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A Comparative Study of Central Bank Regulation and Financial Stability: Lessons for the People's Republic of China

Miao HAN

A Thesis Submitted for the Degree of Doctor of Philosophy

Durham Law School
Durham University
July 2014

For My Parents

献给我的父母

A Comparative Study of Central Bank Regulation and Financial Stability: Lessons for the People's Republic of China

Author: Miao HAN

The global financial crisis (GFC) has been defined as the worst crisis since the 1930s Great Depression, affecting the worldwide financial and economic landscape and requiring profound legal reforms. The GFC has challenged the capacity of central banks to deal with financial risk. This thesis thus aims to explore the relationship between central bank regulation and financial stability. China has attracted particular attention by its quick responses and apparent speedy recovery; as a consequence, the strengths and weaknesses of its central bank should be critically assessed.

The research question of this thesis looks at how the GFC has challenged the role played by state central banks in maintaining financial stability. It is answered through a comparative study. In principle, rules and laws affect a central bank in the context of their two-tier relationships—with Government and with the Market. This relationship is also affected by central banks in response to financial crises. Four major central banks are selected for comparison in this thesis; these are the Federal Reserve System of the US (US Fed), the Bank of England (BOE), the Bank of Japan (BOJ) and the People's Bank of China (PBC). Their respective legal frameworks have been shaped by whether they are market-oriented or government-controlled. But such a stark distinction has been challenged in view of the different styles of central bank crisis management that occurred during the GFC.

The case studies presented here suggest that a convergence has co-existed with some divergence during the development of central banks. The legal frameworks of these four central banks were very similar before the GFC, but they actually operated with varying levels of independence. With similar policy responses during the GFC, they have performed very differently and faced different tasks. This thesis seeks to identify some central explanatory variable for this behaviour, addressing the mismatch of similar risk management solutions and different outcomes. This

comparative study argues that in spite of integration and globalization, the focus of central banks on risk management and financial stability has actually shown significant differences in approach.

This thesis has also undertaken a systematic study of China's central bank. Overall, limited independence has seriously constrained the PBC's functions, making other reform measures relatively superficial as solutions to various risk management problems. The GFC has further exposed its inherent shortcoming. After comparing the PBC with other three central banks, this thesis concludes that domestic vulnerabilities, rather than external shocks, continue to affect the PBC's orientation; this requires an improved balance between political power and market principles.

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Abbreviations

ABCP	Asset-Backed Commercial Paper
ABS	Asset-Backed Securities
ADB	Asian Development Bank
AFC	Asian Financial Crisis
AIG	American International Group
ASEAN	Association of Southeast Asian Nations
BHCs	Bank Holding Companies
Board	Federal Reserve Board
BOE	Bank of England
BIS	Bank for International Settlements
BOJ	Bank of Japan
BOR	Bank-Offered Rate
BRICs	Brazil, Russia, India and China
CBRC	China Banking Regulatory Commission
CDOs	Collateralized Debt Obligations
CDSs	Credit Default Swaps
CIRC	China Insurance Regulatory Commission
CMI	Chiang Mai Initiative
COC	Comptroller of the Currency (US)
CSRC	China Securities Regulatory Commission
DIC	Deposit Insurance Corporation
DMO	Debt Management Office (UK)
ECB	European Central Bank
ESF	Exchange Stabilization Fund (US)
EU	European Union
FAI	Fixed Asset Investment
FCA	Financial Conduct Authority
FDI	Foreign Direct Investment
FDIC	Federal Deposit Insurance Corporation
FHCs	Financial Holding Companies
FOMC	Federal Open Market Committee
FPC	Financial Policy Committee
FRC	Financial Reconstruction Commission
FSA	Financial Services Authority (UK)
FSA	Financial Services Agency (Japan)
FSC	Financial Stability Committee (UK)
FSCS	Financial Services Compensation Scheme
FSOC	Financial Stability Oversight Council
FSMA2000	Financial Services and Markets Act
FRB	Federal Reserve Bank
GAO	Government Accountability Office
GFC	Global Financial Crisis
GSE	Government-Sponsored Enterprise
JGSs	Japanese government securities
IPCs	Individuals, Partnership and Corporations

IPOs	Initial Public Offerings
IMF	International Monetary Fund
LDP	Liberal Democratic Party
Libor	London Interbank Offered Rate
LOLR	Lender of Last Resort
MBSs	Mortgage-Backed Securities
MOU	Memorandum of Understanding
MPC	Monetary Policy Committee
MPM	Monetary Policy Meeting
MNO	Multinational Organization
MOF	Ministry of Finance (China and Japan)
NBFI	Non-Banking Financial Institution
NDRC	National Development and Reform Commission
NPC	National People's Congress
NPLs	Non-performing Loans
OCC	Office of the Comptroller of the Currency
OECD	Organization for Economic Co-operation and Development
OFS	Office of Financial Stability Policy and Research
OLA	Orderly Liquidation Authority
OMOs	Open Market Operations
PBC	People's Bank of China
PRA	Prudential Regulation Authority
PRC	People's Republic of China
PM	Prime Minister
QE	Quantitative Easing
RCC	Resolution and Collection Corporation
RMB	Renminbi
SAFE	State Administration of Foreign Exchange
SEC	Securities and Exchange Commission (US)
SDR	Special Dawing Right
SIFIs	Systemically Important Financial Institutions
SIV	Structured Investment Vehicle
SMEs	Small and Medium Enterprises
SMF	Sterling Monetary Framework
SOE	State-Owned Enterprise
SOCB	State-Owned Commercial Bank
SPV	Special Purpose Vehicle
SRR	Special Resolution Regime
SRU	Special Resolution Unit
TSC	Treasury Select Committee
UKFI	UK Financial Investments
UMP	Unconventional Monetary Policy
US Fed	Federal Reserve System of the US
WTO	World Trade Organization
ZIRP	Zero Interest Rate Policy (Japan)

Chapter One

Introduction

1.1 Research Question and Background

Sweden's Riksbank, the first central bank in the world, was established in 1668 and most countries, either developed or developing, have since established their own state central banks.[1] The inception of central banks was often linked with certain delegated tasks from their governments, but their role in stabilising financial markets was still far from clear. This conundrum – how central banks contribute to financial stability – has been spotlighted again because of the far-reaching effects brought about by the global financial crisis (GFC). In this context, the main research question of this thesis will examine how the GFC has challenged the role played by central banks in maintaining financial stability; this will be answered through a case study of four leading central banks with different orientations propositioned. It will argue that the GFC has challenged them to strike an improved balance between government and the market, among others.

In theory, there are a number of explanations concerning how central banks deal with financial crises, and some central banks were expressly established for the very purpose to do so.[2] Even so, it is still a matter of debate as to how their role in maintaining financial stability has been defined. This problem has in part been attributed to conceptual confusion, and also to an unclear relationship between monetary stability and financial stability.

The definition of "financial stability" has itself evolved over time, but without achieving much consensus. For example, financial stability has been defined as the

[1] According to the Central Bank Hub listed by the Bank for International Settlements (BIS), central banks from 168 countries and areas (including the European Central Bank, Hong Kong SAR and Macau SAR) have registered <www.bis.org/cbanks.htm>.
[2] Historical review will be given in Chapter Two. As argued in one case study, the Bank of Japan was set up to deal with domestic financial manias.

ability of the financial system to facilitate and enhance economic processes, manage risks and absorb shocks; it is also seen as a continuum, changeable over time, and consistent with multiple combinations of financial elements.[3] At the very least, financial stability precludes crises, though not necessarily change *per se*; and thus, financial stability could roughly be regarded as the period without such crises. Three main approaches may be taken to conceptualising financial crisis: the monetarist, the asymmetric information perspective and the financial instability hypothesis.[4] For example, cyclical excess could disturb market participants: a financial crisis is a disruption to financial markets where adverse selection and moral hazard problems become more intensive, and the financial sector fails to channel efficiently the most productive investment opportunities.[5] To the monetarists, errors from monetary policy lead to instability in the financial system, or produce far-reaching negative influences by causing minor disruptions;[6] this approach has linked central banks more directly to financial stability. Recently, different theories have been employed to understand financial crises, including game theory and asymmetric information.[7] Overall, it is difficult to define a "financial crisis", but it is very evident that financial markets have previously developed with crises, which can be prompted by different causes, and also take varying forms.[8] Alternatively, if a positive correlation can be established between monetary and financial stability, it is then not hard to determine the role played by a central bank in maintaining financial stability. However, such a link has not yet been proved with convincing evidence, especially with continuing controversy about the synergy or trade-offs between monetary and financial stability.[9]

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[3] Garry J. Schinasi, *Safeguarding Financial Stability, Theory and Practice* (Washington DC: IMF 2006).
[4] Andrew Crockett, 'The Theory and Practice of Financial Stability' (1996) *De Economist* 144 (4): 531–568.
[5] Frederic S. Mishkin, 'Anatomy of a Financial Crisis' NBER Working Paper Series, No 3934, 1991 <www.ppge.ufrgs.br/Giacomo/arquivos/esp207/mishkin-1992.pdf>.
[6] Milton Friedman and Anna J. Schwartz, *A Monetary History of the United States 1867–1960* (1st Ed., Princeton: Princeton University Press 1971).
[7] Similar to the definition of financial stability, arguments continue about what causes financial crises. Refer to, e.g., Roger W. Ferguson, 'Should Financial Stability Be an Explicit Central bank Objective?' in Piero C. Ugolini, Andrea Schaechter and Mark R. Stone (eds.), *Challenges to Central Banking form Globalized Financial Systems* (Washington DC: IMF 2003).
[8] Charles P. Kindleberger and Robert Z. Aliber, *Manias, Panics and Crashes: A History of Financial Crises* (6th Ed, London: Palgrave Macmillan 2011).
[9] Tommaso Padoa-Schioppa, 'Central Banks and Financial Stability: Exploring a Land in Between' 2nd ECB Central Banking Conference "The Transformation of the European Financial System", Policy Panel Introductory Paper, Frankfurt am Main, October 24&25, 2002 <www.ecb.europa.eu/events/pdf/conferences/tps.pdf>.

It can be challenging to posit a clear-cut link between central banks and financial stability, but the GFC has clarified leading issues. This crisis arose from the subprime mortgage risk attacking the US housing market in 2007, and caused global financial upheavals from 2008 onward.[10] While many factors triggered and/or intensified this crisis,[11] central banks have in succession been criticised for providing excessive liquidity for years running up to the GFC, and also for their inability to maintain systemic stability.[12] Moreover, major central banks have lately launched unprecedented monetary expansion, having themselves moved to the centre of crisis management. It is thus argued that central banks have assumed particular responsibility for dealing with financial stability: "The overall framework [of financial stability] does not appear to have been fully conducive to achieving its objectives, often leaving ill-defined the responsibilities and tools of central banks in their pursuit of financial stability."[13]

Central banks are judged to be both problematic in the building up to the GFC yet still required to provide solutions for it. With recent radical changes, they have been challenged to develop better mechanisms for achieving financial stability:

> "Following the on-going financial crisis, Central Banks are now probably on the verge of a further, fourth, epoch, though the achievement of a new consensus on their appropriate behaviour and operations may well be as messy and confused…Indeed the financial stability authority would then, de facto, become the true Central Bank."[14]

All these issues have provided a focus for this thesis of how the GFC has challenged central bank regulation[15] to maintain financial stability.

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[10] The GFC, including causes and its globalisation, will be analysed in Chapter Three.
[11] For an overall introduction, see, Robert J. Shiller, *The Subprime Solution: How Today's Global Financial Crisis Happened, and What to Do about It* (Princeton: Princeton University Press 2008).
[12] General responses from central banks will be introduced in Chapter Three, and the performances of the selected four central banks will be discussed in the case studies. But for a general review, refer to, John B. Taylor, 'The Financial Crisis and the Policy Responses: An Empirical Analysis of What Went Wrong' NBER Working Paper 14631, 2009 <www.nber.org/papers/w14631.pdf>.
[13] Erlend Walter Nier, 'Financial Stability Frameworks and the Role of Central Banks: Lessons from the Crisis' IMF Working Paper WP/09/70, 2009 <www.imf.org/external/pubs/ft/wp/2009/wp0970.pdf>.
[14] C.A.E. Goodhart, 'The Changing Role of Central Banks' BIS Working Papers No 326, 2010 <www.bis.org/events/conf100624/goodhartpaper.pdf>.
[15] "Central bank regulation" will be defined in Chapter Two. Here we can understand this concept as policy responses from central banks to deal with financial crises.

1.2 Contribution to the Literature

To understand how the GFC has challenged the capacity of central banks to deal with financial crises, two groups of central banks with different basic assumptions will be examined to derive and test the key propositions of this thesis.

In spite of other theoretical and statistical studies which focus more upon the economic effects of central banking, this thesis will employ a more basic theory to identify key legal considerations relevant to central bank regulation aiming at achieving financial stability. Central banks became involved in stabilising financial markets as paper currency replaced metallic currencies. By means of the money supply, their engagement has since been further enhanced. The need to maintain currency value necessitated some agency to establish and maintain public confidence and, at the same time, deposit takers began to participate in the wider monetary cycle. So, after being established as an important intermediary between the banking system and the wider economy, the central bank has gradually developed its core value: serving as the government's banker, and meanwhile as the bankers' bank.[16] Starting from this core orientation, a central bank is principally located in a two-tier relationship – with both government and the market. The theoretical and legal framework used here will revolve around such two tiers, and four individual case studies will illustrate how the GFC has specifically challenged them.

While central bank regulation can be examined from different dimensions, there are some reasons for approaching it from a legal perspective. In general, rulemaking and law reform have developed to modify how financial crises can be dealt with.[17] Since the beginning of the 20th century, it became more common to formalise the position of central banks, especially their relationship with the finance ministries, by writing these expectations into statutes.[18] As central banks have gradually improved their

[16] C.A.E. Goodhart, *The Central Bank and the Financial System* (Dordrecht: Macmillan 1995) 205–215.
[17] Ioannis Glinavos, 'Regulation and the Role of Law in Economic Crisis' (2010) *European Business Law Review* 21(4) <http://ssrn.com/abstract=1425782>.
[18] Before that, such lawful formalisation was impeded due to the lack of what was possible in both theory and practice. It was whereas argued that formalisation by statutes was beneficial: legal compulsion could define the position of a central bank in a more rigid manner without placing it under the direction of the finance ministries or as a pure government institution. Miroslav A. Kriz, 'Central Banks and the State Today' (1948) *The American Economic Review* 38(4): 565-580.

major functions, statutes have often described monetary stability as their primary objective, and have also mandated that they support wider economic development. Furthermore, attitudes to financial regulation have continued to evolve across different financial crises. As the market-oriented reform spread from the 1970s, the role played by governments in financial markets became constrained to regulation and supervision after a period of continuous deregulation. However, flawed regulation and supervision also helped trigger the GFC. As a result, major statutory reforms sought to enhance systemic resilience; at the same time, the relocation of central banks as systemic regulators has invariably been written into statutes.[19] Examples of this include the Dodd–Frank Wall Street Reform and Consumer Protection Act (Dodd–Frank Act) in the US, and the Financial Services Act 2012 in the UK. In sum, statutes have redefined how central banks can act in an effort to achieve system-wide stability, while the GFC has prompted significant legal changes. This thesis will focus upon how laws and rules govern central bank regulation with regard to systemic stability. In principle, legal frameworks are argued to be based upon the two-tier relationship, resulting in certain key legal provisions; central banks have dealt with financial crises by employing policy instruments under their respective legal authority.[20] It is clear that central bank crisis management is affected by each specific two-tier relationship, and this delineates which challenges individual central banks most.

The main research question addressed here will test the key propositions with reference to four leading central banks. Central banks were first set up in developed countries, including the Bank of England (BOE) in 1694, the Bank of Japan (BOJ) in 1883 and the Federal Reserve System of the US (US Fed) in 1913. After World War II, new central banks were established in other (often semi-colonial) countries, including China. However, only limited written materials are available to classify them. In this thesis, four central banks will be examined from their respective two-tier relationships, categorised according to their market or government orientation. What is more, it will pay particular attention to China's central bank. As China was one of the first major countries to have recovered from the spill-over effects of the

[19] *Supra* 17.
[20] Alan S. Blinder, *Central Banking in Theory and Practice* (2nd Ed, Massachusetts: MIT Press 1999) 25–51.

GFC, it might be assumed that the policy responses from the PBC and beyond were particularly effective. However, this thesis will show that the GFC challenged the PBC to such an extent that explicit government intervention might threaten China's further market-oriented reform.

In essence, this thesis will seek to contribute to the relevant literature from the following three perspectives:

(i) theoretical and legal frameworks used will be based upon the core value of a central bank being both the government's banker and the bankers' bank. The two-tier relationship is thus essential in defining a central bank. Propositions will be tested and key legal provisions examined in regard to these two tiers;

(ii) case studies will revolve around the propositions assumed to be relevant to the four central banks, not only testing their market or government orientation, but also clarifying how the GFC has prompted each to change; and

(iii) as there is lack of systemic research into China's central bank, this thesis will probe the PBC's distinctive character and role, and duly compare it.

1.3 Key Propositions

To begin with, it is necessary to set out the key concepts before the specific propositions are examined. The concepts of "state" and "government" might have different meanings and also have been used interchangeably in different academic studies. In international law, there is a close relation between "government" and "statehood". The best known formulation of the basic criteria for "statehood" is laid down in the Montevideo Convention on the Rights and Duties of States: "The State as a person of international law should possess the following qualifications: (a) a permanent population; (b) a defined territory; (c) government; and (d) capacity to

enter into relations with other States."[21] It has further been argued that "government" or "effective government" is the basis for the other central criterion of independence for both internal and external affairs.[22] At the very least, "state" is different from "government": an effective government is one prerequisite for statehood; and the main – and for most purposes the only – organ by which the state acts in international relations is its central government. In any event, international law distinguishes between changes of State personality and changes of the government of the State.[23] In this thesis, "government" will be used in contrast to "market", in distinguishing between the two groups of central banks.

The GFC has brought many different issues into the spotlight. Inter alia, the rule of the prevailing neo-liberalism ideology has been questioned: 'the onset of the global financial crisis in 2008 has been widely interpreted as a fundamental challenge to, if not crisis of, neoliberal governance'.[24] Between the 1970s and 1990s, neo-liberal market-oriented reform became widespread in the US, UK, Japan and beyond.[25] In principle, classic neo-liberalisation incorporates privatisation, minimal regulation, depoliticisation, and liberalisation.[26] Market principles have been expected to enable economic units to maintain a temporary imbalance between incomes and expenditures, adjust the types of claims with diversifying assets and liquidity, and achieve a sound payment system making a wider range of transactions feasible. Such a market economy cannot be effective without certain pre-conditions, including open financial markets, information closure, no anticipation of bailouts, and proper set response mechanisms. [27] Furthermore, since market-oriented institutions claim positive association with economic development, market disciplines are also

[21] Article 33, Convention on the Rights and Duties of States, Montevideo, 26 December 1933.
[22] See Articles on Responsibility of States for Internationally Wrongful Acts (ARSIWA) 2001: Arts 4–7 for the normal situation of responsibility for acts of State organs or agencies and Arts 8–11 for exceptional cases.
[23] James Crawford, *The Creation of States in International Law* (2nd Ed, Oxford: Clarendon Press 2006) 31–33, 55–61.
[24] Jamie Peck, Nik Theodore and Neil Brenner, 'Postneoliberalism and its Malcontents' (2009) *Antipode* 41(S1): 94–116.
[25] Financial liberalisation in the US, UK, Japan and China will be introduced respectively in the case studies later.
[26] William L. Megginson and George M. Netter, 'From State to Market: A Survey of Empirical Studies on Privatization' (2001) *Journal of Economic Literature* 39(2): 321-389.
[27] Timothy D. Lane, 'Market Discipline' (1993) *IMF Staff Paper* 40 (1): <www.jstor.org/stable/3867377>.

employed to reform those institutions, including central banks.[28] In addition, during the market-oriented reform, government has been challenged to balance its welfare role and market making role.[29] However, neo-liberalism did not develop evenly,[30] and differs across the West and the East.[31] For example, a tight nexus of government, financial markets (mainly banks) and firms achieved Japan's industrialisation and economic modernisation, while China has explicitly defined its government as the maker of the markets as early as the beginning of its economic reform.

As regards the financial sector, since the end of the Bretton Woods System, the fixed exchange rates were gradually liberalised, and intervention from government has been reduced to necessary regulation.[32] In consequence, market discipline is a force, whose effectiveness – or, frequently, the alleged ineffectiveness – pervades financial policy, while it does not exclude government intervention especially as regards regulation and supervision.[33] In this context, effective market orientation of central banking is an outcome of monetary policy which succeeds in keeping overall prices low, as well as a sound and stable financial system, which operates at positive market rates of interest across the whole range of financial intermediations.[34] Market-oriented central banks are generally responsible for stable prices by undertaking a programme of actions, including interest rate policies, open market operations (OMOs), quantitative controls, and so forth.[35] They have continued to make credit and capital allocation more feasible by conducting due regulation and

[28] Jakob De Haan, Susanna Lundstrom and Jan-Egbert Sturm, 'Market-Oriented Institutions and Policies and Economic Growth: A Critical Survey' (2006) *Journal of Economic Survey* 20(2): 157-191.
[29] Alberta M. Sbragia, 'Governance, the State, and the Market: What Is Going On?' (2000) *Governance: An International Journal of Policy and Administration* 13(2): 243-250.
[30] *Supra* 24.
[31] For a detailed analysis, see, Robert Wade, *Governing the Market: Economic Theory and the Role of Government in East Asian Industrialization* (Princeton: Princeton University Press 1990).
[32] Donato Mascinadaro and Marc Quintyn, 'Helping Hand or Grabbing Hand? Politicians, Supervision Regime, Financial Structure and Market Review' (2008) *Northern American Journal of Economics and Finance* 19(2): 153-173.
[33] *Supra* 27.
[34] With market disciplines, central banking should reflect the real relationship between the demand for real cash balances and the level of economic activities, as well as the opportunity cost of keeping such balances rather than increasing an alternative asset for an appropriate rate of return. Vicenete B. Valdepenas, 'Market Oriented Central Banking' (1994) *Philippine Review of Economics* 31(2): 104-136.
[35] Claudio E.V. Borio, 'The Implementation of Monetary Policy in Industrial Countries: A Survey' BIS Economic Papers, No 47, 1997 <http://bis.hasbeenforeclosed.com/publ/econ47.pdf>.

supervision, and also control payment and settlement systems oversight.[36] However, financial liberalisation by no means guarantees against financial crises, and may even enhance fragility.[37] Financial liberalisation and innovation have removed the territorial correspondence between financial markets and central banks' jurisdiction, whilst also blurring the traditional distinctions between banks and non-bank financial institutions; this further challenges central banks pursuit of financial stability.[38]

Based on this separation of "market" and "government", this thesis assumes different orientations of four selected central banks. In theory, central banks are generally in charge of monetary policy and financial regulation to some extent; from their respective two-tier relationships, they are argued to be either market-oriented or government-controlled. Both the US Fed and the BOE were primarily market-oriented, while the former was a consolidated regulator within a rigid legal framework, and the latter transferred major financial regulatory duties to an independent outside agency in the late 1990s. They both have represented the diffusion of market-oriented reforms, whereas the BOJ has seemingly followed another direction. Due to long-term subordination to its finance ministry, it was still under government control after financial liberalisation, and its oversight was limited to selected but direct micro monitoring duties. China did not launch economic reform until 1978, aiming for a shift from a highly centralised planning economy to reliance upon market disciplines. As far as the PBC is concerned, it remains government-owned and combines with other responsible agencies to control directly China's partially-liberalised financial markets. Before the GFC changed their respective two-tier relationships, propositions about these central banks can thus be summarised in Table 1.1:

[36] Tommaso Padoa-Schioppa and Fabrizio Saccomanni, 'Managing a Market-Led Global Financial System' in Peter B. Kenen (ed.), *Managing the World Economy: Fifty Years After Bretton Woods* (Washington: IMF: World Bank Group 1994) 235–268.
[37] Asli Demirguc-Kunt and Enrica Detragiache, 'Financial Liberalization and Financial Fragility' World Bank Publications, No 1917, 1998 <http://siteresources.worldbank.org/DEC/Resources/84797-1251813753820/6415739-1251813951236/demirguc.pdf>.
[38] A.H. Golembe and J.J. Mingo, 'Can Supervision and Regulation Ensure Financial Stability?' at FRB San Francisco Conference "The Search for Financial Stability: The Past Fifty Years", California, 1985.

Table 1.1: Propositions about Central Banks in this Thesis

- **Proposition 1**
  The US Fed was predominantly a market-oriented or laissez faire central bank; it was also a consolidated financial regulator based upon rigid legislation.

- **Proposition 2**
  The BOE was predominantly a market-oriented or laissez faire central bank; it had limited prudential regulation role in the tripartite model (involving the BOE, the FSA and HM Treasury).

- **Proposition 3**
  The BOJ was a government-guided central bank, and a regulator that relied upon moral suasion with limited functions;

- **Proposition 4**
  The PBC was a government-owned politically-dominated central bank, and a proactive regulator as part of China's financial regulatory regime.

Accordingly, the market or government orientation is the principal indicator for distinguishing between these central banks. The four case studies will test the propositions illustrated in this table, and also identify further differences.

1.4 Research Method

This research has combined logical, explanatory, empirical, hermeneutic, exploratory and evaluative information. [39] Once analysed by employing appropriate methodologies, the propositions can be tested and the main research question duly answered. In essence, this research is an interdisciplinary comparative study of four selected countries.

[39] Mark Van Hoecke, *Methodologies of Legal Research, What Kind of Method for What Kind of Discipline?* (Oxford: Hart Publishing 2011).

1.4.1 Interdisciplinary Topic

The study of central banks is inevitably interdisciplinary, drawing upon insights from a variety of intellectual traditions, such as economics, finance, mathematics, management, law, social science, etc. Among all interdisciplinary approaches to legal research, there is an increasingly close link between law and economics.[40] Such interdisciplinary legal - economic research is

> "… concerned with the relationship between the economy of a particular place at a given time and the law that controls and guides economic endeavours. We would analyse, therefore, the particular forms of organization of the means of production and distribution in relation to the legal arrangements that control, confine, and give form to the economic activity."[41]

According to this criteria, "immediate research in the general area of" central bank law "may well be concerned with the relationship between the law and the maximization of satisfactions that flow from" central banking.

This thesis will approach the capacity of the selected central banks to deal with financial crises from a legal perspective. However, it is argued that many legal issues could not be properly understood through reliance upon legal doctrine alone.[42] For example, the relationship between a central bank and the government, "central bank independence" in legal provision, is similarly written into statutes, but not actually decided by law alone. As will be evident in the following case studies, it can vary due to a combination of different factors, including the different development stages of domestic markets, financial resources available for central banking, and positions

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[40] Erika Arban, 'Interdisciplinary Approaches to Legal Research: Law and Economics and Critical Legal Studies from a North American Perspective' <www.amministrazioneincammino.luiss.it/wp-content/uploads/2011/01/E.Arban_giur-cost2.pdf>. Law-related interdisciplinary research has a long history. See, George L. Priest, 'The Growth of Interdisciplinary Research and the Industrial Structure of the Production of Legal Ideas: A Reply to Judge Edwards' Yale Law School Legal Scholarship Repository, Faculty Scholarship Series No 1-1-1993, 1993 <http://digitalcommons.law.yale.edu/cgi/viewcontent.cgi?article=1622&context=fss_papers>.

[41] Marshall Harris, 'Legal-Economic Interdisciplinary Research' 10 *Journal of Legal Education* 1957-1968: 452-474.

[42] Robert Cryer, Tamara Hervey, Bal Sokhi-Bulley and Alexandra Bohm, *Research Methodologies in EU and International Law* (Oxford: Hart Publishing 2011). For historical development of legal scholarship, refer to, Richard A. Posner, 'The Present Situation in Legal Scholarship' (1981) *The Yale Law Journal* 90(5): 1113–1130.

of other governments engaged in setting and implementing monetary policy, designing other economic policy objectives, appointing key members, etc. Therefore, this thesis will examine *de jure* legal provisions regarding central bank regulation by taking into account *de facto* circumstance.

1.4.2 Literature Review

This thesis makes its analysis in terms of rule-based legal frameworks, and thus, relies upon a library-based research. It reviews the literature regarding the historical development of central banks, the statutes governing them, and their policy responses and prompted changes during the GFC. Data is collected from diverse sources, including books, journals, magazines, newspapers, conference papers, reports from international organisations, and websites of both Western and Chinese origins. It is not a simple presentation of such materials; rather, it will integrate different arguments systematically and develop more critical assessments of their meanings and value.

1.4.3 Empirical Study

Empirical evidence dominates economics-related studies. Central banks themselves publish data and statistics regarding monetary policy and beyond. As a thesis in law, this study will not focus upon data *per se*, but employ them to gain first-hand insights into the policy responses from, and performances of, the four central banks throughout the duration of the GFC. Empirical study will incorporate: (i) economic and financial inputs, such as GDP, employment, and CPI rates; and (ii) indicators for monetary policy, including the money base, interest rates, and the non-performing loans rates.

It should be noted that the reliability of data from Chinese authorities has been criticised. It is argued that due to strict censorship, official information can be open to manipulation. Limited official publications are available in English, while Chinese language allows considerable flexibility when interpreting politically sensitive topics. To balance this, this thesis will cover both inside and outside information about China, such as that from multiple-national organisations, and public and private

think tanks. For example, country reports from the BIS, IMF and World Bank will be used to analyse China-relevant issues, while views from the specialist institutions and research centres will be employed to assess the reliability of Chinese official statements.

1.4.4 Country-Selected Comparison

These case studies are country-specific.[43] Countries earmarked for further detailed analysis of their central banks include China, Japan, the UK and the US, particularly for determining comparative convergence and divergence.

Particular attention will be given to the PBC, and its historical development, legal framework and policy responses to the GFC are all examined. This thesis will also review central bank regulation from the other three countries. For some time before the GFC, both the US and the UK had pursued finance-led growth, while financial fragility intensified.[44] The US has been the centre of market disturbances during the GFC, whilst its losses and policy responses are equally striking. So is the case of the UK. Both the US Fed and the BOE are selected to represent broadly what might broadly be described as an Anglo-American Style of central banking, orientated towards key market principles. China's economic reform claims to introduce market principles, and thus, the market-oriented US Fed and BOE have important reference value for the PBC. The BOJ is of particular interest in that its own earlier economic bubble produced what has been described as its 'lost decade', especially after unprecedented monetary expansion has increased wider economic uncertainty after the GFC (which Paul Krugman has referred to "Nipponization"). Both the BOJ and the PBC are categorised as government-controlled central banks, which operate closely under their governments' guides, and propositions about them are framed in that light. Therefore, in this thesis, central banks from four countries are selected according to their differing propositions.

[43] For a general introduction to this research method, see, Mike McConville and Wing Hong Chui, *Research Methods for Law* (Edinburgh: Edinburgh University Press 2007) 69–132.
[44] Robert Boyer, 'The Global Financial Crisis in Historical Perspective: An Economic Analysis Combining Minsky, Hayek, Fisher, Keynes and the Regulation Approach' (2013) *Accounting, Economics and Law* 3(3): 93-139.

1.5 Thesis Structure

In testing our propositions, we need to consider the issues that can most effectively be compared from the four different central banks and the major comparative study can be presented accordingly. A legally directed framework has been developed from an analysis of the two-tier relationship governing central banks so that significant differences and similarities can be identified from any comparisons made.

Part I will introduce the theoretical framework for this thesis. Chapter Two, acknowledging that central banks serve as both the government's banker and the bankers' bank, makes their two-tier relationship explicit, with major legal provisions specified. In addition, the central bank is granted crisis management solutions by law, and will adjust its pre-existing two-tier relationship when dealing with financial instability. Chapter Three will explain how the GFC challenged central banks generally.

Part II covers four case studies. Individual central banks – US Fed, BOE, BOJ and PBC – will be examined to test our key propositions about their market or government orientation. Historical evidence suggests that central banks have continued to serve as government's banker and the bankers' bank, and reforms have revolved around the two-tier relationship. As far as rule-based legal frameworks are concerned, in spite of similar provisions, particular two-tier relationships can still take plural forms in these countries. Their proposed orientations will be individually examined according to their respective legal frameworks, and compared with the changes following the GFC, illustrating how this crisis has challenged each of them. Both the US Fed and the BOE renewed direct rescues to the markets in cooperation with their governments, whilst the GFC has raised intense criticism regarding due regulation and supervision. The BOJ was required to deal with domestic economic crisis before the GFC's spill-over effects, and explored further monetary expansion under increased government intervention. It is thus known as "a central bank in crises". In China's case, the PBC officially assisted its quick resilience, which is whereas attributed to strong government intervention; and also, its long-term negative implications added uncertainty to the future of China's market-oriented

reform. In brief, the commitments of these four central banks to their prevailing orientations have been changed by the GFC to varying degrees.

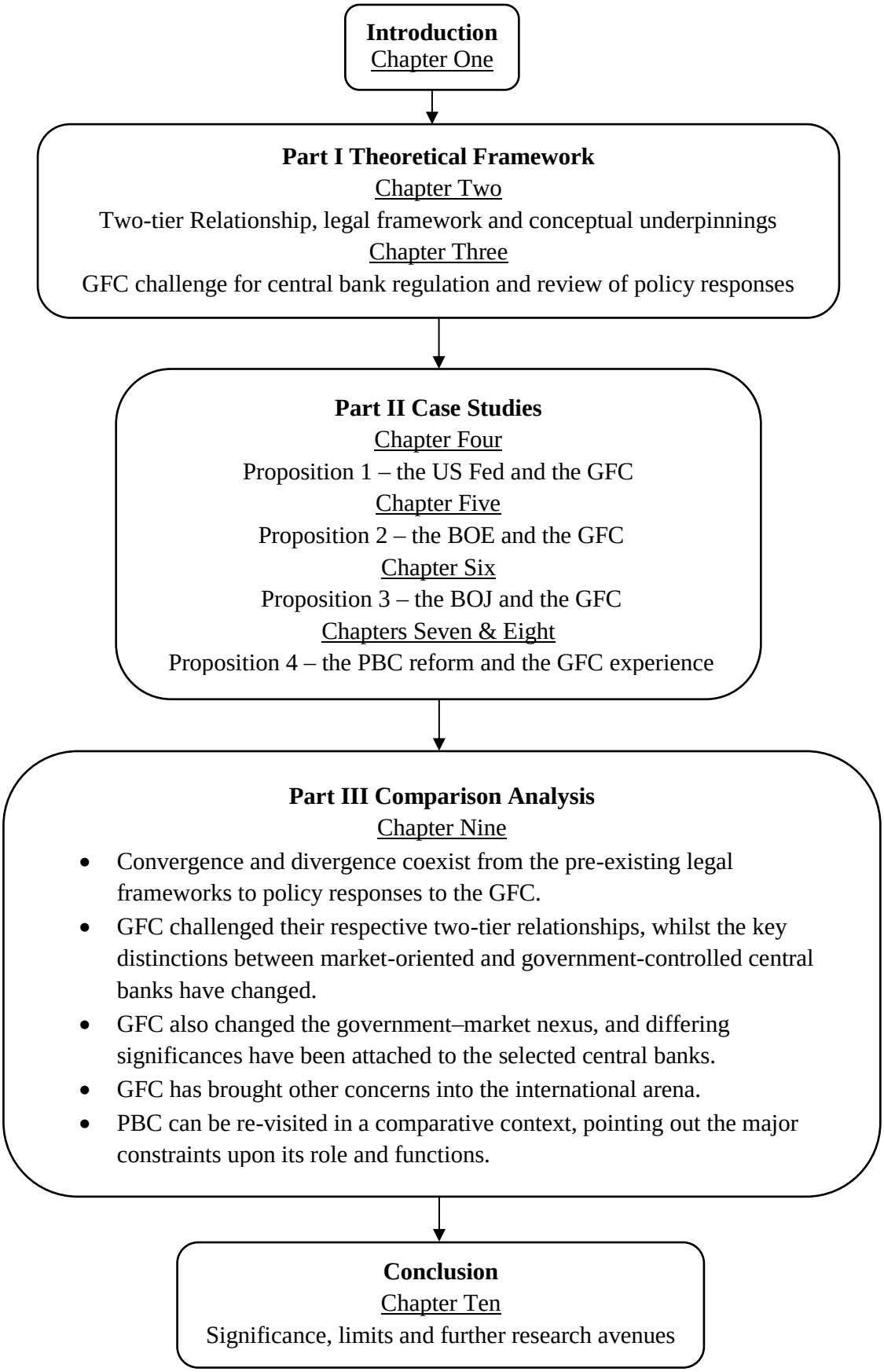
This thesis will consider China's central bank (PBC) in two chapters: reform in Chapter Seven and crisis management in Chapter Eight. In Chapters Four, Five and Six, relevant legal provisions will be highlighted by the case studies of US Fed, BOE, and BOJ, making it possible to compare the legal framework of the PBC after reforms.

Part III will make the major comparative analysis following the presented case studies. Chapter Nine will seek to chart key findings, displaying the pattern of observed convergence and divergence. Tables will compare these four central banks in terms of their overarching legal frameworks, crisis management solutions, and prompted reforms during the GFC. Since this thesis adopts a legal approach, detailed comparisons will be made in relation to different legal orders in all four countries. After summarising the main findings, Chapter Nine concludes that even as their legal frameworks became increasingly similar prior to the GFC, these four central banks still have actually operated from different two-tier relationships. Drawing upon a second comparison, it will demonstrate that central banks have already applied certain similar policy instruments, but these do not guarantee similar outcomes. It is evident that the GFC has challenged these central banks differently, and changed key distinctions between market-oriented and government-controlled central banks. In addition to putting central bank regulation under critical pressure, the GFC has also amended the prevailing government–market nexus. This will be further illustrated with evidences from both the West and the East. In spite of all the changes prompted by the GFC, central banks' core value as the government's banker and the bankers' bank has remained untouched. Therefore, this thesis finds that the GFC has changed the two-tier relationships governing central banks so as to strike an improved balance between government and the market.

Chapter Ten will finally conclude how the main research question has been answered through a comparative case study of these selected countries. During the testing of our key propositions, the significance of this research will be emphasised. Both limitations of this study and avenues for further research are also identified.

This thesis consists of ten chapters, and its structure can be illustrated by the following map (Figure 1.1).

Figure 1.1 Thesis Structure



1.6 Conclusion

In this thesis, the GFC challenge will be examined from a legal perspective of central bank regulation, illustrating how central banks have managed to focus upon systemic financial stability. This chapter has explained some key issues before moving on to test our propositions relating to the market or government orientation assumed to the selected central banks.

The following chapter will first present the two-tier relationship, which decides how a central bank serves as the government's banker and the bankers' bank. As follows, it will suggest what the two-tier relationship meant for the prevailing legal framework and how the GFC challenged such two tiers. Individual case studies will focus upon the key propositions about the selected central banks. China's central bank will be given a systemic study with the emphasis upon its government orientation, and then, a critical assessment can be made in a comparative context.

Part I THEORETICAL FRAMEWORK

Chapter Two

Theoretical Framework: Identifying Central Banks' Two-Tier Relationship

2.1 Introduction

During their long developmental history, central banks have made important changes, but their definition as both government's banker and bankers' bank is rarely questioned.[1] As explained by the BOE:

> 'The Bank's roles and functions have evolved and changed over its three-hundred year history. Since its foundation, it has been the Government's banker and, since the late 18th century, it has been banker to the banking system more generally—the bankers' bank'.[2]

It could therefore be argued that a central bank is positioned in a two-tier relationship: with government and with the market respectively (as illustrated in Figure 2.1). This imposes the following particular duties for the central bank:[3]

As Government's Banker:

- Banknotes issuance;
- Deposits;
- Financial advice;
- Financial services related to issuance and settlement of Government securities and bonds;
- Gold and foreign reserves;
- Treasury management.

As Bankers' Bank:

- Deposits from and loans to banks and other financial institutions;
- Monetary policy instruments;
- Payment and settlement systems;
- Lender of last resort (LOLR);
- Financial regulation and supervision.

[1] The newly-released publication of *Functions and Operations of the Bank of Japan* indicates that a central bank may not play the role of the government's banker from a global perspective, but no further evidence is supplied.

[2] <www.bankofengland.co.uk/about/Pages/default.aspx>.

[3] Central banks are not necessarily engaged in all such functions. For example, gold and foreign reserves were transferred from the BOE to HM Treasury in 1931 once the UK left the gold standard. HM Treasury, *Management of the Official Reserves* <www.gov.uk/government/uploads/system/uploads/attachment_data/file/236352/management_of_the_official_reserves_2013_14.pdf>.

Figure 2.1: The Two-Tier Relationship Governing a Central Bank

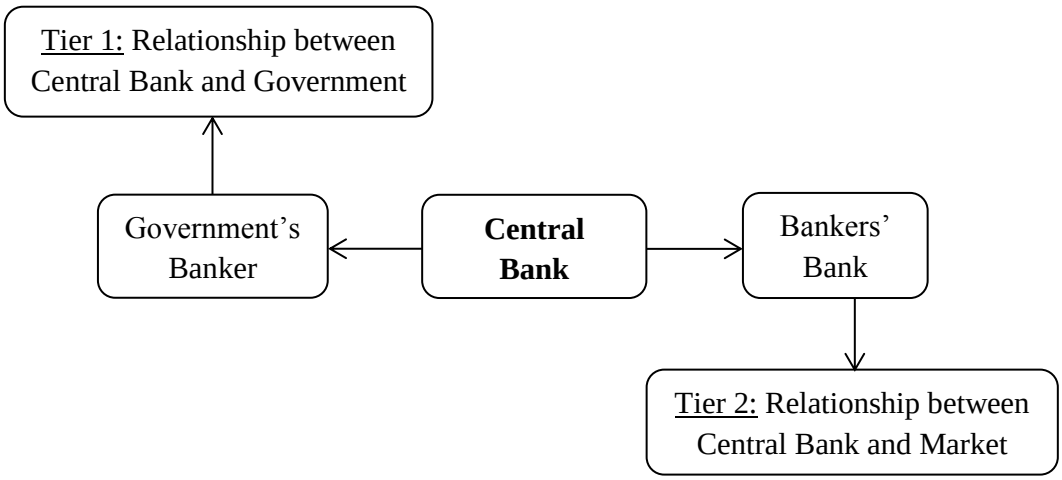


Figure 2.1 displays the position of a central bank relative to its government and the market. This two-tier relationship is the key to understand how a central bank operates as government's banker and bankers' bank.

As clarified in Chapter One, this thesis will examine central bank regulation toward maintaining financial stability, when this was lately challenged by the GFC. Accordingly, this chapter will introduce and analyse the rules-based legal framework governing central banks before detailing further case studies. It will proceed as follows. A short historical review will be first provided: according to its origin, the central bank was initially established by government in order to control inflation, then gradually to regulate and supervise the banking sector. Although historical evidence demonstrates that the central bank was responsible for financial risk management, there is still a lack of consensus regarding its exact role in maintaining financial stability. In the second part of this chapter, rules and laws are argued to regulate a central bank according to its two-tier relationship, resulting in certain common key legal elements. Related propositions will be analysed through their legal framework, linked directly into the two-tier relationship. In the event of financial upheavals, central banks work with both their governments and the markets together, thereby adjusting their two-tier relationships; and their propositions advanced here will reflect this. Furthermore, this chapter will point out that, with

more frequent cross-border financial crises, central banks have pursued increasing regional and international financial cooperation. This chapter will then conclude with an overall framework, which connects its detailed propositions regarding the two-tier relationship, the legal framework and crisis management.

2.2 A Review of the Central Bank: Origin, History and Role in Maintaining Financial Stability

The history of central banks is much shorter than that of the financial markets, so they did not emerge until financial activities had already developed to a certain stage. They have managed to change in response to dynamic market conditions, including repeated financial crises. Even so, it is still difficult to define their role in maintaining financial stability.

2.2.1 Origin: Why Establish a Central Bank?

The central bank is generally established by government. Its origin could be traced from both perspectives: why government sets up the central bank, and why the financial market needs it.

Although many central banks were established to support government's financing of war, or during domestic political unrest, they have gradually been prohibited from financing government deficits directly. However, they do not cease to exist once those conflicts faded; rather they are regulated by statutes and granted the status of being bankers to governments. The reason why governments were tolerant towards the rise of central banks lies mainly in their policies about the maintenance of currency value.[4] Facing increasing price levels, governments can favour monetary expansion by increasing money supply without taking inflationary costs into account. Governments' incentives can be explained by their responsibilities for employment,

[4] Forrest Capie, Charles Goodhart, Stanley Fischer and Norbert Schnadt, *The Future of Central Banking: The Tercentenary Symposium of the Bank of England* (CUP 1994) 1-9.

tax revenue, payments balance, and financial stability.[5] Accordingly, without perfect information, governments cannot pre-commit to placing inflation under control by considerable low costs. The theory of rent-extraction holds that political powers benefit by creating unanticipated inflation in the short term, but obtain more payments by shifting those actions to private sector services. In consequence, independent central banks are viewed to reliably pre-commit to controlling inflations and then stabilize money.[6] So, due to the role in controlling inflation, politicians allow central banks to stay in the financial market, and their primary objective is therefore to achieve monetary stability.

Financial crises can also trigger incentives to establish central banks. For example, both Sveriges Riksbank and the BOJ were once expected to deal with chaotic situations of their domestic monetary markets. As will be explained later, facilities such as the LOLR have been granted to central banks as crisis management related solutions. However, it has also been argued that in the US, banking crises increased following the establishment of the US Fed.[7] Traditionally, banks were taken as distinguished from other financial institutions, as they provided transactions and accounting services, as well as their own portfolio management.[8] Moreover, central banks could operate to regulate and supervise the banking industry due to their uncompetitive role; this mainly derives from their being known as the clearing houses of the financial sector.[9] However, the expansion of financial conglomerates and professional monitoring has brought about new challenges. For example, more non-banking financial institutions have engaged in deposit takings, and banks have expanded their other services and financial products. As a result, it is argued that, with the development of financial markets, characteristics of banks' uncertain "true" assets values and fixed nominal value deposits make them especially vulnerable to runs and systemic risks; this is the dominant concern for regulation and supervision

[5] Geoffrey P. Miller, 'An Interest-Group Theory of Central Bank Independence' (1998) *The Journal of Legal Studies* 27(2): 436-442.
[6] Ibid, 442-445.
[7] It has been argued that a free banking system could work more stably and effectively than a system with a central bank; refer to, Kevin Dowd, 'The Case for Financial Laissez-Faire' (1996) *The Economic Journal* 106(436): 679-687.
[8] E. Fana, 'Banking in the Theory of Finance' (1980*) Journal of Monetary Economics* 6(1): 39-57.
[9] C.A.E. Goodhart, *The Evolution of Central Banks* (vol. 1, MA: MIT Press 1988).

undertaken by the central bank.[10] Furthermore, it is argued that government may cause extra vulnerabilities by imposing deposit insurance upon the banking industry. From this point of view, banks should only be regulated prudentially to reduce such externalities, and the central bank is established to monitor those vulnerabilities only.[11] Lack of consensus, therefore, make it hard to conclude why banks need a central bank to deal with financial crises, and research studies explore different reasons why the banking industry should be rigorously regulated and supervised, as conventionally undertaken by central banks.

So, in order to control inflation, governments set up central banks, which also controlled regulation and supervision over the banking industry. Such a position poses dual-tasks for them: to achieve monetary stability delegated from governments and stability in the banking sector as well.

2.2.2 Historical Development of Central Banks

In the early 19th century, central banks were widely engaged in financing governments, and meanwhile assisted banks with problems. As of their own rights and privileges, they were allowed to issue banknotes and earn seiniorage, as well as being protected from competition. Later, their main functions took shape, including rediscount and loan facilities. By the late 19th century, the central bank developed the dual position of both government's banker and bankers' bank, causing the transformation of the bank of issue to the central bank in the modern sense.[12]

When it came to the 20th century, more central banks were established, and have since experienced important reforms and changes.[13] Up to the 1950s, central banks had been challenged by World War I, the 1930s Great Depression and World War II.

[10] C.A.E. Goodhart, 'Why Do Banks Need a Central Bank?' (1987) *Oxford Economic Papers* 39(1): 75-89.
[11] George J. Benston and George G. Kaufman, 'The Appropriate Role of Bank Regulation' (1996) *The Economic Journal* 106(436): 688-697.
[12] C.A.E. Goodhart, *The Central Bank and the Financial System* (Dordrecht: Macmillan 1995) 205-215.
[13] There are several studies into the history of central banks; for example, see, John Singleton, *Central Banking in the Twentieth Century* (CUP 2010). Individual case studies will be included later.

In general, governments intensified their controls of central banks, and monetary expansion was aimed at supporting fiscal stimulus. Afterwards, it became common to formalize the relationship between the government and the central bank by writing it into the statues.[14] In the Bretton Woods era, central banks gradually combined direct monetary policy instruments, including window guidance and guidelines or instructions over bank loans, and indirect ones, such as ratios policy and Open Market Operations (OMOs)[15]. Lending to governments was more strictly limited, while they still accommodated fiscal policy by trading government papers in the secondary markets.[16] Government rigorously controlled the financial sector until the 1970s, when marketization became ascendant,[17] but banking crises returned. They were thought to be mainly caused by fluctuating exchange rates and inflation, requiring more direct intervention from governments and central banks. Inflation raised increasing concern associated with the oil crises, requiring further commitment of central banks to stabilizing prices.[18] Financial liberalization through deregulation has promoted prudential regulation from the late 1960s, and then gave birth to more diverse models of regulation, changing duly the roles played by central banks. Latterly, central banks were formally granted independence and delegated authority over monetary policies in order to achieve better monetary stability. At the same time, the financial sector had developed along with more frequent crises.[19] The Asian Financial Crisis (AFC) changed the development of financial markets with its evident transboundary characteristics. It highlighted the requirement for better cross-

[14] Such legal formalisation was more a symbol than a change of substance, which could only work out in a certain context, and subject to constraints from legislative texts and the real position of the central bank. See, Miroslav A. Kriz, 'Central Banks and the State Today' (1948) *The American Economic Review* 38(4): 565-580.

[15] OMOs are defined as "… the purchase of sale of securities in the open market by a central bank… Historically, the Federal Reserve has used OMOs to adjust the supply of reserve balances so as to keep the interest funds rate—the interest rate at which depository institutions lend reserve balances to other depository institutions overnight—around the target established by the FOMC [Federal Open Market Committee]." <www.federalreserve.gov/monetarypolicy/openmarket.htm>.

[16] Michael Moran, 'Monetary Policy and the Machinery of Government' (1981) *Hong Kong Journal of Public Administration* 2(2): 47-61.

[17] C.A.E. Goodhart, 'The Changing Role of Central Banks' BIS Working Paper, No 326, 2010 <www.bis.org/events/conf100624/goodhartpaper.pdf>.

[18] Alberto Alesina and Lawrence H. Summers, 'Central Bank Independence and Macroeconomic Performance: Some Comparative Evidence' (1993) *Journal of Money, Credit and Banking* 25(2): 151-162.

[19] B. Eichengreen and M. Bordo, 'Crisis Now and Then: What Lessons from the Last Era of Financial Globalisation?' in P. Mizen (ed.), *Monetary History, Exchange Rates and Financial Markets: Essays in Honour of Charles Goodhart* (vol 2, Edward Elgar Publishing 2003) 52-91.

border cooperation, and thus, regulation and supervision needed to address financial stability in a more global context. [20]

This short historical summary of central banks makes some features more evident:

1. Central banks used to support government financing, especially during World Wars, before they had gradually gained independence, adjusting their relationships with governments.

2. Central banks have often reformed and changed their own operations and mechanisms, including monetary policy instruments and crisis management solutions.

3. Financial crises have generally triggered intensive incentives from governments and their central banks to intervene in financial markets more directly, while governments increased control of their own central banks.

In brief, central banks have developed around their changed two-tier relationships. With increasing independence, they have moved away from strict banking regulation and supervision, and their two-tier relationship has been changed by financial crises, enhancing interaction between government, central bank, and the banking sector.

2.2.3 The Role of Central Banks in Maintaining Financial Stability

Until now, this section has illustrated that central banks were initially established by their governments to control inflation, while the banking industry was arguably under stricter control. However, their exact role in maintaining financial stability is still hard to define: it is argued that they have a better understanding of systemic risks when conducting monetary policy, but the relationship between monetary and financial stabilities remains in question.

[20] Laurence H. Meyer, 'Lessons from the Asian Crisis: A Central Banker's Perspective' Levy Economics Institute, Working Paper No 276, 1999 <www.levyinstitute.org/pubs/wp276.pdf>.

Introduction Chapter has pointed out that the definition of financial stability still evolves without much consensus. Inter alia, it is widely accepted that systemic risk is a critical threat to financial stability;[21] this has been emphasized during the GFC. Systemic risk can be analysed in terms of origins, transmission channels, outcomes, prevention and resolution. First, risks which are possible to extend negative effects beyond any individual institution are viewed as contagion; and thus, the degree of probability to which a certain risk will exert systemic aftermath determines the nature of risk.[22] Such a hypothesis consists of a risk allocation with domino effects.[23] Contagion effects are at the core of systemic risks, having different forms of externalities. In the banking sector, systemic crisis is further complicated by hidden risk exposure, incentive problems, and coordination problems; this is a main justification for regulation.[24] Due to the interbank market, banks are particularly prone to contagion or systemic risks, which can trigger problems in a few entities which soon spread to others and then to the whole industry in a comparatively short time, causing excessive losses.[25] Moreover, transmission mechanisms are important to understand systemic risk in interdependent banking networks: the strong linkage will increase the chance of a systemic risk, while the weak linkage will reduce its likelihood.[26] However, the systemic testing of transmission channels is still missing: the uncertainty between triggers and channels make it difficult, if not impossible, to predict triggers and their approaches to systemic risks.[27] As regards consequences, systemic risks would cause different losses to various financial sectors, and specific conditions vary from country to country.[28] Finally, to deal with systemic risk, both private and public solutions are viewed as inevitable.[29] There are three types of

[21] Andrew Crockett, 'Marrying the Micro- and Macro-Prudential Dimensions of Financial Stability' BIS, Financial Stability Forum, September 21, 2000 <www.bis.org/review/rr000921b.pdf>.
[22] Jean-Charles Rochet and Jean Tirole, 'Interbank Lending and Systemic Risk' (1996) *Journal of Money, Credit and Banking* 28(4): 733-762.
[23] George G. Kaufman and Kenneth E. Scott, 'What is Systemic Risk, and Do Bank Regulators Retard or Contribute to It?' (2003) *The Independent Review* 7(3): 371-391.
[24] Martin Summer, 'Banking Regulations and Systemic Risk' (2003) *Open economies review* 14(1): 43-70.
[25] Dimitrios P. Tsomocos, Sudiptoa Bhattachary, C.A.E. Goodhart and Pojanart Sunirand, *Banks, Relative Performance, and Sequential Contagion* (Springer-Verlag 2007).
[26] Rosa M. Lastra, *Legal Foundations of International Monetary Stability* (OUP 2006) 141-147.
[27] Olivier De Bandt and Philipp Hartmann, 'Systemic Risk: A Survey' ECB Working Paper, No 35, November 2000 <www.ecb.europa.eu/pub/pdf/scpwps/ecbwp035.pdf>.
[28] Ibid.
[29] Ben S. Bernanke, 'Financial Reform to Address Systemic Risk' Board of Governors of the Federal Reserve System, March 10, 2009 <www.federalreserve.gov/newsevents/speech/bernanke20090310a.htm>.

public resolution techniques: preventative solutions focus upon reducing the risks before they undermine banks, such as monitoring their management, capital, solvency, liquidity standards, and large exposure limits, while protective skills, named "rescue packages" in practice, target the most affected parts within financial markets; prudential regulation, which is widely employed, is between these two machineries:

> "Traditionally, it [prudential regulation] has consisted of a mixture of monitoring individual transactions (ensuring, for instance, that adequate collateral was put up), regulations concerning self-dealing, capital requirements, and entry restrictions. In some countries, restrictions were placed on lending in particular areas: many East Asian countries, for example, used to have restrictions on real estate lending. Finally, many countries imposed interest-rate restrictions. Concerns about bank runs also led many countries to provide deposit insurance and to establish central banks to serve as lenders of last resort."[30]

Without exception, the central bank is defined as the sole monetary authority in charge of monetary stability, which can be understood as stability in the price level, e.g., the absence of inflation or deflation. However, there are continued debates about the synergy or trade-off effect between monetary and financial stability. For example, high interest rates may control inflations but violate banks' balance sheets.[31] According to one study about the integral roles of individual banks under financial distress, a contraction in monetary policy will increase the average probability of their distress.[32] Some financial instability is believed to derive from activities of monetary authorities, such as central banks or IMF.[33] By contrast, it is argued that maintaining financial stability was always part of the central bank's genetic code.[34] According to one survey, which incorporated a set of variables from

[30] Thomas F. Hellmann, Kevin C. Murdock and Joseph E. Stiglitz, 'Liberalization, Moral Hazard in Banking, and Prudential Regulation: Are Capital Requirements Enough?' (2000) *The American Economic Review* 90(1): 147-165.
[31] Frederic S. Mishkin, 'The Causes and Propagation of Financial Instability: Lessons for Policymakers' <www.kansascityfed.org/publicat/sympos/1997/pdf/s97mishk.pdf>.
[32] Ferre De Graeve, Thomas Kick and Michael Koetter, 'Monetary Policy and Financial (In)Stability: An Integrated Micro-Macro Approach' Working Paper Series, February 28, 2007 <http://ssrn.com/abstract=966252>.
[33] For some examples, see, Mieczystaw Dobija, 'Monetary Causes of the Financial Systems Instability' Cracow University of Economics, Working Paper No 9/KR/2/08/S/426, 2008. <http://ssrn.com/abstract=1295186>.
[34] Tommaso Padoa-Schioppa, 'Central Banks and Financial Stability: Exploring a Land in Between' Second ECB Central Banking Conference "The Transformation of the European Financial System",

79 countries between 1970 and 1999, the choice of the central bank's objectives significantly affected the probability of a banking crisis except among transition countries.[35] Recently, it has further been estimated that a narrow-down objective of central banks in maintaining financial stability could reduce the likelihood of systemic risks.[36] Overall, disagreements continue, debating about the exact link between monetary and financial stability, creating further uncertainty about the role played by central banks in reducing systemic risks.

Central banks nevertheless have their own incentives and advantages to achieve financial stability.[37] To begin with, monetary policy would be under serious challenge without financial stability, and central banks pursue financial institutions with stable liquidity conditions. It is argued that banks are more vulnerable to contagion or systemic risk due to interdependent contracts in the payment system, the interbank market and the derivatives market; and hence, the authority owning liquidity is required to offer due financial aid.[38] Since the central bank is responsible for liquidity provision, it is qualified to deal with systemic risk caused by the liquidity condition of financial institutions and/or of the market as a whole.[39] The central bank can fulfil this duty through the following specific instruments:[40]

1. Central bank is the only provider of immediate liquidity by legal means mainly through its LOLR facility;

Policy Panel Introductory Paper, Frankfurt am Main, October 24 & 25, 2002 <www.ecb.europa.eu/events/pdf/conferences/tps.pdf>.

[35] Alicia García Herrero and Pedro del Río, 'Financial Stability and the Design of Monetary Policy' Banco de Espana, Working Paper No 0315, 2004 <www.bde.es/f/webbde/SES/Secciones/Publicaciones/PublicacionesSeriadas/DocumentosTrabajo/03/Fic/dt0315e.pdf>.

[36] Alicia García Herrero and Pedro del Río, 'Central Banks as Monetary Authorities and Financial Stability' in *The Handbook of Central Banking and Financial Authorities in Europe* (Cheltenham: Edward Elgar 2005).

[37] Philipp Hildebrand, 'Financial Stability: Objectives and Challenges for Central Banking' Conference of "Banking and Asset Markets: Developments, Risks and Policy Issues", Paris, November 30, 2007 <www.bis.org/review/r071203e.pdf>.

[38] Xavier Freixas, Bruno M. Parigi and Jean-Charles Rochet, 'Systemic Risk, Interbank Relations, and Liquidity Provision by the Central Bank' (2000) *Journal of Money, Credit, and Banking* 32(3): 611-638.

[39] There are three kinds of liquidity shortages under the domain of central banking. For details, see, Stephen G. Cecchetti and Piti Disyatat, 'Central Bank Tools and Liquidity Shortage' FRBNY Economic Policy Review, August 2010 <www.ny.frb.org/research/epr/10v16n1/1008cecc.pdf>.

[40] Ross Cranston, *Principles of Banking Law* (2nd Edition, OUP 2002) 110-125.

2. Central bank is the only legal provider to smooth the functioning of the payment system, which is closely linked with systemic risks.

Moreover, as the leading monetary authority, the central bank can affect the wider economy through monetary policy. It is able to design and carry out a top-down analysis of systemic outcomes of a certain monetary policy, rather than individual institutions; this is regarded as its advantage to predict and prevent systemic risk. A banking crisis can be understood as a situation, where actual or potential bank runs or failures induce banks to suspend the internal convertibility of their liabilities or which compel the government to extend assistance on a large scale. And monetary policy can be designed accordingly.[41] More broadly, since a healthy financial system is important for economic development, the incentive of the central bank could be attached to its other statutory objectives, e.g., supporting economic development. What is more, an interacted relationship between price and financial stability will resolve the potential conflicts of interests, and thus, close coordination and information exchange, as well as the advisory role of the central bank, are necessary for successful banking regulation and supervision.[42] Recently, through the interbank and wholesale markets, the engagement of the central bank in stabilizing the markets has become more preventive with the intention to reduce the moral hazard problem posed when exercising its LOLR facility.[43]

From the theoretical perspective, financial stability may be hard to define, but it tops the public policy agenda.[44] At least, the central bank has its own incentives and advantages when dealing with systemic risk in terms of monetary policy conduct, liquidity support and macroeconomic goals.[45]

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[41] Stijn Claessens and M. Ayhan Kose, 'Financial Crises: Explanations, Types, and Implications' IMF Working Paper, WP/13/28, 2013 <www.imf.org/external/pubs/ft/wp/2013/wp1328.pdf>.
[42] C.A.E. Goodhart, 'The Organizational Structure of Banking Supervision' (2003) *Economic Notes* 31(1): 1-32.
[43] For example, refer to, Alistair Milne, 'Can Central Bank Provision of Market Liquidity Create a Problem of Moral Hazard?' in Franco Bruni and David T. Llewellyn (eds*), The Failure of Northern Rock: a Multi-Dimensional Case Study* (SUERF, The European Money and Finance Forum, Vienna 2009) 175-194.
[44] Andrew Crockett, 'Why is Financial Stability a Goal of Public Policy?' (1997) *Economic Review* Q (IV): 5-22.
[45] Park Yung Chul, 'A Macroprudential Approach to Financial Supervision and Regulation: Conceptual and Operational Issues' Draft for IMF-FSC/FSS International Conference on "Macroprudential Supervision", October 2006 <www.imf.org/external/np/seminars/eng/2006/macropr/pdf/YungChul.pdf>.

2.2.4 Summary

Referring to its origin, the central bank was created by taking into account demands from both government and the banking sector: being government's banker, it was delegated responsibilities for monetary stability; being bankers' bank, it offered regulation, supervision and liquidity support. However, there is little evidence that financial stability has been enhanced by central bank control over monetary stability. Even so, the central bank has distinct incentives in regulation and supervision, which is further enhanced by the inherent instability of the financial system; in the event of financial crises, the central bank is challenged to restore financial stability by using its instruments available. As indicated by historical evidence, the prevailing two-tier relationship is changed by a financial crisis: by sacrificing some independence, the central bank moved closer to government; by managing the markets, it increased direct control.

2.3 Legal Framework of Central Banks

Through the 20th century, central banks began to be regulated by either constitutional or specific laws. They were granted with legal rights and obligations, which are ultimately political choices, expressing society's preferences.[46] This thesis will approach the comparative analysis through a rules-based legal framework, and the following section will introduce typical legal provisions before testing our key propositions in the subsequent case studies. From the perspective of the two-tier relationship, attention will be given to features more directly linked with the relationship of a central bank with government and with the market respectively.

[46] Ellen Meade, 'Political Framework and Legal Status' in *Issues in the Governance of Central banks* (A Report from the Central Bank Governance Group, BIS 2009) 57-76.

2.3.1 Ownership and Legal Status

There are three kinds of legal status granted to central banks: private entity, government-owned corporation, and government institution.[47] Moreover, legal status itself changes: for example, both the BOE and BOJ were nationalised due to World War II. Many newly-established post-war central banks are owned by their states, including China. Nowadays, most central banks operate as public agencies.

2.3.2 Central Bank Objectives

Once central banks were gradually prohibited from directly financing government deficits, their objectives changed.[48] Government delegated monetary policy to central banks, giving them the sole responsible authority for achieving price stability.[49] They used to engage in different economic activities, resulting in other objectives, but potential conflict of interests might cause trades-off effects when they pursue goals other than monetary stability. As a result, during the last two decades, responsibilities were divided: independent central banks were exclusively responsible for monetary stability, while fiscal or political powers pursued employment and/or economic growth.[50] Until recently, it has been argued that inflation targeting would help central banks make further commitment to monetary stability. More central banks have therefore embraced price stability or keeping inflation under control among their objectives, as mandated by statute.[51]

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[47] Ibid. 5-16.
[48] Ibid. 17-55.
[49] C.A.E. Goodhart, 'The Constitutional Position of The Central Bank' The 32nd Wincott Lecture, October 8, 2002 <www.iea.org.uk/sites/default/files/publications/files/upldbook202pdf.pdf>.
[50] The relationship between fiscal policy and monetary policy has been discussed. E.g., Thomas J. Sargent and Neil Wallace, 'Some Unpleasant Monetarist Arithmetic' (1981) F*RB Minneapolis Quarterly Review* 5(3): <www.minneapolisfed.org/research/qr/qr531.pdf>. Overall, it is argued that irresponsible fiscal policy can make monetary policy less effective for achieving monetary stability, and large government deficits would pressure monetary authorities to monetise debts, resulting in rapid money growth but inflation. Refer to, Frederic S. Mishkin, 'What should Central Banks Do?' for the Homer Jones Lecture, FRB St. Louis, March 30, 2000 <https://research.stlouisfed.org/publications/review/00/11/0011fm.pdf>.
[51] Lars E.O. Svensson, 'Inflation forecast Targeting: Implementing and Monitoring Inflation Targets' (1997) *European Economic Review* 41(6): 1111-1146.

2.3.3 Organizational Structure

Controlling monetary policy, central banks are first and foremost policy making institutions. [52] But their specific organizational structures have become more diverse.[53] Developments include the trend towards "flatter" management structures, replacing the strict political hierarchy, and more horizontal management of core activities, resulting in functional reorganization.[54] Latterly, major central banks have created separate divisions responsible for designing and implementing monetary policies.[55]

2.3.4 Monetary Policy Instruments

Monetary policy is exclusive to a central bank for monetary stability purposes only, and should be designed in line with its statutory goals.[56] For the convenience of further analysis, monetary policy instruments are here categorised into conventional and unconventional monetary policy (UMP). As central banks have historically shifted from regulatory instruments to market mechanisms, conventional policy instruments have developed from direct tools to indirect means.[57] By definition, directive instruments control the amount of money and credit quantitatively or qualitatively within the banking system, such as monetary targeting.[58] Some direct tools are still employed to enable them to manage the markets, especially in

[52] Yoshiharu Oritani, 'The Public Governance of the Central Bank: an Approach from New Institutional Economics' BIS Working Paper, No 299, 2010 <www.bis.org/publ/work299.pdf>.
[53] For an empirical cross-country study, refer to, Iftekhar Hasan and Loretta J. Mester, 'Central Bank Institutional Structure and Effective Central Banking: Cross-Country Empirical Evidence' FRB Philadelphia, Working Paper No 08-5, 2008 <www.philadelphiafed.org/research-and-data/publications/working-papers/2008/wp08-5.pdf>.
[54] *Supra* 46, 163-181.
[55] Supra 46, 77-90. Alan S. Blinder, 'Monetary Policy by Committee: Why and How?' DNB Working Paper No.92, February 2006 <www.dnb.nl/binaries/Working%20Paper%20No%2092-2006_tcm46-146749.pdf>.
[56] *Supra* 46, 37.
[57] *Supra* 40, 120-122.
[58] "A monetary targeting strategy comprises three elements: 1) reliance on information conveyed by a monetary aggregate to conduct monetary policy; 2) announcement of targets for monetary aggregates, and 3) some accountability mechanism to preclude large and systemic deviations from the monetary targets." See, Frederic S. Mishkin, 'From Monetary Targeting to Inflation Targeting: Lessons from the Industrialized Countries' Bank of Mexico Conference "Stabilization and Monetary Policy: The International Experience", Mexico City, November 14-15, 2000 <www0.gsb.columbia.edu/faculty/fmishkin/PDFpapers/00BOMEX.pdf>.

transition and emerging countries. By contrast, indirect requirements cover mainly reserve requirements in both means of cash and liquid assets from financial institutions holding with central banks, such as reserve ratios and minimum reserves.[59] Since they take responsibility for the payment and settlement system, banks can borrow either from the interbank market, or from the central bank. In consequence, the central bank can affect borrowing by changing relevant rates.[60] A new development about indirect monetary policy is that OMOs have become widely used, which involve government securities in the money supply between banks and the central bank.[61] Among all those policy instruments mandated for central banks, there has not yet to be convincing evidence about any specific tools to dominate inflation control, although some surveys indicate that fixed exchange rates in developing countries would help reduce the probability of banking crises.[62]

Since the BOJ has employed unusual tools to deal with recession following the burst of the bubble from the late 1980s onwards, unconventional policy instruments have come into the spotlight, and have also been widely employed during the GFC. By definition, the UMP elevates liquidity management, from being passive in meeting the requirements of interest rates policies during "normal" times, to an active role for influencing broader financial conditions.[63] As a crisis management tool, it could be employed in the LOLR programmes targeting systemic risks, and also as an independent monetary policy to maintain financial stability.[64] They will change the central bank's balance sheet, and thus, can be defined as "balance sheet policies".[65]

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[59] Reserve requirements are defined, by the US Fed, as "the amount of funds that a depository institution must hold in reserve against specific deposit liabilities" <www.federalreserve.gov/monetarypolicy/reservereq.htm>.
[60] CPSS-IOSCO, 'Principles for Financial Market Infrastructures' BIS, Committee on Payment and Settlement Systems & Technical Committee of the International Organization of Securities Commissions, April 2012 <www.bis.org/publ/cpss101.htm>.
[61] <www.newyorkfed.org/aboutthefed/fedpoint/fed32.html>.
[62] There are some studies following the AFC 1997. E.g., see, Barry Eichengreen and Ricardo Hausmann, 'Exchange Rates and Financial Fragility' IMF NBER Working Paper No 7418, November 1999 <www.nber.org/papers/w7418.pdf>.
[63] Caruana Jaime, 'Unconventional Monetary Policies in Time of Crisis' BIS, SUERF Annual Lecture, Brussels, November 16, 2009 <www.bis.org/speeches/sp091118.htm>.
[64] Leonardo Gambacorta, Boris Hofmann and Gert Peersman, 'The Effectiveness of Unconventional Monetary Policies at the Zero Lower Bound: A Cross-Country Analysis' BIS Working Paper No 384, 2012 <www.bis.org/publ/work384.pdf>.
[65] Claudio Borio and Piti Disyatat, 'Unconventional Monetary Policies: an Appraisal' BIS Working Paper No 292, 2009 <www.bis.org/publ/work292.pdf>.

Monetary policy instruments can only work properly in certain circumstances, and market discipline is an important base. Due to different transmission channels, different outcomes might be achieved by applying these instruments.[66]

2.3.5 Regulation and Supervision

As explained, banks have traditionally been under more rigorous supervision and regulation, aiming ultimately at maintaining "a safe and sound system". The official reasons for regulation could be classified: (1) systemic risk; (2) prevention of fraud, monetary-laundering, and terrorism; (3) consumption protection and deposit insurance; and (4) competition policy.[67]

In spite of mixed usages, regulation and supervision should be distinguished. As regards rule-making, banking regulation is defined as the establishment of rules, including acts of the legislator, and statutory instruments or rules from competent authorities, such as the Ministry of Finance (MOF), the central bank and other regulatory agencies.[68] Meanwhile, rules from private or self-regulatory agencies and at the international level would all affect the domestic financial market. In banking and financial services, regulations are mainly prudential rules affecting accesses to the market and risks to the system.[69] As for supervision, it broadly refers to the process of monitoring and enforcement, covering the whole range of banking activities: market entry, supervision *stricto sensu*, sanctioning or imposition of supervised entities, and internal/external crisis management. In sum, regulation is the prerequisite to due supervision, which rather focuses upon the degree to which banks abide by rules and regulations. Most supervisors are granted regulatory powers. For example, licensing is a key issue in banks' market entry, including conditions for

[66] Frederic S. Mishkin, 'The Channels of Monetary Transmission: Lessons for Monetary Policy' NBER Working Paper Series No 5464, 1996 <www.nber.org/papers/w5464.pdf>; Pier Francesco Asso, George A. Kahn and Robert Leeson, 'The Taylor Rule of the Transformation of Monetary Policy' The Federal Reserve Bank of Kansas City, RWP 07-11, December 2007 <http://ssrn.com/abstract=1088466>.
[67] *Supra* 40, 65-81.
[68] Rosa M. Lastra, 'Central Banking and Banking Regulation' Financial Market Group, LSE, 97/02408, 1996, 108-109.
[69] Kenneth Kaoma Mwenda, *Legal Aspects of Financial Services Regulation and the Concept of a Unified Regulator* (Washington DC: World Bank 2006)5.

license, the list of activities, and special arrangements for foreign entities, which should all be clearly listed in set rules.[70]

From a historical perspective, financial regulation and supervision was not a natural role for a central bank, especially in the free-banking era. Self-regulation has since shifted toward government intervention, combining both private and public solutions.[71] From the 1970s, with marketization, government intervention was constrained to necessary regulation in the financial sector. Prudential supervision began to be applied to most advanced economies, introducing elements and techniques as regards monitoring the safety and soundness of banks, among others.[72] This was generally embraced by central banks. First, as fixed by laws and rules, capital adequacy is directly linked to the health of banking assets, and lending restrictions are targeted at the excessive risk exposures caused by loans to a single borrower or subsidiaries.[73] The clarified requirements for capital adequacy have been adopted in the international arena, especially after the Basle Accord came into effect.[74] Second, information disclosure became emphasizing, and various measurements and instruments have duly been employed, such as reports, ratings, on-site examinations, in-house surveillance, consultations and external auditions.[75] Third, sanctioning is equal to penalties to non-compliance with the law or other type of wrongdoing: with different emphases, "institutional sanctions" affect the institution, while "personal sanctions" directly target management.[76] In practice, banks in most countries are less subject to general corporate bankruptcy procedures, but to particular arrangements with an emphasis upon depositors' protection and potential contagion risk.

[70] Tommaso Padoa-Schioppa, *Regulating Finance: Balancing Freedom and Risk* (OUP 2004) 14-31.
[71] Cally Jordan and Pamela Hughes, 'Which Way for Market Institutions: The Fundamental Question of Self-Regulation' (2007) *Berkeley Business Law Journal* 4(2): 205-226.
[72] Vincent P. Polizatto, *Prudential Regulation and Banking Supervision: Building an Institutional Framework for Banks* (World Bank Publications 1990).
[73] Joao A.C. Santos, 'Bank Capital Regulation in Contemporary Banking Theory: A Review of the Literature' (2001) *Financial Markets, Institutions & Instruments* 10(2): 41-84.
[74] For a review, see, Patricia Jackson, 'Capital Requirements and Bank Behaviour: The Impact of the Basle Accord' Basle Committee on Banking Supervision Working Papers, No 1, April 1999 <www.bis.org/publ/bcbs_wp1.pdf>.
[75] James R. Barth, Gerard Caprio and Boss Levine, *Rethinking Bank Regulation: Till Angels Govern* (CUP 2006) 46-63.
[76] *Supra* 26, 85-90.

Also, with neo-liberalization, central banks' regulatory and supervisory role has been challenged by financial conglomerates, along with other requirements for professional supervision and regulation.[77] It is argued that potential conflicts of interests might be triggered when dealing with more than one objective by a single authority; this is the major reason to separate regulation and supervision responsibilities from the central bank.[78] Monetary stability is often the primary stated goal for the central bank, which is the sole mandatory monetary authority conducting the top-down monetary policy.[79] But if in charge of financial regulation and supervision, the central bank would possibly endeavour to control inflation by implementing over-constraints or over risk-exposure upon banks.[80] What is more, compromise would cause damage to its reputation, affecting thus monetary stability.[81] As a result, in certain jurisdictions, the task of financial regulation and supervision is entrusted to a separate body outside the central bank.[82] As such, regulation and supervision can be undertaken by the central bank, an independent mega-regulator, or several sector-based organizations.[83]

Even so, it is not possible to totally isolate the central bank from banking regulation and supervision. To begin with, it has its own incentives. It controls liquidity, as well as the payment and settlement system. The liquidity condition of both financial institutions and the market could possibly affect its balance sheet, requiring it to deal with market upheavals caused by liquidity shortage.[84] Meanwhile, failures in supervision and regulation can give rise to reputational risks for monetary policy, whilst confidential bank supervisory information will help the central bank assess macroeconomic variables, requiring consideration of any complementarity between

[77] For a comparison of these two models, see, *supra* 75.
[78] C.A.E. Goodhart and Dirk Schoenmaker, 'Should the Functions of Monetary Policy and Banking Supervision be Separated?' (1995) *Oxford Economic Papers* 47(4): 539-560.
[79] ECB, 'The Role of Central Banks in Prudential Supervision' <www.ecb.int/pub/pdf/other/prudentialsupcbrole_en.pdf>.
[80] Carmine Di Noia and Giorgio Di Giorgio, 'Should Banking Supervision and Monetary Policy Tasks be Given to Different Agencies?' (1999) *International Finance* 2(3): 361-378.
[81] C.A. E. Goodhart and Dirk Schoenmaker, 'Institutional Separation Between Supervisory and Monetary Agencies' Financial Markets Group, LSE, Special Paper No 52, April 1993.
[82] *Supra* 69, 37-87.
[83] For an empirical survey, refer to, Jose de Luna-Martinez and Thomas A. Rose, *International Survey of Integrated Financial Sector Supervision* (World Bank Publications 2003).
[84] *Supra* 39.

monetary policy and financial supervision.[85] In terms of their capacity, central banks generally possess rule-making power and have detailed understanding of the financial markets. Monetary policy instruments, such as monetary policy target, short-term interest rates, money market operations, and standing facilities, are primarily used to achieve price stability; and the other four—payment systems stability, public and private comments, emergency liquidity support and crisis coordination – facilitate maintaining financial stability. At the very least, even without explicit legal provisions, instruments can facilitate them to conduct prudential regulation and supervision.[86] Therefore, central banks have both incentives and capabilities regarding financial regulation and supervision, while safeguarding systemic stability will be adversely affected by removing such powers.

2.3.6 Central Bank Independence

The central bank is located in a two-tier relationship, but being government's banker is not equal to its dependence upon government. Debates continue about the definition of central bank independence, especially about how to make it reconcile with its organizational structure.[87] One of the most widely-used concepts is to free central banks to formulate and conduct monetary policies without government intervention.[88] In a narrow definition of independence, opposing "control",[89] the central bank is independent of political instructions when carrying out its responsibilities.[90]

From a legal perspective, independence refers to powers entrusted to a central bank by legislation. The formal formulation should be contained in a constitution, in a law

[85] Joe Peek, Eric S. Rosengren and Geoffrey M. B. Tootell, 'Is Bank Supervision Central to Central Banking?' (1999) *The Quarterly Journal of Economics* 114(2): 629-653.
[86] *Supra* 70, 111.
[87] James Forder, 'Why is Central Bank Independence so Widely Approved?' (2005) *Journal of Economic Issues* 39(4): 843-865.
[88] John B. Goodman, 'The Politics of Central Bank Independence' (1991) *Comparative Politics* 23(3): 329-349
[89] F. Gulcin Ozkan, 'Who Wants an Independent Central Bank? Monetary Policy-making and Politics' (2000) *The Scandinavian Journal of Economics* 102(4): 621-643.
[90] William Bernhard, 'A Political Explanation of Variations in Central Bank Independence' (1998) *The American Political Science Review* 92(2): 311-327.

or in a contract, forming an organic safeguard by statutes.[91] According to legal provisions, central bank independence incorporates independence in terms of goals, instruments, budget and operation.[92] Generally, the central bank rarely bears goal independence, but has been legally granted operational independence with the explicit monetary objective of price stability. In addition, the incentive of an independent central bank, as well as the integrity and professionalism of central bankers, should be embedded into countries' statutes to guarantee a proper internal structure, including clear declaration of independence, selection and responsibilities of its staff, fiscal and budgetary support, and due regulatory powers.[93]

Historically, central bank independence fluctuated, being particularly affected by inflation rates.[94] There is some historical evidence.[95] In the 19th century, laissez faire and the gold standard fostered considerable independence, later stifled by World War I. The following inflation triggered the return of independence, but after the 1930s Great Depression, reform revolved around further constraining it, enhanced by the government's rising fiscal policies. As argued, such extraordinary events as wars and financial upheavals trigger greater government control over its economic bodies, including the central bank, for political powers have noticeable advantages if required to expand revenues quickly and efficiently.[96] Gradually, it was accepted that inflationary prospects encourage more independent monetary authority, whilst extraordinary events provoke governments' intensive involvement; government intervention and central bank independence can be counter-balance.[97]

However, what constitute adequate independence is still unclear, and controversy has continued with respect to the relationship between central bank independence and

[91] Rose M. Lastra, 'The Institutional Dimension of Central Bank Independence' Working Paper No 6, February 2, 1995 <www.arinoyvillar.com/libros/WPweb/WP06.pdf>.
[92] Amirul Ahsan, Michael Skully and J. Wickramanayake, 'Determinants of Central Bank Independence and Governance: Problems and Policy Implications' (2006) *Journal of Administration and Governance* 1(1): 47-67.
[93] *Supra* 70, 27- 48.
[94] Helge Berger, Jakob De Haan and Sylvester C.W. Eijffinger, 'Central Bank Independence: An Update of Theory and Evidence' (2001) *Journal of Economic Surveys* 15(1): 3-40. Deflation is not rare in history, but it only receives limited attention. The case study about Japan's deflation will be analysed in Chapter Six.
[95] *Supra* 13, 184-202.
[96] *Supra* 26, 50-60.
[97] Forest Capie, 'The Evolution of General Banking' The World Bank, Policy Research Working Paper 1534, 1995 <http://elibrary.worldbank.org/doi/pdf/10.1596/1813-9450-1534>.

monetary stability or even financial stability.[98] In particular, following the collapse of the Bretton Woods System, research in this area did not bring noticeable consensus.[99] In the legal opinion, an autonomous central bank was proved to benefit monetary stability and low inflation,[100] but without much systemic effect upon real economic growth.[101] Later, it was established that other factors also affected central bank independence.[102] For example, *de jure* autonomy was more closely related to independence in developed countries than in less-developed countries, where *de facto* circumstance has further effects upon monetary policy making. Among less developed countries, political vulnerability has a more pronounced influence upon inflation and its variability, while greater independence could hinder macroeconomic performance, especially after major political transitions.[103] From this point of view, legal variables, such as the appointment of the central bank's board and budgetary policy-making, have limited effects upon inflation or macroeconomic variables.[104] It is thus argued that central bank independence is only enhanced by some specific *de facto* circumstances in certain countries.[105]

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[98] Alex Cukierman, Steven B. Webb and Bilin Neyapti, 'Measuring the Independence of Central Banks and Its Effect on Policy Outcomes' (1992) *The World Bank Economic Review* 6(3): 353-398; Guy Debelle and Stanley Fischer, 'How Independent Should a Central Bank Be?' Conference on "Monetary Policy in a Low Inflation Regime", 1994 <www.bostonfed.org/economic/conf/conf38/conf38f.pdf>; Sylvester C.W. Eijffinger and Jakob de Haan, 'The Political Economy of Central-Bank Independence' Special Papers in International Economics, No 19, May 1996.

[99] Marco Arnone, Bernard J. Laurens and Jean-Francois Segalotto, 'The Measurement of Central Bank Autonomy: Survey of Models, Indicators, and Empirical Evidence' IMF Working Paper, WP/06/227, 2006 <http://contenido.bce.fin.ec/documentos/ElBancoCentral/BancaCentral/CBindependence-wp06227.pdf>.

[100] James Forder, 'Central Bank Independence—Conceptual Clarifications and Interim Assessment' (1998*) Oxford Economic Papers* 50: 307-334.

[101] As early as in 1977, Bade and Parkin analysed the relationship between central banks' monetary policy and their statutory powers. This survey was amended by adding political and economic autonomy indexes by Grilli, Masciandaro, and Tabellini (1991).

[102] Alex Cukierman, *Central Bank Strategy, Credibility and Independence: Theory and Evidence* (MA: MIT Press 1992).

[103] Alex Cukierman and Steven B. Webb, 'Political Influence on the Central Bank: International Evidence' (1995) *The World Bank Economic Review* 9(3): 397-423.

[104] Robin Bade and Michael Parkin, 'Central Bank Laws and Monetary Policy' (October 1988) <http://economics.uwo.ca/people/parkin_docs/CentralBankLaws.pdf>.

[105] Bernd Hayo and Carsten Hefeker, 'Do we Really Need Central Bank Independence? A Critical Re-examination' WWZ-Discussion Paper 01/03, University of Basel, March 2001 <http://ssrn.com/abstract=264454>.

Recently, central bank independence has been promoted by enhancing accountability and transparency.[106] Accountability requires the central bank to explain and justify its policies or actions, and to account for any failures of not achieving its stated goals. In spite of autonomy, the central bank should be accountable to another authority, even though few statutes make explicit provisions for such accountability.[107] To understand the concept of accountability, four factors should be emphasised: the accountable (a holder of power), the accountee (subject of responsibility), the content of obligations and the criteria of assessment.[108] Here accountability can be defined from both institutional and empirical approaches.[109] Institutional articulation enables the central bank to remain accountable to executive, legislative and judicial bodies. Independence does not attempt to diminish the political hierarchy, especially between it and the finance ministry; for example, the former should provide necessary advice, reports, and information to the latter. Central bank independence is guaranteed by statute, which is directly related to parliamentary legislative decisions, and thus, the central bank is subject to parliamentary accountability.[110] In addition, it is under legal control. For example, the US and the EU[111] have set up rules to govern functions of the Court of Auditors in ensuring transparency of central banks' activities. The institutional structure of a central bank could help improve accountability: the decision-making authority reflects its institutional capabilities and statutory constraints, linking accordingly with the political framework that determines its autonomy and powers.[112] For example, it is argued that representatives of the board should be appointed from various economic, social, and legal backgrounds, to increase public acceptance.

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[106] Ben S. Bernanke, 'Central Bank Independence, Transparency, and Accountability' at the Institute for Monetary and Economic Studies International Conference, Bank of Japan, May 26, 2010 <www.federalreserve.gov/newsevents/speech/bernanke20100525a.htm>.

[107] An outstanding exception is the Reserve Bank of New Zealand Act of 1989, which formulates detailed provisions for both narrow and broad accountabilities. <www.rbnz.govt.nz/speeches/0031201.html#P251_58930>.

[108] *Supra* 70, 67-73.

[109] *Supra* 26, 53-59.

[110] *Supra* 46, 135-150.

[111] Directorate-General for Communication, *How the European Union Works: Your Guide to the EU Institutions* (European Commission 2007) 35-36.

[112] Adam S. Posen, 'Declarations Are Not Enough: Financial Sector Sources of Central Bank Independence' in Ben S. Bernanke and Julio J. Rotemberg (eds.), *NBER Macroeconomics Annual 1995* (vol 10, MIT Press 1995) 253-274.

As another indicator, transparency is important in informing the wider public of information formulated and conducted by the central bank so as to gain support for maintaining its autonomy. [113] In principle, both disclosure and performance accountabilities are essential to assess the efficiency and transparency of an independent institution in a market economy.[114] Information disclosure is to ensure transparency when the central bank executes monetary policies, and the examples include the minutes of FOMC meetings[115] and improved information disclosure from the BOE.[116] The performance of a central bank can be assessed by whether it has achieved its statutory monetary goal(s), including budget, expense, income, facilities and efficiency ratios, and thereby, its governing body should be held responsible for relevant failures.[117] Accordingly, clear monetary policy instruments clarified by law should enhance the performance of a central bank, and a single goal could facilitate controlling it; it is thus argued that accountability through transparency will result in lower inflationary prospects with reduced variables.[118]

Overall, any central bank can only possess limited independence. As explained, its origin suggests that it derives from political compromise, and appointments are made by a higher political authority to head its organisation.[119] Furthermore, its goal is mostly constrained to price stability, which has been widely enshrined in central bank law. Under this prerequisite, due independence should favour its pre-commitment to statutory responsibilities.

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[113] John B. Goodman, *Monetary Sovereignty: The Politics of Central banking in Western Europe* (Cornell University Press 1992) 8.

[114] For the relationship between central bank transparency and inflation, refer to, E. Spyromitros and S. Tuysuz, 'Do monetary policy transparency, independence and credibility enhance macro-financial stability?' BETA-THEME, Louis Pasteur University, Strasbourg, December 2008 <http://economics.soc.uoc.gr/macro/docs/Year/2008/paper_1_98.pdf>.

[115] <www.federalreserve.gov/monetarypolicy/fomccalendars.htm>.

[116] <www.bankofengland.co.uk/publications/foi/disclosurelog.htm>.

[117] If final responsibility for fulfilling statutory duty were shifted from the central bank to the government, the expected inflation would increase. See, 'Central Bank Accountability and Transparency: A Comparative Study of Central Bank Financial Reporting Practices' KPMG Financial Services, 2009 <www.kpmg.com/CN/en/IssuesAndInsights/ArticlesPublications/documents/Central-bank-accountability-transparency-O-201008.pdf>.

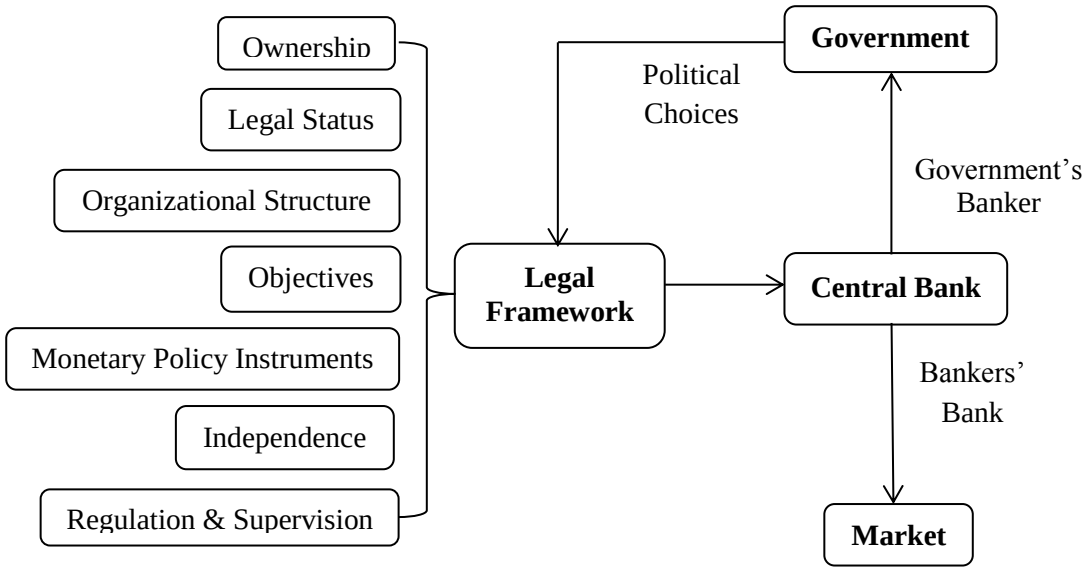
[118] Sylvester C.W. Eijffinger and Marco Hoeberichts, 'Central Bank Accountability and Transparency: Theory and Some Evidence' Economic Research Centre of the Deutsche Bundesbank, Discussion paper 6/00, November 2000 <www.bundesbank.de/Redaktion/EN/Downloads/Publications/Discussion_Paper_1/2000/2000_12_21_dkp_06.pdf?__blob=publicationFile>.

[119] Marcela Eslava, 'Central Bankers in Government Appointed Committees' (2010) *Journal of Public Economics* 94(5-6): 363-379.

2.3.7 Summary

Altogether, the above legal items typically govern a central bank from its two-tier relationship, placing down its legal framework as in the following Figure 2.2:

Figure 2.2: Legal Framework of Central Bank



As illustrated here, there are several common legal elements, which typically exist in legal frameworks governing central banks. Among them, central bank independence is the most convincing explanation of its relationship with the government. Other factors, especially ownership and organizational structures, will define its position with the fulfilment of its statutory objectives from the outset. How central banks deal with the financial sector is reflected by how they exercise their monetary instruments and responsibilities for regulation and supervision. Overall, the legal framework defines how a central bank works as government's banker and bankers' bank.

2.4 Crisis Management Solutions by Central Banks

As stated, financial stability precludes crises, and central banks are required to manage crises under due legal authority. The outcome of crisis management could be judged from the perspective of their statutory objectives (performance accountability). More generally, they work closely both with their governments and the markets so as to restore financial stability, thereby challenging the balance of their previous two-tier relationships.

2.4.1 Crisis Management Solutions

Since the banking sector is innately instable, *ex post* mechanisms are essential for a central bank to deal with problems facing commercial banks and other financial institutions. From a legal perspective, as bankers' bank, it is in charge of serving banks according to its own capacity, mainly the LOLR facility, as well as deposit insurance scheme and bankruptcy proceedings, which are designed for financial stability purpose.

2.4.1.1 LOLR

The LOLR has a long development history, and recently, this facility has been granted to the central bank:[120]

> "…the Bank of England, by the effect of a long history, holds the ultimate cash reserve of the country; whatever cash the country has to pay comes out of that reserve, and therefore the Bank of England has to pay it. And it is as the Bankers' Bank that the Bank of England has to pay it, for it is by being so that it becomes the keeper of the financial cash reserve."[121]

[120] There are still debates about why the LOLR is needed. Refer to, Michael D. Bordo, 'The Lender of Last Resort: Alternative Views and Historical Experience' FRB Richmond Economic Review January/February 1990 <http://people.terry.uga.edu/last/classes/4100/readings/bordo1.pdf>.
[121] Walter Bagehot, *Lombard Street: A Description of the Money Market* (London: Start Publishing LLC 2012).

The LOLR is first an instrument of monetary policy, and thereby, troubled institutions could access credit at the discount rate. But this should be distinguished from monetary policy instruments for price stability: it is to protect banks from runs and failures, rather than control inflation.[122] Secondly, the LOLR is also a banking supervision technique used to bring banks out of financial distress.[123] A failing bank might trigger contagion risks with excessive losses, and hence, providing further liquidity for survival reduces the potential systemic risk.[124]

In principle, the LOLR is available to temporarily illiquid but still solvent banks, triggering the initial problem concerning the differences between illiquidity and insolvency.[125] An economically insolvent bank mostly refers to a bank's liability exceeding its assets, which only causes losses to shareholders.[126] With financial aid, it is not necessarily legally insolvent; in particular, the development of the interbank market has facilitated borrowing between banks. If a bank cannot access credit in this market, it would then be difficult to assess whether it is illiquid or insolvent. Alternatively, lack of liquidity can lead to liabilities exceeding the market value of assets, and might even quickly escalate into insolvency through a "fire-sale".[127] It is thus difficult to differentiate illiquidity from insolvency. Modern central banks mostly offer liquidity to insolvent institutions rather than illiquid ones, as determined by the potential of contagion risks.[128] How any failure from lack of liquidity would adversely affect the economy should also be taken into account. To sum up, both the liquidity position of banks and the potential consequence upon the system should be

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[122] James A. Clouse, 'Recent Development in Discount Window Policy' Federal Reserve Bulletin, November 1994 <www.federalreserve.gov/monetarypolicy/1194lead.pdf>.
[123] Rosa M. Lastra, *The Lender of Last Resort, An International Perspective* (CUP 1999).
[124] Xavier Freixas and Bruno M. Parigi, 'Lender of Last Resort and Bank Closure Policy' CESifo Working Paper No. 2286, April 2008 <www.cesifo.de/pls/guestci/download/CESifo%20Working%20Papers%202008/CESifo%20Working%20Papers%20April%202008/cesifo1_wp2286.pdf>.
[125] C.A.E. Goodhart, 'Myths about the Lender of Last Resort' (1999) *International Finance* 2(3): 339-360.
[126] Stephen Morris and Hyun Song Shin, 'Illiquidity component of Credit Risks' (September 2009) <www.princeton.edu/~smorris/pdfs/Illiquidity%20Component.pdf>.
[127] Fire sale is "essentially a forced sale of an asset at a dislocated price. The asset sale is forced in the sense that the seller cannot pay creditors without selling assets. The price is dislocated because the highest potential bidders are typically involved in a similar activity as the seller, and are therefore themselves indebted and cannot borrow more to buy the asset. Indeed, rather than bidding for the asset, they might be selling similar assets themselves. Assets are then bought by nonspecialists who, knowing that they have less expertise with the assets in question, are only willing to buy at valuations that are much lower". See, Andrei Shleifer and Robert Vishny, 'Fire Sales in Finance and Macroeconomics' (2011) *Journal of Economic Perspectives* 25(1): 29-48.
[128] *Supra* 34.

analysed prior to proceeding with the LOLR.[129] The principles a central bank should follow here include, in addition to distinguishing insolvent institutions from the illiquid ones, lending being preannounced and offered freely, but at a penalty rate and with good collateral.[130] Such lending is short-term by nature but, to meet practical liquidity requirements of falling banks, short-term financial assistance might not be sufficient to resolve their problems.[131]

Clear legal provisions are viewed as effective in minimizing the misuse of the LOLR facility: under prudential consideration, legal provisions should incorporate availability of this facility, procedures, requirements, and especially terms. Basically, the LOLR was conducted through the OMOs, but it is still rare for central bank laws to explicitly formulate this arrangement, apart from US legislation. The US Fed Act describes the periods, penalty rate, and collateral for discount window lending, covering general principles regulating the LOLR.[132] Originally, the US mandated the LOLR facility with discount window arrangements under Sections10 (a) and 10 (b) of the Federal Reserve Act, and it was specifically governed by Regulation A. Basically, this facility was limited to emergent circumstances where borrowers cannot obtain credit from other sources. In 1980, the Depository Institutions Deregulation and Monetary Control Act expanded the application from depository institutions by modifying the nature of financial institutions.[133] The Federal Deposit Insurance Corporation Improvement Act 1991 made further changes to the LOLR: the "Limitations on Advances" section makes it clear that emergent loans are only available short-term for illiquid but solvent financial institutions; additionally, it explicitly addresses that the LOLR is a discretionary role, but not a mandatory one.[134]

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[129] *Supra* 121.
[130] *Supra* 121. Also, see, Henry Thornton, *An Enquiry into the Nature and Effects of the Paper Credit of Great Britain* (Edited and with an Introduction by F.A. Hayek, London: George Allen and Unwin 1939).
[131] Historically, the US Fed extended its loans in repeated financial crises, but suffered major losses. Refer to, Ana Schwartz, 'The Misuse of the Fed's Discount Window' (1992) *FRB St Louis Review* 58: <https://research.stlouisfed.org/publications/review/92/09/Misuse_Sep_Oct1992.pdf>.
[132] <www.frbdiscountwindow.org/index.cfm>.
[133] Robert Craig West, 'The Depository Institutions Deregulation Act of 1980: A Historical Perspective' FRB Kansas City Economic Review, February 1982 <www.kansascityfed.org/PUBLICAT/EconRev/EconRevArchive/1982/1q82west.pdf>.
[134] FDIC strengthened its power, and could offer failed banks with the least costly funds. Subtitle E—Least-Cost Resolution, FDICIA 1991.

Concerning moral hazard, there have been proposals for changing the LOLR.[135] There are arguments over the recipient of emergent financial aid from the central bank: individual institutions or the market as a whole.[136] Recently, some new-rising issues might affect the further reform. One is that, due to financial conglomerates, the central bank might be required for financial assistance in such depository institutions as universal banks, but their illiquid problems are actually caused by business activities in securities markets. It has thus extended the safety net beyond depositors' protection.[137] Another issue is that the US Fed has offered similar financial help to Japanese banks operating in New York in certain conditions.[138]

2.4.1.2 Deposit Insurance

Most industrialized countries have designed deposit insurance programmes,[139] and this part will focus upon some legal aspects.[140] While certain programmes are spelt out in rules, others are implicit. Explicit ones,[141] such as the Federal Deposit Insurance Corporation (FDIC) in the USA[142] and the EC Directive on Deposit Guarantee Schemes[143], are formulated by law with regard to structure and operation. As a general rule, insured depositors are paid only after the bank is closed, preventing bank runs and reducing losses to taxpayers. But the implicit insurance protection covers all depositors, other creditors, shareholders and even managers. Since implicit insurance protection can be exercised while the bank is still operating,

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[135] *Supra* 125. For a case study of the US Fed, refer to, Brain F. Madigan and William R. Nelson, 'Proposed Revision to the Federal Reserve's Discount Window Lending Programs' Federal Reserve Bulletin, July 2002 <www.federalreserve.gov/pubs/bulletin/2002/0702lead.pdf>.
[136] Thomas M. Humphrey and Robert E. Keleher, 'The Lender of Last Resort: A Historical Perspective' (1984) *the Cato Journal* 4(1): 275-321.
[137] <www.frbdiscountwindow.org/regulationa.cfm>.
[138] <www.newyorkfed.org/aboutthefed/fedpoint/fed26.html>.
[139] *Supra* 77, 132-136.
[140] For a detailed survey of legal indicators, refer to, Joseph J. Norton, Rosa M. Lastra, and Douglas W. Arner, 'Legal Aspects of Depositor Protection Schemes: Comparative Perspective' International Seminar on Legal and Regulation Aspects of Financial Stability, Basel, January 21-23, 2002 <www.cdic.ca/CDIC/Cooperation/APECPolicy/Documents/APEC-Norton-Paper.pdf>.
[141] One survey has examined explicit deposit insurance programmes from 68 countries, focusing upon different incentives from all participants. Gillian G. H. Garcia, 'Deposit Insurance: A Survey of Actual and Best Practices' IMF Monetary and Exchange Affairs Department, WP/99/54, 1999 <www.imf.org/external/pubs/ft/wp/1999/wp9954.pdf>.
[142] Official website: <www.fdic.gov/>.
[143] Official website: <http://ec.europa.eu/internal_market/bank/guarantee/index_en.htm>.

it could possibly trigger moral hazard problems.[144] By comparison,[145] a clear legal provision will not only protect certain depositors, but also reduce moral hazard risk.[146] When compared with the LOLR, which is contingent, deposit insurance is non-contingent: the LOLR will be applied with discretion by a central bank, while explicit deposit insurance is mandatory to protect depositors regulated by legislation.

2.4.1.3 Market-Exit Arrangements

Exit arrangements for insolvent financial institutions are necessary to prevent risk contagion from failing organisations spreading further afield, and also facilitate liquidity mobility.[147] The first issue is that, when it comes to banks' insolvency, specific procedures are varying from country to country:[148] the US is typical in dealing with banks' bankruptcy through the special arrangement of taking into account depositors' protection and potential systemic risk from any failing institutions, but before the GFC, the UK favoured the same rules for banks' failure as those were used in dealing with the failures of other companies. In certain countries, for example, Mainland China, none of the banks' bankruptcy has materialised.[149] Secondly, as argued, due to difficulties with differing illiquidity from insolvency, the definition of "bank bankruptcy" is controversial. A technically insolvent bank might be rescued by the LOLR, rather than legal cessation of business. In practice, responsible authorities prefer to rehabilitate, reorganise, or restructure banks, including both private solutions, such as purchases and mergers, and state aid, for example, bailouts from authorities in charge.[150] The public solution involves

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[144] Richard Dale, 'Deposit Insurance in Theory and Practice' Société Universitaire Européenne de Recherches Financières, Amsterdam 2000 <www.suerf.org/download/studies/study7.pdf>.
[145] It is hard to conclude that the explicit programme functions more effectively than the implicit ones, for deposit insurance will only work in a certain macroeconomic context. Refer to, Edward J. Kane, 'Deposit Insurance around the Globe: Where does It Work?' NBER Working Paper Series, No 8493, 2001 <www.nber.org/papers/w8493.pdf>.
[146] There are arguments concerning whether deposit insurance stabilizes or violates financial markets. E.g. Asli Demirguc-Kunt and Enrica Detragiache, 'Does Deposit Insurance Increase Banking System Stability?' IMF Research Department, WP/00/3, 2000 <http://fmwww.bc.edu/repec/es2000/1751.pdf>.
[147] Garry J. Schinasi, 'Responsibility of Central Banks for Stability in Financial Markets' IMF Working Paper, WP/03/121, 2003 <www.imf.org/external/pubs/ft/wp/2003/wp03121.pdf>.
[148] Erwn Nierop and Michael Stenstrom, 'Cross-Border Aspects of Insolvency Proceedings for Credit Institutions—A Legal Perspective' International Seminar on Legal and Regulatory Aspects of Financial Stability, Basel, January 21-23, 2002 <www1.worldbank.org/finance/assets/images/Nierop Stenstrom.pdf>.
[149] Details will be analysed in Chapters Seven and Eight.
[150] BIS, 'Bank Restructuring in Practice: An Overview' Policy Papers No 6, August 1999 <www.bis.org/publ/plcy06a.pdf>.

changing the balance between taxpayers and the troubled bank, for from the economic perspective, "a well-designed and properly announced bailout policy can indeed reduce rather than worsen moral hazard in banking by increasing the value at stake at the time of risk-taking decisions".[151]

2.4.2 Moral Hazard

Moral hazard could be understood as meaning "if you cushion the consequence of any bad behaviour, then you encourage that bad behaviour".[152] As far as the financial sector is concerned, in particular, safety nets such as the LOLR and deposit insurance will trigger irresponsible, careless, or less conservative, investments or other financial activities, and thereby, increasing the threat of moral hazard, as well as more losses to the taxpayers. It is argued that the arrangements above, which are designed to achieve financial stability, could work instead as incentives for participants in the financial market to take more risks, and incur further financial instability.[153]

However, it does not mean that all safety nets should be removed to eliminate negative implications associated with moral hazard. Adverse effects caused by moral hazard should be compared with the losses potentially caused by failing institutions without those rescue packages: when a bankruptcy could possibly trigger contagion risk, the whole market should be rescued as the priority even with the threat of moral hazard; if otherwise, moral hazard should be taken into account, for it would trigger wider-ranging systemic instability or even crisis.[154] As a consequence, the key issue

[151] Tito Cordelia and Eduardo Levy Yeyati, 'Bank Bailouts: Moral Hazard v. Value Effect' IMF Monetary and Exchange Affairs Department, August 1999 <www.researchgate.net/publication/222001550_Bank_bailouts_moral_hazard_vs._value_effect>.
[152] Tom Baker, 'On the Genealogy of Moral Hazard' (1996) *Texas Law Review* 75(2): 237-292.
[153] George G. Kaufman, 'Lender of Last Resort: A Contemporary Perspective' (1991) *Journal of Financial Services Research* 9008 <http://dallasfed.org/assets/documents/research/papers/1990/wp9008.pdf>.
[154] Andrew Crockett, 'Progress towards Greater International Financial Stability' End-of-Programme Conference of the GEI Programme, London, May 5, 2000 <www.bis.org/speeches/sp000505.htm>.

concerning moral hazard here is a cost-benefit analysis, which central banks should consider while dealing with financial crises.[155]

2.4.3 Changed Two-Tier Relationship in Financial Crises

These three facilities arise amid financial crises, which is why they are regarded as "crisis management solutions". Historical evidence has pointed out that facing financial instability, central banks work more closely with their governments, and managed the financial market more directly. This can be further confined by analysing the changed two-tier relationship caused by employing the above facilities of crisis management.

As conducted under the untraditional monetary policy, a central bank might change its own balance sheet to modify market liquidity directly by exercising asset purchases programmes, while also intervening into individual financial institutions through liquidity aid or bailouts. From this point of view, the central bank moves closer to the market. At the same time, central bank independence is weakened by intensified government intervention, and monetary policy accommodates fiscal solutions. For example, the central bank is required to inject liquidity to troubled financial institutions under the LOLR facility, which will be placed under review from the finance ministry which generally controls public funds. In terms of deposit insurance, some programmes are implicitly offered by government, rather than the central bank. Furthermore, in countries with separated financial regulation and supervision, other responsible agents are involved in dealing with financial upheavals, such as the tripartite arrangement of the BOE, FSA and HM Treasury in the UK.

As a result, during financial crises, the central bank still operates as both government's banker and bankers' bank to achieve the statutory objectives of

[155] Ulrich Bindseil, 'Central Bank Financial Crisis Management—A Practical Perspective with Risk Management Focus' ECB, September 24, 2007 <www.wiwi.uni-frankfurt.de/professoren/wieland/vfs/papers2008/Bindseil.pdf>.

stability, but selected crisis management solutions would require closer collaboration among all the three parties in practice.

2.5 Central Bank Regulation toward Financial Stability

Up till this point, this chapter has analysed legal frameworks governing central banks, as well as crisis management solutions granted by law. In essence, there is little doubt about the primary goal for central banks in monetary stability, while debates about their role in financial stability continue. Even so, they have incentives and capacities to deal with financial crises. Under due legal authority, central bank regulation relating to financial stability will operate as follows:

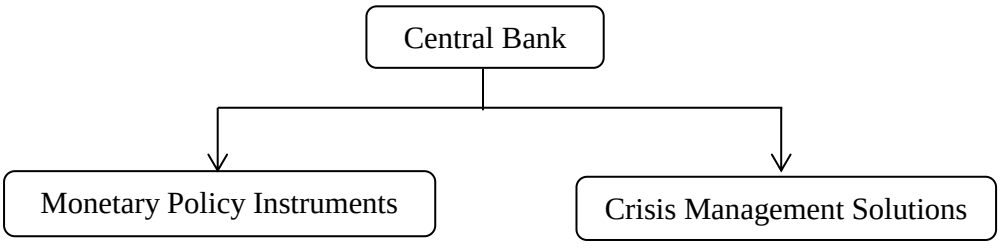
(i) Monetary policy instrument is primary aimed at monetary stability;

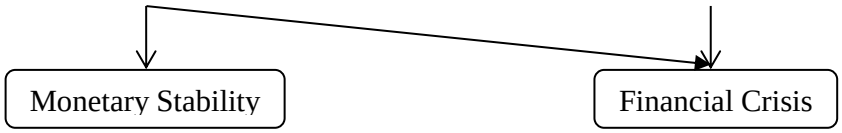
(ii)Emergent lending under the LOLR facility enables to support financial institutions and the markets; and

(iii) Prudential regulation should maintain systemic stability.

The theory part has argued that financial stability can roughly be viewed as transcending disruptive financial crises. Central banks might operate different policy instruments during financial crises and at other times, but their tasks are similarly related to financial stability; this could be summarised as in Figure 2.3:

Figure 2.3: The Role of Central Banks in Maintaining Financial Stability





The figure above displays how a central bank can be linked with financial stability. Central banks are primarily responsible for monetary stability, which should be achieved by conducting direct/indirect monetary policy instruments. They could adjust monetary policy instruments and conduct LOLR facilities to deal with systemic risk. During this course, central banks generally accommodate policy responses from other government bodies, sacrificing some independence, and meanwhile, intervene into financial markets and even business operations of individual financial institutions in a more direct manner. As a result, their original two-tier relationships are changed due to their selected crisis management solutions.

2.6 When National Central Banks Encounter Supranational Financial Crisis

As demonstrated by theoretical, historical and legal evidence above, the central bank operates within domestic legal governance. With financial and economic globalization, financial crises have become cross-border. In this context, an international financial crisis calls for cross-border solutions, including adoption of best practice, due actions taken by multinational organisations (MNOs) and cooperation among central banks.

2.6.1 Financial Liberalisation and Globalisation

After World War II, globalisation of the world economy in trade, production and finance has grown. From a geographic perspective, globalisation is the multiplicity of linkages and interconnections between states and societies, requiring intensification at the levels of interaction, inter-connectedness and interdependence;

by nature, globalisation is production and distribution of products and/or services of homogeneous types and quality on a world-wide basis with the disappearance of former trade barriers and state regulation.[156] As a result, globalisation alters the world economic landscape, including liberalisation of trade and capital markets, internationalisation of cooperation production and distribution strategies and technological changes.[157] The definition of globalisation can be simply divided into scope, which is the intensification at the levels of interaction, and intensity, focusing more upon interaction and interdependence.[158]

Financial globalisation refers to the emergence of integrated capital markets from the wider world. Especially since the 1970s, extensive financial liberalisation had expanded among advanced countries, increasing autonomy and mobility of financial capital, while government intervention changed through market-oriented reform.[159] Financial globalisation, in principle, has brought more capital, improved financial infrastructure, extended markets,[160] and especially, higher economic growth rates for developing countries when integrating well into the cross-border financial markets.[161] However, financial globalisation is also associated with risks, especially spreading further threat of contagion.[162] For example, extended capital markets have arguably intensified domestic economic volatility, which can also challenge democracy either directly or indirectly.[163]

From a worldwide perspective, ongoing economic integration and globalisation of capital accumulation is a matter of national economy integrating around regional

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[156] S. Haggard, *Developing Nations and the Politics of Global Integration* (Washington DC: The Brooking Institution 1995).
[157] Geoffrey Garrett, 'The Causes of Globalization' (2000) *Comparative Political Studies* 33(6/7): 941-991.
[158] A.G. McGrew and P. Lewis, *Globalization and the Nation States* (Cambridge: Polity Press 1992).
[159] Robert A. Mundell, 'A Reconsideration of the Twentieth Century' (2000) *American Economic Review* 30(3): 327-340.
[160] M. Ayhan Kose, Eswar S. Prasad, Kenneth Rogoff and Shang-Jin Wei, 'Financial Globalization: A Reappraisal' (2009) *IMF Staff Papers* 56(1).
[161] Eswar S. Prasad, Kenneth Rogoff, Shang-Jin Wei and M. Ayhan Kose, 'Effects of Financial Globalization on Developing Countries: Some Empirical Evidence' IMF Occasional Paper, No 220, 2003 <www.imf.org/external/np/res/docs/2003/031703.pdf>.
[162] Sergio L. Schmukler, 'Financial Globalization: Gain and Pain for Developing Countries' FRB Atlanta Economic Review, 2nd Quarterly, 2004 <www.frbatlanta.org/filelegacydocs/erq204_schmukler.pdf>.
[163] Leslie Elliott Armijo, 'Mixed Blessings: foreign Capital Flows and Democracy in Emerging Markets' IMF Working Paper, No 47, 1998 <http://ssrn.com/abstract=60132>.

gravitational poles and facilitating closer cooperation and deeper integration after removing trade barriers. Financial globalisation has not yet been fully achieved due to various obstacles; for example, it is argued that a central coordinating and regulatory institution, along with a single currency, is necessary for next-step integration.[164]

2.6.2 Solutions for International Financial Crises

Financial globalisation is closely associated with risks, therefore requiring international cooperation from regulators, supervisors and beyond. [165] Policy responses are made from individual countries, whilst cooperation at both regional and international levels has been intensified. [166]

To begin with, international norms and standards have been designed and applied to advance financial development through best practice.[167] The Basel Accord is most important in relation to prudential regulation of financial institutions.[168] In principle, it has gradually developed to comprise three pillars of minimum capital adequacy, supervisory review process and market discipline, and it aimed to strengthen the soundness and stability of the international banking system by exercising higher capital ratios.[169] Recently, the Basel III proposals have emerged as a response to the GFC.[170]

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[164] Philip Arestis, Santonu Basu and Sushanta Mallick, 'Financial Globalization: the Need for a Single Currency and a Global Central Bank' (2005) *Journal of Post Keynesian Economics* 27(3): 507-531.
[165] Philip Arestis and Santonu Basu, 'Financial Globalization and Regulation' The Levy Economics Institutes of Bard College, Working Paper No 397, December 2003 <www.levyinstitute.org/pubs/wp397.pdf>.
[166] For a proposed framework, see, Lawrence H. Summers, 'International Financial Crises: Causes, Prevention and Cures' (2000) *The American Economic Review* 90(2): 1-16.
[167] Cally Jordan and Giovanni Majnoni, 'Financial Regulatory Harmonization and the Globalization of Finance' The World Bank, Policy Research Working Paper No 2919, October 2002 <http://ssrn.com/abstract=636281>.
[168] The full regulatory framework chronology about the Basel Accord is available at <www.bis.org/list/bcbs_all/page_1.htm>.
[169] Basel Committee on Banking Supervision: <www.bis.org/bcbs/>. And BIS, 'International Convergence of Capital Measurement and Capital Standards: A Revised Framework' (June 2006) <www.bis.org/publ/bcbs107.htm>.
[170] Basel Committee's response to the financial crisis, available at <www.bis.org/bcbs/fincriscomp.htm>.

MNOs have widely been engaged in promoting international cooperation. Inter alia, due to the absence of a global central bank, national central banks are required to cooperate when dealing with cross-border financial crises.[171] Cooperation can be exercised in various formats,[172] and the BIS has played an important role with emphasis upon improving decision making.[173] It has developed "to serve central banks in their pursuit of monetary and financial stability, to foster international cooperation in those areas and to act as a bank for central banks".[174] Central bank cooperation is aimed to achieve and maintain monetary and financial stability, but it is particularly prone to government intervention, international relationships and market conditions.[175] Historically, rigid government control made central bank cooperation gradually recede during the first half of the 20th century.[176] With the market-oriented reform, international banking and capital mobility have sharply expanded, and banking crises made a comeback along with deregulation, requiring further central bank cooperation.[177] The GFC has also highlighted this issue, as explained in the following case studies.

As globalisation has brought cross-border financial crises, influencing factors become more complex, affecting not only the choices of central banks, but also the outcomes of their policy responses: certain joint solutions are expected, and spill-over effects affect more than just one country.

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[171] Jaime Caruana, 'Central Bank Cooperation: Reflections on the Experience of the Last Eight Decades' CEMLA's 60th Anniversary Commemorative Conference on "Central Bank Cooperation at the Beginning of the 21st Century", July 20, 2012 <www.bis.org/speeches/sp120724.htm>.
[172] A.D. Crockett, 'Reflections on the Future of Central Bank Cooperation' 4th BIS Annual Conference on "Celebrating 75 Years of the Bank for International Settlement, 1930-2005", June 27-29, 2005 <www.bis.org/publ/bppdf/bispap27.htm>.
[173] W.R. White, 'Past and Future of Central Bank Cooperation' 4th BIS Annual Conference on "Celebrating 75 Years of the Bank for International Settlement, 1930-2005", June 27-29, 2005 <www.bis.org/publ/bppdf/bispap27.pdf>. Keith Suter, 'The Banker's Banker's Bank: the Bank of International Settlements' Global Directions, July 2004 <http://global-directions.com/Articles/Business/TheCentreOfBanking.pdf>.
[174] <www.bis.org/about/index.htm>. For the historical background, see, James Calvin Baker, *The Bank for International Settlements: Evolution and Evaluation* (Greenwood Publishing Group 2002).
[175] Claudio Borio and Gianni Toniolo, 'One Hundred and Thirty Years of Central Bank Cooperation: a BIS Perspective' BIS Working Paper, No 197, 2006 <www.bis.org/publ/work197.pdf>.
[176] Gianni, Toniolo, *Central Bank Cooperation at the Bank for International Settlements, 1930-1973* (CUP 2005).
[177] Richard N. Cooper, 'Almost a Century of Central Bank Cooperation' BIS Working Paper, No 198, 2006 <www.bis.org/publ/work198.pdf>.

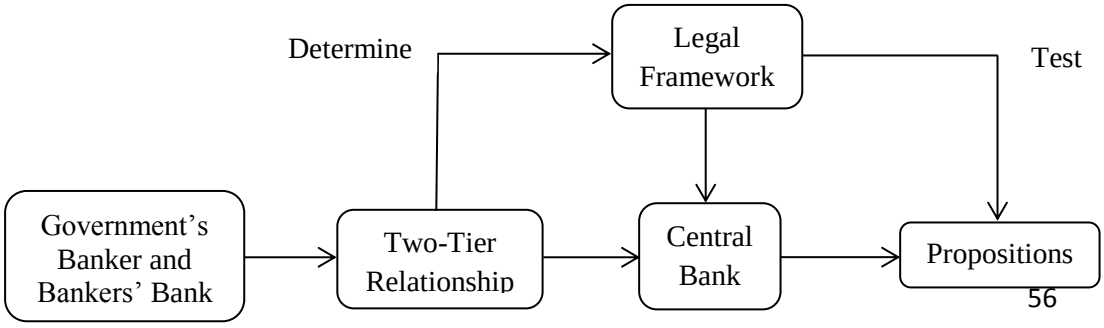
2.7 Conclusion

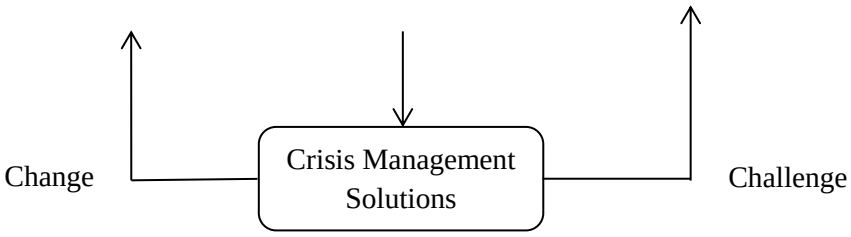
This chapter has introduced the definition of central bank regulation with theoretical and conceptual underpinnings. The core value of a central bank is to serve as government's banker and bankers' bank; from this can a two-tier relationship be developed. Laws and rules are enacted to govern a central bank from different aspects of this two-tier relationship.

There is little doubt that central banks are considered responsible for monetary stability, but their role in maintaining financial stability is not yet clearly defined. Rather than conceptualising financial stability, this chapter has argued that central banks operate between government and markets for systemic stability purpose. They might operate different policy instruments during financial crises and at other times, but their tasks are similarly linked to financial stability. Financial crises triggered such crisis management solutions as adjusted monetary policy instruments and the LOLR facilities. Consequently, the previous two-tier relationships under their legal frameworks are changed: reduced central bank independence can weaken their market-oriented principles, while they will also work as stricter regulators and supervisors, better able to deal with market upheavals. Accordingly, their market or government proposition, assumed under their "old" legal frameworks, will be challenged to reflect these changes.

In principle, this chapter has laid out the logic of the arguments in this thesis, as in figure 2.4:

Figure 2.4: Logic of the Argument of this Thesis





As illustrated above, the two-tier relationship develops from the core value of a central bank. The legal framework, which governs a central bank from such two tiers, will be used to test our key propositions regarding the market or government orientation. However, central bank regulation in financial crises is achieved by reduced central bank independence, but enhanced intervention into the markets, causing changes to its original two-tier relationship under legal authority. Accordingly, the propositions introduced in Chapter One will be tested by analysing the rules-based legal frameworks, which were whereas changed due to central bank crisis management as a result of the GFC. By comparison, it can be established how the GFC has challenged the selected central banks to manage to change for an increasing focus upon financial stability.

In Chapter Three, the challenge posed by the GFC will be outlined, and empirically elaborated in the following case studies.

Chapter Three

The Global Financial Crisis: The Challenge for Central Banks

3.1 Introduction

The previous chapter has established that central banks have important roles to play in maintaining financial stability, and statutes have stipulated facilities which enable them to fulfil their purposes and functions of ensuring monetary stability and managing financial crisis. Their regulation is therefore closely linked with the actuality and/or threat of financial crisis: central banks combine monetary policy instruments and crisis management solutions to deal with market instability. The GFC has highlighted leading issues relevant to central bank regulation among others. This thesis will discuss how the GFC has challenged the market or government orientation propositioned to the selected central banks, beginning with the following outline of the GFC itself and policy responses to it.

Central banks have lately been blamed for both causing and not ably responding to the GFC with particular respect to their financial stability agenda and objectives. Since 2007, they have globally conducted massive policy responses, which will now be reviewed; meanwhile, they have been targeted for profound reforms, moving towards financial stability. As a result of, and compiling data about, my key research questions, this chapter will explore whether, and if so, how central banks have managed to change in order to work towards and achieve financial stability.

3.2 Global Financial Crisis: Causes and Impacts

The GFC has been defined as the worst crisis since the 1930s Great Depression, affecting most developing and developed countries. It derived from the subprime mortgage crisis in the US housing market, and quickly escalated into a global

financial catastrophe.

3.2.1 The US Subprime Mortgage Crisis

From the mid-1990s up to 2005, the global economy had steadily expanded, with advanced economies dominated by low interest and inflation but stable GDP growth.[1] With increasing investment and demand from those countries, as well as improved domestic conditions, emerging markets and developing countries had pursued further economic development.[2] Responding to low real interest rates, they had increased their holdings of US assets, further enlarging global imbalance.[3] When the high technology boom burst, the US Fed instituted easy monetary policy by reducing interest rates from 6.5% in 2001 to 1.0% in 2003, aiming to avoid deeper output contractions.[4] As a result, liquidity increased under monetary expansion, and the wider world economy enjoyed low inflation,[5] leading to reduced risk premia, higher leveraged financial markets, and further financial innovations.[6]

In this context, American property prices boomed after 2001 but, as interest rates were raised worldwide, a failure to make repayments in the housing market brought about a "credit crunch" in early 2006.[7] When property prices declined and subprime mortgage defaults increased in 2007, foreclosures further escalated the housing

[1] Paul Mizen, 'The Credit Crunch of 2007-2008: A Discussion of the Background, Market Reactions, and Policy Responses' (2008) *FRB St. Louis Review* 90(5): 533-539.
[2] There are many quantitative and qualitative studies of the GFC, including its causes, severity and policy reforms. For one of them, see, Stephanie Blankenburg and Jose Gabriel Palma, 'Introduction: The Global Financial Crisis' (2009) *Cambridge Journal of Economics* 33(4): 531-538.
[3] According to the IMF data, global financial assets increased from $ 12 trillion in 1980 to $ 241 trillion in 2007, and countries holding financial assets of more than 350% of their own GDP had doubled until the GFC. IMF, 'Global Financial Stability Report: Responding to the Financial Crisis and Measuring Systemic Risk' World Economic and Financial Surveys, April 2009 <www.imf.org/external/pubs/ft/gfsr/2009/01/pdf/text.pdf>.
[4] Claudio Raddatz and Roberto Rigobon, *Monetary Policy and Sectoral Shocks: Did the FED React Properly to the High-Tech Crisis*? (MIT 2003).
[5] Maurice Obstfeld and Kenneth Rogoff, 'Global Imbalances and the Financial Crisis: Products of Common Causes' for FRB San Francisco Asia Economic Policy Conference, Santa Barbara, CA, October 18-20, 2009 <http://eml.berkeley.edu/~obstfeld/santabarbara.pdf>.
[6] Rudiger Ahrend, Boris Cournede and Robert Price, 'Monetary Policy, Market Excesses and Financial Turmoil' OECD Economics Working Paper, No 2008/5 <www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?doclanguage=en&cote=eco/wkp(2008)5>.
[7] It was argued that instability emerged from the US mortgage market as early as mid-2005. Refer to, Christopher Mayer, Karen Pence and Shane M. Sherlund, 'The Rise in Mortgage Defaults' (2009) *Journal of Economic Perspectives* 23(1): 27-50.

bubble burst, causing huge losses in securitised mortgage and the banking sector.[8] After *New Century Financial* filed for bankruptcy protection and halved its workforce in April 2007, the collapse in the subprime market undermined bank balance sheets.[9] From September 2007, major banks had announced losses in their subprime related investments; in particular, the month of September 2008 saw successive financial panics. For example, on the 15th, Lehman Brothers filed for bankruptcy protection, while Merrill Lynch was taken over by the Bank of America; on the 17th, HBOS was taken over by Lloyds TSB; on the 25th, Washington Mutual closed and was sold to JP Morgan Chase; on the 29th, Bradford & Bingley was nationalised; and on 30th, Dexia became the biggest European bank to be bailed out.[10] The bank-offered rate (BOR) reached record highs, which itself increased anxiety among banks.[11] Liquidity squeeze halted record-high US stock prices, and from there bear-market contagion spread across international markets.[12] Overall, banks, corporate bonds, hedge funds, insurance companies and pension funds all suffered individually varying but comparatively dramatic losses.[13]

Since real estate markets were linked with other important economic sectors, including construction and service businesses, weakness in housing had critically negative effects upon national economies,[14] further encumbered by the squeeze of the capital market.[15] The US economy was likely to have contracted from December 2007, as predicted by the *National Bureau of Economic Research*, and contraction

[8] The bubble in the housing market was argued to be more global than the US based. Franklin Allen, 'An Overview of the Crisis: Causes, Consequences and Solutions' (2010) *International Review of Finance* 10(1): 1-26.
[9] Nicholas H. Dimsdale, 'The Financial Crisis of 2007-9 and the British Experience' (2009) *Oxonomics* 4(1): 1-9.
[10] These victims are argued to have something in common: their complex asset structures partially caused their failures. Ray Barrell and E. Philip Davis, 'The Evolution of the Financial Crisis of 2007-08' (2008) *National Institute Economic Review* 206(5): 5-14.
[11] In principle, the interbank rate is an important indicator about liquidity in the market. For an example, refer to, Francois-Louis Michaud and Christian Upper, 'What Drives Interbank Rates? Evidence from the Libor Panel' BIS Quarterly Review, March 2008 <www.bis.org/publ/qtrpdf/r_qt0803f.pdf>.
[12] Hossein Asgharian and Marcus Nossman, 'Risk Contagion among International Stock Markets' (2011) *Journal of International Money and Finance* 30(1): 22-38.
[13] As reported, banks would take more than two thirds of the total losses and other entities the rest. News report, <www.ft.com/cms/s/0/66b85e34-2ed6-11de-b7d3-00144feabdc0.html>.
[14] Anthony Downs, *Real Estate and the Financial Crisis: How Turmoil in the Capital Markets is Restructuring Real Estate Finance* (US: Urban Land Institute 2009).
[15] IMF, 'Global Financial Stability Report: Transition Challenges to Stability' World Economic and Financial Surveys, October 2013, 63-103 <www.imf.org/external/pubs/ft/gfsr/2013/02/pdf/text.pdf>.

accelerated following Lehman Brothers' bankruptcy in September 2008.[16] By the end of 2008, after the Euro Zone officially slipped into recession,[17] the fourth quarter UK GDP was revealed to have fallen by 1.5% against the previous three months.[18] Developing countries duly encountered related contagion via different channels, such as financial integration and trade links.[19] For example, the BRICs (Brazil, Russia, India and China), which have chiefly thrived from a combination of exporting, FDIs and commodity price rises, suffered badly from sharply reduced exports and capital outflows from advanced markets.[20] In consequence, once triggered by the US subprime mortgage market, the crisis spread wider and deeper than was originally anticipated.

3.2.2 The Creation of Causes

The spread of the US subprime housing crisis reflected a financial panic borne upon widespread contagion.[21] Its persistency and seriousness are partly attributed to new financial developments in the context of excess liquidity deriving from previous growth.[22] There are continuing debates about what caused the GFC.[23] To begin with, global imbalance had already increased, especially due to US deficits and high savings rates among Asian countries.[24] In terms of financial markets, a new financial

[16] News report, <http://news.bbc.co.uk/1/hi/business/7759470.stm> accessed on December 1, 2008.
[17] News report, <http://news.bbc.co.uk/1/hi/world/7729018.stm> accessed on November 14, 2008.
[18] News report, <http://news.bbc.co.uk/1/hi/business/7846266.stm> accessed on January 23, 2009.
[19] Dirk Willem te Velde, 'The Global Financial Crisis and Developing Countries: Which Countries are at Risk and What can be Done?' ODI Background Notes, Overseas Development Institute, October 2008 <www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/3339.pdf>.
[20] Douglas K. Agbetsiafa, 'The Recent Global Financial Crisis: Impacts On Selected Developing Regions' (2011) *International Business and Economics Research Journal* 10(10): 93-101.
[21] Darryl E. Getter, Mark Jickling, Labonte Marc and Edward V. Murphy, 'Financial Crisis? The Liquidity Crunch of August 2007' CRS Report for Congress, RL43182, September 21, 2007 <www.econ.tcu.edu/quinn/crisis/Deleveraging/CRS%20Aug%202007%20Crunch%20.pdf>.
[22] Ben Cohen and Eli Remolona, 'The Unfolding Turmoil of 2007-2008: Lessons and Responses' ADB Institute Working Paper No 124, December 2008 <www.rba.gov.au/publications/confs/2008/pdf/cohen-remolona.pdf>.
[23] E.g., Jacopo Carmassi, Aniel Gros and Stefano Micossi, 'The Global Financial Crisis: Causes and Cures' (2009) *Journal of Common Market Studies* 47(5): 977-996; Viral V. Acharya and Matthew Richardson, 'Causes of the Financial Crisis' (2009) *Critical Review* 21(2-3): 195-201; Quarda Merrouche and Erlend Nier, 'What Caused the Global Financial Crisis?—Evidence on the Drivers of Financial Imbalances 1999—2007' IMF Working Paper, No WP/20/265, 2010 <www.imf.org/external/pubs/ft/wp/2010/wp10265.pdf>.
[24] But debates continue. Refer to, Justin Yifu Lin and Volker Treichel, 'The Unexpected Global Financial Crisis: Researching Its Root Cause' The World Bank, Policy Research Working Paper, No 5973, January 2012 <http://elibrary.worldbank.org/doi/pdf/10.1596/1813-9450-5937>.

structure, incorporating highly-leveraged financial institutions, securitised credit, interacting investments, rating agencies, and so forth, had emerged. [25] By comparison, regulatory and supervisory changes were lacking,[26] while developments in internal risk assessment[27] and fair value accounting standards[28] were thought insufficient to minimise or eliminate full-blown crises.

Once Fannie Mae was established under the Roosevelt Administration in 1938, the US housing sector massively changed.[29] From the mid-1970s, with faster housing finance development, private investment banks have moved into mortgage financing, and then mortgage securitisation. The business model of housing mortgage shifted from "buy and hold" to "trade" on securitised products: rather than holding mortgages on their own balance sheets, lenders made initial loans, and then pooled them with other mortgages, named as mortgage-backed securities (MBSs). Investment banks and broker-dealers were traditionally prohibited from participating in the origination and securitisation of mortgages, but this segmentation was broken by the Gramm-Leach-Bliley Act 1999: commercial banks engaged in investment business, and investment banks entered into the mortgage-related business.[30] As a result, the mortgage market and the banking sector have become more closely connected, and increasingly interdependent. [31]

[25] Janems Crotty, 'Structural Causes of the Global Financial Crisis: A Critical Assessment of the "New Financial Architecture"' (2009) *Cambridge Journal of Economics* 33(4): 563-580.
[26] C.A.E. Goodhart, 'The Background to the 2007 Financial Crisis' (2008) *International Economics and Economic Policy* 4(4): 331-346.
[27] Anil K Kashyap, 'Lessons from the Financial Crisis for Risk Management' for the Financial Crisis Inquiry Commission, February 27, 2010 <http://faculty.chicagobooth.edu/anil.kashyap/research/papers/lesson_for_fcic.pdf>.
[28] It was lack of general consensus about whether, and if so, how the fair-value accounting standard should improve its flawed assessment about banks' asset. See, Christian Laux and Christian Leuz, 'Did Fair-Value Accounting Contribute to the Financial Crisis?' NBER Working Paper, No 15515, November 2009 <www.nber.org/papers/w15515.pdf>.
[29] Peter M. Carrozzo, 'New Deal for the American Mortgage: The Home Owners' Loan Corporation, the National Housing Act and the Birth of the National Mortgage Market' (2008) *University of Miami Business Law Review* 17(1): 1-46.
[30] This Act will be analysed in Chapter Four. For its links with the GFC, refer to, Joseph Karl Grant, 'What the Financial Services Industry Puts Together Let No Person Put Asunder: How the Gramm-Leach-Bliley Act Contributed to the 2008-2009 American Capital Markets Crisis' (2010) *Albany Law Review* 73(2): 371-420.
[31] For a historical review, refer to, Jan Kregel, 'Changes in the US Financial System and the Subprime Crisis' The Levy Economics Institute, Working Paper No 530, April 2008 <www.levyinstitute.org/pubs/wp_530.pdf>.

In terms of banks, they were initially built upon borrowing short and lending long, and they thus assumed most of the risks. However, banks have developed an originate-and-distribute model: they initiate assets and then sell them to the investment market; risks, along with assets, are thereby transferred to other investors.[32] As a result, modern banks pursue would-be innovations not only in lending but also in invested products with higher risks and returns; and investment business has gated the development of riskier products. As the Basel Accord required certain capital adequacy ratios, banks preferred to have short-term debt, rather than expensive equity, in order to collect funding.[33] As a result, both securitisations and structured products have increased.[34] The simple banking model is thus succeeded by a shadow banking pyramid with complex transactions, making it possible for banks to transfer risks within the long and complicated selling-buying investment chain, which can entice banks to supply reckless loans. During this course, banks' obligations have been changed; for example, within the extended chain, risks to borrower quality have reduced, while gaps in information disclosure have grown.[35] Under an increasingly close connection between banking and mortgage activities, where borrowers defaulted, banks would repossess property; but in a declining market, they frequently failed to recover fully.

If there were only problems with subprime mortgages alone, the scope of the problem could be clearly defined.[36] However, supposed financial innovations such as securitisation and structured products, including Collateralized Debt Obligations (CDOs) and Credit Default Swaps (CDSs),[37] added another dimension to the crisis.[38]

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[32] Gary Gorton, 'Slapped in the Face by the Invisible Hand: Banking and the Panic of 2007' for FRB Atlanta's 2009 Financial Markets Conference on "Financial Innovation and Crisis", May 11-13, 2009 <www.frbatlanta.org/news/conferen/09fmc/gorton.pdf>.

[33] For an empirical comparison between subordinated debt and equity as capital needed by banks, see, BIS, 'Markets for Bank Subordinated Debt and Equity in Basel Committee Member Countries' Working Paper, No 12, August 2003 <www.bis.org/publ/bcbs_wp12.pdf>.

[34] Anil K. Kashyap, Raghuram G. Rajan and Jeremy C. Stein, 'Rethinking Capital Regulation' for FRB Kansas City symposium on "Maintaining Stability in a Changing Financial System", Wyoming, August 21-23, 2008, 2-3 <www.kc.frb.org/publicat/sympos/2008/KashyapRajanStein.08.08.08.pdf>.

[35] *Supra* 1.

[36] It is argued that only $0.7 trillion mortgage is subprime, compared with the approximately $5.8 trillion residential mortgage. Bank of England, 'Financial Stability Report' Issue No 22, October 2007 <www.bankofengland.co.uk/publications/Documents/fsr/2007/fsrfull0710.pdf>.

[37] For long, securitisation has some flaws about the types of assets, incentives, institutions and so forth. Refer to, Steven L. Schwarcz, 'The Future of Securitization' (2009) *Connecticut Law Review* 41(4): 1315-1325. By category, different securitised products have varying affects upon the wider economy; Robert A. Jarrow, 'The Role of ABS, CDS and CDOs in the Credit Crisis and the Economy'

Under the "originate-and-distribute" model, securitising and structuring is a complex process of pooling, packaging, selling and reselling, which is fulfilled by banks through special purpose vehicles (SPVs).[39] SPVs have the following features: (1) they are established to participate in investment activities by creating new asset-backed securities (ABSs), which are conferred on them by parent banks; and (2) they are at the arm's length but not under the direct control of the banks that create them. The SPVs would sell structured financial products with different risk ratings for different tranches. All such structured financial derivatives share one particular characteristic in common: they are off-balance-sheet, and hence, their investment activities will not bankrupt their parent banks. Ironically, however, when the interbank market weakens, parent banks pay for any loss caused by their investment activities, and thus, banks still make risky products.[40] Also, many purchasers – Conduits and structured investment vehicles (SIVs) – are the original sellers of those securitised products.[41] Those products are further sold to various end-investors; and insurance companies offer CDSs to participate in the investment market.[42] This new model can be displayed in Figure 3.1.

(September 20, 2011) <www.russellsage.org/sites/all/files/Rethinking-Finance/Jarrow%20ABS%20CDS%20CDO%202.pdf >.

[38] Andrea de Michelis, 'Overcoming the Financial Crisis and the United States' OECD Economic Department Working Papers, No 669, February 20, 2009 <http://dx.doi.org/10.1787/226765644531>.

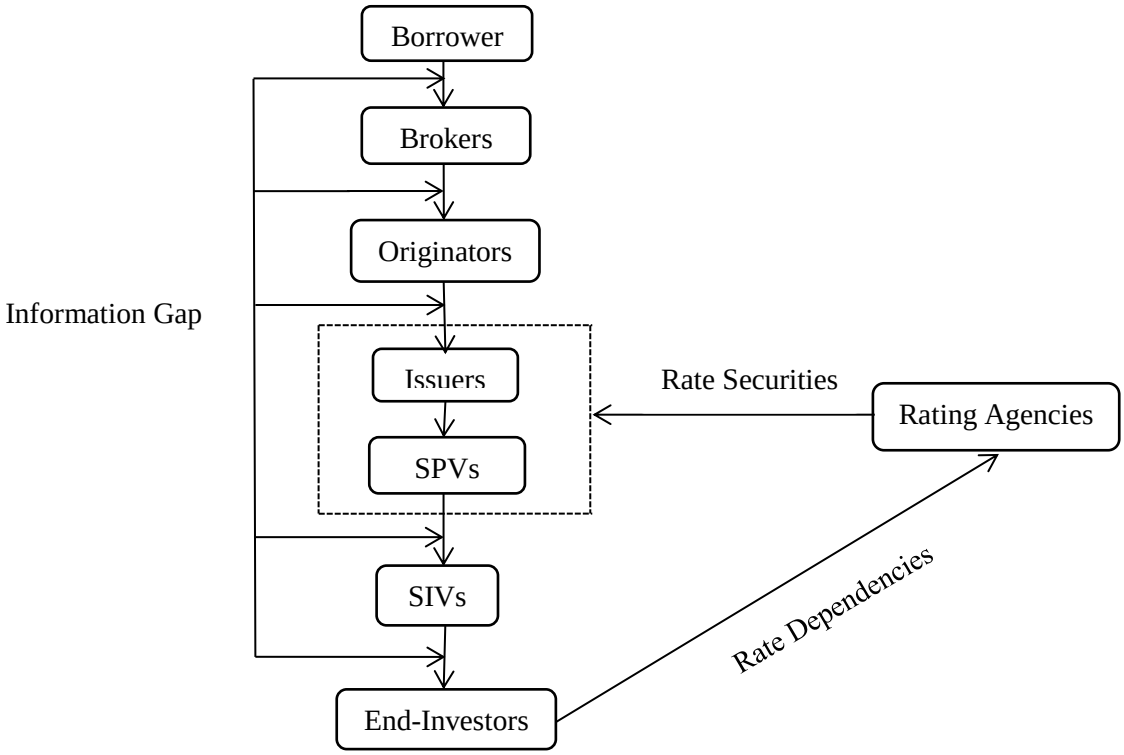
[39] For details about structured finance, see, Martin Hughes**,** *Legal Principles in Banking and Structured Finance* (2nd Edn, Tottel Publishing 2006).

[40] *Supra* 25.

[41] SIVs are off-balance-sheet entities created by banks, whereby evading capital requirements under Basel I. Conduits are similar to SIVs, but backed and owned by parent banks. For further, see, Mahmut Karayel, *Financial Analysis and The Credit Crisis of 2008* (Babcock and Brown 2008).

[42] Sebastian Schich, 'Insurance Companies and the Financial Crisis' (2009) *OECD Journal: Financial Market Trends* 2: 1-31.

Figure 3.1 The Originate-and-Distribute Model of Banking



As illustrated, new participants, along with more complex financial instruments, get introduced to the financial markets, and in this shadow system, investors become increasingly removed from the underlying assets both physically and financially.[43] Prior to the GFC, it was believed that not only has such a long chain with the banks' leadership improved efficiency, but also distributed risks across market sectors and internationally that used to solely reply upon individual banks.[44] The capability to distribute contagion is thus similarly accelerated: the greater integration of capital markets has meant that, if a major problem arose, it is more likely to have wider and indeed potentially damaging consequences.[45] The subprime mortgage crisis has first caused losses on securitised mortgage products and absorbed market liquidity, which quickly spread elsewhere. From the perspective of its transmissions, both financial

[43] Erik F. Gerding, 'The Shadow Banking System and Its Legal Origins' (January 24, 2012) <http://ssrn.com/abstract=1990816>.
[44] David Murphy, 'A Preliminary Enquiry into the Cause of the Credit Crunch' (2008) *Quantitative Finance* 8(5): 435-451.
[45] Rodney J. Garratt, Lavan Mahadeva and Katsiaryna Svirydzenka, 'The Contagious Capacity of the International Banking Network: 1985-2009' (October 16, 2011) <http://ideas.repec.org/p/cdl/ucsbec/qt0r89f16p.html>.

and non-financial channels have amplified instability and panics.[46] For example, due to further financial integration, the UK and Europe were quickly impacted after the US contraction (although Japan did not display severe economic recession until the end of 2008, as explained later). In consequence, since late 2008, economic conditions have deteriorated in most advanced economies, and world output reduced continuously; for example, the IMF once predicted that global economic growth would be 0.5% in 2009, the lowest since World War II, but it was found to shrink by 0.6%.[47] Emerging markets such as the BRICs have slowed economic growth, but remained more resilient between 2010 and 2011.[48] Meanwhile, sovereign debt crisis deepened across Europe, and the risk shocks caused by the asset crisis were greater among advanced markets.[49]

3.3 The GFC Challenges for Central Banks: Key Research Question

The GFC has produced important negative impacts. For example, among the Wall Street top five investment banks, both Goldman Sachs and Morgan Stanley converted to commercial banking charters, while others no longer exist.[50] However, as indicated by historical evidence, both rigid and lessened financial regulation and supervision regimes have been questioned by financial crises.[51] During the last two decades, unprecedented financial prosperity amplified regulatory arbitrage, resulting in deregulation and also legal gaps in several key aspects. So, strengthened

[46] Andrew K. Rose and Mark M. Spiegel, 'Cross-country Causes and Consequences of the 2008 Crisis: International Linkages and American Exposure' NBER Working Paper Series, No 15358, September 2009 <www.nber.org/papers/w15358.pdf>. By category, except the US, countries could be grouped into those with and those without direct exposures to this subprime mortgage market. See, Steven B. Kamin, and Laurie Pounder, 'How Did a Domestic Housing Slump Turn into a Global Financial Crisis?' for the International Financial Markets and Financial Crises, February 1, 2010 <www.federalreserve.gov/Pubs/Ifdp/2010/994/ifdp994.pdf>.

[47] IMF, 'World Economic Outlook Update: Global Economic Slump Challenges Policies' (January 28, 2009) <www.imf.org/external/pubs/ft/weo/2009/update/01/>.

[48] Dilip K. Das, 'How did the Asian Economy Cope with the Global Financial Crisis and Recession? A Revaluation and Review' (2012) *Asia Pacific Business Review* 118(1): 7-25.

[49] Alexander Chudik and Marcel Fratzscher, 'Liquidity, Risk and the Global Transmission of the 2007-2008 Financial Crisis and the 2010-2011 Sovereign Debt Crisis' FRB Dallas, Working Paper No 107, January 2012 <www.ecb.europa.eu/pub/pdf/scpwps/ecbwp1416.pdf>.

[50] K. Thomas Liaw, *The Business of Investment Banking: A Comprehensive Overview* (John Wiley and Sons 2011).

[51] For a case study about how increasing regulation and legal exposure caused the banking crisis in Texas in the 1980s, see, Robert T. Clair and Paula Tucker, 'Six Causes of the Credit Crunch (Or, Why Is It So Hard to Get a Loan?)' FRB Dallas Economic Review, 3rd Quarter, 1993, 531-567 <www.dallasfed.org/assets/documents/research/er/1993/er9303a.pdf>.

regulation has become appealing due to the evident mismatch between the new financial architecture and the flawed regulatory system.[52] As regards central banks, they have intensely been criticized for excessive liquidity in the Great Moderate era, as well as fatal failures to prevent systemic instability, and their changes are seen as part of the solution.

3.3.1 Global Monetary and Fiscal Policy Responses: A Review

To deal with the GFC, fiscal stimulus and monetary expansion have been combined. Due to its cross-border characteristics, cooperation has been reinforced, especially following the collapse of Lehman Brothers in September 2008.[53]

Fiscal stimulus packages were generally conducted more intensively than monetary rescue efforts.[54] As early as 2008, aggressive fiscal measures, including tax reduction and spending expansion, were introduced to boost domestic demand and spur better economic performance, although actual spending rates varied from country to country.[55]

Central banks have widely injected capital directly into financial markets and rescued certain individual financial institutions.[56] In spite of different pre-crisis interest rates, their official rates were reduced to the near-zero levels in the US, UK, and Japan from 2009. With speedy deterioration of the crisis, further qualitative and quantitative measures were undertaken, including extended LOLR facilities,

[52] Relevant reforms will be discussed in each case study chapter. For general, see, IMF, 'Lessons of the Financial Crisis for Future Regulation of Financial Institutions and Markets and for Liquidity Management' (February 4, 2009) <www.imf.org/external/np/pp/eng/2009/020409.pdf>. Kenneth W. Dam, 'The Subprime Crisis and Financial Regulation: International and Comparative Perspectives' (2010) *Chicago Journal of International Law* 10(2): 1-58; Charles K. Whitehead, 'Reframing Financial Regulation' (2010) *Boston University Law Review* 90(1): 1-50.
[53] Stijin Claessens, Giovanni Dell'Ariccia, Deniz Igan and Luc Laeven, 'Cross-Country Experiences and Policy Implications from the Global Financial Crisis' (2010) *Economic Policy* 25(62): 267-293.
[54] Sameer Khatiwada, 'Stimulus Packages to Counter Global Economic Crisis: A Review' International Institute for Labour Studies, Discussion Paper Series No 196, Geneva, 2009 <www.ilo.org/wcmsp5/groups/public/---dgreports/---inst/documents/publication/wcms_193154.pdf>.
[55] Antonio Spilimbergo, Steve Symansky, Olivier Blanchard and Carlo Cottarelli, 'Fiscal Policy for the Crisis' IMF Staff Position Note SPN/08/01, 2008 <www.imf.org/external/pubs/ft/spn/2008/spn0801.pdf>.
[56] Ray Barrell and Dawn Holland, 'Fiscal and Financial Responses to the Economic Downturn' (2010) *National Institute Economic Review* 211(1):115-126.

expanded asset purchase programmes, and more direct aid for particular market sectors and institutions. Due to these crisis management solutions, central banks' objectives have generally shifted from targeting inflation toward restoring financial stability and supporting economic activities.

In terms of regional collaboration, the EU has its own sovereign debt crisis, and both fiscal and monetary stimuli have brought intense controversy and criticism.[57] For Asian countries, in spite of lesser impact, regional cooperation has been further strengthened;[58] for example, China has actively promoted bilateral local currency swap schemes and sought to reform the Chiang Mai Initiative.[59] More broadly, the G7 and G20 summits represent new developments in international cooperation, where a wider range of agreements have been reached covering regulation and supervision over hedge funds, bonuses, rating agencies, capital requirements for banks, securitisation, tax havens, accounting rules, and so forth.[60]

[57] Any further explanation is beyond the scope of this thesis, but for the timeline, see, BBC News, 'Timeline: The Unfolding Eurozone Crisis' (June 13, 2012) <www.bbc.co.uk/news/business-13856580>. It is argued that the management of EU sovereign debt crisis is predominantly linked with global financial and economic recovery: Silvia Sgherri and Edda Zoli, 'Euro Area Sovereign Risk during the Crisis' IMF Working Paper No 09/222, 2009 <www.imf.org/external/pubs/ft/wp/2009/wp09222.pdf>. About policy responses and their impacts, refer to, Adrian Blundell-Wignall, 'Solving the Financial and Sovereign Debt Crisis in Europe' (2012) *OECD Journal: Financial Market Trends* 2011(2): 1-23. It is also argued that government intervention might cause further uncertainties; see, Irina M. Stanga, 'Sovereign and Bank Credit Risk During the Global Financial Crisis' De Nederlandsche Bank Working Paper No 314, Eurosysteem, August 2011 <www.dnb.nl/en/binaries/working%20paper%20314_tcm47-257146.pdf>. For more discussion about specific arrangements, refer to, 'Financial Stability Review: Valuation and Financial Stability' Banque De France, Eurosysteme, October 2008 <www.banque-france.fr/fileadmin/user_upload/banque_de_france/publications/Revue_de_la_stabilite_financiere/rsf_1008.pdf>.

[58] For further discussion, see, Jehoon Park, T. J. Pempel and Geng Xiao, *Asian Responses to the Global Financial Crisis: The Impact of Regionalism and the Role of the G20* (Edward Elgar Publishing 2012).

[59] More details will be offered in Chapter Eight as regards China's role in Asia's regional cooperation. But for a short review, refer to, Jikon Lai and John Ravenhill, 'Asia's Multi-level Response to the Global Financial Crisis' (2012) *Asia Europe Journal* 9(2): 141-157.

[60] The first G20 summit, held on November 15, 2008, produced a very detailed communiqué calling for legal policy and regulation reforms. Refer to, Eric Helleiner and Stefano Pagliari, 'Towards a New Bretton Woods?' (2009) *New Political Economy* 14(2): 275-287; Eric Helleiner, 'A Bretton Woods Moment? The 2007-2008 Crisis and the Future of Global Finance' (2010) *International Affairs* 86(3): 619-636.

It is difficult to make an overall judgement about the exact effectiveness of those responses, for exposures to risks, as well as losses, vary from country to country.[61] More specific analyses will be given in the individual case study chapters.

3.3.2 Overarching Central Bank Reforms

As the traditional banking sector has gradually been replaced, central banks have themselves also developed. They have embraced the following features: (1) after being delegated monetary policy for price stability, independence has been written into their statutes together with enhanced accountability and transparency; (2) a fixed toolbox of monetary policy instruments has been granted to achieve their statutory goals; and (3) prudential regulation has prevailed, but relevant responsibilities have shifted from some central banks, including the BOE. In the years running up to the GFC, accommodative monetary policy, as well as light-touch prudential regulation, has induced certain banks to take greater funding and credit risks within a shadow system increasingly characterised by complicated securitisation and high-level leverage ratios during financial conglomeration. Therefore, with central banks' focus upon monetary policy, and financial markets upon liberalisation, a mismatch has already emerged.

With the GFC, central banks have combined conventional and unconventional monetary policy instruments, so interest rates have been reduced to, and maintained at, near-zero levels among most advanced countries, while expanded liquidity supports have been offered with exceptional arrangements, but selected policy instruments and their outcomes vary. Overall, central banks have intended to restore financial stability by modifying their monetary policies, and also been required to resolve wider economic problems that have exposed. However, monetary policies have their own limits and structural problems, especially, cannot be resolved by

[61] E.g., see, Barry Eichengreen, 'The Financial Crisis and Global Policy Reforms' for FRB San Francisco's Conference on Asia and the Financial Crisis, California, October 2009 <www.frbsf.org/economic-research/conferences/aepc/2009/09_Eichengreen.pdf>.
Anthony Payne, 'How Many Gs are there in "Global Governance" after the Crisis? The Perspective of the 'Marginal Majority' of the World's States' (2010) *International Affairs* 86(3): 729-740; Jomo Kwame Sundaram, *Reforming the International Financial System for Development* (Columbia University Press 2010).

these alone; moreover, overburdened central banks might risk their own credibility and independence.[62]

As suggested by the history of central banks, their role and functions changed with financial crises. For example, following the 1930s Great Depression, the US central bank failed to rebuild the gold standard; and, after the 1970s' crises, central banks endeavoured to achieve monetary stability associated with the triumph of market economy. Similarly, it is argued that central banks could have reached another crossroad in the aftermath of the GFC.[63] In principle, they are required to improve crisis management solutions, thus rebuilding stability and regaining economic development. The main avenues for reform include the following three aspects:

1. Objectives: central banks should retain their primary objective of price stability, but emphasize financial stability.

   Without exception, price stability has been the primary goal for central banks' exercise of monetary policy. However, specific targets for inflations have not necessarily been adopted, with debates about them becoming more complicated once the GFC shifted attention to financial stability.[64]

   Certain developments have occurred, including an enhanced role in maintaining financial stability for the UK central bank and the establishment of new councils managing systemic risks in the US, but other uncertainties still exist. In Japan, price stability has brought a mixed outcome of lower inflation but greater financial imbalance. Since it is estimated that the most serious imbalance destabilising macro economy has emerged from the financial sector, *ex ante* measures to restrain the accumulation of a financial imbalance take priority.[65] In financial crisis, monetary easing is employed to liquidate the financial sector and restore market confidence, which might create potential inflation; but tight

[62] BIS, '82nd Annual Report: 1 April 2011-31 March 2012' (June 24, 2012) 2-3, 34-49 <www.bis.org/publ/arpdf/ar2012e.pdf>.
[63] C.A.E. Goodhart, 'The Changing Role of Central Banks' BIS Working Paper, No 326, November 2010 <www.bis.org/publ/work326.pdf>.
[64] Olivier Blanchard, Giovanni Dell'Ariccia and Paolo Mauro, 'Rethinking Macroeconomic Policy' (2010) *Journal of Money, Credit and Banking*, supplement 42(S6): 199-215.
[65] Masaaki Shirakawa, 'Central Banking: Before, During and After the Crisis' (2013) *International Journal of Central Banking* 9(S1): 373-387.

monetary policy, while able to counter inflation, would likely accentuate financial distress. Conflicts thus intensify when the central bank is in charge of both monetary and financial stability, and it is necessary to inform this relationship with further evidence.[66]

2. Financial regulation and supervision: reform should focus upon the introduction and implementation of macro-prudential policies.

While such policies are not new, a macro-prudential dimension reinforces existing approaches for systemic stability.[67] Aiming at ensuring financial stability by mitigating the build-up of systemic risks, this is understood to limit the costs to the economy from financial distress.[68] So macro-prudential policies are directly linked with governing the conjunctural and structural financial system, rather than individual institutions only.[69] Specific tools include capital requirements and buffers, forward-looking loss provisioning, liquidity ratios, prudent collateral valuation, and suchlike.[70] Central banks have their own incentives and advantages when coping with systemic risks, making them central to strengthening macro-prudential policies.[71]

Debates about how to arrange financial regulation and supervision have continued since the pre-crisis period, especially after the Financial Services Authority (FSA) was established in the UK as a mega regulator in the late 1990s.

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[66] For some new research, see, Tobias Adrian and Hyun Song Shin, 'Financial Intermediaries, Financial Stability and Monetary Policy' FRB New York, Staff Reports No 346, September 2008 <www.kansascityfed.org/publicat/sympos/2008/shin.08.06.08.pdf>.

[67] Alistair Milne, 'Macro-Prudential Policy: Is It Really So New?' (2009) *Oxford Review of Economic Policy*, Special Issue.

[68] For a comparison between micro- and macro-prudential regulatory policies, see, Andrew D. Crockett, 'Marrying the Micro- and Macro-Prudential Dimensions of Financial Stability' at the 11th International Conference of Banking Supervisors, Basel, September 20-21, 2000 <www.bis.org/speeches/sp000921.htm>.

[69] However, macro-prudential regulation has its own limits and constraints, and should complement other prudential and macroeconomic policies. Refer to, E. Philip Davis and Dilruba Karim, 'Macroprudential Regulation—The Missing Policy Pillar' Brunel University, Working Paper No. 09-30. June 2009 <www.brunel.ac.uk/__data/assets/pdf_file/0016/82123/0930.pdf>.

[70] BIS, 'Macroprudential Regulation and Policy' Papers No 60, December 2011 <www.bis.org/publ/bppdf/bispap60.pdf>. Moreover, it is suggested that with a focus upon a countercyclical capital buffer, Basel III is a macro-prudential regulatory policy; refer to, Luis I. Jacome and Erlend W. Nier, 'Macroprudential Policy: Protecting the Whole' IMF Finance and Development <www.imf.org/external/pubs/ft/fandd/basics/macropru.htm>.

[71] MCM, 'Macroprudential Policy: An Organizing Framework' (IMF, March 14, 2011) <www.imf.org/external/np/pp/eng/2011/031411a.pdf>.

In the aftermath of the GFC, standards of "good supervision" have been revisited. Overall, it is argued that supervisors' approaches to financial stability, including indicators, the ability and the will to act, could affect the outcomes.[72]

3. Conduct: central banks should make their operational framework more flexible and yet reduce moral hazard, while still maintaining their own independence.

As will be analysed, the four selected central banks were slow to respond to changed financial conditions, and were also inflexible in selecting crisis management solutions. Therefore, it is argued that more flexible frameworks for central bank operations would make them more resilient.[73] Some unconventional monetary policy may still be required even after economic recovery has occurred. Specific facilities should also be re-assessed; for example, in terms of the LOLR, possible reforms might include more recipients, more explicit legal provisions, stricter regulation about collateral, and expanded coverage.[74] Furthermore, international cooperation should move further to mitigate systemic financial instability, rather than harmonising individual capital and regulatory requirements alone.[75]

In general, central banks have often worked more closely with their governments to deal with financial crises; this renewed argument as to whether and how much central bank independence still matters.[76] At the same time, central banks have particular effects upon financial market participants.

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[72] Jose Viñals, Jonathan Fiechter, Aditya Narain, Jennifer Elliott, Ian Tower, Pierluigi Bologna and Michael Hus, 'The Making of Good Supervision: Learning to Say "No"' IMF Staff Position Note, SPN/10/08, May 18, 2010 <www.imf.org/external/pubs/ft/spn/2010/spn1008.pdf>. A comparison of different patterns of financial regulation and supervision will be provided in Chapter Nine.

[73] MCM, 'Central Banking Lessons from the Crisis' (IMF, May 27, 2010) <www.imf.org/external/np/pp/eng/2010/052710.pdf>.

[74] Stephen G. Cecchetti and Piti Disyatat, 'Central Bank Tools and Liquidity Shortages' for FRB New York Conference on "Central Bank Liquidity Tools," February 19-20, 2009 <www.ny.frb.org/research/epr/10v16n1/1008cecc.pdf>.

[75] Stijin Claessens, Giovanni Dell' Ariccia, Deniz Igan and Luc Laeven, 'Lessons and Policy Implications from the Global Financial Crisis' IMF Working Paper, WP/10/44, 2010 <www10.iadb.org/intal/intalcdi/PE/2010/04683.pdf>.

[76] This is not a new issue either; refer to, Jakob de Haan, Donato Masciandaro and Marc Quintyn, 'Does Central Bank Independence still Matter?' (2008) *European Journal of Political Economy* 24(4): 717-721.

How to restore financial stability has been critically questioned by the GFC, and central bank reforms start with the relocation of their role in mitigating systemic risks. This is the challenge posed by the GFC and should be tackled by central banks.

3.4 Conclusion

The GFC has caused profound changes to financial markets and beyond. This chapter has summarised the performances and reforms of central banks, especially regarding their role in maintaining financial stability. Principally, major monetary policy responses, both domestic and cross-border, have explained the increasing requirement for central banks to stabilise financial markets and then contribute to economic growth, while profound reforms have been conducted to improve facilities and mechanisms for financial crisis. From those points of view, the GFC has challenged the capacity of central banks to deal with financial crises, and accordingly, the main research question for this thesis is first to discover whether, and then explore exactly how, central banks might have managed to change in order to restore financial stability.

As will be shown in the following chapters, individual case studies will revolve around their respective propositions about how changing two-tier relationships were impacted by/upon leading central banks during the GFC. It will argue that this crisis has brought central banks closer to the broader policies of their governments, and also to financial markets. Therefore, the changed two-tier relationship has typically been characterised by reduced central bank independence and more direct control over the markets; each case study will prove this.

Part II: CASE STUDIES

Chapter Four

US Federal Reserve System and the Global Financial Crisis[1]

4.1 Introduction

As clarified in Chapter One, the proposition of a central bank can be approached from its legal framework, which deals with its two-tier relationship; these all have later been challenged by the GFC. This chapter will demonstrate that the US Fed was a market-oriented central bank with consolidated prudential regulation until the GFC changed its commitment to market principles.

The GFC originated from the US subprime mortgage crisis, and the US Fed has since changed monetary policy responses to deal with the resulting recession. Also, the US attracts significant attention from China. This chapter will thus provide a leading case study for further comparison. With these goals in mind, this chapter proceeds as follows. First, the US Fed had gradually developed its functions as the LOLR, and also indirect policy instruments to affect financial markets. Its legal framework assumed it to be a market-oriented central bank and consolidated regulator. Throughout the GFC, the US Fed has become a target for public criticism about sacrificing independence, directly intervening in the financial markets, and neglecting systemic financial stability. In response to these problems, subsequent legal reforms sought to reaffirm it as a market-oriented central bank and macro-prudential regulator. Accordingly, under the pressure from the GFC, the US Fed has changed its two-tier relationship, and then its proposition. This chapter will conclude with a comparative summary regarding the way in which the GFC has challenged the approach of the US Fed toward financial stability.

[1] This chapter is updated until mid-July 2013.

4.2 Overriding Legal Framework of the US Fed before the GFC

This section will first focus upon the ruling legal framework of the US Fed before the GFC. It was arguably born of financial panics, and had been challenged by recurring financial crises. It was intended to work as the LOLR with financial regulation and supervision modified accordingly. However, it was founded with the express purpose of being independent, and its relationship with Government developed following limited statutory changes. These characteristics constitute the distinct two-tier relationship governing the US Fed; the legal framework assumed its independence within Government and emergent lending to markets.

4.2.1 Establishment of the US Fed

American banks were initially built up in the colonies, following the model of the BOE. Between 1835 and 1856, the "free banking" model brought flourishing financial activities under an increasing number of laws and rules, especially in New York.[2] After the National Banking Act 1863, a dual system of state-registered and nation-registered banks came into being with certain rudimentary central banking functions.[3] This Act required national supervision by the newly established Comptroller of the Currency (COC), covering capital and reserve requirements, interbank payment and holdings of gold.[4] New York gradually developed to be the central reserve city, and clearing houses also emerged.[5] Clearing houses, which initially dealt with increasing cheque transactions, began to issue their own loan

[2] The New York law was viewed contributed to successful banking and the wider economy growth in the US. See, Hugh Rockoff, 'The Free Banking Era: A Reexamination' (1974) *Journal of Money, Credit and Banking* 6(2): 141-167.
[3] William Graham Summer, *A History of Banking in all the Leading Nations* (The Journal of Commerce and Commercial Bulletin, 2nd Edition, vol 1, 1971).
[4] Paul Peretz and Jean Reith Schroedel, 'Financial Regulation in the United States: Lessons from History' (2009*) Public Administration Review* 69(4): 603-612.
[5] Jon R. Moen and Ellis W. Tallman, 'New York and the Politics of Central Banks, 1781 to the Federal Reserve Act' FRB Atlanta, Working Paper 2003-42, 2003 <www.frbatlanta.org/filelegacydocs/wp0342.pdf>.

certificates, similar to the LOLR lending and a public role in money creation, and selected regulatory duties.[6]

Reluctance to develop central banking delayed the establishment of the US Fed until just before World War I.[7] In 1907, a run on the Knickerbockers Trust Company caused suspended payments to depositors, triggering intensive debates over uneven regulation among financial institutions, working as a catalyst for the creation of a central bank.[8] Responding directly to this crisis, the Aldrich Vreeland Act was enacted in 1908 with provisions of note-issues in an emergency,[9] and a National Monetary Commission was established to explore long-term solutions to related banking and financial problems, as well as temporary mechanisms to offer emergent lending, moving further towards central banking.[10] From an international perspective, pre-war upheavals also accelerated the need for domestic market stability controlled by central banks.[11]

The Federal Reserve Bill was passed in December 1913, and twelve regional Federal Reserve Banks (FRBs) were established in 1914, with the Federal Reserve Board (Board) in Washington DC. This Act did not explicitly express its responsibilities in the event of a financial crisis, but rather instructed it to "furnish an elastic currency, to afford means of rediscounting commercial paper, to establish a more effective supervision of banking".[12] It provided loans to accommodate fluctuations in currency demand under the discount window mechanism; the principal function for FRBs was

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[6] Gary Gorton, 'Private Clearinghouses and the Origins of Central Banking' FRB Philadelphia, Business Review, 1984 <www.phil.frb.org/research-and-data/publications/business-review/1984/brjf84gg.pdf>.

[7] Alexander Hamilton proposed to establish the Bank of the United States at the end of the 18th century, aiming to ensure currency circulation with advantages accruing to government, banks, and the wider public. See, *supra* 3, 22-62.

[8] Ellis W. Tallman and Jon R. Moen,' Lessons from the Panic of 1907' FRB Atlanta, Economic Review, May/June 1990 <http://fraser.stlouisfed.org/docs/meltzer/talles90.pdf>.

[9] J. Laurence Laughlin, 'The Aldrich-Vreeland Act' (1908) *Journal of Political Economy* 16(8): 489-513.

[10] William G. Dewald, 'The National Monetary Commission: A Look Back' (1972) *Journal of Money, Credit and Banking* l4(4): 930-956.

[11] J. Lawrence Broz, *The International Origins of the Federal Reserve System* (NY: Cornell University Press 1997).

[12] <www.newyorkfed.org/aboutthefed/history_article.html> Robert L. Owen, Chairman of the Committee on Banking and Currency, US Senate, said "it is the duty of the United States to provide a means by which the periodic panics which shake the American Republic and do it enormous injury shall be stopped". Robert L. Owen, 'The Federal Reserve Act: Its Origin and Principles' (November 15, 1918) <http://fraser.stlouisfed.org/docs/publications/books/fra_owen_1919.pdf>.

to rediscount to their member banks in case of liquidity shortage.[13] There were no provisions about lending to Government, but during its first decade, it supported war finance by keeping interest rates low but bond prices high. Inflation rose in 1917, but due to pressure from the Treasury, the US Fed could not raise interest rates until 1919, causing recession in 1921.[14]

The dual-chartering banking system continued. Types of commercial banks were divided according to which government body chartered them, and whether or not they were members of the Federal Reserve System. National banks were chartered by the federal government through the Office of the Comptroller of the Currency (OCC) in the Treasury, which were members by law. State banks were chartered by state governments, which could join voluntarily when meeting specified criteria.[15] The relationships between the Board, FRBs, and commercial banks can be summarised as follows. Each FRB was owned by member banks in the region, and member banks held deposits with FRB in their respective regional divisions. FRBs were thus owned by commercial banks, but under the supervision of the Board, which consisted of Secretary of the Treasury, OCC and five members appointed by the President, who was also responsible for selecting the governor and vice governor. As a result, the US Fed was considered a private agency operating in the public interest under Government supervision.[16]

In dealing with financial panics, the US Fed took over the management of the financial system from the private sector. The 1913 Act placed down the principle mechanism of discount window, whereby the US Fed served as the LOLR. The legal description explicitly highlighted its independence from the banking sector rather than Government.[17] It was argued to be a decentralised central bank which balanced

[13] Sections 26, 30, 32, 35, 36, 41, and 49, Federal Reserve Act 1913.
[14] Charles R. Whittlesey, 'The Banking System and War Finance' NBER Financial Research Program "Our Economy in War", Occasional Paper 8, 1943 <www.nber.org/chapters/c9925.pdf>.
[15] Comptroller of the Currency Administrator of National Banks, *National Banks and The Dual Banking System* (OCC, 2003).
[16] <www.let.rug.nl/usa/essays/general/a-brief-history-of-central-banking/federal-reserve-act-(1913).php>.
[17] James Forder, '"Independence" and the Founding of the Federal Reserve' (2003) *Scottish Journal of Political Economy* 50(3): 297-310.

the competing interests of private banks and populist sentiment. Even the word "central bank" had been conspicuously absent from the legislation.[18]

4.2.2. The US Fed in the 1930s Great Depression

The US Fed commenced business during World War I; in 1923, its Board set up the Open Market Investment Committee, and promulgated principles for OMOs. The US stock market crashed in October 1929, and by mid-1930, the economy went into deep depression.[19] The US Fed misjudged the stock market boom by tightening monetary policy partly triggered financial recession,[20] whilst having failed to fulfil its task as the LOLR as described under the 1913 Act.

Only a limited short-term monetary expansion was undertaken through OMOs by the spring of 1932.[21] There are several reasons explaining its inactivity. To begin with, membership did not equally apply to commercial banks, so the dual banking system led to the lack of nationwide branch banking and constrained the wider liquid money market.[22] In this context, region-based FRBs had often competed rather than cooperated when injecting liquidity into banks in their respective jurisdictions since 1929.[23] From a legal perspective, the 1913 Act limited the conduct of the LOLR in the event of a banking crisis: the LOLR could only be made to member banks, with most non-member banks excluded;[24] the US Fed could only rediscount real bills

[18] <www.federalreserveeducation.org/about-the-fed/history/>
[19] There are many studies into its causes, crisis management solutions, and lessons in general and for the US Fed particularly. For an overall study of monetary policy responses, refer to, Milton Friedman and Anna Schwartz, *A Monetary History of the United States, 1867-1960* (Princeton: Princeton University Press 2008).
[20] Frederic S. Mishkin and Eugene N. White, 'U.S. Stock Market Crashes and Their Aftermath: Implications for Monetary Policy' NBER Working Paper No 8992, 2002 <www.nber.org/papers/w8992.pdf>.
[21] Gerald Epstein and Thomas Ferguson, 'Monetary Policy, Loan Liquidation, and Industrial Conflict: The Federal Reserve and the Open Market Operations of 1932' (1984) *Journal of Economic History* 44(4): 957-983.
[22] *Supra* 19, 362-390.
[23] Mark A. Carlson, Kris Michener and Gary Richardson, 'Arresting Banking Panics: Federal Reserve Liquidity Provision and the Forgotten Panic of 1929' (2011) *Journal of Political Economy* 119(5): 889-924.
[24] By December 1929, only 35% of commercial banks were members; non-member banks, saving institutions, trust companies and other financial institutions were excluded from the discount window "except by permission of the Federal Reserve Board". This could be conducted via member banks

such as "notes, drafts, and bills of exchange arising out of actual commercial transactions" with a term to maturity of "up to 90 days". FRBs controlled discount windows for the member banks they regulated, but the Board did not fully clarify discount rates and conduct for FRBs. Meanwhile, FRBs had to maintain minimum gold reserves equal to 40% of their outstanding notes and 35% of their deposit liabilities; as a result, the gold standard reduced the space for monetary easing.[25] The functions of the US Fed as the LOLR were weakened by insufficient legal provisioning, a decentralised federal system, and international factors linking its commitment under the gold standard.[26]

Responding to the 1930s Great Depression, the New Deal enacted a series of programmes, including reforms relating to the LOLR facilities.[27] The first Glass-Steagall Act was introduced in 1932, adding Section 13(3) to the 1913 Act as a provision of the Emergent Relief and Construction Act. The US Fed was authorised "in unusual and exigent circumstances … to discount for any individual, partnership, or corporation, notes, drafts, and bills of exchange of the kinds and maturities made eligible for discount for member banks". The newly-added Section 13(13) allowed borrowing against the obligations of the US government and its agencies. In 1934, Congress added Section 13(b), permitting working capital advances for up to five years to established industrial and commercial businesses. The Banking Act 1935 made further changes: it removed the requirement of "exceptional and exigent circumstance" for loans under Section 10(b), and also that of loans under Section 13(3) secured by both collateral eligible for discount by member banks and the endorsement of the borrower or a third-party surety; and those credit programmes were permanently added to the Federal Reserve Act. Accordingly, Congress removed some constraints upon the LOLR by changing the 1913 Act, and thereby,

working as agents and only with the exception of approval from the Board. See, Howard H. Hackley, *Lending Functions of the Federal Reserve Banks: A History* (US Fed, Washington DC 1973) 117-125.

[25] There are lasting debates about whether the LOLR of the US Fed was constrained by the gold standard. See, *supra* 19.

[26] Mark A. Carlson and David C Wheelock, 'The Lender of Last Resort: Lessons from the Fed's First 100 Years' FRB St. Louis, Working Paper Series 2012-056B, 2013 <http://research.stlouisfed.org/wp/2012/2012-056.pdf>.

[27] For the review of statutory changes, see, *supra* 24, 127-145.

enhanced discretion of the US Fed to offer credit supports against an extended range of collaterals to more recipients in the context of a financial crisis.[28]

Moreover, under the Glass-Steagall Act 1932, the Board eased reserve requirements over FRBs, extending to include government securities as collateral for note issues. In March 1933, the Emergency Banking Act further suspended the gold standard: the US Fed was allowed to issue an unlimited amount of currency backed only by government securities without gold reserve requirement.[29] Later, under the Gold Reserve Act 1934, Congress nationalised the gold reserve of the US Fed by establishing the Exchange Stabilization Fund (ESF), leaving the Treasury controlling gold and exchange transactions both home and abroad.[30]

The landscape of the US financial sector, including the oversight regime, had fundamentally been different due to those legal reforms. First, the Glass-Steagall Act 1933 separated commercial and investment banking, aiming to resolve conflicts of interests to protect depositors by limiting banks' engagement in the securities business.[31] The Board strengthened its regulatory power: it was instructed to set maximum limits on interest rates which commercial banks could pay on time deposits (Regulation Q), adjust reserve requirements of member banks, and regulate margin requirements for the purchase and holding of registered securities. This Act also required bank holding companies (BHCs) to be examined by the US Fed, and the Board could gather information on affiliates of member banks, especially the voting permit requirement under Regulation P.[32] The FDIC was set up to deal with banking panics in the absence of an effective LOLR; this was expanded and made permanent by the Banking Act 1935.[33] Under this, Congress amended the Federal Reserve Act to provide, by statute, the FOMC with central control over OMOs and

[28] The US Fed only made few loans under Sections 13(3) and 13(13) until 1940. In contrast, Section 13(b) was employed more extensively, and repealed in 1958 under the Small Business Investment Company Act. For details, see, David Fettig, 'Lender of More than Last Resort' FRB Minneapolis, December 2002 <www.minneapolisfed.org/publications_papers/pub_display.cfm?id=3392&>.
[29] *Supra* 19, 462-482.
[30] <http://www.newyorkfed.org/aboutthefed/fedpoint/fed14.html> accessed in May 2007.
[31] The key features about such separation were articulated in ss. 16 and 21 of the Act. Refer to, Vincent Di Lorenzo, 'Public Confidence and the Banking System: The Policy Basis for Continued Separation of Commercial and Investment Banking' (1986) *American University Law Review* 35: 647-698.
[32] §§5(c), 19, 48 Stat. at 164, 165, 186, Banking Act 1933.
[33] *Supra* 19, 434-442.

its principles,[34] whilst improving central bank independence by removing the Secretary of the Treasury and the COC from the Board.[35] At the same time, the Board strengthened its controls over the FRBs: all members on the Board joined the FOMC, while the Board was authorised to influence FRBs' discount rates.[36]

The 1930s reform improved financial regulation and supervision by strengthening the US Fed, introducing deposit insurance, and establishing more individual responsible agencies based upon the dual-chartering system.[37] Both it and the OCC were federal regulators, whilst the FDIC underwrote deposit insurance for those regulated at the federal level, as well as many state-regulated banks. The financial sector also changed: Regulation Q set limits upon interest rates, commercial banking was separated from investment business, interstate branching continued to be prohibited, and the chartering regime limited free risk taking. In consequence, the 1930s Great Depression left a highly regulated and controlled financial system, where the US Fed governed interest rates, reserve requirements, and discount rates.

4.2.3 Legal Framework before the GFC

The legal framework is defined by the Federal Reserve Act, along with subsequent laws.[38] The US Fed comprises the Board, twelve regional FRBs, and the FOMC. The following part will explain major legal elements.

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[34] For a legislative review, especially of its relevance to the Federal Reserve Act, refer to, US Fed, 'Alternative Instruments for Open Market and Discount Window Operations' Study Group on Alternative Instruments for System Operations, December 2002 <www.federalreserve.gov/boarddocs/surveys/soma/alt_instrmnts.pdf>.

[35] Tier II, Bank Act 1935. Also, see, John H. Williams, 'The Banking Act of 1935' (1936) *American Economic Review* 26(1): 95-105.

[36] Ben S. Bernanke, 'A Century of U.S. Central Banking: Goals, Framework, Accountability' Conference "the First 100 Years of the Federal Reserve System: The Policy Record, Lessons Learned, and Prospects for the Future", July 10, 2013 <www.federalreserve.gov/newsevents/speech/bernanke20130710a.htm>.

[37] *Supra* 4.

[38] *The Federal Reserve System: Purposes and Functions* (9th edn, US Fed 2005).

Objectives

After World War II, the Employment Act 1946 reordered economic policy-making, building up the legislative framework for the federal government to pursue the full objectives of production, employment, consumption, investment and finances. Under this constitution, the US Fed acted under a mandate with Government: it was expected to foster "conditions under which there will be afforded useful employment opportunities … for those able, willing, and seeking to work, and to promote maximum employment, production, and purchasing power".[39] In the Federal Reserve Reform Act 1977, this was clarified to "promote effectively the goals of maximum employment, stable price, and moderate long-term interest rates".[40] In 1978, the Full Employment and Balanced Growth Act was enacted, requiring it to "promote full employment … and reasonable price stability". Accordingly, the objectives of the US Fed were defined to embrace both employment and price stability.[41]

By law, the US Fed should enable maximum employment, maintain stable prices and moderate long-term interest rates.[42] It acquired multiple objectives without explicit inflation targeting.[43] In practice, under the leadership of Chairman Greenspan, the dual mandate above had been strengthened since the late 1980s.[44]

Independence

The Treasury-Federal Reserve Accord 1951 defined the department management and monetary policies necessary to ensure the successful financing of Government's

[39] Arthur F. Burns, 'Some Reflections on the Employment Act' (1962) *Political Science Quarterly* 77(4): 481-504.
[40] Section 2A, Federal Reserve Reform Act 1977.
[41] Emmanuel Apel, *Central Banking System Compared: The ECB, the Pre-Euro Bundesbank and the Federal Reserve System* (London: Routledge 2003) 32.
[42] For historical evolution, see, 'The Goal of U.S. Monetary Policy' FRB San Francisco, Economic Letter No 99-04, January 29, 1999 <www.frbsf.org/economic-research/publications/economic-letter/1999/january/the-goals-of-us-monetary-policy/>.
[43] Willem Thorbecke, 'A Dual Mandate for the Federal Reserve: the Pursuit of Price Stability and Full Employment' (2002) *Eastern Economic Journal* 28(2): 255-268.
[44] Alan S. Blinder and Ricardo Reis, 'Understanding the Greenspan Standard' for FRB Kansas City Symposium, August 25-27, 2005 <www.kansascityfed.org/publicat/sympos/2005/pdf/Blinder-Reis2005.pdf>.

requirements and minimise monetisation of public debts.[45] An independent government securities market was established, but the US Fed was still responsible for assuring the success of Treasury debt sales.[46] The FOMC took over monetary policy decision-making after abolishing the Executive Committee in 1955. In 1962, the US Fed was authorised to deal with foreign exchange operations on its own account.[47] Afterwards, few statutory changes were made to govern its independence, but in practice, its interaction with government had changed between the 1970s and 1980s.[48] From 1975, Congress started regular consultations with it about plans for monetary and credit aggregates,[49] while required by the Full Employment and Balanced Growth Act, the Chairman began to report monetary policy goals and objectives to Congress twice annually from 1978.

It was held that the US Fed had "independence within the government": it does not have to be ratified by the President or any other executive branches of government, but remain subject to Congress.[50] It also gained income primarily from interest on government securities under OMOs, as well as from foreign currency transactions, fees and other interests, but it handed the rest of its earnings, excluding expenses, to the Treasury.[51] Therefore, without relying upon the congressional budget, the US Fed had considerable budgetary independence.

Clearly, central bank independence is never absolute, and the US Fed faced both formal and informal restrictions.[52] To begin with, it is an agent of Congress, required to support employment. Moreover, Government's authority derived from personnel

[45] Robert L. Hetzel and Ralph F. Leach, 'The Treasury-Fed Accord: A New Narrative Account' (2001) *FRB Richmond Economic Quarterly* 87(1): 33-55.
[46] Robert L. Hetzel and Ralph F. Leach, 'After the Accord: Reminiscences on the Birth of the Modern Fed' (2001) *FRB Richmond Economic Quarterly* 87(1): 57-64.
[47] For the influence of foreign exchange operations upon central bank independence and monetary policy, see, Marvin Goodfriend and J. Alfred Broaddus, 'Foreign Exchange Operations and the Federal Reserve' (1996) *FRB Richmond Economic Quarterly* 82(1): 1-19.
[48] *Supra* 17.
[49] House Concurrent Resolution 133 of 1975.
[50] Section 2B, Appearances Before and Reports to the Congress, Federal Reserve Act.
[51] <www.federalreserve.gov/faqs/about_12799.htm>.
[52] Informal restrictions can arise from budgetary authority, the relationship between President and the US Fed, its location at the political centre of Washington DC, etc. Refer to, Allan H. Meltzer, *History of the Federal Reserve: Vol. 2, Book 1, 1951-1969* (London: University of Chicago Press 2009) 1-40.

appointments to it.[53] The constitution of the Board dated back to the Banking Act 1935, including the Chairman and Vice Chairmen appointed by the President and confirmed by Senate; the Chairman regularly testifies before congressional committees and meets with the President and the Treasury Secretary. The Board has continual contacts with other policy makers, such as the President's Council of Economic Advisers, and regularly reports to the House and Senate committees, while Congress supervises those monetary policies set by the Board. Furthermore, Congress charters and oversees FRBs, which operate a nationwide payments system, and also work as bankers for the Treasury. In order to promote accountability, both the Government Accountability Office (GAO)[54] and a public accountant audit the Board.[55] Congress prescribed only two areas outside the GAO review: monetary policy deliberations, decisions, and action; and transactions involving foreign central banks, governments and international financial organisations.[56] Additionally, the US Fed has been required to improve its communication and transparency. For example, from 1994, the FOMC began to release its statement with further details after the monetary policy meeting.[57]

With "independence within the government" as described by statute, the US Fed's actual independence leaves open where the limits of the government authority ultimately lie.

Organisational Structure[58]

The Board is primarily required to formulate monetary policy with sole responsibility for changes in reserve requirements and discount rates initiated by a

[53] M.A. Akhtar and Howard Howe, 'The Political and Institutional Independence of U.S. Monetary Policy' BNI, Quarterly Review, No 178, 1991 <http://bib03.caspur.it/ojspadis/index.php/PSLQuarterlyReview/article/viewFile/10645/10529>.
[54] Since 1978, GAO has conducted a regular audit of the US Fed according to the Federal Banking Agency Act (Public Law 95-320).
[55] H.R. 28, Federal Reserve Accountability Act of 1993: Hearing before the Committee on Banking, Finance, and Urban Affairs, House of Representatives, One Hundred Third Congress, First Session, October 27, 1993. US Fed, Press Release, <www.federalreserve.gov/newsevents/testimony/alvarez20090925a.htm> accessed on September 25, 2009.
[56] Public Law 95-320, Federal Banking Agency Act 1978 (31 USCA §714).
[57] David E. Lindsey, 'A Modern History of FOMC Communication: 1975-2002' <http://fraser.stlouisfed.org/docs/publications/books/20030624_lindsey_modhistfomc.pdf> accessed on August 19, 2009).
[58] <www.federalreserveeducation.org/about-the-fed/structure-and-functions/>.

FRB. It also conducts analyses of domestic and international financial and economic development, national payment system, and consumer credit protection. FRBs' Board constitutes nine directors elected from outside with 3 classes representing the public interests of different groups.[59] They have more direct relationships with the financial markets: they hold reserves as deposits from commercial banks, and manage onsite bank examinations. The relationship between the Board and FRBs is two-fold: the former had a broad oversight responsibility over the operations of the FRBs, and the latter must submit their annual budgets for approval from the Board.

The FOMC is the dominant body for monetary policy making.[60] It determines its own organisation by statute, and governs OMOs. Its 12 members include the 7 Board members plus 5 Presidents from FRBs. Since 1981, eight regularly scheduled meetings have been held every five to eight weeks for each year, where the committee reviews prevailing economic and financial conditions.[61] The FOMC is the agent which carries responsibility for monetary policy instruments, aimed at meeting the US Fed's long-term goals of price stability and economic growth.[62]

Monetary Policy

The US Fed had gradually changed its monetary policy from direct tools to indirect means.

In the 1950s and 1960s, the conduct of bank credit generally served as the primary intermediate objective for monetary policy, and the FOMC initially targeted free reserves and then federal funds rates.[63] Later, the US Fed faced a dilemma of the trade-off between suppressing inflation and maintaining employment after holding Treasury bond prices stable, which was exacerbated in the 1970s.[64] With further

[59] Board, 'The Structure of the Federal Reserve System' <www.federalreserve.gov/pubs/frseries/frseri4.htm> accessed on June 14, 2002.
[60] Official website: <www.federalreserve.gov/monetarypolicy/fomc.htm> accessed on September 3, 2013.
[61] <www.federalreserve.gov/monetarypolicy/rules_authorizations.htm> accessed on June 10, 2013.
[62] US Fed, 'Statement on Longer-Run Goals and Monetary Policy Strategy' <www.federalreserve.gov/monetarypolicy/files/FOMC_LongerRunGoals.pdf> effective on January 29, 2013.
[63] *Supra* 19.
[64] Thomas D. Willett, *Political Business Cycles: the Political Economy of Money, Inflation, and Unemployment* (Duke University Press 1988).

inflation threats during the oil crises, it shifted towards targeting money growth.[65] In October 1979, the FOMC strengthened its commitment to control monetary aggregates by adopting a non-borrowed reserves operating target, while deemphasizing the federal funds rates as its leading operating target.[66] However, it missed all such targets between 1979 and 1982. As monetary aggregates failed to relate inflation with nominal GDP, it was criticised for misleading conduct of money policy. In this context, Chairman Alan Greenspan testified in Congress in 1993 that it would no longer use any monetary targets to guide monetary policy.[67] In brief, the US Fed adjusted its conduct of monetary policy responding to changed macroeconomic conditions, especially regarding inflation.[68]

Under legal authority, the US Fed had such official monetary policy instruments as OMOs, reserve requirements, contractual clearing balances and discount window lending.[69] These were employed to control federal funds rates, influencing the demand and supply of the trade balance held by depository institutions. Both OMOs and discount window loans could be employed to change the aggregate supply of the monetary base, adjusting not only the aggregate quantities of money and credit but also interest rates.[70] In spite of legal authority, it is argued that, in the 1990s, monetary policy under former Chairman Greenspan was made and implemented with particular discretion, being flexible and adaptable to changed conditions.[71] In 2003,

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[65] Anne-Marie Meulendyke, 'A Review of Federal Reserve Policy Targets and Operating Guides in Recent Decades' FRBNY Quarterly Review, Autumn 1988 <www.newyorkfed.org/research/quarterly_review/1988v13/v13n3article2.pdf>.

[66] David M. Jones, *Unlocking the Secrets of the Fed: How Monetary Policy Affects the Economy and Your Wealth-Creation Potential* (John Wiley & Sons 2002) 19-23.

[67] Ben S. Bernanke and Frederic S. Mishkin, 'Central Bank Behaviour and the Strategy of Monetary Policy: Observations from Six Industrialized Countries' NBER Working Papers, No 4082, 1993 <www.nber.org/papers/w4082.pdf>.

[68] For a historical review, refer to, Richard Clarida, Jordi Gali and Mark Gertler, 'Monetary Policy Rules and Macroeconomic Stability: Evidence and Some Theory' NBER Working Paper, NO 6442, 1998 <www.nber.org/papers/w6442.pdf>.

[69] *Supra* 38.

[70] David H Small and James A. Clouse, 'The Scope of Monetary Policy Actions Authorized under the Federal Reserve Act' US Fed Finance and Economics Discussion Series No 2004-40, 2004 <www.federalreserve.gov/pubs/feds/2004/200440/200440pap.pdf>

[71] Alan Greenspan, 'Risk and Uncertainty in Monetary Policy' at Meeting of the American Economic Association, California, January 3, 2004 <www.federalreserve.gov/BoardDocs/Speeches/2004/20040103/>.

the US Fed set rates at the discount window operations above the Funds rates, and loans to banks were priced through interest rates.[72]

LOLR Facilities

The US Fed gradually developed its LOLR associated with occasional financial panics.[73]

By law, it could offer financial aid through discount window and OMOs, as well as an emergency discount window under Section 13(3) of the Federal Reserve Act.[74] Legislation provided some flexibility, allowing it to consider extending its statutory authority in prescribed circumstances. The US Fed was governed to rediscount commercial paper with member banks but not directly with the public; that is, only commercial paper could be discounted with member banks, and then rediscounted.[75] Section 13(3) required non-depository institutions to pledge the same "near substitute for cash" quality of collateral eligible for discount window, including certain US Treasury obligations and "notes, drafts, and bills of exchange issued or drawn for agricultural, industrial, or commercial purposes" with a maturity of up to 90 days.[76] When lending to depository institutions, known as the LOLR facility, Section 10(b) stimulated its broadest authority to extend loans as long as they were collateralised. As previously observed, this facility was extended to individuals, partnership and corporations (IPCs) during the 1930s Great Depression under Section 13(3). In principle, lending to IPCs could only be made in unusual and exigent circumstances, and only when IPCs were not able to secure sufficient credit accommodations from other banking institutions. In terms of asset purchases and sales, the US Fed could employ OMOs to inject reserves and smooth market dislocations. According to Section 14, it could purchase the debt of US state and local governments, and US financial service institutions, as well as private-sector

[72] George A. Kahn, 'Monetary Policy under a Corridor Operating Framework' 4 *Kansas City FRB Economic Review* (2010): 5-34.
[73] *Supra* 26.
[74] Colleen Baker, 'The Federal Reserve as Last Resort' (2012) *University of Michigan Journal of Law Reform* 46(1): 69-133.
[75] Official website: <www.federalreserve.gov/monetarypolicy/discountrate.htm> accessed on October 15, 2013.
[76] Walker Todd, 'FDICIA's Emergence Liquidity Provisions' FRB Cleveland Economic Review, 3rd Quarter, 1993 <www.clevelandfed.org/research/review/1993/93-q3-todd.pdf>.

debt in the case of unusual and exigent circumstance. In practice, it had narrowed down the scope of securities.[77] In 1991, the Federal Deposit Insurance Corporation Improvement (FDICI) Act was released, restricting bailouts by instructing regulators to close failing firms,[78] whilst deleting the strict restricts on eligible collaterals, expanding the US Fed's safe net.

Table 4.1 summarises financial aid offered by the US Fed under its legal authority:

Table 4.1: Monetary Policy Actions Authorised under Federal Reserve Act

Facilities	**Usual Conditions**		**Unusual and Exigent Circumstances**	
	Provisions	**Requirements**	**Provisions**	**Requirements**
Lending Activities	Section 10(b), 13(2), (3), (4), (6), (8), (13) and 13(a)	Lending to depository institutions; Certain types of collateral; Limited risk added to the US Fed's balance sheet	Sections 13(3) and (13)	Lending to non-depository institutions; Certain types of collateral; More risk added to the US Fed's balance sheet
Asset Purchases	Section 14	Domestic OMOs only in securities issued or guaranteed by US Treasury or federal agencies	Section 13(3)	Extending to certain types of private-sector debt

As illustrated in Table 4.1, various legal provisions had defined what kind of financial aid could be offered in both usual and unusual circumstances. It could only extend its safety net over more recipients with a wider range of collaterals as long as a certain conditions were met. When purchasing private-sector debt, the US Fed

[77] *Supra* 70.
[78] *Supra* 52, 25.

affected credit allocation across the economy,[79] and also risked its own balance sheet by affecting liquidity directly.[80]

Financial Regulation and Supervision

During the US financial history, the multi-agency pattern of supervision and regulation was based upon the dual-chartering banking system; different market sectors were regulated by individual agencies.[81] The US Fed had gradually developed its financial oversight duties, while liberalizing the highly regulated financial system left by the 1930s Great Depression.[82]

In 1956, the Bank Holding Company Act was enacted, granting the Board the authority to require the registration of companies controlling two or more banks.[83] In 1980, the Depository Institutions Deregulation and Monetary Control (DIDMC) Act marked the commencement of financial modernisation, allowing interest payment to transaction accounts and also removing interest rate ceilings.[84] Meanwhile, the US Fed began to set reserve requirements for all eligible institutions to provide checking account services, extending its regulatory coverage.[85] By the late 1990s, the Gramm-Leach-Bliley Act 1999 (GLB) brought important changes. With increasing demands from large financial constitutions for branch banking in states and interest payment on deposits, the GLB finally ended the separation between commercial and investment banks, allowing commercial banks, investment banks and insurance

[79] Board and US Department of the Treasury, *The Role of the Federal Reserve in Preserving Financial and Monetary Stability: Joint Statement by the Department of the Treasury and the Federal Reserve* (Joint press release, <www.federalreserve.gov/newsevents/press/monetary/20090323b.htm> accessed on March 23, 2009).
[80] Spence Hilton and James McAndrews, 'Challenges and Lessons of the Federal Reserve's Monetary Policy Operations during the Financial Crisis' 6th ECB Central Banking Conference on "Approaches to Monetary Policy Revisited – Lessons from the Crisis", November 2010 <www.ecb.europa.eu/events/conferences/html/cbc6/24hiltonmcandrews6cbc.pdf>.
[81] *Supra* 37.
[82] Jeffrey D. Dunn, 'Expansion of National Bank Powers: Regulatory and Judicial Precedent under the National Bank Act, Glass-Steagall Act, and Bank Holding Company Act' 36 *Southwestern Law Journal* (1982-1983): 765-792.
[83] § 2 (a) & §5 (c), Bank Holding Company Act of 1956, Pub. L. No. 84-511, 70 Stat. 133. This Act was subsequently amended in 1966 and 1970.
[84] Robert Craig West, 'The Depository Institutions Deregulation Act of 1980: A Historical Perspective' Economic Review, February 1982, <www.kansascityfed.org/PUBLICAT/EconRev/EconRevArchive/1982/1q82west.pdf>.
[85] FDIC, 'An Examination of the Banking Crises of the 1980s and Early 1990s' in *History of the Eighties – Lessons for the Future* (A Study prepared by the FDIC's Division of Research and Statistics, December 1997) 87-135.

companies to enter into each other's lines of business.[86] It laid the foundation for the US Fed to become the "umbrella regulator" over the new financial holding companies (FHCs), and it began to oversee such companies as were traditionally regulated by the SEC and state regulators. As a result, it regulated an increasing number of financial institutions as a consolidated supervisor.[87]

In terms of approaches, safety and soundness was the core value for US banking regulation, supervision and enforcement, while its principles were purposefully left to evolve in accordance with changed market situations.[88] With the market-oriented liberalization since the late 1970s, a risk-based approach was introduced after the "savings and loans" debacle,[89] linking the likelihood of risks posed by a financial institution or market sector with its particular scope of business.[90] The Board gradually formalised its requirement for capital adequacy, which was based upon risk-focused prudential supervision,[91] and the Basel Accord I was introduced in 1989.[92] Under the GLB 1999, the US Fed was granted broad discretion to oversee the safety and soundness of the parent FHCs, rather than intervening into individual banking, investment and insurance businesses.[93] Its umbrella supervision focused on reporting requirements, examination, capital oversight, enforcement powers, and sharing information with other primary or functional regulators; only after the GLB 1999 had the US Fed expanded the above oversight to functionally regulated

[86] William M. Isaac and Melanie L Fein, 'Facing the Future – Life without Glass-Steagall' 37 *Catholic University Law Review* 1987–1988: 281-322.
[87] Thomas T. Holyoke, 'Expanding the Limits of Power: The Federal Reserve and the Implementation of Functional Regulation in the Gramm-Leach-Bliley Era' (2002) *The Review of Policy Research* 19(4): 95-119.
[88] Dalvinder Singh, *Banking Regulation of UK and US Financial Markets* (England: Ashgate Publishing Ltd. 2007) 69-77.
[89] GAO, 'Bank and Thrift Examination: Adoption of Risk-Focused Examination Strategies' GAO/t-GGD-98-13, 1998 <www.gao.gov/assets/110/107103.pdf>.
[90] Title 12, Banks and Banking of the US Code.
[91] In 1983, after the Fifth Circuit Court of Appeals overturned one direction from the OCC about capital requirements, Congress enacted the International Lending Supervision Act. This Act reaffirmed the importance of capital adequacy in relation to the safety and soundness of the banking industry, and thus, clarified the authority of regulators to issue capital adequacy directives.
[92] 54 Fed Reg 4186 & 4191.
[93] Public Law 106-102 n 243 s.46.

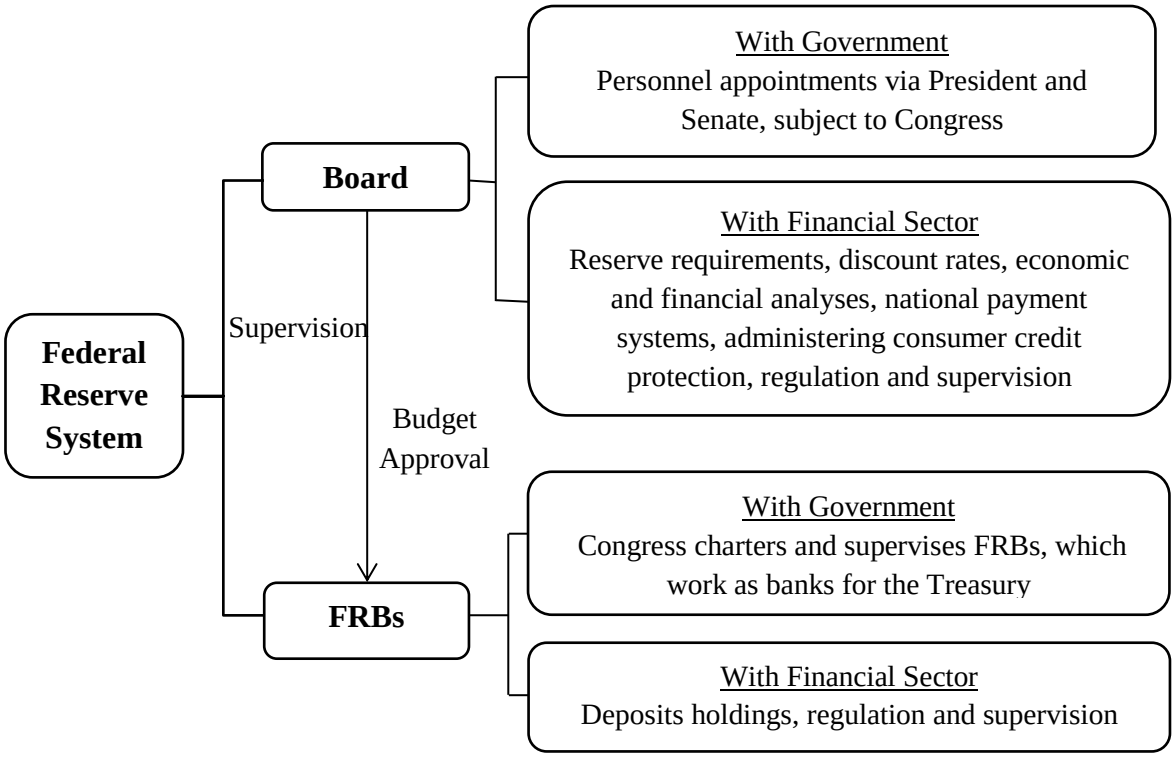
subsidiaries.[94] It introduced and emphasised risk-based supervision; and risk management, from both the internal and external aspects, had been strengthened.[95]

By law, the Board had a wide-range responsibility over state-chartered member banks, BHCs, foreign activities of member banks, activities of foreign banks in the US, and Edge Act and agreement corporations.[96] After the GLB 1999, the US Fed was the leading prudential regulator, while the SEC and the State Insurance Commissioner, as well as other state or federal regulators, were functional regulators overseeing different market sectors. Emphasizing risk-focused approaches to the core value of safety and soundness, such regulation architecture was argued to have strengths of sheer size, specialism and flexibility.[97] Therefore, the US Fed controlled monetary instruments exclusively, but shared financial oversight with other government agents, together forming a consolidated regulation regime with regulatory laxness.[98]

The legal framework of the US Fed could be described in Figure 4.1:

[94] Mark B. Greenlee, 'Historical Review of "Umbrella Supervision" by the Board of Governors of the Federal Reserve System' FRB Cleveland, Financial Stability Working Paper No 08-07, 2008 <www.bu.edu/rbfl/files/2013/09/Issue2Greenlee.pdf>.
[95] Charles W. Calomiris, 'The Regulatory Record of the Greenspan Fed' (2006) *American Economic Review* 96(2): 170-173.
[96] <www.frbsf.org/education/publications/doctor-econ/2006/november/commercial-banks-regulation>.
[97] *Supra* 88, 31-42.
[98] Andreas Busch, 'Divergence or Convergence? State Regulation of the Banking System in Western Europe and the United States' at the Workshop on Theories of Regulation, Oxford, May 25-26, 2002 <www.nuffield.ox.ac.uk/politics/papers/2002/w17/Divergence_Convergence.pdf>.

Figure 4.1: The Federal Reserve System



As illustrated in Figure 4.1, the US Fed operated chiefly in four areas, including monetary policy, supervision and regulation, financial stability and certain financial services. As Government's banker, legislation defined the US Fed's operational independence, and also explicitly set the limits of the government's authority; as bankers' bank, it could affect financial markets through monetary policy instruments, financial aid and prudential regulation. The FRBs have more direct contracts with the financial sector.

4.2.4 Summary

The US Fed, established as a private entity to operate in the public interest, was first and foremost set in place to govern the LOLR amid financial panics, but continuous legal reforms had brought other major changes as summarised in Table 4.2:

Table 4.2: Major Changes around US Fed's Two-Tier Relationship before GFC

Circumstances Legislation	Monetary Policy Operation	Central Bank Independence	Relationship with Financial Markets
1930s Great Depression	US Fed's misjudgement about stock market boom helped trigger financial recession	Government nationalised US Fed's gold reserves; US Fed was required to support government's general economic strategy	US Fed neglected LOLR facilities; Limited monetary stimulation through delayed OMOs and interest rates cuts
New Deal Reform **Glass-Steagall Acts 1932 and 1933; Emergency Banking Act 1933; Gold Reserve Act 1934; Banking Act 1935**	US Fed governed OMOs; FDIC was introduced; FOMC was set up but Treasury's decisions dominated gold policies and interest rates; Centralising the power of the Board over FRBs	Independence was strengthened by removing Treasury Secretary and the OCC from Board	Commercial banks were prohibited from investment activities with few exceptions; individual agencies were responsible for segmented financial markets; US Fed examined BHCs; Regulation Q set ceilings on interest rates
Employment Act 1946		A mandate between Government and US Fed	
Treasury-Federal Reserve Accord 1951	FOMC resumed decision-making authority over interest rates	US Fed began to raise independence	
US's engagement in political conflicts and military wars 1960s **Inflation/Deflation 1970s-1980s** **Full Employment and Balanced Growth Act 1978**	FOMC adjusted monetary policy conduct with changed macroeconomic conditions, especially regarding inflation	Congress began regular consultations with US Fed; US Fed to promote full employment and price stability; Chairman reported to Congress regularly	Congress gradually removed prohibitions over markets since the 1930s; US Fed extended regulatory and supervisory regime
DIDMC Act 1980	Financial Modernisation		US Fed extended reserve

	requirements; Interest rate ceilings were abolished; Risk-based prudential regulation developed
FDICI Act 1991	US Fed explicitly conducted the LOLR facility under the clear legal authority
GLB Act 1999	Breaking separation between commercial and investment banking; Board improved and expended umbrella supervision

According to the information summarised in Table 4.2, the 1930s Great Depression brought about legal reforms with far-reaching effects. The US Fed improved emergent lending facilities, and operated as part of the sector-based regulation regime. Afterwards, it had changed with dynamic developments of monetary policy and theory, in line with its relationship with Government.[99]

After the 1951 Accord, there were few statutory changes relating to central bank independence, and the US Fed was legally prescribed to be accountable to Congress only, operational independence being ensured by budgetary autonomy and transparency. The FOMC was exclusively in charge of interest rate decisions, whilst the US Fed had OMOs, reserve requirements, and contractual lending facilities to affect indirectly the supply of and demand from financial markets. It was also granted responsibilities in the event of financial instability, including emergent lending and asset purchases, which were more direct management targeting specific financial sectors or institutions. Regarding regulation and supervision, it fulfilled umbrella supervision as one consolidated supervisor by mainly focusing upon the LOLR and deposit insurance under the FDICIA, as well as capital adequacy under

[99] *Supra* 52.

the Basel Accord. Accordingly, as Government's banker, the US Fed had clarified its objective to support employment maximum, but with budgetary and operational independence; as bankers' bank, its conduct of indirect monetary policy instruments, functions of LOLR facilities and prudential regulation all developed. It can thus be concluded that the US Fed was a market-oriented central bank with consolidated prudential regulation.

This system was considered to have operated relatively effectively. For example, for a decade up to the GFC, the US Fed maintained low interest and inflation rates, contributing to the longest peacetime economic expansion in the US history. Following the stock exchange crash in 1987 and the terrorist attack in 2001, it augmented emergent lending through discount window and OMOs, whilst clarifying its duty as the nation's central bank to meet liquidity requirements and support the economic system.[100]

4.3 GFC Impact upon the US Fed

Since the GFC was triggered by the US subprime housing market crisis, the US Fed has attracted considerable attention. According to the Federal Reserve Act, it governs monetary policy, pursues financial stability mainly by the facility of the LOLR, supervises member banks and BHCs, and ensures an orderly payment and settlement system. Corresponding instruments thus include interest rate policies, OMOs, discount windows and reserve requirements. In the event of financial crises, it would first employ the above instruments to implement due monetary policy, achieving "the goals of maximum employment, stable prices, and moderate long-term interest rates"; however, as market conditions worsen, innovative measures have been sought.[101] The following part will introduce crisis management solutions selected by the US Fed and other responsible agencies, focusing upon the changes brought by the GFC for further comparison.

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[100] Bruce Champ, 'Open and Operating: Providing Liquidity to Avoid a Crisis' FRB Cleveland Economic Commentary, February 13, 2003 <www.clevelandfed.org/research/commentary/2003/0215.pdf>.
[101] Marc Labonte, 'Monetary Policy and the Federal Reserve: Current Policy and Conditions' CRS Report for Congress, RL30354, 2010 <http://research.policyarchive.org/19842.pdf>.

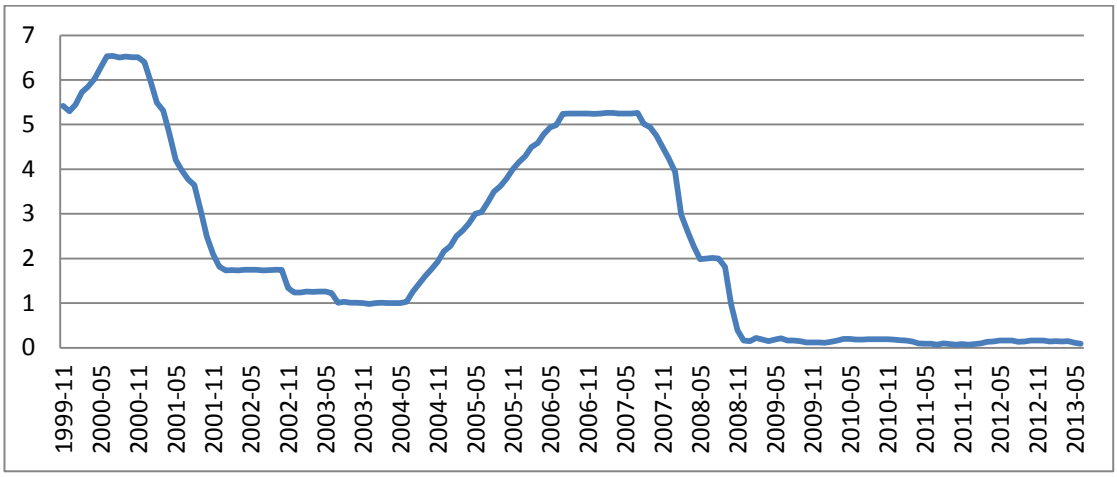
4.3.1 Crisis Management Solutions

The course of the GFC can be divided into two stages by the collapse of Lehman brothers in September 2008, and policy responses from the US Fed have changed accordingly.[102] The rescue package can be examined from the following five perspectives.

(1) Interest Rate Reductions

Since September 2007, when liquidity squeeze emerged from a wider market,[103] the FOMC cut both target federal funds rates and primary lending rates to 0%-0.25% on December 16, 2008 (as displayed in Table 4.3).

Table 4.3: Federal Funds Effective Rates between End 1999 and May 2013



Data sources: US Fed
<*www.federalreserve.gov/releases/h15/current/*>

Moreover, under the Financial Services Regulatory Relief Act 2006[104] and the Emergency Economic Stabilisation Act 2008[105], the US Fed began to pay interests

[102] Ben S. Bernanke, 'Reflection on a Year of Crisis' at FRB Kansas City's Annual Economic Symposium, August 21, 2009 <www.federalreserve.gov/newsevents/speech/bernanke20090821a.htm>.
[103] For the key indicators for this crisis, see, Stephen G. Cecchetti, 'Crisis and Responses: The Federal Reserve and the Financial Crisis of 2007–2008'NBER Working Paper Series, No 14134, 2008 <www.nber.org/papers/w14134.pdf>.
[104] S. 2856 (109th) Oct 13, **2006**.
The Act is available at <www.gpo.gov/fdsys/pkg/BILLS-109s2856enr/pdf/BILLS-109s2856enr.pdf>.
[105] Public Law110-343, 122 STAT. 3765.

on excess reserves, introducing a floor under the federal funds rate, with the discount rate as a ceiling above the funds rate; the target for federal funds rate would be between the ceiling and the floor.[106] It is thus argued that without statutory formalisation, the US Fed has operated under a corridor system of interest rates.[107] These changes are agued to enable it to meet its longer-term target of federal funds rates, given that more UMPs had changed its own balance sheet,[108] and that monetary policy conduct had differed when interest rates maintained at the near-zero level.[109]

(2) Conventional and Unconventional Monetary Policy

Latterly, the US Fed had renewed financial aid to financial institutions and the markets. The following table lists these facilities.

The Act is available at <www.gpo.gov/fdsys/pkg/PLAW-110publ343/pdf/PLAW-110publ343.pdf>.

[106] Marvin Goodfriend, 'Interest on Reserves and Monetary Policy' FRBNY Economic Policy Review, forthcoming, <www.newyorkfed.org/research/epr/02v08n1/0205good.pdf>.

[107] The corridor system has been debated and discussed in the US before the GFC. This facility is closely linked with reform of the US Fed Regulation D (Reserve Requirements of Depository Institutions). The Financial Service Regulatory Relief Act 2006 approved the reform since October 1, 2011, but it was made effective on October 1, 2008 as a result of the GFC via the release of Emergency Economic Stabilization Act 2008. The final approval was announced by the Board on May 20, 2009. Press Release, <www.federalreserve.gov/newsevents/press/monetary/20081006a.htm> accessed on October 6, 2008; and <www.federalreserve.gov/newsevents/press/monetary/20090520b.htm> accessed on May 20, 2009.

[108] *Supra* 72.

[109] D. Tropeano, 'Quantitative Easing in the United States after the Crisis: Conflicting Views' (Universitµa degli Studi di Macerata, Quaderno di Dipartimento n. 64, 2011 <http://webhouse.unimc.it/economia/repo/quaderni/QDief64-2011.pdf>); Hess Chung, Jean-Philippe Laforte, David Reifschneider and John C. Williams, 'Estimating the Macroeconomic Effects of the Fed's Asset Purchases' FRBSF Economic Letter, No 2011-03, 2011 <www.frbsf.org/economic-research/publications/economic-letter/2011/january/macroeconomic-effects-fed-asset-purchases/>.

Table 4.4: US Fed's Selected Facilities and Programmes between August 2007 and Mid-2013[110]

FACILITY	AIM & FUNCTIONS
August 2007 **Discount Window[111]**	Banks were allowed to exchange their holdings of Treasury securities for cash to manage their liquidity constraints, but additional borrowing was quite limited[112]
December 2007 **Term Auction Facility (TAF)[113]**	Combining OMOs with discount window lending:[114] sound institutions were allowed to directly borrow longer-term (extended from 28 days to 84 days) loans from US Fed as long as collateralised; Auctions were conducted anonymously, helping channel loans into banks which needed it most, without undermining the price of their securities
March 2008 **Term Securities Lending Facilities (TSLF) [115]**	Primary dealers were allowed to swap secured or collateralised funding for Treasury securities[116]
Primary Dealer Credit Facility (PDCF)	Primary dealers – investment banks and brokers – were allowed to borrow overnight loans directly from US Fed with a relatively wide range of securities accepted as collateral[117]
May 2008 **Asset purchase of Bear Stearns**	Outside US Fed's conventional regulatory regime

[110] For a summary, refer to, Baird Webel and Marc Labonte, 'Government Interventions in Response to Financial Turmoil' CRS Report for Congress, R41073, 2010 <http://fas.org/sgp/crs/misc/R41073.pdf>.
[111] Office website: <www.frbdiscountwindow.org/>.
[112] This facility was conventionally used to support failing financial institutions rather than healthy ones; see, James A. Clouse, 'Recent Developments in Discount Window Policy' 80 *Federal Reserve Bulletin* 1994: 956-977.
[113] Olivier Armantier, Sandra Krieger and James McAndrews, 'The Federal Reserve's Term Auction Facility' (2008*) FRBNY Current Issues in Economics and Finance* 14(5): 1-11. The final TAF auction was operated on March 8, 2010.
[114] Such an auction facility was already under consideration in 2001, when the US Fed ran out of federal government securities; for the initial design, refer to, Board, 'Federal Reserve System Study Group on Alternative Instruments for System Operations' (December 2002) <www.federalreserve.gov/boarddocs/surveys/soma/alt_instrmnts.pdf>.
[115] Michael J. Fleming, Warren B. Hrung and Frank M. Keane, 'The Term Securities Lending Facility: Origin, Design and Effects' (2009) *FRBNY Current Issues in Economics and Finance* 15(2): 1-11. The TSLF peaked at $ 260 billion on October 1, 2008, and no more transactions from August 2009. It was closed on February 1, 2010.
[116] For many years, primary dealers had been allowed to swap Treasuries of different maturities or attributes with the US Fed on an overnight basis through the System Open Market Account Securities Lending Programme. Michael J. Fleming, Warren B. Hrung and Frank M. Keane, 'Repo Market Effects of the Term Securities Lending Facility' FRBNY Staff Reports No 426, 2010 <www.newyorkfed.org/research/staff_reports/sr426.pdf>.
[117] Press Release, 'Federal Reserve Announces Establishment of Primary Dealer Credit Facility' FRBNY <www.ny.frb.org/newsevents/news/markets/2008/rp080316.html> accessed on March 16, 2008. It was closed on February 1, 2010.

September and October 2008	
Special loans to American Insurance Group (AIG)	Outside US Fed's conventional regulatory regime
Asset-Backed Commercial Paper Money Market Mutual Liquidity Facility (AMLF)	High-quality asset-backed commercial papers (ABCPs) were taken as collateral when depository institutions and BHCs borrowed from US Fed[118]
Commercial Paper Funding Facility (CPFF)	SPV combining with AMLF: to borrow from US Fed to purchase all types of 3-month, highly rated US commercial paper from issuers;[119]
Money Market Investor Funding Facility (MMIFF)	US Fed to purchase non-financial commercial paper from non-financial firms, as well as uncollateralised debt; FRBNY provided senior secured funding to a series of SPVs to facilitate an industry-supported private-sector initiative to finance the purchase of eligible assets from eligible investors[120]
November 2008	
Purchases of longer-maturities securities	Fannie Mae and Freddie Mac were placed into conservatorship; US Fed purchased MBSs issued by government-sponsored enterprises (GSEs) through OMOs,[121] including both above and Federal Home Loan Banks[122] US Fed extended to buy agency debt and agency-insured mortgage-backed securities[123]
2009	
Quantitative Easing (QE)[124]	Continuing to inject liquidity by buying long-term MBSs and Treasury securities until March 2010
April 2010	
Term Deposit Facility (TDF)[125]	All institutions eligible to receive earnings on their balances held with FRBs were allowed to claim term deposits[126]

[118] It was closed on February 1, 2010.
[119] Official website: <www.federalreserve.gov/monetarypolicy/cpff.htm> accessed on February 5, 2010. It was closed on February 1, 2010.
[120] Press Release, <www.federalreserve.gov/monetarypolicy/20081021a.htm> accessed on October 21, 2008; and <www.federalreserve.gov/monetarypolicy/mmiff.htm> accessed on February 5, 2010.
[121] Intensive debates emerge about GSEs purchases; see, Christopher L. Peterson, 'Fannie Mae, Freddie Mac, and the Home Mortgage Foreclosure Crisis' 10 *Loyola Journal of Public Interest Law* (2008-2009): 149-170.
[122] Janet L. Yellen, 'The Federal Reserve's Asset Purchase Program' at the Brimmer Policy Forum, Allied Social Science Associations Annual Meeting, Colorado, January 8, 2011 <www.federalreserve.gov/newsevents/speech/yellen20110108a.htm>.
[123] As verified by the Federal Reserve Act, the US Fed was allowed to buy securities issued or guaranteed by the US Treasury of US agencies.
[124] There are misleading uses of this term, triggering some debates. Janet L. Yellen, 'US Monetary Policy Objectives in the Short and Long Run' Presented to the Andrew Brimmer Policy Forum, IBEFA/ASSA Meeting, January 4, 2009 <www.frbsf.org/our-district/press/presidents-speeches/yellen-speeches/2009/january/yellen-us-monetary-policy-objectives/0104b.pdf>.
[125] Official website: <www.federalreserve.gov/monetarypolicy/tdf.htm> accessed on April 26, 2013.

November 2010 **QE2**	Another purchase of $600 billion longer-term Treasury securities by mid-2011[127]
September 2011 **Maturity Extension Programme**	Operation Twist: $667 billion purchase of long-term Treasury securities was conducted with an equivalent sale of short-term Treasury securities, without much effect upon its balance sheet[128]
September 2012 **QE3**	Monthly, US Fed purchased MBSs at a pace of $40 billion and continued longer-term Treasury securities at a pace of $45 billion with extended maturities, which will continue until the labour market has improved with price stability[129]
December 2012 **QE4 after QE2**	Purchasing MBSs and longer-term Treasuries regularly until expected inflation rate at 2.5%, or unemployment rate below 6.5%
January 2013 **FOMC resumed rolling over maturing Treasury securities at auctions**	Increasing the public's cash balance and directly injecting new money into the market[130]
March 2013	US Fed clarified to continue QE3 until the labour market gains substantial improvement,[131] expanded normal OMOs, and also raised asset purchases with further extended maturities

As illustrated in Table 4.4, the US Fed had changed its policy instruments in response to changed market conditions. From autumn 2007 to autumn 2008, with gathering banking losses, it took over illiquidity or lower quality assets from the banking sector, weathering its own balance sheet, but without changing the size of its

[126] It is viewed as one tool for the US Fed to drain reserves when accommodative monetary policy should be withdrawn after economic conditions improved. It announced to conduct 5 small value offerings of term deposits under the TDF after approving the basic structure required for those offerings. Press Release, <www.federalreserve.gov/newsevents/press/monetary/20100510b.htm> accessed on May 10, 2010; documents can be downloaded from <www.frbservices.org/centralbank/term_deposit_facility.html>.

[127] Press Release, <www.federalreserve.gov/newsevents/press/monetary/20101103a.htm>, accessed on November 3, 2010.

[128] Press Release, <www.federalreserve.gov/newsevents/press/monetary/20110921a.htm> accessed on September 21, 2011.

[129] Press Release, <www.federalreserve.gov/newsevents/press/monetary/20120913a.htm> accessed on September 13, 2012.

[130] News Report, <www.forbes.com/sites/jamesdorn/2012/12/27/ben-bernankes-qe4-another-step-toward-helicopter-money-and-away-from-freedom/> accessed on December 27, 2012.

[131] Press Release, <www.federalreserve.gov/newsevents/press/monetary/20130619a.htm> accessed on June 19, 2013.

own assets. This was named "qualitative easing".[132] As financial upheavals intensified sharply after Lehman Brothers' crisis, it began to extend maturities, enlarge the range of collaterals, and grant more institutions emergent liquidity supports, rather than sterilising additional credits by selling its own good assets.[133] For example, to support the commercial papers market, the CPFF is the first modern standing facility with an ongoing commitment to purchase, as opposed to lending against, assets. Its balance sheet increased from $ 905.8 billion in May 2008 to $2,312 billion by end-2008,[134] reaching 3 trillion in 2012. From the end of 2008, when interest rates reached the near-zero level, there was little scope for a central bank to affect the market by cutting rates, and thus, it began to inject good assets by restructuring its own balance sheet.[135] Up to March 2010, when most *ad hoc* facilities were closed, it purchased $ 1.7 trillion longer-term securities, $300 billion of Treasury securities, $175 billion of agency debt and $1.25 trillion of AMBSs, while renewing its commitment under extended maturities and expansive collateral. Consequently, its selected monetary policy responses have most affected its own balance sheet either in composition or in size.

(3) Numerical Inflation Targeting and Commitment to Further Expansion

On January 25, 2012, the US Fed began publishing its forecasts for federal funds rate targets, announcing a longer-run goal of a 2% inflation rate:

> '… Committee judges that inflation at the rate of 2 per cent … is most consistent over the longer run with the Federal Reserve's statutory mandate. Communicating this inflation goal clearly to the public …. thereby fostering price stability and moderate long-term interest rates and enhancing the Committee's ability to promote maximum employment in the face of significant economic disturbances.

[132] Philipp Bagus and Markus H. Schiml, 'New Modes of Monetary Policy: Qualitative Easing by the Fed' iea Economic Affairs, Oxford, June 2009 <www.philippbagus.com/archivos/NEW%20MODES%20OF%20MONETARY%20policy%20-%20qualitative%20easing%20by%20the%20fed.pdf>.
[133] Ben S Bernanke, 'The Crisis and the Policy Responses' at the Stamp Lecture, LSE, January 13, 2009 <www.federalreserve.gov/newsevents/speech/bernanke20090113a.htm>.
[134] Ben S. Bernanke, 'The Federal Reserve's Balance Sheet: An Update' at the Board Conference on Key Development in Monetary Policy, Washing DC, October 8, 2009 <www.federalreserve.gov/newsevents/speech/bernanke20091008a.htm>.
[135] Ben S. Bernanke, 'Liquidity Provision by the Federal Reserve' at FRB Atlanta Financial Markets Conference, May 13, 2008 <www.federalreserve.gov/newsevents/speech/bernanke20080513.htm>.

> The maximum level of employment is largely determined by nonmonetary factors that affect the structure and dynamics of the labour market … it would not be appropriate to specify a fixed goal for employment; rather, the Committee's policy decisions must be informed by assessments of the maximum level of employment. …'[136]

While maximum employment was reinforced as its goal, the US Fed specified a clear inflation target but not a parallel numerical employment goal, bringing renewed discussion about whether it should adopt a single mandate of price stability with a numerical inflation target.[137] Without statutory change, at the very least, it has moved to embrace the key features of an inflation targeting regime.[138]

From mid-2012, fragile economic growth was restored: inflation remained subdued, and the unemployment rate only declined marginally over the period, leaving other risks and uncertainty.[139] In this context, the FOMC announce to maintain its low-level interest rates and extend highly accommodative monetary policy facilities for a considerable time after economic recovery strengthened.[140] In September 2012, it further explicitly announced to keep interest rates at zero per cent until at least

[136] Press Release, <www.federalreserve.gov/newsevents/press/monetary/20120125c.htm> accessed on January 25, 2012.
[137] Prior to the GFC, it had been argued that the US Fed had operated an implicit inflation targeting since the late 1970s. But it was important to make such commitment to the long-term low inflation more explicit. See, Marvin Goodfriend, 'Inflation Targeting in the United States?' in Ben S. Bernanke and Michael Woodford (eds.), *The Inflation-Targeting Debate* (University of Chicago Press 2004) 311-337.
[138] Marc Labonte, 'Changing the Federal Reserve's Mandate: An Economic Analysis' CRS Report for Congress, R41656, 2012 <http://fas.org/sgp/crs/misc/R41656.pdf>.
[139] Board, 'Monetary Policy Report' <www.federalreserve.gov/monetarypolicy/mpr_20130226_summary.htm> accessed on February 26, 2013
[140] Press Release, <www.federalreserve.gov/newsevents/press/monetary/20120913a.htm> accessed on September 13, 2012.

2015.[141] Then, in December 2012, the US Fed sought to extend monetary easing until a certain inflation or unemployment rate was achieved (QE4):[142]

> '… the Committee decided to keep the target range for the federal funds rate at 0 to 1/4 per cent and currently anticipates that this exceptionally low range for the federal funds rate will be appropriate at least as long as the unemployment rate remains above 6-1/2 per cent, inflation between one and two years ahead is projected to be no more than a half percentage point above the Committee's 2 per cent longer-run goal, and longer-term inflation expectations continue to be well anchored … developments. When the Committee decides to begin to remove policy accommodation, it will take a balanced approach consistent with its longer-run goals of maximum employment and inflation of 2 per cent.'[143]

The US Fed finally replaced the data-based guidance for the federal funds rates with numerical thresholds linked to unemployment and projected inflation rates, linking explicitly monetary policy operations with statutory macroeconomic goals of stable prices and maximum employment.[144] It has since widely employed forward commitments, clarifying the continuation of a low-level federal funds rate for an extended period, to achieve additional monetary stimulus, as well as improved transparency.

(4) Fiscal Stimulus Packages

Fiscal stimulus packages have been gradually enhanced, and the US Fed had undertaken some actions to support the Treasury.

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[141] Ben Bernanke, 'Transcript of Chairman Bernanke's Press Conference' at Chairman Bernanke's Press Conference, September 13, 2012 <www.federalreserve.gov/mediacenter/files/FOMCpresconf20130619.pdf>. The FOMC announced additional purchases if employment did not improve, generally maintaining the simulative policy for a "considerable time". News report, <www.policymic.com/articles/14668/qe3-announcement-fed-announces-40-billion-dollars-in-monthly-mbs-purchases-zirp-through-2015> accessed on September 17, 2012. In January 30, 2013, the FOMC confirmed that it would continue those purchases due to paused economic development.

[142] News Report, <http://econintersect.com/b2evolution/blog1.php/2012/12/12/11-december-2012-fomc-meeting-statement > accessed on December 12, 2012.

[143] Press Release, <www.federalreserve.gov/newsevents/press/monetary/20121212a.htm> accessed on December 12, 2012.

[144] News report, Binyamin Appelbaum, 'Fed Ties New Aid to Jobs Recovery in Forceful Move' (The New York Times, <www.nytimes.com/2012/09/14/business/economy/fed-announces-new-round-of-bond-buying-to-spur-growth.html?pagewanted=2&hp&pagewanted=print&_r=0> accessed on September 13, 2012).

Following the G-7 meeting in 2008, the US announced capital injection equivalent to 1.9% of the GDP from the Treasury, extension of deposit insurance to all non-interest-bearing transaction deposits, a programme which allowed banks and BHCs to issue FDIC-guaranteed senior debts, and the US Fed's continued commitment to stabilise key financial institutions and market sectors.[145] Under the Emergency Economic Stabilisation Act 2008, the Troubled Asset Relief Plan (TARP) was established to inject capital and purchase troubled assets, and the Treasury gained broad discretion to administer this programme.[146] Meanwhile, the Term Asset-Backed Securities Loan Facility (TALF) was announced by the joint agreement of the US Fed and the Treasury, aiming to encourage the issuance of securities backed by privately originated loans to consumers and businesses, and then improve the market condition for ABSs.[147] Both the TARP and the TALF were employed to encourage non-mortgage asset backed securities, but under the TALF, the US Fed lent to purchase rather than outright purchase, and these securitized products were not troubled existing assets. Overall, all such facilities have further deteriorated the US Fed's own balance sheet by introducing longer maturities, more financial institutions and a wider range of collaterals.[148]

By 2009, together with the US Fed, Treasury Secretary Timothy Geithner announced a plan, requiring capital injection into GSEs, asset purchases of troubled MBSs, and

[145] Since the OECD Committee on Financial Markets (CFM) meeting in March 2008, the financial safety net extended its coverage and functions in the event of bank runs. Refer to, Sebastian Schich, 'Financial Crisis: Deposit Insurance and Related Financial Safety Net Aspects' (OECD Journal: Financial Market Trends, OECD, 2008< www.oecd.org/finance/financial-markets/41894959.pdf>). About the US Fed response after the G-7 meeting in October 2008, refer to 'Minutes of The Meeting of the Board of Directors of the Federal Deposit Insurance Corporation Held in the Board Room, Federal Deposit Insurance Corporation Building, Washington, DC' (October 13, 2008).

[146] The TARP itself is evolutionary. For example, in March 2009, the Public Private Investment Plan (PPIP) was established to remove nonperforming assets from bank balance sheets along with FDIC participation, so that private institutions were allowed to swap with the Treasury, the FDIC and the US Fed. For details, refer to, Baird Webel and Edward V. Murphy, 'Troubled Asset Relief Program: Legislation and Treasury Implementation' CRS Report for Congress, RL34730, 2009 <https://waxman.house.gov/sites/waxman.house.gov/files/documents/UploadedFiles/TARP_Implementation.pdf>.

[147] Board, 'Regulatory Reform' <www.federalreserve.gov/newsevents/reform_talf.htm> accessed on August 2, 2013. Unless further notice, the TALF ceased making loans collateralised by newly issued CMBS on June 30, 2010 and other types of loans on March 31, 2010. Details can be found from <www.newyorkfed.org/markets/talf_faq.html> accessed on April 1, 2010.

[148] For a summary, refer to, Joseph Gagnon, Mathew Raskin, Julie Remache and Brian Sack, 'The Financial Market Effects of the Federal Reserve's Large-Scale Asset Purchases' *International Journal of Central Banking* (March 2011) <www.ijcb.org/journal/ijcb11q1a1.pdf>.

a $ 1 trillion credit facility.[149] On February 10, 2009, he and the heads of federal banking agencies also unveiled a new strategy, encouraging banks to provide credit to households and businesses. On February 13, 2009, Congress approved a new economic stimulus package with outstanding policy diversification, covering infrastructure, health, education, unemployment assistance and tax cuts (referred to as the American Recovery and Reinvestment Act 2009).[150]

(5) Cross-Border Cooperation

The US Fed has actively participated in cross-border cooperation with other central banks under Section 14 of the Federal Reserve Act.[151] As early as December 2007, the FOMC began establishing foreign exchange swap lines with the ECB and the Swiss National Bank.[152] After September 2008, the US Fed increased currency swaps, and also set up new lines with such as the BOE and BOJ.[153] Europe's sovereign debt crisis stressed US dollar short-term funding markets in May 2010, and thus, the FOMC re-built temporary reciprocal currency arrangements with several central banks.[154]

As a central bank, the US Fed can issue currency and bank reserves required to finance asset purchases and restore market functioning. This is done in the context of increasing cooperation with the Treasury, and also strengthening its links with market participants. All these have brought about significant changes to its two-tier relationship.

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[149] Financial Stability Oversight Council, '2011 Annual Report' <www.pciaa.net/web/sitehome.nsf/lcpublic/379/$file/fsocar2011.pdf>.
[150] Mark Horton and Anna Ivanova, *The Size of the Fiscal Expansion: An Analysis for the Largest Country* (Fiscal Affairs Department, February 2009) <www.imf.org/external/np/pp/eng/2009/020109.pdf>.
[151] For general information, refer to <www.federalreserve.gov/monetarypolicy/bst_liquidityswaps.htm> accessed on November 30, 2011.
[152] Press Release, <www.federalreserve.gov/newsevents/press/monetary/20071212a.htm> accessed on December 12, 2007.
[153] Press Release, <www.federalreserve.gov/newsevents/press/monetary/20080918a.htm> accessed on September 18, 2008; and <www.federalreserve.gov/newsevents/press/monetary/20080924a.htm> accessed on September 24, 2008.
[154] Press Release, <www.federalreserve.gov/newsevents/press/monetary/20100511a.htm> accessed on May 11, 2010.

To begin with, the US Fed has worked as a LOLR on a major scale, including *ad hoc* facilities and bailouts of non-depository firms. Accordingly, it has directly affected liquidity conditions of both key market sectors and individual financial institutions.[155] During this course, it was criticized for having overly expanded its authority by repeatedly citing Section 13(3).[156] As legally defined, only depository institutions were eligible for financial aid against a certain type of collateral, but the Act also granted the US Fed flexibility to expand lending facilities and asset purchases "in unusual and exigent circumstances". When interest rates were near zero or a significant pay-down of the Treasury debt, it could purchase longer-maturity Treasury securities, accept other assets than US Treasury securities, structure its discount window operations, and make loans directly to IPCs if conditions are met; or when the US government has paid off the federal debt completely, or to such an extent that lack of depth in the Treasury market has an adverse impact on market's functioning, it could consider conducting OMOs purchasing of assets other than Treasury debt.[157] After 2008, the FOMC had reduced interest rates to the near-zero level, constituting the exception to extend financial aid. How these policy instruments are classified as unconventional tools can be displayed in Table 4.5.

[155] James Bullard, 'Three Lessons for Monetary Policy from the Panic of 2008' (2010) *FRB St. Louis Review* 92(3): 155-164.
[156] Christian A. Johnson, 'Exigent and Unusual Circumstances: the Federal Reserve and the US Financial Crisis' in Kern Alexander and Niamh Moloney (eds.), *Law Reform and Financial Markets* (Elgar Financial Law, Edward Elgar 2011) 269-305.
[157] For individual lending facilities under Section 13(3), refer to, Office of Inspector General, *The Federal Reserve's Section 13(3) Lending Facilities to Support Overall Market Liquidity: Function, Status, and Risk Management* (US Fed, November 2010).

Table 4.5: Classification of Facilities and Programmes Established Introduced by US Fed during GFC

Market Conditions	Facility	Non-depository Institutions	Longer Maturities	Extended Collateral	Private Sector	Treasury Securities
Losses across banking sector	Term Discount Window					
	Interest Rate Cuttings					
Interbank market dried up	TAF		√			
Large financial institutions announced their subprime-related losses, deteriorating market conditions	TSLF	√				
	PDCF	√				
	Special Loans to AIG	√				
	Asset Purchases from Bear Stearns	√				
Lehman Brothers collapse	AMLF			√		
	CPFF			√		
	MMIF				√	
Interest Rate at the near-zero level	Further asset purchases; Quantitative easing				√	√
Recovery delayed but uncertainty increased	TALF				√	
	QE2		√			√
	QE3 and QE4		√		√	√

As seen from Table 4.5, the US Fed has supported depository institutions with lower requirements regarding collaterals and maturities, whilst adding emergent lending under Section 13(3) to non-depository institutions.[158] Overall, it has offered more extensive financial aid to a wider range of recipients due to the GFC.

However, as delegated authority may always be retrieved by the state during a crisis, the US Fed worked more closely with other government agencies amid the GFC, especially with the Treasury. First, it started certain asset purchases as required to support the Treasury. For example, in November 2008, it bought large amounts of direct obligations and MBSs from GSEs, supplementing similar programmes operated by the Treasury.[159] Moreover, in cooperation with the OCC and FDIC, it led stress tests into capital positions of nineteen largest BHCs, and the Treasury committed to providing any public capital needed.[160] What is more, some of the US Fed's financial aid facilities have had evident fiscal implications. It set up Maiden Lanes to purchasing assets from Bear Stearns and the AIG, including MBSs and CDSs.[161] Both cases were verified by citing Section 13(3). The FRBNY was required to lend to Bear Stearns directly. Since any losses arising from this deal reduced the amount transferred by the FRBNY to the Treasury, it is argued that this constituted a fiscal solution rather than monetary instrument. [162] Similarly in the case of AIG, the Treasury purchased $ 40 billion in preferred shares, and the US Fed purchased its distressed CDOs and mortgage-backed securities.[163] Not only did such deals pose risks to taxpayers, but also impair central bank independence, which otherwise should be preserved.[164] Meanwhile, cooperation between the US Fed and financial

[158] Kenneth N. Kuttner, 'The Federal Reserve as Lender of Last Resort During the Panic of 2008' on behalf of the Committee on Capital Markets Regulation, as part of a report on policy responses to the financial crisis, December 30, 2008 <www.capmktsreg.org/pdfs/The_Federal_Reserve_as_Lender_of_Last_Resort_during_the_Panic_of_2008.pdf>.
[159] Department of the Treasury, *GSE MBS Purchase Program and GSE Credit Facility* (Budget in Brief FY 2011 <www.treasury.gov/about/budget-performance/budget-in-brief/Documents/Housing%20GSE%20FY11%20508.pdf>.
[160] US Fed, 'The Supervisory Capital Assessment Program: Design and Implementation' <www.federalreserve.gov/bankinforeg/bcreg20090424a1.pdf> accessed on April 24, 2009.
[161] Maiden Lanes was set within the Federal Reserve Bank of New York. Official website: <www.newyorkfed.org/markets/maidenlane.html>.
[162] Vincent R. Reinhart, 'Fallout from a Bailout' (Washington Post, May 22, 2008) <www.aei.org/article/economics/financial-services/fallout-from-a-bailout/>.
[163] Press Release, <www.federalreserve.gov/newsevents/press/other/20080916a.htm> accessed on September 16, 2008.
[164] Marvin Goodfriend, 'Central Banking in the Credit Turmoil: An Assessment of Federal Reserve Practice' (2011) *Journal of Monetary Economics* 58(1): 1-12.

institutions had been strengthened to support specific market sectors with a distinct fiscal nature. This encouraged debate about the quasi-fiscal nature of monetary policy responses. In principle, fiscal stimulus is potentially more effective for dealing with economic recession, but monetary policies have further fiscal implications. Therefore, once UMPs were launched, interactions between fiscal and monetary policies changed and increasingly interdependent.[165]

Overall, during the GFC, the US Fed had largely extended its lending facilities and asset purchases "in unusual and exigent circumstance", which was achieved under the joint efforts with the Treasury. As a result, its two-tier relationship changed, with reduced central bank independence but enhanced intervention into financial markets.

4.3.2 Reforming the US Financial Regulation and Supervision System

According to the Treasury statement, two particular problems have caused the GFC, among others:

> '…There were systematic failures in the checks and balances in the system, by Boards of Directors, by credit rating agencies, and by government regulators. Our financial system operated with large gaps in meaningful oversight, and without sufficient constraints to limit risk. Even institutions that were overseen by our complicated, overlapping system of multiple regulators put themselves in a position of extreme vulnerability …'[166]

To summarise, the US financial oversight system failed to maintain financial stability from the systemic perspective, whilst the multi-agency pattern failed to oversee systemic risks effectively.[167]

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[165] Donald L. Kohn, 'Interactions between Monetary and Fiscal Policy in the Current Situation' at the Conference on "Monetary-Fiscal Policy Interaction, Expectations, and Dynamics in the Current Economic Crisis", Princeton University, May 23, 2009 <www.federalreserve.gov/newsevents/speech/kohn20090523a.htm>.

[166] Timothy Geithner, 'Secretary Geithner Introduces Financial Stability Plan' <www.treasury.gov/press-center/press-releases/Pages/tg18.aspx> accessed on February 10, 2009.

[167] In 1996, the GAO pointed out that the US financial regulation and supervision regime basically emerged in the aftermath of the 1930s Great Depression, failing to change in response to financial modernization. Inter alia, its complexity brought regulatory burden but inefficient oversight; and especially conflicts had been caused by multiple responsible agencies. For details, see, GAO, *U.S. and*

In terms of the US Fed, it was officially in charge of financial stability by supervising and regulating financial institutions, operating the national payments system, and serving as the LOLR facility. However, it had mainly focused upon designing and conducting monetary policy rather than stabilizing the whole financial system, but financial stability policy has taken on greater prominence amid the GFC, and has been judged equal to monetary policy.[168] Initially, the US Fed made organisational changes to improve its capacity to strengthen prudential regulation over the largest, most complex financial firms. In spring 2009, it led the Supervisory Capital Assessment Programme (stress test), evaluating comprehensively the largest banking organisations.[169] It created the Large Institution Supervision Coordinating Committee (LISCC) as a multidisciplinary body to centralize supervision over these firms on a regular, simultaneous and horizontal base.[170] It also set up the Office of Financial Stability Policy and Research (OFS): grouping skilled staff from different professional areas,[171] the OFS should identify and analyse potential risks to financial stability and the wider economy, setting the macro-picture for regulation and supervision.[172]

The benchmark of legal reforms is the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act), which came into effect on July 21, 2010.[173] This Act is aimed to address perceived gaps and weaknesses exposed during the GFC, and focus upon systemic risks by adjusting regulators and introducing system-wide regulatory policy.[174]

Foreign Experience May Offer Lessons for Modernizing U.S. Structure (GAO/GGD-97-23, November 20, 1996).

[168] Board, 'Monetary Policy Report to the Congress' <www.federalreserve.gov/monetarypolicy/files/20120229_mprfullreport.pdf> accessed on February 29, 2012.

[169] Relevant resources can be found at <www.federalreserve.gov/bankinforeg/stress-tests-capital-planning.htm> accessed on December 2, 2013.

[170] Scott G. Alvarez, 'Bank Supervision and Risk Management' Statement before the Committee on Financial Services US House of Representatives, June 19, 2012 <www.federalreserve.gov/newsevents/testimony/alvarez20120619a.htm>.

[171] Press Release, <www.federalreserve.gov/newsevents/press/other/20101104a.htm> accessed on November 4, 2010.

[172] Official website: <www.federalreserve.gov/econresdata/fspr-fsa-staff.htm> accessed on December 2, 2013.

[173] This act can be downloaded from <www.sec.gov/about/laws/wallstreetreform-cpa.pdf>.

[174] Treasury, 'Financial Regulation Reform – A New Foundation: Rebuilding Financial Regulation and Supervision' <www.treasury.gov/initiatives/Documents/FinalReport_web.pdf> accessed on June 23, 2009.

To begin with, the Financial Stability Oversight Council (FSOC) was established to take comprehensive responsibility for identifying and monitoring risks across the financial system.[175] It designated nonbank financial companies for supervision by the Board (Board-supervised nonbank financial companies), [176] and make recommendations to enhance prudential standards applicable to such companies, as well as large, interconnected BHCs.[177] It also collects data, reports to Congress, and makes recommendations according to regulatory and supervisory matters of systemic concern, so it is non-regulatory in nature.[178] Another new agency – Office of Financial Research – now exists within the Treasury, responsible for improving the quality of financial data available to such policy makers as the FSOC, as well as the public.[179] The OTS was abolished, and its responsibilities were taken over by the US Fed, the OCC and the FDIC. Meanwhile, duties for existing agencies have been rearranged. The US Fed began to supervise thrift holding companies, nonbank financial firms and certain payment, clearing, and settlement utilities which the FSOC designates as systemically important [180], while also being granted responsibilities to supervise all systemically important financial institutions (SIFIs).[181] It is granted the power to identify additional priorities beyond the core areas of regulation and supervision. The US Fed and the FSOC should collaborate to reduce systemic risks. The US Fed is one of 10 voting members of the FSOC, and the Board has contributed to the FSOC studies mandated by the Act and also to rulemakings. Recently, most of them are directed at enhancing bank supervision and prudential standards.[182]

Regarding how to regulate and supervise, there were three traditional components: safety and soundness, deposit insurance and adequate capital; now the Dodd-Frank

[175] Documents can be downloaded from <www.treasury.gov/initiatives/fsoc/Pages/home.aspx>.
[176] Section 113, Dodd-Frank Act 2010.
[177] 12 USC §5325.
[178] Reports can be downloaded from <www.treasury.gov/initiatives/fsoc/studies-reports/Pages/default.aspx>.
[179] Official website: <www.treasury.gov/initiatives/ofr/Pages/default.aspx>.
[180] US Treasury, Press Release, <www.treasury.gov/press-center/press-releases/Pages/tg1645.aspx> accessed on July 18, 2012.
[181] SIFIs are the entities, whose failure or financial distress could generate destabilising effects on the rest of the system, including both large BHCs and Board-supervised nonbank financial companies. Board, *To the Officer in Charge of Supervision at Each Reserve Bank and to Domestic and Foreign Large Financial Institutions* (SR 12-17 CA 12-14, December 17, 2012).
[182] Board, 'Monetary Policy Report to the Congress' <www.federalreserve.gov/monetarypolicy/files/20120717_mprfullreport.pdf> accessed on July 17, 2012.

Act has added the fourth pillar of systemic risk.[183] Macro-prudential regulation requires more focus upon not only the safety and soundness of individual financial entities, but also the linkages among institutions and the overall market conditions.[184] The Dodd-Frank Act imposes a macro-prudential mandate on individual responsible agencies, including the US Fed.[185] The Board is required to set out "more stringent" prudential standards, [186] including liquidity requirements, risk management requirements, stress tests, limits on concentration and credit exposure, enhanced public disclosures, limits on short-term debt, leverage limits, off-balance sheet activities, and so forth, for BHCs with total consolidated assets of $50 billion or more and Board-supervised nonbank financial companies.[187] In addition, a "Vice Chairman for Supervision" has been designated, responsible for recommending, to the Board, the policies regarding regulation and supervision of depository institution holding companies and other financial firms supervised by the Board, while overseeing such supervision and regulation. [188] Regarding macro-prudential regulation tools, on an annual basis since 2010, the US Fed has conducted the Comparative Capital Analysis and Review (CCAR) [189] to ensure that large, complex BHCs have robust, forward-looking capital planning progress for their risks and sufficient capital to continue operation throughout times of financial and economic stress.[190] It also conducts the Dodd-Frank Act stress tests (DFA stress tests).[191] Moreover, the Orderly Liquidation Authority (OLA) was established to improve the prospects for an orderly liquidation of a systemic financial firm.[192] Consequently, the

[183] Mark Jickling and Edward V. Murphy, 'Who Regulates Whom? An Overview of US Financial Supervision' CRS Report for Congress, R40249, 2010 <http://assets.opencrs.com/rpts/R40249_20101208.pdf>.
[184] Henry M. Paulson, Robert K. Steel and David G. Nason, *The Department of Treasury Blueprint for a Modernized Financial Regulatory Structure* (The Department of the Treasury, March 2008) <www.treasury.gov/press-center/press-releases/Documents/Blueprint.pdf>.
[185] Ben S. Bernanke, 'Implementing a Macroprudential Approach to Supervision and Regulation' at 47th Annual Conference on Bank Structure and Competition, Chicago, May 5, 2011 <www.federalreserve.gov/newsevents/speech/bernanke20110505a.htm>.
[186] Sections 165 & 166, Dodd-Frank Act 2010.
[187] Melanie L. Fein, 'Dodd-Frank Wall Street Reform and Consumer Protection Act' Fein Law Offices, Working Paper Series, July 21, 2010 <http://ssrn.com/abstract=1357452>.
[188] 12 USC §242.
[189] <www.federalreserve.gov/bankinforeg/ccar.htm> accessed on December 2, 2013.
[190] Board, 'Comprehensive Capital Analysis and Review 2012: Methodology and Results for Stress Scenario Projections' <www.federalreserve.gov/newsevents/press/bcreg/bcreg20120313a1.pdf> accessed on March 13, 2012.
[191] <www.federalreserve.gov/bankinforeg/dfa-stress-tests.htm> accessed on November 13, 2013. Updates: <www.federalreserve.gov/bankinforeg/stress-tests-capital-planning.htm> accessed on December 2, 2013.
[192] Title II, Orderly Liquidation Authority, Dodd-Frank Act 2010.

US Fed reviews the resolution plans (living wills),[193] whilst deposit insurance from the FDIC comes under the stricter requirements in collaboration with the Treasury.[194] In brief, the Dodd-Frank Act has removed many restraints over the Board's regulatory and supervisory responsibilities under the BHCs Act and the GLB Act, whilst extending its authority beyond traditional banking sectors with more emphasis upon risk management, capital planning and adequacy.

Responding to criticism of the legitimacy of some unprecedented monetary expansion, the Dodd-Frank Act modified Section 13(3) of the Federal Reserve Act with constraints upon approval authority, recipient's conditions, eligible collateral, and so forth. Emergent lending to IPCs is replaced by financial assistance to a "participant in any program of facility with broad-based eligibility",[195] and Treasury Secretary has the authority to approve lending programs. In this context, the Board is required to consult the Treasury Secretary first, so as to ensure that financial aid is provided to maintain market-wide stability, rather than directly supporting individual financial institutions.[196] Meanwhile, the Act has required FRBs to reform their governance structures to effectively represent the public under the audit of the GAO. What is more, in the 112th Congress, finally, H.R. 459 on July 25, 2012 eliminated the final restriction that GAO cannot evaluate economic merits of policy decision from the US Fed.[197] Overall, the GAO has increased its audit power over emergent lending under Section 13(3), OMOs, and discount window, as well as FRBs' governance.[198] Additionally, the US Fed has improved transparency through further

[193] <www.federalreserve.gov/bankinforeg/resolution-plans.htm> accessed on October 3, 2013.
[194] Official website: <www.fdic.gov/regulations/reform/initiatives.html> accessed on November 15, 2013.
[195] 12 USC §342. Official website: <www.federalreserve.gov/aboutthefed/section13.htm> accessed on May 23, 2013.
[196] In other words, such bailouts as Bear Stearns, AIG and Citigroup should have been prohibited under the Dodd-Frank Act. It is thus argued that this reform is targeted at abolishing the "too-big-to-fail" policy. However, due to conflicts of provisions about SIFIs, the Dodd-Frank Act might strengthen existing rules rather than resolve other negative problems. Refer to, Arthur E. Wilmarth, 'The Dodd-Frank Act: A Flawed and Inadequate Response to the Too-Big-To-Fail Problem' 89 *Oregon Law Review* (2011): 951-1057. Richard W. Fisher, 'Correcting "Dodd-Frank" to Actually End 'Too Big to Fail' Statement before the Committee on Financial Services U.S. House of Representatives, Hearing on "Examining How the Dodd-Frank Act Could Result in More Taxpayer-Funded Bailouts", June 26, 2013 <http://financialservices.house.gov/uploadedfiles/hhrg-113-ba00-wstate-rfisher-20130626.pdf>.
[197] Marc Labonte, 'Federal Reserve: Oversight and Disclosure Issues' CRS Report for Congress, R42079, 2012 <www.hsdl.org/?view&did=720758>.
[198] GAO, *Federal Reserve System: Opportunities Exist to Strengthen Policies and Processes for Managing Emergency Assistance* (GAO-11-696, July 2011).

publications: besides a weekly summary of its own balance sheet, it has published more detailed monthly reports updating its unconventional liquidity injections.[199] In particular, as from December 2010, it began to release individual lending records under discount window and also for emergent lending, including borrowers' identities; this is the first time in its history to release borrowers' own identities.[200] As a result, when conducting emergent lending and asset purchases as crisis management solutions, the US Fed has come under reinforced oversight from the Treasury, as well as the GAO.

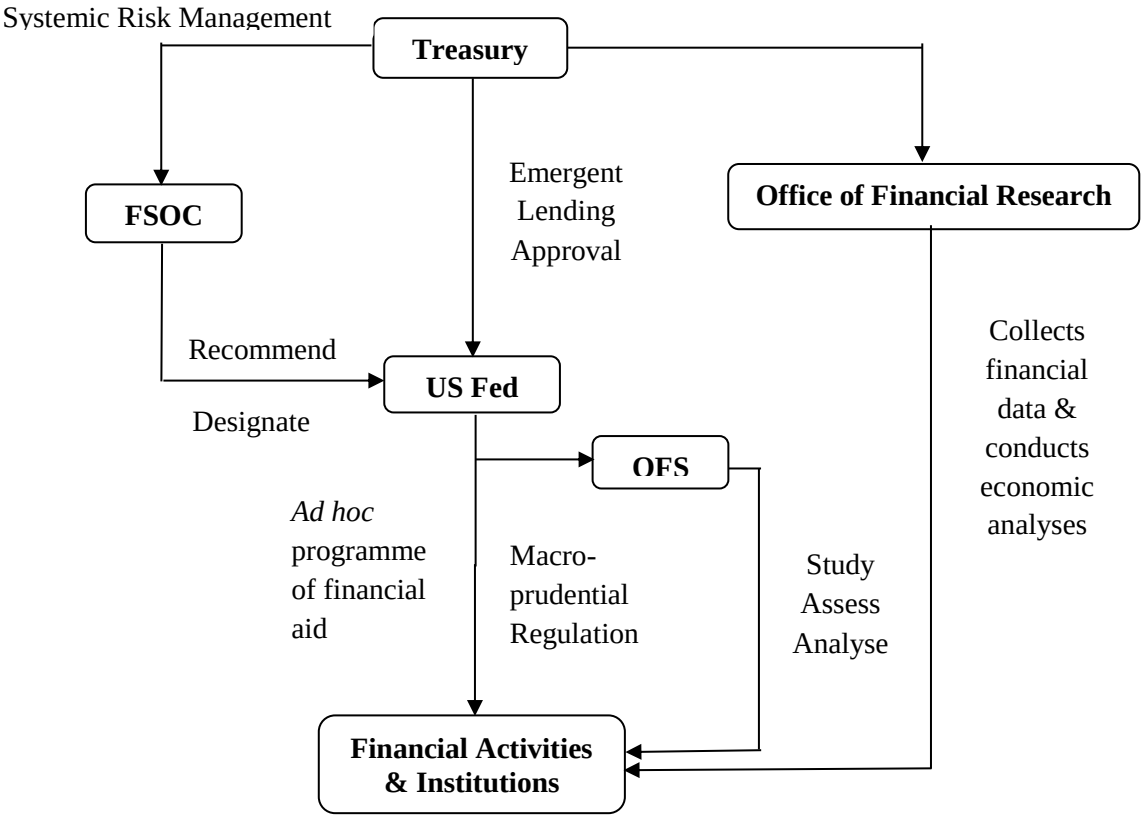
Internationally, the US Fed has started implementing the Basel III.[201] By July 2013, it, together with the COC and FDIC, has finalised implementation requirements for US banking firms to increase capital adequacy, improve the quality of regulatory capital, and also strengthen their risk-weight framework.[202]

During the GFC, the US Fed recognised how it had underestimated its role in regulation and supervision as regards maintaining financial stability. The release of the Dodd-Frank Act intended to fill in gaps and resolve problems exposed by emphasising the clear division of responsible agencies and macro-prudential regulation.[203] The US Fed has its role clarified to deal with systemic risks, including both structural vulnerabilities and cyclical systemic risks.[204] It has thereby been required to give special attention to placing SIFIs under a new consolidated oversight framework, while monitoring routinely such indicators as measures of leverage, maturity mismatch and regular stress tests. By contrast, Section 13(3) has been modified to restrict emergent lending from the US Fed with enhanced requirements for oversight, transparency and information disclosure. In particular, direct interventions into financial markets and individual institutions have been strictly constrained. In that regard, the Dodd-Frank Act has strengthened the official

[199] Federal Reserve Sunshine Act 2009 (HR 1348) and Federal Reserve Transparency Act 2009 (S 513).
[200] *Supra* 197.
[201] Darryl E. Getter, 'US Implementation of the Basel Capital Regulatory Framework' CRS Report for Congress, R42744, 2012 <http://fpc.state.gov/documents/organization/201108.pdf>.
[202] Press Release, <www.federalreserve.gov/newsevents/press/bcreg/20130702a.htm> accessed on July 2, 2013.
[203] For how the Dodd-Frank Act reset the US regulation regime, including the comparison, refer to Appendix 4-1.
[204] *Supra* 168.

authority from Government in relation to crisis management for systemic stability, while the US Fed has been reformed to balance its role as monetary authority and systemic regulator. The new regulation and supervision regime can be displayed in Figure 4.2:

Figure 4.2: Financial Regulation and Supervision Regime under Dodd-Frank Act



Accordingly, the US Fed has enhanced macro-prudential regulation over more individual financial institutions, but its emergent lending under Section 13(3) has been constrained. At the same time, the Treasury has strengthened its influence upon the US Fed in both aspects.

4.3.3 Summary

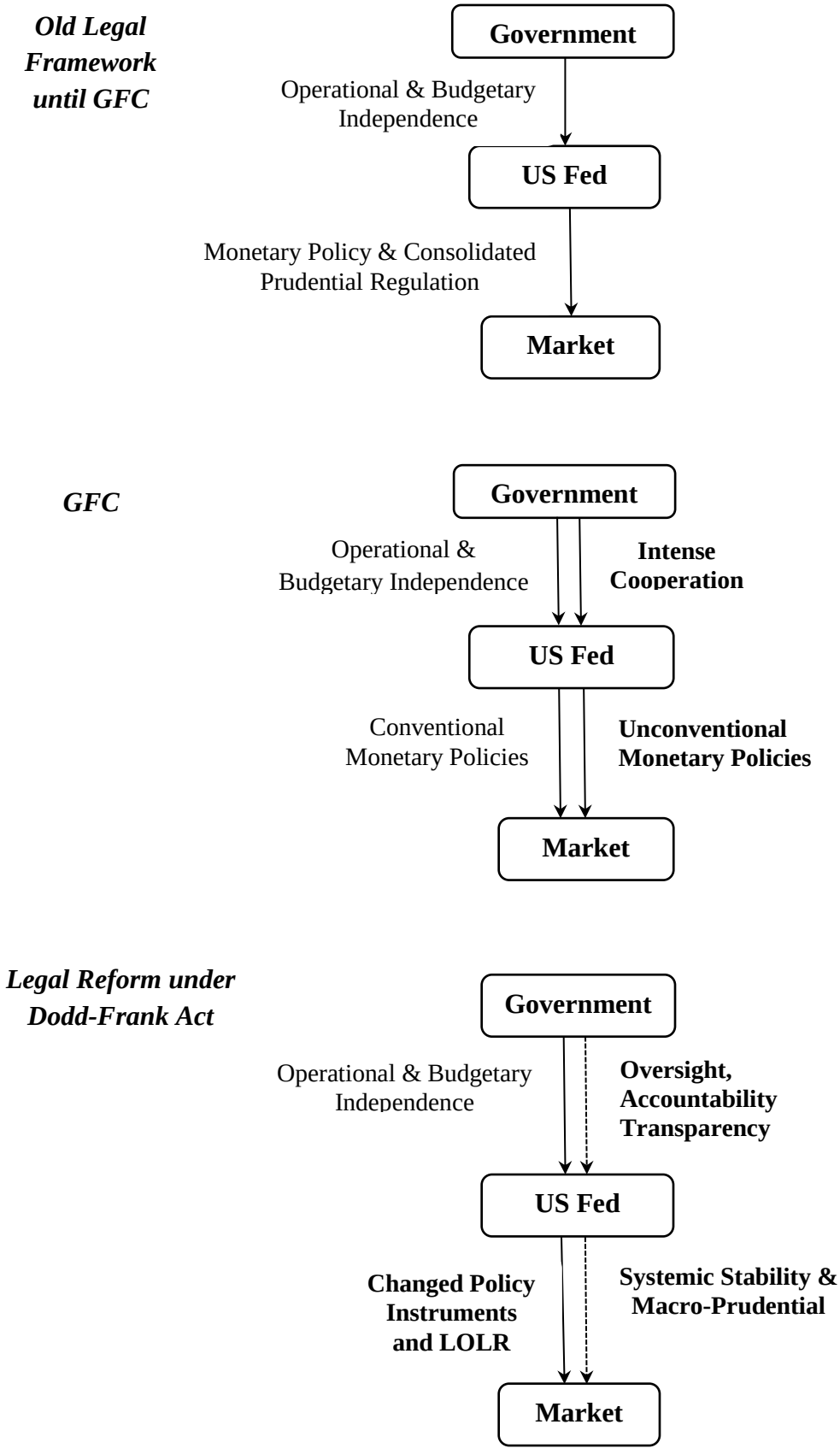
Unlike hesitant responses during the 1930s Great Depression, the US Fed has utilised unprecedented monetary expansion during the GFC. It has moved closer to

both Government and financial markets through major asset purchases and direct bailouts. In comparison, financial regulation and supervision were not considered to be as critical as monetary policy before the GFC exposed critical gap in financial stability. Therefore, the Dodd-Frank Act, as a comprehensive reform of the US oversight regime, has changed the role played by the US Fed in maintaining financial stability.

4.4 How has the GFC Challenged the US Fed?

Prior to the GFC, the US Fed was defined by law as a market-oriented central bank with consolidated micro-prudential regulation. During the GFC, with increased cooperation between the US Fed and Government, financial markets have received more direct support; the two-tier relationship is thus characterised by reduced central bank independence and more direct intervention into financial markets. In 2010, the Dodd-Frank Act was enacted, and inter alia, it has endeavoured to rearrange the triangular relationship of Government, US Fed and financial markets. This entire process can be depicted in Figure 4.3:

Figure 4.3: Changed Two-Tier Relationships of the US Fed



As illustrated here, Government had once directly controlled the US Fed, exerting further controls over the markets. By law, the US Fed was granted certain crisis management solutions, including indirect monetary policy instruments and LOLR facilities. However, such legal tools and facilities gave way to more direct intervention into markets through asset purchases and bailouts of financial institutions during the GFC. Such a tight nexus did not change until the legal reform under the Dodd-Frank Act brought a new triangular interaction. In terms of the two-tier relationship governing the US Fed, Government has more indirect controls of it, and the Treasury has strengthened its authority over crisis management; by emphasising macro-prudential regulation but limiting direct liquidity support, the US Fed has re-positioned itself as a systemic regulator. To say the least, therefore, statutory changes are aimed to protect the US Fed from being directly controlled by Government and also from directly administering financial markets.

Dodd-Frank Act 2010 is still at the preliminary stage of implementation,[205] so that it may be too early to draw many consolidated conclusions.[206] But the US Fed has experienced significant changes relating to its legal framework, as compared in Table 4.6:

[205] GAO has studied the progress what regulators have already made in implementing the Dodd-Frank Act, as well as recommendations for further development. Refer to, GAO, *Financial Regulatory Reform: Regulators Have Faced Challenges Finalizing Key Reforms and Unaddressed Areas Pose Potential Risks* (GAO-13-195, January 2013).

[206] For the latest update about implementation, refer to, Daniel K. Tarullo, 'Dodd-Frank Implementation' Testimony before the Committee on Banking, Housing, and Urban Affairs, US Senate, Washington DC, July 11, 2013 <www.federalreserve.gov/newsevents/testimony/tarullo20140206a.htm>.

Table 4.6: Legal Framework of the US Fed—Changes During the GFC

Legal Framework	Prior to GFC	Under Dodd-Frank Act
Objectives	To maximum employment, maintain stable prices, and moderate long-term interest rates	Clarified to link monetary policy with employment; 2% target for inflation rate
Independence	Independence within Government	Independence within Government
		Enhanced oversight, accountability and transparency; GAO strengthens audits
Governance	Board of Governors plus FRBs	Board: a new Vice Chairman for Supervision; FRBs Presidents: new election mechanisms
Monetary Policy	OMOs, reserve requirements, contractual clearing balances, discount window lending	Limits on emergent lending under Section 13(3), especially increasing oversight from Treasury
Regulation & Supervision		
• **Objectives**	**Safety and soundness, deposit insurance and adequate capital**	**<u>Plus</u> systemic risks**
• **Approaches**	**Consolidated micro-prudential regulation and undermined functions in stabilising financial system**	**Macro-prudential regulation over more financial institutions and focuses upon systemic stability**

According to Table 4.6, the major changes brought by the Dodd-Frank Act to the US Fed can be summarised as: (i) clarified target for inflation rate and goal for financial stability; (ii) constrained financial aid under enhanced government oversight; (iii) macro-prudential regulatory policy; and (iv) improved transparency and credibility.

In particular, the Dodd-Frank Act has left central bank independence intact, but strengthened requirements from oversight, accountability and transparency. The Treasury, along with the GAO, has been brought to govern the US Fed in regard to

emergent lending. Furthermore, by introducing numerical inflation rate targeting, the US Fed clarified its commitment to projected inflation and a set unemployment rate, linking monetary policy further explicitly with statutory macroeconomic goals.[207] The Dodd-Frank Act has strictly limited direct bailouts of individual financial institutions, but extended the US Fed's macro-prudential regulatory duties. At its core, statutory changes promote macro-prudential regulation over direct control, while enabling Government to deal better with financial crises. This Act has therefore endeavoured to maintain the market orientation of the US Fed, whilst balancing its functions as monetary authority and systemic prudential regulator.

After major changes, the American economy has not yet fully recovered from recession: neither inflation rate target nor maximum employment goal has been met, though a highly controlled financial system is not likely to make resurgence as following the 1930s Great Depression. The FOMC has clarified to continue its zero bound on interest rates, much of monetary expansion is still in operation, and the exit of UMPs has been a particular concern, especially with prevailing quantitative easing policies in the international arena.[208] At the firm level, financial markets differ from before the GFC, with more changes underway.[209] If economic recovery halted, it would not be clear whether and how the US Fed would put more efforts to spur growth. To summarise, regulatory restructuring is aimed at balancing the independence of the US Fed in monetary policy with systemic stability regulation, but prolonged crisis management has questioned its exact market orientation.

4.5 Conclusion

This chapter has supplied evidence to demonstrate that the US Fed was a market-oriented central bank with consolidated prudential regulation, while also detailing

[207] Otmar Issing, 'A New Paradigm for Monetary Policy?' (2013) *International Finance* 16(2): 273-288.
[208] Board, 'Monetary Policy Report' <www.federalreserve.gov/monetarypolicy/files/20130717_mprfullreport.pdf> accessed on July 17, 2013.
[209] For example, on April 4, 2012, the Board approved final rules of Regulation D (Reserve Requirements of Depository Institutions) and Regulation J (Collection of Checks and other Items by Federal Reserve Banks and Funds Transfers through Fedwire).

changes that have resulted from the GFC. First, the previous legal framework defined it as independent within Government, whilst governing indirect monetary policy, LOLR facilities and some prudential regulation. However, selected crisis management solutions during the GFC has placed distinct burdens upon the US Fed's market-oriented approach; it was linked to financial markets through innovative emergent lending facilities, and was also linked to the Treasury via a joint commitment to restore financial stability. Furthermore, the GFC triggered profound statutory reforms in the US. In particular, the Dodd-Frank Act has enhanced Government's indirect control over crisis management, and also modified the US Fed as a prudential regulator responsible for systemic stability. The US Fed's position as a market-oriented central bank has been challenged by the GFC to bring it closer to the broader policies of the Treasury, whilst legal reforms prioritized to balance its role in both monetary and financial stability. Overall, this chapter has provided support for the proposition in this thesis how the US Fed as a market-oriented regulator has been questioned by the GFC.

Chapter Five

Bank of England and the Global Financial Crisis[1]

5.1 Introduction

Similar to the US Fed, the Bank of England (BOE), under its legal framework, was required to be a market-oriented central bank and lender of last resort in the event of financial crises; prudential financial regulation was distributed between it and another independent agency. But its two-tier relationship has been challenged by crisis management during the GFC. This chapter will thus explain how its market-oriented commitment has been changed accordingly.

With these goals in mind, this chapter will proceed as follows. Before the GFC, the ruling legal framework assumed that the BOE was a market-oriented central bank with operational independence, and along with the old Financial Services Authority (FSA), it conducted prudential regulation and supervision over financial markets. During the GFC, the BOE has changed its operating framework to implement unconventional monetary policy (UMP), while HM Treasury has enhanced its power to assist individual financial institutions and stabilise the whole market. Moreover, after the old tripartite model failed, significant changes have been introduced by the UK Government to reform financial regulation and supervision. In particular, under the Financial Services Act 2012, the BOE became responsible for systemic stability, the FSA was split into a twin-peak model controlling prudential regulation, and Government, especially HM Treasury, positioned to lead the UK financial oversight regime. Accordingly, under pressure from the GFC, the BOE has changed its two-tier relationship, and hence its orientation. This chapter concludes with a comparative summary regarding the way in which the GFC has challenged the BOE to maintain financial stability.

[1] This chapter is updated until August 2013.

5.2 Overriding Legal Framework of the BOE before the GFC

This section will focus upon the ruling legal framework of the BOE before the GFC, arguing that it was a market-oriented central bank, and its regulatory and supervisory duties had undergone important changes. Currently, it consists of the following parts as displayed in Table 5.1:[2]

Table 5.1: The Constitution of the BOE[3]

- The Bank of England Act 1694 (BOE Act 1694)
- The Charter of the Bank of England 1694 (1694 Charter)
- The Bank Charter Act 1844 (BOE Act 1844)
- The Bank of England Act 1946 (BOE Act 1946)
- The Charter of the Bank of England 1998 (1998 Charter)
- The Bank of England Act 1998 (BOE Act 1998)
- The Banking Act 2009
- Financial Services Act 2012
- Orders (No 1120, 1129, 1130, 1270 and 1344)

5.2.1 The BOE Development as a Central Bank

The first Bank of England Act was enacted in 1694, establishing it to raise money for the war with Louis XVI.[4] By legal status, it was a joint stock corporation invested with a legal personality. It was prohibited from engaging in general trade, but authorised to deal in bills of exchange, and then in the equivalent of promissory notes, gold coins, bullion and silver. It was entrusted by law with a monopoly position: competing banks were not allowed, and it assumed informal control of

[2] The Banking Act 1979 was enacted to regulate deposits and deposit takers. The majority of this Act was repealed by other laws and rules, including the Banking Act 1987. These two legislations were not particularly to govern the BOE, but affected its operations, and thus, they will be analysed later.
[3] <www.bankofengland.co.uk/about/Pages/legislation/default.aspx>.
[4] Richard Hildreth, *The History of Banks: to Which is Added, a Demonstration of the Advantages and Necessity of Free Competition in the Business of Banking* (Batoche Books, Kitchener 2001) 8–10, 16–22.

banks.[5] According to the 1694 Charter, capital stock was allocated to the BOE, and the Governor and Company determined its internal organization.

In the 19th century, the growth of trade and industry promoted private banks, and the BOE gradually developed its main functions as a note issuer, central bank, and settlement venue.[6] In spite of an unclear origin,[7] the BOE Act 1844 separated the issue department from the banking department,[8] but it could only issue fiduciary notes after consultation with HM Treasury.[9] Its supervisory role derived from its functions as the LOLR, and it began to regulate powerful joint stock banks by controlling interest rates from the late 1800s[10] and margins maintenance in World War I.[11] It held both accounts of the daily balance and of the daily global balance, which demonstrated its role as the settlement venue.

After World War II, the BOE was nationalized by the new Labour Government through the BOE Act 1946.[12] Its stock was transferred to Treasury solicitors, becoming a government institution subordinate to HM Treasury.[13] Even so, the BOE was granted the power to make requests or recommendations to banks, and issue directions under HM Treasury, which whereas could give it directions only after consulting with its governor.[14] Moreover, a person could not assume office as a minister of state or as a civil servant and meanwhile a BOE officer.[15] This Act did

[5] Ibid. 10–14.
[6] John Clapham, *The Bank of England – A History* (Cambridge 1944).
[7] It is argued that the BOE had begun to issue notes since the BOE Act 1696; refer to, *Bank of England v. Anderson* (1837) 3 Bing. NC 589, 653. Until the 19th century, other banks were still allowed by legislation to issue notes under the authority of, or the licence from, the BOE; refer to, the Currency and Bank Notes Act 1925.
[8] This separation set down the division between the BOE's liability and assets. <www.bankofengland.co.uk/mfsd/iadb/notesiadb/Central_bank_bs.htm>.
[9] BOE, *A Brief History of Banknotes* <www.bankofengland.co.uk/banknotes/about/history.htm>.
[10] Responding to bank failures, the Joint Stock Bank Act was enacted in May 1826, ending the BOE's monopoly on joint-state status. The Joint Stock Companies Act 1844 was the first banking code in England, regulating joint stock banks. Later, the Joint Stock Banking Companies Act 1857 allowed banks to register with the BOE with unlimited liability, and then with limited liability in 1858. Richard S. Grossman, *Unsettled Account: The Evolution of Banking in the Industrialized World since 1800* (Princeton University Press 2010) 169-196.
[11] H.S. Sayers, *The Bank of England 1891–1944* (Cambridge 1976).
[12] R.F. Harrod, 'Consequences of Nationalizing the Bank of England' (1946) *The Political Quarterly* 17(3): 214-227.
[13] House of Commons Treasury Committee, *Accountability of the Bank of England* (Twenty-first Report of Session 2010-12).
[14] BOE Act 1946, (9 and 10 Geo. 6 c. 27, February 14, 1946) <www.bankofengland.co.uk/about/legislation/1946act.pdf>.
[15] *The Economist* (February 16, 1946).

not provide a clear definition of "bank" for supervision purposes, so deposit takers were under regulation and supervision at different levels, with some still self-regulated.[16]

Since the 1950s, the BOE had further improved its monetary operations.[17] Between 1971 and 1973, it introduced Competition and Credit Control, enabling deposit banks to participate in a wider range of business and also relaxing capital requirements.[18] It administered foreign exchange rates until 1979, reaching the peak of its influence over the banking sector.[19] It introduced supplementary special deposits (corset) until June 1980, placing a quantitative control on banks' balance sheets by penalising the institutions whose monetary liabilities grew faster than the prescribed rate.[20] After suspending this corset, with the spread of market-oriented reform, it gradually reduced direct controls of lending and increased OMOs to control the growth of broad money.

However, financial crises exposed the shortcomings of the BOE in dealing with market panics. In 1972, the declining property market and the international exposure led to adverse contagion among clearing banks in the UK, but its experience from previous crises limited its ability to rebuild market confidence. As a result, in 1973, 26 clearing banks were supported by a "lifeboat" arrangement from the BOE, forming an early LOLR facility.[21] Its progress in formalising financial regulation and supervision was slow. Between 1973 and 1975, the Secondary Banking Crisis informed it of the necessity to better oversee the whole banking sector.[22]

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[16] Maximilian J.B. Hall, 'The Evolution of Financial Regulation and Supervision in the UK: Why We Ended up with the Financial Services Authority?' (2001) *Banca Impresa Societa* 12(3): 377-412.
[17] <www.bankofengland.co.uk/about/Pages/history/bank_history.aspx>.
[18] "Competition and Credit Control" was extracted from a lecture by the Chief Cashier of the BOE on May 14, 1971. It was a consultation paper about changes expected to modify its dealing in the gilt-edged market, rather than a legislative process.
<www.bankofengland.co.uk/archive/Documents/historicpubs/qb/1971/qb71q4477481.pdf>.
[19] In 1947, HM Treasury and the BOE granted a list of "authorized banks" with the right to deal in foreign exchange (Exchange Control Act, Act No.VII of 1947). On October 24, 1979, the BOE announced to remove controls of the financing of direct investment and began to relax controls of outward portfolio investment. For details, see, Forrest Capie, *The Bank of England: 1950s to 1979* (CUP 2010) 710-721.
[20] A.W. Mullineux, *International Banking and Financial Systems: A Comparison* (Springer 1987) 28.
[21] David Cobham, 'Monetary Policy' in Michael J. Artis and David P. Cobham (eds.), *Labour's Economic Policies 1974–1979* (Manchester University Press 1991) 38–55.
[22] Joseph Jude Norton, *Devising International Bank Supervisory Standards* (Graham & Trotman/Martinus Nijhoff 1995) 73–77.

Internationally, after the UK joined the European Commission (EC) in 1973, EC Directives in banking regulation and supervision exerted significant impact upon UK banking law. In 1979, the First EC Banking Directive required member countries, including the UK, to establish a prior authorisation procedure for credit institutions. An inter-banking market was promoted by the Second EC Directive.[23] Under internal and external factors, therefore, the Banking Act 1979 was approved, setting the foundations for the BOE to regulate and supervise all UK banks. The requirements for a deposit-taking business were described in detail for the first time, as was diplomatic recognition of deposit takers under the EC Directives;[24] and a deposit insurance scheme was also introduced.[25] However, in the domestic market, financial institutions were still divided into two categories: those with the title of "bank" included the BOE, recognised banks, licensed deposit takers, and institutions as listed in Schedule 1 of the 1979 Act; and those non-bank institutions, which were under a more relaxed control determined by the BOE,[26] were prohibited from engaging in banking business but allowed to take deposits from the public.[27] In addition, an administrative rulemaking framework was designed for it to issue directions for regulatory purposes, leading further toward prudential supervision. Until then, the BOE still preferred informal, non-legalistic and flexible supervision, and specific criteria for prudential supervision were thus absent from this Act.[28]

The collapse of Johnson Matthey Bank (JMB) in 1984 triggered further debates about differentiated supervision between banks and other licensed deposit takers, and the Banking Act 1987 was enacted to formalize the BOE's role in financial oversight.[29] It was defined "generally to supervise the institutions authorised by it in

[23] Michael Gruson and Werner Nikowitz, 'The Second Banking Directive of the European Economic Community and Its Importance for Non-EEC Banks' (1989) *Fordham International Law Journal* 12(2): 206–241.
[24] <www.publications.parliament.uk/pa/cm201012/cmselect/cmtreasy/874/87405.htm>.
[25] Anthony Saunders and Berry Wilson, 'The Impact of Consolidation and Safety-net Support on Canadian, US and UK Banks: 1893–1992' (1999) *Journey of Banking & Finance* 23(2 – 4): 537-571.
[26] Cmnd, *The Licensing and Supervision of Deposit Taking Institutions* (White Paper 6584, London, 1976).
[27] I. Morrison, P. Tillet and J. Welch, *The Banking Act 1979* (London, 1979); F.R. Ryder, *The Banking Act 1979* (London 1979).
[28] C.A.E. Goodhart, 'Financial Supervision from a Historical Perspective: Was the Development of Such Supervision Designed, or Largely Accidental?' in David G. Mayes and Geoffrey Edward Wood (eds.), *The Structure of Financial Regulation* (Warwick: Taylor & Francis 2008) 43–64.
[29] This Act can be downloaded from <http://hansard.millbanksystems.com/commons/1985/jul/26/johnson-matthey-bankers >. For further, refer to, M. Blair, R. Cranston, C. Ryan and M. Taylor, *The Bank of England Act 1987* (London 1998).

the exercise of those powers", terminating the previous two-tier banking system.[30] A new BOE Board of Banking Supervision was appointed, including the governor, deputy governor, executive director and six independent members.[31] Moreover, more instruments were granted to execute the supervisory role: for example, the BOE could require detailed information in an individual case, and also revise the minimal criteria as it saw fit.[32] It was required to report its own activities annually to the Chancellor of the Exchequer, and independent members above were appointed jointly by HM Treasury and the governor. As a result, the BOE was by law accountable to Government.[33]

In brief, as Government's banker, the BOE was nationalised in 1946, and thereafter, few statutory changes were made in regard to its relationship with Government. It managed government's cash position and issued sterling market debt, including Treasury bills and gilt-edged stocks. As bankers' bank, the BOE had gradually reduced its direct monetary controls, while formalizing its prudential regulation.

5.2.2 The BOE Legal Framework before the GFC

The Labour Government brought important changes in 1997.[34] Reforms relating to the BOE sought to separate monetary policy, debt management and financial regulation, thereby changing its two-tier relationship. It is thus argued that the establishments of the Monetary Policy Committee (MPC) and an integrate regulator were the most marked changes in the history of the BOE since World War II.[35]

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[30] Dalvinder Singh, *Banking Regulation of UK and US Financial Markets* (England: Ashgate Publishing Ltd. 2012) 8.
[31] When the BOE Act 1998 took effect, the Board of Banking Supervision became a committee of the FSA.
[32] G. Penn, *Banking Supervision: Regulation of the UK Banking Sector under the Banking Act 1987* (London 1987).
[33] *Supra* 13. Also, see, Marianne Ojo, 'The Financial Services Authority: A Model of Improved Accountability?' Munich Personal RePEc Archive, MPRA Paper No 228, 2005 <http://ssrn.com/abstract=1542793>.
[34] For a brief, refer to, John Hills, 'Thatcherism, New Labour and the Welfare State' CASE paper, CASE/13, LSE, August 1998 <http://eprints.lse.ac.uk/5553/1/Thatcherism_New_Labour_and_the_Welfare_State.pdf>.
[35] <www.bankofengland.co.uk/education/targettwopointzero/mpframework/independentBankEngland.htm>.

5.2.2.1 The BOE Act 1998

This Act was enacted in 1998 after a series of transition arrangements.[36] Key legal provisions include:

Objectives

The BOE was formally described "to maintain price stability, and subject to this, to support the Government's economic policy, including its objectives for growth and employment". As the monetary authority, it should primarily achieve the inflation targeting, and also support general economic development.[37] The BOE thus had multiple goals.[38]

Independence

The BOE Act 1946 enabled HM Treasury to give the BOE directions relating to policy-making about interest rates after consultation with Governor; this power was reserved only "if they are satisfied that the directions are required by the public interest and by extreme economic circumstances".[39] The BOE handed over its responsibility as Government's debt manager to the Debt Management Office (DMO) within HM Treasury, marking the formal separation of debt management from monetary policy.[40] Therefore, it was further distanced from Government, gaining operational independence with respect to monetary policy.[41]

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[36] Gordon Brown, *A letter to the Governor of the Bank of England* <www.bankofengland.co.uk/monetarypolicy/Documents/pdf/chancellorletter970506.pdf> accessed on May 6, 1997.
[37] Mervyn King, 'The MPC Two Years On' at the Queen's University, Belfast, May 17, 1999 <www.bankofengland.co.uk/archive/Documents/historicpubs/speeches/1999/speech41.pdf>.
[38] Peter Rodgers, 'The Bank of England Act' BOE Quarterly Bulletin, May 1998 <www.bankofengland.co.uk/archive/Documents/historicpubs/qb/1998/qb980201.pdf>.
[39] *Bank of England Bill: Memorandum by Her Majesty's Treasury* <www.publications.parliament.uk/pa/ld199798/ldselect/lddereg/066xi/dr1106.htm> accessed on January 30, 1998.
[40] <www.dmo.gov.uk/index.aspx?page=About/About_DMO>.
[41] It is argued that the BOE's performance in keeping inflation under control had ensured contributions to its independence. Refer to, Stephen Nickell, 'The Assessment: the Economic Record of the Labour Government since 1997' (2002) *Oxford Review of Economic Policy* 18(2): 107-119.

To strengthen independence, Government set up the MPC as an internal committee of the BOE to specialize in formulating and implementing monetary policy, [42] aiming to fulfil its responsibility in controlling inflation.[43] In September 1992, the UK was forced to leave the European Monetary System following speculative attacks on the pound, and the BOE replaced the exchange rate anchor with a clear inflation rate for price stability. Chancellor of the Exchequer announced the inflation target between 1% and 4%, and the BOE committed to this, producing regular quarterly inflation reports. After its establishment, the MPC was directed by statute to aim for this, and thus could only operate to meet such numerical inflation targeting on a quasi-independence way. [44] Moreover, a representative from HM Treasury attended the MPC discussion of policy issues without vote rights. Through this representative, the MPC was confirmed to be acting consistently with fiscal policy development and other government's macro-economic policies, whilst the Chancellor was fully informed of MPC discussion.[45] The MPC was accountable to the BOE Court through its monthly reports, and also explained its actions regularly to parliamentary committees, especially the Treasury Select Committee (TSC).[46] It was exclusively responsible for interest rate policies, raising the BOE's independence in policy making; however, HM Treasury still maintained its strong presence by setting inflation targets, sending representative to MPC meetings, and enhancing accountability.

Organisational Structure[47]

The BOE Court set up to formally focus upon operational affairs of the BOE, including the Governor, two Deputy Governors, and sixteen Non-Executive Directors. A sub-committee was formed by the Non-Executive Directors, whose tasks included the review of the MPC procedures.

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[42] C.A.E. Goodhart, 'The Role of the Monetary Policy Committee: Strategic Considerations' in Lavan Mahadeva and Gabriel Sterne (eds.), *Monetary Policy Frameworks in a Global Context* (London: Routledge, 2000) 226–242.
[43] The establishment of the MPC was proposed in a letter from the Chancellor of the Exchequer to the Governor of the BOE on May 6, 1997, followed by another MPC remit on June 12, 1997. On June 1, 1998, the MPC came into operation under the BOE Act 1998.
[44] Charles Bean, 'Inflation Targeting: the UK Experience' (BOE, October 2003) <www.bankofengland.co.uk/archive/Documents/historicpubs/speeches/2003/speech203.pdf>.
[45] Alan Budd, 'The Role and Operations of the Bank of England Monetary Policy Committee' (1998) *The Economic Journal* 108(451): 1783-1794.
[46] <www.bankofengland.co.uk/about/parliament/index.htm>.
[47] *Supra* 13.

Functions

The Court of Directors formally determined the BOE's key functions in line with its objectives, including setting monetary policy, and overseeing market operations and financial stability.[48] By division, the MPC controlled interest rate policies, and the Financial Stability Division within the BOE was responsible for overall systemic stability.[49] Moreover, all building societies in the UK were required to place interest-free deposits with the BOE, and thus, the tiered financial institutions had further come under uniformed and standardised oversight.[50]

The BOE had gradually developed the Sterling Monetary Framework (SMF) to achieve inflation targeting, whilst reducing disruption to the payment and settlement system to maintain financial stability.[51] The SMF was evolutionary: in March 1997, the BOE extended OMOs of gilt repo, relaxed requirements for counterparties to be separately capitalised and added funds provision late in the day;[52] and it listed the eligible collateral, pattern of operations rounds and functional criteria for counterparties from 2002.[53] After 2006, it paid interests on reserve balances held by banks and building societies, which chose their own reserve targets over the period of the MPC's monthly meetings (maintenance period).[54] On any given day, participants were allowed to vary their reserve positions, and adjust their interest rates within the corridor, where the lending rate was above, and the deposit rate was below the policy rate.[55] Therefore, the SMF incorporated the following three main elements:[56]

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[48] Barbara Casu, Claudia Girardone and Philip Molyneux, *Introduction to Banking* (Financial Times, Prentice Hall 2006) 132–140.
[49] *Supra* 16.
[50] Christos Hadjiemmanuil, 'Institutional Structure of Financial Regulation: A Trend towards "Megaregulators"?' 5 Y.B. Int'l Fin. & Econ. L. 127 (2000–2001).
[51] <www.bankofengland.co.uk/markets/money/index.htm>.
[52] BOE, 'Reform of the Bank of England's Operations in the Sterling Money Markets' (February 1997) <www.bankofengland.co.uk/markets/Documents/money/stermm2.pdf>.
[53] BOE, 'The Bank of England's Operations in the Sterling Money Markets'(May 2002) <www.bankofengland.co.uk/markets/Documents/money/stermm3.pdf>.
[54] BOE, 'The Framework for the Bank of England's Operations in the Sterling Money Markets' (November 2006) <www.bankofengland.co.uk/markets/Documents/money/publications/redbook0506.pdf>.
[55] Roger Clews, 'Implementing Monetary Policy: Reforms to the Bank of England's Operations in the Money Market' BOE Quarterly Bulletin, Summer 2005 <http://ssrn.com/abstract=753986>.
[56] *Supra* 54.

- **Reserves-averaging schemes:** banks and building societies joined voluntarily, and chose to hold target balances with the BOE on average over maintenance periods;
- **Standing facilities:** including deposits and lending, aiming to allow banks to borrow from, and deposit with, the BOE in unlimited amounts at specific interest rates;
- **OMOs:** short-term repos[57] at the official Bank Rate, long-term repos at the market rates determined in variable-rate tenders, and outright purchases of high-quality bonds. They were intended to provide liquidity insurance to the banking sector by balancing their own prudent risk management and the BOE's balance sheet.

In the SMF, the BOE controlled the amount of money in line with statutory objectives, whilst operating the LOLR facilities to provide temporary, short-term liquidity assistance to the financial sector; and financial institutions could employ the SMF to manage their own sterling liquidity positions.[58]

Overall, after the MPC was granted operational independence to set interest rates, the BOE officially focused upon being a monetary authority. As Government's banker, it traded government securities in the SMF; as bankers' bank, it offered, on a voluntary basis, guidance on interest rates and liquidity insurance to participants.

5.2.2.2 The FSA and the FSMA 2000

As the market-oriented reform developed, financial conglomerates broke down boundaries between banking, securities and insurance from the 1980s.[59] On October 25, 1986, London's "Big Bang" was launched, sought to end the division between brokers and jobbers, abolish constraints upon capital flows, attract more foreign

[57] The BOE defines Repo as "a form of short-term borrowing for dealers in government securities. The dealer sells the government securities to investors, usually on an overnight basis, and buys them back the following day".
[58] Michael Cross, 'The Bank's Balance Sheet during the Crisis' BOE Quarterly Bulletin, Quarter 1, 2010 <www.bankofengland.co.uk/publications/Documents/quarterlybulletin/qb100102.pdf>.
[59] L. Van den Berghe, K. Verweire and S.W.M. Carchon, 'Convergence in the Financial Services Industry' in the framework of the Tokyo Executive Seminar on Insurance Regulation and Supervision, September 1999 <www.oecd.org/finance/insurance/1915267.pdf>.

investors, re-structure the gift market, promote fair competition, etc., raising London as an international financial centre.[60] The largest banks became universal and global by combining securities transactions, derivative trading, fund management and insurance business in the cross-border capital markets.[61] It was thus argued that all the activities of separate regulators and supervisors should be brought under an integrated body to oversee the financial market as a whole.[62] At the same time, financial crises continued, especially after the collapse of Barings in 1995 triggered intense criticism about the BOE's supervision.[63] As a result, the FSA was established on October 28, 1997 to centralize prudential regulation.[64] It at first oversaw the reforms conducted under the BOE Act 1998, and then the Financial Services and Markets Act 2000 (FSMA 2000) came into full force, giving the FSA a statutory position and powers as a mega regulator.[65]

By legal status, the FSA was a limited company financed by levies on the sector, but accountable to Treasury ministers and Parliament.[66] It had improved principle-based prudential regulation,[67] and at the core, without authorisation under Section 19 of FSMA 2000, it was a criminal offence to conduct identified types of financial business listed in Regulated Activities Order 2001. To assess "impact and probability" of risks and sensitivities of a regulated body consistent with its business activities, the FSA was equipped with various mathematical models,[68] and regulated

[60] John Plender, 'London's Big Bang in International Context' (1986-1987) *International Affairs* 63(1): 39–48.
[61] Richard Davies, Peter Richardson, Vaiva Katinaite and Mark Manning, 'Evolution of the UK Banking System' BOE Quarterly Bulletin, Q 4, 2010 <www.bankofengland.co.uk/publications/Documents/quarterlybulletin/qb100407.pdf>.
[62] George Alexander Walker, *International Banking Regulation Law, Policy and Practice* (vol. 19, London: Kluwer Law International 2001) 243.
[63] 'Implications of the Barings Collapse for Bank Supervisors' Reserve Bank of Australia Bulletin, November 1995 <www.rba.gov.au/publications/bulletin/1995/nov/pdf/bu-1195-1.pdf>.
[64] *Rulebook Amendments and Additions: The Financial Services Authority* (Rules and Regulations Volume 1, Miscellaneous, Release 177—The Financial Services/Change of Name of Designated Agency Rules 1997, <www.betterregulation.com/external/SIB%20%7C%20Volume%201.pdf>). For relevant reforms and the legal framework of the FSA, refer to Appendix 5-1.
[65] FMSA 2000 was revised in July 2005.See, Michael Blair QC (eds.), *Blackstone's Guide to the Financial Services and Markets Act 2000* (OUP 2009).
[66] It was argued that due to its extensive range of obligations, the FSA was accountable to government, Parliament, the judiciary, practitioners and consumers. See, Rosa M. Lastra and Heba Shams, 'Public Accountability in the Financial Sector' in Eilis Ferran and C.A.E. Goodhart (eds.), *Regulating Financial Services and Markets in the Twenty First Century* (Oxford: Hart Publishing 2001) 177-188.
[67] Martyn Hopper and Jenny Stainsby, 'Principle-Based Regulation – Better Regulation?' *Journal of International Banking Law and Regulation* 2006(7): 387-391.
[68] Supervision Manual, 1.1 & 1.3, FSMA 2000.

bodies were classified according to risks.[69] Being responsible for regulation and supervision at the firm level, the FSA developed its duties from the dialogue with financial markets, which might have caused conflict of interests over the integrity of business and prudential regulatory requirements.[70] Meanwhile, regulated bodies were still allowed to set their own standards, and the FSA was expected to oversee and promote self-regulation by improving accountability and transparency. This "flexibility" was criticised as being overly uncertain, causing other potential conflicts and continuous controversy. [71] In addition, the Financial Services Compensation Scheme (FSCS) was created to replace the old deposit insurance scheme, aiming to protect customers against risks from service providers' going into insolvency or being unable to meet due obligations.[72]

More importantly, the FSMA 2000 stipulated the division of responsibilities and cooperation mechanisms between HM Treasury, BOE and FSA, setting up a tripartite financial regulation and supervision model:

> "The Bank contributes to the maintenance of the stability of the financial system as a whole…ensuring the stability of the monetary system as part of its monetary policy functions…overseeing financial system infrastructure systemically significant to the UK, in particular payments systems whether based in the UK or abroad … undertaking, in exceptional circumstances, official financial operations… in order to limit the risk of problems in or affecting particular institutions spreading to other parts of the financial system.
>
> The FSA… is responsible for the authorisation and prudential supervision of banks, building societies, investment firms, insurance companies and brokers, credit unions and friendly societies; the supervision of financial markets, securities listings and of clearing and settlement systems; the conduct of operations in response to problem

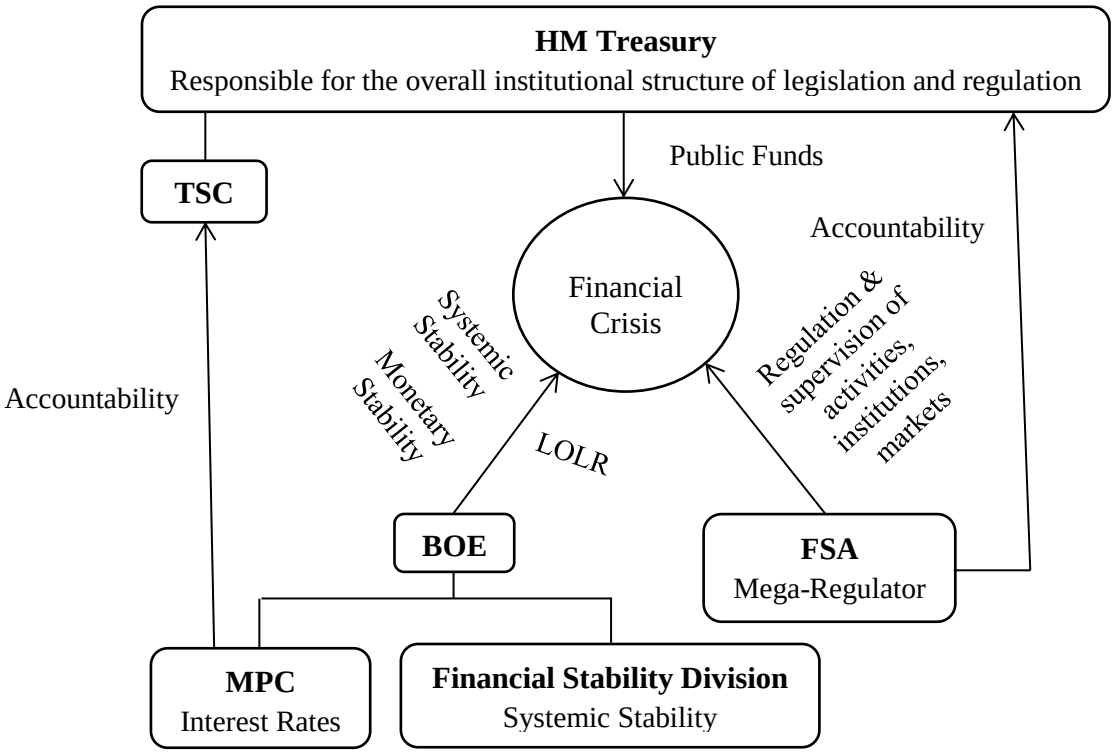
[69] S.19, S.31 & Sch.2; General Prudential Rulebook, Chapter 29, FSMA 2000.
[70] David T. Llewellyn, 'Institutional Structure of Financial Regulation and Supervision: The Basic Issues' at a World Bank seminar "Aligning Supervisory Structures with Country Needs", Washington DC, June 6 & 7, 2006 <http://siteresources.worldbank.org/INTTOPCONF6/Resources/2057292-1162909660809/F2FlemmingLlewellyn.pdf>.
[71] Ian Bartle and Peter Vass, 'Self-Regulation and the Regulatory State: A Survey of Policy Practice' CRI Research Report 17, 2005 <www.bath.ac.uk/management/cri/pubpdf/Research_Reports/17_Bartle_Vass.pdf>.
[72] About the FSA-FSCS model, see, Joseph Norton, 'Global Financial Sector Reform: The Single Financial Regulator Model Based on the United Kingdom FSA Experience – A Critical Reevaluation' (2005) *The International Lawyers* 39(1): 15-62.

cases affecting firms, markets and clearing and settlements systems within its responsibilities….

The Treasury is responsible for the overall institutional structure of financial regulation and the legislation which governs it, including the negotiation of EC directives; informing, and accounting to Parliament for the management of serious problems in the financial system and any measures used to resolve them…."[73]

Accordingly, the UK tripartite model can be displayed in Figure 5.1:

Figure 5.1: UK Tripartite Model of Financial Regulation and Supervision



As illustrated in Figure 5.1, the tripartite model indicated how the three parties were involved in dealing with financial crises. The FSA oversaw individual financial institutions and specific market sectors through principles-based prudence and risk-based assessments; the BOE pursued monetary policy, the LOLR, and the broad oversight of the financial system as a whole; and HM Treasury controlled public funds, as well as the overall institutional structure which governed the tripartite

[73] FSA, 'Memorandum of Understanding between HM Treasury, the Bank of England and the Financial Services Authority' <www.fsa.gov.uk/pubs/mou/fsa_hmt_boe.pdf>.

model.[74] Within this model, both the BOE and FSA were accountable to HM Treasury.

5.2.3 Summary

The BOE was one of the oldest central banks in the world, and major changes around its two-tier relationship can be summarised in the following Table 5.2.

[74] Economic Affairs Committee, *Financial Supervision in the United Kingdom* (Lords Select Committees, 2009) paras. 90-95, ch 5.

Table 5.2: Major Changes around the BOE's Two-Tier Relationship before the GFC

Governing Legislation	Conditions	Independence	Relationship with the Market
1694 Act & Charter	War with France	BOE established as a joint stock corporation	BOE had monopoly
1844 Charter	Main functions of central banking	BOE issued fiduciary notes with HM Treasury	BOE regulated interest rate and margins maintenance
BOE Act 1946	Labour Government took office after World War II	BOE was nationalised, subordinate to HM Treasury; Limited independence in monetary policy	Dual-track supervision for deposit takers, but self-regulation was espoused
Banking Act 1979	Banking industry developed; BOE shifted toward indirect policy instruments; Crises unveiled gaps in regulation and supervision; UK legislation was affected by EC Directives	BOE managed government's cash position and issued sterling market debt	Defining and setting requirements for deposit-taking business; Deposit insurance scheme; Diplomatic recognition under EC directives; Prudential regulation without specific criteria
Banking Act 1987	JMB crisis triggered further debates about differentiated supervision between banks and other licensed deposit takers	BOE was required to report activities to the Chancellor of the Exchequer annually; HM Treasury controlled personnel appointment	Supervising all institutions authorised by it with more tools, ending the two-tier system; Board of Banking Supervision Division was set up
BOE Act 1998	Financial conglomerates further developed; "Big Bang" liberalized financial markets, and raised London as an international financial centre	Goal dependence: price stability and economic development; Operational independence: MPC controlled interest rate policies, but HM Treasury maintained certain influence	BOE controlled the LOLR and systemic stability
FSMA 2000		HM Treasury led the tripartite model by controlling public funds and institutional structure	FSA conducted risk-and principle-based prudential regulation with great flexibility

As illustrated in Table 5.2, the post-war nationalization changed the BOE from being a private joint-stock company to subjecting to HM Treasury. Afterwards, few statutory changes occurred to adjust its relationship with Government, while it had slowly changed its attitudes toward financial regulation and supervision. The BOE Act 1998 constituted a turning point in its development. On one hand, operational independence was written into statute, and the establishment of the MPC consolidated its decision-making authority as regards monetary policy. The BOE controlled the amount of money required to meet inflation targets via indirect tools under the SMF, including reserve accounts, standing facilities and OMOs. On the other hand, the FSA was set up to take over prudential regulation from the BOE. The package of prudential regulation included capital adequacy requirements under the Basel Accord, the LOLR facility from the BOE, prior authorisation and risk-weighted assessment from the FSA, as well as the deposit insurance scheme. The tripartite model defined how HM Treasury, BOE and FSA dealt with regulation and financial crises.

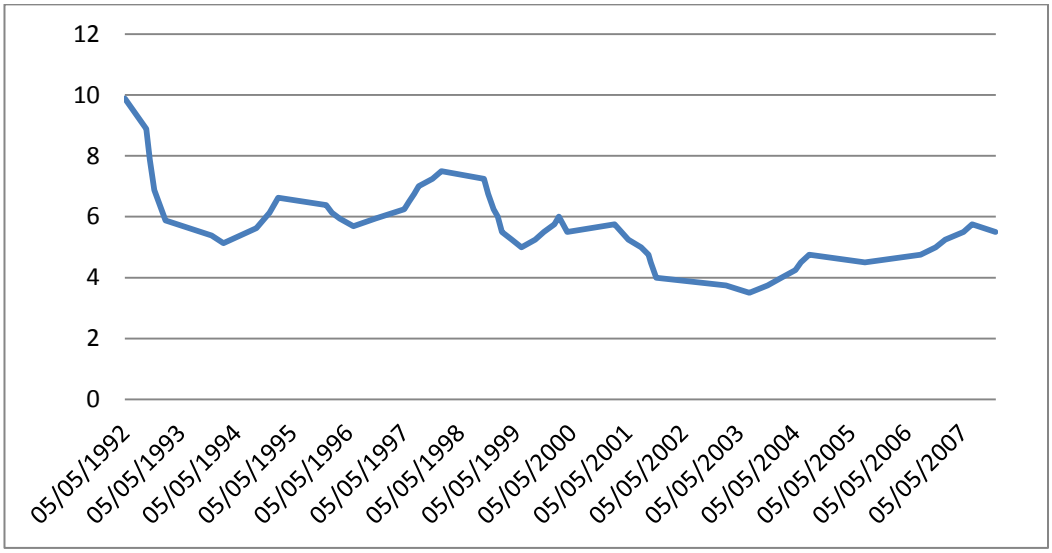
Laws and rules enabled the BOE to employ indirect monetary policy tools, the LOLR facilities and certain prudential regulatory policy as crisis management solutions. Therefore, it was a market-oriented central bank with operational independence under its legal framework, whilst was responsible for systemic stability within the tripartite model. Its successor, the FSA, was a risk-and-principles-based prudential regulator. However, since the MPC was accountable to the TSC, and the FSA to HM Treasury, HM Treasury continued to influence monetary policy, financial regulation and crisis management solutions.

5.3 The GFC Impact upon the BOE

Until early 2007, inflation had not moved by more than 1% away from its target for over ten years, the BOE increased Bank Rates to 5.75% on July 5, 2007 (as illustrated in Table 5.3), and output had grown up every quarter since the second half

of 1992.[75] However, the UK was a victim to the GFC: following the collapse of Lehman Brothers, the British mortgage market fell to almost a three-year low,[76] and the UK went into economic recession from the end of 2008.[77] In this context, the BOE renewed policy innovations, whilst the tripartite model was criticized after nationalizing Northern Rock, and then targeted for profound reforms. The following part will introduce crisis management solutions selected by the BOE and other responsible agencies, focusing upon changes brought by the GFC for further comparison.

Table 5.3: BOE Bank Rates between May 1992 and July 2007



Data source: BOE <*www.bankofengland.co.uk/mfsd/iadb/Repo.asp?Travel=NIxIRx*>.

[75] For economic growth contributed by the BOE's monetary policy, refer to, *Treasury Committee Inquiry into the Monetary Policy Committee of the Bank of England: Ten Years on – The Bank of England's Submission regarding the Economic Context* (Submitted to the House of Commons Treasury Committee, February 19, 2007) <www.bankofengland.co.uk/monetarypolicy/overview.htm>.
[76] Stanley McGreal, Greg Lloyd, Martin Haran, Jim Berry and Alastair Adair, 'The Global Financial Crisis: Impact on Property Markets in the UK and Ireland' Report by the University of Ulster Real Estate Initiative Research Team, March 2009 <http://news.ulster.ac.uk/podcasts/ReiGlobalCrisis.pdf>.
[77] <http://news.bbc.co.uk/1/hi/business/7846266.stm> accessed on January 23, 2009.

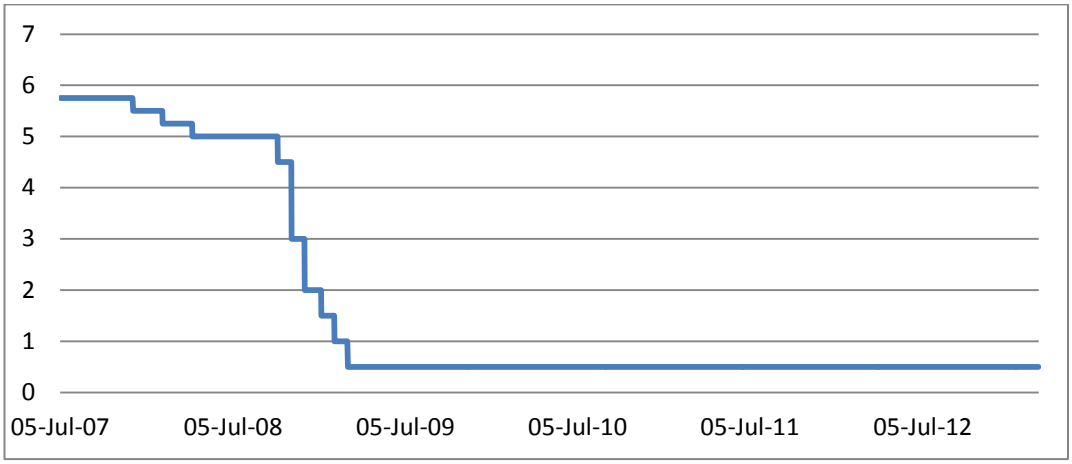
5.3.1 Crisis Management Solutions

As a market-oriented central bank similar to the US Fed, the BOE has combined conventional and unconventional monetary policy instruments to deal with market upheavals. Major responses can be analysed from the following five perspectives.

(1) Bank Rate Reductions

By August 2007, economic problems had become evident in the UK. However, the BOE did not change Bank Rates until the end of 2007 in fear of moral hazard: liquidity injection would offer extra incentives for banks to take more risks.[78] Finally, the Bank Rate was reduced to 0.5% in March 2009 (as illustrated in Table 5.4).

Table 5.4: BOE Bank Rates between July 2007 and March 2013



Data source: BOE <*www.bankofengland.co.uk/mfsd/iadb/Repo.asp?Travel=NIxIRx*>.

(2) Conventional and Unconventional Monetary Policy

The BOE had first conducted its statutory monetary policy instruments to deal with liquidity shortage, but as market upheavals worsened, untraditional tools were underway. These can be summarised in Table 5.5:

[78] George Walker, 'Sub-prime Loans, Inter-bank Markets, Financial Support' (2008) *Company Lawyer* 29(1): 22–25.

Table 5.5: BOE's Monetary Policy Responses during the GFC

TIME	FACILITY
Autumn 2007 – Autumn 2008	Extended OMOs with greater size, greater frequency and wider ranges of collateral[79]
December 2007	Increasing three-month-maturity repo operations; Certain AMBSs and covered bonds were accepted as collateral[80]
April 2008	Special Liquidity Scheme (SLS): banks and building societies to swap high-quality but temporarily illiquid securities for UK Treasury bills;[81] Funded by Government via UK Treasury bills without much direct effect on BOE's balance sheet[82]
October 2008	Discount Window Facility (DWF): permanent facility to swap assets; Banks and building societies could borrow gilts against a wide range of potentially less liquid eligible collateral at varying fees to upgrade collateral; BOE had discretion to lend cash rather than gilts when necessary[83]
March 2009	Quantitative easing: asset purchases[84]
June 2010	Indexed long-term repos: first permanent repo facility to supply liquidity insurance against different types of collateral[85]
December 2012	Extended Collateral Term Repo Facility (ECTR): BOE could operate against a wider range of collateral than under the above repo in a crisis

According to Table 5.5, the BOE initially combined interest rate cuts with extended OMOs to deal with credit crunch, but enhanced financial aid from September 2008. When the Bank Rate maintained at 0.5% since March 2009, quantitative easing had

[79] The BOE released the narrow OMO collateral set on July 1, 2011, and the wider OMO collateral set on October 2, 2012.
[80] BOE, 'Long-Term Repo Operations: Market Notice' <www.bankofengland.co.uk/markets/Documents/money/documentation/statement071214.pdf> accessed on December 18, 2007.
[81] Official website: <www.bankofengland.co.uk/markets/Pages/sls/default.aspx>. It is officially closed on 30 January 2012. Also, see, Paul Tucker, 'Financial System and Monetary Policy: Implementation' at the Bank of Japan 2009 International Conference, Tokyo, May 27–28, 2009 <www.bankofengland.co.uk/archive/Documents/historicpubs/speeches/2009/speech390.pdf>.
[82] <www.bankofengland.co.uk/publications/news/2008/029.htm>.
[83] BOE, 'Extending Eligible Collateral in the Discount Window Facility and Information Transparency for Asset-Backed Securitisations: A Consultative Paper' (March 2010) <www.bankofengland.co.uk/markets/Documents/money/publications/condocmar10.pdf>.
[84] Official website: <www.bankofengland.co.uk/monetarypolicy/Pages/qe/default.aspx>.
[85] Official website: <www.bankofengland.co.uk/markets/Pages/money/ltomo/default.aspx>.

been executed through sizeable asset purchases.[86] Quantitative easing sought to boost money supply directly through liquidity injection, and also bring the level of nominal demand consistent with inflation targets for the medium term.[87] Overall, the MPC had authorised asset purchases of £375 billion up to July 2012, most of which were UK Government debt or gilts.[88] By conducting large-scale asset purchases, the BOE worked as the LOLR to the whole market, thereby changing the composition of its own balance sheet (as illustrated in Table 5.6).[89]

[86] James Benford, Stuart Berry, Kalin Nikolov and Chris Young, 'Quantitative Easing' BOE Quarterly Bulletin, Q 2, 2009 <www.bankofengland.co.uk/publications/Documents/quarterlybulletin/qb090201.pdf>.
[87] Joyce Michael, Ana Lasaosa, Ibrahim Stevens and Tong Matthew, 'The Financial Market Impact of Quantitative Easing' BOE Working Paper No 393, 2010 <www.bankofengland.co.uk/research/Documents/workingpapers/2010/wp393.pdf>.
[88] BOE, 'Quantitative Easing Explained' <www.bankofengland.co.uk/monetarypolicy/pages/qe/default.aspx>.
[89] Paul Fisher, 'The Bank of England's Balance Sheet: Monetary Policy and Liquidity Provision During the Financial Crisis' at the Professional Pensions Show, London, November 19, 2009 <http://piketty.pse.ens.fr/files/capitalisback/CountryData/UK/VariousOfficialSeries/BalanceSheetBoE/Fisher09.pdf>.

Table 5.6: BOE Balance Sheet between November 2006 and October 2011[90]

(In GBP Billion)

DATE	Total Assets/Liabilities	Assets/Liabilities in Issue Department	Assets/Liabilities in Banking Department
Nov 08, 2006	80,110	38,700	41,457
Jul 11, 2007	79,980	39,932	40,097
Dec 24, 2007	102,241	45,022	102,241
Mar 05, 2008	105,954	41,334	70,497
Sep 17, 2008	118,031	42,618	75,442
Oct 01, 2008	186,592	42,882	143,784
Oct 15, 2008	276,747	43,304	260,810
Mar 04, 2009	167,018	44,980	147,635
April 08, 2009	214,054	46,613	198,452
April 07, 2010	251,670	51,809	226,036
Oct 26, 2011	256,207	-	-

Data source: BOE
<*www.bankofengland.co.uk/statistics/bankstats/2011.htm*>.

After the BOE utilized its own balance sheet to conduct quantitative easing, the implementation of monetary policy was challenged to serve a dual goal of keeping short-term market interest rates in line with Bank Rates, and also undertaking various asset purchases. [91] Accordingly, the BOE changed its operations in the SMF. The Operational Standing Facilities (OSFs) replaced its standing facilities, serving two goals: (i) to assist monetary policy in the normal market conditions by preventing the market rates moving too far from Bank Rates, and (ii) to enable

[90] The APF was withdrawn by the BOE on November 15, 2011.
[91] Bill Winters, 'Review of the Bank of England's Framework for Providing Liquidity to the Banking System' Presented to the BOE Court (October 2012) <www.bankofengland.co.uk/publications/Documents/news/2012/cr2winters.pdf>.

participating banks to manage unexpected (fictional) payment shocks.[92] Both deposit and lending facilities are designed for participating institutions to place unsecured deposits with, or borrow via, overnight repo transaction against high-quality, highly-liquid collateral, directly from the BOE. The deposit rate was set at zero since March 2009 with the lending rate at 25bp above Bank Rate.[93] Moreover, the BOE suspended the corridor interest rate system: rather than voluntary targets and reserves averaging, it operated a "floor system", so that all reserves balances were remunerated at Bank Rates.[94] In addition, short-term OMOs were suspended. The supply of reserves was therefore determined by the level of reserves injected via asset purchases, long-term OMOs and other money flows.[95] How the BOE had changed its operations in the SMF due to the GFC can be compared in Table 5.7:

Table 5.7: Changed Facilities for the BOE's Operation in the SMF

Before the GFC	During the GFC
Reserves-averaging Schemes • **A corridor of interest rates**	Reserves-averaging Schemes Suspended • A floor system to remunerate all reserve balances at Bank Rates
Standing Facilities	Replaced by OSFs
OMOs	Short-term OMOs Suspended
	• Permanent Facilities: DWF, Indexed Long-Term Repo Operations and ECTR • *ad hoc* facilities: Quantitative easing

Data Source: BOE

[92] Official website: <www.bankofengland.co.uk/markets/Pages/money/osf/default.aspx>
[93] BOE, 'The Framework for the Bank of England's Operations in the Sterling Money Markets' (Updated, June 2012) <www.bankofengland.co.uk/markets/Documents/money/publications/redbookjune2012.pdf>.
[94] To control inflation prospects, the BOE exercised one-week bills in its own name to drain liquidity excess from the markets. 'Bank of England Market Notice: Sterling Monetary Framework; Asset Purchase' <www.bankofengland.co.uk/markets/Documents/marketnotice090305.pdf> accessed on March 5, 2009.
[95] BOE Market Notice, <www.bankofengland.co.uk/markets/Documents/marketnotice090806smf.pdf> accessed on August 6, 2009.

As illustrated by Table 5.7, both permanent and temporary aid facilities were added to the SMF, while certain traditional tools were changed.[96] In principle, the introduction of the floor system and the increase in reserves triggered banks' need to transact with the BOE rather than the money market, and the decline in unsecured money market activity heightened sensitivity to credit risk. While these changes intended to assist the effective implementation of monetary policy, given that quantitative easing was exercised at the near-zero Bank Rate,[97] the BOE had also enhanced its direct management over financial institutions through asset purchases and interest rate controls.[98]

(3) MPC's New Remit

Further significant changes occurred in March 2013. According to Government's Budget, the BOE was required to undertake more monetary activism to spark economic recovery, provided that inflation remained under control.[99] The MPC has been required by HM Treasury to prioritise growth, but also permitted to depart from its inflation targeting in certain circumstances.[100] The new remit is as follows:

> "The remit recognises that inflation will on occasion depart from its target as a result of shocks and disturbances. Attempts to keep inflation at the target in these circumstances may cause undesirable volatility in output. This reflects the short-term trade-offs that must be made between inflation and output variability in setting monetary policy …

[96] BOE, 'The Framework for the Bank of England's Operations in the Sterling Money Markets' (Updated, June 2013) <www.bankofengland.co.uk/markets/Documents/money/publications/redbookjune2013.pdf>.
[97] Christopher Jackson and Mathew Sim, 'Recent Developments in the Sterling Overnight Money Market' BOE Quarterly Bulletin, Q3 2013 <www.bankofengland.co.uk/publications/Documents/quarterlybulletin/2013/qb130304.pdf>.
[98] Roger Clews, 'The Bank's Money Market Framework' BOE Quarterly Bulletin, Q 4, 2010 <www.bankofengland.co.uk/publications/Documents/quarterlybulletin/qb100404.pdf>.
The latest summary of its operations under the SMF is available at <www.bankofengland.co.uk/markets/Documents/sterlingoperations/summaryops130307.pdf>.
[99] Claire Jones, 'Budget 2013: Changes to BoE Remit Expand Options for Activism' (Financial Times) <www.ft.com/cms/s/0/2697b1ca-9169-11e2-b4c9-00144feabdc0.html> accessed March 2013.
[100] Samuel Brittan, 'Budget 2013: It's the Monetary Policy that Matters' (Financial Times) <www.ft.com/cms/s/0/e10ebba0-917a-11e2-b839-00144feabdc0.html#axzz2Qw5dkcTw> accessed on March 20, 2013.

> … Monetary activism has a vital role to play in the Government's economic strategy as the Government delivers on its commitment to fiscal consolidation…"[101]

Moreover, the BOE explicitly announced that its expansionary monetary policy would hold until the inflation target was met; this was described as forward guidance.[102] Such forward guidance is linked directly with the unemployment rate as taken into account when the MPC decides monetary policy:

> "… the Monetary Policy Committee has provided some explicit guidance regarding the future conduct of monetary policy. The MPC intends at a minimum to maintain the present highly simulative stance of monetary policy until economic slack has been substantially reduced, provided this does not entail material risks to price stability or financial stability. In particular, the MPC intends not to raise Bank Rate from its current level of 0.5% at least until the Labour Force Survey headline measure of the unemployment rate has fallen to a threshold of 7% ... if it judges that additional monetary stimulus is warranted …"[103]

It has been argued that the BOE had relied more upon Bank Rates to control inflation than upon falling output, exposing its limitations in meeting the dual objectives.[104] According to this new remit, the single mandate of inflation targeting has been replaced by a further clarified dual mandate which now included government's employment goal. This would correct the BOE's over-emphasis on inflation targets; however, without statutory changes, Government has accordingly brought the BOE closer to its objective for economic development, thereby affecting its independence.

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[101] HM Treasury, 'Remit for the Monetary Policy Committee' <www.bankofengland.co.uk/monetarypolicy/Documents/pdf/chancellorletter130320r.pdf> accessed on March 20, 2013.

[102] BOE, News Release, <www.bankofengland.co.uk/monetarypolicy/Pages/forwardguidance.aspx> accessed on August 7, 2013. Analysis about forward guidance was included in its latest inflation report, refer to, BOE, 'Monetary Policy Trade-offs and Forward Guidance' (MPC, August 2013) <www.bankofengland.co.uk/publications/Documents/inflationreport/2013/ir13augforwardguidance.pdf>.

[103] BOE, News Release, <www.bankofengland.co.uk/publications/Pages/news/2013/096.aspx>.

[104] Colin Thain, 'A Very Peculiar British Crisis?: Institutions, Ideas and Policy Responses to the Credit Crunch' 4 *British Politics* 2009: 434–449.

(4) Joint Actions with HM Treasury

During the GFC, HM Treasury directly assisted individual financial institutions with liquidity supports. As early as October 8, 2008, the Darling Plan was announced,[105] and HM Treasury introduced the Asset Protection Scheme (APS) to recapitalise the banking sector by purchasing preference shares.[106]

The BOE made some joint efforts with HM Treasury. In January 2009, the Chancellor of the Exchequer authorised the BOE to set up an Asset Purchase Facility (APF).[107] After being indemnified, the BOE bought high-quality assets financed through Treasury bills and the DMO's cash management operations, via its subsidiary – the Bank of England Asset Purchase Facility Fund under the remit of the Chancellor.[108] The APF gradually incorporated the commercial paper facility, corporate bond purchases, secured commercial paper facility, gilt lending and corporate bond sales.[109] Meanwhile, the MPC could also use the APF for monetary policy purposes: the BOE purchased assets mainly from non-bank institutions with banks as intermediaries, so non-bank institutions could get their accounts credited by selling asset purchases, and banks could get payment to create reserves by working as intermediaries.[110]

On July 13, 2012, to incentivise bank lending, the BOE and HM Treasury jointly launched the Funding for Lending Scheme (FLS).[111] Banks and building societies could borrow a certain amount of Treasury Bills in exchange for eligible collateral at a pre-set fee according to the lending growth in the market.

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[105] Nicholas H. Dimsdale, 'The Financial Crisis of 2007–9 and the British Experience' (2009) *Oxonomics* 4(1): 1-9.
[106] <http://webarchive.nationalarchives.gov.uk/20130129110402/http://www.hm-treasury.gov.uk/apa_aps.htm>.
[107] Official website: <www.bankofengland.co.uk/monetarypolicy/qe/facility.htm>. At the initial stage, Treasury bills were used to purchase private-sector debt, and since March 2009, purchases have been financed by central bank reserves. The latest result of the APF is available at <www.bankofengland.co.uk/markets/Pages/apf/results.aspx>.
[108] *Bank of England Asset Purchase Facility Fund Limited, Annual Report 2012/13* <www.bankofengland.co.uk/publications/Documents/other/markets/apf/boeapfannualreport1307.pdf>.
[109] Official website: <www.bankofengland.co.uk/markets/Pages/apf/default.aspx>.
[110] *Bank of England Annual Report 2013* (Presented to Parliament by the Chief Secretary to the Treasury by Command of Her Majesty) 14 <www.bankofengland.co.uk/publications/Documents/annualreport/2013/2013report.pdf>.
[111] Official website: <www.bankofengland.co.uk/markets/Pages/FLS/default.aspx>.

(5) Cross-Border Cooperation

The BOE introduced the US dollar repo operations on September 18, 2008,[112] swap line agreements with the ECB in December 2010,[113] the FX intervention in the Yen market in March 2011,[114] and the GBP/RMB swap line agreements with the PBC in June 2013.[115] Additionally, the BOE began to apply the Basel III as a more truly global minimum standard for bank liquidity, to be put imposed in January 2015 but would be phased in over four more years up to 2019.[116]

In a nutshell, during the GFC, the BOE's policy responses mainly included Bank Rate reductions, asset purchases and changed operations under the SMF, resulting in more direct market intervention. However, HM Treasury increased its control over the BOE, especially through the MPC's new remit since 2013. Accordingly, its two-tier relationship changed: as Government's banker, it was brought to the wider policies of HM Treasury; as bankers' bank, it strengthened the implementation of monetary policy through direct market intervention. What is more, some *ad hoc* facilities of the BOE were set up under enhanced cooperation with HM Treasury, whilst most of its holdings were gilts or government debt; this raised the power of HM Treasury to affect the financial market as a whole.

5.3.2 Northern Rock Crisis: Failure of the Tripartite Model?

Ever since the 1970s, the UK mortgage market had continuously expanded, attracting more participants to compete with banks.[117] Mortgage assessment procedures had become more standardised, along with the development of the

[112] Official website: <www.bankofengland.co.uk/markets/Pages/other/dollarrepo/default.aspx>.
[113] BOE, News Release, <www.bankofengland.co.uk/publications/Pages/news/2011/078.aspx> accessed on August 25, 2011.
[114] News Report, <www.theguardian.com/business/blog/2011/mar/18/yen-currency-intervention-bank-of-england-holdings> accessed on March 18, 2011.
[115] BOE, News Releases, <www.bankofengland.co.uk/publications/Pages/news/2013/082.aspx> accessed on June 22, 2013.
[116] *Banking Standards* (Parliamentary Commission on Banking Standards, a joint committee of the House of Commons and the House of Lords, Written Evidence, December 19, 2012) The FPC is in charge of its implementation. The arrangement can be downloaded from <www.bis.org/bcbs/basel3/basel3_phase_in_arrangements.pdf>.
[117] Kathleen Scanlon and Christine Whitehead, 'The UK Mortgage Market: Responding to Volatility' (2011) *Journal of Housing and the Built Environment* 26(3): 277–293.

wholesale market, as well as the ever-changing ranges and mixes of securitised financial products. In this context, the sub-and-near-prime lending had speedily increased.[118] Since 2004, the FSA began to supervise the mortgage market.[119] In September 2007, Northern Rock, the UK's fifth largest mortgage lender and previously viewed as the most cost effective mortgage lender, saw the biggest run since the mid-19th century. This section will use its failure to examine the limits of the UK's tripartite model.

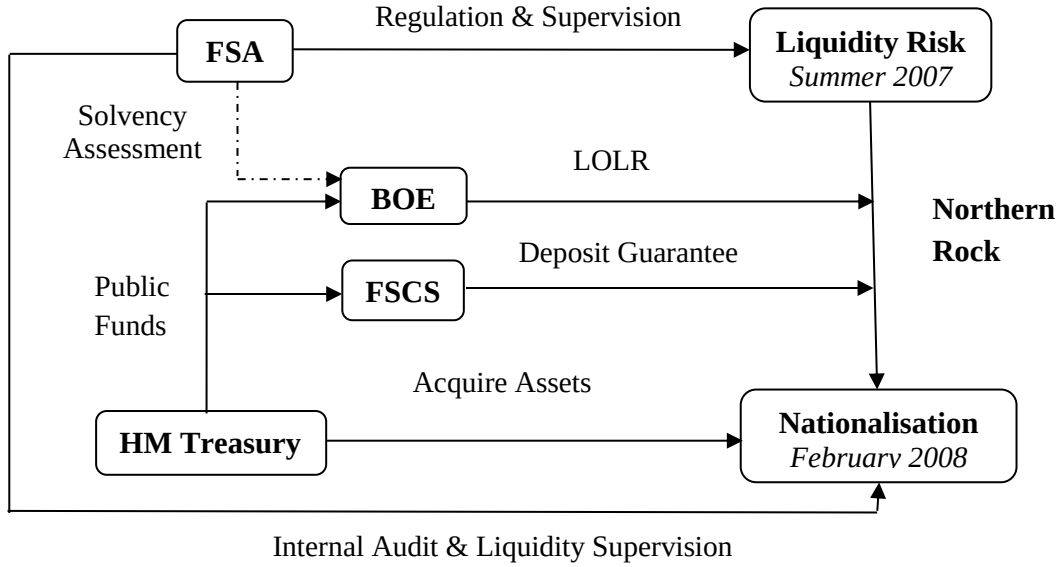
Northern Rock had relatively limited retail business, but relied upon the interbank market to finance the holding of mortgages. Its business was extended by securitising mortgages and selling them on; when the market for securitised products dried up, it turned to the wholesale market for funding.[120] Northern Rock was considered to be a typical "originate-and-distribute" bank, which financed long-term mortgages by short-term funding. When the US subprime crisis spilled over, its inability arose from stressful conditions in the wholesale market, eventually leading to its insolvency.[121]

On September 13, 2007, the BOE announced financial aid for Northern Rock, which was expected to guarantee its business operations but then actually triggered bank runs on September 14 and 17.[122] Hereupon the BOE announced that deposits were guaranteed against all the losses incurring to Northern Rock, and further extended on September 19.[123] In October, additional facilities were made available, aiming to maintain its strategies until February 2008, when a private buyer might take over its

[118] Mark Stephens, Janet Ford, Peter Spencer, Alison Wallace, Steve Wilcox and Peter Williams, 'Housing Market Recessions and Sustainable Home-Ownership' <www.publicnet.co.uk/features/2008/10/31/housing-market-recessions-and-substainable-home-ownership/> accessed on October 31, 2008.
[119] For the FSA's historical legal reforms, see <www.cml.org.uk/cml/policy/issues/271#1>.
[120] Kevin Keasey and Gianluca Veronesi, 'Lessons from the Northern Rock Affair' (2008) *Journal of Financial Regulation and Compliance* 16(1): 8–18.
[121] E.g., Martin Weale, 'Northern Rock: Solutions and Problems' (2007) *National Institute Economic Review* 202(1): 4-8. Brian Walters, *The Fall of Northern Rock: An Insider's Story of Britain's Biggest Banking Disaster* (Harriman House Ltd 2008).
[122] This public announcement was blamed for having triggered further runs, but the BOE defended its obligation under the authority of the Market Abuse Directive against providing aid discreetly, as Northern Rock was a publicly traded company. See, Andrew Haynes, 'Market Abuse, Northern Rock and Bank Rescues' *Journal of Banking Regulation* 2009 (10): 321-334.
[123] The timeline of the Northern Rock crisis is available at <http://news.bbc.co.uk/1/hi/business/7007076.stm>.

business.[124] After it failed to find a proper buyer, the Chancellor of the Exchequer announced to place Northern Rock into public ownership temporarily for a period commencing upon February 17, 2008.[125] The whole procedure how the tripartite model dealt with Northern Rock crisis can be summarised in Figure 5.2:

Figure 5.2: Nationalisation of Northern Rock under the Tripartite Model



Source: HM Treasury

As illustrated in Figure 5.2, the FSA, as the regulator at the firm level, assured that Northern Rock was still solvent based upon its own risk assessment, while the BOE provided emergency funding, and then made additional financial aid available for a longer maturity on a wider range of collateral. However, only HM Treasury had the power to make the political decision to use public money, and thus, since Northern Rock's problems emerged, HM Treasury gradually extended the FSCS to include

[124] One of the proposals from the private sector is available at <www.marketwatch.com/story/olivant-outlines-northern-rock-bid-as-jc-flowers-quits-race> accessed on December 7, 2007. Another came as the aid under the European Central Bank funding by taking advantage of its collateral requirements, refer to <www.bankingtimes.co.uk/2007/12/06/eu-approves-northern-rock-rescue-aid/> accessed on December 6, 2007. Northern Rock itself favoured a covert support operation, but nationalisation was finally decided. For a short conclusion, refer to, Maria-Cristina Ungureanu and Vasile Cocris, 'Northern Rock: The Crisis of a UK Mortgage Lender' 2 *Review of Economic and Business Studies* 2008: 129–139.

[125] For the summary of public supports, see, Office of Fair Trade, *Northern Rock: The Impact of Public Support on Competition* (March 2009).

both depositors and institutions.[126] After nationalization, Northern Rock received the arm-length regulation from HM Treasury, as Government acquired its shares.[127]

While the particular business model of Northern Rock made it vulnerable to external shocks in the capital and mortgage markets,[128] its nationalisation exposed the malfunction of the tripartite model as financial supervisor and regulator.[129] Under the FSMA 2000, as explained, the BOE and FSA shared duties for systemic stability; the MoU arranged how they and HM Treasury should deal with financial crises.[130] In principle, the BOE focused upon systemic stability with the LOLR facility; the FSA monitored individual market participants at both pre and post crisis periods; and HM Treasury worked as the intermediary between Parliament and markets, but unable to intervene into the activities of the BOE and FSA. The shortcoming of this interwoven network was reflected in the difficulty of clarifying WHICH should take WHAT duty in a financial crisis.

Regarding Northern Rock, HM Treasury Committee's detailed the respective failures of the tripartite bodies.[131] To begin with, the FSA was guilty of systemic failure in its regulation approach.[132] Prior to the GFC, it conducted a survey into the UK sub-prime mortgage market under the cooperation of the BOE and HM Treasury, addressing that, in spite of weaknesses, no major concerns bore the possibility of systemic failures.[133] It also failed to supervise Northern Rock properly: the FSA made mistakes in appointing personnel members and requiring it to undertake stress-

[126] Dalvinder Singh and John Raymond LaBrosse, 'Northern Rock, Depositors and Deposit Insurance Coverage: Some Critical Reflections' 2 *The Journal of Business Law* 2010: 55–85.
[127] <http://webarchive.nationalarchives.gov.uk/+/http:/www.hm-treasury.gov.uk/press_16_08.htm>.
[128] For Northern Rock's internal problems, especially as regards corporate governance and risk management, refer to, Roman Tomasic, 'Corporate Rescue, Governance and Risk Taking in Northern Rock' (2008) *Company Lawyer* 29 (10 & 11): 297–303, 330–337.
[129] City Staff, 'Northern Rock Fiasco Could Have Been Avoided' (A Five-part Investigation, the Telegraph) <www.telegraph.co.uk/news/politics/1570366/Northern-Rock-fiasco-could-have-been-avoided.html> accessed on 24 November 2007.
[130] <www.bankofengland.co.uk/financialstability/mou.pdf>.
[131] HM Treasury, *The Run on the Rock*
Volume I <www.publications.parliament.uk/pa/com200708/cmselect/cmtreasy/56/56i.pdf> & Volume II <www.parliament.the-stationery-office.co.uk/pa/cm200708/cmselect/cmtreasy/56/56ii.pdf> (2007).
[132] 'Brown's "Churchill" Moment Masks Failure of Regulator He Built' (Bloomberg) <www.bloomberg.com/apps/news?pid=20601102&sid=auS77akg6dq0&refer=uk#> accessed on November 26, 2008.
[133] BOE, 'Financial Stability Report' Issue No 20, July 2006 <www.bankofengland.co.uk/publications/Documents/fsr/2006/fsrfull0606.pdf>.

testing, and also wrongly allowed it to weaken its balance sheet as a waiver programme under the Basel Accord II out of concerns regarding liquidity problems.[134] In terms of the BOE, it was prevented from undertaking efficient systemic regulation by various obstacles, including legislative constraints and insufficient deposit insurance. For example, as early as April 2007, it had identified the increasing wholesale funding of banks as a potential risk if markets became less liquid, but few *ex ante* solutions had been conducted to reduce risk exposures.[135] It was also widely criticised for its insistence against capital injection for fear of moral hazard, as well as slow responses, whilst selected solutions lacked flexibility in accepting a sufficiently wide range of collateral.[136] Moreover, it failed to hold high-level discussions with Northern Rock about financial aid before September 10, 2007. When implementing its rescue package, it was blamed for inadequate preparation for support facility, deposit guarantee, and following announcements. In brief, the BOE was held responsible for slow responses both in general and particularly regarding Northern Rock.[137] At the very least, therefore, the tripartite model had already failed to work properly in the period leading to the deterioration of financial conditions, rather than just in the case of Northern Rock alone.[138]

After nationalising Northern Rock, Government subsequently applied similar rules to several financial institutions. In November 2008, UK Financial Investments (UKFI) was established as a Companies Act Company with HM Treasury as its sole shareholder. UKFI is responsible for managing Government's shareholdings in The Royal Bank of Scotland Group plc, Lloyds Banking Group and UK Asset Resolution Ltd (Bradford and Bingley, and Northern Rock Asset Management).[139] Consequently, these institutions were under the arm-length regulation of HM Treasury through the UKFI, whose Board is accountable to the Chancellor of the

[134] No sooner was Northern Rock nationalised than the FSA chief Hector Sants admitted four failings in their work, refer to <www.independent.co.uk/news/business/news/fsa-chief-admits-failings-over-northern-rock-crisis-788652.html> accessed on February 28, 2008.
[135] BOE, 'Financial Stability Report' Issue No 29, June 2011 <www.bankofengland.co.uk/publications/Documents/fsr/2011/fsrfull1106.pdf>.
[136] Brian McDonnell, 'Northern Rock: Was Mervyn King Right?' (2007) *Butterworths Journal of International Banking & Financial Law* 22(11): 623–626.
[137] Sonia Ondo-Ndong and Laurence Scialom, 'Northern Rock: The Anatomy of a Crisis – the Prudential Lessons' at the North American Economic and Financial Association Conference, Honolulu, June 30—July1, 2010 <http://economix.fr/pdf/dt/2008/WP_EcoX_2008-23.pdf>.
[138] Franco Bruni and David T. Llewellyn (eds.), *The Failure of Northern Rock: A Multi-dimensional Case Study* (Vienna: SUERF 2009) <www.suerf.org/download/studies/study20091.pdf>.
[139] <www.ukfi.co.uk/about-us/what-we-do/>.

Exchequer and then to Parliament.[140] HM Treasury has therefore further enhanced its direct control of individual financial institutions.

5.3.3 Reforming the UK Financial Regulation and Supervision Regime

The GFC, including the Northern Rock crisis, brought an urgent requirement to improve the UK financial regulation and supervision regime, bolstering a new round of reforms.

At first, the existing model was improved toward a more intrusive regulatory regime. The FSA abandoned its stand as "not an enforcement led regulator",[141] launching the Supervisory Enhancement Programme (SEP) to strengthen "intensive supervision".[142] Particularly, in March 2009, *the Turner Review* pointed out that the FSA regulation and supervision should have been more intrusive and systemic.[143] From a legislative perspective, the Banking (Special Provisions) Act 2008 came into force on February 21, 2008 to deal with Northern Rock's nationalization, and afterwards, more nationalisation and Treasury transfer orders were exercised to protect depositors' rights while dealing with failing banks.[144] It was revealed by the Banking Act 2009 on February 21, 2009.[145] Under this Act, the BOE was given a

[140] <www.ukfi.co.uk/about-us/who-we-are/>.
[141] Adair Turner, 'Chairman's Statement' (FSA Annual Report 2009/10, No 6, 2010) <www.fsa.gov.uk/pages/Library/Corporate/Annual/ar09_10.shtml>
[142] FSA, News Release, <www.fsa.gov.uk/library/communication/pr/2008/028.shtml> accessed on March 26, 2008. *The FSA's Supervisory Enhancement Programme, in response to the Internal Audit Report on Supervision of Northern Rock: High-Level Summary* can be downloaded from <www.fsa.gov.uk/pubs/other/enhancement.pdf>. For specific measures about the FSA's intensive supervision, see, Eric Helleiner and Stefano Pagliari, 'The End of Self-Regulation? Hedge Funds and Derivatives in Global Financial Governance' in Eric Helleiner, Stefano Pagliari and Hubert Zimmermann (eds.), *Global Finance in Crisis: The Politics of International Regulatory Change* (Warwick: Taylor & Francis 2010) 74–90.
[143] Adair Turner, *The Turner Review: A Regulatory Response to the Global Financial Crisis* (FSA, March 2009) <www.fsa.gov.uk/pubs/other/turner_review.pdf>. The FSA made detailed responses: *A Regulatory Response to the Global Banking Crisis* (Discussion Paper 09/2, 2009) <http://fic.wharton.upenn.edu/fic/Policy%20page/dp09_02.pdf>.
[144] The Act can be downloaded from <www.legislation.gov.uk/ukpga/2008/2/contents>. For the application of this legislation to Northern Rock and others, refer to, Roman Tomasic, 'The Rescue of Northern Rock: Nationalisation in the Shadow of Insolvency' (2008) *Corporate Rescue and Insolvency* 1(4): 109-111.
[145] The Act can be downloaded from <www.legislation.gov.uk/ukpga/2009/1/contents>. Two key statutory instruments were also effective on February 21, 2009 as secondary legislations, including The Banking Act 2009 (Restriction of Partial Property Transfer) Order 2009, S.I. 2009 No. 322 and

statutory objective for contributing to "the maintenance of financial stability",[146] and the Financial Stability Committee (FSC) was established.[147] This Act changed significantly the bankruptcy law in the UK by setting a statutory toolkit for resolving failing banks and building societies.[148] Special Resolution Regime (SRR) was introduced as bank insolvency legislation used when a bank or part of a bank's business "has encountered, or is likely to encounter, financial difficulties".[149] The Act conferred responsibility on the FSA to intervene and then apply a special regime before a bank reached the point of insolvency.[150] Special Resolution Unit (SRU) was established within the BOE to "plan for and implement resolutions of failing UK banks and building societies under the SRR".[151] Three resolution tools were granted by law: private sector purchase, bridge bank and temporary public ownership.[152] HM Treasury could decide whether to put a bank into temporary public ownership. Between 2007 and 2009, briefly, the FSA sought to strengthen intensive supervision, whilst the tripartite model focused upon formalising the legal framework to deal with failing banks.[153]

The newly-established Conservative-Liberal Democrat Coalition introduced further regulatory reforms. It announced that, to correct fundamental problems exposed by the GFC, the FSA would be abolished,[154] with the BOE at the centre of banking

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The Banking Act 2009 (Third Party Compensation Arrangements for Partial Property Transfers) Regulation 2009, S.I. 2009 No. 319.

[146] Section 2A(1), BOE Act 1998 (as inserted by Section 238 Banking Act 2009).

[147] It was removed after government legislated to set up the Financial Policy Committee.

[148] Roman Tomasic, 'Creating a Template for Banking Insolvency Law Reform after the Collapse of Northern Rock' (2009) *Insolvency Intelligence* 22(5 & 6): 65-70, 81-88. In December 2009, HM Treasury proposed to apply similar arrangements to investment banks with solvency difficulties; see, Roman Tomasic, 'Establishing a UK Rescue Regime for Failed Investment Banks' (2010) *Corporate Rescue and Insolvency* 3(2): 160-165. Some technical issues were adjusted under Clauses 59–62, Financial Services Act 2012.

[149] S.1 (1), Banking Act 2009. Also see, HM Treasury, Banking Act 2009, Special Resolution Regime: Code of Practice, February 2009.

[150] S. 7, Banking Act 2009. For discussion, see, Dalvinder Singh, 'The UK Banking Act 2009, Pre-Insolvency and Early Intervention: Policy and Practice' 1 *Journal of Business Law* 2011: 20-42.

[151] Official website: <www.bankofengland.co.uk/financialstability/Pages/role/risk_reduction/srr/Special-Resolution-Unit.aspx>.

[152] <www.bankofengland.co.uk/financialstability/Pages/role/risk_reduction/srr/default.aspx>.

[153] Emilios Avgouleas, 'Banking Supervision and the Special Resolution Regime of the Banking Act 2009: The Unfinished Reform' (2009) *Capital Markets Law Journal* 4(2): 201–235.

[154] It is whereas argued that the FSA should not have been split, due to its effectiveness in supervision, enforcement, economy, and customer protection. So its restructuring was a political compromise. Refer to, Eilis Ferran, 'The Break-up of the Financial Services Authority' (2011) *Oxford Journal of Legal Studies* 31(3): 455–480.

regulation and supervision.[155] It was widely agreed that insufficient attention was paid to the cumulated systemic risks in the financial sector, which was one major inherent weakness of the tripartite model. Specific limits could be summarised as:[156]

- BOE: granted the statutory objective of maintaining financial stability, but still lacked facilities and tools to deliver financial stability;

- FSA: with specific tools for financial stability, focused upon individual firms due to its wide range of duties;

- A significant regulatory "underlap" existed in the oversight regime, with no authorities having the remit to tackle this linkage between firm-level and systemic stability.

Being a landmark, the BOE transferred prudential regulation to the FSA in 1998, and had since focused upon monetary policy. As exposed during the GFC, however, central banks should re-examine "the intimate relationship between macro-prudential regulation, micro-prudential regulation and supervision, and the provision of liquidity insurance to banks", rebuilding their role in overall financial stability.[157] To strengthen their involvement in maintaining financial stability, responsible bodies should be reformed with different approaches to regulation. In consequence, UK government amended existing legislation – mainly the BOE Act 1998 and the FSMA 2000[158] – to give effect to the reform; and the Financial Services Act was enacted in 2012.[159]

New responsible agencies are established after the old ones were reformed or abolished. The Financial Policy Committee (FPC), set up as a Committee of the

[155] HM Treasury, *A New Approach to Financial Regulation: Judgement, Focus and Stability* (Cm 7874, July 2010).
[156] HM Treasury, *A New Approach to Financial Regulation: Building a Stronger System* (Cm 8012, February 2011).
[157] *Supra* 155.
[158] The consolidated version of the FSMA 2000 is available at <www.hmtreasury.gov.uk/d/consolidated_fsma_210220012.pdf> accessed on June 12, 2012.
[159] HM Treasury put forward the proposal in its report of July 2010 (Cm 7874), and consultations were collected and presented in February 2011 (Cm 8012). The draft of Financial Services Bill was explained in its report of June 2011 (Cm 8083). The Bill was introduced to the Parliament on January 26, 2012. It took effect on April 1, 2013. The full text can be downloaded from <www.hm-treasury.gov.uk/fin_financial_services_bill.htm>.

BOE Court, controls primarily macro-prudential supervision over the entire financial system, filling thus the key gap of the tripartite model.[160] Responsibility for prudential regulation was transferred to the Prudential Regulation Authority (PRA), added as a subsidiary to the BOE, monitoring deposit takers, insurers and some investment firms.[161] The Financial Conduct Authority (FCA) controls customer protection and the regulation of business conduct.[162] From this point of view, prudential and conduct of business regulations, formerly undertaken by the FSA, were shared by the twin-peak model of the PRA and FCA:[163] the former provides dedicated resources to supervise individual institutions, while the latter focuses more upon thematic work than firm-specific supervision;[164] and they both seek more forward-looking, proactive and judgement-based supervision.[165] These three newly-established regulators first and foremost emphasize various facets of financial stability.

It is further argued that prudential regulation should be re-oriented toward risk across the system as a whole. Gaps have emerged between macroeconomic policy and regulation of individual financial institutions, contributing to the build-up of leverage and liquidity mismatch in the markets; macro-prudential policy is identified to fill these gaps.[166] Accordingly, it should address resources of systemic risk, increase the resilience of the financial system, and moderate exuberance over the supply of credit to the wider economy.[167] The BOE has identified three groups of macro-prudential regulatory tools:[168]

> (i) Those that affect the balance sheet of financial institutions, including maximum leverage ratios, countercyclical capital and liquidity buffers, time-varying provisioning practices and distribution restrictions;

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[160] <www.bankofengland.co.uk/financialstability/Pages/fpc/default.aspx>.
[161] <www.fsa.gov.uk/about/what/reg_reform/pra>. Also, see, The Bank of England Act 1998 (Macro-prudential Measures) Order 2013 (No. 644); HM Treasury, *A New Approach to Financial Regulation: Draft Secondary Legislation* (October 2012) and BOE, 'The Prudential Regulation Authority' Quarterly Bulletin, 2012 Q4 <www.bankofengland.co.uk/publications/Documents/quarterlybulletin/qb1204.pdf>
[162] Official website: <www.fsa.gov.uk/about/what/reg_reform/fca>.
[163] For some transition reforms, refer to <www.fsa.gov.uk/about/what/reg_reform/background>.
[164] FSA, News Release, <www.fsa.gov.uk/about/what/reg_reform>.
[165] <www.fsa.gov.uk/static/pubs/plan/bp2012-13.pdf>.
[166] Gabriele Galati and Richhild Moessner, 'Macroprudential Policy—A Literature Review' (2013) *Journal of Economic Surveys* 27 (5): 846-878.
[167] BOE, *The Role of Macroprudential Policy* (A Discussion Paper, November 2009).
[168] BOE, *Instruments of Macroprudential Policy* (A Discussion Paper, December 2011).

(ii) Those that affect the terms and conditions of financial transactions, including the ability to restrict the quantity of lending at high ratios of loan to value or of loan to income; and

(iii) Market structure tools, for example, the authority can adjust risk weights on intra-financial system activities to limit excessive exposures building up between financial institutions.

The FPC is defined as the macro-prudential regulator, having two primary tools: recommendations and directions.[169] It has the power to make recommendations to regulators, to HM Treasury, within the BOE and to other relevant bodies. It also has the direction-making power over the PRA and FCA, but strictly limited to using macro-prudential tools set out by HM Treasury in secondary legislation.[170]

In addition, clarified division of responsibilities and effective cooperation are viewed equally important and should be further strengthened.[171] Under the new regime, in the event of financial crises, the BOE has the primary operational responsibility for crisis management, including identifying potential crises, developing contingency plans, and implementing emergent solutions when necessary, while the Chancellor of the Exchequer is solely responsible for all decisions involving public funds or liabilities.[172] To advance effective collaboration,[173] cross-membership is widely applied among the MPC, FPC, PRA and FCA;[174] and the MoU between the PRA and FCA has specified their cooperation in some areas and coordination in others, thereby maintaining the functions of the twin-peak model.[175] Transparency has also been enhanced: Financial Stability Report is now published twice a year under the

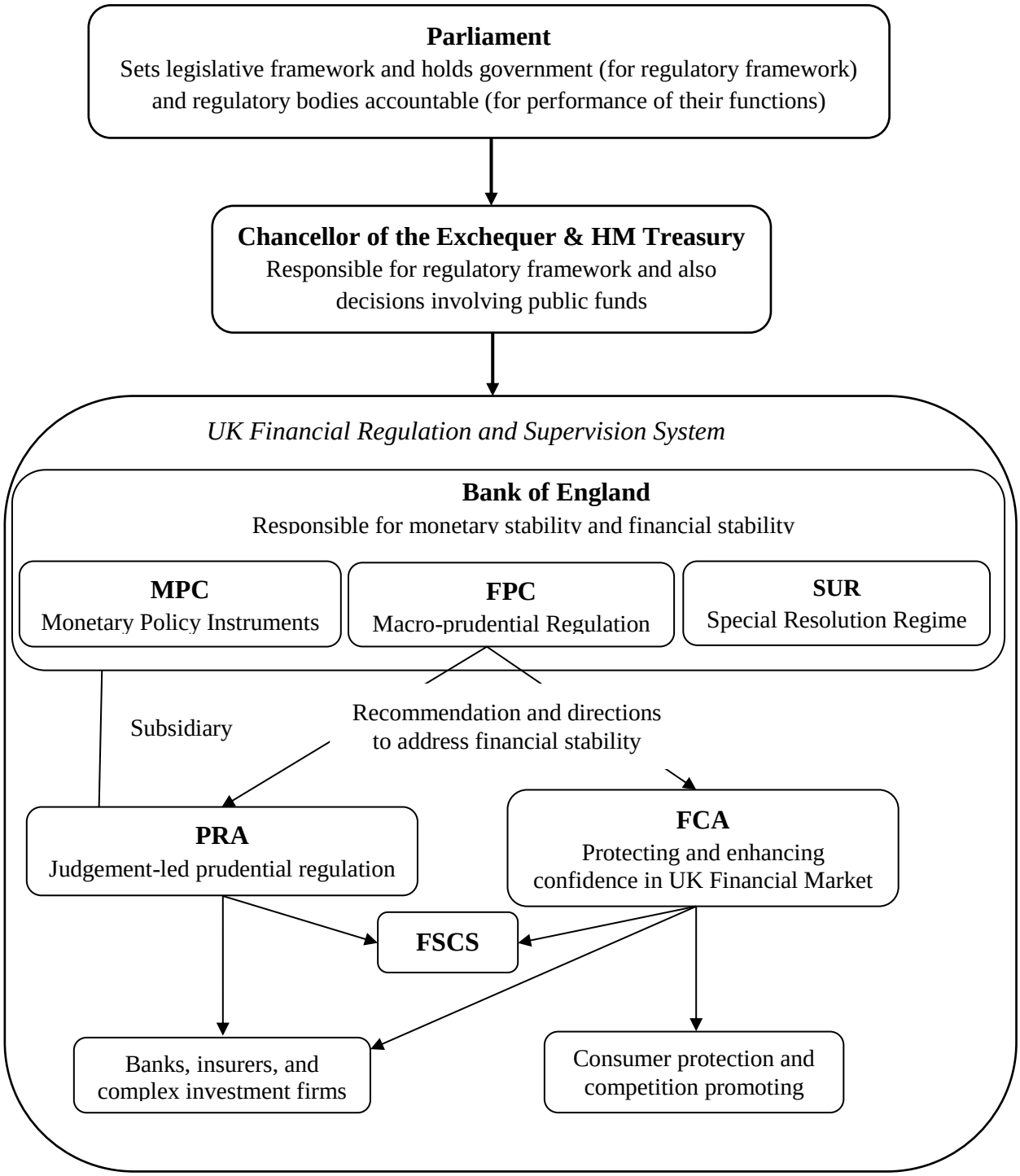
[169] HM Treasury, *The Financial Services Bill: The Financial Policy Committee's Macro-prudential Tools* (Cm 8434, September 2012).
[170] To test macro-prudential tools, an interim FPC operated from February 2011 to March 2013. For the outcomes, refer to, BOE, *The Financial Policy Committee's Powers to Supplement Capital Requirements* (A Draft Policy Statement, January 2013).
[171] *Supra* 156.
[172] For more details, see, HM Treasury, *Memorandum of Understanding on Financial Crisis Management* <www.hm-treasury.gov.uk/d/fin_fs_bill_mou_financial_crisis_management_jan2012.pdf>.
[173] HM Treasury, *A New Approach to Financial Regulation: The Blueprint for Reform* (Cm 8083, June 2011).
[174] House of Lords and House of Commons, *Draft Financial Services Bill: Session 2010–12* (Joint Committee on the Draft Financial Services Bill, HL Paper 236, HC1447, 2011).
[175] BOE, *Draft Memorandum of Understanding (MoU) between the Financial Conduct Authority (FCA) and the Prudential Regulatory Authority (PRA)* <www.bankofengland.co.uk/financialstability/Documents/overseeing_fs/fca_pra_draft_mou.pdf>.

guidance of the interim FPC,[176] the FPC publishes the records within six weeks after the quarterly meetings,[177] and the PRA releases leading issues with regard to micro-prudential regulation.[178]

The UK's new financial regulation and supervision system aims at maintaining systemic stability, bringing about both new institutions and different approaches to monitoring. It can be displayed in the following figure:

[176] It can be downloaded from <http://www.bankofengland.co.uk/publications/Pages/fsr/default.aspx>.
[177] Sections 9Q, 9R and 9S, BOE Act 1998 (inserted by clause 3 of the Financial Services Act 2012) <www.bankofengland.co.uk/financialstability/Pages/fpc/meetings/default.aspx>.
[178] It can be downloaded from <www.bankofengland.co.uk/pra/Pages/publications/default.aspx>.

Figure 5.3: New UK Financial Regulation and Supervision System



Source: HM Treasury and Bank of England

According to Figure 5.3, this new regime is expected to correct the shortcomings exposed by the GFC, and thus, addresses macro-prudential regulation, clear division of responsibilities, effective communication and cooperation, and improved transparency. Within the BOE, the FPC employs macro-prudential regulation to deal with system-relevant risks; being a subsidiary of the BOE, the PRA undertakes prudential regulation at the firm level; and the BOE also controls the SRU. Therefore, by embracing monetary policy, macro-and micro-prudential regulations, and failing bank resolutions, the BOE is now central to financial oversight after abolishing the tripartite model.

Due to these changes, the BOE's two-tier relationship has been modified. It has moved closer toward Government, especially HM Treasury. Both the FPC and MPC are given balanced statutory objectives of financial stability/monetary stability, and also supporting the wider economy, enhancing their goal dependence upon Government's macroeconomic strategies. Moreover, the MoU has set out the requirement for the BOE Governor to inform HM Treasury of any financial cases involving public funds;[179] also, HM Treasury is given by the statute the power of directions over the BOE in certain circumstances, along with statutory investigatory powers.[180] HM Treasury can recommend the FPC to help shape its pursuit of financial stability, as well as other influencing factors to be taken into account.[181] In addition, a Treasury representative is a non-voting member of the FPC, as well as of the MPC, while the PRA Board is accountable to Parliament, appearing regularly before the TSC.[182] In principle, HM Treasury enhances its control over the BOE group to affect markets in the event of financial crises.

On the other hand, new tools and facilities with the system-wide focus have been designed for the BOE to manage financial markets more directly. Within it, the FPC achieves macro-prudential regulation by identifying, monitoring and taking action to remove or reduce systemic risks.[183] As the PRA regulates deposit takers, insurers and some complex investment firms, the BOE has extended its coverage to these

[179] Section 58 (1), Financial Services Act 2012.
[180] Section 61, Financial Services Act 2012.
[181] *Supra* 173.
[182] <www.publications.parliament.uk/pa/cm201012/cmselect/cmtreasy/874/110628.htm>.
[183] *Supra* 169.

institutions. It also regulates some post-trade financial market infrastructures, including recognised payment systems,[184] and central counterparties and securities settlement systems, to help ensure their resilience.[185] It continues to control failing banks' resolutions by applying the SRR, absorbing thus tailored treatment to individual financial institutions. Overall, the BOE, with the coordination of the FCA, has embraced macro- and micro-prudential regulations together, enhancing its effects upon financial markets.

In terms of regulatory and supervisory reforms, as Government's banker, the BOE sacrificed some independence but under further HM Treasury's leadership; as bankers' bank, it extended its authority, as well as more direct intervention at the firm level.

5.3.4 Summary

To deal with the GFC, the BOE enhanced its intervention into the markets through asset purchases and interest rates controls, while the tripartite model was replaced by a new regime. Inter alia, the Financial Services Act 2012 brought the BOE to the centre of the UK financial oversight regime by splitting the FSA into a twin-peak model. HM Treasury had considerably raised its power by: (i) stabilizing financial markets by offering liquidity supports; (ii) nationalizing individual financial institutions; and (iii) leading the regulation regime. In a word, Government, through HM Treasury, has increasingly controlled financial markets, especially via the central bank group.

5.4 How has the GFC Challenged the BOE?

Prior to the GFC, the BOE was defined by law as a market-oriented central bank with operational independence and indirect monetary policy instruments, while the

[184] Part 5, Banking Act 2009.
[185] BOE, 'The Bank of England's Approach to the Supervision of Financial Market Infrastructures' (December 2012) <www.bankofengland.co.uk/publications/Documents/news/2012/nr161.pdf>.

FSA conducted risk-based micro-prudential regulation. However, not only has the GFC triggered more direct financial aid from the BOE, but also questioned the tripartite model. From the legal perspective, both the Banking Act 2009 and the Financial Services Act 2012 modified the operations of the BOE; relevant changes can be summarised in Table 5.8:

Table 5.8: Legal Framework of the BOE – Changes by the GFC

Legal Framework	Prior to the GFC	During the GFC
Objectives	To maintain price stability, and subject to this, support Government's economic policy, including its objectives for growth and employment	Plus contribute to the maintenance of financial stability
Independence	Operational independence	Operational independence with further transparency
Organisation	MPC controlled interest rate policy with a non-voting representative from HM Treasury and accountable to TSC	Within BOE: • FPC with a HM Treasury representative • SUR BOE's Subsidiary: PRA accountable to TSC
Monetary Policy • **Price stability**	Numerical inflation targeting pre-set by HM Treasury	New remit allowing flexibility in meeting the 2% target; Explicit forward guidance linking monetary policy directly with employment conditions
• **Monetary Operations**	SMF: OMOs, reserve accounts, Standing facilities, and a corridor system of interest rates	Interest rates: corridor → a floor system; OSFs replaced standing facilities; Short-term OMOs suspended; DWF as a permanent facility for assets swap; Indexed Long-Term Repos; Collateral Term Repos; *ad hoc* facilities: Quantitative Easing
Regulation and Supervision • **Agencies**	**BOE sought systemic stability but without specific tools** **FSA was mega-regulator**	**BOE at the centre of financial oversight, embracing monetary stability and financial stability** **FSA was replaced by a twin-peak model**
• **Approaches**	**Risk-and-principle-based prudential regulation of individual institutions and specific financial sectors**	**FPC: macro-prudential regulation over the entire financial market;** **PRA: judgement-led prudential regulation at the firm's level;** **FCA: business conduct regulation and consumer protection;** **SUR: failing bank resolutions**

As compared in Table 5.8, legal changes concentrated on improving the capacity of the BOE to deal with financial crises. As a monetary authority, its previous legal framework had identified certain indirect monetary policy tools to operate in the SMF but, with major asset purchases, it has controlled financial markets more directly. Moreover, the BOE has moved more closely to serve Government's goals under its new remit, whilst nationalising financial institutions actually raised the authority of HM Treasury. As the systemic regulator, the BOE is argued to have achieved a phoenix-like re-emergence, being the centre of maintaining financial stability, but HM Treasury has actually led this new regime. To sum up, due to the GFC, the BOE has changed its duties as both monetary authority and systemic regulator.

The two-tier relationship governing the BOE is different from that before the GFC: as Government's banker, the BOE is increasingly controlled by HM Treasury; and as bankers' bank, it influences financial markets more directly. Therefore, even though legal reforms leave pre-existing central bank independence relatively intact, the triangular relationship has been adjusted toward an enhanced Government control over financial markets via the BOE group; central bank independence was weakened without statutory reforms. Against this backdrop, the GFC has challenged the market orientation of the BOE by modifying its functions regarding monetary policy, macro-and micro- prudential regulation.

Until mid-2013, it was still hard to conclude that the BOE had fulfilled its goals of monetary and financial stability: inflation continued to elevate above targets and prospects, and the Court, with risk and uncertainty, still endeavoured to sustain systemic stability.[186] The BOE also maintained its comparatively intensified control over financial markets: the SMF has been adjusted to accommodate an increasing number of UMPs, Bank Rates were kept at 0.5%, and asset purchases were £375 billion in total. At the firm level, nationalised financial institutions remained under public ownership, and the agenda for selling them back to the private sector was far

[186] BOE, *Annual Report 2013* (Presented to Parliament by the Chief Secretary to the Treasury by Command of Her Majesty) 26-33. <www.bankofengland.co.uk/publications/Documents/annualreport/2013/2013report.pdf>.

from clear.[187] What is more, the interdependence among monetary policy, macro-prudential policy and banking stability is problematic,[188] challenging the BOE to balance monetary and financial stability.[189]

5.5 Conclusion

This chapter has demonstrated that the BOE used to be a market-oriented central bank with limited prudential regulatory policy, and then examined changes that have resulted from the GFC. The previous legal framework defined operational independence for the BOE controlling indirect monetary policy, systemic stability and the LOLR facility, but major financial oversight responsibilities were transferred to the FSA. However, selected crisis management solutions during the GFC have changed the BOE's two-tier relationship: as Government's banker, it has been placed under further control of HM Treasury to support overall economic development; as bankers' bank, its indirect monetary tools gave way to more direct means of asset purchases and interest rate controls. In terms of legal changes, according to the Banking Act 2009 and the Financial Services Act 2012, while the BOE controlled major financial oversight, HM Treasury's influence on financial markets had further increased by assisting individual financial institutions and leading the new regulation system. The BOE's proposition as a market-oriented central bank has therefore been challenged by the GFC to bring it closer to the broader policies of HM Treasury with more fundamental changes regarding the reallocation of financial regulation and supervision. Overall, this chapter has provided support for the proposition in this thesis that the BOE, as a market-oriented central bank with limited regulatory duties, has been systemically challenged by the GFC.

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[187] UKFI, *UK Financial Investments Limited (UKFI) Annual Report and Account 2012/13* Presented to the House of Commons pursuant to section 7 of the Government Resources and Accounts Act 2000, July 15, 2013.

[188] Angela Maddaloni and Jose-Luis Peydro, 'Monetary Policy, Macroprudential Policy and Banking Stability: Evidence from the Euro Area' ECB Working Paper Series No 1560, 2013 <www.ecb.europa.eu/pub/pdf/scpwps/ecbwp1560.pdf>.

[189] Jens Weidmann, 'Managing Macroprudential and Monetary Policy—A Challenge for Central Banks' at the SUERF/Deutsche Bundesbank Conference 2011/IMFS, November 8, 2011 <www.bis.org/review/r111109g.pdf>.

Chapter Six

Bank of Japan and the Global Financial Crisis[1]

6.1 Introduction

As the first central bank outside the Europe, the Bank of Japan (BOJ) was established in 1882, and then politically controlled for over a century. Therefore, unlike the market-orientated US Fed and BOE, the BOJ is assumed to be a government-guided central bank conducting limited financial regulation and supervision.

To prove the above proposition, this chapter will proceed as follows. The BOJ had experienced limited statutory changes before the GFC. In particular, legal reforms in the 1990s brought constrained central bank independence while, under a new regulation regime, the BOJ only conducted limited micro-prudential regulation and LOLR facilities. This chapter will focus upon crisis management solutions selected by the BOJ: it was first challenged to deal with the NPLs and bank failures during the domestic crisis period, and then by the GFC to overcome lasting deflation and economic stagnation. Lately, it, following further government intervention, has enhanced its liquidity support and oversight at the firm level. This chapter will conclude with a comparative summary, analysing how its government-guided nature has been challenged by the GFC.

6.2 Overriding Legal Framework of the BOJ before the GFC

Historically, there were few legal reforms in relation to the BOJ. This section will argue that it was a government-guided central bank with limited micro monitoring duties.

[1] This chapter is updated until October 2013.

6.2.1 Establishment of the BOJ

The establishment of the BOJ was directly triggered by Japan's domestic market instability since the mid-19th century,[2] and benefited from its open economy policy to the western influence.[3] However, its establishment is generally viewed as being achieved under the power of Count Masayoshi Matsukata, arguing that a central bank would facilitate Government to stabilize markets.[4] After the Ministry of Finance (MOF) initiated preparations, his views were accepted in June 1882, releasing the Bank of Japan Act by Law No. 32 (BOJ Act 1882).[5]

The BOJ was built up on the model of Banque National De Belgique (BNB),[6] being a joint-stock company with renewable licence. The state was a major shareholder, and private shareholders were to be approved by the MOF. The MOF also controlled personnel appointments, branch opening, and operational management. The Bank Committee was set up within the Treasury to control monetary policy. To support Government, the BOJ offered sizeable short-term loans, increased interest rates and issued notes beyond ordinary limits.[7] Moreover, it helped to build up the unified domestic monetary system through redemption schemes of silver and national bank notes;[8] and under the Convertible Bank Note Act 1884,[9] this function was conducted under the supervision of the MOF and Treasury.[10] The BOJ managed the banking sector directly through rediscounting facilities and direct advances with illiquid securities as collaterals; both discount rates and bill discount window were initiated

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[2] Hugh T. Patrick, 'External Equilibrium and Internal Convertibility: Financial Policy in Meiji Japan' (1965) *Journal of Economic History* 25(2): 187-213.
[3] Gregg Huff, 'Financial Transition in Pre-World War II Japan and Southeast Asia' (2007) *Financial History Review* 14(2): 149-175.
[4] Toshihiko Yoshino, 'The Creation of the Bank of Japan – Its Western Origin and Adaptation' (1977) *The Developing Economics* 15(4): 399-401.
[5] William Graham Summer, 'The Bank of Japan (Nippon Ginko)' in *A History of Banking in all the Leading Nations* (vol. 4, New York: Reprints of Economic Classics 1896).
[6] Michael Schiltz, 'An "ideal bank of issue": the Banque National e de Belgique as a model for the Bank of Japan' (2006) *Financial History Review* 13(2): 179-196.
[7] Keiichi Asada and Giichi Ono, *Expenditures of the Sino-Japanese War* (New York: OUP 1922) 47–78.
[8] Mari Ohnuki, 'Bank of Japan Network and Financial Market Integration: From the Establishment of the Bank of Japan until the Early 20th Century' IMES Discussion Paper Series, No 2006-E-27, 2006 <www.imes.boj.or.jp/research/papers/english/me25-1-5.pdf>.
[9] Angela Redish, 'Anchors Aweigh: the Transition from Commodity Money to Fiat Money in Western Economies' (1993) *Canadian Journal of Economics* 26(4): 777-795.
[10] Toshiki Tomita, 'Japanese Government Bonds 100 Years Ago' NRI Papers No 90, 2005 <www.nri.com/global/opinion/papers/2005/pdf/np200590.pdf>.

on a comparative base.[11] It had special rediscounting facilities with the Yokohama Specie Bank, transferred to the Branch of Osaka in 1889.[12] When a banking crisis occurred in 1891, the BOJ responded by exercising implicit deposit insurance, offering emergent loans to contracted industries (similar to the LOLR facility), enabling the development of payments and inter-regional transfer systems, as well as establishing its own branches.[13]

Since the beginning, the BOJ had close relationships with Government, especially the MOF, and with markets as well. In spite of objections to its privilege of higher benefits, it, by combining monetary policy instruments and preliminary crisis management, had evident effects: as Government's banker, it supplied war loans, and also helped stabilise the monetary system; as bankers' bank, it directed the industry by offering commercial loans to contracted institutions, and also integrated domestic financial markets.[14]

6.2.2 Bank of Japan Act 1942

During World War II, Japan's production and reallocation was centralized to meet emergent military requirements.[15] In the financial sector, bank loans for investment were rationed from September 1937, a compulsory lending scheme was introduced in March 1939 and, lending and securities exceeding certain amounts needed Government approval. After December 1940, Japan's economy was further centralised under the Memorandum of Establishing a New Economic System.[16] Financial regulation was reinforced: under Government's initiative, dividends were constrained, limiting fund-raising from the capital market, but loans were

[11] These direct policy instruments lasted until the 1980s. See, Bernard Laurens, 'Refinance Instruments: Lessons from Their Use in some Industrialized Countries' IMF Working Paper, WP/94/51, 1994 <http://ssrn.com/abstract=883517>.
[12] Kris James Mitchener and Mari Ohnuki, 'Institutions, Competitions, and Capital Market Integration in Japan' IMES Discussion Paper, No 2008-E-12, 2008 <www.nber.org/papers/w14090.pdf>.
[13] Hassouna Moussa and Jiro Obata, 'The Rise of the Current Banking System in Japan, 1868–1936' Tsukuba Economics Working Papers, No 2009-011, 2009 <www.econ.tsukuba.ac.jp/RePEc/2009-011.pdf>.
[14] *Supra* 5, 571.
[15] John W. Dower, 'The Useful War' (1990) *Daedalus* 119(3): 49-70.
[16] Ming Lei, *A Study of Japan's Wartime Centralized Economy/Riben Zhanshi Tongzhi Jingji Yanjiu* (Beijing: Renmin Publishing House 2007) [in Chinese].

encouraged from banks, especially from long-term credit banks. As a result, a comparatively small group of commercial banks began to dominate domestic capital allocation, providing the basis for Japan's banking-oriented indirect financing.[17]

In order to strengthen the state's control over the economy, the Bank of Japan Act 1942 (BOJ Act 1942) was modelled on the Reichsbank Act 1939.[18] The Wartime Financing Bank was established to support further wartime loans.[19] The BOJ was required to "adjust currency, regulate financing and develop the credit system, conforming to policies of the state to ensure appropriate application of the state's total economic power". It could only set discount rates and reserve requirements with the consent from the MOF and Prime Minister (PM).[20] The governor, replacing the director, undertook absolute responsibility for decision-making, and was fully accountable to Government. In principle, the BOJ was administered by the MOF to operate exclusively to accomplish the purposes of the state.

During American occupation era,[21] limited changes occurred regarding the BOJ. Under the Finance Law 1947, it was legally prohibited from underwriting government bonds unless authorized by the Diet to refinance maturing debts under specific circumstances.[22] The Policy Board was reformed in 1949 to protect the BOJ from government intervention. However, in effect, it followed recommendations made by the BOJ staff, or as an executive board of directors representing several departments within the BOJ.[23] Therefore, delegating monetary policy duties to the

[17] Yukio Noguchi, 'The 1940 System: Japan under the Wartime Economy' (1988) *American Economic Review* 88(2): 404-407.
[18] Masanobu Konno, 'A Historical Inquiry into the Japanese Financial System and Economic Reform' (2003) *Economic Journal of Takasaki City of University of Economics* 46(1): 15-32.
[19] Takeo Hoshi and Anil Kashyap, *Corporate Financing and Governance in Japan: The Road to the Future* (MIT Press 2004) 51–67.
[20] Randall C. Henning, *Currencies and Politics in the United States, Germany and Japan* (Washington DC: Institute for International Economics 1994) 66–75.
[21] For how the US occupied Japan through its existing organs, refer to, Wenfeng Ren, 'Financial Reform in Early Post-war Era and Continuity of Main-Bank System' 2 *Japanese Studies Forum* 2009 [in Chinese]
[22] John B. Goodman, 'Central Bank-Government Relations in Major OECD Countries' for the Use of the Joint Economic Committee, Congress of the United States, No 44-675, August 1, 1991.
[23] Masaaki Nakao, 'The Process of Decision-Making and Implementation of Monetary Policy in Japan' BOJ Research and Statistics Department, Tokyo, 1991.

Policy Board did not enhance central bank independence, and conflicts caused by other unchanged legal provisions underlined the BOJ's political subordination.[24]

6.2.3 Legal Framework

From the 1950s, Japan quickly recovered and gained further growth, but new political, economic, technological and international forces had since challenged its financial sector.[25] In 1975, the MOF launched financial liberalisation to promote fair competition and consolidate market principles.[26] Japan was ranked as the second largest economy and largest creditor nation in 1985, but this was followed by a cycle of economic bubble and burst (referred to as Japan's "lost-decade").[27] In spite of all the profound changes, as wartime legislation, the BOJ Act 1942 was not replaced by a new legislation until 1998, though the BOJ had been criticised for its misleading and delayed monetary policies.[28]

From the legal perspective, a strong MOF with its subordinated central bank enabled Japan's development, while also impeding substantial statutory changes. By the 1990s, intensified economic and political instability made profound reforms possible.[29] Therefore, a "Big-Bang" reform sought to reshape the financial system to

[24] Thomas F. Cargill, Michael M. Hutchison and Takatoshi Ito, *The Political Economy of Japanese Monetary Policy* (MIT Press 1997) 21–25.
[25] Jennifer A. Amyx, *Japan's Financial Crisis: Institutional Rigidity and Reluctant Change* (Oxford: Princeton University Press 2004) 107–146.
[26] Kazou Tatewaki, *Banking and Finance in Japan: An Introduction to the Tokyo Market* (Routledge 1991).
[27] A detailed explanation about Japan's "lost decade' will be well beyond the scope of this thesis. But for a detailed explanation, see, Frances McCall Rosenbluth, *Financial Politics in Contemporary Japan* (London: Cornell University Press 1989). Grimes, William W., *Unmaking the Japanese Miracle* (London: Cornell University Press 2001) 108-161. About the property bubble in Japan, refer to, E. Oizumi, 'Property Finance in Japan: Expansion and Collapse of the Bubble Economy' (1994) *Environment and Planning* 26(A): 199-213. It is argued that misleading monetary policies from the BOJ also helped trigger the bubble: Ryuzo Miyao, 'The Effects of Monetary Policy in Japan' (2002) *Journal of Money, Credit and Banking* 34(2): 376-392.
[28] Geoffrey P. Miller, 'The Role of a Central Bank in a Bubble Economy' (1996) *Cardozo Law Review* 18(3): 1053-1081. Toshiki Jinushi, Yoshihiro Kuroki and Ryuzo Miyao, 'Monetary Policy in Japan since the Late 1980s: Delayed Policy Actions and Some Explanations' in Ryoichi Mikitani and Adam Simon Posen (eds.), *Japan's Financial Crisis and its Parallels to U.S. Experience* (Peterson Institute 2000) 115-131.
[29] Kozo Yamamura, 'The Japanese Political Economy after the Bubble: Plus Ca Change?' (1997) *Journal of Japanese Studies* 23(2): 291–331.

develop free markets, fair trade and international standards;[30] transparency was viewed as crucial for achieving this goal.[31] Legislative and administrative reforms focused upon reconstituting market forces, moral hazard and transparency.[32] In a nutshell, the MOF was restructured, bringing forward a new BOJ and a new financial regulation regime.[33]

6.2.3.1 The BOJ Act 1998

The goal of the BOJ reform was clarified in the draft submitted to the Diet: central bank independence should be ensured by enhancing transparency, achieved by both deregulation and introducing international standards;[34] accountability and reporting responsibility should be both well documented and made public.[35] The formal policy deliberations were made by the Central Bank Study Group, a private advisory agent established by PM Hashimoto Ryutaro.[36] Their findings were presented to an internal council of the MOF, while the full text was drafted by the MOF.[37] The BOJ reform was thereby propelled by politicians and the MOF, especially, led the legal reform.

The new legislation was aimed to separate the BOJ from the MOF, whereby it could pursue its statutory responsibilities without direct political interventions. Main legal elements include:

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[30] Japan's "Big Bang" reform is argued to follow the "Anglo–American" model of financial liberalization, but deemed as failing to achieve economic recovery. See Kiu Hayama, 'Should Japan Shift to the U.S.-Style Financial System?' USJP Occasional Paper 07-05, 2007 <http://dev.wcfia.harvard.edu/us-japan/research/pdf/07-05.Hayama.pdf>. However, different opinions emerged during the GFC, affirming some valuable gains; e.g., Bruce E. Aronson, 'A Reassessment of Japan's Big Bang Financial Regulatory Reform' IMES Discussion Paper No 2011-E-19, 2011 <www.imes.boj.or.jp/research/papers/english/11-E-19.pdf>.

[31] Takeo Hoshi and Huge Patrick (eds.), *Crisis and Change in the Japanese Financial System* (Springer 2000) 233-252.

[32] Harald Baum, 'Globalization vs. Paternalistic Regulation: Some Thoughts about Economic Success, The Rule of Law, and the Regulation of Japan's Financial Markets' in Christoph Antons (ed.), *Law and Development in East and Southeast Asia* (Routledge 2003) 131-153.

[33] Jennifer Holt Dwyer, 'Explaining Central Bank Reform in Japan' (2004) *Social Science Japan Journal* 7(2): 245–262.

[34] Yasuo Matsushita, 'Matsushita Reports on a New Framework of Monetary Policy Under the New Bank of Japan Law' (June 27, 1997) <www.bis.org/review/r970918b.pdf?frames=0>.

[35] 'Views on the Revision of the Bank of Japan Law' Provisional Translation, Policy Statements, Proposals and Reports, September 17, 1996 <www.keidanren.or.jp/english/policy/pol050.html>.

[36] BOJ, 'The Bank of Japan's Statement on the Report of the Central Bank Study Group' (November 12, 1996) <www.boj.or.jp/en/announcements/release_1996/un9611a.htm/>.

[37] Toru Nakakita, 'Restructuring the Ministry of Finance and Revising the Bank of Law: The History of the Revision of the Bank of Japan Law' (2001) *The Japanese Economy* 29(1): 48–86.

Objectives

The BOJ was responsible for price stability, whereby sound economic development was enhanced, while maintaining an orderly payment and settlement system.

Organisational Structure

Traditionally, the MOF retirees entered the top rank of the BOJ. In 1998, when Hayami Masaru was appointed Governor by the Hashimoto Cabinet, the BOJ governorship became the first breakthrough, but the MOF still controlled personnel appointments.[38]

The Policy Board resumed its formal power, being the BOJ's highest decision-making body, and formulated monetary policy at Monetary Policy Meetings (MPMs).[39] It also controlled reforms affecting the BOJ's organisation, code of conduct for executives and staff, as well as the repos market.[40] The Board was extended to have nine members, including the governor and two deputy governors, along with six deliberative members selected by the Cabinet with the consent of both Diet Houses.[41] Non-voting representatives from the MOF and Economic Planning Agency still attended the MPMs to express views and even request a delayed policy decision, but could be rejected by the Board. The BOJ executives included the Policy Board members, up to three auditors, up to six executive directors and an unspecified number of advisers. Auditors were appointed by the Cabinet, but both advisers and executive directors were appointed by the MOF on the recommendation of the Policy Board.[42]

[38] *Supra* 25, 85–106.
[39] Articles 14–20, Chapter II, BOJ Act 1998.
[40] BOJ, 'Major Decisions by the Policy Board in Fiscal 1997' (September 1998) <www.boj.or.jp/en/announcements/release_1998/giji97.htm/>).
[41] The Chairman of the Board used to be elected by the Board members among themselves, but after September 2000, the Governor of the BOJ has been the Chairman automatically.
[42] Dieter Gerdesmeier, Francesco Paolo Mongelli and Barbara Roffia, 'The Eurosystem, the US Federal Reserve and the Bank of Japan' European Central Bank, Working Paper Series, No 742, 2007 <www.ecb.europa.eu/pub/pdf/scpwps/ecbwp742.pdf>.

Major Functions

The BOJ was granted the final power in deciding the amount of bank notes, rather than being approved by the Cabinet for the ordinary amount and by the MOF for excess as under the 1942 legislation. But technique issues, including the format of coins and notes, still belong to the Cabinet and MOF.[43] Authorised by law, the BOJ served Government by receiving and paying government bonds and cash, and also trading Japanese government bonds (JGBs).[44] The BOJ and MOF formulated and conducted exchanges through their own accounts respectively.[45] In terms of monetary policy instruments, the BOJ had long relied upon window guidance to guarantee bank lending from major financial institutions.[46] But with financial liberalization, it shifted to interest rates as the transmission channel to execute monetary policy.[47] In 1982, it officially announced to abandon direct credit controls through window guidance.[48] During the bubble and burst cycle, it mainly relied upon interest rate policies to affect markets.[49]

The BOJ undertook on-site examinations and off-site monitoring to gauge risks and business conditions of individual financial institutions by collecting and analysing micro information.[50] Therefore, it still possessed the power to investigate directly at the firm level. Moreover, it was responsible for designing contingency plans for emergencies, including the extension of loans under special in-advance contracts to those institutions with stated current accounts, and reporting it to the PM and MOF.[51]

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[43] Articles 33–49, and Chapters IV and V, BOJ Act 1998.
[44] Articles 33–35, BOJ Act 1998.
[45] BOJ, 'Outline of International Finance' <www.boj.or.jp/en/intl_finance/outline/index.htm/>.
[46] The underdeveloped securities market made window guidance necessary and effective until the 1980s. Takeo Hoshi, David S. Scharfstein and Kenneth J. Singleton, 'Japanese Corporate Investment and Bank of Japan Guidance of Commercial Bank Lending' in Kenneth J. Singleton (ed.), *Japanese Monetary Policy* (University of Chicago Press 1991) 63–94.
[47] Bruce Kasman and Anthony P. Rodrigues, 'Financial Liberalization and Monetary Control in Japan' FRBNY Quarterly Review, Autumn 1991 <http://newyorkfed.org/research/quarterly_review/1991v16/v16n3article3.pdf>.
[48] But some empirical research established that window guidance lasted until the 1990s, which also brought excessive credit creation to the bubble economy. Refer to, Richard A. Werner, 'Monetary Policy Implementation in Japan: What They Say Versus What They Do' (2002) *Asian Economic Journal* 16(2): 111–151.
[49] For example, it is argued that monetary policy shocks affected the bubble economy by influencing the real output. See, Ryuzo Miyao, 'The Effects of Monetary Policy in Japan' (2002) *Journal of Money, Credit and Banking* 34(2): 376-392.
[50] Articles 44 and 45, the Revision of the BOJ Act 1998.
[51] BOJ, 'A Guide to "Monetary Base and the Bank of Japan's Transactions"' (June 8, 2000) <www.boj.or.jp/en/statistics/outline/exp/data/exmbt01.pdf>.

The BOJ decided whether a financial institution was eligible based on these criteria: i) the institution should play a major role in funds or securities settlement or as an intermediary in money markets; ii) it should ensure the appropriateness of its businesses and management structure, and of its operational framework; and iii) it should conclude an on-site examination contract with the BOJ.[52] By law, its LOLR facilities included:[53]

> (1) Complementary lending offering extensions of loans against collateral;
> (2) Extensions of temporary uncollateralised loans in case of unexpected shortage of funds for payment problems, and to smooth settlement of funds among financial institutions;
> (3) Extensions of special loans to maintain financial stability in cooperation with Government.

It is worth noting that the PM and MOF could legally request the BOJ to lend in much broader circumstances, but the right of refusal was lacking in this Act. Therefore, the BOJ shared its LOLR responsibility with the MOF to deal with liquidity shortages.

Accountability and Transparency

Under the BOJ Act 1998, the BOJ was accountable to the Diet: every six months, the BOJ reported to the Diet via MOF, the governor appearing before the Diet on request.[54] The BOJ clarified that transparency should be comprehensively practiced, including clarification of its role, responsibilities, and objectives, open access for formulating and reporting policy decisions, public availability of policy information, and accountability and assurances of its integrity.[55] To advance transparency, it joined the IMF's programme of the Code of Good Practices on Transparency in Monetary and Financial Policies in 1999. However, it was still criticised for only

[52] BOJ, 'Payment and Settlement and the Roles of the Bank of Japan' in *Functions and Operations of the Bank of Japan* (Tokyo: Institute for Monetary and Economic Studies 2012).
[53] Articles 33, 37 & 38, BOJ Act 1998.
[54] Geoffrey P. Miller, 'Decision-making at the Bank of Japan' (1996) *Law & Pol'y Int'l Bus.* 28(2): 1-48.
[55] BOJ, 'The Self-Assessment Report on Transparency Practices for Monetary Policy' (August 16, 2002) <www.boj.or.jp/en/announcements/release_2002/data/fsap02.pdf>.

pursuing limited transparency when assessing particular political, economic, procedural, policy, and operational factors.[56]

Independence

As explained, central bank independence has been closely linked with inflation control, but this was not the case with the BOJ.[57] Historically, it was rarely challenged for failed monetary policy in managing inflation. For example, during the two oil crises in the 1970s, it placed inflation under control by conducting different policy instruments.[58] Overall, Japan had a successful policy record in controlling inflation with the least independent central bank; this is known as "the Japan puzzle".[59] Therefore, inflation was not the primary reason to grant the BOJ more autonomy.[60] Instead, it was deemed responsible for the bubble economy and its burst, as well as deflation. As argued, the longer deflation lasted, the harder for monetary policy to work effectively; consequently, deflation constrained the functions of the BOJ.[61] Furthermore, as political instability exacerbated in the 1990s, the MOF lost its preferential position supported by the powerful Liberal Democratic Party (LDP).[62] In this context, the BOJ reform became the breakthrough point for changing the MOF. Externally, the ECB was established with significant independence, influencing Japan's choice over which path to take to reform.[63] Accordingly, the BOJ reform arose from both domestic instability and international pressure, which contributed to making independence its top priority.

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[56] Sylvester C.W. Eijffinger and Petra M. Geraats, 'How Transparent are Central Banks?' (2006) *European Journal of Political Economy* 22(1): 1-21.
[57] It is argued if some other factors, including reputational considerations, were added to cross-country inflation variations, Japan might not be exceptional from the closely positive relationship between central bank independence and inflation maintaining. For further, see, Carl E. Walsh, 'Inflation and Central Bank Independence: Is Japan Really an Outlier?' (1997) *Monetary and Economic Studies* 15(1): 89-117.
[58] Ben Bernanke and Frederic Mishkin, 'Central Bank Behaviour and the Strategy of Monetary Policy: Observations from Six Industrialized Countries' in Olivier Jean Blanchard and Stanley Fischer (eds.), *NBER Macroeconomics Annual 1992* (vol. 7, MIT Press 1992) 183–238.
[59] *Supra* 20, 75–80.
[60] Takatoshi Ito, 'Inflation Targeting and Japan: Why has the Bank of Japan not Adopted Inflation Targeting?' NBER Working Paper, No 10818, 2004 <www.nber.org/papers/w10818.pdf>.
[61] In theory, deflation will increase the demand for money but reduce deposit expansion money multiplier. Further deflation would be generated unless the central bank was able to place it under control. Thomas F. Cargill and Elliott Parker, 'Price Deflation and Consumption: Central Bank Policy and Japan's Economic and Financial Stagnation' (2004) *Journal of Asian Economics* 15(3): 493–506.
[62] Ko Mishima, 'The Changing Relationship between Japan's LDP and the Bureaucracy: Hashimoto's Administrative Reform Effort and Its Politics' (1998) *Asian Survey* 38(10): 968-985.
[63] John Singleton, *Central Banking in the Twentieth Century* (CUP 2011) 204–221.

Between the 1950s and 1960s, reforms toward greater central bank independence proved fruitless, mainly due to the strong opposition from the MOF.[64] However, even under the BOJ Act 1998, it was still in question whether its independence had really been improved. Fundamentally, the BOJ could not conduct more functions than those prescribed by law, thereby confining its overall authority within this legislation.[65] It was independent in formulating and implementing currency and monetary controls, as well as business operations, but with ambiguous wording. In practice, its relationship with Government was more complex than what legal provisions prescribed. The MOF maintained its authority to an obvious degree by: (i) affecting the formality of monetary policy by sending a representative to the Policy Board, and selecting advisers and executive members; (ii) monitoring the BOJ's current expenditure budget under a government cabinet order; (iii) working as the bridge between the BOJ and the Diet; and (iv) requesting the BOJ to conduct the LOLR facility under its own discretion.

Moreover, the BOJ was placed under the increasing power of Government. The Act reaffirmed that uncollateralised loans were channelled to Government, and government bonds were subscribed or underwritten by the BOJ with different categories.[66] According to Article 4,

> "… [the BOJ] shall always maintain close contact with the government and exchange views sufficiently, for monetary policy and price stability is a component of overall economic policy, and hence, the monetary management and the basic goal of the government's economic policy should be mutually harmonious …"

[64] Frank C. Langdon, 'Big Business Lobbying in Japan: The Case of Central Bank Reform' (1961) *American Political Science Review* 55(3): 527-538.
[65] Ryoichi Mikitani and Patricia Hagan Kuwayama, 'Japan's New Central Banking Law: A Critical View' Centre on Japanese Economy and Business, Columbia Business School, 1998.
[66] According to Public Finance Law, the BOJ was in principle prohibited from underwriting government bonds and making loans to Government, unless described in special cases. The Policy Board published "Principal Terms and Conditions for Transactions with the Government" to regulate its other transactions with Government. See, Beate Reszat, 'Japan's Financial Markets: The Lost Decade' HWWA Discussion Paper 231, 2003 <http://ageconsearch.umn.edu/bitstream/26335/1/dp030231.pdf>.

Accordingly, Government linked the BOJ directly with its own economic strategy.[67] In terms of personnel selection, the Cabinet was responsible for appointing the governor and vice governors, which should be approved by the Diet, whose right to dismiss central bankers under special circumstances remained intact. According to Article 65 of Japan's Constitution, administrative power belonged to the Cabinet led by the PM, which was critical for opposition against more BOJ independence.[68] Therefore, the implicit logic of the BOJ Act 1998 was the changeover of influencing powers: claiming to raise central bank independence, this legislation reinforced the subjection of the BOJ to the Diet and Cabinet by weakening the MOF.

After the legal reform, debates continued as regards the BOJ's real independence. It seemed to have a higher level of *de facto* independence: it had gained a reputation for controlling inflation in the 1970s, while the strong MOF had blocked certain political pressure. For example, it insisted upon operating OMOs to finance the national budget deficit, rather than purchasing public debt directly as required by Government; it even tightened monetary policy against pressure for monetary expansion from domestic and international markets between 1998 and 1999. This was arguably achieved by the astute leadership of Governor Hayami Masaru, the BOJ's ability to turn politicisation of monetary policy to its own advantages, and its expertise knowledge base.[69] However, the BOJ was criticised for "independence trap": it failed to anticipate lasting deflation with prolonged negative effects, but appeared comfortable with the prospect of sustained low-level inflation rates since the late 1990s.[70]

The BOJ Act 1998 modified the scope of the BOJ's functions. In principle, it was defined as being responsible for monetary policy, government-related transactions, various LOLR facilities, and limited but direct micro-regulation into individual

[67] Arvid J. Lukauskas and Yumiko Shimabukuro, 'The Non-Linear Process of Institutional Change: The Bank of Japan Reform and Its Aftermath' (2006) *Japanese Journal of Political Science* 7(2): 127–152.
[68] 'Constitution and Government of Japan' <http://japan.kantei.go.jp/constitution_and_government/frame_all_02.html>.
[69] *Supra* 59, 75–80.
[70] Takatoshi Ito and Frederic S. Mishkin, 'Two Decades of Japanese Monetary Policy and the Deflation Problem' in Takatoshi Ito and Andrew K. Rose (eds.), *Monetary Policy Under Very Low Inflation in the Pacific Rim* (vol. 15, University of Chicago Press 2006) 131–201.

financial institutions. However, its transparency and independence were still constrained, failing to meet stated reform targets.

6.2.3.2 New Financial Regulation and Supervision System

After World War II, the MOF was the major financial regulator, controlling interest rates and capital flows through regulatory and administrative directions. To deal with troubled institutions, an official convoy facility operated: the BOJ made liquidity available,[71] and the MOF required stronger institutions to support or merge with weaker ones.[72] Forgiveness and forbearance pervaded between administrative authorities and markets, also between banks and their corporation customers; this gave rise to difficulties in transparency and financial disclosure.[73] For long, the financial sector, with rigid and direct regulation, was viewed as an instrument of industry policy. As Japan's economic development hit its limits in the late 1970s, conflicts emerged, including a bias toward indirect financing, functional segmentation, administrative guidance, convoy regulation, and international isolation.[74] Inter alia, the convoy system, involving the MOF, BOJ, business and financial institutions, did assist Japan's post-war economic growth, but also impeded necessary reforms.[75] Later, the bubble-burst cycle caused increasing unemployment and business failures, and thus, in private and public sectors, the level of outstanding debts made up over 25% of GDP. Japan's "main bank" system, based upon forgiveness and forbearance, channelled credits to weak corporations; and this aggravated the NPLs problem facing both banks and non-bank financial institutions.[76] This was further worsened by the strict capital adequacy ratio adopted

[71] Kazuo Ueda, 'The Structure of Japan's Financial Regulation and Supervision, the Bank of Japan's Role and Monetary Policy' CARF Working Paper, CARF-F-200, 2009 <www.carf.e.u-tokyo.ac.jp/pdf/workingpaper/fseries/209.pdf>.
[72] Steven K. Vogel, 'The Bureaucratic Approach to the Financial Revolution: Japan's Ministry of Finance and Financial System Reform' (1994) *Governance* 7(3): 219-243
[73] Thomas Cargill, Michael Hutchison and Takatoshi Ito, *Financial Policy and Central Banking in Japan* (MIT Press 2000) 46–47.
[74] Robert Dekle and Kenneth Kletzer, 'Deposit Insurance, Regulatory Forbearance, and Economic Growth: Implications for the Japanese Banking Crisis' in Michael M. Hutchison and Frank Westermann (eds.), *Japan's Great Stagnation: Financial and Monetary Policy Lessons for Advanced Economies* (MIT Press 2006) 61–101.
[75] Ryoichi Mikitani and Adam Posen, *Japan's Financial Crisis and Its Parallels to U.S. Experience* (Peterson Institute 2000) 57–100.
[76] Joe Peek and Ecri Rosengren, 'Unnatural Selection: Perverse Incentives and the Misallocation of Credit in Japan' (2005) *American Economic Review* 95(4): 1144-1166.

under the Basel Accord 1988.[77] In brief, bad loans were the immediate causes of many problems in Japan's banking industry and, with changed market conditions, the old convoy system became unsustainable.[78]

In the 1990s, continuous bank failures and recapitalization by the MOF constrained financial sector development, and also indicated the limitations of previous regulators.[79] When housing loan corporations (the *jusen* industry) was announced to be insolvent in 1996, the MOF employed the Deposit Insurance Corporation (DIC) to make a full government guarantee until March 2001. This new disclosure of information indicated the real level of all the problems, which had lastingly been manipulated by the authority, and intensive public negative reaction was also triggered by the MOF's solution by employing massive public fund.[80] Especially, the AFC brought Japan's economy to the edge of financial panic in November 1997;[81] and in particular, problems continued longer in the banking industry with extraordinary costs at output, causing a banking crisis until 1998. For example, Sanyo Securities filed for protection from creditors on November 3, 1997, triggering scandals in the interbank call market, and the unusual procedure exposed inadequate government intervention.[82] The bankruptcy of Hokkaido Takushoku Bank made null the "too-big-to-fall" policy of the MOF,[83] and Yamaichi failure exerted international spillover effects because of its extensive banking business.[84] In 1998, the Long-Term Credit Bank and the Nippon Credit Bank went into temporary nationalisation, which

[77] When adopting the Basel Accord, some banks shifted toward under the supervision of the MOF. Heather Montgomery, 'The Effect of the Basel Accord on Bank Lending in Japan' CEI Working Paper Series, No 2001-22, 2001 <http://cei.ier.hit-u.ac.jp/working/2001/2001WorkingPapers/wp2001-22.pdf>.
[78] *Supra* 33, 1–81.
[79] Colin P.A. Jones, 'Japanese Banking Reform: A Legal Analysis of Recent Developments' 3 *Duke Journal of Comparative & International Law* 1993: 387–440.
[80] Robert J. Brown, *The Ministry of Finance: Bureaucratic Practices and the Transformation of the Japanese Economy* (London: Quorum Books 1999) 129-145.
[81] Pablo Bustelo, 'The East Asian Financial Crises: An Analytical Survey' ICEI Working Papers, No 10, October, 1998 <http://pendientedemigracion.ucm.es/info/eid/pb/ICEIwp10.pdf>.
[82] Elijah Brewer III, Hesna Genay, William Curt Hunter and George G. Kaufman, 'Does the Japanese Stock Market Price Bank-Risk? Evidence from Financial Firm Failures' (2003) *Journal of Money, Credit and Banking* 35(4): 507-543.
[83] The "too-big-to-fail" policy formed in the 1920s, when banking failures and depositors' runs triggered a wide-range panic. As the regulator, the Banking Bureau within the MOF favoured a soft landing in order to avoid crises. For details, see, *supra* 80, 93–111.
[84] News report, 'Yamaichi: The Fall of a Financial Giant' (BBC News) <http://news.bbc.co.uk/1/hi/34448.stm> accessed on November 25, 1997.

underlined the necessity of dealing with failures of large financial institutions in a more orderly and consistent manner.[85]

The objective of regulatory reform was to introduce a mechanism in line with international best practice standards, whereby bank failures could be handled better with less negative impact upon financial stability.[86] New rules and regulations were released. The Law Concerning Emergency Measures for the Reconstruction of the Functions of the Financial System (Financial Reconstruction Law) was enacted to deal with a failed bank without necessarily finding a sound receiving bank beforehand. The Financial Function Early Restoration Law aimed at restoring confidence in the banking sector by arranging capital injections under a new framework.[87]

Moreover, responsible agencies were changed. The MOF transferred its regulatory and supervisory duty to an outside agency – Financial Supervisory Agency.[88] It was first supervised by the MOF and then by the Financial Reconstruction Commission (FRC), an independent office under the PM, since 1998. Under this arrangement, the relationship between the PM and the financial supervisor was strengthened, reducing the MOF's power for dealing with bank failures.[89] In July 2000, the Financial Supervisory Agency was re-structured into the Financial Services Agency (FSA), and a new mechanism was introduced. Banks were ensured to be viable and investment fully recovered by assessing their "original cost accounting standards" and "effective capital ratios", followed by explicit plans to improve profitability.[90] This "management improvement plan" was first submitted to the FRC upon receiving capital and made public subsequently. The FRC became responsible for NPLs disposals by employing public funds, and Government's power was restricted to converting preferred shares into common stocks over the operations of the

[85] Akihiro Kanaya and David Woo, 'The Japanese Banking Crisis of the 1990s: Sources and Lessons' IMF Working Paper, WP/00/7, 2000 <www.imf.org/external/pubs/ft/wp/2000/wp0007.pdf>.
[86] *Supra* 73, 41–81.
[87] Hiroshi Nakaso, 'The Financial Crisis in Japan during the 1990s: How the Bank of Japan Responded and the Lessons Learnt' BIS Papers, No 6, 2001 <www.bis.org/publ/bppdf/bispap06.pdf>.
[88] Hiroshi Nakaso, 'Recent Banking Sector Reforms in Japan' FRBNY Economic Policy Review, July 1999 <www.ny.frb.org/research/epr/99v05n2/9907naka.pdf>.
[89] Maximilian J.B. Hall, 'Banking Regulation and Supervision in Japan: Some Issues and Concerns' (2003) *Journal of Financial Regulation and Compliance* 11(1): 45–59.
[90] *Supra* 33.

weakest institutions up to five years. The FSA regularly checked their actions against the plans and could intervene directly into their management.

Japanese banks were required to dispose of their bad loans within 2–3 years by following bankruptcy procedures or rehabilitating borrowers. [91] The Prompt Corrective Action was initiated to evaluate and audit their positions, whilst supervising them in accordance with set standards. NPLs were assessed more transparently through more informative and realistic reports. Capital ratios were divided by percentages, and varying capital rations applied to banks according to their businesses under the Basel Accord: higher ratios of capital adequacy applied for internationally active banks, [92] while the FSA controlled the reform and recapitalisation plan for banks between 4% and 8%.[93] Accordingly, insolvent banks were distinguished from the merely weak: special public control was placed over insolvent banks by government-managed bridge banks, while weaker ones could be injected with public funding on request. Meanwhile, an explicit insurance programme was introduced, and the DIC was reformed.[94] DIC accounts were divided into: (i) Special Account, established under the revised Deposit Insurance Law in 1998 to nationalise institutions; (ii) Financial Reconstruction Account, to support emergent financial aid under the Financial Reconstruction Law; and (iii) Account for Early Restoration of Financial Function, to recapitalise a weak bank under the Prompt Corrective Action Standards after the DIC approved its business restoration plan. Additionally, the Resolution and Collection Corporation (RCC) was established to purchase loans from both failed and still solvent but weak banks, NPLs were charged at market prices or fair value, and securitisation developed to further consolidate banks' capital base.[95]

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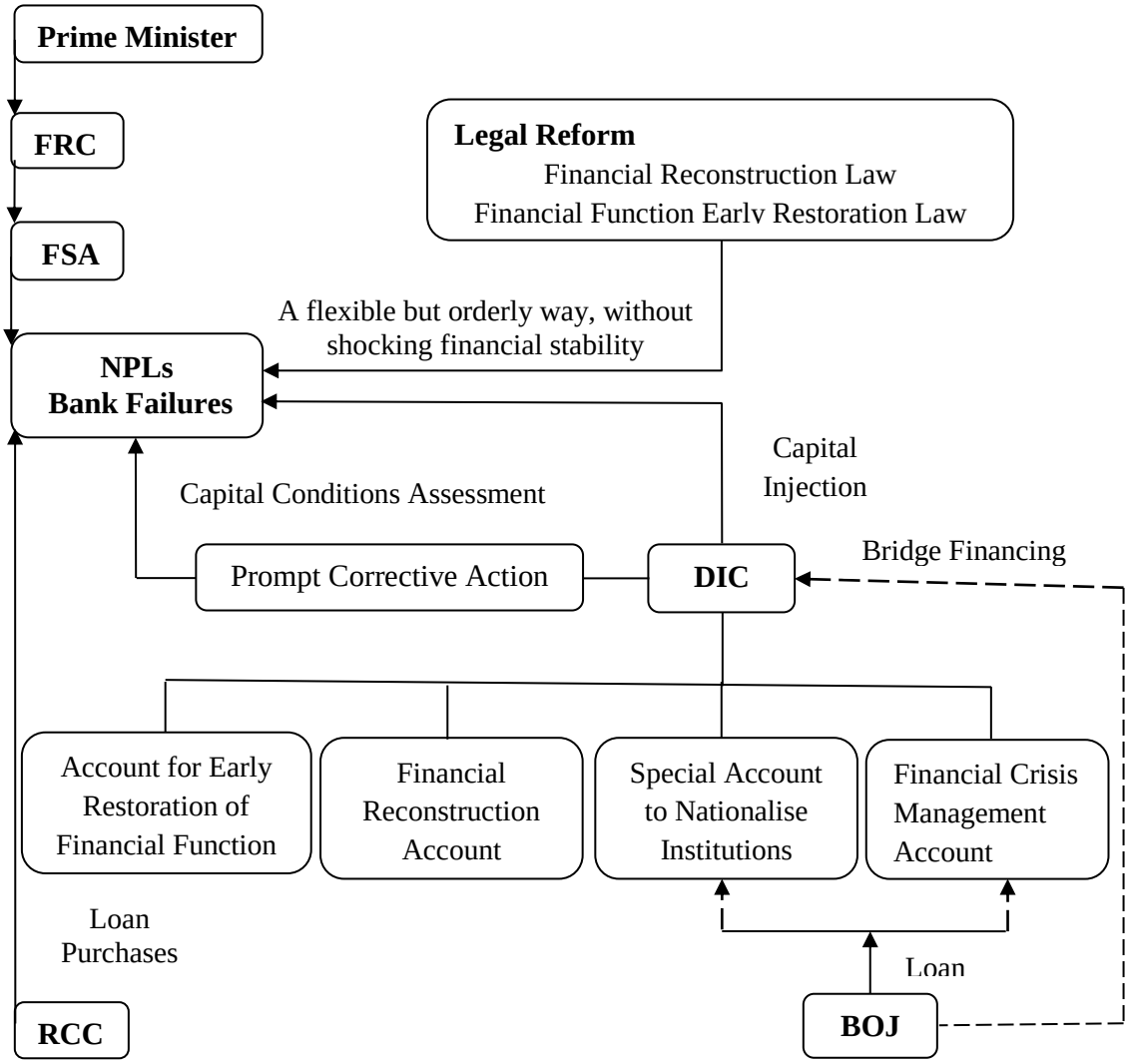
[91] *Supra* 73, 73–74.
[92] Patricia Jackson, 'Capital Requirements and Bank Behaviour: The Impact of the Basle Accord' Basle Committee on Banking Supervision, Working Papers No 1, 1999 <www.bis.org/publ/bcbs_wp1.pdf>.
[93] David Woo, 'In Search of "Capital Crunch": Supply Factors behind the Credit Slowdown in Japan' (2003) *Journal of Money, Credit & Banking* 35(6): 1019-1038.
[94] Curtis J. Milhaupt, 'Japan's Experience with Deposit Insurance and Failing Banks: Implications for Financial Regulatory Design?' (1999) *Washington University Law Quarterly* 77(2): 399–431.
[95] Kenneth Kang, 'The Resolution and Collection Corporation and the Market for Distressed Debt in Japan' in Tim Callen and Jonathan Ostry (eds.), *Japan's Lost Decade: Policies for Economic Revival* (IMF 2003) 65–79.

Within this new regime, the LOLR facilities of the BOJ were diminished, for such loans could pose threats and trigger conflicts between the FSA and the BOJ.[96] The BOJ was still responsible for making loans on bills available to the DIC's Financial Crisis Management Account according to the Financial Law on Emergency Measures for Stabilizing the Financial Functions, and the Special Account according to the Supplementary Provisions of the Deposit Insurance Law, but the Deposit Insurance Act stipulated that funds required by failed financial institutions would be provided by the DIC rather than the BOJ. In practice, the BOJ also lent temporarily to the DIC via bridge financing, but the DIC generally borrowed from private channels and also international financial institutions.[97]

After the above reform, the new financial regulation and supervision regime can be displayed in Figure 6.1:

[96] Takeo Hoshi and Takatoshi Ito, 'Financial Regulation in Japan: A Sixth Year Review of the Financial Services Agency' (2004) *Journal of Financial Stability* 1(2): 229-243.
[97] *Supra* 87.

Figure 6.1: Japan's New Financial Regulation and Supervision System



Accordingly, the key to Japan's financial regulation and supervision reform was to add new facilities and responsible agencies to deal with NPLs and bank failures. The MOF was replaced by the FSA controlling financial regulation, while the BOJ only offered limited financial aid under its LOLR facilities.

6.2.4 Summary

This section has focused upon legislation governing the BOJ. Major changes around its two-tier relationship can be summarised in Table 6.1:

Table 6.1: Major Changes around BOJ's Two-Tier Relationship before GFC

Conditions	Legislation	Independence	Relationship with Market
External influence and domestic instability	BOJ Act 1882	A joint-stock company with the state as the major shareholder; Under the direction of the MOF and Treasury	Directly manage the industry to integrate financial markets
World War II	Memorandum of Establishing a New Economic System		Rationing measures of lending and securities; MOF strengthened direct control but prioritized major banks
	BOJ Act 1942	BOJ was under the MOF and operated to support the nation's centralised strategy	
American Occupation	1947 Finance Law	BOJ underwrote government bonds; Policy Board was controlled by the Diet, Cabinet, MOF and Treasury	
Economic recovery and development until the 1970s		BOJ reform for more independence failed due to the powerful MOF	BOJ controlled inflation and conducted window guidance to channel commercial loans; MOF controlled financial markets and the convoy system
Economic dynamics 1970s and 1980s			BOJ shifted to indirect monetary policy; banking industry was challenged by NPLs and bankruptcy; Convoy regime failed to manage regulation and recapitalisation
Big Bang Financial Reform since 1996	BOJ Act 1998	Highlighting independence and transparency, the BOJ reform implied the shifted influence from the MOF to the Diet and Cabinet; BOJ was confined to control monetary policy	On-site examination, off-site monitoring and limited LOLR facilities

	Financial Reconstruction Law, Financial Function Early Restoration Law; Prompt Correction Action	FSA was supervised first by the MOF and then by the FRC under the PM	Convoy system was replaced by a new system to deal with NPLs and capital injection

As illustrated in Table 6.1, the BOJ experienced few legal changes prior to the GFC. From the outset, it was established with close relationships with Government and financial markets. During World War II, it was brought directly under the MOF, with the predominant goal to support government's wartime needs. In spite of Japan's undergoing changes, the BOJ was governed by such exceptionally long-standing wartime legislation until 1998, when it was reformed during Japan's "Big Bang".

The BOJ reform sought to improve independence through further transparency. By examining its legal framework, the strong presence of the MOF was reduced, but its real independence was constrained by the rising power of the Diet and Cabinet. Consequently, the stated reform goals miscarried. Meanwhile, the indirect-financing pattern, which had assisted Japan's economic development, produced serious NPLs with threats of insolvency from the 1990s. This was first dealt with by the MOF with LOLR support from the BOJ under the convoy system, and then by the FSA; the BOJ's role had been further weakened regarding banks' liquidity and bankruptcy.

Overall, the BOJ was predominantly a monetary authority, while financial regulation and supervision shifted from the MOF to the FSA. Its two-tier relationship can be summarised as follows: as Government's banker, the BOJ was under continuous government guidance, carrying the responsibility for maintaining monetary stability to support the state's strategy, and managing treasury funds and government securities services; as bankers' bank, it, based upon contractual relationship, conducted examining and monitoring at the firm level, as well as emergent lending in limited cases. After the reform, the FSA, as the successor of the MOF, continued to supervise banks at the firm level. In brief, the BOJ was a government-guided central bank, and oversaw financial institutions quite directly.

6.3 The GFC Impact upon the BOJ

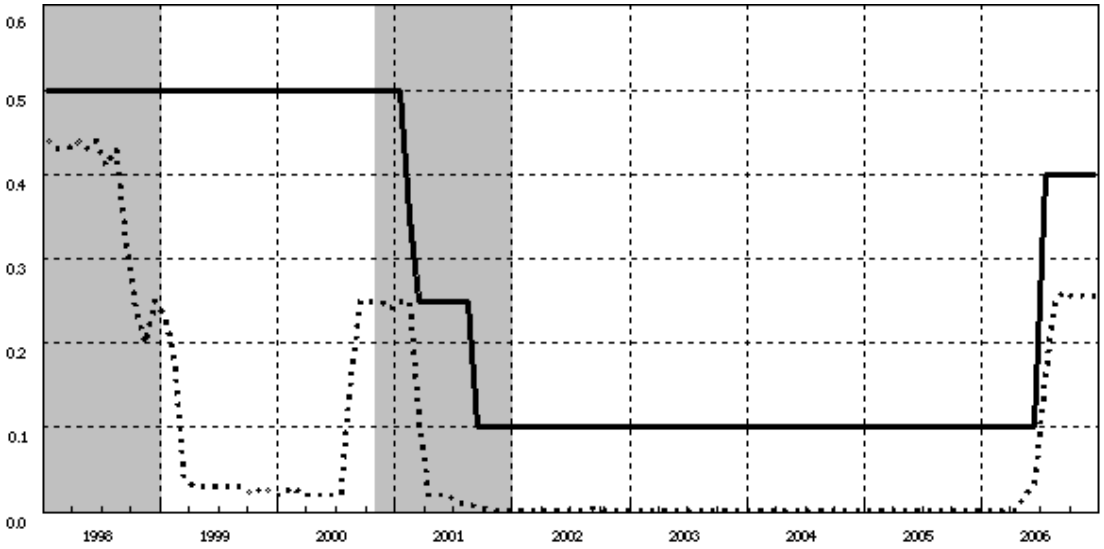
The new BOJ was challenged to deal with Japan's domestic crisis and also the GFC; therefore, it can be viewed as "a central bank in crisis". This section will introduce and analyse its crisis management solutions before making further comparisons.

6.3.1 The BOJ in Japan's Domestic Crisis

Since the mid-1990s, the relationship between the money stock and economic activity had become unstable, and thus, the BOJ adjusted monetary policy to directly influence the credit creation behaviour of financial institutions and overall money demand.[98] It continued to reduce interest rates to 0.25% in September 1998 (as illustrated in Table 6.2). On February 12, 1999, the Policy Board decided to reduce the uncollateralised call rate to virtually zero, named the Zero Interest Rate Policy (ZIRP). Due to a false expectation of recovery, it raised the rate to 0.25% in August 2000, soon threatening economic recession. It re-introduced the ZIRP in March 2001, and also announced that it would last until "the inflation rate becomes stably above zero".[99] The goal of the ZIRP was further clarified in October 2003 to continue until "the CPI inflation rate becomes zero or above for a few months and there is no forecast by the Board members of falling back to deflation".[100]

[98] BOJ, 'The role of the Money Stock in conducting Monetary Policy' BOJ Quarterly Bulletin, May 6, 2003 <www.boj.or.jp/en/research/brp/ron_2003/data/ron0305a.pdf>.
[99] BOJ, News Release <www.boj.or.jp/en/announcements/release_2001/k010319a.htm/> accessed on March 19, 2001.
[100] BOJ, News Release <www.boj.or.jp/en/announcements/release_2003/k031010.htm/> accessed on October 10, 2003.

Table 6.2: Time-Series Setting of BOJ Interest Rates between 1998 and 2006



Basic discount rate and basic loan rate ——
Call rate, uncollateralized overnight/average ·····

Data source: BOJ
<*www.stat-search.boj.or.jp/ssi/cgi-bin/famecgi2?cgi=$graphwnd_en*>.

With prolonged deflation, neither monetary expansion nor fiscal stimulus can effectively help support economic recovery. Hence, the BOJ began experiments by introducing unconventional monetary policies (UMPs). [101] It set up the Complementary Lending Facility (CLF) to offer extended loans against a wider range of collaterals.[102] On March 19, 2001, the Policy Board officially announced "quantitative easing".[103] It increased the outstanding balance of the current accounts to ¥ 35 trillion in 2004, whilst shifting its target of monetary policy operation from the uncollateralised overnight call rate to the outstanding balance of the current account balances held by financial institutions. So, given that the current account balance far exceeded the level of required reserves, the BOJ began to provide liquidity directly to financial institutions, triggering their incentives to hold sufficient

[101] Alan Ahearne, Joseph Gagnon, Jane Haltmaier, and Steve Kamin, 'Preventing Deflation: Lessons from Japan's Experience in the 1990s' Board of Governors of the Federal Reserve System, International Finance Discussion Papers, No 729, 2002 <www.federalreserve.gov/Pubs/IFDP/2002/729/ifdp729.pdf>.
[102] Documents can be downloaded from <www.boj.or.jp/en/mopo/measures/mkt_ope/len_a/index.htm/>.
[103] BOJ, News Release <www.boj.or.jp/en/announcements/release_2001/k010319a.htm/> accessed on March 19, 2001.

excess reserves. At the same time, it increased outright monthly purchases of long-term JGBs from ¥ 0.4 trillion to ¥ 1.2 trillion from March 2001 to November 2002, after the low interest rate limited the profits produced by short-term funds. Between July 2003 and March 2006, it conducted ABSs purchases under a temporary measure to support corporate financing. Overall, the BOJ employed its own current account balances to conduct quantitative easing through assets purchases.[104]

To promote NPL disposals, the BOJ completed a comprehensive review in 2002, pointing out that bad loans were caused by both the bubble economy and structural shortcomings. Thereafter, it encouraged major financial institutions to strengthen their own efforts toward more appropriate provisioning, and also expanded the secondary market for loan assets to help remove NPLs from their balance sheets.[105] In October 2002, the Financial Revitalisation Program was introduced, aiming at halving the NPL ratios by the end of March 2005. This goal would be achieved through stricter assessment of assets, and the restructuring of both financial and industrial sectors.[106] In 2004, the Financial Function Strengthening Act[107] created the Financial Functions Strengthening Account to inject public funds to prevent further NPLs. This account allowed Government to make capital injection prophylactically into financial institutions which were solvent but without sufficient capital to operate.[108]

By April 2005, the banking crisis was alleviated by a combination of rescue measures, including accommodated monetary policy, direct intervention, and fiscal stimulus packages.[109] To protect depositors and ensure confidence, Government established the blanket guarantee of deposit in June 1996, and extended until March 2002. As market conditions smoothed, it was replaced by a limited coverage in

[104] Eiji Maeda, Bunya Fujiwara, Aiko Mineshima and Ken Taniguchi, 'Japan's Open Market Operations under the Quantitative Easing Policy' BOJ Working Paper Series, No 05-E-3, 2005 <www.boj.or.jp/en/research/wps_rev/wps_2005/data/wp05e03.pdf>.
[105] BOJ, 'Japan's Nonperforming Loan Problem' Quarterly Bulletin, November 2002 <www.boj.or.jp/en/announcements/release_2002/data/fss0210a.pdf>.
[106] Masao Ishikura, 'Reassessing the Japanese Responses to Globalization: Causes and Consequences of the Japanese Financial Crisis' in Jang-Sup Shin (ed.), *Global Challenges and Local Responses: The East Asian Experience* (Psychology Press 2007) 116–139.
[107] Act No. 128 of 2004, FFSA.
[108] <www.dic.go.jp/english/e_kikotoha/e_zaimu/e_jokyo/e_kanjyo/e_kyouka.html>.
[109] Dick K. Nanto, 'The Global Financial Crisis: Lessons from Japan's Lost Decade of the 1990s' CRS Report for Congress, RS 22960, May 4, 2009 <http://fpc.state.gov/documents/organization/125542.pdf>.

2005.[110] This reform is argued to have advanced the development of market disciplines in deposit insurance.[111] The BOJ also shifted its focus from crisis management to supporting private sector initiatives to provide efficient and advanced financial services via fair competition, though meanwhile maintaining financial stability.[112] To facilitate this change, it conducted reorganisation: the Financial Systems and Bank Examination Department replaced the Financial Systems Department and the Bank Examination and Surveillance Department, and the Centre for Advanced Financial Technology was set up. In addition, the BOJ began to release regularly Financial System Reports to explain its own policy stances after evaluating the entire financial system. According to these reports, the soundness of individual financial institutions would be regularly examined, and macroeconomic imbalance was vitally linked with systemic risk.[113]

Between November 2005 and March 2006, the core CPI inflation turned positive, and economic recovery stabilized.[114] The BOJ returned to the uncollateralised overnight call rate for its money market conduct,[115] and raised it to 0.25% on July 17 to avoid large swings in prices and other economic activities in the future.[116] It ended the quantitative easing policy, but continued the call rate at the above low level.[117] In 2007, the FSA launched a reform toward balancing rule-based and principle-based regulation, with improved transparency to promote financial institutions'

[110] 'Transitioning from a Blanket Guarantee to a Limited Coverage System' A Research paper from Asia Regional Committee of International Association of Deposit Insurers, September 2005 <www.iadi.org/docs/2009-3-24_edited-2005_ARC_Research_Paper_Transition__Final.pdf>.
[111] Masami Imai, 'Market Discipline and Deposit Insurance Reform in Japan' (2006) *Journal of Banking & Finance* 30(12): 3433–3452.
[112] BOJ, 'The Bank of Japan's Measures regarding the Financial System after the Full Removal of Blanket Guarantee of Deposits' (March 18, 2005) <www.boj.or.jp/en/announcements/release_2005/fss0503a.htm/>.
[113] BOJ, News Release <www.boj.or.jp/en/research/brp/fsr/fsr05a.htm/> accessed on March 18, 2005.
[114] Koyo Ozeki, 'Outlook for Global Finance: The Evolving Crisis and Japan's Experience' Japan Credit Perspectives, PIMCO, January 2009 <www.freerepublic.com/focus/chat/2183000/posts>.
[115] BOJ, News Release <www.boj.or.jp/en/announcements/release_2006/k060309.htm/> accessed on March 9, 2006.
[116] BOJ, News Release <www.boj.or.jp/en/announcements/release_2006/k060714.pdf > accessed on July 14, 2006.
[117] Masaaki Shirakawa, 'The Role of Central Banks in the New Financial Environment' at the International Monetary Conference, Kyoto, June 9, 2009 <www.bis.org/review/r090612b.pdf>.

international competitiveness.[118] However, Japan suffered contagion from the GFC before this reform was completed.

6.3.2 The BOJ amid the GFC

Unlike the US and UK, Japan was not challenged by severe housing collapses or banking failures during the GFC.[119] Instead, its banking sector was comparatively stable, for continuous recapitalization had ensured financial soundness rather than profitability.[120] Japanese banks were less innovative with limited direct exposure to the US subprime mortgage housing market. Until September 2010, subprime-related losses were established at ¥ 1,038 billion, representing less than 2.2% of Japanese bank Tier-1 capital, much less than their counterparts in the US and UK.[121]

However, the stock market was alert to the US subprime mortgage crisis, declining gradually but sustainably after a record peak in mid-2007. This placed downturn pressure upon balance sheets and capital adequacy ratios of commercial banks, limiting their willingness to lend, especially from summer 2008.[122] New loans for equipment funds declined by 9% on a year-to-year basis in the third quarter of 2008, and reduced more sharply until the year end.[123] Some exporting and manufacturing sectors showed earlier instabilities, and major problems emerged since November 2008.[124] For example, exports fell by 12.5% in late 2008, with another 36.8%

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[118] FSA, 'Plan for Strengthening the Competitiveness of Japan's Financial and Capital Markets' (December 2007) <www.fsa.go.jp/en/news/2007/20071221/01.pdf> & 'The Principles in the Financial Services Industry' (April 18, 2008) <www.fsa.go.jp/en/news/2008/20080424/01.pdf>.
[119] Dick K. Nanto, 'The Global Financial Crisis: Lessons from Japan's Lost Decade of the 1990s' CRS Report for Congress, RS 22960, 2009 <http://fpc.state.gov/documents/organization/125542.pdf>.
[120] Mariko Fujii and Masahiro Kawai, 'Lessons from Japan's Banking Crisis, 1991–2005' ADBI Working Paper Series 222, 2010 <www.adbi.org/files/2010.06.29.wp222.lessons.japan.banking.crisis.1991.2005.pdf>.
[121] Takafumi Sato, 'Global Financial Crisis – Japan's Experience and Policy Response' at the Asia Economic Policy Conference, FRB San Francisco, October 20, 2009 <www.frbsf.org/economic-research/files/09_Sato.pdf>.
[122] BOJ, 'Financial Markets Report' (March 2009) <www.boj.or.jp/en/research/brp/fmr/data/mkr0903.pdf>.
[123] Masahiro Kawai and Shinji Takagi, 'Why was Japan Hit So Hard by the Global Financial Crisis?' ADBI Working Paper Series, No 153, 2009 <www.adbi.org/files/2009.10.05.wp153.japan.gfc.pdf>.
[124] Mitsuyo Ando and Fukunari Kimura, 'How did the Japanese Exports Respond to Two Crises in the International Production Networks? The Global Financial Crisis and the East Japan Earthquake' (2012) *Asian Economic Journal* 26(3): 261-287.

reduction in the early 2009; real GDP shrank by 12.1% at the end of 2008. In 2008 and 2009, Japan performed less well than its peers and emerging countries in Asia.[125]

Japan got contagion with a noticeable time lag, but still serious losses occurred; this has mainly been attributed to its particular trade and industrial structure.[126] In the Great Moderation era, worldwide economic growth facilitated Japan's recovery, and export contributions to GDP became high; its over-dependence upon exports and foreign capital accelerated its vulnerability to external shocks. So declining demand from both advanced countries[127] and regional trade partners[128] directly reduced GDP growth. Moreover, after Japan's industrial structure was reformed to introduce more effective Yen exchange rates, exports were spurred by a declining currency value, especially between 2003 and 2007.[129] As domestic inventory adjustment engendered further pressure on exports, downward pressure upon industrial production also increased.[130] Meanwhile, foreign banks largely reduced their investment in the interbank market and their holdings of Japanese stocks. As a result, negative outward portfolio investments increased from 2007 in absolute terms, inward portfolio investment turned negative in 2008/09, and foreign short-term investment reduced; all these forced a credit crunch.[131] Overall, Japan entered into serious economic recession from late 2008, mainly due to the collapse of world trade and liquidity crunch in international capital markets.[132]

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[125] BIS, '83rd BIS Annual Report 2012/2013' < www.bis.org/publ/arpdf/ar2013e.htm> accessed on June 23, 2013.

[126] Helen Hughes, *Achieving Industrialization in East Asia* (Cambridge University Press 1988) 241-254. Chalmers Johnson, *MITI and the Japanese Miracle: The Growth of Industrial Policy, 1925-1975* (Stanford: Stanford University Press 1982). As estimated, global GDP shocks had an increasingly significant impact on Japan's economic performance, due to its structural reform and further globalisation. *Supra* 123.

[127] Ryuhei Wakasugi, 'Why was Japan's Trade Hit So Much Harder?' in Richard Baldwin (ed.), *The Great Trade Collapse: Cause, Consequences and Prospects* (Geneva: The Graduate Institute, Centre for Trade and Economic Integration 2011) 207-219.

[128] Kyoji Fukao and Tangjun Yuan, 'Why is Japan so heavily affected by the Global Economic Crisis? An Analysis Based on the Asian International Input-output Tables' (VOX) <www.voxeu.org/index.php?q=node/3637>.

[129] Tokuo Iwaisako, 'Japanese Macroeconomic Policy Management after the Global Financial Crisis' (2010) *Public Policy Review* 6(5): 795-806.

[130] Martin Sommer, 'Why Has Japan Been Hit So Hard by the Global Recession?' IMF Staff Position Note, SPN/09/05, 2009 <www.imf.org/external/pubs/ft/spn/2009/spn0905.pdf>.

[131] News report, <www.japantimes.co.jp/news/2008/12/03/news/boj-takes-steps-to-thaw-credit-crunch/> accessed on December 3, 2008.

[132] It was named as an "export-led type" crisis; see, Satoshi Mizobata, 'The Japanese Economic System under the Global Crisis: Change and Continuity' for the KIER-UNC international workshop with the Japanese Society for Comparative Economic Studies, September 26, 2009 <www.ciem.org.vn/home/vn/upload/info/attach/12548013346511_Japanses_crisis_2009.pdf>.

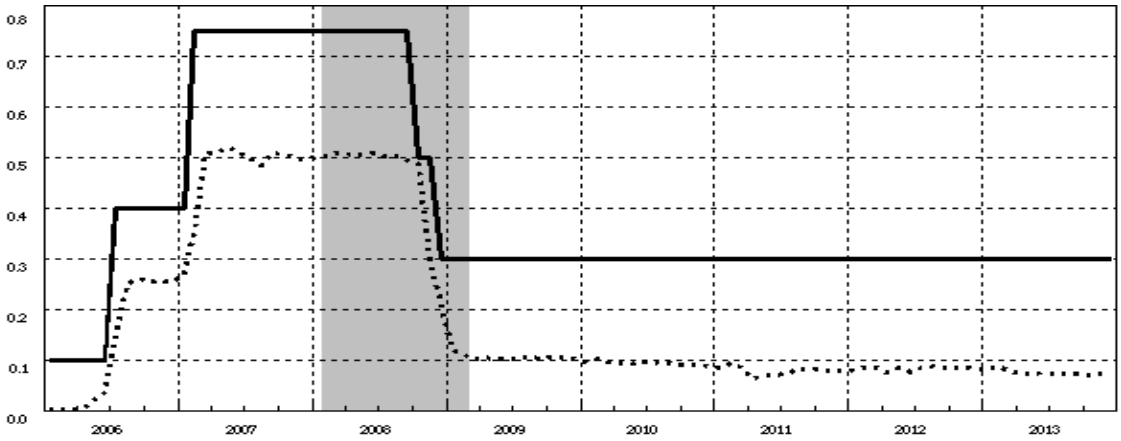
To deal with the GFC, Japan similarly employed fiscal stimulus and monetary expansion. The BOJ was first to prevent the exacerbation of this crisis and then manage it with selected solutions.[133] The Governor summarised the key policy responses as "ample liquidity provisions, support for credit market functioning, macroeconomic stimulus, and injections of public capital and elimination of balance sheet uncertainties".[134] Its crisis management solutions could be analysed from the following six perspectives.

(1) Interest Rate Reductions:

Under the ZIRP, the BOJ maintained the uncollateralised overnight call rate at 0.5% until October 31, 2008, and reduced it to 0.1% in December 2008. To clarify its commitment, it announced at the end of 2009 to maintain quantitative easing until the country came out of deflation.[135] By October 2010, the BOJ had made continuous cuts to "around 0 to 0.1%" (as illustrated in Table 6.3), and the target was set until price stability came into sight without any significant systemic risk.[136]

[133] John B. Taylor, 'The Mayekawa Lecture: The Way Back to Stability and Growth in the Global Economy' (December 2008) <www.imes.boj.or.jp/english/publication/conf/2008/mayekawa.pdf>.
[134] Masaaki Shirakawa, 'Way Out of Economic and Financial Crisis – Lessons and Policy Actions' at Japan Society, New York, April 23, 2009 <www.bis.org/review/r090427a.pdf>.
[135] BOJ, 'Statement on Monetary Policy' <www.boj.or.jp/en/announcements/release_2009/k091218.pdf > accessed on December 18, 2009.
[136] BOE, News Release <www.boj.or.jp/en/announcements/release_2010/k101005.pdf> accessed on October 5, 2010.

Table 6.3: Time-series Setting of BOJ Interest Rates between 2006 and Mid-2013



Data Source: BOJ
<*www.stat-search.boj.or.jp/ssi/cgi-bin/famecgi2?cgi=$graphwnd_en*>.

(2) Quantitative Easing

Following the collapse of Lehman Brothers, the Japanese financial market deteriorated sharply, corporate bankruptcies increased and stock prices fell. According to the Short-term Economic Survey of Enterprise in Japan (*Tankan*), more firms reported difficulties in accessing credit from financial institutions.[137] As various indicators pointed out, the spillover effects from the GFC to Japan required the BOJ to explore more UMPs, as summarised in Table 6.4:[138]

[137] Masaaki Shirakawa, 'Global Financial Crisis and Policy Responses by the Bank of Japan' to the Board of Councillors of Nippon Keidanren/Japan Business Federation, Tokyo, December 22, 2008 <www.bis.org/review/r090116b.pdf>.
[138] Officially, the BOJ summarised its solutions to include "reductions in the policy interest rate, measures to ensure stability in financial markets, and steps to facilitate corporate financing". Refer to, BOJ, 'The Bank of Japan's Policy Measures during the Financial Crisis' <www.boj.or.jp/en/mopo/outline/cfc.htm/>.

Table 6.4: Quantitative Easing from the BOJ between 2008 and 2013

Category	Programme	Aims and Functions
JGBs	Purchases/sales of JGBs with repo agreements	Extended maturities and wider ranges of eligible collaterals
Corporate Financing Support[139]		
October 2008	Complementary Deposit Facility (CDF)[140]	Remuneration was paid to excessive reserves, lowering real interest rates and securing financial stability directly
December 2008	A new operation utilising corporate debt	
	Special Funds-Supplying Operation to Facilitate Corporate Financing (SFOFCF)[141]	Providing an unlimited amount of funds against the value of corporate debt at loan rates equivalent to the target for the uncollateralised overnight call rate[143]
2009	Outright purchases of corporate financing instruments[142]	Including commercial papers (CPs) and short-term corporate bonds against a wider range of eligible collaterals[144]
Liquidity Aid to Banks 2009	Purchase of bank-held corporate shares[145]	
	Subordinated loans programme[146]	Supporting banks subject to international capital standards
	A quantitative easing facility of ¥ 10 trillion three-month loans[147]	Influencing directly the volume of loans and also lowering interest rates on term instruments

[139] BOJ, News Release, <www.boj.or.jp/en/announcements/release_2008/un0810d.pdf> accessed on October 14, 2008.
[140] Documents can be downloaded from <www.boj.or.jp/en/mopo/measures/mkt_ope/oth_a/index.htm/>.
[141] BOJ, News Release <www.boj.or.jp/en/announcements/release_2008/un0812b.pdf> accessed on 2 December 2, 2008.
[142] BOJ, News Release <www.boj.or.jp/en/announcements/release_2009/un0901b.pdf> accessed on January 22, 2009. Also, see, *supra* 130.
[143] BOJ, News Release <www.boj.or.jp/en/announcements/release_2008/mok0812c.pdf> accessed on December 19, 2008.
[144] *Supra* 137.
[145] BOJ, News Release <www.boj.or.jp/en/announcements/release_2009/k090318.pdf> accessed on March 18, 2009.
[146] Provision of subordinated loans to banks: <www.boj.or.jp/en/announcements/release_2009/fsky0903a.htm/> Official documents can be downloaded from <www.boj.or.jp/en/finsys/psloans/index.htm/>.

2010	Loan support programme[148]	Encouraging lending from private financial institutions
	Fund-Provisioning Measures to Support Strengthening the Foundations for Economic Growth (FMSSFEG)[149]	Supplying long-term funds at a low interest rate against certain collateral
Comprehensive Quantitative Easing (CQE) October 2010	New Asset Purchase Programme[150]	BOJ purchased CPs, corporate bonds, ETFs, J-REITs, and longer-maturity JGBs
Great East Japan Earthquake March 2011	Quasi-fiscal support[151]	BOJ injected ¥ 15 trillion into the interbank market; Temporary financial support to affected areas for public welfare; CQE was extended
BOJ New Framework 2013	Numerical price stability target	Linking monetary policy directly with economic recovery
	Quantitative and Qualitative Easing (QQE)[152]	BOJ shifted to the money base control as the target of monetary framework; Regular assets purchases

According to the information presented by Table 6.5, the BOJ focused upon facilitating corporate financing, while supporting the banking sector and export-led growth.[153] It also conducted quasi-fiscal support after Great East Japan earthquake: for example, it provided funds to meet the demand from the market sector and ensure

[147] BOJ, News Release <www.boj.or.jp/en/announcements/release_2009/k091201.pdf> accessed on December 1, 2009.
[148] Documents can be downloaded from <www.boj.or.jp/en/mopo/measures/mkt_ope/len_b/index.htm/>.
[149] BOJ, 'Statement on Monetary Policy' <www.boj.or.jp/en/announcements/release_2010/k100615.pdf> accessed on June 15, 2010.
[150] Sayuri Shirai, 'Japan's Monetary Policy in a Challenging Environment' at the Bank of Italy and at the Eurasia Business and Economics Society Conference, Rome, January 11-12, 2013 <www.bis.org/review/r130117b.pdf>.
[151] BOJ, News Release, <www.boj.or.jp/en/about/bcp/saigai20110311.htm/> accessed on March 11, 2011.
[152] A schematic outline was established by the BOJ in relation to the operation of the QQE and the newly-established inflation target: <www.boj.or.jp/en/mopo/outline/qqe.htm/>.
[153] BOJ, 'Recent Conduct of Monetary Policy toward a Sustainable Growth Path with Price Stability' <www.boj.or.jp/en/mopo/outline/sgp.htm/>.

financial stability, and amended its provisions to conduct more asset purchases over extended periods.[154] As established empirically, asset purchases under the CQE were aimed at stabilizing financial markets while allowing for further monetary easing, but their impact on inflation and outputs was limited.[155] Moreover, by taking over credit risks from the private sector as emergency steps, the BOJ directly affected resource distribution.[156] What is more, it changed its own balance sheet to favour financial markets. The lasting JGBs purchases changed the composition of its balance sheet. Its size to nominal GDP sharply expanded from 2001 to 2006, and maintaining almost constant between 2007 and 2009;[157] however, it expanded further after introducing the CQE in October 2010.[158] According to its commitment under the QQE, the size and composition of its balance sheet would induce further burden and risk.

(3) BOJ's New Framework

As early as 2006, the BOJ announced to introduce a new framework for monetary policy conduct. It considered examining the inflation rate at 0%-2% over one-to-two years, achieving therefore sustainable economic growth under price stability.[159] Due to the GFC, this experiment was formalised. Given that it has continued to be a critical challenge for Japan to overcome deflation and regain sustainable growth, in February 2012 the BOJ judged that inflation should be in a positive range of 2% or lower in the medium to long term, and also set the price stability goal at 1% for the

[154] BOJ, 'Enhancing of Monetary Easing' (March 14, 2011) <www.boj.or.jp/en/announcements/release_2011/k110314a.pdf>.
[155] W. Raphael Law, 'Bank of Japan's Monetary Easing Measures: Are They Powerful and Comprehensive?' IMF Working Paper, WP/11/264, 2011 <www.imf.org/external/pubs/ft/wp/2011/wp11264.pdf>.
[156] For the relationship between a low interest rate environment and corporate investment, refer to, Tetsuya Yamada, 'Accelerated Investment and Credit Risk under a Low Interest Rate Environment: A Real Options Approach' BOJ Monetary and Economic Studies, Discussion Paper 2010-E-8, 2010 <www.imes.boj.or.jp/research/papers/english/me28-9.pdf>.
[157] Shiegenori Shiratsuka, 'Size and Composition of the Central Bank Balance Sheet: Revisiting Japan's Experience of the Quantitative Easing Policy' BOJ Monetary and Economic Studies, November 2010 <www.dallasfed.org/assets/documents/institute/wpapers/2010/0042.pdf>.
[158] Kazumasa Iwata and Shinji Takenaka, 'Central Bank Balance Sheets Expansion: Japan's Experience' JCER Discussion Paper, No 134, 2012 <www.jcer.or.jp/eng/pdf/dp134.pdf>.
[159] Introduction: <www.boj.or.jp/en/announcements/release_2006/k060309b.htm/> accessed on March 9, 2006. Background Note: <www.boj.or.jp/en/announcements/release_2006/mpo0603a.htm/> accessed on March 10, 2006.

time being.[160] However, it failed to meet this target, even after a large scale of asset purchases.

In December 2012, with change-over of political leaders, Japan's new government announced its ambitious policy framework to overcome lasting deflation and achieve sustainable economic growth. It has been named the "Abenomics approach" having three arrows: "a 10 trillion yen fiscal stimulus, inflation targeting and structural reform".[161] The immediate task was to end lasting deflation, requiring the BOJ to introduce and fulfil its numerical inflation rate at 2%; the second was to achieve stable long-run GDP growth over the coming decade of 2% in real terms, and 3% in current prices; the third was fiscal consolidation.[162] After taking office, Mr Abe continuously threatened to revise the central bank law if the BOJ did not support his strategies by more aggressive monetary easing. It was thus challenged to revise its mandate, as well as adding steps to provide monetary accommodation decisively.[163]

At the MPM in January 2013, the BOJ announced:

> '… The newly-introduced "price stability target" is the inflation rate that the Bank judges to be consistent with price stability on a sustainable basis ... toward strengthening competitiveness and growth potential of Japan's economy make progress. … the Bank sets the "price stability target" at 2 percent in terms of the year-on-year rate of change in the consumer price index (CPI) – a main price index …'[164]

Accordingly, a price stability target was formally introduced by the BOJ, and "switching from a 'goal' to a 'target' reflects an increasing awareness regarding the importance of flexibility in the conduct of monetary policy in Japan". Removing the

[160] BOJ, News Release <www.boj.or.jp/en/announcements/release_2012/k120214b.pdf> accessed on February 14, 2012.
[161] 'Japan is Back: A Conversation with Shinzo Abe' (Foreign Affairs, July/August 2013 Issue) <www.foreignaffairs.com/discussions/interviews/japan-is-back>.
[162] Hugh Patrick, 'Japan's Abenomics: Recovery Leading to Good Growth?' Columbia Business School, CJEB Annual Report 2012-2013: 9-14. <http://academiccommons.columbia.edu/catalog/ac:168421>.
[163] News report, <http://online.wsj.com/article/SB10001424127887323495104578310994288881764.html> accessed on February 18, 2013.
[164] BOJ, News Release <www.boj.or.jp/en/announcements/release_2013/k130122b.pdf> accessed on January 22, 2013. Background note: <www.boj.or.jp/en/announcements/release_2013/rel130123a.htm/>.

limits, the BOJ began to purchase certain assets regularly,[165] and clarified its commitment to strengthen cooperation with Government:

> "… The Bank of Japan conducts monetary policy based on the principle that the policy shall be aimed at achieving price stability, thereby contributing to the sound development of the national economy, and is responsible for maintaining financial system stability …
>
> The Government will, in order to revitalize Japan's economy, not only flexibly manage macroeconomic policy but also formulate measures for strengthening competitiveness and growth potential of Japan's economy, and promote them strongly under the leadership of the Headquarters for Japan's Economic Revitalization..."[166]

In February 2013, Haruhiko Kuroda was nominated Governor, and then the BOJ began more monetary easing.[167] A comprehensive entailing programme was set up to pursue economic recovery, including monetary, fiscal and structural policies.[168] At the MPM in April 2013, the BOJ adopted the money base control as the target of the monetary framework and announced to formalise the "Quantitative and Qualitative Easing" policy (QQE):

> "In order to (achieve the price stability target) … it [the BOJ] will enter a new phase of monetary easing both in terms of quantity and quality … the main operating target for money market operations is changed from the uncollateralized overnight call rate to the monetary base ... It will double the monetary base and the amounts outstanding of JGBs as well as ETFs in two years, and more than double the average remaining maturity of JGB purchases … will continue with the quantitative and qualitative monetary easing … as long as it is necessary for maintaining that target in a stable manner … The quantitative and qualitative monetary easing…will underpin the Bank's commitment, and is expected not only to work through such

[165] BOJ, News Release <www.boj.or.jp/en/announcements/release_2013/rel130122a.pdf> accessed on January 22, 2013.
[166] BOJ, News Release <www.boj.or.jp/en/announcements/release_2013/k130122c.pdf> accessed on January 22, 2013.
[167] News report, <www.bloomberg.com/news/2013-02-28/abe-nominates-haruhiko-kuroda-as-next-bank-of-japan-governor.html> accessed on February 28, 2013.
[168] News report, <www.theguardian.com/business/2013/apr/08/japan-shinzo-abe-yen-economics> accessed on April 8, 2013.

> transmission channels like longer-term interest rates and asset prices but also to drastically change the expectations of markets and economic entities …"[169]

In principle, the QQE would help achieve recovery though both a quantitative increase and qualitative changes in the BOJ's balance sheet. Quantitatively, the BOJ increased the monetary base at an annual pace of 60–70 trillion yen; from the qualitative perspective, it continued annual purchases of JGBs at ¥ 50 trillion, ETFs at ¥ 1 trillion per year, J-REITs at ¥ 30 billion per year; and its purchases of CPs and corporate bonds were set to reach 2.2 trillion yen and 3.2 trillion yen respectively by the end of 2013.

The Abenomics approach has attracted considerable attention and discussion.[170] In June 2013, the Japan Revitalisation Strategy highlighted Government's plans to achieve economic recovery, while the BOJ was given added requirement to spur growth.[171] To achieve such goals, it has operated a numerical inflation targeting, further asset purchases and a new target for monetary operation. The problematic longer-term implications cannot be ignored. At the above pace, its money base would double to ¥ 270 trillion by the end of 2014, and the increased holding (more than double in two years) of longer-term JGBs (up to about seven years) would change the size and composition of its balance sheet with extended maturities.[172] In addition, these measures are expected to bring positive results by affecting the public's inflation expectations; this will be achieved, step-by-step, mainly through changes in relation to longer-term interest rates and asset prices.[173] For years, the zero bound on interest rates have changed the main transmission channels of

[169] BOJ, News Release <www.boj.or.jp/en/announcements/release_2013/k130404a.pdf> accessed on April 4, 2013.
[170] News report, <www.project-syndicate.org/focal-points/will-japan-s-sun-rise>.
[171] News report, <www.kantei.go.jp/foreign/96_abe/documents/2013/1200485_7321.html> accessed on June 14, 2013. The document can be downloaded from <www.kantei.go.jp/jp/singi/keizaisaisei/pdf/en_saikou_jpn_hon.pdf>. Three plans were proposed to achieve the rebirth of Japan: Plan for the Revitalization of Japanese Industry, Strategy of Global Outreach and Strategic Market Creation Plan: <http://japan.kantei.go.jp/96_abe/documents/2013/1200485_7321.html> accessed on June 21, 2013. For categorized highlights with updated information, see, <www.nippon.com/en/features/h00042/> accessed on October 28, 2013.
[172] IMF, '2013 Article IV Consultation: Japan' Country Report No 13/253, 2013 <www.imf.org/external/pubs/ft/scr/2013/cr13253.pdf>.
[173] Three main elements are viewed essential to affect the public's inflation expectations, and six steps have been proposed by changing stated inflation expectations. For details, see, Ryuzo Miyao, 'Central Banking Further into Uncharted Territory' at a Meeting Held by the Foreign Correspondents' Club of Japan, May 28, 2013 <www.bis.org/review/r130528f.pdf>.

monetary policy, bringing thus renewed uncertainty.[174] In addition, the BOJ is required to enhance and improve its dialogues with financial markets participants, consolidating its oversight at the firm level.[175]

Until now, it is argued that all these measures have successfully enhanced financial soundness of institutions, inflation expectations, economic activity and prices.[176] But it is still not clear whether, with improvements in banking and corporate sectors, easing measures will become more effective.[177] Overall, it would be too early to draw decisive conclusions: sector-based reforms bear their respective risks,[178] and the function of Abe's "three arrows" depends upon the design and implementing of all the relevant plans; historically, there is little experience to draw in on how to escape from a sustainable deflation.[179] Recently, to ensure its commitment, the Council on Economic and Fiscal Policy, monitoring macroeconomic policies, has overseen monetary policy, further limiting the BOJ's independence as a monetary authority.[180]

(4) Fiscal Stimulus

Japan's economic conditions worsened following the failure of Lehman Brothers, triggering intense government intervention. "Emergency guarantee" was introduced

[174] Serkan Arslanalp and Raphael Lam, 'Outlook for Interest Rates and Japanese Banks' Risk Exposures under Abenomics' IMF Working Paper WP/13/213, 2013 <www.imf.org/external/pubs/ft/wp/2013/wp13213.pdf>. It is further argued that the ZIRP might have altered how the policy interest rate drives market rates of longer maturities. Refer to, Shigeru Iwata, 'Monetary Policy and the Term Structure of Interest Rates When Short-Term Rates Are Close to Zero' BOJ Monetary and Economic Studies, Vol. 28, November 2010 <www.imes.boj.or.jp/research/papers/english/me28-5.pdf>.

[175] Haruhiko Kuroda, 'Japan's Unconventional Monetary Policy and Initiatives toward Ensuring Stability of the Global Financial System' at FRB Kansas City Economic Policy Symposium, August 24, 2013 <www.bis.org/review/r130826c.pdf>.

[176] Haruhiko Kuroda, 'Japan's Economy and Monetary Policy – Toward Overcoming Deflation' at a meeting held by the Research Institution of Japan, Tokyo, July 29, 2013 <www.boj.or.jp/en/announcements/press/koen_2013/data/ko130729a1.pdf>.

[177] S. Pelin Berkmen, 'Bank of Japan's Quantitative and Credit Easing: Are They Now More Effective?' IMF Working Paper, WP/12/2, 2013 <www.imf.org/external/pubs/ft/wp/2012/wp1202.pdf>.

[178] IMF, 'Japan: Selected Issues' Country Report No 13/254, 2013 <www.imf.org/external/pubs/ft/scr/2013/cr13254.pdf>.

[179] *Supra* 172.

[180] Debates continue about whether the BOJ has really sacrificed its autonomy to support government in its quest for economic recovery, refer to, 'Win Some, Lose Some' (The Economist) <www.economist.com/news/finance-and-economics/21570710-bank-japan-tests-limits-shinzo-abes-economic-power-win-some-lose> accessed on January 26, 2013.

to help borrowers by easing the criteria for loans guarantee programmes.[181] In 2009, Japan released a fiscal stimulus package worth ¥ 130 billion.[182] As output further deteriorated, a new stimulus package was announced to prevent a double-dip recession.[183] In 2012, Japanese Cabinet approved a further economic stimulus package of ¥ 423 billion,[184] and later, MP Abe began to bolster economy by cushioning the impact of an increase in the national sales tax.[185] These stimulus measures were invested into the public arena with direct support to households, and public financial institutions were urged to increase their loans to aid private corporations.[186] It is argued that Japan's fiscal stimulus packages, including changed emphases and weights, were particularly affected by repeated party leadership changes.[187] After years, the budget deficit has become a major concern after its public debt renewed the records: until the second half of 2010, Japan's public debt took up approximately 200% of GDP.[188]

(5) Financial Regulation and Supervision

Before the GFC, Japan's financial regulatory and supervisory regime was reformed toward an optimal combination of rule-based and principles-based oversight

[181] Arito Ono, Iichiro Uesugi and Yukihiro Yasuda, 'Are Lending Relationships Beneficial or Harmful for Public Credit Guarantees? Evidence from Japan's Emergency Credit Guarantee Program' (2013) *Journal of Financial Stability* 9(2): 151-167.
[182] 'Assessing the G-20 Stimulus Plans: A Deeper Look' (Brookings Online, March 2009) <www.brookings.edu/articles/2009/03_g20_stimulus_prasad.aspx>.
[183] News report, 'Japan Plans Huge Fiscal Stimulus as Economy Dives' (The Independent, online) <www.independent.co.uk/news/business/news/japan-plans-huge-fiscal-stimulus-as-economy-dives-1664514.html> accessed on April 7, 2009.
[184] News report, <www.thejakartapost.com/news/2012/10/26/japan-approves-new-stimulus-ailing-economy.html> accessed on October 26, 2012.
[185] News report, <www.reuters.com/article/2013/09/10/us-japan-economy-tax-idUSBRE9890D020130910> accessed on September 10, 2013.
[186] Nobuyoshi Yamori, Kazumine Kondo, Kei Tomimura and Yuko Shindo, 'Japanese Banking Regulations and SME Finance under the Global Financial Crisis' (2013) *Japanese Journal of Monetary and Financial Economics* 1(1): 59–90.
[187] Saori N. Katada, 'Financial Crisis Fatigue? Politics behind Japan's Post-Global Financial Crisis Economic Contraction' (2013) *Japanese Journal of Political Science* 14(2): 223–242.
[188]; refer to, Sebastian Becker and Wolf von Rotberg, 'Public Debt in 2020: Monitoring Fiscal Risks in Developed Markets' Deutsche Bank Research, Current Issues, July 6, 2011 <www.dbresearch.com/PROD/DBR_INTERNET_EN-PROD/PROD0000000000275164/Public+debt+in+2020%3A+Monitoring+fiscal+risks+in+developed+markets.pdf>.

approaches with improved transparency.[189] During the GFC, the limited banking crisis brought moderate changes rather than massive legal reforms.

The BOJ identified liquidity risk as the major challenge facing financial institutions, and accordingly, suggested four areas to improve for "appropriateness in liquidity risk management".[190] It clarified that proper conduct of liquidity management constituted a requirement for financial institutions to accept counterparties for fund provisioning such as OMOs and the CLF.[191] Moreover, in order to exercise macro-prudential regulation, the BOJ highlighted its initiatives in analysing and assessing systemic risks rooted in the entire financial system from both cross-sectional and time-series dimensions.[192] Additionally, top-down bank stress tests were launched by the BOJ with details covered by its Financial System Report, whilst the FSA carried out bottom-up tests with common assumptions for major banks and insurers.[193] Meanwhile, it insisted that its direct access to information about individual financial institutions through on-site examinations and off-site monitoring contribute to effective macro-prudential regulation.[194] Since 2008, such monitoring has been based upon risk, which was further emphasized in its policy for fiscal 2013.[195] Oriented at risk management, the BOJ strengthened its regulation at the firm level.

The FSA was not severally challenged by assisting troubled financial institutions during the GFC, but became more concerned about their capital adequacy, which was argued to have been learnt from its previous experience between 2001 and 2006.[196] When the stock market declined, the FSA announced to loosen capital adequacy ratio regulation temporarily, whereby banks could keep their valuation

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[189] Takafumi Sato, 'Toward Better Regulation' at meetings of the International Bankers Association, September 25, 2007 and of the American Chamber of Commerce in Japan, September 26, 2007 <www.mondovisione.com/media-and-resources/news/speech-by-mr-takafumi-sato-commissioner-japans-financial-services-agency-fsa-at-/>.
Documents are available from <www.fsa.go.jp/en/policy/ofrsf/index.html>.

[190] BOJ, 'The Bank of Japan's Approach to Liquidity Risk Management in Financial Institutions' (June 26, 2009) <www.boj.or.jp/en/announcements/release_2009/data/fss0906a.pdf>.

[191] BOJ, 'Liquidity Risk Management in Financial Institutions Following the Global Financial Crisis' (July 2, 2010) <www.boj.or.jp/en/announcements/release_2010/data/fss1007a.pdf>.

[192] *Supra* 52, 144–182.

[193] IMF, 'Japan: Financial Sector Stability Assessment Update' Country Report No 12/210, 2012 <www.imf.org/external/pubs/ft/scr/2012/cr12210.pdf>.

[194] BOJ, 'The Bank of Japan's Initiatives on the Macroprudential Front' (October 18, 2011) <www.boj.or.jp/en/finsys/fs_policy/fin111018a.pdf>.

[195] BOJ, 'On-Site Examination Policy for Fiscal 2013' (March 15, 2013) <www.boj.or.jp/en/finsys/exam_monit/exampolicy/kpolicy13.pdf>.

[196] Uwe Vollmer and Ralf Bebenroth, 'The Financial Crisis in Japan: Causes and Policy Reactions by the Bank of Japan' (2012) *The European Journal of Comparative Economics* 9(1): 51–77.

losses of "other available-for-sale securities" as capital.[197] It then revised the definition of NPLs in November 2008: banks were allowed not to classify condition-changed loans as NPLs under wider exceptions, therefore reducing bad loans but increasing capital adequacy ratios. The FSA also introduced emergency facilities to encourage loans from financial institutions, including further aid to SMEs.[198] In 2008, the Financial Function Strengthening Act was amended,[199] allowing financial institutions to apply for liquidity supports with extended deadlines under easing criteria.[200] Overall, the FSA's regulatory responses to the GFC focused upon ensuring capital adequacy of financial institutions, and hence, loans could be guaranteed under additional supports.[201]

(6) Cross-Border Cooperation:

Japan's vulnerability to external shocks triggered the BOJ to accelerate some proactive currency transactions with other central banks and international organisations from late 2007,[202] addressing the problems derived from international short-term funding markets.[203] Late 2011 saw further coordinated central bank actions as the crisis intensified, especially in the Europe.[204] In particular, large-scale swap lines were established with the US Fed,[205] and the BOJ actively participated in strengthening the CMI mechanism in Asia.[206] Also, Japan promoted broader legal and governance reforms,[207] as well as further discussion and exchange of views.[208]

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[197] This was part of Government's Economic Policy Measures Packages released on October 30, 2008. Before, the Japanese banks subjected to domestic capital adequacy standards were required to deduct 60% of their other available-for-sale securities when assessing capital.

[198] The credit guarantee system emerged before World War II, and credit guarantee corporations were established to support SMEs financing. Refer to, Credit Guarantee Corporation, 'Credit Guarantee System in Japan 2012' National Federation of Credit Guarantee Corporations, 2012 <www.zenshinhoren.or.jp/news/document/CGS2012_web.pdf>.

[199] This Act, designated to continue into March 2012, was extended until March 2017 after the East Japan Great Earthquake.

[200] 'Amendment to Act on Special Measures for Strengthening Financial Functions' (AM & T, November 2008) <www.amt-law.com/pdf/bulletins2_pdf/081121_2.pdf>).The summary about capital injection is available at <www.dic.go.jp/english/e_katsudo/e_shihonzokyo/e_jisseki-kyoka.html>.

[201] *Supra* 186.

[202] Article 41, BOJ Act 1998.

[203] <www.boj.or.jp/en/announcements/release_2007/un0712a.htm/>.

[204] BOJ, News Release <www.boj.or.jp/en/announcements/release_2011/rel111130e.pdf> accessed on November 30, 2011.

[205] <www.boj.or.jp/en/mopo/mpmdeci/mpr_2008/index.htm/>.

[206] *Supra* 52, 206–208.

[207] For example, the former PM Aso announced to add $100 billion to support the IMF and also required to improving its capacity to manage cross-border financial crises. His speech is available at

The Basel III was introduced with final rule published on March 30, 2012 and implementation began from March 2013.[209]

6.4 How the GFC Challenged the BOJ

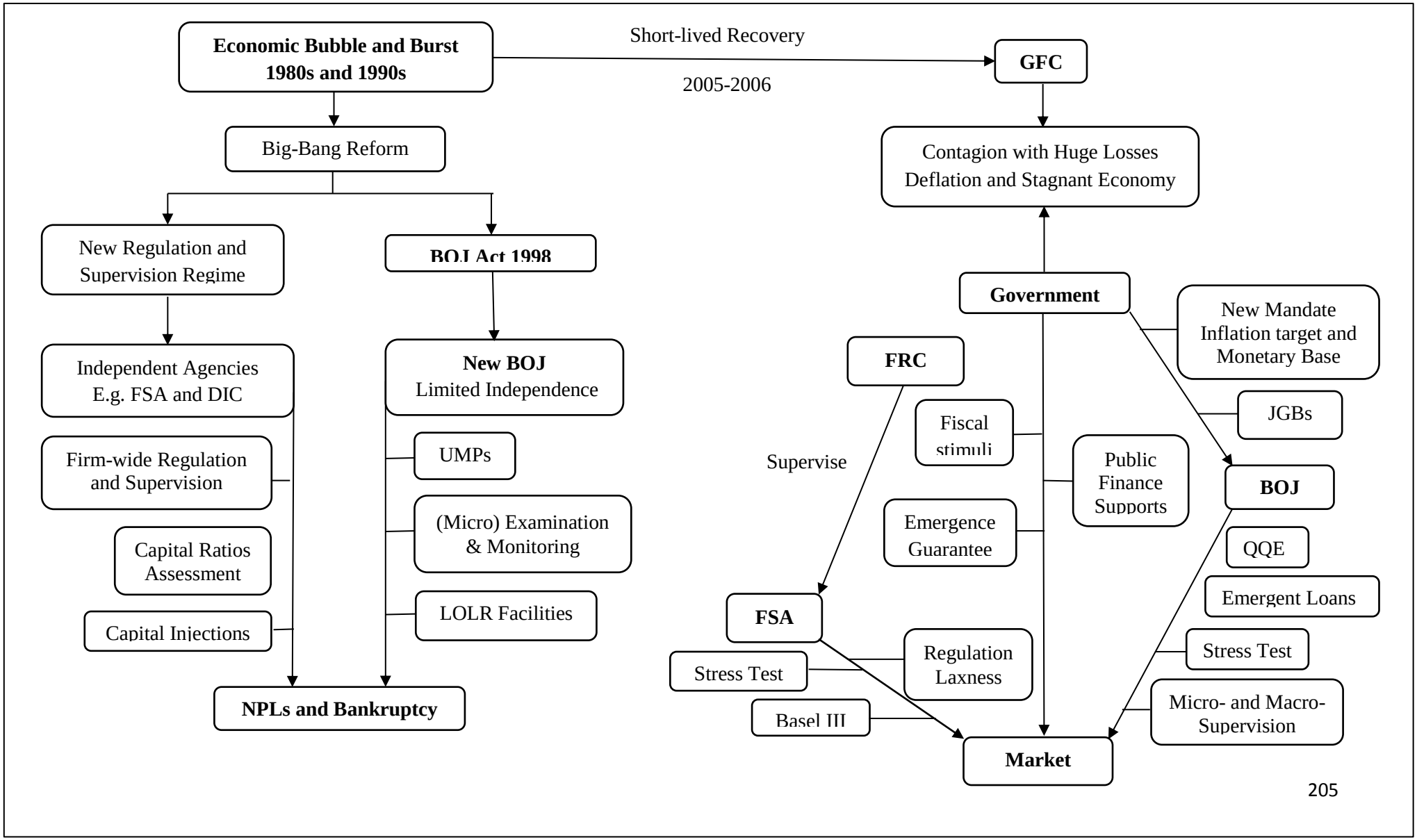
Japan had experienced massive economic and political dynamics before the GFC, including a bubble-burst cycle. As a central bank in crisis, the BOJ was first challenged by NPLs and bank failures, and then by the GFC, especially deflation and economic recession; the overall experiences can be displayed in Figure 6.2:

<www.kantei.go.jp/foreign/asospeech/2008/11/081115tarosproposal.pdf > accessed on November 15, 2008.

[208] *Supra* 52, 213–215.

[209] Draft regulations are expected in 2014/2015. Refer to, BIS, 'Basel III Regulatory Consistency Assessment (Level 2): Japan' (October 2012) <www.bis.org/bcbs/implementation/l2_jp.pdf>.

Figure 6.2: the BOJ in Financial Crises



As illustrated in Figure 6.2, the big-bang reform brought a new BOJ and a new financial regulation regime. To summarise the relevant changes, the BOJ hardly raised central bank independence, while the LOLR facilities were limited when dealing with NPLs and bank failures. What is more, the BOJ pioneered untraditional monetary policy instruments to support the market more directly. The FSA, the successor of the MOF, focused upon regulation for capital adequacy at the firm level. When it came to the GFC, without sizeable legal reforms, Government reinforced its support to financial markets, and also directed the BOJ further explicitly. The BOJ *per se* had renewed its policy instruments to offer liquidity, whilst promoting better risk management. At these two periods, crisis management solutions selected by the BOJ can be compared in Table 6.5 below:

Table 6.5: Monetary Policy Responses from the BOJ: 2001-2006 vs. GFC

	2001–2006	GFC
Pre-conditions	Lasting deflation and economic stagnancy after a bubble-burst cycle	Short-lived economic recovery with recapitalised banking sector; Uncollateralised overnight call rate was maintained at 0.5%
Interest Rate Reductions	ZIRP was introduced in 2001 and extended from 2002 with clarified objectives, commitment and timescale	Virtually zero interest rate policy would be kept at 0–0.1% from October 2010; BOJ explicitly linked its ZIRP with inflation and price stability
Asset Purchases	CLF; Extended maturities of funds-supplying operations; Credit easing by purchasing long-term JGBs, ABCPs and ABSs; Outright purchases of stocks from banks' equity portfolios	BOJ purchased CPs, corporate bonds, ETFs, J-REITs, and longer-maturity JGBs against a wider range of collaterals; Various facilities to directly support banks and corporate financing, such as CDF, SFOFCF, and loan support programme; Formalised QQE in April 2013
Regulation and Supervision	Dealing with NPLs and bankruptcy through on-site examination, off-site surveillance and limited LOLR facilities	Micro-prudential regulation: monitoring liquidity risk at the firm level; Macro-prudential regulation: managing financial imbalance
Framework of Monetary Policy Conduct	Uncollateralised call rate	BOJ introduced numerical inflation targeting and shifted to the money base as the target of monetary framework
Cross-border Cooperation	N/A	Swap lines with selected major central banks; Acceptance of selected government bonds as collaterals

According to Table 6.5, Japan's government did not launch major legal reforms during the GFC; this is partly attributed to the comparatively stability of Japanese banks after continuous recapitalisation. But Japan still suffered huge losses, requiring the BOJ to pursue more unconventional measures. At these two points, the compositions of crisis management solutions selected by the BOJ are similar: these included interest rate reductions, clarified commitment and asset purchase programmes, but monetary easing was more aggressive during the GFC. From the

timing perspective, the BOJ was slow to deal with the bubble economy and its aftermath, but it acted proactively during the GFC, especially in cross-border cooperation.

As argued, during a financial crisis, a central bank sacrificed part of its independence, while increasing its direct controls over financial markets; this is very evident in terms of the BOJ. As bankers' bank, it added emergent loans based upon its contracts with banks to ensure liquidity, while intensifying on-site examination and off-site monitoring to assist in improving liquidity risk management at the firm level. More importantly, the independence of the BOJ, constrained rigorously under the legal framework, was further diminished. The continuous outright purchase of long-term JGBs required it to maintain government bond prices. With Abenomics, Government used the BOJ to serve its own strategy more directly. Under the newly-established mandate, the BOJ has conducted the following three changes: (i) it has explicitly committed to a numerical price stability target, which is determined by Government's strategy for GDP growth; (ii) reset the monetary base as the operating target of monetary policy conduct, linking directly with Government's overall policy; and (iii) has purchased various assets on an unprecedented basis. Due to the GFC, overall, the BOJ has gradually re-positioned itself as Government's engine leading the fight against deflation.

Lately, the BOJ has closely supported Government via overall monetary easing, while strengthening its management over financial activities and institutions through asset purchases and intense micro-prudential regulation. The challenge caused by the GFC to the BOJ can therefore be summarised: the BOJ, via supporting lending and investment from the private sector toward further economic growth, has continued to serve Government's goal for sustainable recovery; and this has enhanced cooperation under the triangular relationship of Government, BOJ, and financial markets accordingly.

6.5 Conclusion

This chapter has demonstrated that the BOJ has continued to be a government-guided central bank, while the GFC has further intensified Government's direct control. The historical development of the BOJ evidenced significant political domination, especially the strong MOF continuously affecting monetary policy and financial regulation. The BOJ reform brought limited improvement to central bank independence and confirmed its limited but comparatively direct contacts with financial institutions. The new BOJ has been examined in the context of financial crises. During the last 15 years, providing that Government has explored different approaches to regain economic growth, the BOJ has introduced and renewed UMPs to expand monetary easing, while the banking sector has come under more intensive regulation regarding capital adequacy. The GFC has brought more government intervention into the BOJ and more direct central bank regulation over financial markets. The BOJ's proposition as a government-guided central bank has thus been changed by the GFC by bringing it closer to serving Government's strategy for recovery. This chapter has provided support for the proposition in the thesis that the BOJ has strengthened its functions as a government-guided monetary authority amid the GFC.

Chapter Seven

From Centrally Planned Economy to Market-Oriented Principles: The People's Bank of China under Change

7.1 Introduction

The People's Bank of China (PBC), established on January 1, 1948, is the youngest of the four central banks selected here. The key objective of this thesis is to make a critical examination of the PBC, and this chapter will review its two-tier relationship under change amid China's market-oriented reform.

The proposition is that the PBC has still been a government-owned central bank which, together with specialised regulators, continued to administer China's underdeveloped financial markets. To demonstrate this, this chapter will proceed as follows. It will initially outline China's financial sector before reform with the PBC as the mono-bank. It is followed by the overview of the PBC's reform, but few statutory changes occurred. China's financial regulation and supervision system is argued to have borne structural weaknesses from the outset. By comparing relevant laws and rules, this chapter will then argue that China's Party-led economic reform embraces selected market principles, which has ensured continued political domination, enabling Government to continue direct controls over the PBC and the wider economy as well.

7.2 The PBC amid Revolution

After founding, China had pursued different approaches towards overall development. At this stage, the PBC operated as the mono bank with few changes.

7.2.1 The PBC under Soviet Model

China first transplanted a largely Soviet model in a wholesale manner. Such a model encouraged rapid industrialisation through a highly and comprehensively centralised authority: public ownership was deemed a prerequisite for the true socialist economy, and mandatory planning excluded acknowledged market principles. [1] Ultimate decision-making power was politically centralised to the central government, representing the Party,[2] and political agencies directly controlled enterprises.[3] In the financial sector, the central bank was the only bank with monitoring responsibilities, and also controlled the central cash, credit and settlement transactions.[4] Government formally employed the central plan to allocate resources to its key sectors based on the predetermined development plans.[5] The budget plan was prioritised to supply the normal working capital to state-owned enterprises (SOEs), and bank credits were mainly used to meet the "temporary" needs.[6] On the whole, the financial sector was limited to achieve planned targets as the cashier and accountant of the national economy.

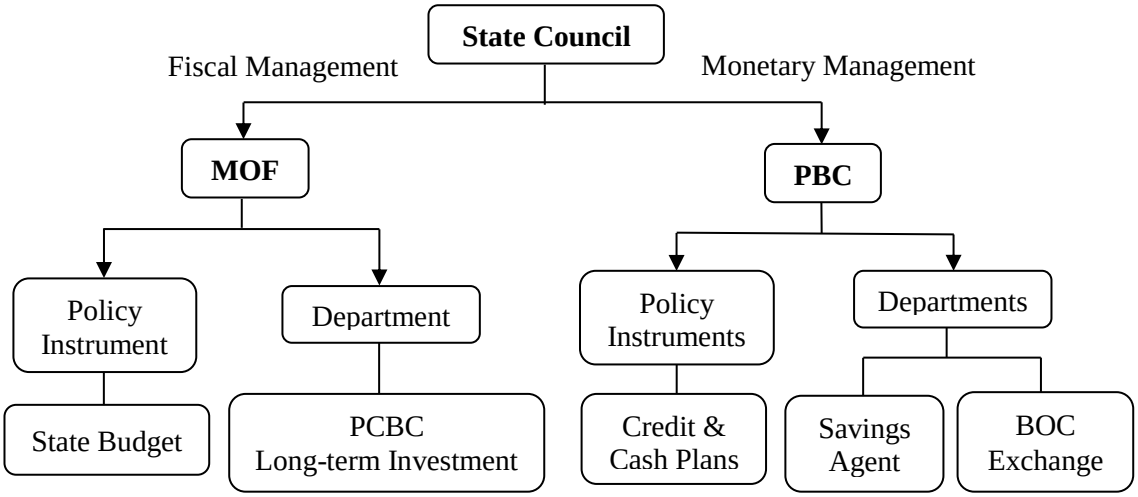
China's socialist transformation programme focused upon the establishment of a state-owned economic system.[7] Until 1955, the PBC had transformed all private deposit-takers into its own saving agents, with the Bank of China (BOC) being its

[1] Hailiang Gu, 'The Formation and Development of the Socialism in the Soviet/Sulian Shehui Zhuyi Moshi de Xingcheng yu Fazhan' in *The Marxist History/Makesi Zhuyi Lishi* (Beijing: Renmin University Press 2008) ch 7 [in Chinese].
[2] Shulin Lin, 'The Soviet Socialist Model and Socialism with Chinese Characteristics/Shehui Zhuyi de Sulian Moshi yu Zhongguo Tese Shehui Zhuyi' <http://theory.people.com.cn/GB/49150/49152/9168586.html> accessed on April 21, 2009 [in Chinese].
[3] Dongtao Zou, 'The Soviet Model and Searching for China's Solution /Sulian Moshi yu Shehui Zhuyi Daolu de Tansuo' in *China's Way and the China Model: 1949–2009/ Zhongguo Daolu yu Zhongguo Moshi* (Beijing: Social Science Academic Press 2009) ch 2 [in Chinese].
[4] Yingyuan Yang, 'Freeing the Banking Credit from the Soviet Model/Woguo Yinhang Xinyong Yaocong Sulian Moshi zhong Jiefang Chulai' 5 *Journal of Finance* 1980: 21-24 [in Chinese].
[5] Robert F. Miller, 'Theoretical and Ideological Issues of Reform in the Socialist System: Some Yugoslav and Soviet Examples' (1989) *Soviet Studies* 41(3): 430-448.
[6] Zhen Zhu, 'China's Fiscal System of State and SOEs for the Last 60 Years: Historical Development and Choice in Practice/Xinzhongguo 60 Nian Guojia yu Guoyou Qiye Caizheng Fenpei Moshi: Lishi Yanjin yu Xianshi Xuanze' <www.crifs.org.cn/crifs/html/default/caizhengshihua/_history/3803.html> accessed on January 13, 2010 [in Chinese].
[7] Pradumna B. Rana and Naved Hamid, *From Centrally Planned to Market Economies: The Asian Approach* (vol 2, People's Republic of China and Mongolia, OUP 1996) 263–264.

foreign exchange department and the Agricultural Bank of China (ABC) subjected.[8] The People's Construction Bank of China (PCBC) was transformed into a fiscal agent under the Minister of Finance (MOF).[9] The PBC confiscated capitalist-invested and bureaucrat-monopolised capital to bring both capital and cash circulation under the state's control.[10] Fiscal and monetary management then only included the state budget, and the cash and credit plans.[11]The MOF consolidated the annual revenue and expenditure plan, first designed to finance government operations and then invest, especially in the heavy industry.[12] Money was simply categorised into currency and transfer money. Monetary management aimed to control cash in circulation and bank credits to support state sectors. Under the credit plan, bank branches made loans according to specified credit targets set up by the higher level units, which subsequently retained any resulting surplus. The cash plan, determined by both the credit plan and state budget, was employed to maintain monetary balance between the demand and the supply of consumer goods stipulated in the physical plan.[13] At that stage, the PBC controlled currency issue, money supply and interest rates as a central bank, whilst taking deposits and offering short-term loans as working capital and capital replacement. The entire financial sector can be displayed in Figure 7.1:

[8] Timothy Haosen Wan, *Development of Banking Law in the Greater China Area: PRC and Taiwan* (London: Kluwer Law International 1999) 168–175.
[9] <www.ccb.com/en/ccbtoday/anniversarycelebration.html > accessed on October 1, 2004.
[10] James Petras, 'Past, Present and Future of China: From Semi-Colony to World Power?' (2006) *Journal of Contemporary Asia* 36(4): 423–441.
[11] Wenliang Han, 'Discussing the Financial Model on China's New Economic Base: Comparing Economic Models and Financial Models of the Soviet, Yugoslavia and Hungary/Lun Woguo Xin Jingji Moshi Jichu shang de Jinrong Moshi: Jianlun Sulian Nansilafu he Xiongyali de Jingji Moshi he Jinrong Moshi' 8 *Journal of Finance Research* 1987: 66-71 [in Chinese].
[12] Ia. Liberman, 'The Soviet State Budget in the System of Economic Categories of Socialism' (1963) *Problems of Economic Transition* 5(11): 15–21.
[13] Xiaoping Xu, *China's Financial System under Transition* (Macmillan Press Ltd 1998) 8–16.

Figure 7.1: China's 1950s Financial Structure



Accordingly, a highly centralised planning economy led the PBC towards the mono bank, and capital allocation relied upon the budget, cash and credit plans.

7.2.2. The PBC under Maoist Ideology

Once exposed, the shortcomings of the Soviet Model produced evident structural imbalance:[14] savings were encouraged to support long-term investment in the heavy industry, and domestic consumption brought limited economic improvements.[15] In this context, a statement "On the Top 10 Major Relations" released in 1956 indicated that the China rethought its socialist revolution.[16] Few changes occurred with the PBC, but Maoist ideology, seeking to reshape China through organization and modernization reforms, brought wider effects.[17]

[14] Richard L. Walker, *China Under Communism: The First Five Years* (London: George Allen & Unwin Ltd 1956) 101–127.
[15] Jinglian Wu, 'Economic Development Strategy and Economic System Choice/Jingji Fazhan Zhanlue yu Jingji Tizhi Moshi de Xuanze' 1 *Journal of China's Industrial Economy* 1985 [in Chinese].
[16] Mao, Zedong, 'Lun Shida Guanxi' at the Enlarge Meeting of the Central Politburo of the Communist Party of China, April 25 , 1956 <http://news.xinhuanet.com/ziliao/2004-12/30/content_2393996.htm>.
[17] Guangshun Fang, 'A Study of the Maoist Ideology about Freeing and Developing Productivity/Mao Zedong Guanyu Jiefang he Fazhan Shengchanli de Tansuo' 5 *Maoist Research* 2005 [in Chinese].

To begin with, the absolute leadership of the Party was strengthened as the vanguard of proletarian society, limiting the negative influence from revelatory Populism.[18] With overly extensive politicisation, previous laws and rules were widely replaced by administrative controls sanctioned through the Party leaders.[19] Meanwhile, "fragmented authorizationism" changed China's bureaucratic system:[20] under the mass-directed organisational model, self-reliant local governments caused fragmented communities and compartmentalised resources, as well as super localities' control over economy; the central plan was weakened, but local initiative was still limited.[21]

Both politicisation and decentralisation affected the financial sector. Economic activities were controlled via specific pre-set targets, personnel appointments and vertical management based upon political hierarchy.[22] Monetary policies were administratively controlled by the Central Party Committee and State Council, whilst the central credit plan was decentralised with banks required primarily to support local development.[23] As a result, credit expanded to support repeated "adventurist" advances, making economic growth only attributed to massive investment.[24] In terms of the PBC, its role was further weakened by streamlining its organisational structure and halved its staff. In 1962, to save the nation's economy, the Central Party Committee and State Council released the "Six Provisions for Banks", centralizing banking business and money issuance.[25] It was followed by the "Note of Changing the Position of the PBC in the State Structure". The PBC was thus subject to the State Council, being responsible for cash management and credit supervision.[26] With the Cultural Revolution, China's economic conditions further destabilized.[27] The

[18] Benjamin Schwartz, 'Modernisation and the Maoist Vision – Some Reflections on Chinese Communist Goals' 21 *The China Quarterly* 1965: 3–19.
[19] James R. Townsend, *Political Participation in Communist China* (Berkeley: University of California Press 1969) 65–209.
[20] Kenneth G. Lieberthal and David M. Lampton (eds.), *Bureaucracy, Politics, and Decision Making in Post-Mao China (*Berkeley: University of California Press 1992).
[21] H. F. Schurmann, 'Organisation and Response in Communist China' 321 *The Annals of the American Academy of Political and Social Science* 1959: 51–61.
[22] Audrey Donnithorne, 'Central Economic Control' (1966) *Bulletin of the Atomic Scientists* 22(6).
[23] Godfrey Yeung, 'How Banks in China Make Lending Decisions' (2009) *Journal of Contemporary China* 18(59): 285-302.
[24] *Supra* 15.
[25] <http://bgt.mof.gov.cn/zhuantilanmu/caizhengbudashiji/200806/t20080620_47576.html>.
[26] PBC, *Sixty Years of the PBC: 1948–2008* (Beijing: China's Finance Press 2008) 50–56 [in Chinese].
[27] China's government has defended its continued economic gains between 1966 and 1976: <http://cpc.people.com.cn/GB/69112/70190/70209/4767590.html>.

PBC was targeted for anti-bureaucratism reform and repositioned as the MOF's cashier and accountant, whilst branches were controlled by local governments. [28]

Maoist ideology sought the absolute Party leadership, while subjecting the economy to extensive politicisation.[29] Under the destroyed central plan, the mono-bank system had been budget-based, and the PBC ended up being subject to the MOF with dysfunctional monetary policies.

7.3 The PBC during Economic Reform

Until the late 1970s, China was an isolated economy with low inflation, small budget deficits and minor external imbalance, being dominated by political fragmentation, administrative orders, and centrally controlled economic activities.[30] This part will highlight some key features of China's reform since 1978 before examining the PBC in detail.[31]

7.3.1 Overview

It is argued that legal development can underpin a well-functioning financial sector, which in turn supports better economic performance.[32] However, the interaction of law, finance and economic development can be different in China: its GDP growth, attributed mainly to exports and foreign investment, was initially achieved without

[28] Minggao Shen, Jikun Huang, Linxiu Zhang and Scott Rozelle, 'Financial Reform and Transition in China: A Study of the Evolution of Banks in Rural China' (2010) *Agricultural Finance Review* 70(3): 305-332.
[29] Jack Gray, 'Politics in Command: The Maoist Theory of Social Change and Economic Growth' (1974) *The Political Quarterly* 45(1): 26-48.
[30] Gregory C. Chow, 'China's Economy: Reform and Perspectives' <www.princeton.edu/~gchow/China.html> accessed on April 15, 1999.
[31] For a timeline of China's reform, see, Nolan Peter, *Transforming China: Globalisation, Transition and Development* (Anthem Press 2004). For data and statistics, refer to, Gautam Jaggi, Mary Rundle, Daniel Rosen and Yuichi Takahashi, 'China's Economic Reforms: Chronology and Statistics' Institute for International Economics, Working Paper 96–5, 1996 <www.iie.com/publications/wp/96-5.pdf>.
[32] Yang Yao and Linda Yueh, 'Law, Finance and Economic Growth in China: An Introduction' (2009) *World Development* 37(4): 357-362.

sophisticated financial markets or effective legal systems.[33] This paradox is of particular significance to understanding Chinese reformism.[34] It is claimed to be a comprehensive transformation, including both financial liberalization and legal reform.[35] Table 7.1 displays some of its main characteristics:

[33] Wing Thye Woo, 'The Real Reasons for China's Growth' 41 *The China Journal* 1999: 115-137.
[34] Martin King Whyte, 'Paradoxes of China's Economic Boom' 35 *Annual Review of Sociology* 2009: 371–392.
[35] Harry Harding, *China's Second Revolution: Reform after Mao* (Brookings 1987).

Table 7.1: Overview of China's Reform

Target & Goal	
To build up "a socialist market economy with Chinese characteristics", including "economy system reform" and "opening up to the world"[36]	
Financial Liberalization	
Targets	Centralized credit plan and pre-specified margins for interest rates setting should be removed, allowing the pricing mechanism to operate freely on the market base; and direct controls over interest and exchange rates, financial intermediation, and credit allocation should be eliminated[37]
Goal	An independent central bank, flexible interest rates, and efficient revenue systems[38]
Reform Measures	Financial sector should function as: i) a medium of exchange and a store of value, or simply a payment mechanism; ii) the medium to mobilise savings for productive investment; iii) smoothing conflicts caused by maturities mismatch; and iv) transforming and diversifying evident risks[39]
Legal Reform	
Targets	Under the Communist regime, the "command-and-control" model placed down varying biases, including towards the public ownership and the state sector; this is what the legal reform should most target
Goal	Socialist legal system
Reform Measures	Enacting market-friendly laws, establishing institutions to implement and enforce substantive rules,[40] encouraging the demand from market participants[41]

As illustrated in Table 7.1, selected market principles would replace centralized planning, resolving the problems inherited from the Soviet Model and Maoism. As

[36] <http://theory.people.com.cn/GB/49154/49155/8404298.html> accessed on November 15, 2008.
[37] Guijun Lin and Ronald M. Schramm, 'China's Foreign Exchange Policies Since 1979: A Review of Developments and an Assessment' (2003) *China Economic Review* 14(3): 246-280.
[38] Kang Chen, Gary H. Jefferson and Inderjit Singh, 'Lessons from China's Economic Reform' (1992) *Journal of Comparative Economics* 16(2): 201-225.
[39] *Supra* 13, 17–19.
[40] Gerald W. Scully, 'The Institutional Framework and Economic Development' (1988) *Journal of Political Economy* 96(3): 652-662.
[41] Cheryl W. Gray, 'Reforming Legal Systems in Developing and Transition Countries' (September 1997) 13-16 <www.imf.org/external/pubs/ft/fandd/1997/09/pdf/gray.pdf>.

stipulated, "old" institutions should be reformed,[42] and enterprises should be modernized by diversifying ownerships and reforming property rights.[43]

(1) Party Control and State Monopoly

By and large, Government has been relocated as the maker of the market, leading the market-oriented reform, and thus, China's reform was conducted in a top-down manner,[44] affecting the choice of a gradualist strategy.[45] Decision-making was decentralized, encouraging local governments to remove regulatory obstacles, and establish more innovative institutions for local economic growth; this has extended political coverage, and also increased differences and splits from the central government.[46] At the initial stage, it is argued that the presence of a strong central government would favour the reform by making gradualism acceptable and applicable without excessive costs of instabilities.[47]

Meanwhile, the monopoly of the state was not simply removed, but the state-owned, planned economy has been utilized as the base for launching a new non-state, market-based sector.[48] Inter alia, competition, rather than privatization, was advocated,[49] the non-state sector was encouraged to compete with the SOEs,[50] and

[42] Yingyi Qian, 'The Institutional Foundations of China's Market Transition' at Annual Bank Conference on Development Economics, World Bank, No 47582, 1999 <docenti2.unior.it/doc_db/doc_obj_19431_01-12-2012_50b9d78510830.pdf>.
[43] Yingyi Qian and Jinglian Wu, 'China's Transition to a Market Economy: How Far across the River?' for the conference on Policy Reform in China at the Centre for Research on Economic Development and Policy Reform, Stanford University, November 1999 <http://web.stanford.edu/group/siepr/cgi-bin/siepr/?q=system/files/shared/pubs/papers/pdf/credpr69.pdf>.
[44] Ibid.
[45] For China's debates about gradualism or big-bang, see, Yingwang Cao, 'Chen Yun and Deng Xiaoping in the Initial Stage of Reform and Opening Up' (2010) *Contemporary China History Studies* 17(3): 16-21 [in Chinese].
[46] Jeffrey Sachs and Wing Thye Woo, 'China's Transition Experience, Re-examined' World Bank Group, The Newsletter about Reforming Economies, 2001 <http://siteresources.worldbank.org/INTTRANSITION/Newsletters/20561381/apr96.pdf>.
[47] Leong H. Liew, 'Gradualism in China's Economic Reform and the Role for a Strong Central State' (1995) *Journal of Economic Issues* 29(3): 883-895.
[48] David M. Kotz, 'Lessons from Economic Transition in Russia and China' in Ron Baiman, Heather Boushey and Dawn Saunders (eds.), *Political Economy and Contemporary Capitalism: Radical Perspectives on Economic Theory* (Armonk 2000).
[49] Shaojia Guy Liu and Gala Garino, 'Privatisation or Competition: A Lesson Learnt from the Chinese Enterprise Reform' (2001) *Economics of Planning* 34(1-2): 37-51.
[50] Jeffrey Sachs, Wing Thye Woo, Stanley Fischer and Gordon Hughes, 'Structural Factors in the Economic Reforms of China, Eastern Europe, and the Former Soviet Union' (1994) *Economic Policy* 9(18): 101-145. For a general introduction about China's underestimated private sector, See, Linda Y.

pilot programmes,[51] as well as second-best arrangements,[52] were widely used to balance planning and market principles, bringing about many dual-track systems.[53]

(2) Internal and External Financial Liberalization

Where financial liberalization is argued to have followed economic growth, finance is viewed as an endogenous factor responding to demand requirements in a more sophisticated system, and financial intermediation can have positive effects beyond government intervention.[54] As far as China is concerned, however, its average GDP growth approached 3% annually, in a context where the mono-bank system came under rigorous political control, with Government controlling capital allocation.[55] Certain empirical studies thus observe unidirectional causality from economic growth to financial development: in China, economic growth encouraged financial sector development, accelerating financial liberalisation accordingly.[56]

China's financial liberalization was not launched until 1984, when sudden inflation brought retrenchment, exposing the distorted pricing system.[57] In a transition economy, institutions, instruments and markets all need to be liberalized,[58] but uneven development was applied as a strategy in China. Since the beginning, financial institutions have been prioritized before reforming instruments and market principles.[59] From the external perspective, China's export-oriented economic

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Yueh, 'Perspectives on China's Economic Growth: Prospects and Wider Impact' <www.gdnet.org/CMS/conference/papers/yueh_plenary1.pdf>.

[51] Carl Riskin, *China's Political Economy: the Quest for Development since 1949* (OUP 1987).

[52] Yingyi Qian, 'How Reform Worked in China' William Davidson Working Paper, No 473, 2002 <http://deepblue.lib.umich.edu/bitstream/handle/2027.42/39858/wp473.pdf?sequence=3>.

[53] Fan Gang, 'Incremental Changes and Dual-Track Transition: Understanding the Case of China' (1994) *Economic Policy* 9(19): 99-122.

[54] Ross Levine, 'Law, Finance and Economic Growth' 8 *Journal of Financial Intermediation* 1999: 8–35.

[55] John McMillan and Barry Naughton, 'How to Reform a Planned Economy: Lessons from China' (1992) *Oxford Review of Economic Policy* 8(1): 130-143.

[56] Qi Liang and Jian-Zhou Teng, 'Financial Development and Economic Growth: Evidence from China' (2006) *China Economic Review* 4(17): 395-411.

[57] On Kit Tma, *Financial Reform in China* (Routledge 1995) 88–100.

[58] John P. Bonin and Paul Wachtel, 'Financial Sector Development in Transition Economies: Lessons from the First Decade' (2003) *Financial Markets, Institutions & Instruments* 12(1): 1-66.

[59] Hassanali Mehran, Marc Quintyn, Tom Nordman and Bernard Laurens, *Monetary and Exchange System Reforms in China: An Experiment in Gradualism* (Washington DC: IMF 1996) 10–17.

development has increased international trade, financial assistance, and technical cooperation.[60]

Even so, the effects of extensive and prolonged government intervention are still being experienced even now.[61] With the securities market still being undermined, the indirect-financing system remained dominated by the state sector.[62] The state has first controlled the banking industry through ownership, and used its monopoly to lend mostly to itself.[63] Secondly, decentralisation has attracted incentives from local governments to meet pre-set targets for economic development by employing financial institutions within their jurisdictions, reinforcing their influence upon economic activities. Thirdly, SOEs are still manipulated as privileged with cheaper credit guaranteed by Government, increasing potential NPLs to the SOCBs.[64] But, without improved capital allocation, flawed institutions – especially the SOEs – cannot accomplish the market-oriented reform.[65] Reform of financial markets has thus been inextricably bound up with the official efforts to reform the SOEs with the state retaining ultimate control over them.[66] What is more, financial repression continued with reform. By definition, it refers to a policy regime that creates a wedge between actual return rates to financial assets and nominal return rates to the investors.[67] Under the central plan, extraordinarily low levels of interest rates boosted profits for the SOCBs and facilitated industrialization.[68] Where Government

[60] Ramgopal Agarwada, 'International Cooperation behind National Borders: Country Case Study of China' UN Development Programme, New York, 2005 <http://web.undp.org/thenewpublicfinance/casestudies/cs_background_note.pdf>.
[61] *Supra* 55.
[62] Linton Katherine Connor, 'Access to Capital in China: Competitive Conditions for Foreign and Domestic Firms' 1 *Journal of International Commerce and Economics* 2008: 27-50.
[63] James Riedel, Jing Jin and Jian Gao, *How China Grows: Investment, Finance, and Reform* (Oxford: Princeton University Press 2007).
[64] Thomas G. Rawski, 'Reforming China's Economy: What Have We Learned?' 41 *The China Journal* 1999: 139-156.
[65] *Supra* 42.
[66] Charles W. Calomiris, *China's Financial Transition at a Crossroad* (NY: Columbia University Press 2007).
[67] David D. Li, 'Beating the Trap of Financial Repression in China' (2001) *Cato Journal* 21(1): 77-90.
[68] Ronald I. McKinnon, *The Order of Economic Liberalisation: Financial Control in the Transition to a Market Economy* (2nd ed., JHU Press 1993) 11–30.

also benefited from increasing revenue by controlling commercial lending,[69] there could be resistance to further financial deepening.[70]

In sum, China's financial sector has developed with strong government intervention,[71] whilst being right intervened with the SOEs reform.

(3) Law in Transition

Generally, economic growth requires a legal order offering stable and predictable rights of property and contract. However, in China, the legal framework was weak, and even the legitimacy of private property was long questioned. Prior to the reform, the substance of political commitment was the key precondition for economic growth. It is thus argued that China functioned on the basis of what it has, rather than what it lacks.[72] Even so, economic reform can stimulate the demand for legal reform, and generate resources necessary for the supply. From this standpoint, a sound and effective legal system was not an incentive for launching market development in China, but instead a pre-condition for advancing improvements.[73] Therefore, a socialist legal system was believed to contribute to a nation's wealth and economic growth, and integral to China's comprehensive transformation.[74]

As early as 1954, the Party wrote into Constitution that the state power should rest exclusively in the hands of a supreme legislature.[75] After decades' reform, however,

[69] Chong-En Bai, David D. Li, Yingyi Qian and Yijing Wang, 'Anonymous Banking and Financial Repression: How Does China's Reform Limit Government Predation Without Reducing its Revenue?' CERP Discussion Paper, No 2221, 1999 <www.bm.ust.hk/~ced/pred-ced99.PDF>.
[70] Feng Susan Lu and Yang Yao, 'The Effectiveness of Law, Financial Development, and Economic Growth in an Economy of Financial Repression: Evidence from China' (2009) *World Development* 37(4): 763–777.
[71] Richard W. Carney, 'Political Hierarchy and Finance: The Politics of China's Financial Development' in Andrew Walter and Xiaoke Zhang (eds.), *East Asian Capitalism: Diversity, Continuity, and Change* (OUP 2012) 159–178.
[72] Donald C. Clarke, 'Economic Development and the Rights Hypothesis: The China Problem' (2003) *American Journal of Comparative Law* 51(1): 89-111.
[73] Richard A. Posner, 'Creating a Legal Framework for Economic Development' (1998) *World Bank Research Observer* 13(1): 1-11.
[74] CCP, 'Communiqués of the 3rd Plenum of the 11th CCP Central Committee' 1 Red Flag 1979 <http://cpc.people.com.cn/GB/64162/64168/64563/65371/4441902.html> [in Chinese].
[75] Nanping Cao and Liaoyuan Cheng, 'Law and Legal Research under the Soviet Model/Sulian Shidai de Fazhi he Fazhi Lilun Pingshu' in Gao Hongjun, An Yu and Shan Jiang (eds.), *Qinghua Falv Lunheng* (vol. 1, Beijing: Tsinghua University Press 2000) 149 – 176 [in Chinese].

the legal system is still fraught.[76] The biggest challenge lies in the critical tensions between "rule by man" and "rule by law". China's reform regime attempts to achieve political legitimacy through legal reform,[77] and the dignity of the Party is thereby ensured by reinforcing the relationship between codification and politics.[78] The Constitution explicitly confirms the supreme authority of the Party above all the institutions of the state and society, though it requires all organisations, including the Party, to abide by the law.[79] The Party is thus wholly exempted from legal constraints,[80] weakening the benefits brought by legislation, including transparency, predictability, and accountability,[81] whilst unequal treatment between Party members and the others undermines public trust.[82] Consequently, the Party has asserted that law is an instrument to execute its own policies.[83] In addition, legal reform is conducted through pre-existing political organs, prioritising the Party's superior position of administrative bureaucracies.[84] Legislative powers are divided between central and local government bodies, reinforcing the overly extensive authority of administrative power.[85] Fundamentally, it is argued that China's legal reform has been constrained by the systemic and ideological limitations of the Party rule;[86] and its major shortcoming is thus constitutional, lying in the "ambiguous relationship between the constitutional supremacy of the Communist Party and the authority of law".[87]

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[76] It is summarised as 'wufakeyi, youfabuyi, zhifabuyan, weifabujiu' in Chinese.
[77] Pitman B. Potter, 'Riding the Tiger: Legitimacy and Legal Culture in Post-Mao China' 138 *The China Quarterly* 1994: 325-358.
[78] Frances Hoar Foster, 'Codification in Post-Mao China' (1982) *The American Journal of Comparative Law* 30(3): 395-428.
[79] Forward, Articles 5 and 33, PRC Constitution 2004.
[80] Opposite opinions exist, arguing that with economic growth, the Party has gradually retreated from interfering with laws and rules, and thus, further statutory changes could assist political reform. See, Randall Peerenboom, *China's Long March toward Rule of Law* (CUP 2005) 55–238, 450–512.
[81] William P. Alford, 'The More Law, the More…? Measuring Legal Reform in the People's Republic of China' Centre for Research on Economic Development and Policy Reform, Working Paper No 59, 2009 <http://siepr.stanford.edu/publicationsprofile/1523>.
[82] Discharge Regulation of the Communist Party Members <www.people.com.cn/GB/shizheng/1026/2346251.html>.
[83] Perry Keller, 'Sources of Order in Chinese Law' (1994) *The American Journal of Comparative Law* 42(4): 711–759.
[84] For example, Communist Party membership is a pre-requisite for being selected as a public servant. See, Shunan Leng and Chen Huaixu, 'How to Reform the Principle of Bureaucracies under the Party in the Examination Recruitment System' *Culture and History Vision* (April 2010): 31–33 [in Chinese].
[85] David M. Lampton, 'A Plum for a Peach: Bargaining, Interest, and Bureaucratic Politics in China' in Kenneth G. Lieberthal and David M. Lampton (eds.), *Bureaucracy, Politics and Decision Making in Post-Mao China* (University of California Press 1992) 33–58.
[86] Stanley B. Lubman, *Bird in a Cage–Legal Reform in China after Mao* (Stanford University Press 1999).
[87] *Supra* 83, 729.

The close relationship between legislation and the vocabulary of the Party doctrines and policies helps explain the contextual nature of Chinese legislative language.[88] Legislation is drafted in approved terms as strictly required by the Party, making it difficult to fully understand the legal system without reference to relevant political documents, especially unpublished documents from administrative bureaucracies.[89] China has been criticised for limited transparency, but the Party continues a strict censorship system to prohibit certain issues from being publicly discussed,[90] making context important to recognise what rules and regulations really mean.[91]

China's financial sector has been particularly vulnerable, for its effectiveness depends upon an effective legal system with strong protections for investors, lenders and borrowers.[92] For example, the capital markets have arguably developed without a sound legal base, leaving behind problems; the problems trigger the necessity of legal reform for further growth.[93] Therefore, the financial sector has displayed a "crash-then-law" character: market developments often precede, rather than follow, legal reforms, especially in protecting shareholders' rights.[94]

7.3.2 The PBC Reform in the 1980s

Before reform, the PBC was the only bank controlled by the MOF with limited functions under centralized planning. Required by market economy, it should assume independence to make policy decisions, whilst shifting toward indirect conduct of monetary policy and regulating the financial markets prudentially. Accordingly, the reform started with freeing it from the MOF, and separating central banking functions from commercial banking business.

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[88] *Supra* 83, 711–759.
[89] Genping Wu, 'Exploring to Introduce the Information Disclosure System for China's Government Affairs' (2002) *Journal of Nanjing Agricultural University* 4(4): 52-56 [in Chinese].
[90] Benjamin L. Liebman, 'Watchdog or Demagogue? The Media in the Chinese Legal System' (2005) *Columbia Law Review* 105(1): 1–57.
[91] Xinzhong Fan, Ding Zheng and Xuenong Zhan, *Merits, Reasonableness, Law and Chinese: Examining China's Traditional Legal Culture* (Beijing: Renmin University Press 1992) [in Chinese].
[92] Rafael La Porta, Florencio Lopez-de-Silanes, Andrei Shleifer and Robert Vishny, 'Investor Protection and Corporate Governance' (2000) *Journal of Financial Economics* 58(1-2): 3–27.
[93] Zhiwu Chen, 'Capital Markets and Legal Development: The China Case' 14 *China Economic Review* 2003: 451-472.
[94] John C. Coffee, 'The Rise of Dispersed Ownership: The Role of Law and the State in the Separation of Ownership and Control' (2001) *The Yale Law Journal* 111(1): 1-82.

The domestic financial market continuously developed, making it possible to change the scope of the PBC. In 1979, it announced to recuperate domestic insurance businesses. In 1983, People's Insurance Company of China (PICC) was transformed to a bureau-level economic entity under the State Council, with branches supervised vertically by head office in Beijing.[95] The PBC still audited and supervised the PICC, but seceded insurance from banking. In terms of banks, the ABC was restored, the PCBC was granted independence and, particularly, in 1984, the newly-established Industry and Commercial Bank of China (ICBC) replaced the PBC to take deposits from, and lend loans to, households and industries for commercial purposes. They operated strictly according to their specified business jurisdictions as indicated by their titles, forming a specialised state-owned banking system.[96] Moreover, non-banking financial institutions (NBFIs) and foreign banking institutions gained legal approval with pilot programmes in Beijing, Shanghai, and Guangzhou. Gradually, the PBC separated insurance from banking in the operation area, and freed specialised banks to provide financial services; the PBC itself began to focus upon macroeconomic control by administering interest rates under the central credit plan.[97]

The MOF and the PBC operated separately from 1978. In 1982, the PBC issued "Notice of the Information of the PBC's Internal Structure at the Secretaries level", clarifying its own political rank within the central government. "State Council Decision Requiring the PBC to Perform the Functions of the Central Bank" was released in 1983 (1983 Decision), confirming its legal status as central bank.[98] This Decision promulgated it to be a state authority under the State Council, but did not explicitly specify its political hierarchy. Its management board was controlled by the State Council, with branches supervised by local governments. The PBC supervised specialised banks based upon administrative hierarchy, whilst relying upon the centralised credit plan to balance finance budget and lending channels.[99]

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[95] *60-year Feature of China's Insurance Industry: 1949–2009* (The Insurance Institute of China 2009) <www.iic.org.cn/D_newsZT/19/bxy60nianzhuantibd.html> [in Chinese].
[96] BIS and PBC, *Strengthening the Banking System in China: Issues and Experiences* (Basel: BIS 1999).
[97] 'China through A Lens: Financial System' <www.china.org.cn/english/features/386256.htm>.
[98] <www.china.com.cn/law/flfg/txt/2006-08/08/content_7060345.htm>.
[99] Branches of specialised banks were vertically managed by their head offices and also by the corresponding PBC branches. The exception was the CPCB with its financial budget controlled by the MOF.

With more liberalization after 1984, the Economic Reform Office sought to reform the pricing, tax and fiscal system. The "Provisional Regulations of the PBC on Banking Management" was released in 1986 (Provisional Regulation 1986).[100] The financial sector was positioned to support the real economy, generating profound effects to China's growth model.[101] Both the PBC and the banking sector were required to maintain domestic currency value, and promote social and economic efficiency. The State Council still controlled monetary policy making. The MOF was not allowed to overdraw from the PBC, which could only operate to meet the requirements under long-term economic strategies and priorities for funds allocation determined by the MOF.[102] In terms of its relationship with markets, the PBC gradually removed credit quotas and pre-specified margins under the central plan, while still administering interest rates by stimulating maximum business loan rates and minimum deposit rates. As regulator and supervisor, without clear authority and sufficient instruments, the PBC and its branches engaged in managing day-to-day operations of specialised banks, policy banks and trust companies, rather than implementing its own monetary policies.[103]

Most importantly, Provisional Regulation 1986 settled a dual subordination: the PBC was subordinate to the State Council in administrative affairs, whereas financial markets were subordinate to the PBC for business purposes.

7.3.3 PBC Law 1995

The above Provisional Regulation, formulated by the State Council, was replaced by a central bank law from the NPC in 1995, and erenow, further marketization paved the way.

[100] <www.21abroad.net/bank_card/2502053.html>.
[101] Zhaoxing Wang, 'China's Banking Industry: Moving Forward in Accord with Reform and Opening' in Min Zhu, Jingqing Cai and Avery Martha (eds.), *China's Emerging Financial Markets: Challenges and Global Impact* (Wiley: John Wiley & Sons (Asia) Pte Ltd 2009) 73–89.
[102] Richard J. Goossen, *Business Law and Practice in the PRC* (Longman 1987).
[103] Priscilla Mei-fun Leung, Rajesh Sharma and Yan Jia, *Banking Law on the People's Republic of China* (iSinolaw Ltd 2004) 10.

First, the highly centralized credit control became less effective for dealing with China's dynamic macroeconomic conditions. Increasing conflicts of interest between central and local governments rendered certain direct administrative guides ineffective for controlling inflation from 1988.[104] Excessive real estate investment and speculation in the equity market raised prices, with signs of an economic bubble emerging in 1993.[105] Since 1992, reduced tariff tax and recovery from the previous political tension saw FDIs exceed foreign loans.[106] Inflation and capital inflows therefore distorted the financial sector.[107] With regards to financial liberalization, the PBC approved more diverse ownership structures, including joint-stock state-owned commercial banks, shareholding banks backed-up by enterprises, and finance lease firms.[108] Old specialised banks were transformed into SOCBs, offering more financial products and services.[109] Later, they were commercialized and recapitalized repeatedly, increasing thus profitability and competitiveness.[110] At the same time, the securities market gradually developed: government securities were issued in 1981, followed by other types of bonds and enterprise shares; with deepening SOE reform, secondary markets were established in Shanghai and Shenzhen in 1988.[111] To smooth conflicts arising from the newly-born capital markets, the China Securities Regulatory Commission (CSRC) was established in 1992, and the PBC thus stopped managing securities businesses.[112] Moreover, policy banks were built up in 1994 to

[104] B. Pradumna Rana and Naved Hamid, *From Centrally Planned to Market Economies: The Asian Approach* (vol. 1, OUP 1995) 189.
[105] Ernst Hagemann, 'PR China: Still No Lasting Stabilisation of the Overheated Economy' (1994) *Economic Bulletin* 31(9): 19-24.
[106] OECD, 'Main Determinants and Impacts of Foreign Direct Investment on China's Economy' Working Paper on International Investment, Number 2000/4, 2000 <www.oecd.org/investment/investmentfordevelopment/1922648.pdf>.
[107] Francoise Lemoine, 'FDI and the Opening Up of China's Economy' CEPII, No. 2000–11, 2000 <www.cepii.fr/%5C/anglaisgraph/workpap/pdf/2000/wp00-11.pdf>.
[108] Jianlu Shang, *The Competitiveness of State-Owned Commercial Banks in China* (PhD Thesis, University of Hertfordshire, March 2009).
[109] Eric Girardin, *Banking Sector Reform and Credit Control in China* (OECD Publishing 1997) 27-34.
[110] For detailed analysis, see, Martha Avery, Min Zhu and Jingqing Cai (eds.), *China's Emerging Financial Markets: Challenges and Global Impact* (John Wiley & Sons 2009) 71-234.
[111] Liyu Zeng, *Chinese Bond Markets–An Introduction* (Standard & Poor's 2009).
[112] Principles to regulate securities in China: <www.estandardsforum.org/china/standards/objectives-and-principles-of-securities-regulation>; Establishment of the CSRC: <www.china.com.cn/economic/txt/2009-09/29/content_18624019.htm>, and its official website at <www.csrc.gov.cn/pub/newsite/>.

take over duties of policy loans from the PBC, reducing its commitment to market liquidity and supporting the state sector.[113]

Reform progresses in other areas also made contributions. Inter alia, the State Council released "the Decision on Financial Structure Reforms", requiring the PBC to reform its mechanisms of monetary policy and macroeconomic supervision. It then abandoned the profit retention system and set up an independent budget management system.[114] The State Administration of Foreign Exchange (SAFE) changed the dual foreign exchange system into a systemic settlement, and RMB became convertible in the current account.[115] As argued, continued economic reform required further legal changes. For example, increasing FDIs had made rules and laws governing company and corporate governance more market-oriented.[116]

In response, "Law of the PRC on the PBC" was enacted in 1995 (PBC Law 1995). The PBC was defined as a state-owned government institution with capital invested and owned by the state; losses were totally compensated by the Treasury.[117] It began to have clearer objectives as a state central bank: to design and implement monetary policies, improve macroeconomic management, and supervise financial markets. It was argued that many factors would influence the selected legal framework for a country's monetary policy, and the basic logic here was to prevent financial risk and support economic development.[118] The primary objective of monetary policy was clarified to maintain domestic currency value.[119] However, neither inflation control nor monetary stability was defined, and currency value had a narrow meaning without reference to external stability with the SAFE responsible for foreign exchanges.

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[113] Lanjun Wang and Hejin Zhang, 'On the Operational Risks of China's Policy-Based Banks' (2001) *The Study of Finance and Economics* 27(5): 30-36 [in Chinese].
[114] News Report, <http://news.xinhuanet.com/ziliao/2005-03/17/content_2709610.htm> accessed on March 17, 2005.
[115] <http://gaige.rednet.cn/c/2008/01/31/1432827.htm> accessed on January 31, 2008.
[116] Tobias M.C. Asser, 'Banking Law Reform in China' in IMF, *Current Legal Issues Affecting Central Banks* (vol. 4, Washington DC: IMF 1997) 289-306.
[117] *Supra* 59, 19.
[118] *Supra* 103, 22.
[119] There were debates about whether the PBC's primary objective was to stabilize RMB value or credit. For details, see, Guangyuan Yu, 'The Most Important Duty of the PBC is to Maintain the Credit Relationship' 43 *College Journal of Changchun Advanced Finance Institution* 1996 [in Chinese].

The responsibilities of the PBC were classified. As monetary authority, it made monetary policy decisions under the State Council. Direct controls were imposed on liquidity mainly through controlling the quantity of monetary supply, and the credit plan was still in place. As financial regulator, the PBC administered financial institutions and their businesses by market-entry and market-exit arrangements. Its direct oversight was further facilitated by having higher political standing than the SOCBs with chairmen at the vice-ministerial level.

Under Article 7, the PBC was independent "in fulfilling its duties without disruptions from local governments, other administrative authorities or agencies". Nevertheless, it did not possess either political or operational independence. Governor and deputy governors were nominated by the Premier of the State Council and then decided by the NPC or its Standing Committee, but law did not specify candidates' qualifications, tenure, and dismissal. Being a state-owned government body, the PBC was one functional ministry of the State Council. As Government's banker, it was still responsible for loans to policy banks, and the State Council still held the power to make it lend to selected NBFIs. In particular, the PBC relied upon interest rate policies to administer markets, and thus, the approval and reporting system strengthened the authority of the State Council in its daily operation.

This Act filled in the corresponding gap in China's legal system. It was argued that the PBC would become more effective under this formalised legislation.[120] In principle, it was still under the strict control of both the NPC and State Council, while being closely attached to, rather than independent of, markets through direct intervention. All suggested that the PBC was a government-controlled central bank, which directly controlled China's preliminarily liberalized financial markets.[121]

[120] *Supra* 8, 198.
[121] Hai Yan and Guifeng Shi, 'Legal Aspects of Independence of the Central Bank' (Law Library, August 1, 2000) <www.law-lib.com/lw/lw_view.asp?no=8>).

7.3.4 PBC Law 2003

From the late 1990s, external factors, including the AFC in 1997 and China's WTO accession in 2001, accelerated the domestic reform, especially in relation to financial liberalisation and globalisation. In this context, the PBC Law 1995 was amended in accordance with "the Decision to Amend the Law of the PRC on the PBC" in 2003 (PBC Law 2003).

7.3.4.1 The AFC Impact

On July 2, 1997, Thai government abandoned the pegged fixed exchange rate policy, and the baht depreciated by 17.1% within one day. This quickly triggered adverse changes in stock markets and asset prices, before spreading to its neighbouring East Asian countries. [122] Disturbances in the financial sector seriously influenced the real economy, and caused widespread social insecurity, shifting "Asian Miracles" into "Asian Meltdown".[123]

In spite of a similarly weak domestic banking system, China did not incur the same losses as its neighbours. In early 1998, recession was limited to exports with some financial anxiety. Hainan Development Bank[124] and Guangdong International Trust and Investment Corporation[125] were closed by Government; the NPLs of the "Big Four" SOCBs accounted for around 20% of total advances until 1997 but then rose sharply; B shares lost nearly 80% of their value in 1998[126] and capital inflows reduced as well.[127]

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[122] William C. Hunter, George G. Kaufman and Thomas H. Krueger, *The Asian Financial Crisis: Origins, Implications, and Solutions* (London: Kluwer Academic Publishers 1999).
[123] Laurence H. Meyer, 'Lessons from the Asian Crisis: A Central Banker's Perspective' Levy Economics Institute, Working Paper No 276, 1999 <www.levyinstitute.org/pubs/wp276.pdf>.
[124] Fulin Chi, 'Rise and Fall of the Hainan Development Bank' (Beyond Transition, The World Bank Group 2001) <www.worldbank.org/html/prddr/trans/oct98/cfulin.htm>.
[125] William Gamble, 'Economic Effects of Legal Infrastructure - Collapse of the Guangdong International Trust and Investment Corporation' Emerging Market Strategies Company, March 25, 1999) <www.emergingmarketstrategies.com/articles/20-collapse-of-the-guangdong-international-trust-and-investment-corporation.html>.
[126] Wei Fang, *China's Financial Sector Reform in the Transition to a Market Economy: Key Issues and Policy Options* (LIT 1999) 220–226.
[127] Edward M. Graham and Erika Wada, 'Foreign Direct Investment in China: Effects on Growth and Economic Performance' Institute for International Economics, Working Paper No 01-03, 2001 <www.mi.iie.com/publications/wp/01-3.pdf>.

Certain favourable factors limited China's losses. Since 1993, economic reforms had been advanced with profound changes in tax, fiscal tools, foreign reserves, and macroeconomic policies. Up to 1997, problems caused by overheating, including credit expansion, had been under control, and the current account surplus boosted international trade.[128] Various capital controls were still in place to protect the underdeveloped domestic financial market.[129] In particular, after abolishing the retention system, the over-appreciation of RMB was reduced by 50% of its official rate in 1994.[130] Afterwards, partial convertibility in the current account hindered international speculators from any short position against RMB.[131] Moreover, unlike free capital flows, Government deliberately favoured certain types of capital inflows (FDIs) through policy and legislation bias.[132] As a result, China's incomplete financial reform initially worked to defend against adverse external effects.[133]

Achievements from previous reforms had informed responses to the AFC.[134] When data suggested limited losses in 1997, Government introduced a temporary system to manage banks, securities companies and insurance companies respectively.[135] The PBC pursued some pro-active policy instruments to cope with external shocks. From late 1997 to mid-1998, it reduced interest rates four times, and lowered reserve ratios and rediscount rates to encourage commercial lending. It added an extra 20% loan to financial institutions in 1998, while having a limited effect on encouraging

[128] Dilip K. Das, 'Implications of the Financial Crisis for Asian Exports' ADB EDRC Briefing Notes, No 8, 1999 <www.aric.adb.org/pdf/edrcbn/edrcbn08.pdf>.
[129] James Crotty and Gerald Epstein, 'A Defense of Capital Controls in Light of the Asian Financial Crisis' (1999) *Journal of Economic Issues* 32(2): 427-433.
[130] Jingtao Yi, 'Policy Options for China's Exchange Rate Regime in the Post-Reform Era' The University of Nottingham Ningbo, Centre for Global Finance, Discussion Paper 26, 2008 <www.nottingham.ac.uk/shared/shared_cpi/documents/discussion_papers/Discussion_Paper_26_Policy_Options_Exchange_Rate_Regime.pdf> .
[131] Shalendra D. Sharma, 'Why China Survived the Asian Financial Crisis?' (2002) *Brazilian Journal of Political Economy* 22, No 2 (86): 32–58.
[132] Guoqiang Long, 'China's Policies on FDI: Review and Emulations' in Theodore H. Moran, Edward M. Graham and Magnus Blomstrom (eds.), *Does Foreign Direct Investment Promote Development?* (Washington DC: Institute for International Economics and the Centre for Global Development 2005) 315–336. Wanda Tseng and Harm Zebregs, 'Foreign Direct Investment in China: Some Lessons for Other Countries' IMF Policy Discussion Paper PDP/02/3, 2002 <www.imf.org/external/pubs/ft/pdp/2002/pdp03.pdf>.
[133] Haihong Gao, 'Liberalising China's Capital Account: Lessons Drawn From Thailand's Experience' World Bank–East Asian Development Network Fellowship, Visiting Researchers Series No 6, 2000 <www2.pids.gov.ph/eadn/gaohaihong.pdf>.
[134] *Supra* 63.
[135] <http://dangshi.people.com.cn/GB/16347155.html>.

consumption, and deposit savings were still increasing.[136] Meanwhile, the PBC issued many guidelines and suggestions to strengthen its direct management over some key financial sectors, causing certain centralization. When compared, fiscal stimulus was more important than monetary expansion. Funds, equivalent to 2.5% of GDP, raised by special state bonds, banking credits and local public finance, were invested in infrastructure construction, employment creation and prioritised industries.[137] It was argued that fiscal intervention yielded faster results and bigger economic returns by better targeting affected areas directly.

While the AFC provoked attention to the steps and sequencing of market liberalisation,[138] China's market-oriented reform continued. The credit plan was replaced with an annual guiding directory from Government, and more foreign invested banks were approved to participate in RMB businesses. The PBC required the SOCBs to reform their corporate governance, portfolio management and information disclosure.[139] The PBC itself was restructured in 1998: nine regional branches replaced thirty-one provincial and municipal branches to promote regional economic development and banking efficiency, while reducing political intervention from local governments. After China Insurance Regulatory Commission (CIRC) was set up in 1998 to supervise the insurance sector, the PBC conducted banking oversight only.

In essence, the AFC was not a prerequisite for China to proceed with economic reform, but contradictory requirements had compelled China, including the PBC, to balance between crisis management and further financial liberalisation.

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[136] Aart Kraay, 'Household Saving in China' (2000) *World Bank Economic Review* 14(3): 545–570.
[137] China's Active Fiscal Policy: <http://rdecon.crup.com.cn/html/ziyuanzhongxin/jingjixue/weiguanjingjixue/weiguanjingjixueyuanli/2009/1225/31550.html>; The Effectiveness of China's Active Fiscal Policy: Facing the Financial Crisis <www.crifs.org.cn/crifs/html/default/caijingshilun/_content/10_08/18/1282117310650.html>.
[138] Min Zhao, 'External Liberalisation and the Evolution of China's Exchange System: An Empirical Approach' World Bank Beijing Office, May 2006 <http://siteresources.worldbank.org/INTCHIINDGLOECO/Resources/external_liberalization_and_exchange_control.pdf>.
[139] Erika Leung, Lily Liu, Lu Shen, Kevin Taback and Leo Wang, 'Financial Reform and Corporate Governance in China' MIT Sloan School of Management 50th Anniversary Proceedings, June 2002 <http://bbs.cenet.org.cn/uploadImages/2003317164448185 88.pdf>.

7.3.4.2 China's WTO Commitment

As the largest developing country, China made a lengthy endeavour to become a WTO permanent member.[140] Apart from GDP growth, it was still difficult to conclude whether or not its financial sector was ready for such further integration.[141] The profitability of financial institutions was difficult to assess, especially with the SOCBs burdened by unclear NPLs. Four asset management companies (AMCs) were established to handle such loans,[142] but failed to prevent the new birth from the SOEs and China's structural rebalancing.[143] The presence of foreign banks was limited: 191 institutions accounted for less than 3% of assets, 2% of loans, and almost 0.1% of deposits.[144] Additionally, some "window dressing" measures were encouraged by Government to meet the WTO requirements. For example, some rules and regulations were adopted just before the accession.[145] Even so, China's WTO accession was generally viewed to act as a lever to force further reform, and also lock in marketization progress and make it irrevocable.[146]

China was designated as a nonmarket economy under the WTO for the purposes of anti-dumping determinations,[147] and agreed to detailed concessions.[148] In the financial sector, relevant steps can be summarised in Table 7.2:

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[140] Karen Halverson, 'China's WTO Accession: Economic, Legal, and Political Implications' (2004) *Boston College International & Comparative Law Review* 27(2): 319-370.
[141] <www.economist.com/node/780479>.
[142] John P. Bonin and Yiping Huang, 'Dealing with the Bad Loans of the Chinese Banks' (2001) *Journal of Asian Economics* 12(2): 197-214.
[143] Alicia Garcia-Herrero, Sergio Gavila and Daniel Santabarbara, 'China's Banking Reform: An Assessment of its Evolution and Possible Impact' (2006) *CESifo Economic Studies* 52(2): 304-363.
[144] Deepak Bhattasali, 'Accelerating Financial Market Restructuring in China' World Bank, December 1, 2002 <http://siteresources.worldbank.org/INTRANETTRADE/Resources/bhattfinservices.pdf>.
[145] Kevin Wong and Andrew McGinty, 'Is China Ready for WTO?' *China Law & Practice*, December 1999/January 2000, <www.chinalawandpractice.com/Article/1694787/Channel/7576/Is-China-Ready-for-WTO.html>.
[146] *Supra* 140.
[147] William P. Alford, 'When is China Paraguay? An Examination of the Application of the Antidumping and Countervailing Duty Laws of the United States to China and Other "Non-market Economy" Nations' 61 *Southern California Law Review* 1987: 79-90.
[148] For the Protocol, refer to, *Report of the Working Party on The Access of China: Addendum, Schedule CLII – The People's Republic of China, Part 2 – Schedule of Specific Commitments on Services List of Article 2 MFN Exemptions* (WTO, WT/ACC/CHN/49/Add.2, October 1, 2001).

Table 7.2: China's Financial Commitments under the WTO

ITEMS	COMMITMENTS
Geographic Coverage	Foreign Currency Business: foreign financial institutions are permitted to provide services in China without any geographic restrictions RMB Business: restrictions will be removed by increased numbers of cities within 5 years after accession
Clients	Foreign Currency Business: foreign financial institutions are permitted to provide services in China without restrictions RMB Business: within 2 years after accession, services to Chinese enterprises; within 5 years, services to Chinese clients Qualified foreign financial institutions can serve clients in any regions only if such business is allowed
Licensing	Foreign financial institutions are authorised to establish under prudential criteria Non-prudential measures will be phased out over 5 years For RMB business, foreign financial institutions should be in operation for 3 years in China with a two-consecutive-year profitable file prior to application
NBFIs	Motor vehicle financing, advisory, intermediation, financial leasing services

According to Table 7.2, China should gradually relax controls over financial products and services, in line with market principles and further liberalisation.[149] Inter alia, fair competition was the principal requirement for financial liberalisation, achieved mainly by deregulation and the entry of more foreign financial institutions.[150] It was argued that incoming foreign institutions would bring about more sophisticated services, products and skills. Consequently, the traditional

[149] Lei Xu and Chien-Ting Lin, 'Can Chinese Banks Compete after Accession to WTO?' (2007) *Journal of Asian Economics* 18(6): 883–903.
[150] It is based on Financial Services Agreement inserted into the WTO after the AFC. Refer to, Wendy Dobson and Pierre Jacquet, *Financial Services Liberalisation in the WTO* (Peterson Institute 1998).

monopoly of the SOCBs would be weakened, promoting better capital allocations,[151] and facilitating the adjustment of the SOEs-SOCBs relationship.[152]

Under the WTO rules, the PBC would promote financial liberalization, and improve its conduct of monetary policy and financial oversight. After 2001, it began to check up existing rules and promulgate new regulations.[153] In particular, it introduced the Basel Accord by enacting "the Administrative Regulations of the PRC on the Foreign Invested Financial Institutions" (Regulations on FIFIs) in 2001 and "the Implementing Rules" in 2002.[154] The PBC controlled the establishment of the FIFIs and their operations. Among others, WTO rules highlighted the significance of RMB convertibility,[155] whilst requiring the PBC to shift toward prudential supervision with enhanced transparency and better information disclosure.[156]

7.3.4.3 Legal Framework under the PBC Law 2003

Statutory reforms occurred amid China' changed internal and external financial conditions. The PBC Law 2003 clarified further its role as Government's banker and bankers' bank, incorporating the following main elements:

Objectives

The PBC shall "under the leadership of the State Council, formulate and implement monetary policy, prevent and mitigate financial risks, and maintain financial stability."[157] It was explicitly required to maintain financial stability without this being clearly defined.

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[151] Nicolas R. Blancher and Thomas Rumbaugh, 'China: International Trade and WTO Accession' IMF Working Paper, Issues 2004-2036, 2004 <www.imf.org/external/pubs/ft/wp/2004/wp0436.pdf>.
[152] Justin Yifu Lin, 'WTO Accession and Financial Reform in China' (2001) *Cato Journal* 21(1): 13–18.
[153] Wei J. Lee, 'China and the WTO: Moving toward Liberalisation in China's Banking Sector' 1 *DePaul Bus. & Comm. L.J.* 2002-2003: 481-508.
[154] The first administrative regulation about the FIFIs was enacted in 1994. For other regulations, refer to, Priscilla Mei-fun Leung, Rajesh Sharma and Yan Jia, *Banking Law in the People's Republic of China* (iSinolaw Ltd 2004) 128–149.
[155] *Supra* 138.
[156] Alicia Garcia-Herrero and Daniel Stantabarbara, 'Where is the Chinese Banking System Going with the Ongoing Reform?' Banco de España, Occasional Document, No 0406, 2004 <www.bde.es/f/webbde/SES/Secciones/Publicaciones/PublicacionesSeriadas/DocumentosOcasionales/04/Fic/do0406e.pdf>.
[157] Article 2, PBC Law 2003.

Organisational Structure

In order to reduce the conflicts between the PBC and the MOF, leadership appointments shifted from the board of directors to a governor-led system.[158] But central bankers holding the same tenure as administrative officials increased the risk of political intervention.[159] The new MPC regulation was promulgated in 2004 but with few substantive changes.[160]

Monetary Policy Instruments

By law, monetary policy instruments included rates policies, monetary supply and ratios policies, while the PBC has continued subsidies and loans directly to the SOCBs.

Regulation and Supervision

Since the NPC Standing Committee released "the Decision on the CBRC in Performing the Duties of Supervision and Administration Originally Performed by the PBC" on April 26, 2003, the PBC Law 2003 distinguished between monetary instruments and supervisory duties. The PBC concentrated upon its responsibilities as monetary authority,[161] and its regulatory objective was to promote coordinated development by monitoring financial markets. A new facility for examining troubled financial institutions was promulgated, after due approval from the State Council.[162]

Independence

"Operational independence" was announced by law, but the PBC's actual autonomy was still in doubt. Personnel appointments were still under the NPC and State Council. The PBC was placed under the rigorous budget control of the State Council with net profits turned over to the Treasury, and internal auditing and accounting systems supervised by agents within the State Council.[163] As monetary authority, the PBC could only design and implement policy instruments after being approved by

[158] Ibid. Article 10.
[159] Lawrence Saez, *Banking Reform in India and China* (Palgrave Macmillan 2004).
[160] PBC, News Releases, <www.pbc.gov.cn/publish/zhengcehuobisi/586/1157/11574/11574_.html>.
[161] PBC, News Releases, <www.pbc.gov.cn/publish/tiaofasi/272/1383/13833/13833_.html>.
[162] Article 34, PBC Law 2003.
[163] Articles 38-40, PBC Law 2003.

the State Council, and report them to the Standing Committee for recording. The MPC was still the executive of Government in maintaining currency value. The PBC exercised centralised leadership and control over nine branches, with support from local governments due to China's political hierarchy. This created the dilemma of being independent of local administrative intervention while relying upon it to implement monetary policy and supervisory duties. To sum up, the PBC was still under dual subordination to the NPC and State Council, having no operational independence in either formulating or implementing monetary policies.

When compared with the PBC Law 1995, the 2003 Act did not touch its ownership and legal status, but refined its legal framework with clearer objectives and diverse policy instruments. This reflected the requirement from the AFC for a stronger role played by central banks in maintaining financial stability,[164] and also from China's WTO accession to advance liberalization. Overall, as Government's banker, the PBC continued to be under political control; and as bankers' bank, it maintained some management at the firm level.

7.4 Financial Regulation and Supervision Regime

China's financial regulation regime has also developed in response to gradual market liberalization, which could be divided into three stages: highly centralised planning economy, early economic reform, and contemporary progress.[165]

Prior to marketization, the PBC was the only financial institution under the directly administrative leadership of the MOF, and regulation was thus neither needed nor sought.[166] Until the mid-1990s, the PBC had the dual role as monetary authority and financial regulator. It controlled both the market and individual institutions through direct administration rather than indirect market principles, for the central credit plan

[164] Martin S. Feldstein, 'Refocusing the IMF' (1998) *Foreign Affairs* 77(2) <http://ssrn.com/abstract=60037>.
[165] For this classification, as well as a comparison with the US, UK and Australia, see, Hui Huang, 'Institutional Structure of Financial Regulation in China: Lessons from the Global Financial Crisis' 10 *Journal of Corporate Law Studies* 2010:219-254.
[166] Rajesh Sharma and Jia Yan, *Banking Law in the People's Republic of China* (EMIS Professional Publishing 2004).

was not fully removed.[167] In consequence, the PBC administered interest rates and executed window guidance, while financial institutions were directly burdened by constraints over total lending, and sub-ceilings for certain types of commercial loans. At the third stage, China gradually developed a more sector-based regulatory model. It is argued that China's WTO entry accelerated financial liberalization, and also improved regulation and supervision.[168] On March10, 2003, "the Decision of the 1st Session of the 10th NPC on the Plan of Reforms of the Organizations of the State Council" was promulgated, aiming to administratively reorganise China's bureaucracy in line with a more market-oriented economy. According to the restructuring plan, China Banking Regulatory Commission (CBRC) was established, taking over banking surveillances from the PBC.

With the establishment of the CBRC, CIRC and CSRC, the regulatory and supervisory regime of *Yihang Sanhui* (one central bank, and three commissions) officially formed, based upon the segmentation of financial markets, known as *Fenye Jingying*, *Fenye Jianguan* (separate operations, and separate regulations). By this division, the PBC took responsibility for monetary policy and systemic stability, with three commissions overseeing securities, insurance and banking respectively. However, such a model bears some structural weaknesses.

By nature, three commissions have constrained independence. For example, the CBRC was legally described as the "banking supervision institution of the State Council", making it an internal department of the State Council, affecting its conduct and legislative authority from the outset.[169] Chairpersons were appointed by the State Council, and accountable to its Premier.[170] According to Article 14, the CBRC was overseen by the National Audit Office and the Ministry of Supervision within the State Council. Moreover, legal provisions required other government departments to support the CBRC's oversight. In addition, local governments have generally used

[167] Joseph Jude Norton, C. J. Li and Yangxin Huang, *Financial Regulation in the Greater China Area: Mainland China, Taiwan and Hong Kong SAR* (London: Kluwer Law International 2000).
[168] James R. Barth, Zhongfei Zhou, Douglas W. Arne, Berry EC. Hsu and Wei Wang, *Financial Restructuring and Reform in Post-WTO China* (London: Kluwer Law International 2006).
[169] Yunliang Chen and Ting Chen, 'The Legal Nature of China Banking Regulatory Commission' (2012) *Science of Law* 30(1): 74–83.
[170] Latest news release: <www.gov.cn/rsrm/2011-10/29/content_1981420.htm>.

local SOCB branches to support the SOEs in their jurisdictions to achieve economic goals,[171] challenging the CBRC's regulation and supervision.[172]

China's domestic market was still dominated by state ownership with underdeveloped securities markets. Such imbalance has adversely affected capital allocation with easy Government intervention.[173] The CBRC was granted broad authority of rulemaking, but only in accordance with policy directives from the central government. It controlled market-entry, the approval of products and services, on-site examination and off-site monitoring. So the CBRC was a prudential and conduct of business regulator.[174] Furthermore, sector-based regulation was consistent with clear boundaries among financial activities and limited conglomeration. With further liberalisation and integration, this regime would not meet changing market conditions. Some evidence of this has already emerged, especially after China advanced its globalisation after WTO accession.[175] Therefore, as China's reform leads gradually to the business model of *Huiye Jingying* (financial conglomerate), this regime has come under intensified challenges.[176] When assigning its objectives, "banking risks" was introduced and depositor interests were emphasised for the first time. The core value of the modern banking industry referred implicitly to "a safe and sound banking industry" and also to maintaining public confidence by ensuring fair competition.[177] However, the legislation did not clarify its relationship with the PBC in the event of systemic banking crises. In extreme circumstances, the CBRC would inform the PBC if deemed necessary, but usually in coordination with the State Council.[178]

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[171] 'China's Struggling Smaller Firms: Small Fish in a Big Pond' (The Economist, September 10, 2009) <www.economist.com/node/14409584>.
[172] Genevieve Boyreau-Debray and Shang-Jin Wei, 'Pitfalls of a State-Dominated Financial System: The Case of China' NBER Working Paper Series, No 11214, 2005 <www.nber.org/papers/w11214.pdf>.
[173] Diana Farrel, Susan Lund and Fabrice Morin, 'How Financial-System Reform could Benefit China?' *McKinsey Quarterly*, special edition, 2006 <http://salsa.babson.edu/Pages/Articles/0605FinReformChinaMck.pdf>.
[174] Weiping He, 'The Powers of the China Banking Regulatory Commission' (2010) *Journal of International Banking Law and Regulation* 27(2): 103-108.
[175] Hui Huang, 'Securitisation: International Experience and Chinese Practice' at the International Conference on "New Developments of Commercial Law", Beijing, May 13–14, 2005 <http://ssrn.com/abstract=1173782>.
[176] Kuan-Chun Chang, 'From Zero to Something: The Necessity of Establishing a Regulatory System of Financial Conglomerates in China' (2009) *Asian-Pacific Law & Policy Journal* 11(1): 1-100.
[177] *Supra* 8, 20–40.
[178] State Council, No.11 [2008], Notice on the Institutional Structure of the State Council <www.gov.cn/zwgk/2008-04/24/content_953471.htm> accessed on April 24, 2008.

Overall, China's financial regulation and supervision system has developed under the direct control of the State Council, whilst it was only chosen for China's underdeveloped financial markets.

7.5 How has the PBC Changed?

The PBC was established without legal recording, and underwent statutory changes during China's economic reform. Relevant changes around its two-tier relationship can be summarised in Table 7.3:

Table 7.3: Major Changes of the PBC around its Two-Tier Relationship

Legislation	Relationship with Government	Relationship with Markets
1978: economic reform started with delayed financial liberalization	PBC was separated from MOF	Financial institutions developed and diversified; PBC stopped insurance operations and reduced commercial banking businesses
1983 Decision	PBC was a state authority under State Council and still controlled quasi-fiscal issues	PBC managed specialised banks directly, and employed the central credit plan to balance finance budget and lending channels
Provisional Regulations 1986	PBC was formalised as central bank under the direct leadership of State Council	PBC managed the banking sector to support real economy and administered rates policies with a credit quota plan
PBC Law 1995	PBC was granted with state-owned legal status under dual-tracked subordination	Central plan was still used; Money supply and interest rates were administered; PBC regulated financial institutions and their daily operations
PBC Law 2003	PBC had limited independence in budget, operation and policy-making	CBRC was established to regulate and supervise banking institutions and their businesses; PBC controlled monetary policy and overall financial stability

As illustrated in Table 7.3, the PBC has gradually been separated from the MOF and from commercial banking business. As Government's banker, after reducing quasi-fiscal duties, it still operated under rigid dual subordination as an executive department of the State Council. As bankers' bank, it has enhanced its role as monetary authority and, with the establishment of the CBRC, clarified its role as

systemic regulator. Two central bank laws, in 1995 and 2003, can be compared in Table 7.4:

Table 7.4: Comparison between PBC Law 1995 and PBC Law 2003

Legal Provision	PBC Law 1995	PBC Law 2003
Ownership and Status	State-owned government institution	
Objectives	Maintaining currency value, and thereby promoting economic development	Plus maintaining financial stability
Independence	Independence with unclear wording	Operational independence
Accountability	Dual-subjection to NPC and State Council	
Organisational Structure	Board of directors; Governor and Deputy Governors appointed by State Council 31 branches based upon provincial division	Governor-led system 9 branches across administrative provinces
MPC	A consultative and advisory body	Under the direct control of the Party and State Council; Monetary policy derives from political compromise
Monetary Policy Instruments	Issue of RMB, centralised controls of money supplies and interest rates	Rates policies, monetary supply, ratios policies, and window guidance
Regulation and Supervision	Firm-level controls with direct political intervention	Promoting the development of the financial market as a whole; Controlling certain examination over financial institutions (including their insolvency); Oversee inter-bank loans and bond markets CBRC was established as the main banking regulator

According to Table 7.4, the overall legal framework had improved with clearer wording, granting the PBC sophisticated policy instruments. Ownership, legal status and accountability to both the NPC and the State Council stayed unchanged. As argued, the Chinese legal system was still under strict political controls, and thus, central bank laws cannot exactly reflect the two-tier relationship governing the PBC.

The PBC has gradually loaded off commercial banking business, but can still affect the financial sector directly. The central bank in a typical transition economy could generally adopt price-based, quantity-based and non-central bank policy instruments.[179] Price-based instruments refer to those decided through pricing money in the financial system, including rates and ratios policies, and OMOs; they are indirect by nature. In China, the reserve requirement instrument was introduced in 1984 to control liquidity, and has been used more actively since 1998.[180] After being introduced in 1993, OMOs further developed in 1997, helping the PBC shift toward indirect market-based principles after the AFC.[181] The PBC has several rates policies, but still shears the deposit rates for the money already at the disposal of commercial banks, ensuring them to access funds at rates below deposit rates for profitability.[182]

By contrast, quantity-based and non-central bank instruments are direct, non-market tools. Quantity-based means are aimed at changing the amount of money without considering its price, including loan quotas and window guidance. The official credit plan was abolished in 1998, but preferential lending still prevailed from the SOCBs to SOEs. Window guidance,[183] itself transplanted from Japan in the 1990s, enables the central bank to affect market participants by negotiation rather than strict rules.[184] It has been considered vital for the PBC to control liquidity in a quantitative manner,

[179] Michael Geiger, 'Instruments of Monetary Policy in China and Their Effectiveness: 1994-2006' UN Conference on Trade and Development, Discussion Papers No 187, 2008 <http://unctad.org/en/Docs/osgdp20082_en.pdf>.
[180] Guonan Ma, Xiandong Yan and Xi Liu, 'China's Evolving Reserve Requirements' BIS Working Papers, No 360, 2011 <www.bis.org/publ/work360.pdf>.
[181] Xie Duo, 'The Conduct of the Open Market Operations and the Shift of Monetary Policy Instruments' 5 *Economic Research Journal* 2005: 31-46.
[182] Tarhan Feyzioglu, Nathan Porter and Elod Takats, 'Interest Rate Liberalization in China' IMF Working Paper, WP/09/171, 2009 <http://211.253.40.86/mille/service/ers/20000/IMG/000000017525/wp09171.pdf>.
[183] Official explanation of window guidance by the PBC: <www.pbc.gov.cn/publish/main/851/3004/30045/30045_.html> accessed on February 27, 2009.
[184] Hugh T. Patrick and Yung Chul Park, *The Financial Development of Japan, Korea, and Taiwan: Growth, Repression, and Liberalization* (OUP 1994) 40-41.

whereby bank loans could be managed without modifying interest rates.[185] As established in a bureaucracy theory, a central bank might prefer to conduct covert methods to divert critical investigation and apparent failures, extending its authority without much explicit intervention. Similarly, moral suasion could enable it to administer the directions of lending.[186] In China, the PBC's governor was at a higher political rank than chairpersons from the SOCBs, facilitating the conduct of window guidance and then controlling the outcomes. It is also argued that by strengthening the oversight of network banks, the PBC could conduct window guidance more effectively.[187] In the third classification, price and wage controls are typical non-central bank tools. Due to incomplete marketization, centralized planning has widely co-existed with market principles, and hence, the PBC has continued to co-control various dual-track systems. As a result, it still replied upon quantity-based and non-central bank tools to directly administer the financial sector, which has been facilitated by China's economic transition and political hierarchy.

What is more, the PBC's independence was still seriously questioned. Central bank independence should be assessed from its institutional arrangement, operational and decision-making process, and credibility with financial institutions, central and local governments, as well as the public.[188] By law, official influencing factors upon the PBC's independence include:

i) Personnel appointments were controlled by State Council;
ii) It counted on the central budget;
iii) MPC was a consultative and discussion body;
iv) Dual-track subordination continued;
v) Local government directly affected the implementation of monetary policy;
vi) Financial crisis management was conducted under State Council.

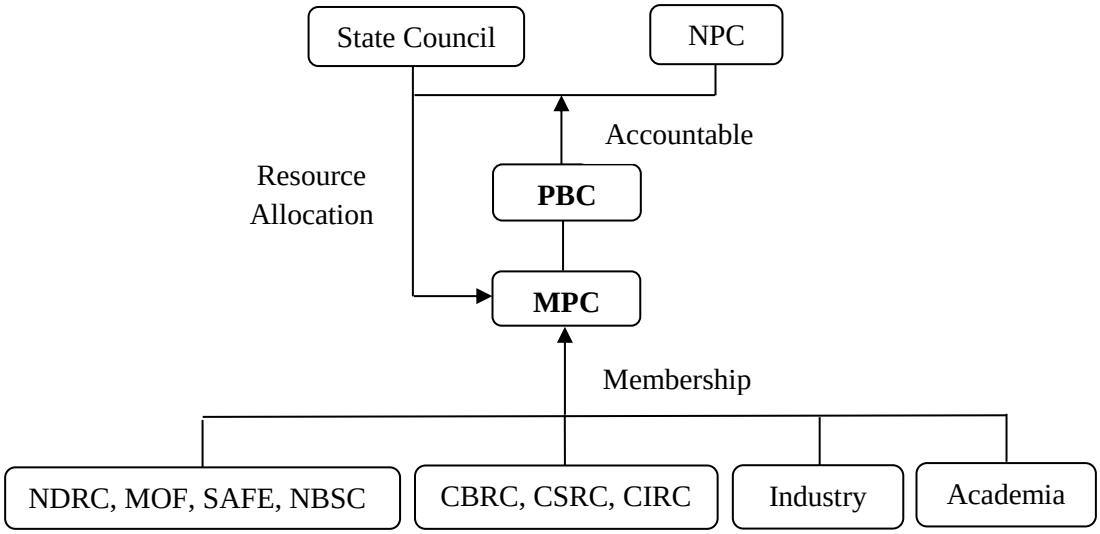
[185] Junwen Fu and Hong Zhao, 'Study on the Theory and Practice of China's Window Guidance – One of the Monetary Policy Instruments' *Journal of Central University of Finance & Economics*, September 2008 <http://caod.oriprobe.com/articles/14911257/Study_on_the_Theory_and_Practice_of_China_s_Window.htm>.
[186] John F. Chant and Keith Acheson, 'The Choice of Monetary Instruments and the Theory of Bureaucracy' 12 *Public Choice* 1972: 13-33.
[187] Hong-yu Li, 'On the Supervision of Network Bank' 3 *Journal of Shanxi Finance and Economics University* 2001.
[188] Connie We-Wee Chung and Jose L. Tongzon, 'A Paradigm Shift for China's Central Banking System' (2004) *Journal of Post Keynesian Economics* 27(1): 87-103.

The PBC is part of an extensive political network, restricting its independence fundamentally, which could be better understood by scrutinising the MPC. To begin with, the State Council formally controlled the formulation of the MPC Provisional Rule. Its leading target was to properly formulate monetary policies, being a consultation and discussion body within the PBC. Moreover, the MPC was explicitly required by law to take into account the prevailing macroeconomic context and meet the pre-set Government strategies. In addition, under the direct leadership of the Party, the Central Finance Work Commission has the power to decide interest rates, close financial institutions, and approve the annual guiding plan to support SOEs.[189] As a result, the policy-making authority of the MPC has remained limited by the Party.[190]

Functions of the MPC were further weakened by its organisational structure. It consisted of ex-officio members, including the PBC Governor, Director of the SAFE, and Chair of the CSRC, with other members being approved by the State Council after appointment by the PBC.[191] The PBC used to be the cashier and accountant to the MOF, which remains important, particularly regarding its sizeable budget and revenues;[192] in this context, its Vice Minister was a formal member of the MPC. Economic transition has also allowed other government departments to participate in monetary policy formulation. For example, the SAFE controlled exchange rates and the NDRC was responsible for overall reform, intruding upon the PBC in their respects. Therefore, the PBC was positioned in a shadow system as displayed in Figure 7.2:

[189] Victor Shih, 'Partial Reform Equilibrium, Chinese Style, Political Incentives and Reform Stagnation in Chinese Financial Policies' Comparative Political Studies, SAGE, August 21, 2007 <http://faculty.wcas.northwestern.edu/~vsh853/papers/cps_final_proof.pdf>.
[190] *Supra* 188.
[191] MPC members with their profiles: <www.pbc.gov.cn/publish/huobizhengceersi/3417/2012/20120316104215475395327/20120316104215475395327_.html>.
[192] Christine Wong, 'Budget Reform in China' (2007) *OECD Journal on Budgeting* 7(1): <www.oecd.org/china/43412239.pdf>.

Figure 7.2: The Shadow System of the PBC



As illustrated in Figure 7.2, the PBC was accountable to the NPC and State Council, which also controlled resource allocation to the MPC. Moreover, various government departments impinged upon the PBC through their resources in the MPC, and thus, monetary policy derived from negotiation and political compromise among different MPC participants.

The PBC was still a political-dominated government-owned central bank with direct intervention into partially-liberalized financial markets. Its two-tier relationship was characterised by direct control from Government and direct administration into markets. It is argued that its independence cannot be raised until further reforms work effectively, including: i) the MPC should be granted full policy-making authority; ii) institutional structure should be professionalized yet reduced intervention via political hierarchy; iii) indirect monetary policy instruments should replace non-market mechanisms; and iv) information disclosure, accountability and enforcement mechanisms to be improved.[193] However, it is elsewhere argued that a fundamental problem of government intervention is the exact relationship between government and the incumbent political party. Government departments are established to conduct the party policies as if all the ministerial bureaucrats are under the control of the Party. After decades, the PBC was just reformed to work more

[193] *Supra* 188.

effectively as a competent institution of the State Council, rather than with real operational independence. This has limited the PBC leverage from the outset, making interest rates liberalisation, RMB convertibility and prudential regulation relatively superficial solutions in regards to independent policy-making authority. Reform has been carried out under the Party's absolute leadership, and thus, it is still ambiguous whether the Party or Government has really intended to grant the PBC with more independence.

7.6 Conclusion

This chapter has provided support for the proposition that the PBC was still a government-controlled central bank with direct intervention into financial markets, though it did conduct some proactive policy responses to the AFC. During China's market-oriented reform, a particular interaction of law, finance and economic growth has emerged, characterised by the Party's absolute leadership and the state-led development. In terms of the PBC, it has gradually developed its role as a state central bank amid selected financial liberalization. Both the PBC and CBRC prefer to control markets through direct management over prudential regulation. Examining the PBC's two-tier relationship beyond what legislation prescribed, it was actually identified as the executive of the State Council, and its independence granted by law has been fundamentally weakened by the shadow political system behind. To sum up, government control is the key to understanding its nature as Government' banker, and incomplete financial liberalisation is the pre-condition to assessing its functions as bankers' bank; this is the circumstance under which China got contagion from the GFC, affecting thus its selected policy responses and also the following outcomes.

Chapter Eight

People's Bank of China and the Global Financial Crisis: Policy Responses and Beyond[1]

8.1 Introduction

The previous chapter has defined the PBC as a government-owned central bank during China's market-oriented reform. Political domination is its predominant characteristic, which affects its relationships with Government and with markets respectively. In this context, it has been challenged by the spillovers from the GFC since late 2008, but China regained significant GDP growth one year later.

This chapter will focus upon how the GFC has affected the politically-dominated orientation of the PBC. It will provide support for the proposition that the PBC is a proactive financial regulator under direct Government control. It will start with planned monetary expansion, identifying major influencing factors that produced mixed outcomes: immediate effectiveness poses longer-term risks and challenges. Inter alia, the PBC has come under Government's further intervention with monetary policy supporting the fiscal stimulus, and market-oriented financial liberalisation was suspended as one of its chosen crisis management solutions. After comparing the PBC before, during and after the GFC, this chapter will argue that, while this demonstrated proactive risk management, it remained constrained by political domination. Overall, as Government has intensified direct controls over both the PBC and wider financial markets, the GFC has actually exposed further its structural problems.

[1] This chapter is updated until October 2013, and an older version has been published with (2012) *Journal of Chinese Economic and Business Studies* 10(4): 361-390.

8.2 China and the GFC: Policy Responses, Outcomes and Key Influencing Factors

In November 2008, China's continued GDP growth was disturbed by losses in export-led manufacturing and reduced FDI from the international capital market. Since the second half of 2009, however, it attained previous GDP growth levels while most advanced countries were still struggling to recover. Consequently, the GFC only affected China for a limited period from late 2008 until late 2009. This section will now outline China's experience during that period, assessing the effectiveness of its chosen crisis management strategies.

8.2.1 China's Resilience Explained

To deal with the GFC, China similarly combined monetary expansion and fiscal stimulus, but different transmission channels had buffered the negative spillovers from the outset.

8.2.1.1 Transmission Channels

Prior to the GFC, China had further developed its external economic and financial ties after three decades of economic reform. Since 1978, exports and investment had driven its reform toward unprecedented economic growth. The scale and pace of economic development were thus closely linked to external demands and international capital flows. [2] As regards the financial sector, many financial institutions in China, including most SOCBs, acquired stakes from the US investment banks, while most major international investors also hold stakes in Chinese financial institutions.[3] Particularly after 2007, China has overtaken the US to become the world's second largest merchandise exporter after the EU, while still attracting $75 billion FDI, the 3rd largest gross recipient following the EU and US.

[2] Nicholas R. Lardy, 'The Role of Foreign Trade and Investment in China's Economic Transformation' 144 *The China Quarterly* 1996: 1065-1082.
[3] Yongnian Zheng and Minjia Chen, 'How Effective will China's Four Trillion Yuan Stimulus Plan Be?' University of Nottingham, China Policy Institute, Briefing Series Issue 49, 2009 <www.nottingham.ac.uk/cpi/documents/briefings/briefing-49-how-efficient-4-tln-yuan.pdf>.

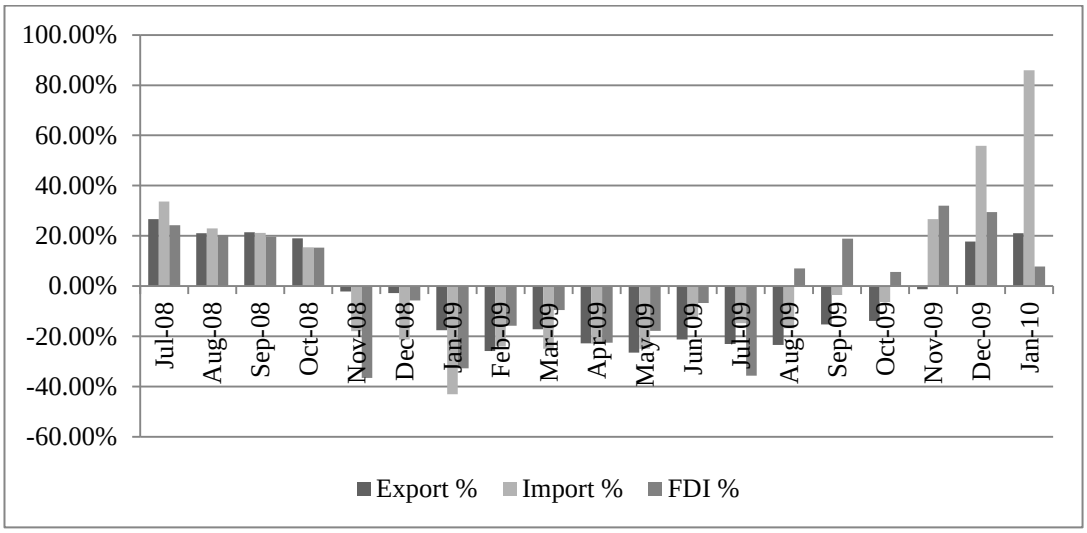
Fundamentally different from the developed world, as a result, China encountered contagion from external financial markets via trade and investment channels, rather than directly from a banking crisis *per se*.[4]

Such transmission channels inform China's losses in specific aspects. Since 2007/2008, economic recession in the US and other major affected countries reduced consumption, as well as capabilities to invest, which would duly hinder China's double digit GDP growth rates (as illustrated in Table 8.1).[5] After November 2008, year-on-year export growth rate was negative for an entire year,[6] and due to credit squeeze in the global capital market, international capital inflows declined sharply, resulting in reduced FDI between November 2008 and April 2009.[7] Recession was not however restricted to exports and capital inflows. In some respects, China might have benefited from limiting the growing ties between its domestic financial sector and the global financial market,[8] but certain losses still occurred. The Shanghai Stock Market Index lost nearly two thirds of its value from the end of 2007 to 2008.[9] The Chinese housing market experienced a severe downturn in late 2008, which placed further burden on banking operations and profitability.[10] Another outstanding example emerged when the balance of payments experienced an unprecedented change: significant current account surpluses had been an important feature of China's export-driven economic structure; however, due to growing imports and

[4] Mingchun Sun, 'China: Unscratched Through the Global Financial Tsunami' (2009) *China & World Economy* 17(6): 24-42.
[5] For example, it is established that a 1 standard deviation shock to G-3 countries'(US, UK and Japan) output growth can lead to a 0.29 percentage point standard deviation in China's output growth. Refer to Ligang Liu, 'Impact of the Global Financial Crisis on China: Empirical Evidence and Policy Implications' (2009) *China & World Economy* 17(6): 1-23. As the PBC estimated, if US GDP growth declined by 1%, China would suffer a 6% decline in exporting, cutting about 2% from GDP growth. Refer to Li Wang and Xin Fan, 'The Influence of the US Subprime Crisis and Our Strategies to Cope with/Meiguo Cidai Weiji de Yingxiang he Zhongguo de Zhanlue' 3 *World Economy* 2008: 54-58 [in Chinese].
[6] Data resources: Comprehensive Department Ministry of Commerce of the PRC <http://zhs.mofcom.gov.cn/tongji.shtml>.
[7] Da-yong Zhang and Hong-wei Song, 'Effects and Measures of American Subprime Mortgage Crisis on Foreign Direct Investment in Developing Countries' <www.paper.edu.cn>.
[8] Xianguo Yao and Xin Wu, 'Transition of China's Financial System after the Global Financial Crisis' (2011) *The World Economy* 34(5): 792-804.
[9] Data resources: Shanghai Stock Exchange; documents can be downloaded from <www.sse.com.cn/researchpublications/publication/yearly/c/tjnj_2008.pdf> and <www.sse.com.cn/researchpublications/publication/yearly/c/tjnj_2009.pdf>.
[10] Shujie Yao, Dan Luo and Stephen Morgan, 'Impact of the US Credit Crunch and Housing Market Crisis on China' University of Nottingham, GEP Leverhulme Centre, China and the World Economy Research Paper 2008/32, 2008 <www.nottingham.ac.uk/cpi/documents/briefings/briefing-43-us-credit-crunch-housing-market-crisis-on-china.pdf>.

declining export values, the current account fell dramatically.[11] Accordingly, due to its over-dependency upon exporting and investment, China was particularly vulnerable to external shocks, causing serious economic problems between 2008 and 2009.

Table 8.1: Changes in China's Monthly Trade and FDI Inflows between July 2008 and January 2010



Data Source: Ministry of Commerce, PRC

Why, then, was the financial sector not the first domino to fall in China? The reason was partly due to incomplete financial reform, including gradual liberalisation, constrained financial derivatives and innovations.[12] Securitization, estimated as one major trigger to the GFC, was only tested in limited pilot programmes since March 2005.[13] Because of various constraints, individuals and the private sector were

11
<www.mof.gov.cn/zhuantihuigu/zhongguocaizhengjibenqingkuang/zgczjbqkfl/201001/t20100119_261877.html> accessed on March 9, 2009.

12 Nicholas R. Lardy, *China's Unfinished Economic Revolution* (Brookings Institution Press 1988). Details were introduced in Chapter Seven.

13 In March 2005, after being approved by the State Council, the PBC, together with another nine government departments, the CBRC included, established the Coordination Group for the Pilot Program of Credit Asset Securitization. Pilot programme started in the inter-bank bond market, with China Credit Trust Co. Ltd (credit asset-backed securities) and CITIC Trust & Investment Co. Ltd (individual home mortgage loan-backed securities). Originators of those two securities are the State Development Bank and China Construction Bank. PBC, 'Credit Asset-backed Securities were Approved for Issuance in the Inter-bank Bond Market by the PBC' <www.pbc.gov.cn/publish/english/955/2006/20063/20063_.html> accessed on December 22, 2005.

legally prevented from freely investing abroad.[14] In terms of financial institutions, they were only partially exposed to the US sub-prime crisis, even after doubling their investment in 2006/2007 (as illustrated in Table 8.2).[15] They have become more commercialised with more explicit emphasis upon productivity and profitability to support the real economy since reform.[16] For example, Chinese banking institutions were much lower leveraged with the NPLs ratio reported to be 1.8% on average in 2009,[17] and the loan-to-deposit ratio was only 66% in 2008, whereas their US counterparts were generally reported 100% ratios. Although commercial banks seem to hold relatively significant US securities, the domestic financial market remained stable. In mid-2008, the Industry and Commercial Bank of China (ICBC), the largest commercial bank in terms of market capitalisation, claimed an exposure of $ 1.23 billion, accounting for no more than 0.3% of its total securities investment; the Bank of China (BOC) reported the largest risk exposure to the US housing mortgage market, but still showed profitable growth even after adverse information exposure.[18] Banking lending significantly increased during the GFC, from 14.3% in August 2008 to 34.4% in June 2009,[19] so China was hardly threatened by a credit crunch.

[14] On January 5, 1997, the SAFE issued the Circular on Printing and Distributing the Detailed Rules on the Implementation of the Measures for the Administration of Individual Foreign Exchange, setting out rigorous controls of individuals' trading foreign currency in amounts, manners, procedures, and so forth.

[15] For data and statistics, see, News Report, Capital Weekly, available at <http://focus.jrj.com.cn> accessed on August 11, 2007.

[16] BIS and PBC, 'Strengthening the Banking System in China: Issues and Experiences' BIS Policy Papers No 7, 1999 <www.bis.org/publ/plcy07.pdf>. For the relationship between the banking sector and the real economy in China, see, Alicia Garcia-Herrero and Daniel Santabarbara, 'An Assessment of China's Banking System Reform' in Jean-Pierre Cabestan, Jean-Francois Di Meglio and Xavier Richet (eds.), *China and the Global Financial Crisis: A Comparison with Europe* (Routledge 2012) 46-69.

[17] CBRC, 'Annual Report 2009' <www.cbrc.gov.cn/chinese/home/docView/20100615A314C942DEE7DD34FF395FFCEB671E00.html> accessed on April 19, 2010.

[18] Peter Liu, 'The Financial Crisis and China's Banking Industry' <www.morningstar.co.uk/uk/news/article.aspx?articleid=59112&categoryid=14&lang=en-GB&validfrom=> accessed on November 25, 2008.

[19] PBC, 'Annual Report of Financial Stability 2009' <www.pbc.gov.cn/publish/jinrongwendingju/370/2010/20100712145051297162094/20100712145051297162094_.html> accessed on June 26, 2009.

Table 8.2: Chinese Commercial Banks' Exposure to the US Subprime Mortgage Securities (RMB Million)

Bank	US Securities Investment	ABS	SPL Lending	Value of SPL	Estimated Loss of SPL	Compared with PBT of 2007
BOC	590,766	37.4	0.51	29,641	3,853	4.5
CCB	306,685	10.8	0.07	4,433	576	0.7
ICBC	199,870	3.5	0.010.01	930	120	0.1
BCOM	27,583	52.5	0.07	1,941	252	1.2
CMB	34,272	17.3	0.02	794	103	0.7
CITIC	24,052	4.8		154	19	0.2

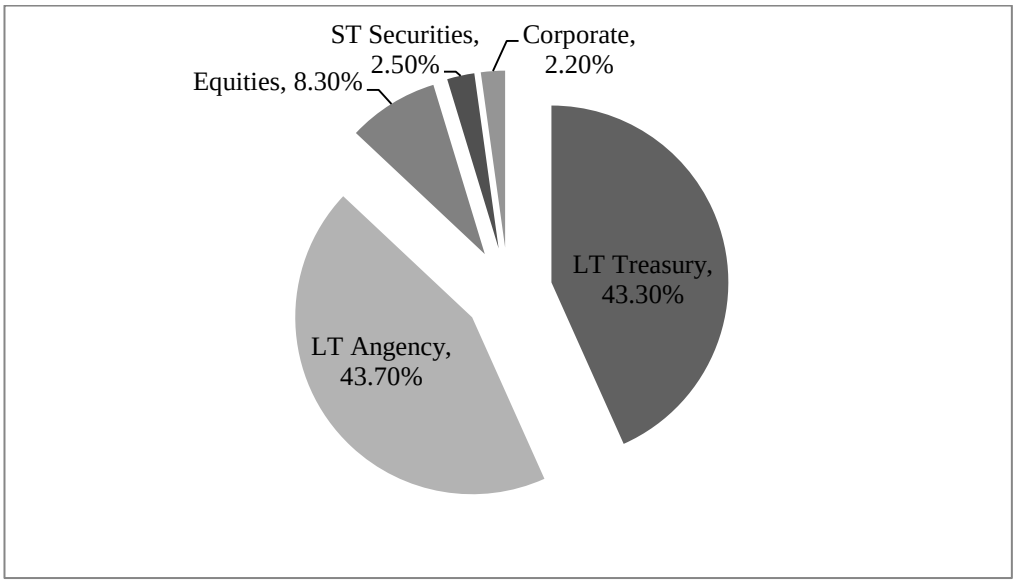
Notes
ABS: Asset Backed Securities; SPL: Subprime Loans; PBT: Profit before Tax
CCB: China Construction Bank; BCOM: Bank of Communication; CMB: China Merchant Bank; CITIC: China International Trust and Investment Corporation
Source: Capital Weekly, August 11, 2007 <*http://focus.jrj.com.cn*>.

Moreover, the PBC's holding of US assets did not appear excessively risky. China's foreign exchange reserves expanded during the decade before the GFC, from $216 billion in 2001, 15.3% of GDP, to $1.946 trillion, equivalent to 45% of GDP in 2008/9. To earn interest from foreign reserves, the PBC converted its foreign exchange holdings into financial securities in order to execute its exchange rate policy of pegged RMB against the US dollar.[20] As of June 2008,[21] China held US securities worth $1,205 billion, significantly up from $922 billion the year before. By category (as illustrated in Table 8.3),[22] China was the largest holder of long-term US agency securities, its $527 billion accounting for 36% of the total. Most of China's holding in US securities consisted of long-term government agency and long-term Treasury securities, 43.7% and 43.3% respectively. In particular, the PBC held considerable debts from the securities issued by Fannie Mae and Freddie Mac,

[20] Morris Goldstein and Nicholas R. Lardy (eds.), *Debating China's Exchange Rate Policy* (Peterson Institute for International Economics 2008) 1-60.
[21] The US Treasury Department conducts an annual survey about foreign portfolio holdings of US securities by countries, which reports data excluding foreign direct investment in the US for the year ending every June.
[22] Wayne M. Morrison and Marc Labonte, 'China's Holding of US Securities: Implications for the US Economy' CRS Report for Congress, RL34314, 2009 <http://file.wikileaks.org/file/crs/RL34314.pdf>.

which have been in conservatorship of the Federal Government since September 2008. The PBC involvement in the subprime mortgage market was thus a relatively small part of its total US securities holdings.[23]

Table 8.3: Composition of China's Holdings of US Securities in June 2008



Notes
LT=Long Term ST=Short Term
Data Resources: Department of Treasury, UK

The strong trade relationship with the rest of the world, including exports and international capital flows, therefore, brought China into the province of the GFC without making it a particular victim of it. In terms of financial exposure, China had not yet completed liberalisation with continuing constraints upon financial derivatives, investment channels, and advanced securitization. Although both commercial banks and the state central bank had increased their engagement with US financial assets, their overall holding was not so critical as to escalate a credit crunch into large-scale financial upheaval. Its relatively closed financial market deflected and deterred more serious losses. A different crisis contagion channel has thus limited China's eventual exposure and the attendant policy responses, as well as their

[23] Official data about China's engagement in the US subprime mortgage market are not accessible from the Chinese government. The tendency is to reduce holding in long-term US agency debt but increase in short-term US Treasury securities for safety reasons.

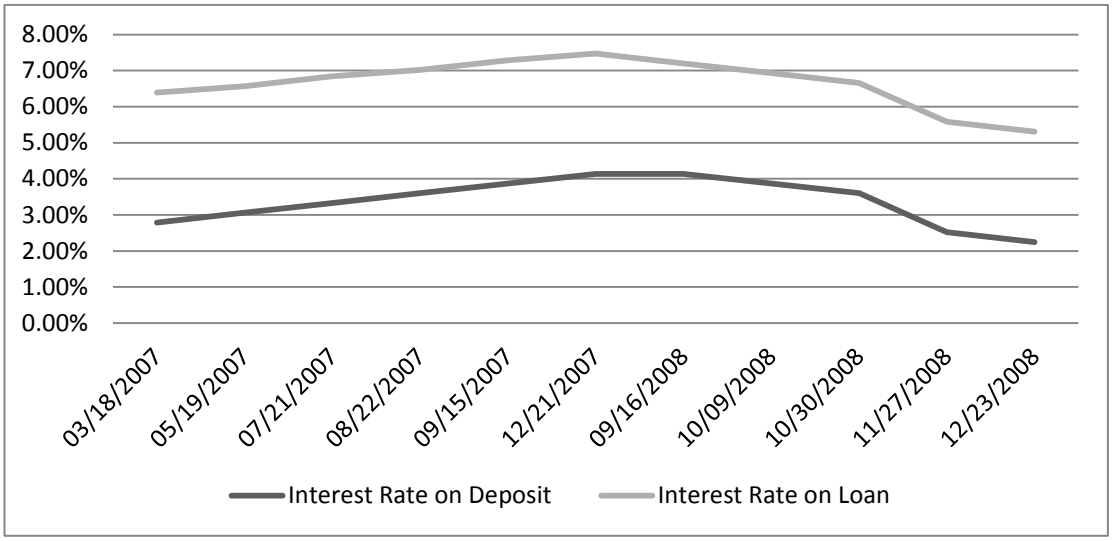
later outcomes.[24]

8.2.1.2 The PBC Policy Responses

China recorded two-digit GDP growth rates between 2003 and 2007, resulting from excessive investment and net exports. In early 2008, fearing an overheated domestic economy, some measures were undertaken to rebalance growth, including slowing the pace of new investment. The PBC had executed a tight monetary policy prior to the GFC, but soon revised this.[25] For example, both interest rates and required reserve ratios increased up to June 2008 but, as early as September 2008, the PBC reduced both: the former was continuously cut until December 2008 (as illustrated in Table 8.4), and the latter declined to 15.5%. The RMB had been pegged against a basket of currencies with a 0.3% daily fluctuation since 2005, but the PBC pegged it back to the USD as early as July 2008.[26] By end-2008, the PBC voluntarily stopped issuing central bank bills, which used to be purchased mainly by SOCBs. Excess liquidity thus confounded the interbank market, and real interest rates declined. More remarkably, the loan quota mechanism, introduced to control economic overheating between late 2007 and early 2008, was removed, aiming to encourage further lending.[27] Accordingly, in response to the GFC, the PBC loosened monetary policy by easing lending.

[24] Nir Kshetri, 'Emerging Economies and the Global Financial Crisis: Evidence from China and India' (2011) *Thunderbird International Business Review* 53(2): 247-262.
[25] Barry Naughton, 'China's Emergence from Economic Crisis' 29 *China Leadership Monitor* 2009: 1-10.
[26] Wayne M. Morrison and Marc Labonte, 'China's Currency: An Analysis of the Economic Issues' CRS Report for Congress, RS21625, 2011 <http://fpc.state.gov/documents/organization/155620.pdf>.
[27] Lijun Mao and Bo Wang, 'Lending Caps to Reduce Liquidity' (China Daily, 21st January 2010).

Table 8.4: PBC Interest Rates between March 2007 and December 2008



Data source: PBC <*www.pbc.gov.cn/publish/zhengcehuobisi/628/index.html*>.

Between December 5 and 7, 2008, the Economic Work Conference, which stipulated guidelines for all monetary and fiscal policies for 2009, was finally held in Beijing after three weeks' delay.[28] The total increase in bank loans was targeted at RMB¥ 4 trillion with an extra RMB¥ 100 billion allocated to policy banks. Following the announcement of the stimulus package in November 2008, bank loan growth exploded. For instance, the first week of 2009 saw a record RMB¥ 600 billion bank loans, and the figure increased up to RMB¥ 4.6 trillion by the end of March, more than the entire stimulus package envisaged. M2, the broad money supply,[29] increased 27.7%, constituting 178% of GDP.[30]

Although the PBC began monetary expansion after Lehman Brothers' bankruptcy,[31]

[28] 'News of the Communist Party of China' <http://theory.people.com.cn/GB/49154/49155/8480932.html> accessed on December 8, 2008.
[29] The PBC's official explanation of M2: <www.pbc.gov.cn:8080/publish/goutongjiaoliu/524/2011/20111115190311532831963/20111115190311532831963_.html> accessed on November 15, 2011.
[30] Data resource: National Bureau of Statistics of China <www.stats.gov.cn/was40/gjtjj_detail.jsp?searchword=%BB%F5%B1%D2%B9%A9%D3%A6%C1%BF&presearchword=2008%C4%EA%BB%F5%B1%D2%B9%A9%D3%A6%C1%BF&channelid=6697&record=13> accessed on October 18, 2012.
[31] It is reported that the first policy discussion meeting was held as early as June 2008 prior to the Beijing Olympics, well ahead of the collapse of Lehman Brothers. Dirk Schmidt and Sebastian Heilmann, 'Dealing with Economic Crisis in 2008-09: The Chinese Government's Crisis Management in Comparative Perspective' in Stiftung Bertelsmann (ed.), *Managing the Crisis: A*

little evidence is available to indicate contagion in China.[32] For example, both exports and FDI did not incur major losses until November 2008, three months after the first interest rates cut.[33] The PBC accordingly undertook some proactive measures. Its mechanisms of risk management were otherwise improved by diversified instruments. It succeeded in adding loanable funds by cutting benchmark interest rates and rates for mortgage loans, as well as varying chosen preferences and requirements.[34] It also affected monetary policies in a gradual and carefully negotiated manner. In addition to prioritising agriculture and exports, the PBC extended lower reserve ratios requirements to main SOCBs from other savings institutions. It has also given preference to the countryside and earthquake-struck areas. To some extent, China's central bank still pursues selected quasi fiscal responsibilities and/or administrative guidance for the wider public welfare.

8.2.1.3 Fiscal Stimulus Package

After the PBC proactively reduced interest rates, China announced on November 9, 2008 a two-year RMB¥ 4 trillion fiscal stimulus package, equivalent to $586 billion, accounting for nearly 14% of GDP in 2008. In terms of scale, this fiscal stimulus package was the second largest after the US.[35] The NDRC was originally responsible for designing and implementing the package, but other changes have since taken place. The Economic Work Conference in December 2008 reviewed this proposal, and later modified in March 2009 with slightly more emphasis upon social

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Comparative Assessment of Economic Governance in 14 Economies (Gutersloh: Bertelsmann Stiftung 2010).

[32] Major economic indicators fell below expectations, but due to 2008 Beijing Olympic Games, it is difficult to explain its exact relationship with external financial shocks. Refer to, Jeffrey G. Owen, 'Estimating the Cost and Benefit of Hosting Olympic Games: What Can Beijing Expect from Its 2008 Games?' (2005) *The Industrial Geographer* 3(1): 1-18.

[33] Laura Alfaro and Maggie Chen, 'Surviving the Global Financial Crisis: Foreign Direct Investment and Establishment Performance' Harvard Business School, Working Paper 10-110, 2010 <www.hbs.edu/faculty/Publication%20Files/10-110.pdf>.

[34] Nicholas R. Lardy, 'The Sustainability of China's Recovery from the Global Recession' Peterson Institute for International Economics, No PB10-7, 2010 < http://ssrn.com/abstract=2126176>.

[35] It is estimated that fiscal stimuli from the US, China and Japan accounted for around $424 billion in 2009. China's package constituted 2.1% of its GDP, and the US's package 1.9% of its GDP. By 2010, the US accounted for 60% of the planned stimulus from G-20 countries and China for 15%. Eswar Prasad and Isaac Sorkin, 'Assessing the G-20 Economic Stimulus Plans: A Deeper Look' (Brookings, March 2009) <www.brookings.edu/~/media/research/files/articles/2009/3/g20%20stimulus%20prasad/03_g20_stimulus_prasad.pdf>.

spending.[36] Further changes occurred in 2010 with additional importance attached to healthcare and education.[37] In essence, this stimulus package has been liable to be amended according to government's discretion throughout its implementation. By category, it consisted of public works, social welfare and tax reform (as illustrated in Table 8.5), with the largest portion devoted to transport and power infrastructure (37.5%). It reaffirmed that fixed asset investment (FAI) has long been the most important driving power because of its high growth rate and sizeable share of recorded GDP increases.[38]

Table 8.5: Sector Breakdown of China's Fiscal Stimulus Package

Items	Initial Plan November 2008	Revised Plan March 2009	First Tranche December 2008	Second Tranche February 2009
Transport & power infrastructure	60%	50%	25%	21%
Rural village infrastructure	12%	12%	34%	24%
Environmental investment; natural area	12%	7%	12%	8%
Affordable housing	9%	13%	10%	22%
Technological innovation; structural adjustment	5%	12%	6%	12%
Health & education	1%	5%	13%	13%

Source: News release, MOF, May 21, 2009 <*www.ndrc.gov.cn/xwzx/xwtt/t20090521_280383.htm*>.

With regards to funding resources, central government directly committed 30%, amounting to 19% of China's fiscal revenue. The remaining 70% was covered by local governments bearing the responsibility to collect funds. Implementation was

[36] <www.gov.cn/ldhd/2009-12/07/content_1481724.htm> accessed on December 7, 2009.
[37] <www.mof.gov.cn/zhuantihuigu/2010qgcz/qgczhy2010/201001/t20100111_258396.html>.
[38] Yanchun Zhang, Nina Thelen and Aparna Rao, 'Social Protection in Fiscal Stimulus Packages: Some Evidence' United Nations Development Programme, a UNDP/ODS Working Paper, March 2010 <http://web.undp.org/developmentstudies/docs/socialprotection_fiscalstimulus_march2010.pdf>.

thereafter impacted by bargaining and negotiation between central and local governments.[39] To gain approval, local governments submitted applications about potential projects to the NDRC, and funds were accordingly allocated either directly from central government or through commercial bank loans. However, according to the Law of the PRC on the Financial Budget, local governments are prohibited from issuing bonds. Under this arrangement, they were instead allowed to invest in bonds issued by the MOF up to the total value of RMB¥ 200 billion, with revenue and repayment obligations accounted into their own budgets. A special arrangement of bank loans with extra-long-term, concessionary interest rates were also authorised to provide paid-in capital for such projects. By this means, local governments could finance their preferred projects by employing bank loans from SOCBs to allocate funds to SOEs.[40] Elsewhere, corporate debt was encouraged to take advantage of China's underdeveloped capital market. In the first quarter of 2009, for example, Initial Public Offerings (IPOs) increased subsequently by 7 million, 17 million, and 25 million shares.[41]

8.2.2 Assessment of China's Policy Responses

Leading state actors, the PBC included, have introduced proactive solutions to cope with any potential economic recession associated with external financial stocks. For all its proactivity, it is still hard to conclude that the PBC has successively managed to overcome the GFC without adverse consequences; instead, various factors have explained China's renewed growth. To assess the full outcomes, a three-tier strategy, incorporating varying-term goals, should be taken into consideration.[42]

It is widely agreed that China's package has enabled it to achieve stipulated GDP

[39] *Supra* 3.
[40] News report, 'Where Did that 7 Trillion Yuan Come From?' (Caijing online) <http://english.caijing.com.cn/2009-07-30/110218623.html> accessed on July 30, 2009.
[41] Date resource: CSRC <www.csrc.gov.cn/pub/newsite/sjtj/zqscyb/index_1.htm>.
[42] World Bank Office, 'Quarterly Update' China Quarterly Update, Beijing, March 2009 <http://siteresources.worldbank.org/INTCHINA/Resources/318862-1237238982080/5923417-1257229995645/cqu_Oct_2009.pdf>.

growth targets both in 2008 and 2009.[43] In January 2010, a GDP growth rate above 10% exceeded previous years on average. The Shanghai Stock Exchange Composite Index rose by 45% and, on a year-on-year basis, in April 2010, retail sales soared by 14.8%, industrial output by 7.3%, and investment in real estate by 6.4%.[44] In this respect, Chinese policy responses to the GFC appear notably effective. The PBC's contribution was not beyond the general toolbox for a central bank but, in the context of incomplete economic reform, it was nevertheless considerable. Monetary policies were employed prior to the selected fiscal stimulus package, but the latter is still claimed to have duly renewed GDP growth.[45] Empirically, China's stimulus package added approximately 2 – 3 percentages to the levels of GDP in both 2009 and 2010.[46] Since the end of 2008, fiscal and monetary stimuli have reinforced each other: on one hand, the PBC adopted various monetary instruments to make funds available, and the fiscal package channelled loanable credits; on the other hand, under due fiscal policies, credits have been targeted to deal with actual and prospective recession. Throughout 2009, a loose monetary policy in effect supported the expansionary fiscal policy. Therefore, fiscal support, on which China depended to survive external shocks, was more effective than monetary policies, and the PBC's own responses took this into account for bottoming up economic recession.

China's financial regulation and supervision regime is argued to have been sufficient

[43] 8% continued to be the strategic economic objective from 2008 to 2010, with official GDP rates at 9.6%, 9.2% and 10.3% respectively. Data sources: NBSC, *Annual Report of the Nation's Social and Economic Development* (2009 and 2010) <www.stats.gov.cn/english/Statisticaldata/AnnualData/>. According to World Bank Group, China's GDP growth rates were 9.6% in 2008 and 9.1% in 2009: <http://search.worldbank.org/quickview?name=%3Cem%3EGDP%3C%2Fem%3E+%3Cem%3Egrowth%3C%2Fem%3E+%28annual+%25%29&id=NY.GDP.MKTP.KD.ZG&type=Indicators&cube_no=2&qterm=GDP+growth+rate+China> However, it has been pointed out that statistics were probably "man-made" and then not reliable: <www.telegraph.co.uk/finance/china-business/8183389/Wikileaks-Top-Chinese-official-doesnt-believe-GDP-figures.html> accessed on December 6, 2010.

[44] Wayne M. Morrison, 'China and the Global Financial Crisis: Implications for the United States' CRS Report for Congress, RS22984, 2009 <http://fas.org/sgp/crs/row/RS22984.pdf>.

[45] In the short run, both fiscal stimulus and monetary expansion will work out the stress caused by financial turbulence, with significantly differing levels across regions. But the latter is argued to have longer-term functions with less negative effects. See, Zhiwei Zhang and Wenlang Zhang, 'The Road to Recovery: Fiscal Stimulus, Financial Sector Rehabilitation, and Potential Risks Ahead' Hong Kong Monetary Authority, Research Department Working Paper, 18/2009, 2009 <www.bis.org/repofficepubl/arpresearch201003.14.pdf>.

[46] Adam Mckissack and Jessica Y. Xu, 'Chinese Macroeconomic Management Through the Crisis and Beyond' (2011) *Asian-Pacific Economic Literature* 25(1): 43-55.

to meet immediate GFC problems.[47] As the banking regulator, the CBRC conducted direct policy instruments to regulate banking risks, mainly by addressing liquidation risk management, information disclosure, interest rate risk management, methods of capital calculation, inspections of capital adequacy, and securitisation.[48] It particularly strengthened controls over trust companies with stricter criteria about conduits for banks to make off-sheet loans. More importantly, the working mechanism between the PBC and CBRC is judged successful. They cooperated to directly affect capital distributions. Since the end of 2008, bank loans followed fiscal expansion, and most were channelled to SOEs supported by their local governments. In this context, the CBRC called for more support for SMEs and rural finance[49] and, in response, the PBC removed constraints upon the circulation of bonds issued by SMEs.[50] The CBRC also acted with the PBC to release a series of regulations in relation to loan policies, financial innovations and services.[51] Even so, the competence of the *yihang sanhui* arrangement was certified by China's overall limited risk exposure. In particular, no major financial institutions claimed illiquidity or insolvency between 2008 and 2009. This reduced the burden facing China's financial regulators and supervisors, which have not yet been challenged by failing banks or market rescues on a large scale.

From the perspective of its medium-term plan, China has sought to readjust economic growth, and since the 16th NPC Conference in 2002, certain structural reforms have occurred.[52] In December 2004, a Central Economic Work Conference was held in Beijing, whereby the central government announced to change

[47] Mingkang Liu, 'The Choice of China's Banking Regulation and Supervision/Zhongguo Yinhangye Jianguan de Xuanze' at the 10th Summit, Asian Bankers, 2009 <www.hq.xinhuanet.com/focus/boao2009/> accessed in April 2009 [in Chinese].
[48] Documents can be downloaded from <www.cbrc.gov.cn/chinese/home/docViewPage/110014&current=2.>.
[49] CBRC [2013] No. 7, Options of the China Banking Regulatory Commission on Deepening the Financial Service for SMEs <www.cbrc.gov.cn/govView_966D1715F72A4E31BFE75BEB19B3F3B4.html> accessed on March 21, 2013). Zhaoxin Wang, 'Interviews with Xinhua News' (Online, 2009).
[50] PBC, Announcement No. 1, 2009.
[51] Yuhua Xu, 'The Regulatory Practice of China's Banking Sector' Multi-Year Expert Meeting on Services, Development and Trade, Country Report: China, 2009, Geneva <http://unctad.org/sections/wcmu/docs/c1mem3p32_en.pdf>.
[52] <http://cpc.people.com.cn/GB/64184/64186/207391/13295828.html> accessed on March 12, 2005. For a brief analysis, refer to, Nicholas R. Lardy, 'China: Toward a Consumption-Driven Growth Path' Institute for International Economics, Policy Briefs in international economics, No PBO 6-6, 2006 <www.iie.com/publications/pb/pb06-6.pdf>.

fundamentally China's economic growth pattern.[53] In principle, domestic consumption would replace the role played by investment and exporting to spur further economic growth.[54] China was expected to focus upon deepening structural reform, including a shift toward domestic consumption, a shift to interior development, and more emphasis upon higher value-added manufacturing and supporting SMEs.[55] However, neither fiscal nor monetary policies above were particularly specific about these ends.[56] For example, even during the GFC, SOE capital was implicitly guaranteed by governments and banks, though SMEs and the private sector had sought further exports and employment growth.[57] Exports grew after the 3rd quarter of 2009 following policy preference from both local governments and the PBC. Rather than a credit crunch, banking credit increased faster, accelerating GDP growth. As has been argued about China's transmission channels, over-dependency upon exports and international investment induced contagion from external financial shocks, but recovery still rested upon SOEs, exports, and more expansive lending; and domestic vulnerabilities have thus been aggravated by disparate global demands. From this point of view, there is an observable mismatch between official policy responses and the stated medium-term development target of advancing economic rebalancing.[58] Therefore, in the post-crisis era, China could become challenged by deteriorated vulnerabilities from lasting unbalanced growth and ineffective crisis management solutions as well.[59]

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[53] News report, <http://english.peopledaily.com.cn/zhuanti/Zhuanti_436.html> accessed on December 15, 2004.

[54] Nicholas R. Lardy, 'China: Rebalancing Economic Growth' in Henry Paulson, Robert B. Zoellick and Craig Mundie (eds.), *The China Balance Sheet in 2007 and Beyond* (Centre for Strategic and International Studies and the Peterson Institution for International Economics 2007) 1-24.

[55] William H. Overholt, 'China in the Global Financial Crisis: Rising Influence, Rising Challenges' (2010) *The Washington Quarterly* 33(1): 21-34.

[56] It is argued that fiscal policy can be more important in the post-crisis era. Donghyun Park and Yolanda Fernandez Lommen, 'The Role of Fiscal Policy in Rebalancing the People's Republic of China' ADB Briefs, No 3, 2010 <www.carecprogram.org/uploads/docs/CAREC-Countries/PRC/2010/ADO2010-Update-East-Asia-PRC.pdf>.

[57] <www.chinadaily.com.cn/business/2011-02/09/content_11967514.htm> accessed on February 9, 2011.

[58] In 2009, it was widely reported in China that structural rebalance was formally accelerated by China's V-model recovery. E.g., see, Fengxuan Xue, 'Balanced Development: China's Future Development Strategy' 1 *Asia-Pacific Economic Review* 2010: 3-5, 54 [in Chinese]; Yan Jin, 'The Formal Initiative of China's Economic Pattern Adjustment and Reform/Zhonguo Jijing Jiegou Tiaozheng he Gaige Zhengshi Qichen' 2 *Comment* 2010:30-32 [in Chinese]; and Lie Zhang, 'To Start the Structural Adjustment of China's Economy/Zhongguo Jijing Jiegou Tiaozheng Poju' 1 *Chinese Business Update* 2010:30-32 [in Chinese].

[59] For political and economic challenges after the GFC, refer to, Nicholas R. Lardy and Arvind Subramanian, *Sustaining China's Economic Growth after the Global Financial Crisis* (Peterson Institute 2011).

Now, it is still difficult to predict the full longer-term effect of China's selected crisis management solutions, but expectations have since changed. Fiscal solvency, which had helped facilitate China's economic expansion, has raised critical concerns. From 2001, the central government had pursued a contraction fiscal policy; and in 2006, the PNC used a new approval system for the national budget, accelerating national debt reduction from that year on.[60] Accordingly, China had claimed a sound fiscal base, carrying a deficit of only 0.4% of GDP in 2008 with average outstanding public debt accounting for less than 20% of GDP.[61] Given that China's GDP growth rate was 8% prior to the stimulus package, the outstanding amount of total debt reached 21.6% in 2008, 25.5% in 2009, and 27.9% in 2010.[62] However, fiscal soundness of local governments became more critical after they have committed a considerable part of the stimulus package.[63] Moreover, local governments typically employed corporate vehicles to obtain capital with implicit or explicit guarantees, even though legal restrictions prohibit sub-national borrowing. From 2008 to 2009, those vehicles had largely increased funds, approximately equal to the total issuance over the previous four years. But there are risks in employing such vehicles, and undue information asymmetry[64] makes it so difficult to access that additional NPLs in SOCBs became possible. The CBRC indicated that, until June 2010, around 23% of those bank loans supporting local governments' invested projects were at the risk of default.[65] Since mid-2010, the MOF intervened in local governments' fiscal policies by regulating their fiscal positions in terms of supervision, corporate governance, and the accounting system of corporate vehicles.[66] In addition, credit

[60] News report, <www.atimes.com/atimes/China_Business/HE27Cb01.html> accessed on May 27, 2006.
[61] Lida Liu, 'The Fiscal Policy Framework in China' (PBC Research Bureau 2007) 569-593 <www.bancaditalia.it/studiricerche/convegni/atti/fiscal_policy/Session%203/Lida.pdf>.
[62] *Supra* 5, Liu (2009): 11-13.
[63] Larry Brainard and Bo Zhuang, 'Is China's Local Government Debt a Serious Problem?' China Macro Policy, Trusted Sources Research & Networks, April 28, 2010 <www.trustedsources.co.uk/china/macro-policy/Is-China-s-local-government-debt-a-serious-problem>.
[64] Xu Lin, 'Taming "Local Government INC"' (China Reform, Issue 316). <http://english.caixin.com/2010-01-21/100110141.html> accessed on January 15, 2010.
[65] Local Governments' Debts/Difang Zhengfu Zhaiwu (2012) *Financial Focuses* 196(4):1-11 [in Chinese].
[66] On June 7, 2010, the MOF enacted Note of Supervision of the Financial System of Local Financial Corporations (MOF [2010] No. 56 <http://jrs.mof.gov.cn/zhengwuxinxi/zhengcefabu/201006/t20100617_322960.html>); on September 10, 2010, Note of Provisional Arrangement of Governments' Financial Vehicles (MOF [2010] No. 80 <http://zhs.mof.gov.cn/zhengwuxinxi/zhengcefabu/201009/t20100921_340141.html>); on October 28, 2010, Note of Provisional Arrangement of the Accounting System of Local Governments' Financial

expansion exacerbated excess in industrial capacity, and exerted downward pressure on prices, as well as corporate profits.[67] As a result, SOCBs would be further challenged by deteriorating balance sheets, while SOEs faced significant competition disadvantages. Although corporate bond and commercial paper markets were encouraged to develop during the GFC, they failed to change the dominant position by indirect financing offered by bank loans.[68] In consequence, rather than negative effects from external financial shocks, China's financial market has become more susceptible to domestic vulnerabilities associated with deepening financial reform.

Before the crisis, China was challenged by severe inflation, and inflationary pressures continue to constitute a major concern, especially after monetary aggregates have grown at a significant speed. Since January 2010, the PBC began to tighten monetary policies by increasing required reserve ratios; it maintained low interest rates for loans and deposits throughout 2009 and increases them after October 2010 (as illustrated in Table 8.6).[69] In spite of these changed policy instruments to control economic overheating, by October 2013, M2 reached RMB¥ 107.02 trillion, more than 200% of GDP, triggering an increasing concern about a credit bubble.[70] In particular, the urban real estate sector and the stock market have continuously signalled the threat of a bubble economy.[71] It is further

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Vehicles in Non-profit Projects (MOF [2010] No. 22 <http://kjs.mof.gov.cn/zhengwuxinxi/gongzuotongzhi/201011/t20101115_348841.html>).

[67] Lianshi Zhou, 'Political Factors and Corrections of Excess in Industrial Capacity in China/Zhonguo Channeng Guosheng de Zhengce Yinsu yu Wanshan' 2 *Shanghai Economics Review* 2007: 3-10 [in Chinese].

[68] R. Herd, S. Hill and C. Pigott, 'China's Financial Sector Reforms' OECD Economics Department Working Papers, No 747, OECD Publishing, <http://dx.doi.org/10.1787/5kmlh5n23mzs-en> accessed February 1, 2010.

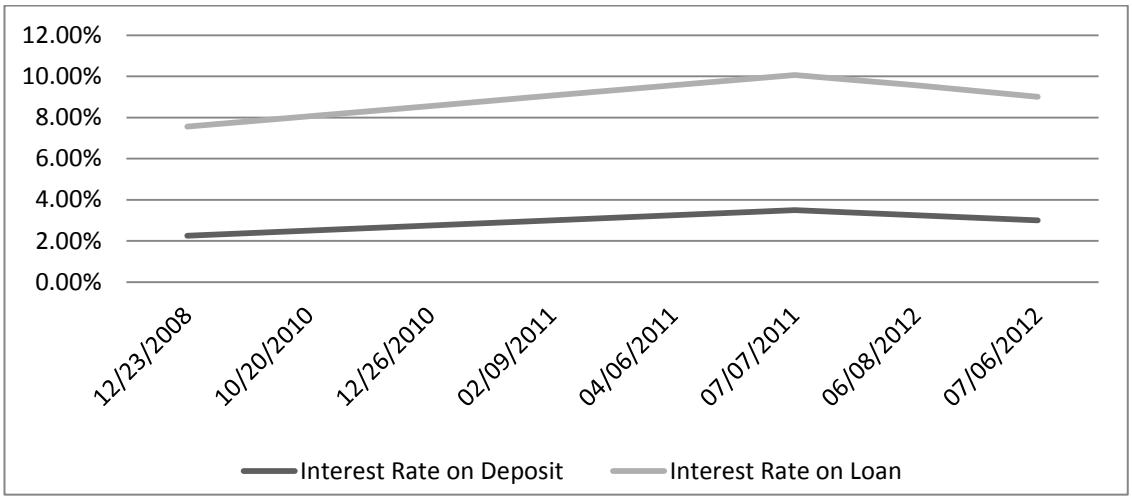
[69] PBC, News Release, <www.pbc.gov.cn/publish/goutongjiaoliu/524/2011/20110201155627303686272/20110201155627303686272_.html> accessed on February 1, 2011.

[70] Data source: PBC Data and Statistics, <www.pbc.gov.cn/publish/diaochatongjisi/3172/2013/20131111155717859590178/20131111155717859590178_.html> accessed on November 11, 2013. For the threat of China's credit bubble, see, Gavyn Davies, China Faces a Difficult Credit Bubble Workout (Financial Times, July 8, 2013) <www.ft.com/cms/s/0/f76a5202-e241-11e2-87ec-00144feabdc0.html#axzz2uQgF0RDr>.

[71] Even it is argued that "China is a bubble"; see, Jesse Colombo, 'China's Bubble Economy or The China Bubble' <www.thebubblebubble.com/china-bubble/>. As regards the effect of such bubble-like signs, disagreement still continues. China has been warned of the severity of its bubble and serious outcomes after the bursting; refer to Takatoshi Ito, 'China's Property Bubble is Worse than it Looks' (Financial Times, March 17, 2010) <www.borrelliwalsh.com/files/publications/212/212News2010031902.pdf>. Paul Krugman, 'Will China Break?' (The New York Times, December 18, 2011) <www.jordipujol.cat/files/articles/xina19.pdf>. However, some scholars are more optimistic; see,

argued that China's bubble up to 2010 was similar to Japan in the late 1980s, when the central bank conducted monetary easing in fear of deflationary effects with a stronger currency.[72] However, after peaking at the two-digit GDP growth in 2010, China's economic growth has slowed down. For 2012, it was 7.5%, the lowest for thirteen years. In the 12th Five-Year Plan, the target for economic growth was reduced to 7% for 2011-2015.[73] As the challenge of rebalancing has become more evident, new reform measures are required with sacrificing sort of economic growth; this has been publicly addressed in top political leaders' speeches.[74] In brief, China is now challenged by the conflict between overheating market conditions, as regards its official stimulus packages amid the wider economic recession, and slowing economic development during the accelerating transition toward a more balanced and sustainable growth path.[75]

Table 8.6: PBC Interest Rates between December 2008 and July 2012



Source: Monetary Policy Department, PBC <*www.pbc.gov.cn/publish/zhengcehuobisi/628/index.html*>.

Christian Dreger and Yanqun Zhang, 'Is There a Bubble in the Chinese Housing Market?' (2013) *Urban Policy and Research* 31(1): 27-39.

[72] Kazuo Ueda, 'Japan's Bubble, the USA's Bubble and China's Bubble' (2011) *China and World Economy* 19(1): 47-62.

[73] <www.gov.cn/2011lh/content_1825838.htm> accessed on March 16, 2011.

[74] President Jingping Xi made a speech at the Asian-Pacific Economic Co-operation Forum (APEC), saying that Beijing was willing to sacrifice the pace of growth for structural economic reform. Refer to, <www.scmp.com/news/china/article/1326571/china-must-sacrifice-faster-growth-reform-xi-tells-apec-summit> accessed on October 8, 2013.

[75] IMF, 'People's Republic of China: 2013 Article IV consultation' IMF Country Report No. 13/211, 2013 <www.imf.org/external/pubs/ft/scr/2013/cr13211.pdf>.

So, quick resilience can only show the success of crisis management solutions in meeting the short-term target, but still China encounters both instant and far-reaching negative effects from the GFC. Monetary and fiscal expansions have further enhanced overheating economic prospects with intense inflationary pressure. As the selected policy responses brought an observable mismatch in relation to its stated rebalancing reform goals, external instability has actually brought more unbalanced economic growth.[76] What is more, under loose monetary policy, easing lending follows the proactive fiscal policy, so that the monetary policy response remains subordinated to fiscal stimuli. Should global recovery falter, China would likely return to fiscal tools to offset any susceptibility to external shocks.[77] For example, in mid-2013, it employed a mini-stimulus package to deal with domestic slowdown, including tax cuts, facilities for exporting firms, and extended investment into railway projects from private investors.[78] It is thus argued that these factors, which underlined sustained growth even during the GFC, paradoxically pose other risks and challenges to China's domestic economy over a long-term perspective.[79]

8.2.3 Summary

Confronting the recent GFC, limited market liberalisation has helped reduce direct negative effects from external shocks, placing China in a better position to deal with financial risk. Broadly, economic reform has brought major household savings and foreign reserves into play, buffering outside shocks. China was also fiscally judicious, allowing flexibility to design and implement well-directed policy changes. As regards monetary policies, the PBC formally controlled interest and exchange

[76] Sonia Brunschwing, Bruno Carrasco, Tadateru Hayashi and Hiranya Mukhopadhyay, 'The Global Financial Crisis: Impact on Asia and Emerging Consensus' Asian Development Bank, South Asia Working Paper Series No 3, 2011 <www.adb.org/sites/default/files/pub/2011/Impact-on-Asia-and-Emerging-Consensus.pdf>.
[77] IMF, 'People's Republic of China: 2010 Article IV consultation – Staff Report; Staff Statement; Public Information Notice on the Executive Board Discussion' IMF Country Report, No 10/238, 2010 <www.imf.org/external/pubs/ft/scr/2010/cr10238.pdf>.
[78] News report, <http://finance.cankaoxiaoxi.com/2013/0726/245275.shtml> accessed on July 26, 2013.
[79] Kumiko Okazaki and Tomoyuki Fukumoto, 'Macro-financial Linkage and Financial Deepening in China after the Global Financial Crisis' IMES Discussion Paper Series, No 2011-E-2, 2011 <www.imes.boj.or.jp/research/papers/english/11-E-02.pdf>.

rates policies,[80] which enabled further measures to be put in place to control liquidity. Overall, China's chosen fiscal stimulus package sought domestic stability, assisted by monetary policy with easy lending. In terms of outcomes, there has been an observable mismatch between official policy responses and the stated longer-term mission of economic rebalancing. More broadly, in the post-crisis era, China will be challenged by not only the pre-existing unbalanced growth, but also all costs paid for its quick resilience, renewing uncertainty about its further development.

8.3 Overall PBC Policies during the GFC

It is argued that one leading goal for central banks in developing countries is to support financial sector development.[81] During the GFC, China's marketisation continued, with both domestic liberalisation and a new supranational financial strategy in place.

8.3.1 Domestic Financial Liberalisation

As demonstrated in Chapter Seven, China's financial liberalization did not develop evenly in terms of institutions, instruments and market principles. During the GFC, further reform measures have been applied especially to financial institutions and instruments, while certain suspended marketization has been resumed in succession. Monetary Policy Department II was established within the PBC in November 2009, and its objective, besides cooperation with the MPC and Monetary Policy Department, concentrates upon RMB issues, including exchange rates, as well as cross-border currency trade and cooperation.[82] The MPC was also reformed with expert members increased from one to three in March 2010.[83] To improve transparency through further information disclosure, the PBC began reporting

[80] As explained in Chapter Seven, refer to Section 7.5.
[81] This has been further confirmed as one principle for reform in the post-crisis era. Refer to, William Poole, 'Principles for Reform' (2010) *Finance & Development* 47(2): 28-29.
[82] Official website: <www.pbc.gov.cn/publish/huobizhengceersi/3120/index.html>.
[83] PBC, News Release, <www.pbc.gov.cn/publish/huobizhengceersi/3419/2010/20100915161005426631932/20100915161005426631932_.html> accessed on March 29, 2010.

financial stability annually.[84] It is thus argued that the PBC has improved its own structure and working mechanisms towards policy-making authority after continuous reforms and strengthening credibility of its policy records in financial crises.[85] In terms of the banking sector, joint-stock reform was adopted for all major SOCBs,[86] after Central Huijin Investment Company Limited (Huijing) injected RMB¥ 1.3 billion into the Agriculture Bank of China in November 2008.[87] Since 2011, commercialization-oriented reform extended to restructure rural financial institutions[88] and Postal Savings Bank of China[89].

With regard to instruments, the PBC formally introduced a pilot programme of the Dynamic Adjustment of Deposit Reserve Ratio in early 2011,[90] allowing the ratios to vary on a quarterly or monthly basis gradually.[91] In January 2013, it launched the short-term liquidity operations (SLOs) complementing the OMOs, and also the Standing Lending Facility (SLF). Both were intended to offer financial aid in case of temporary liquidity shortage.[92] While it shifted to repo operations to moderately withdraw liquidity,[93] reserve repo operations were mainly used to inject liquidity in the second half of 2012.[94] In market sectors, the Growth Enterprise Market (GEM) was launched in May 2009 after a pilot programme in Shenzhen Stock Exchange in

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[84] Reports of Financial Stability from 2009 can be downloaded from <www.pbc.gov.cn/publish/jinrongwendingju/363/index.html>.
[85] Stephen Bell and Hui Feng, 'How Proximate and "Meta-institutional" Contexts Shape Institutional Change: Explaining the Rise of the People's Bank of China' (2014) *Political Studies* 62(1): 197-215.
[86] Allen N. Berger, Iftekhar Hasan and Mingming Zhou, 'Bank Ownership and Efficiency in China: What Would Happen in the World's Largest Nation?' (2009) *Journal of Banking & Finance* 33(1): 113-130.
[87] Yuk-Shing Cheng, 'Reforms of the Agricultural Bank of China: Can Policy and Commercial Objectives be Reconciled?' (2009) *The Chinese Economy* 42(5): 79-97.
[88] For the forum, see <www.chinanews.com/fortune/2011/08-02/3228732.shtml> accessed on August 2, 2011.
[89] For history and reform, see <www.psbc.com/portal/zh_CN/Home/PSBCNews/28874.html> accessed on April 16, 2012.
[90] PBC, 'China Monetary Policy Report Quarter Four, 2011' Monetary Policy Analysis Group <www.pbc.gov.cn/image_public/UserFiles/english/upload/File/2011Q4.pdf> accessed on February 15, 2012.
[91] Guonan Ma, Xiaodong Yan and Xi Liu, 'China's Evolving Reserve Requirements' BIS Working Papers No 360, 2011 <www.bis.org/publ/work360.pdf>.
[92] PBC, 'Highlights of China's Monetary Policy in the First Quarter of 2013' <www.pbc.gov.cn/publish/english/955/2013/20130530151859400875836/20130530151859400875836_.html> accessed on May 30, 2013.
[93] PBC, 'China Monetary Policy Report Quarter One, 2013' Monetary Policy Analysis Group <www.pbc.gov.cn/image_public/UserFiles/english/upload/File/13Q1MPR_EN_[afterNancy]1.pdf> accessed on May 9, 2013.
[94] PBC, 'China Monetary Policy Report Quarter Four, 2012' Monetary Policy Analysis Group <www.pbc.gov.cn/image_public/UserFiles/english/upload/File/%E8%B4%A7%E5%B8%81%E6%94%BF%E7%AD%96%E6%8A%A5%E5%91%8A(1).pdf> accessed on February 6, 2013.

2008.[95] The bond market expanded, but still dominated by the MOF and policy banks. The interbank market has also grown, especially after the PBC released the 2009 Notice,[96] requiring improved pricing in the Shanghai Interbank Offered Rate (Shibor).[97] Additionally, interbank market participants have expanded to cover banks, other financial institutions, non-financial enterprises, and insurance companies. As of the bond market, the PBC and MOF announced to create a market-making initiative for newly issued critical term bonds,[98] with pilot programmes to trade treasury bonds.[99] By 2011, the pilot programme of credit-asset securitization, suspended at end-2008, was resumed with the approval of the State Council; in May 2012, the PBC, working with the CBRC and MOF, upgraded the programme.[100] But securitization was still at the preliminary stage of development: there were no specific rules or regulations governing securitisation, only high quality credit assets were allowed for securitization, and re-securitization was still prohibited.[101] Certain controls over cross-border investment have meanwhile been relaxed,[102] and the CSRC considered relaxing the conditions for qualified foreign institutional investors (QFII).[103]

By comparison, progress in introducing market-oriented principles was delayed. As a proactive crisis management solution, the PBC first suspended the gradual reform regarding RMB convertibility. According to official data, the RMB against USD

[95] CSRC, Announcement No. 19, 2009.
[96] PBC, Announcement No. 24, 2009, <www.pbc.gov.cn/publish/bangongting/92/2010/20100302145249965992278/20100302145249965992278_.html> accessed on November 14, 2009.
[97] Shibor: <http://tianjin.pbc.gov.cn/publish/fzh_tianjin/2909/2011/20110929154048042834307/20110929154048042834307_.html> accessed on September 26, 2011.
[98] MOF and PBC [2011] No. 6.
[99] <www.pbc.gov.cn/image_public/UserFiles/english/upload/File/20130828-2012%E5%B9%B4%E6%8A%A5%E8%8B%B1%E6%96%87%E6%9C%80%E7%BB%888.8.pdf > 64-67.
[100] PBC [2012] No. 127, 'Notice on Further Expanding the Credit Asset Securitization Pilot Program' (May 17, 2012). Compared with the original pilot program in 2005, the reform introduced changes regarding securitization products and regulations from the PBC and the CBRC; see, Shengzhe Wang, 'Developments in the Chinese Securitisation Market' *China-EU Law Journal* <http://download.springer.com/static/pdf/915/art%253A10.1007%252Fs12689-013-0034-4.pdf?auth66=1394731127_3d51776ff65b6881e0de13e64c05926d&ext=.pdf> accessed on December 6, 2013.
[101] PBC, 'PBC Spokesperson Answers Press Questions on Expanding the Pilot Program of Credit Asset Securitization' <www.pbc.gov.cn/publish/english/955/2013/20130911165305934354341/20130911165305934354341_.html> accessed on September 11, 2013.
[102] SAFE [2012] Circular 7.
[103] <www.csrc.gov.cn/pub/zjhpublic/G00306201/201206/t20120620_211650.htm>.

appreciated by over 6% from November 2007 to March 2008, and the exchange RMB/USD rate arrived at 6.87 in December 2008.[104] Not until July 2010 did it announce further reform of the exchange rate policy, moving forwards to marketization.[105] It widened the floating range of the RMB/USD rate from 0.5% to 1% in April 2012.[106] The PBC has thus displayed an evident uncertainty about currency liberalization,[107] triggering concerns especially from the US.[108] Moreover, interest rates liberalisation was initiated in 1996. However, as accumulated liquidity restricted the commercial banks' ability to raise lending rates over the benchmark rate, liberalisation progress had slowed since as far back as 2004.[109] Interest rates continued to be determined by non-market factors, mainly the PBC's administration. The loan-deposit rate margin has likewise been ensured between the loan rate as the floor and the deposit rate as the ceiling.[110] It was not changed until June 2012, when the PBC reformed the floating ranges of deposits and commercial loans: the upper limit of deposits was set at 1.1 times and the floor of loans at 0.8 times.[111] After lowering the floor to 0.7 times in July 2012, the PBC announced to basically lift constraints upon loan rates after one year.[112] Later, in October 2013, the mechanism for loan prime rates was officially announced, applying to selected banks, while the PBC continued to set basic interest rates for loans as a transition arrangement.[113]

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[104] For historical review, see, Jarko Fidrmuc, 'Time-Varying Exchange Rate Basket in China from 2005 to 2009' (2009) *Comparative Economic Studies* 52(4): 515-529.
[105] PBC, News Release, <www.pbc.gov.cn/publish/zhengcehuobisi/641/2010/20100621164119336592231/20100621164119336592231_.html> accessed on June 20, 2010.
[106] PBC, Announcement No. 4, 2012.
[107] Appreciation of Chinese Yuan has been a long-standing problem but without general consensus. For details, see, *supra* 20.
[108] Lael Brainard, *Report to Congress on International Economic and Exchange Rate Policies* (DIANE Publishing 2011). About China's policy responses, see, Lee Taylor Buckley, 'China's Responses to US Pressure to Revalue the RMB' (2012) *China Research Centre* 11(1) <www.chinacenter.net/chinas-response-to-u-s-pressure-to-revalue-the-rmb/>.
[109] Wen Bin, 'An Empirical Study on the Choice of Benchmark Interest Rate after Interest Rates Liberalization in China' 11 *Studies of International Finance* 2004: 54-60.
[110] Lei Lu, 'Market Structure and Pricing Control: Analysis of Interest Rate Liberalization in China/Shichang Jiegou yu Jiage Guanzhi: Zhongguo Lilv Shichanghua de Pingxi' 4 *Journal of Financial Research* 2011: 46-57 [in Chinese].
[111] PBC, News Release, <www.pbc.gov.cn/publish/goutongjiaoliu/524/2012/20120607185856802594865/20120607185856802594865_.html> accessed on June 7, 2012.
[112] PBC, News Release, <www.pbc.gov.cn/publish/goutongjiaoliu/524/2013/20130719184316951612816/20130719184316951612816_.html> accessed on July 19, 2013.
[113] PBC, News Release, <www.pbc.gov.cn/publish/goutongjiaoliu/524/2013/20131025111655380607759/20131025111655380607759_.html> accessed on October 25, 2013.

Such rates have not yet effectively channelled due fund allocation, and the PBC has strengthened administrative tools to deal with financial volatilities.[114]

Lately, China's financial regulation and supervision regime has changed. Stress tests, initialled by the CBRC jointly with the PBC in 2007,[115] were completed in 2011, but data were not accessible except for a brief summary.[116] With regards to rule-making, both the PBC and CBRC have drafted and enacted rules and laws regarding financial liberalization. For example, after reforming its national payments system, the PBC introduced the High Value Payment System (HVPS) as a systemically important payment system (SIPS), and drafted the regulation through its administration.[117] In China, "financial holding companies (FHCs)" have not yet been included in formal legal frameworks, though pilot programmes have developed since the 1980s.[118] During the GFC, the PBC continued to formalize its regulation of FHCs.[119] From the perspective of the sector-based regulator, the CBRC introduced monitoring indicators in its off-site system, including leverage ratio, liquidity coverage ratio and net stable funding ratio,[120] and in January 2013, it released the new Regulation

[114] Tuuli Koivu, 'Has the Chinese Economy become More Sensitive to Interest Rates? Studying Credit Demand in China' (2009) *China Economic Review* 20(3): 455-470.
[115] CBRC [2007] No. 91.
[116] <http://changsha.pbc.gov.cn/publish/changsha/3997/2013/20131231152335662207430/20131231152335662207430_.html> accessed on December 31, 2012. A broad outline was included in the PBC's annual financial stability report of 2012 <www.pbc.gov.cn/image_public/UserFiles/english/upload/File/China%20Financial%20%20Stability%20Report(1).pdf> accessed on October 17, 2012.
[117] PBC [2012] No.4 <www.gov.cn/gongbao/content/2012/content_2163591.htm> accessed on January 5, 2012.
[118] Before the GFC, FHCs, without strict legal definition, had been established with varying formats. In 2003, the PBC conducted some preliminary research: 'Research on the Development of Financial Holding Companies in China' <www.pbc.gov.cn/publish/yanjiuju/703/1486/14867/14867_.html> accessed on July 26, 2004.
[119] PBC [2008] No. 195, Notice of the PBC on Bringing the Deposits of Financial Holding Companies into the Scope of Payment of Deposit Reserves. In March 2013, a proposal was submitted to the State Council, proposing to draft the Law on Financial Holding Companies, where the US model of umbrella supervision was viewed as in accordance with China's financial sector (News report, <www.chamc.com.cn/xwzx/jtxw/2013/138105.shtml> accessed on June 14, 2013). Also, it is argued that the sector-based financial market has fundamentally limited the FHCs. Refer to, Xiangui Zeng, 'A Legal Study into the Regulation and Supervision of Financial Holding Companies in China/ Zhongguo Jinrong Konggu Gongsi Jianguan de Falv Zhidu Yanjiu' Fudan University, Shanghai, 2012 <http://cdmd.cnki.com.cn/Article/CDMD-10246-1013100360.htm> [in Chinese].
[120] CBRC, Annual Report 2011, <www.cbrc.gov.cn/chinese/files/2013/8FC77357E36D44D2BD8B3C4BE97F965F.pdf> accessed in April 2012, 59-73.

Governing Capital of Commercial Banks (Provisional).[121] Meanwhile, the PBC clarified that while financial behaviour should come under comprehensive effective legal regulation, a more principle-based approach would facilitate the implementation of laws.[122] However, legal reform occurred piecemeal by revising old rules and drafting new laws, reinforcing China's rule-based regulatory framework.[123]

Since financial sector reform began, institution building has been much emphasised with more diversified ownership and internal structure, followed by banking and capital markets development, but still market liberalisation raised further problems; this continued during the GFC. In principle, for a central bank in a transition economy, slow-speed liberalisation could themselves be employed as instruments against moderate external shocks. The resulting co-existence of direct and indirect tools helps guarantee effects as planned due to the PBC's direct control over the financial sector.

8.3.2 China's New Supranational Financial Strategy

China has long developed an export-led growth pattern driven by massive FDI. In particular, the RMB has continued to peg to the USD, and also China is the largest creditor of US securities. It is estimated that a depreciation of the dollar by 20% would generate a $300 billion loss in China's reserve.[124] As early as in 2008, therefore, two rounds of Strategic Economic Dialogue between China and the US were held, where Chinese authorities promised to continue US treasury bonds holding but urged the US to stabilise its economy and protect Chinese investment,

[121] CBRC, News Release, <www.cbrc.gov.cn/EngdocView.do?docID=AB70AFA9BF4D4E51BFA5D90734894692>. The Provisional Regulation is available at <www.cbrc.gov.cn/chinese/files/2013/F33707362EA84C04B259FED646D35977.pdf>.
[122] PBC, News Release, <www.pbc.gov.cn/publish/jinrongwendingju/366/2012/20120806200312423169311/20120806200312423169311_.html> accessed on October 8, 2012.
[123] IMF, 'Financial Sector Assessment Program, Financial Sector Assessment: China' (November 2011) <www.imf.org/external/pubs/ft/scr/2011/cr11321.pdf>.
[124] Junluo Liu, *Chinese Economy in Challenge/Bei Bangjia de Zhongguo Jingji* (Beijing: DynoMedia Inc 2010) [in Chinese].

given the potential risk from US dollar depreciation.[125] During the GFC, in order to reduce its over-dependence upon US dollar in foreign trade, cross-border capital flows, and foreign reserve exchange management,[126] China launched another 3-tier strategy combining RMB internationalisation, regional monetary cooperation and the reconstruction of the international monetary regime.[127]

Internationalisation of a nation's domestic currency intends to extend its usage beyond national borders involved in international transactions whether in merchandise trade or financial assets dealings.[128] The decisive principle is that national government does not prohibit certain activities and that the relevant foreign parties, be they private or public, permit or facilitate the activity described.[129] To some extent, internationalisation and capital account liberalisation are considered asymmetric: currency internationalisation is exercised after full convertibility in both current and capital accounts, but as long as the above principle is met, internationalisation could be achieved by gradual regionalisation, especially in a country conducting gradualist economic reform, such as China.[130] As a result, although internationalisation is not considered an inevitable consequence of financial liberalisation, or a prerequisite for deepening financial reform, it is officially thought to help strengthen and diversify domestic financial markets, and as such presents a leading solution in China.[131] Before the GFC, the PBC participated in two Asian bond funds in 2003 and 2004 by organising working taskforces so as to promote currency multilateralization.[132] These proceedings were not terminated with the

[125] The first one on June 18, 2008: <https://ustreas.gov/initiatives/us-china/meetings/jun2008.shtml>; the second on December 3–5, 2008: <https://ustreas.gov/initiatives/us-china/meetings/dec2008.shtml>.
[126] Lixing Zou, 'China's Finance under the Global Financial Reform/Quanqiu Biange zhong de Zhongguo Jinrong' 8 *Economic Development* 2010: 9-22 [in Chinese].
[127] Ming Zhang, 'China's New International Financial Strategy Amid the Global Financial Crisis' (2009) *China & World Economy* 17(5): 22-35.
[128] Hans Genberg, 'Currency Internationalization: Analytical and Policy Issues' Hong Kong Institute for Monetary Research, Working Papers No 31/2009, 2009 <www.bis.org/repofficepubl/arpresearch200903.12.pdf>.
[129] Peter B. Kenen, 'Currency Internationalization: An Overview' <www.bis.org/repofficepubl/arpresearch200903.01.pdf> accessed on March 1, 2009.
[130] Jing Li, 'Regionalization of the RMB and China's Capital Account Liberalization' (2004) *China & World Economy* 12(2): 86-100.
[131] Yulu Chen, Fang Wang and Ming Wang, 'Currency Internationalization as the Strategic Policy: The Empirical Experience of the US/Zuowei Guojia Jingzheng Zhanlve de Huobi Guojihua: Meiyuan de Jingyan Zhengju' 2 *Economic Study* 2005: 35-44 [in Chinese].
[132] Study Group Report, 'Asian Bond Markets Development and Regional Financial Cooperation' The 21st Century Public Policy Institute, February 2011

GFC. For example, it initiated bilateral local currency swap schemes worth RMB¥ 650 billion with Korea, Hong Kong, Malaysia, Belorussia, Indonesia and Argentina following the G20 Summit in November 2008, when the President stated that China would "enhance its capacity to provide liquidity assistance, improve regional financial infrastructure and make the best use of regional liquidity assistance mechanisms".[133] Recently, the PBC extended bilateral agreements to central banks in advanced economies, including the BOE in June 2013 and the ECB in October 2013.[134] In addition, it has accelerated pilot programmes to use RMB in cross-border trade,[135] especially formalising relevant rules between 2012 and 2013.[136] With deepening reform of the exchange rate policy, the PBC intensified its two-way flexibility by trading on RMB directly with other currencies.[137]

Meanwhile, during the GFC, progress continued towards further Asian regionalisation,[138] including the establishment of a Credit Guarantee and Investment Fund (CGIF), and Asian Development Bank (ADB) trust fund and the Associations of Southeast Asian Nations "ASEAN+3" Macroeconomic Research Office (AMRO).[139] Inter alia, responding to the effects of the GFC upon Asia,[140] the Chiang Mai Initiative (CMI) has gradually changed.[141] Signed in May 2000, the CMI is a bilateral US dollar-denominated exchange arrangement within the "ASEAN+3" framework, targeting at managing regional short-term liquidity and assisting with

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<http://asianbondsonline.adb.org/publications/external/2011/Asian_Bond_Markets_Development_and_Regional_Financial_Cooperation.pdf>.

[133] PBC, 'Strengthen Regional Cooperation, Proactively Open Currency Exchange/Jiaqiang Quyu Jingrong Hezuo Jiji Kaizhan Huobi Huhuan' <www.gov.cn/gzdt/2009-03/31/content_1273393.htm> accessed on March 31, 2009 [in Chinese].

[134] Further examples include: the PBC signed the currency swap agreement with Turkıye Cumhurıyet Merkez Bankası on February 21, 2012, with Reserve Bank of Australia on March 22, 2012, and with Banco Central do Brasil on March 26, 2013.

[135] Hongbin Qu, Junwei Sun and Donna Kwok, 'The Rise of the Redback: A Guide to Renmibi Internationalization' HSBC Global Research, Macro, November 9, 2010.

[136] The first announcement was made in September 2010. Other important documents include: PBC [2012] No. 23, No. 165, and No. 183; PBC [2013] No. 168.

[137] Until November 2013, RMB can be directly traded with the USD, EUR, YEN, HKD, GBP, AUD, CAD, CNY, RUB and SGD. MOF, News Release, <http://fta.mofcom.gov.cn/article/ftazixun/201311/14297_1.html>accessed on November 6, 2013.

[138] Natasha Hamilton-Hart, 'Regional and Multi-Level Governance: East Asian Leadership after the Global Financial Crisis' (2012) *Asia Europe Journal* 9(2): 237-254.

[139] For details, see, Gregory Chin, 'Responding to the Global Financial Crisis: The Evolution of Asian Regionalism and Economic Globalization' ADBI Working Paper Series, No 343, 2012 <www.adbi.org/files/2012.01.31.wp343.gfc.evolution.asian.regionalism.economic.globalization.pdf>.

[140] Kunal Sen, '"Hard Rain's a-gonna Fall": The Global Financial Crisis and Developing Countries' New Political Economy, March 7, 2011 <www.relooney.info/0_New_12049.pdf>.

[141] Jikon Lai and John Ravenhill, 'Asia's Multi-level Response to the Global Financial Crisis' (2012) *Asia Europe Journal* 9(2): 141-157.

other global financial facilities or institutions.[142] Since 2009, the "ASEAN+3" finance ministers' meetings have been held more frequent. For example, on February 22, 2009, the Action Plan to Restore Economic and Financial Stability of the Asian Region was released, mainly attributed to China, Japan and South Korea.[143] On March 24, 2010, the first instalment under the Chiang Mai Initiative Multilateralisation (CMIM) of $ 120 billion came into effect, proposing to readdress balance of payments and short-term liquidity difficulties, and supplement existing international financial arrangements through currency swap transactions among CMIM participants in times of liquidity need.[144] Until May 2012, its reserve was doubled.[145] In principal, the CMI has changed from a bilateral arrangement to a multilateral facility across the crisis period.[146] However, while China has a strong interest in preventing its neighbouring countries from economic flight due to its strong trade linkage within the ASEAN area, its rise has been taken as a challenge to the IMF and the US's power in Asia.[147]

Finally, developing and emerging countries have increasingly requested to reform the international financial architecture, albeit with mixed prospects. Despite that selective policy responses have focused upon such problems as countercyclical macroeconomic policy and international capital flows, certain countries have continued to rely upon international financial aid in case of liquidity shortage.[148] Prior to the G20 London summit in 2009, the PBC Governor, Zhou Xiaochuan,

[142] East Asian Forum, <www.eastasiaforum.org/2009/05/11/the-chiang-mai-initiative-china-japan-and-financial-regionalism/> accessed on May 11, 2009.
[143] Yung-Chul Park, 'Global Economic Crisis and East Asia: What ASEAN+3 Can and Should Do' *SERI Quarterly*, April 2009 <https://relooney.fatcow.com/SI_FAO-Asia/0-Important_4.pdf>; Joint Media Statement: 'Action Plan to Restore Economic and Financial Stability of the Asian Region' <www.aseansec.org/22158.htm>.
[144] Joint press release, 'Chiang Mai Initiative Multilateralization (CMIM) Comes Into Effect on the 24th of March 2010' <www.boj.or.jp/en/announcements/release_2010/un1003e.htm/> accessed on May 24, 2010.
[145] PBC, News Release, <www.pbc.gov.cn/publish/goujisi/300/2012/20120507093349286956886/20120507093349286956886_.html> accessed on May 7, 2012.
[146] Shixin Zhou, 'The Development and the Future of the CMIM/Qingmai Changyi Duobianhua de Yanjin yu Qianjing' 5 *Finance and Economics* 2012 [in Chinese] <http://econ.cssn.cn/jjx/xk/jjx_yyjjx/jjx_jrx/201310/t20131024_522407.shtml>.
[147] Jin Yuan Wen and Melissa Murphy, 'Regional Monetary Cooperation in East Asia: Should the United States Be Concerned?' A Report of the CSIS Freeman Chair in China Studies, Centre for Strategic & International Studies, November 2010 <http://csis.org/files/publication/101129_Yuan_RegionalCoop_WEB.pdf>.
[148] Yilmaz Akyuz, 'Policy Response to the Global Financial Crisis: Key Issues for Developing Countries' South Centre, Research Papers No 24, 2009 <www.southcentre.int/wp-content/uploads/2013/05/RP24_Policy-Response-to-the-Global-Financial-Crisis_EN.pdf>.

made an open speech titled "Reflections on Reforming the International Monetary System".[149] This is viewed as a statement of China's ambition to reconstruct the entire international monetary architecture.[150] In reality, China had already begun to diversify its reserves, including commodities, especially strategic petroleum reserves, and IMF bonds.[151] Furthermore, the PBC has become more active in joining various multinational organisations and forums. For example, it is currently a member of the South East Asian Central Bank and the Eastern and Southern African Trade and Development Bank.

8.3.3 Summary

The PBC has attracted worldwide attention due to its quick responses during the GFC. According to this analysis, it is otherwise ambiguous about its commitment to further liberalization. During the GFC, financial reform was not totally terminated, but its future is by no means assured. Inter alia, the reform of exchange rate policies has been particularly difficult, and intensive window guidance may have further weakened the role of interest rates in modifying market liquidity. In spite of the market-oriented reform, the PBC resumed direct policy instruments for managing external financial shocks. In the context of partial financial reform, therefore, the specific link between the central bank and the market has enabled continued direct administration, working as part of its crisis management strategy. In contrast to slow-speed domestic liberalisation, the PBC has been more progressive at cross-border financial cooperation. However, its RMB convertibility still triggered intense

[149] Governor Zhou published three articles immediately after the NPC annual news conference. The main theme was to create an international reserve currency, disconnected from individual nations, and remained stable in the long run, thus removing the inherent deficiencies of using credit-based national currencies. News report, <www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=1&cad=rja&ved=0CCkQFjAA&url=http%3A%2F%2Fnews.sina.com.cn%2Fc%2Fsd%2F2009-03-30%2F104417511243.shtml&ei=l3qfUpOSK8GmhAeu_4Fg&usg=AFQjCNGMi2OIhKjIK8UZCGwfqGI3Up2omQ&sig2=P5wtjhxmjhrX5pm0W3Mmug&bvm=bv.57155469,d.bGQ> accessed on March 30, 2009.

[150] Fabio Msini, 'New Consensus on Global Money? A Note' (2009) *Perspective on Federalism* 1(Single Issue): 42-50.

[151] Melissa Murphy and Jin Yuan Wen, 'Is China Ready to Challenge the Dollar? Internationalization of the Renminbi and Its Implications for the United States' A report of the CSIS Freeman Chair in China Studies, Centre for Strategic & International Studies, October 2009 <http://csis.org/files/publication/091007_Murphy_IsChinaReady_Web.pdf>.

debates, criticizing excessive Government intervention.[152] At the very least, not only has its supranational financial strategy favoured China's exports-led development with increasing capital inflows, but also balanced the pressures from delayed reforms in domestic markets.

8.4 How has the GFC challenged the PBC?

The following part will analyse and compare functions of the PBC in the event of external financial shocks before examining the central explanatory variable.

8.4.1 The PBC in the AFC and the GFC Compared

During the economic crises of the last decade or so, China suffered limited losses and the PBC has developed further, but different characteristics are noticeable, as summarised in Table 8.7.

[152] Hongyi Chen, Wensheng Peng and Chang Shu, 'The Potential of the Renminbi as an International Currency' <www.bis.org/repofficepubl/arpresearch200903.06.pdf> accessed in February 2009.

Table 8.7: China in the AFC and the GFC Compared

Features	AFC	GFC
Period	1997–1998	2008–2009
Trigger	Thai Baht appreciated disproportionally after Thai government abandoned pegged exchange rate policy regime	US subprime mortgage crisis escalated into a worldwide financial crisis from September 2008
Scope	Southeast and East Asia	Most advanced economies and emerging markets
China's Position	Nearly avoided with limited export losses.	Losses concentrated in exports and FDIs with limited loss in financial markets; China recovered around the second half of 2009
Transmission to China	Export and International Capital Flows	Plus further financial integrity
Fiscal Policies	Stimulus package of 2.5% GDP to support infrastructure and SOCBs; Tax reductions; Expenditure on social security, etc.	A formal stimulus package of RMB¥ 4 trillion fiscal expansion over two year; VAT system restructure; Social security net rebuilding.
Monetary Policies from the PBC	Reducing interest rates, required reserves ratio and excess reserves ratio three times in 1998 and again in 1999.	Reducing interest rates and required reserves ratios more often; Credit expansion and re-distribution; Flexible monetary policy instruments
Financial Regulation & Supervision	PBC issued guidelines and suggestions to strengthen its direct management over financial markets	CBRC directed the banking sector and cooperated with PBC
Cross-Border Cooperation	Inter-Asian cooperation	Participating in Asian cooperation and beyond

As illustrated in Table 8.7, China was not at the centre of either the AFC or the GFC, but suffered more losses and sought intense crisis management solutions during the latter. However, the similar mechanism of policy responses, combining fiscal stimulus with monetary expansion, can be problematic.

It is above all claimed that macroeconomic circumstances were distinctly different before the outbreak of these two external shocks. Since the 1997 AFC, the financial sector, especially commercial banks, has continued reform, with increasing loans, as well as diversification in income breakdowns and professional services. This brought more innovations and improved banks' operating capabilities, which alleviated the relatively closed financial market.[153] The way China obtained WTO membership in 2001 required further financial liberalisation. Before the GFC, economic ties had been further strengthened between developing countries and sophisticated markets, but by which time, global imbalance became increasingly significant.[154] Also, China's domestic reform and cross-border financial linkages have continued.[155] In consequence, China has been under increasing pressure from both domestic economic liberalisation and global economic imbalance.[156]

Nevertheless, policy responses worked in a similar way. When the PBC initiated some proactive measures, market sectors, especially financial markets, did not appear unstable. Consequently, it did not make responses just according to changed market conditions alone. In terms of monetary policy instruments, it had intended more direct market rescue; for example, Huijin increased shareholdings from the BOC, ICBC and CCB.[157] With more diversified instruments, the PBC became more adaptable: in the second half of 2008, it shifted from tight to moderately easy monetary policy, including reduced reserve ratios, lending and deposit interest rates; but in 2010, from July to November, the PBC first tightened and then loosened monetary policy.[158] Even so, reliance upon fiscal stimulus intensified from 2008 to 2010; by category, infrastructure took the largest part. A decade after the AFC,

[153] Reuven Glick and Michael Hutchison, 'Navigating the Trilemma: Capital Flows and Monetary Policy in China' (2009) *Journal of Asian Economics* 20(3): 206-224.
[154] Yifu Justin Lin, 'The Impact of the Financial Crisis on Developing Countries' World Bank, Korea Development Institute, Seoul, October 31, 2008 <http://mdgpolicynet.undg.org/ext/economic_crisis/WB_-_The_Impact_of_the_Financial_Crisis_on_Developing_Countries_Justin_Yifu_Lin.pdf>.
[155] Wim Naude, 'The Financial Crisis of 2008 and the Developing Countries' United Nations University-WIDER, Discussion Papers No 2009/01, 2009 <www.wider.unu.edu/publications/working-papers/discussion-papers/2009/en_GB/dp2009-01/>.
[156] Gerald Chan, 'China's Response to the Global Financial Crisis and its Regional Leadership in East Asia' (2012) *Asia Europe Journal* 9(2): 197-209.
[157] Michael F. Martin, 'China's Sovereign Wealth Fund: Developments and Policy Implications' CRS Report for Congress, R41441, 2010 <http://fas.org/sgp/crs/row/R41441.pdf>.
[158] PBC, News Release, <www.pbc.gov.cn/publish/goutongjiaoliu/524/2012/20120228112915760981120/20120228112915760981120_.html> accessed on February 28, 2012.

however, China's infrastructure conditions had already improved, which then brought criticism about Government's priorities.[159] Within limited welfare investment, expenditure on housing well exceeded that on education and healthcare, while FAI remained important. It is argued that expense on education and health care only have limited immediate functions, where efforts were not directly focused upon economic growth. However, inequality and underdeveloped social security had especially crippled the effort for continuing economic growth and declining poverty rates.[160] Arguably, infrastructure investment had become a panacea to deal with China's economic predicament.[161]

From the AFC to the GFC, the basic pattern of crisis management solutions from China did not change in the event of external financial shocks. With regards to monetary policy responses, the PBC diversified risk management during the GFC when compared with the AFC, but failed to enhance its role in supporting economic recovery, since its policy instruments were kept subordinate to fiscal stimulus.

8.4.2 The GFC Challenge for the PBC

Unlike central banks in the US and UK, the PBC was not the centre of intensive criticism or massive legal reforms during the GFC. This is partially attributed to China's limited losses in the context of incomplete liberalisation, which would affect the outcomes of the chosen crisis management solutions. China's relevant experience before, during and after the GFC can be compared in Table 8.8.

[159] Ming Su and Quanhou Zhao, 'China: Fiscal Framework and Urban Infrastructure' in George E. Peterson and Patricia Clarke Annez (eds.), *Financing Cities: Fiscal Responsibility and Urban Infrastructure in Brazil, China, India, Poland and South Africa* (SAGE Publications 2007) 85-104.
[160] Emanuele Baldacci, Giovanni Callegari, David Coady and Ding Ding, 'Public Expenditures on Social Programs and Household Consumption in China' IMF Working Paper, No WP/10/69, 2010 <www.imf.org/external/pubs/ft/wp/2010/wp1069.pdf>.
[161] Yongding Yu, 'China's Policy Responses to the Global Financial Crisis' Australian Government Productivity Commission, Richard Snape Lecture, Melbourne, November 25, 2009 <www.relooney.info/0_New_6189.pdf>.

Table 8.8: PBC's Performances at Different Stages of the GFC

	Pre-GFC	During-GFC	Post-Crisis
Macro-Economic Conditions	Lasting GDP growth triggered concerns about economic overheating; Balancing reform measures brought preliminary improvements	Losses concentrated on exports and FDIs with some instability in financial markets	Renewed GDP growth since 2010, triggering further concerns about inflation; Fiscal stimulus caused negative effects
Financial Reforms	Institutions developed faster than instruments and marketisation; External liberalisation benefited exports and FDI	Uneven development intensified; External liberalisation was accelerated	Domestic liberalisation boosted since 2012/2013; External financial cooperation has expanded beyond regionalisation
PBC Policy Instruments	PBC as a monetary authority and systemic regulator with limited independence behind a shadow political system; PBC administered interest and exchange rates policies; PBC continued tight monetary policy until mid-2008 due to potential inflation prospects	PBC reform continued with more diversified policy instruments; Monetary expansion subjected to fiscal stimulus; Direct tools revived as crisis management solutions	MPC developed toward professionalisation; PBC claimed to reduce direct controls over RMB convertibility and interest rates
Financial Regulation and Supervision	*Yihang Sanhui* was set up with constrained independence and direct management over markets	CBRC intensified its direct control at the firm level; Cooperation between CBRC and PBC worked effectively	Prudential regulation was emphasised but without substantial changes; Collaboration began to be formalised under the political leadership of State Council

According to Table 8.8, China has experienced dynamic changes, and the PBC has pursued different policy instruments whilst continuing internal reforms. In terms of timing, given China's resilience after 2009, measures for further financial liberalization, especially after 2012, were not directly linked with the GFC.

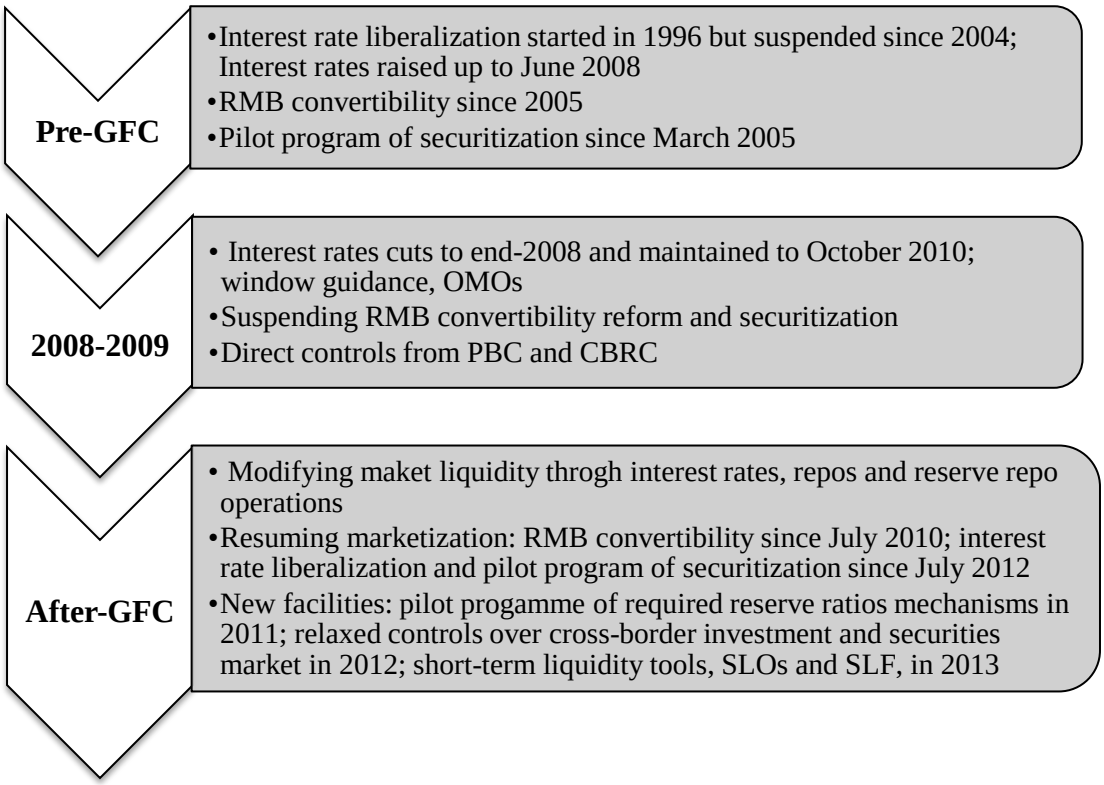
Limited losses lessened the challenge for China's financial regulator and supervisor from the outset; this helps explain why further reforms did not occur regarding effective oversight. Even so, both the PBC and CBRC have strengthened their use of more direct instruments, though they should develop prudential regulation as required by market-oriented liberalization. Especially, macro-prudential regulation was highlighted by the PBC[162] and then by the 12th Five-Year Plan as a reform measure.[163] But few detailed proposals subsequently followed.[164] China's financial market has developed with further uncertainty. Before the GFC, the domestic financial sector was reformed toward more universal banking models, which whereupon slowed down due to external upheavals. Meanwhile, China's shadow banking system has expanded following the fiscal stimulus package, posing new problems for monitoring.[165] Therefore, in spite of moderate market unrest, China's financial regulators had enhanced direct controls over the markets, whilst being

[162] The PBC first introduced this concept in its 2009 third quarter monetary policy review: <www.pbc.gov.cn/publish/zhengcehuobisi/3031/2010/20100226100237005279255/20100226100237005279255_.html> accessed on November 11, 2009.
[163] <www.gov.cn/gzdt/2012-09/17/content_2226795.htm> accessed on September 17, 2012.
[164] Zhiqiang Chen, 'The Financial Stability Framework in the Post-Crisis Era/Houweiji Shidai de Jinrong Weizhi Jizhi' 7 *PBC China Finance* 2011: 88-89 [in Chinese].
[165] According to the report released by Chinese Academy of Social Sciences, China's official think tank, the size of the shadow banking system was approximately RMB¥ 205 billion up to the end-2012: <http://news.xinhuanet.com/finance/2013-10/09/c_125497544.htm> accessed on October 9, 2013. A report from the State Council ([2013] No.107) spread in the financial sector but without official release, saying the shadow banking system was considered under a risk-based regulatory framework. It is still unclear how to define its scope: <http://finance.sina.com.cn/money/bank/bank_hydt/20140120/083818009543.shtml>. Information asymmetry made it difficult to assess their risk, but their solvency positions should be improved. Refer to, Jianjun Li and Sara Hsu, 'Shadow Banking in China: Institutional Risks' University of Massachusetts Amherst, Political Economy Research Institution, Working paper Series, No 334, 2013 <www.peri.umass.edu/fileadmin/pdf/working_papers/working_papers_301-350/WP334.pdf>. Based upon the existing studies, China's shadow banking system consisted of commercial and investment banking, quasi financial institutions and informal financial institutions; they have grown rapidly. See, Sara Hsu, Jianjun Li and Yanzhi Qin, 'Shadow Banking and Systemic Risk in Europe and China' CITYPERC Working Paper Series No 2013/02, 2013 <http://ssrn.com/abstract=2215233>. The expansion of China's shadow banking sector has increasingly attracted worldwide attention, and some surveys began to include data from China; for example, FSB, 'Global Shadow Banking Monitoring Report' (since 2011).

challenged to develop prudential regulation with indirect policy instruments.[166]

When focusing upon particular policies and reforms relating to the PBC, its overall performances are displayed in Figure 8.1:

Figure 8.1: The GFC Challenge for the PBC



As seen from Figure 8.1, prior to the GFC, the PBC was a central bank in a transition economy with incomplete financial liberalization, employing both direct and indirect tools. Due to the GFC, direct controls were reset as risk management solutions, and further market-oriented principles gave way to administered interest rates and exchange policy. After China's resilience, the PBC's policy instruments included: (i) conventional monetary policy instruments aiming at modifying market liquidity; (ii) re-introduction of certain suspended pilot programmes; and (iii) introduction of new

[166] Some transition arrangements have been suggested to resolve conflicts between interacted financial markets and segmented regulation framework. Refer to, Sebastian Florian Bruck, 'A Comeback for the Dual-Track Reform Model? Examining the Case for a Unified Chinese Financial Services Regulator' 10 *Journal of Banking Regulation* 2009: 234–248.

facilities. In brief, with direct controls from both the PBC and other regulators, the GFC constituted a breakpoint for China's financial sector liberalization.

As explained in Chapter Seven, the PBC was a government-controlled central bank. Due to the GFC, Government has reinforced its direct control over the PBC and other regulators more explicitly.

The PBC was located in a shadow political system, which posed important limitations upon its selected policy responses regarding risk management. The NDRC was responsible for the fiscal stimulus package, and also had the final approval over projects proposed by local governments. The PBC could only operate within this decision-making authority, and the subsequent implementing of selected policy responses were subject to local governments. For example, by channelling treasury bonds and bank loans to SOEs, local governments have thereby increased their influence over financial markets during the GFC, as publicly warranted or encouraged by the PBC as the state central bank. In terms of domestic market-oriented reform, besides the PBC, different government departments were still involved in promoting RMB swap and cross-border settlements. For example, due to exchange controls, the SAFE is responsible for drafting rules to regulate participants in RMB cross-border settlements regarding market-entry, reporting, accounting, and so on.

On the surface, China's financial regulators and supervisors could directly influence the markets through orders or directions, but this regime had to withstand potential challenges from other external political authorities. As soon as recovery was suggested in June 2009, the PBC and CBRC urged the banking sector to impose stricter lending criteria, and even tentatively sought an "exit" from expansionary monetary policy.[167] But, in various top-level speeches, the dual course of a "proactive fiscal policy" and a "relatively loose monetary policy" was still strongly

[167] News report, 'Rise in Loans Prompts China Scrutiny' (Financial Times) <www.ft.com/cms/s/0/115b5868-7b0e-11de-8c34-00144feabdc0.html#axzz1TQIbcJpw> accessed on July 28, 2009; 'Banking Regulator: Ensure Loans Enter Real Economy' (People's Daily) <www.english.peopledaily.com.cn/90001/90778/90857/90862/6712365.html> accessed on July 28, 2009.

supported.[168] The market has seemingly followed the tone set by the PBC and CBRC. For example, in July 2009, the value of new bank loans dropped by more than 75% compared with the previous month.[169] With regards to their cooperation, the informal mechanism under the State Council without any due legal framework could not be changed until August 2013, when the inter-ministry co-presence conference was approved to be set up.[170] Overall, China's financial monitoring regime continues under political intervention, especially from the State Council.

Since 2012, the PBC had shifted between tight and loose monetary policies, implying that China's domestic financial market has become more volatile, especially after the 12th Five-Year Plan sought to accelerate structural rebalancing. In particular, a short-term credit crunch did not occur during the GFC, but attacked the inter-bank market in June 2013.[171] The PBC did not inject short-term liquidity until share prices plunged and the credit market momentarily froze.[172] By July 2013, the State Council released *the Guidelines on Financial Sector for Adjustment of Economic Structure, Transformation and Upgrading of the Economy*, and the financial sector was thereby re-assured about rebalancing economic development while maintaining financial stability.[173] However, China's GDP growth slowed, and financial market prospects have become further unclear; as a result, both the PBC and other financial regulators are in a tough position to deal with fresh challenges associated.[174]

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[168] News report, 'Chinese President Urges Adherence to Macroeconomic Policies in Second Half' (People's Daily) <www.english.peopledaily.com.cn/90001/90778/90857/90862/6708530.html> accessed on July 23, 2009; Xinhua News, 'Chinese Premier Urges Firm Implementation of Proactive Fiscal Policy' (News, Embassy of the PRC in the USA) <www.china-embassy.org/eng/xw/t574929.htm> accessed on July 23, 2009.

[169] Alicia Garcia-Herrero and Eric Girardin, 'China's Monetary Policy Communication: Money Markets Not Only Listen, They Also Understand' HKIMR Working Paper No.02/2013, 2013 <http://ssrn.com/abstract=2202602>.

[170] State Council [2013], No. 91. It is argued that conflicts between the PBC and CBRC have also emerged from their respective regulation approaches toward the shadow banking system; News Report, <http://wallstreetc n.com/node/72417> accessed on January 17, 2014.

[171] Shen Wei, 'The Latest Credit Crunch in China's Banking Sector: Short-Term or Long-Term Gain?' (November/December) *The Banking Law Journal* 2013: 928-948.

[172] PBC, News Release, <www.pbc.gov.cn/publish/goutongjiaoliu/524/2013/20130625182009056961206/20130625182009056961206_.html> accessed on June 25, 2013.

[173] State Council [2013] No. 67, <www.gov.cn/zwgk/2013-07/05/content_2440894.htm> accessed on July 5, 2013.

[174] A rumour has spread, implying intensified conflicts between the PBC and CBRC, but no official records were available. News reports, <www.eufnet.com/News/201175/eufnet/833436154900.shtml> accessed on July 5, 2011; and <http://wallstreetcn.com/node/72417> accessed on January 15, 2014.

8.4.3 Policy Implications

This part has further examined crisis management solutions of the PBC from different dimensions. From the AFC to the GFC, in spite of diversified monetary policy responses, the significance attributed to the fiscal stimulus package implies that the PBC had not yet fully realised its role of crisis management. During the GFC, Government explicitly enhanced direct controls over the PBC and financial markets as well.

In theory, in case of financial crises, administrative power under the constitution law should enable the injection of short-term liquidity, stabilize monetary and pricing mechanisms and then control and release wider panic-based contagion.[175] The GFC has exposed the limits of crisis management in the administrative state.[176] In China, while policy responses from the PBC promised some immediate advantages for dealing with both actual and potential financial instabilities, they also bear other problematic longer-term implications for both macroeconomic conditions, and its own conduct of monetary policy. Inter alia, direct government intervention has evidently risen, which continues to limit the PBC and other regulators, whilst bringing further uncertainty into China's market-oriented reform. However, amid the crisis, the limits of government intervention have also emerged. For example, following downward pressure between July 2007 and 2008, the Chinese property market quickly returned to previous growth rates, and attracted disproportional commercial loans within the fiscal stimulus package.[177] Since 2010, Government has stepped in by combining interest rates, tax reforms, fiscal subsidies and so forth.[178] It is whereas argued that, without considerable deposit interests and diversified investment products, major household savings have been continuously invested into

[175] Feiyue Shan, 'Intervention in Financial Crisis in the Context of Constitutional Politics' 6 *Jurist* 2010:1-8 [in Chinese].
[176] Eric Posner and Adrian Vermeule, 'Crisis Governance in the Administrative State: 9/11 and the Financial Meltdown of 2008' (2009) *The University of Chicago Law Review* 76(4): 1613-1681.
[177] Eddie Chi-Man Hui, Cong Liang, Ziyou Wang and Bo-Tong Song, 'Real Estate Bubbles in China: A Tale of Two Cities' (2012) *Construction Management and Economics* 30(11): 951-961.
[178] Ligang Liu, 'Guideline for Supervising the Real Estate Market in China/Zhongguo Fangdichang Tiaokong de Daoxiang' (FT China) <www.ftchinese.com/story/001034562> accessed on October 9, 2010 [in Chinese]. During the last three years, policies from the central government include: State Council [2010] No. 4 and No. 10, [2011] No. 1 and [2013] No. 17. For the list, see <http://anshan.house.sina.com.cn/news/2013-03-20/17431970640.shtml> accessed on March 20, 2013.

the property and stock markets;[179] this has made government intervention rarely successful.[180] Therefore, the role played by Government as financial disciplines cannot continue its old effects any longer as spur to economic growth.

As for policy implications, given that the PBC should be reformed to be more legal-dominated and market-driven, the state needs to determine further reform of the financial sector as a whole. Particularly, unsolved issues, such as independence, accountability and better implementation of monetary policies, continue to affect the PBC's orientation. Deepening liberalisation of the financial sector, including rates policies, RMB convertibility and the role of the PBC, requires thus an improved balance between political power and market principles.[181] As a result, the GFC, after suspending China's financial liberalisation, has further exposed the structural problems revolving around the PBC and other regulators, in particular regarding continued political intervention and what else advanced market development requires.

From the external perspective, China has strengthened its relationship with neighbouring countries, Emerging Market Economies (EMEs) and sophisticated markets as well. With its rise, it would be possibly accepted that China and its crisis management solutions will be used for future reference about managing financial shocks. Above all, others should carefully take into account not only short-term benefits, but also standing shortcomings of its chosen approaches.

8.5 Conclusion

Overall, this chapter has dealt with China's experiences in the GFC, addressing how it achieved apparent quick resilience but suffered further domestic vulnerabilities.

[179] Shujie Yao and Dan Luo, 'The Economic Psychology of Stock Market Bubbles in China' (2009) *The World Economy* 32(5): 667-691.
[180] Ashvin Ahuja, Lillian Cheung, Gaofeng Han, Nathan Porter and Wenlang Zhang, 'Are House Prices Rising Too Fast in China?' IMF Paper, WP/10/274, 2010 <http://ssrn.com/abstract=1751386>. For an empirical analysis, see, Ya Ping Wang, Lei Shao, Alan Murie and Jianhua Cheng, 'The Maturation of the Neo-Liberal Housing Market in Urban China' (2012) *Housing Studies* 27(3): 343-359.
[181] Ray Barrell, Tatiana Fic and Lana Liadze, 'Fiscal Policy Effectiveness in the Banking Crisis' (2009) *National Institute Economic Review* 207(1): 43-50.

The GFC had adversely affected China for a limited period spanning 2008/2009, constituting a breakpoint in market-oriented financial reform. Inter alia, crisis management solutions selected by the PBC reflected its constrained role in maintaining financial stability under direct government intervention, with further market-oriented reform still determined by Government. This chapter has provided support for the proposition in this thesis that the PBC, being a proactive regulator, has continued under direct government controls, while the GFC has further raised government intervention into the PBC and also the wider economy.

Part III COMPARATIVE ANALYSIS

Chapter Nine

Central Bank Regulation toward Financial Stability: Convergence, Divergence, or Multiple Pathways? Evidence from the Comparative Study

9.1 Introduction

The key propositions of this thesis relating to the market or government orientation of central banks have been successively tested in Chapters Four to Eight. These have dealt respectively with four selected central banks, namely, the US Fed, the BOE, the BOJ and the PBC. The main themes of this thesis have been addressed by reference to these case studies. It has been noted that the GFC has challenged existing central bank regulatory ability to maintain financial stability. This chapter will now identify the leading signs of convergence, divergence or multiple pathways in the character and conduct of these central banks' approaches to facilitating financial stability.

This chapter will proceed as follows. First, all four central banks will be compared from the perspectives of their legal frameworks and changes that have occurred to them as a result of the GFC. Convergence had often co-existed with divergence throughout their history: in spite of similar legal frameworks, they had operated with different two-tier relationships, which has led to certain different outcomes in each central bank's case regarding the GFC. Further comparison has found that the GFC enlarged existing divergences, as well as gaps between their respective legal frameworks and prevailing two-tier relationships.

Comparisons are summarised under four main categories representing different levels of convergence bearing other important implications. Given that the actions of central banks are ultimately co-determined by their respective governments and market forces, this chapter will highlight where financial regulation explicitly, and central bank independence implicitly diverged. Moreover, the case studies reported

here have found that these central banks have each had their respective focuses and approaches when seeking to restore financial stability. In addition, comparisons have revealed how central banks have pursued legal changes at different levels, whilst historical evidence has already demonstrated the varying importance attached to laws and statues across countries. What is more, the GFC has not only changed the prevailing two-tier relationships governing central banks, but also changed the nexus between government and the market. Hence, their market or government orientation should be re-examined in the context of such new government-market balance. Overall, this chapter will argue that the GFC has challenged central banks so as to strike an improved balance between government and the market.

The financial sector arguably might face the prospect of "Nipponization", as well as added uncertainty regarding further integration and other globalization forces. The chapter will latterly re-examine the PBC's response to such forces, while highlighting the main constraints imposed upon its functions as a state central bank.

9.2 Comparing Four Central Banks: The Co-Existence of Convergence and Divergence in Their Governing Strategies

This section will detail and compare the key findings from the four central banks studied in this thesis. Comparisons are made from the perspectives of their legal frameworks and crisis management responses regarding the GFC. This will be followed by further consideration of the argument suggesting the inevitable co-existence of convergence and divergence in their respective character and conduct.

9.2.1 Comparing Legal Frameworks before the GFC

It has been established that central banks are defined by their respective two-tier relationships. Key legal elements accordingly include their objectives; organizational structures; monetary policy instruments; accountability, credibility and independence; and systems of financial regulation and supervision. Similarities and differences in each of these elements are now identified, arguing that, with increasingly convergent

legal provisions, their respective two-tier relationships had significantly differed across countries.

9.2.1.1 Comparing Central Bank Objectives

As suggested in prevailing models, the requirements created by government and the banking sector have jointly led to the creation of the central bank with the primary goal of achieving price stability. After ceasing to directly finance governments, central banks pursued other objectives regarding the wider economy. Relevant laws and rules have generally prescribed what the central banks are required to achieve, and also enable them to be held accountable. Table 9.1 illustrates this by drawing upon previous discussions of earlier case studies.

Table 9.1: Comparing Central Bank Objectives

Central Bank	Monetary Policy Objectives	Other Objectives	Numerical Targeting
US Fed	Maintaining stable prices and moderate long-term interest rates	Maximizing employment and supporting economic development	Nil
BOE	Maintaining price stability	Supporting government's economic policy, including its objective for growth and employment	Yes
BOJ	Maintaining price stability	Enhancing the sound development of the economy, and achieving the goal of an orderly payment and settlement system	Nil
PBC	Maintaining the stability in the value of the currency	Promoting economic growth	Nil

Table 9.1 separates legal provisions regarding monetary policy objectives from other objectives of these institutions; as numerical targeting rose, it is useful to consider

whether those four central banks adopted certain quantitative criteria when pursuing the goal of price stability. Under statutory requirements, central banks have a multitude of goals, often linking monetary policy targeting with other economic development strategies.[1] As the sole national monetary authority, they were primarily responsible for maintaining stable prices, whilst leveraging and promoting economic growth.[2] After delegating monetary policy to their respective central banks, governments have still been able to exercise control, such as by setting inflation targets, employment objectives, or by a combination of both of these.[3]

The US Fed acted upon inflation and employment concerns by adjusting federal fund rates as the key strategy for its short-term targeting.[4] But, as moderate long-term interest rates changed over the business cycle, market expectations about further policy actions varied.[5] The US Fed therefore embraced such interest rates as its goal for monetary policy. Meanwhile, the 1978 US Full Employment and Balanced Growth Act required the federal government, including the US Fed, to achieve objectives regarding the whole economy.[6] The US Fed was considered to have had an inflation bias from its inception due to its original bureaucratic structure,[7] and concentrating upon full employment could help balance its pursuit of statutory objectives.[8]

[1] It is argued that a hierarchy of central bank objectives might exist, including lexicographic ordering and price stability as the primary goal, followed by the others shared with other government departments. Lars E. O. Svensson, 'Optimal Inflation Targets, "Conservative" Central Banks, and Linear Inflation Contracts' NBER Working Paper No 5251, 1995 <www.nber.org/papers/w5251.pdf>.
[2] However, a central bank with explicit objective(s) alone can hardly support social welfare. Refer to, Philip Lawler, 'Monetary Policy, Central Bank Objectives, and Social Welfare with Strategic Wage Setting' 53 *Oxford Economic Papers* 2001: 94-113.
[3] Berthold Herrendorf and Ben Lockwood, 'Rogoff's "Conservative" Central Banker Resorted' (1997) *Journal of Money, Credit and Banking* 29(4): 476-495 (Part 1).
[4] Richard Davis, 'Intermediate Targets and Indicator for Monetary Policy: A Critical Survey' FRB New York, Summer 1990 <www.ny.frb.org/research/quarterly_review/1990v15/v15n2article6.pdf>.
[5] V. Vance Roley and Gordon H. Sellon, Jr., 'Monetary Policy Actions and Long-Term Interest Rates' Economic Review, 4th Quarter, 1995 <www.kc.frb.org/publicat/econrev/pdf/4q95role.pdf>.
[6] Leon H. Keyserling, '"Liberal" and "Conservative" National Economic Policies and their Consequences, 1919-1979: A Study to Help Implement Promptly the Humphrey-Hawkins Full Employment and Balanced Growth Act of 1978' at Conference on Economic Progress, Washington, DC, 1979.
[7] Mark Toma, 'Inflation Bias of the Federal Reserve System: a Bureaucratic Perspective' 10 *Journal of Monetary Economics* 1982: 163-190.
[8] Glenn T. Potts and Dudley G. Luckett, 'Policy Objectives of the Federal Reserve System' (1978) *The Quarterly Journal of Economics* 92(3): 525-534.

Among the four central banks considered here, only the BOE adopted a quantitative inflation rate target (numerical targeting).[9] From a theoretical perspective, a central bank is given independence to fulfil delegated tasks, and in this way is held accountable. The explicitly clarified and announced inflation targeting could facilitate better central bank communication, and also accountability.[10] Additionally, it is argued that numerical targeting encouraged more independent central bank instruments, moving thus towards the optimal conduct of monetary policy in practice.[11]

Specific domestic conditions had imposed particular requirements upon central banks in Japan and China. For example, in the 1990s, Japan's domestic banking crisis required the BOJ to seek a more stable payment and settlement system.[12] In addition, Japan had been challenged by negative inflation or deflation after experiencing a bubble-burst cycle. The implications of maintaining price stability were thus different for the BOJ when compared to inflation control efforts by other central banks. As described in Chapter Six, the Diet, Cabinet and MOF have continued to control the BOJ in different degrees, so the BOJ was still under direct political control when pursuing economic development.[13]

As explained, China's market-oriented reforms were essential to understanding the statutory goals of the PBC. First, capital accounts have not been fully liberalized in China, and thus, the PBC, along with the SAFE, still controls exchange rates, requiring the balancing of domestic and foreign transactions. The PBC has thus been required to maintain domestic currency value.[14] Secondly, China's dual-track pricing

[9] In 1999, the Price Stability Act was proposed to mandate the US Fed to target an explicit numerical inflation rate. The reform failed, but triggered further discussions about the optimal target for a central bank to conduct monetary policy. Willem Thorbecke, 'A Dual Mandate for the Federal Reserve' Public Policy Brief Highlights, No 60A, 2003 <www.levyinstitute.org/pubs/hili60a.pdf>.
[10] *Supra* 1.
[11] Alexander Mihailov, 'Instrument Independence with Goal Dependence: Lessons from the Bank of England's Reaction Function' (August 2007) <www.personal.reading.ac.uk/~les05am/InstrIndepGoalDepBoERnFnJAShAMS070831.pdf>.
[12] Solid systems of payment and settlement system have been encouraged globally. BIS, 'Core Principles for Systemically Important Payment Systems: Report of the Task Force on Payment System Principles and Practices' BIS Committee on Payment and Settlement Systems, Consultative Report, CPSS Publications No 43, 2001 <www.bis.org/publ/cpss43.pdf>.
[13] Maurice Wright, 'Who Governs Japan? Politicians and Bureaucrats in the Policy-making Processes' (1999) *Political Studies* 47(5): 939-954.
[14] Hassanali Mehran, *Monetary and Exchange System Reforms in China: An Experiment in Gradualism* (Washington DC: IMF 1996) 55-63.

system has allowed the NDRC to control overall price levels, whilst the PBC is only one of several government departments responsible for fostering price stability.[15] The NDRC is also in charge of setting the goals for long-term economic development and macroeconomic management, giving it a leading role within China's political hierarchy, compelling the PBC to operate within such plans.[16] As a result, statutory objectives for the PBC bear the features of economic transition and political direction.

In summary, all four central banks discussed here do not have goal independence, and in the context of convergence, certain important differences remain. In addition to monetary policy objectives, central banks work together with other responsible agencies to pursue other particular government goals. These case studies suggest that the government's authority is either relatively explicitly (as in the UK and China) or implicitly determined (as in the US and Japan). Both the BOJ and the PBC, being government-oriented central banks, were first required to deal with their respective domestic problems, whilst also serving their governments' overarching development strategies.

9.2.1.2 Comparing Organizational Structures of the Central Banks

The institutional structures of central banks vary across countries. They are determined by a combination of factors, including geographic size, political systems, cultural traditions, and so forth. The previous chapters have identified different legal provisions, compared in Table 9.2.

[15] World Bank, 'Price Reform in China' World Bank, Report No 10414-CHA, May 28, 1992.
[16] <http://en.ndrc.gov.cn/mfndrc/default.htm>.

Table 9.2: Comparing Central Bank Organizational Structures

Central Bank	Constitution and Appointment	Monetary Policy Making	
		Constitution	**Function**
US Fed	Board: 7 members, including Chairman and Vice Chairmen, nominated by the President and confirmed by the Senate	**Federal Open Market Committee:** Board members, FRBNY's President, and 4 out of the other 11 FRB presidents on a rotating basis	Decision-making body
BOE	Court of Directors appointed by the Crown, 9 directors as non-executive with one designated by the Chancellor of the Exchequer as Chairman	**Monetary Policy Committee:** Governor, 2 Deputy Governors, Chief Economist and Executive Director as executive members; 4 external members directly appointed by the Chancellor: HM Treasury representative without voting rights	Decision-making body
BOJ	Governor, 2 deputy governors, 6 deliberative members of the Policy Board, up to 3 auditors appointed by the Cabinet, up to 6 executive directors and certain advisors appointed by the MOF on the BOJ's recommendation	**Monetary Policy Board:** Governor, deputy governors and 6 deliberative members selected by the Cabinet with the consent of both Houses of the Diet	Decision-making body
PBC	Governor appointed by the Premier of the State Council, and confirmed by the NPC/its Standing Committee; certain deputy governors appointed or removed by the Premier of the State Council.	**Monetary Policy Committee:** Governor, SAFE Director, and CSRS Chairman as ex-officio members; other members nominated by the PBC and appointed by the State Council	Consultative body

How a central bank is organized, including its constitution and key personnel, is outlined through legislation, but the PBC Law 2003 did not specify how central bankers were appointed. Since all four central banks studied have established

divisions for conducting monetary policy, Table 9.2 also compares their respective arrangements. In theory, government can exercise leverage over the central bank through controlling the appointment of senior bank officers; decisions on their tenure indicate the varying degrees of government's influence.[17] The MOF maintained a strong presence by selecting some executive members for the BOJ, while in China, both the NPC (or its Standing Committee) and the State Council controlled resource allocation.

It is argued that on average, group can make better decisions than individuals, without being slower in reaching decisions, so differently named specialized divisions have recently been established to control monetary policy making.[18] The four case studies nevertheless identify differences in their respective organizational structures. In terms of legal status, only the PBC-MPC was a consultative body, the others actually formulating monetary policies. Both the BOE and the PBC had representatives from financial ministries, but representatives in the PBC had voting rights. With many other government departments' representatives occupying key positions, the PBC-MPC could only pronounce once necessary political compromises had been reached. Furthermore, such divisions can be divided into individual or collegial committees, leading to different protocols of decision making.[19] The BOE-MPC was a typical specialised committee, where all members could voice their own opinions, acted on them by voting, and decisions were made by majority vote. The FOMC was a collegial committee, where members agreed in advance that their individual opinions must be subordinated to the common good. In particular, under the Greenspan's Chairmanship of the US Fed, the consensus was assumedly based on his own preference informed or influenced by views of other senior members.[20] In regard to the BOJ's Board, it began to operate on a more

[17] Robin Bade and Michael Parkin, 'Central Bank Laws and Monetary Policy' (October 1988) <http://economics.uwo.ca/people/parkin_docs/CentralBankLaws.pdf>.
[18] Alan S. Blinder and John Morgan, 'Are Two Heads Better than One?: Monetary Policy by Committee' (2005) *Journal of Money, Credit and Banking* 37(5): 789-811.
[19] Alessanro Riboni and Francisco J. Ruge-Murcia, 'Monetary Policy by Committee: Consensus, Chairman Dominance, or Single Majority' (2010) *The Quarterly Journal of Economics* 125(1): 363-416.
[20] Another type of committee is the genuinely-collegial committee, allowing members to argue for difference behind "closed doors" before the group decision is achieved. The ECB has approached monetary policies similar to this way.

individual basis after the 1996 Big-Bang reform.[21] In China, a simple two thirds majority was required, while recommendations, or/and meeting notes had to be prepared when the PBC reported to the State Council regarding the monetary base, interest rates and other important decisions.[22] Different types of committees affect how central banks communicate with their stakeholders.[23] For example, the FOMC published terse statements after its meetings, but its subsequent minutes provided more detailed explanations. By contrast, existing legislation and other relevant rules do not clarify the requirements for communication, accountability and credibility for the PBC-MPC.[24] The other issue here worth noting concerns how the BOE-MPC subscribed to the goal of quantitative numerical inflation targeting, elsewhere claimed to have improved central bank independence and transparency.[25]

It has been argued that well-structured institutional arrangements can ensure that committee members remain adequately informed of both macro and micro economic information before making major decisions. Accordingly, an optimal model has been suggested, which incorporates clear objectives, as well as ensuring independence with measures to avoid free-riding.[26] The above comparison makes it clear that an essential step required to improve the PBC's independence would be to grant its MPC full policy-making authority.

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[21] Alan S. Blinder, *The Quiet Revolution: Central Banking Goes Modern* (New Haven: Yale University Press 2004).

[22] <www.pbc.gov.cn/publish/huobizhengceersi/3421/2010/20100915170700606910707/20100915170700606910707_.html>.

[23] Alan S. Blinder, 'Central Bank Talk: Committee Structure and Communication Policy' for the ASSA Meetings, Philadelphia, January 9, 2005 <http://aea-net.org/annual_mtg_papers/2005/0109_1015_0702.pdf>.

[24] <www.pbc.gov.cn/publish/huobizhengceersi/3416/2010/20100914145905843679838/20100914145905843679838_.html>.

[25] For an empirical survey, refer to, Anita Tuladhar, 'Governance Structures and Decision-Making Roles in Inflation Targeting Central Banks' IMF Working Paper, WP/05/183, 2005 <http://211.253.40.86/mille/service/ERS/10000/IMG/000000004811/wp05183.pdf>.

[26] Philipp Maier, 'How Central Banks Take Decisions: An Analysis of Monetary Policy Meetings' in Pierre L. Siklos, Martin T. Bohl, and Mark E. Wohar (eds.), *Challenges in Central Banking: The Current Institutional Environment and Forces Affecting Monetary Policy* (CUP 2010) 320-356.

9.2.1.3 Comparing Monetary Policy Instruments of Central Banks

The way that central banks affect financial markets has gradually shifted from the use of direct tools towards indirect means. As illustrated in Table 9.3, all four central banks had employed similar indirect monetary policy instruments, but the PBC also continued to use various direct controls.

Table 9.3: Comparing Monetary Policy Instruments under Legal Provisions

Central Bank	Monetary Policy Instruments
US Fed	OMOs, reserve requirements, discount rate, and window discount lending
BOE	OMOs, reserve requirements, Bank Rates
BOJ	OMOs, reserve requirements, Rates policy (window guidance, abolished in 1994)
PBC	OMOs, reserve requirements, interest rates policy, and window guidance

From Table 9.3, it is evident that central bank laws have specified limited monetary policy tools available to them, and these were similar, except for "window guidance" by the BOJ and the PBC. The limited choice of policy instruments is largely attributable to their specified objectives regarding monetary stability.[27] Beyond legislation, however, the PBC could employ more direct tools; "window guidance" was only one explicit example of these. As previously observed, window guidance operated more effectively through China's political hierarchy, while the PBC continued to rely upon quantity-based and non-central bank instruments to conduct monetary policy. Its direct controls could be summarised as: (i) guiding interest rates setting of commercial banks; (ii) controlling, with other government departments, exchange rates and capital accounts; (iii) controlling extensive dual-track systems in the context of the co-existing centralized planning and rigorously-controlled market

[27] Karl R. Bopp, 'Central Banking Objectives, Guides and Measures' (1954) *The Journal of Finance* 19(1): 12-22.

principles; and (iv) legally supporting the SOCBs, providing selected subsidies, and supporting local governments and one policy bank, among continued bias toward the state-owned sectors.

Therefore, apart from legal provisions, the PBC still controlled China's partially-liberalized financial markets through both explicit and implicit tools, which would arguably best be replaced by fully implemented indirect monetary policy instruments; this was a leading target for China's market-oriented reformers.[28]

9.2.1.4 Comparing Financial Regulation and Supervision by Central Banks

The role played by central banks in overseeing financial markets has triggered continuous discussions. In certain countries, such duties have been transferred to outside responsible agencies, but central banks were still in charge of certain facilities linked with systemic stability. The patterns of legal responses observed here are demonstrated in Table 9.4:

[28] Paul Hilbers, 'Monetary Instruments and Their Use during the Transition from a Centrally Planned to a Market Economy' IMF Working Paper, WP/93/ 87 C, 1993 <http://ssrn.com/abstract=883397> [in Chinese].

Table 9.4: Comparing Financial Regulation and Supervision

Central Bank	Financial Stability as Legislative Objective	Regulation and Supervision Approaches	Internal Responsible Division	External Responsible Agency
US Fed	Nil	A dual federal-state system; US Fed conducted umbrella supervision as a consolidated supervisor, focusing on reporting requirements, examination, capital oversight, enforcement powers, and sharing information with other primary or functional regulators	Nil	Functional regulators at federal and state levels
BOE	Nil	Tripartite: BOE, FSA and HM Treasury	Financial Stability Division	FSA
BOJ	Nil	BOJ controlled on-site examination and off-site monitoring	Nil	FSA
PBC	**Yes**	PBC controlled coordinated financial development, information disclosure, business conduct supervision, examination into troubled institutions, etc.	Financial Stability Bureau	CBRC, CIRC and CSRC

The design of regulation and supervision suggests how governments affect financial markets. The legislation has often outlined such roles from the perspectives of institutional structures and approaches. Table 9.4 helps explain the relative importance of financial stability as a leading statutory requirement for the respective central banks considered here. Only the PBC had financial stability as an explicit statutory objective, others having more implicit roles tying financial stability into

broader economic development goals.[29] Financial stability arguably requires *ex ante* prevention and *ex post* management of financial crises. Central banks can reduce financial instability through requisite monetary policy, especially in the event of liquidity crises. It is contended that maintaining financial stability has often been, and possibly always will be, a fundamental objective of central banks with or without the existence of legal provisions to this effect.[30] The table above also makes it evident that the clarification of financial stability had few clear linkages with the establishment of a responsible division within the central bank.

Furthermore, none central banks had sole authority for financial regulation and supervision. The UK led the trend of uniform financial oversight under a single agency. In this model, the character of the central bank affects cooperative arrangements with other sectors: a strong central bank reduces unification.[31] Both in the US and the UK, risk-based prudential regulation had been further developed. However, financial regulators and supervisors in Japan and China still used direct approaches when managing their respective domestic problems. The Japanese regime emerged after a severe domestic banking crisis, dealing with NPLs and banks' failures at the firm level. In China, there still existed clear boundaries between banking, insurance and securities sectors, leading to the rigorously enforced differences between sector-based responsible bodies;[32] direct and political controls were maintained throughout partial and incomplete financial liberalization.

[29] Roger W. Ferguson, 'Should Financial Stability Be An Explicit Central Bank Objective?' for the Conference at the IMF "Challenges to Central Banking from Globalized Financial Systems", Washington DC, September 16-17, 2002 <www.federalreserve.gov/BoardDocs/Speeches/2002/20021016/default.htm>.

[30] BIS, *Issues in the Governance of Central Banks: A Report from the Central Bank Governance Group* (Basel: BIS 2009) 5-55.

[31] It is named "central bank fragmentation effect". Refer to, Donato Masciandaro, 'Divide et Impera: Financial Supervision Unification and Central Bank Fragment Effect' (2007) *European Journal of Political Economic* 23(2): 285-315, and 'Politicians and Financial Supervision Unification outside the Central Bank: Why do They do It?' 5 *Journal of Financial Stability* 2009: 124-146.

[32] Having both shortcomings and advantages, it was suggested that for emerging and transition economies, separate responsible bodies would be a favourable choice. C.A.E. Goodhart, 'The Organizational Structure of Banking Supervision' (2003) *Economic Notes* 31(1): 1-32.

9.2.1.5 Comparing Central Bank Independence

As stated in Chapter Two, central bank independence is a most significant indictor of the relationship between a central bank and its government. While both transparency and credibility can be beneficial, it is never absolute. In the late 20th century, most central banks obtained operational independence, further protected through written statues. Table 9.5 compares respective independence levels of those four central banks.

Table 9.5: Comparing Central Bank Independence

Central Bank	Legal Provision	Accountability	Transparency
US Fed	Independence within Government	Accountable to the Congress and the public	A full range of detailed information concerning its policy actions, operations, and financial accounts
BOE	Operational Independence	Via the House of Commons Treasury Committee	Regular and *ad hoc* publications, educational materials, MPC publications
BOJ	Operational Independence	Accountable to the Diet regularly and on request, with the MOF as the bridge	Clarifying its decisions and opinions or votes; publications released in accordance with detailed requirements about timing and contents
PBC	Operational Independence	Dual-subjection to the NPC and the State Council	Part of the programme of "making government affairs open to the public"*

Note:
*'Making government affairs open to the public/yangguang zhengwu' was a programme launched by China's government around mid-2000, aiming at promoting transparency and incorruptness. For general information, refer to,
<*http://news.163.com/12/0416/09/7V711BQR0001124J.html*>

Table 9.5 deals with the issue of central bank independence. In addition to clear stipulation, legislation has also clarified required accountability—which agency/agencies it is held accountable to—and transparency—how it communicates with the stakeholders. As this table shows, all four central banks claimed operational independence, but still faced different requirements concerning accountability and transparency as a consequence of varying political interventions. The MOF still intermediated between the BOJ and the Diet, while the PBC remained subject to both the NPC and the State Council. To summarise the relevant findings, other agency/agencies still influence central banks' autonomy by: (i) setting monetary policy targets; (ii) setting other statutory objectives; (iii) appointing key members; and (iv) directly engaging in designing and implementing due monetary policy.

Central bank independence was not uniformly constituted. Where market-oriented central banks were founded as private corporations, government-controlled central banks maintained close relationships with their respective governments, especially through their finance ministries. Extreme events could nevertheless invite radical changes. Due to World War II, the BOJ Act 1942 brought the BOJ further under the MOF control, the BOE was nationalized in 1946, whereas the US Fed gained more independence after the 1951 Accord. Therefore, the initial role played by governments, as well as any centralization and nationalization associated with extreme events, significantly influenced actual central bank independence.

As argued in Chapter Two, central bank independence in a transitional economy is more likely to be affected by *de facto* circumstances, especially ongoing government intervention.[33] Some time after its founding, the PBC operated as a mono-bank in a centralized planning economy, ending up as the cashier and accountant for the MOF. With market-oriented reform, it has been gradually re-oriented as a state central bank operating in the context of incomplete financial liberalization with an underdeveloped legal system. As detailed in the case studies earlier, insufficient

[33] Most existing studies about central banks in transition and emerging countries do not include the analysis of the PBC. For example, Helmut Wagner, 'Central Banking in Transition Countries' IMF Working Papers, WP/98/126, 1998 <www.imf.org/external/pubs/ft/wp/wp98126.pdf>; Thorsten Beck, Asli Demirguc-Kunt and Ross Levine, 'A New Database on the Structure and Development of the Financial Sector' World Bank Financial Sector Discussion Paper No 2, September 1999 <www1.worldbank.org/finance/assets/images/fs02_web.pdf>.

transparency is continuously a serious challenge for the Chinese legal system.[34] The real level of central bank independence needs to be examined beyond the authority of rules and laws. Relevant legal provisions explicitly prescribed dual subjection, while other government agencies were authorized to impinge upon monetary policy making via the MPC, and local political authorities could directly affect subsequent policy implementation. In a word, legal rules ensured that the PBC worked as one executive body of the State Council, and other direct intervention from both central and local governments affected the making and conduct of monetary policy.

9.2.1.6 What Two-Tier Relationship Means for Prevailing Legal Frameworks

The previously discussed comparisons have explored patterns of convergence and divergence emerging from the legal frameworks governing central banks. Within this co-existence, certain subtle differences are evident, whilst others are more pronounced. Inter alia, central bank independence cannot be understood without taking into account other influencing factors besides legal provisions. Overall, market-oriented central banks have performed their responsibilities with operational independence backed by specified accountability and transparency; rules and laws have explicitly set the limits of government influence. By contrast, government-oriented central banks, such as the BOJ and the PBC, were under more direct political controls, even though operational independence was also written into their statutes. Especially, a number of other political agencies have been authorized by law to participate in and affect monetary policy making with the PBC. Apart from the tasks specified by economic transition, it is questionable whether statutes in China really intend to grant the PBC genuine independence, or even more likely to maintain political controls.

In terms of central banks' relationships with financial markets, indirect policy instruments appear particularly similar, while the PBC also still used direct controls. In addition to lawful window guidance, partial liberalization facilitated eligible direct

[34] There are some studies about government transparency and corruption in China. But China is absent from most surveys regarding transparency in the financial marker, including central bank independence. For example, there is no information about China in the IMF's Reports on the Observance of Standards and Codes (ROSCs), and also its 2012 survey of fiscal transparency and accountability.

monetary policy instruments, and also changed operational conduct. Moreover, it is obvious that great divergence arose from how financial regulation and supervision were arranged and approached in the four different countries. In pursuing risk-based prudential regulation, the US Fed and the BOE had different arrangements: the multi-agency pattern derived from the dual-chartering banking system in the US, whilst with the establishment of the FSA, the BOE was more a monetary authority than a financial regulator. Domestic circumstances directed the focuses of financial surveillance for the government-controlled BOJ and PBC. The PBC was explicitly required to pursue financial stability, but the lack of significant systemic risk made this statutory goal relatively superficial; and financial sector underdevelopment led towards sector-based regulation.

As illustrated in the previous chapters, key propositions about the market or government orientation of these four central banks were tested by analysing their respective legal frameworks. Market-oriented US Fed and BOE came under indirect government oversight, and affected markets via indirect policy means and prudential regulation. Moreover, the distinction between the US Fed and the BOE lay mainly in their respective institutional structures: the FOMC was a collegial committee, but the BOE-MPC was more specialized, while financial regulatory and supervisory duties were separately distributed among different regulators. In comparison, government-controlled central banks had limited operational independence and their interaction with financial sectors was more direct. To summarize, despite similar legal provisions, differences were created by the nature of their particular relationships with government and with the market. Under co-existing convergence and divergence, therefore, the four central banks actually operated with different levels of independence and different distances from financial markets.

9.2.2 Comparing Central Bank Regulation to Achieve Financial Stability

The GFC has obliged central banks to review their preferred crisis management solutions, and their two-tier relationships have come under challenge. After comparing their responses during the last few years, this section will address the following issues:

(i) similarities in the use of statutory policy tools for crisis management coexisted with differences in legal frameworks;
(ii) during the GFC, selected monetary policies varied, bringing about different outcomes; and
(iii) in seeking solutions to the GFC, legal reforms took different formats across these countries.

9.2.2.1 Comparing Legal Approaches to Crisis Management

It was demonstrated in Chapter Two that financial crises triggered certain policy responses from central banks and beyond; these were described as crisis management solutions. According to their respective legal frameworks, these different responses are compared in Table 9.6.

Table 9.6: Comparing Statutory Crisis Management Solutions

Country	LOLR	Deposit Insurance	Bankruptcy Proceeding
US	US Fed could conduct extended LOLR, especially under Sections 10(a) and (b), 13(3) of Federal Reserve Act	FDIC controlled explicit deposit insurance	Within special arrangements for banks' bankruptcy, the FDIC was often pointed as the receiver for failed banks
UK	BOE could provide temporary, short-term liquidity assistance under SMF	FSCS controlled explicit deposit insurance	Banks' bankruptcy was dealt with under the same rules for other companies*
Japan	BOJ had limited LOLR after the Big-Bang reform	DIC controlled explicit deposit insurance	Prompt Corrective Action: special public control was exercised over insolvent banks by a government-managed bridge bank
China	PBC was responsible for subsidiaries, lending to SOCBs, local governments and one policy bank	No programmes or legislations existed about deposit insurance	No official arrangements for banks' bankruptcy

Notes:
*Bankruptcy in the UK does not have a singular law: one system for England and Wales, one for Northern Ireland, and one for Scotland; refer to <www.gov.uk/bankruptcy>.

Table 9.6 displays the respective arrangements in the selected countries regarding *ex post* mechanisms for crisis management. Without exception, all four central banks were required to support market liquidity via the LOLR mechanisms, but other facilities varied. As illustrated in this table, statutes specified how they could each inject capital into the markets in the case of liquidity shortage. Chapter Four showed that the US Fed had gradually expanded its LOLR facilities in exigent and unusual circumstances, especially after the 1930s Great Depression had brought intense criticism about it being ill-prepared to provide necessary liquidity support. In contrast, before formalizing its regulation and supervision, the BOE approached the

private sector for funds whilst adopting a self-regulation approach. When demand for support went beyond its capacity, the BOE needed to be assisted with public funds under the charge of the finance ministry; this explains the role played by HM Treasury in the UK's tripartite model. In Japan, central bank law enabled the Prime Minister and the MOF to request the BOJ to broaden its lending, while loans were legally constrained regarding NPLs and bank failures. In terms of China, neither deposit insurance nor bank bankruptcy arrangements were governed by formal rules or laws.[35] The PBC loans were legally guaranteed to support the state sector, continuing direct control at the firm level.[36]

9.2.2.2 Comparing Central Banks' Crisis Management during the GFC

Central banks could function towards financial stability via bank lending and deposits,[37] as illustrated in the previous case studies. Their overall conduct during the GFC has been summarised in Table 9.7.

[35] It is argued that China has continued an implicit deposit insurance programme, guaranteed by central government or the PBC. With further reform, it should be replaced by an explicit one. For details, refer to, Patrick Honohan, 'Protecting Depositors in China' in Aslı Demirgüç-Kunt, Edward James Kane and Luc Laeven (eds.), *Deposit Insurance Around the World: Issues of Design and Implementation* (MA: MIT Press 2008) 335-355.

[36] <www.chinabaike.com/law/zhishi../cs/qt/1433474.html>. Also, existing programmes in advanced countries might not be applicable in China, due to its predominant state-ownership in the financial sector. See, Michael Faure and Jiye Hu, 'Towards a Deposit Guarantee Insurance in China? A Law and Economics Perspective' (2013) *The Chinese Journal of Comparative Law* 1(2): 256-288.

[37] Jeremy C. Stein, 'Monetary Policy as Financial Stability Regulation' (2012) *The Quarterly Journal of Economics* 127(1): 57-95.

Table 9.7: Comparing Central Bank Actions and Policies in US, UK, Japan and China during the GFC

	US	UK	Japan	China
Pre-conditions	Great moderation: low interest and inflation rates, stable GDP growth; Banking sector developed to a "initiate-and-distribute" model; Subprime mortgage expanded with securitizations and structured products		A short-lived recovery from the bubble-bursting cycle; Banking sector had been recapitalized	Economic reform developed with speedy GDP growth; Domestic financial liberalization was uncompleted
Transmissions Channel	Domestic subprime mortgage crisis quickly accelerate into a financial crisis.	International financial links	Exports and credit crunch in international capital markets	Exports and FDIs reduction
Fiscal Stimulus	√	√	√	√
Conventional monetary policy	√	√	√	√
UMPs	√	√	√	**X**
Statutory Objectives of Central Banks	To maintain stable prices and moderate long-term interest rates; To maximize employment and support economic development	To achieve the 2% inflation rate target and support Government's economic policy	To maintain price stability, support economic development and a sound payment and settlement system	To maintain currency value and support economic development
Outcome*	**X** Unemployment rate over 7% until end-2013; Federal Funds Rates maintained at 0.25%	**X** MPC failed to meet its target since March 2008; Bank Rates maintained at 0.5%	**X** Deflation and stagnant economy continue to be the most critical challenge; interest rate maintained at 0%	√ China achieved stipulated GDP growth targets both in 2008 and 2009; a higher economic growth rate from January 2010

Note:
*For the convenience of comparison, the outcomes are only examined in terms of whether the state central banks have met their statutory goals.

Table 9.7 lists relevant important features regarding the respective experiences of these four countries before and during the GFC. By and large, variations can be identified in regard to how they were affected by this crisis, as well as the outcome following the use of their selected responses. Prior to the GFC, all four countries had different macroeconomic conditions, despite the increasing impact of integration and globalization. The US and the UK were both in the "great moderation" era, while Japan had already made effort to recover from a bubble-burst cycle. With more promising GDP growth, China pursued market-oriented reform. Both Japan and China had developed exporting-led growth, rendering them vulnerable to external financial shocks; this mainly explains the transmission channels through which they were subject to the GFC contagion.

With different sizes and orientations, a combination of fiscal and monetary expansion is globally prevailing; in terms of monetary policy, central banks' responses reveal both convergence and divergence in management styles. First, the PBC pursued proactive risk management, including interest rates cuts, reduced OMOs and greater employment of window guidance, well before exports and FDIs fell; proactive solutions from the BOJ concentrated upon cross-border cooperation. Secondly, the case evidence shows the extensive use of unconventional monetary policy (UMP) by the US Fed, BOE and BOJ, as illustrated in Table 9.8.

Table 9.8: Selected Financial Rescue Efforts in China, Japan, UK, and US from October to December 2008

Packages	China	Japan	UK	US
Increased Guarantee of Private Deposits			£50,000 billion	FDIC $250,000 billion
Guarantees for Bank Loans or Debt		√	FSA √	SEC √
Fund to Purchase Commercial Papers				√
Purchase Mortgage Bonds			√	√
Ban or Restrict Short-selling		√	√	√
Capital Injections	√*		√	√
Options to Purchase Assets of Uncertain Value				TARP √
Induced Mergers & Acquisitions	√		√	√
IMF Emergency Lending				

Note:
*The PBC is by law given the duty to lend directly to the SOCBs and beyond.

According to Table 9.8, in the US, UK and Japan, asset purchases expanded as the crisis deteriorated following the collapse of Lehman Brothers in September 2008, and more untraditional instruments were considered once official interest rates

reached the near zero level after 2008.[38] By contrast, the PBC largely replied upon conventional monetary policy, as well as upon its legal duty to support the banking sector, but fulfilled its statutory tasks of maintaining currency stability and furthering economic development. However, our case study of the PBC has suggested that it had revived the use of direct monetary tools and also suspended the process of domestic marketization as part of its crisis management solutions. The GFC actually constituted a breakpoint in China's market-oriented reform efforts, and delayed further market liberalization, including exchange and interest rates. Table 9.8 therefore exhibits two management styles conducted by these central banks:

(i) UMP tools, launched by the US Fed, BOE and BOJ, mainly refer to liquidity facilities supplied by central banks on extraordinary terms; in the context of near-zero interest rates, large-scale purchases of private sector credit assets and government bonds seek to ease capital flows;[39] and

(ii) PBC's solutions include lawful direct and indirect monetary policy means, as well as other measures rooted in China's economic transition.

Both the UMP tools and the PBC's solutions have further long-term implications. It is difficult to assess the effectiveness of individual UMP instruments because of varying financial conditions across economies, but certain policies are deemed more helpful than others.[40] For example, central banks have succeeded in reducing the tail risks indicated by financial stress indicators, but the monetary complex has contracted, for they have engaged in major short-term transactions. Additionally, the UMP, similar to the safety net, would worsen the problem of moral hazard: central banks' direct intervention, as in bailouts, might give banks and other financial institutions further incentives to make riskier investments.[41] What is more, purchases of government bonds trigger particular arguments about their low rates of return but

[38] Turner Philip, 'Central Banks, Liquidity, and the Banking Crisis' in Griffith-Jones Stephany, Ocampo Jose Antonio and Stiglitz Joseph E. (eds.), *Time for a Visible Hand: Lessons from the 2008 World Financial Crisis* (Oxford Scholarship Online, February 2010) <www.oxfordscholarship.com/oso/public/content/economicsfinance/9780199578801/toc.html> Chapter 6.
[39] Domanski Dietrich, 'Exit from Unconventional Monetary Policy Measures and the Future of Central Bank Operational Frameworks' BIS, 38th Economics Conference 2010.
[40] Claudio Borio and Piti Disyatat, 'Unconventional Monetary Policies: an Appraisal' BIS Working Papers No 292, 2009 < www.bis.org/publ/work292.pdf>.
[41] Emmanuel Farhi and Jean Tirole, 'Collective Moral Hazard, Maturity Mismatch, and Systemic Bailouts' (2012) *American Economic Review* 102(1): 60-93.

higher risks from complicated portfolio compositions. Their effectiveness is more difficult to assess than the provisions of financial aid to the private sector, but governments could intervene more directly in the markets.[42] The extensive employment of the UMP has raised concern about the balance sheets of central banks, questioning whether they could still offer emergency financial facilities once the next financial crisis arises, which would be more likely triggered by extensive asset purchases.[43] Even so, it is argued that monetary responses are more potent in the event of financial distress than at other times: not only could they occur quickly, but have also successfully reduced the possibility of contraction effects in risk management.[44] As a result of the UMP tools, the government, the central bank and the financial market have moved towards further interdependence in the US, UK and Japan. On the other hand, the problem of the PBC's chosen solutions lies in its longer potential negative effects upon domestic market liberalization. In particular, the rise of direct government intervention has brought further uncertainty about China's market-oriented reforms.

The GFC was highly contagious, but each country had significantly different experiences. Initially, both Japan and China suffered contagion due to their own domestic vulnerabilities, while the US and UK were at the centre of wider financial upheavals. Monetary policy instruments were largely similar though still constrained by legislation, but the comparison has identified two particular strategies exercised by these central banks. After conducting their chosen measures, the US Fed, BOE and BOJ entered the unknown territory of central banking by exploring unprecedented monetary expansion. In terms of the PBC, with China's limited losses, it was the only central bank here to have achieved its tasks as prescribed by law, but its "success" came under close scrutiny given that the government intensified direct intervention.

[42] *Supra* 40.
[43] Thorvald Grung Moe, 'Shadow Banking and the Limits of Central Bank Liquidity Support: How to Achieve a Better Balance between Global and Official Liquidity' Levy Economics Institute of Bard College, Working Paper No 712, 2012 <www.levyinstitute.org/pubs/wp_712.pdf>.
[44] Mishkin Frederic S., 'Is Monetary Policy Effective During Financial Crises?' NBER Working Paper Series, No 14678, 2009 <www.nber.org/papers/w14678.pdf>.

9.2.2.3 Central Bank Reforms following the GFC

The previous chapters argued that both the US and UK chose legal reforms to change their flawed financial systems once the GFC exposed various critical shortcomings and structural problems; however, in Japan and China, further rule making and law reforms have had different focuses. This part will argue that, in terms of statutory changes, divergence has become more apparent, as demonstrated in Table 9.9.

Table 9.9.: Comparing Legal Reforms of US Fed and BOE during the GFC

Country	Legal Reform	Crisis Management Solutions	Financial Stability
US	Economic Stimulus Act 2008	$152 billion expenditure at tax rebates and incentives	
	Housing and Economic Recovery Act 2008	Changing the rules regulating the GSEs, including Fannie Mae and Freddie Mac	
	Emergency Economic Stabilization Act 2008	Troubled Asset Relief Plan: Treasury to purchase or insure "troubled assets"*	
	American Recovery and Reinvestment Act 2009	$787 billion economic stimulus package	Maintaining and increasing employment immediately; Improving temporary relief programmes
	Dodd-Frank Act 2010	US Fed clarified to link monetary policy with employment, and set a long-term 2% inflation rate target; LOLR facilities were re-regulated	US Fed to control macro-prudential regulation of more financial institutions and focus upon systemic stability
UK	Banking Act 2009	Special Resolution Regime was introduced to deal with bank insolvency, and Special Resolution Unit was established within the BOE	BOE was granted with a statutory objective for contributing to the maintenance of financial stability
	Financial Services Act 2012	Dual mandate included flexible inflation targeting and government's macroeconomic goals	FSA was replaced by a "Twin-Peak" model controlling prudential policy and business conduct regulation; BOE to control macro- and micro-prudential regulation under the leadership of HM Treasury

Table 9.9: Comparing Legal Reforms of BOJ and PBC during the GFC

Country	Legal Reform	Crisis Management Solutions	Financial Stability
Japan	Japan Revitalization Strategy	BOJ introduced a numerical target for inflation rate, and reset monetary base as its target for money market operations; Council on Economic and Fiscal Policy monitored monetary policy	
	New Measures for Financial Facilitation; Act on Temporary Measures to Facilitate Financing for SMEs; Financial Function Strengthening Act (Amendment).	FSA smoothed financial panics mainly through relaxed capital adequacy standards	BOJ controlled liquidity risk management surveillance; Macro-prudential regulation focuses upon financial imbalance Stress tests exercised by both BOJ and FSA
China**	*Xingzheng Fagui*;[45] *Bumen Guizhang*;[46] *Guifanxing Wenjian*[47]		Collaboration mechanisms to be formalized between PBC and CBRC under State Council

Notes:
* The TARP has changed over time, and the Dodd-Frank Act reduced the amount of the authorized expenditures of 'troubled assets' from $700 billion to $475 billion.
** China has a complex legal system, and Chapter Six has explained the legal authority and hierarchy therein.

[45] The State Council enacted a relevant legislation to regulate financial credit during the GFC, refer to, State Council, No 613 <www.pbc.gov.cn/publish/tiaofasi/273/2013/20130305100536731178677/20130305100536731178677_.html>.
[46] The PBC released three regulations between 2008 and 2014. PBC, Law Enforcement and Inspection Procedures of the PBC, No 1 [2010] www.pbc.gov.cn/publish/tiaofasi/274/2010/20100712150127980126616/20100712150127980126616_.html>; PBC, Managing Payments and Settlements of Non-financial Firms, No 2 [2010] <www.pbc.gov.cn/publish/tiaofasi/274/2010/20100621164122767397231/20100621164122767397231_.html>; PBC, Financial Credit, No 1 [2013] <www.pbc.gov.cn/publish/tiaofasi/274/2013/20131203152618446381432/20131203152618446381432_.html>.
[47] The PBC published more than one hundred *Guifanxing Wenjian* from mid-2008 to November 2013. More broadly, policies and regulations, from the PBC, CBRC, State Council and other responsible government departments, are numerous. Those with significant importance and relevance were cited in Chapters Seven and Eight, while most can be downloaded from the PBC's website at <www.pbc.gov.cn/publish/tiaofasi/269/index.html>.

Based upon the pattern evident in Table 9.9, each country has released new rules and laws during the GFC; and some of these are directly linked with preferred crisis managements, whilst financial stability has been officially emphasized with different degrees of intensity. Legal reforms affecting central banks did occur in all four countries yet divergent approaches were clear. From the outset, varying losses caused by the GFC emphasised different requirements for legal changes, as well as diverse focuses. Severe banking failures and financial stress have questioned financial regulation and supervision systems in both the US and UK, leading to massive legal changes. Convergence became significant where systemic stability was emphasized in both countries, whilst macro-prudential regulation has been strengthened incrementally/step by step. However, the following divergences were evident: (i) the US Fed introduced a numerical target for the inflation rate while, after previous failures, the BOE was allowed to depart from its 2% inflation targeting; (ii) employment goals were reaffirmed for the US Fed's operations, whilst the BOE has been required by HM Treasury to prioritize growth under its new remit since 2013; and (iii) the US Fed is still a consolidated regulator and now has an extended scope over financial institutions, but more radical changes have occurred in the UK, characterised by re-locating the BOE as the oversight centre with overall responsibility for financial stability.

As far as government-controlled central banks are concerned, legal changes, which were less bold, were intended to resolve domestic problems rather than focus upon the GFC itself. After a few years, Japan went back to the difficulty of dealing with deflation and a stagnant economy. Maintaining the division of tasks between the BOJ and FSA, the central bank continued to explore monetary expansion, and also introduced numerical inflation targeting goals, clarifying this so as to serve the government's strategy aggressively. In China's case, its limited losses reduced the need for legal reform, but new policies and regulations emerged. There is very clear evidence that the GFC has suspended China's marketization, so, such as measures between 2010 and 2013 aimed at re-activating and continuing the reform but with limited progress.

Overall, the GFC has created different requirements for legal reforms with varying focuses. Major statutory changes were directed to moving market-oriented central

banks towards a reinforced role in maintaining systemic stability, and thus, their legal reforms were directly linked to the GFC. By contrast, Japan and China enacted rules and laws to resolve their particular domestic problems, resulting in a more domestic-driven model pursuing changes.

9.2.2.4 How the GFC Changed Central Banks' Two-Tier Relationship

In the previous case studies, we have shown that the two-tier relationships of all four central banks have been changed to varying degrees as a result of the GFC. Governments have explicitly increased their own powers to stabilize financial markets through sizeable fiscal stimulus packages, and implicitly acted to bring central banks under closer control. Without exception, joint rescues have been carried out by all central banks and their respective finance ministries. Moreover, new mandates explicitly required the BOE and BOJ to demonstrably support governmental economic goals; the US Fed and BOJ have purchased massive government bonds; monetary easing by the PBC actually supported the fiscal stimulus package. All these central banks have entwined their relationships with their financial markets, achieved either via the use of UMP tools or the PBC's solution. Globally, macro-prudential regulation dealt with systemic risk, and was embraced particularly by both the US Fed and the BOE. In consequence, the GFC has enhanced the triangular relationship: the government and the central bank worked more closely towards controlling financial markets; and the changed two-tier relationship became characterised by reduced central bank independence and increased governmental intervention into markets.

The GFC had at first enlarged the gaps between their legal frameworks and the two-tier relationships governing those four central banks. Afterwards, these countries had different regards for legal orders: both the US and UK chose to acknowledge the amended two-tier relationships through statutory changes while, with more explicit government intervention, Japan and China focused more on their domestic problems. What is more, the market-oriented US Fed and BOE have continued to be under direct challenge from the GFC to restore financial stability. They pursued unprecedented asset purchases aimed at smoothing market liquidity, while legal reforms were directed to resolving previous shortcomings, making many reforms

crisis-driven. By contrast, government-controlled central banks had different priorities. External shocks brought Japan back to be critical of deflation and a stagnant economy, requiring further actions from the BOJ. To recover from the sluggish conditions in 2008/2009, the PBC reset direct tools, and reform measures gave way to crisis management solutions for restoring stability; these lacked consistency with China's claimed market-oriented reform, and calls for deepening liberalisation so long as the effects of external shocks were reduced. From this point of view, reforms relating to the BOJ and PBC are more domestic-driven by comparison.

All told, the GFC has brought different challenges to market-oriented and government-controlled central banks, leading to the above division of the post-crisis tasks. In response to the challenges created by the GFC, the commitment of the US Fed and BOE to market principles was secondary to restoring financial stability, while the government orientation of both the BOJ and PBC became even more evident. This is how the GFC amended their pre-existing ("old") orientations respectively.

9.2.3 Comparative Summary: Convergence, Divergence or Multiple Pathways?

In principle, central banks are defined from their respective two-tier relationships. The two tiers are as follows:

- the relationship between central bank and government, and
- the relationship between central bank and market.

The assumed propositions were tested with reference to their respective legal frameworks, which prescribe the character and conduct of central banks with regard to:

- Objectives (monetary policy objectives and others);
- Organizational structure;

- Direct and indirect monetary policy instruments;
- Financial regulation and supervision (institutional structures and approaches);
- Independence.

Central banks seek and are required to make efforts to restore financial stability in the event of financial crises; the following facilities are available for this purpose:

- Conventional and unconventional monetary policy employed as crisis management solutions;
- Emergent financial support, such as the LOLR and bailouts.

The different levels of convergence can be tabulated; Table 9.10 seeks to do this by covering all of the above items regarding central banks' legal frameworks and their use of crisis management solutions during the GFC.

Table 9.10: Comparing Legal Frameworks and Management Solutions in Four Central Banks

	Convergence in Legal Frameworks		
		High	**Low**
Convergence in Crisis Management Solutions	**High**	**TYPE 1:** Statutory design of multiple objectives with the primary goal for monetary stability; Legal provision for operational independence; Combination of fiscal and monetary stimulus during the GFC; Indirect monetary policy responses as crisis management	**TYPE 3:** Other statutory objective(s)
	Low	**TYPE 2:** LOLR facilities	**TYPE 4:** Organizational structures; Direct and unconventional monetary policy instruments; Regulation and supervision

Table 9.10 provides an overall review of how the selected four central banks were similar to and different from each other. To present the patterns of convergence and divergence, the findings can be categorised into the following four types of responses evident at different times in their conduct:

- **Type 1-HH**: high convergence in legal frameworks and high convergence in crisis management solutions.

  Under similar legal provisions, all four central banks conducted certain allied actions during the GFC. In principle, they have continued to take charge of monetary stability, and within the combined stimulus packages, limited lawful monetary policy means were first employed in response to market upheavals.

- **Type 2-HL**: high convergence in legal frameworks but low convergence in crisis management solutions.

  All four central banks were similarly provided with the LOLR facilities, but their respective practices varied greatly during the GFC. For the US Fed, BOE and BOJ, the UMP originally derived from discretion granted under their statutory duties as a LOLR in the event of financial crises. For the PBC, it still directly controls the allocation of capital and manages income distribution, so that its solutions were only workable for a government-controlled central bank in a semi-liberalized financial market.

- **Type 3-LH**: low convergence in legal frameworks but high convergence in crisis management solutions.

  As detailed in Section 9.2.1.1, they had different objectives for the wider economy, but the GFC shifted all their attention towards dealing with market upheavals and restoring financial stability.

- **Type 4-LL**: low convergence in legal frameworks and low convergence in crisis management solutions.

Their legal frameworks were not identical, with some aspects being prescribed differently by law, and their approaches to the GFC diverged. This type displays the most evident divergence that existed among the four central banks. Statutes defined their respective organizational arrangements and regulatory regimes. When dealing with financial instability, the PBC revived direct controls over the markets, and the other three employed widely UMP measures.

From the above four types, obviously, convergence has co-existed with some divergence during the development of the four central banks. Before the GFC, with statutory operational independence, they all controlled monetary stability, a fixed toolbox of monetary policy instruments, and the LOLR facilities (as categorised in Type 1 and Type 2 above). In these selected countries, prior to the GFC, central banks were primarily in charge of monetary policy and also of financial regulation to some extent; the GFC has changed both sides of central bank regulation. After the BOJ pioneered the UMP tools, both the US Fed and BOE introduced and expanded innovative monetary policies; but differently, the PBC reapplied direct controls and suspended domestic liberalization in advance. The following evident differences include the distinction between the UMP tools and the PBC strategies, the focuses for legal reforms, the assignment of the post-crisis tasks, and especially the re-arrangements of financial regulation and supervision; those are categorised in Type 4 of Table 9.10 above.

The most explicit difference emerged from their institutional structures and approaches toward financial regulation and supervision, as illustrated in Table 9.11 below.

Table 9.11: National Arrangements for Financial Regulation and Supervision before the GFC

Country	Institutional Structure	Regulation and Supervision Approach
US	At both Federal and State levels; US Fed was a consolidated regulator at the federal level	Risk-based micro-prudential regulation
UK	FSA was the mega regulator, and BOE was in charge of LOLR facilities, as well as systemic stability	Principle-based prudential regulation
Japan	FSA was the main regulator, and the BOJ controlled on-site examination, off-site monitoring and limited LOLR facilities	Dealing with domestic changes of NPLs and bank failures; Oversight maintained at the firm level
China	*Yihang Sanhui*: PBC legally controlled monetary and financial stability, while CBRC, CIRC and CSRC controlled banking, insurance, and securities respectively	Sector-based direct control mainly within political hierarchy

As argued, there were historical reasons to explain the different focuses of the US Fed and the BOE as market-oriented central banks,[48] while continued domestic challenges prompted the BOJ's model, and partial liberalization, along with preliminary financial conglomerate, led to China's choice of sector-based regulation. By the GFC, when conducting regulatory duties, their selected institutional structures and reforms were, and continue to be, different from one another, though macro-prudential policy has similarly been emphasized, as illustrated in Table 9.12.

[48] Dalvinder Singh, 'The US Architecture of Bank Regulation and Supervision: Recent Reforms in Their Historical Context' in John Raymond LaBrosse, Rodrigo Olivares-Caminal and Dalvinder Singh (eds.), *Managing Risk in the Financial System* (Edward Elgar Publishing 2011) 399-415.

Table 9.12: Reforming Financial Regulation and Supervision during the GFC

Country	Changed Institutional Structure	Changed Approaches
US	FSOC was established to control systemic stability; OTS was abolished; US Fed extended its oversight scope	Macro prudential regulation focused upon systemic stability
UK	FSA was abolished; PRA and FCA were established as a Twin-Peak model for prudential and conduct of business regulation; BOE embraced macro- and micro-prudential regulation, and banks' failures	Macro prudential regulation focused upon systemic stability; Banks' failures began to be managed according to set rules under the SRU
Japan	Nil	Macro prudential regulation claimed to control financial imbalance
China	Nil	Political coordination mechanism

Obviously, the more radical reforms in the UK sought to re-structure its entire oversight regime, while the US Fed was required by legislation to balance its duties as a LOLR and systemic regulator. By comparison, domestic economic situations had continuously specified priorities for the government-controlled central banks. The GFC has further renewed the debates about the optimal model for financial oversight; the bone of contention includes the division of responsible agencies, as well as their improved governance towards best practice of policy conduct,[49] specific tools for macro-prudential regulation,[50] and the criteria for effective monitoring,[51] among others. All such issues have continued from the pre-crisis period, but the GFC has challenged the respective significance. Inter alia, a systemic regulator was lacking before the GFC exposed the structural weaknesses of financial regulation

[49] Ross Levine, 'The Governance of Financial Regulation: Reform Lessons from the Recent Crisis' (2012*) International Review of Finance* 12(1): 39-56.
[50] For a summary, refer to, Gabriele Galati and Richhild Moessner, 'Macroprudential Policy—A Literature Review' (2013) *Journal of Economic Surveys* 27(5): 846-878.
[51] Steve Keen, 'Hindsight on the Origins of the Global Financial Crisis' inn Steven Keen (ed.), *The Global Financial Crisis: What Have We Learnt?* (Edward Elgar Publishing 2011) 111-125.

and supervision in the global arena, and thus, such a regulator should be introduced to focus upon the system-wider risk.[52]

Implicitly, the relationship between the central bank and the government is more complicated than principal legal provision alone. Similar operational independence was granted by law, as illustrated in Type 1 of Table 9.10, but actual levels of autonomy distinguished market-oriented from government-controlled central banks. Less substantive differences existed between the US Fed and BOE, which has whereas been amplified by the GFC. For decades, without evident statutory changes, the US Fed maintained its independence within the government, but the BOE did not gain operational independence until the late 1990s with HM Treasury remaining influence upon both monetary policy and financial regulation. When it came to the GFC, the Dodd-Frank Act left central bank independence intact but with enhanced and extended transparency and oversight from both the Treasury and the GAO. In the UK, however, the power of HM Treasury was expanded by nationalizing private enterprises and leading the new regulation regime. In contrast, both the government-controlled BOJ and the PBC came under further direct political control, but their statutes did not reflect their changed relationships with the governments.

Overall, the GFC has enlarged certain divergences. Between the US Fed and BOE, more differences in independence and financial regulation regimes have become evident, while further gaps have emerged between market-oriented and government-controlled central banks.

Up until this point, this chapter has discussed the patterns of convergence and divergence, making horizontal comparisons above. Depending upon the time parameter, the two-tier relationship, essential to define a central bank, has changed due to the GFC:

1. Before the GFC, the four central banks operated within similar legal frameworks, but actually with different levels of independence and at varying distances from financial markets.

[52] Roberta S. Karmel, 'The Controversy over Systemic Risk Regulation' Brooklyn Law School, Legal Studies Paper No 179, 2010 <http://ssrn.com/abstract=1540691>.

2. During the GFC, crisis management solutions, including monetary policy adjustments and LOLR facilities, have simultaneously moved central banks towards government and financial markets.

3. Following the GFC, reforms have intended to reconstitute their two-tier relationships. For market-oriented central banks, independence was still desirable with increasing focus upon systemic stability, but the BOJ and the PBC faced more domestic challenges than crisis-driven changes in the US and the UK.

So far, as proved by the findings, it can be argued that the two-tier relationship is relatively dynamics. The GFC has presented that with convergent crisis management solutions, those four central banks had different focuses and approaches. In particular:

1. With considerable independence, the US Fed has amended its authority to intervene directly into financial institutions and markets; regulatory reform promoted a macro-prudential approach toward systemic stability without changing the multiple-agency institutional structure.

2. The BOE has continued to explore the feasibility of a central bank being financial regulator and supervisor. Radical legal reform has increased its power to maintain systemic stability but HM Treasury seeks to lead the central bank group.

3. Facing domestic deflation and economic stagnation, the BOJ has continued to be guided by Government, and challenged to break the limits of monetary expansion for pursuing a sustainable recovery.

4. China is primarily challenged to continue its market-oriented reform rather than deal with external shocks, while rising government intervention has questioned how far its liberalization can be. Inter alia, crisis management solutions from the PBC and beyond have brought further uncertainty apart from certain immediate benefits.

To summarise, within similar legal frameworks, those four central banks have operated, during the GFC, around different relationships with both the governments and the markets; they relied upon different approaches and focuses to restore financial stability; and accordingly, their two-tier relationships have been affected differently by the GFC.

9.3 Implications to be drawn from this Comparative Analysis

The foregoing analysis has demonstrated the detailed co-existence of convergence and divergence among all four central banks. This section will seek to explore some further effects that the GFC posed for central banks.

9.3.1 Rule of Law or Rule of Central Bankers?

This study has concentrated upon rule-based legal frameworks to assess central bank regulation towards financial stability. Individual propositions were established by comparing "old" legal frameworks with recent changes arising from the GFC. However, other historical evidence has already shown significant differences between the US Fed, BOE, BOJ and PBC in their pursuit of changes through rule makings and law reforms; this is further illustrated in Table 9.13.

Table 9.13: Comparing Major Legal Changes to the Four Central Banks before the GFC

Country	Laws and Rules	Changes
US	Federal Reserve Act 1913	US Fed was established as a private agency
	Glass-Steagall Act 1932	Adding Section 13(3) as a provision of the Emergent Relief and Construction Act; Section 13(13) set eligible collateral for emergent loans from US Fed
	Glass-Steagall Act 1933	Separating commercial and investment banking; Regulation Q set limits upon interest rates; FOMC was set up
	Emergency Banking Act 1933	Gold standard was suspended
	Gold Reserve Act 1934	ESP controlled US Fed's gold reserve
	Banking Act 1935	Further changes to Sections 10(b) and 13(3); FDIC extended and became permanent; Secretary of the Treasury and the COC was removed from the Board
	Employment Act 1946	Mandate between Government and US Fed for recovery
	Treasury-Federal Reserve Accord 1951	An independent securities market was established; FOMC assumed decision-making authority; Central bank independence improved
	Banking Holding Company Act 1956	Registration requirements for companies controlling two or more banks under US Fed
	Full Employment and Balanced Growth Act 1978	US Fed's objectives embraced price stability and maximum employment
	Depository Institutions Deregulation and Monetary Control Act 1980	Interest paid to transaction accounts; Interest rate ceilings were removed; US Fed set reserve requirements for more eligible institutions
	Federal Deposit Insurance Corporation Improvement Act 1991	Explicit regulation of the LOLR with further extension
	Gramm-Leach-Bliley Act 1999	Ending the separation between commercial and investment banks; US Fed was an "umbrella" consolidate regulator with broad discretion

Country	Laws and Rules	Changes
UK	BOE Act 1694	BOE was established as a private joint-stock corporation
	BOE Charter 1694	Capital stock and organizational structure were set
	BOE Charter 1844	BOE controlled monetary policy, financial stability and the settlement revenue; Issue and banking departments were separated
	BOE Act 1946	BOE was nationalized with limited independence in monetary policy; Corporate governance further developed
	Banking Act 1979	BOE conducted different regulations over the two-tier banking system, and began to issue directions for regulatory purposes; Deposit insurance scheme formed
	Banking Act 1987	More supervisory instruments were granted; BOE Board of Banking Supervision was established; Legal accountability to Government increased
	BOE Charter 1998	Uniformed supervision over the whole banking sector; Corporate governance was improved by establishing the new Board of Banking Supervision Division; Further accountability was required
	BOE Act 1998	Operational independence; MPC was established in 1997 to control monetary policy
	FSMA 2000	FSA emerged as a mega-regulator with prudential regulation

Country	Laws and Rules	Changes
Japan	BOJ Act 1882	BOJ was established as a joint-stock company with the state as the major stakeholder
	Convertible Bank Note Act 1884 (with amendment in 1888)	BOJ promoted the unified stable monetary system through redemption of silver and national bank notes under the MOF and Treasury
	Memorandum of Establishing a New Economic System 1940	Centralization of policy and industry to support war, including loan rationings
	BOJ Act 1942	Under intensified authority of the MOF, the BOJ was administered to operate exclusively to accomplish the purpose of the state
	Finance Law 1947	Supporting wartime loans Policy Board was reformed in 1949
	BOJ Act 1998	Operational independence but under the increasing authority of the Diet and Cabinet; Policy Board resumed its decision making power over monetary policy; On-site and off-site monitoring at the firm level
	Legislation in Big-Bang: Financial Reconstruction Law; Financial Function Early Restoration Law; Prompt Corrective Action; and Deposit Insurance Law 1998	New agencies were established to deal with NPLs and bank failures; FSA took over financial regulation and supervision from the MOF; DIC accounts were reformed; BOJ only offered limited LOLR

Country	Laws and Rules	Changes
China		
		PBC was established in 1948 as a government department
	State Council Decision 1983	PBC was a state authority under State Council with its branches supervised by local governments; PBC supervised specialized banks according to the administrative hierarchy; Centralized credit plan continued to balance finance budget and lending channels
	Provisional Regulations 1986	PBC was located as a bureau-level government institution within State Council with all monetary policies approved by the State Council before implementation; PBC controlled the markets mainly through direct and political tools
	PBC Law 1995	PBC was stimulated to be a state-owned government institution under the dual-tracked authority of the NPC and the State Council; PBC was closely attached with, rather than independent of, financial markets with direct intervention into financial institutions
	MPC Regulations 1997	MPC was established as a consultative body for compromising monetary policy decisions
	PBC Law 2003	Dual subjection continued with various government departments allowed by law to determine monetary policy design and implementation
	CBRC Decision 2003	*Yihan Sanhui* regime took up based upon division of financial markets with constrained independence

Table 9.13 shows how these four central banks developed under their respective legal authority. As can be seen from this table, statute and rule changes were more frequently launched to modify the US Fed and the BOE. However, in Japan, central bank laws developed relatively passively, as exceptionally long-standing wartime legislation stood out. The short history of the PBC had initially limited the possibility of significant legal changes, but inherent shortcomings of the Chinese

legal system, including the Party's absolute leadership and extensive administrative authority, weakened the utility of existing legislation. It is also argued that the performances of central banks in developing countries were more directly linked with legal enforcement rather than *de jure* central bank independence.[53] Consequently, the weak enforcement of laws in China has continued to impair the conduct of the PBC. At the very least, the value of rules and laws was conventionally discounted in both Japan and China, and thus, a clear line had been drawn between market-oriented and government-controlled central banks.

As regards legal events trigged by the GFC, Section 9.2.2.3 has compared respective differences of the four countries. When compared, massive and frequent statutory changes have occurred to the US Fed, but the reference to the rule of law was rare in discussion when it launched unprecedented monetary expansion. In particular, the legitimacy of some of its innovative crisis management solutions has been questioned by repeatedly citing Section 13(3) of the Federal Reserve Act. The US Fed used some fiscal policies to subsidize selected financial sectors, including both general programmes of liquidity support and direct bailouts of certain financial institutions. When offering support at the firm level, it discriminated some from the others: for example, it established *ad hoc* special facilities for Bear Stearns and AIG, but let Lehman Brothers fail.[54] Overall, it has actually acted as a market maker during the GFC:

[53] Waranya Atchariyachanvanich, 'The Legal Central Bank independence and Macroeconomic Performance: An Empirical Study on Eighteen Developing Countries in the 1990s' Forum of International Development Studies, Issue 23, March 2003 <www.gsid.nagoya-u.ac.jp/bpub/research/public/forum/23/09.pdf>. However, this study did not include China's central bank when charting the findings by employing a framework of legal enforcement variables and their scorings.

[54] There are particular reasons explaining the different tunes set by the US Fed when dealing with the risks of Bear Stearns and Lehman Brothers. Refer to, Chris Isidore, 'Why They Let Lehman Die' CNN Money Special Report, Issue 1 <http://money.cnn.com/2008/09/15/news/companies/why_bear_not_lehman/index.htm?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+rss%2Fmoney_news_companies+(Companies+News)> accessed on September 15, 2008.

> "To ameliorate the threat to financial and economic stability, the Federal Reserve and a number of other central banks in effect found they needed to provide a substitute for the arbitrage and trading no longer being undertaken in sufficient size by the private sectors."[55]

Seemingly, in order to restore financial stability, central banks have tried "every possible remedy but applying the rule of law".[56] It was thus argued that legal reforms should limit its illegal expansion and improper direct intervention into private sectors, though Section 13(3) had already granted it overly broad authority in "exigent and unusual circumstances".[57] This points to the role of legal orders in regulating central banks: are central bankers ruled by law or by their own rules? The rule of law can be defined from different dimensions. At the core, it is opposite to the discretionary exercise of the authority; government agencies should do nothing but faithfully enforce statutes without arbitrariness or undue discretion. By contrast, the rule of authority allows executive government authorities to release substantive new decrees and forgo enforcing the statutes.[58] The principal difference between rule of law and rule of authority has been explained as follows:

> "Stripped of all technicalities, this means that government in all its actions is bound by rules fixed and announced beforehand—rules which make it possible to foresee with fair certainty how the authority will use its coercive powers in given circumstances and to plan one's individual affairs on the basis of this knowledge."[59]

As established here, central banks are generally bound to their legal mandate. In spite of essential legal elements, the mandate is purposely defined in comparatively loose terms.[60] This has therefore permitted central bankers great discretion over monetary policy and regulatory rule-making under the legislation that created and

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[55] Donald L. Kohn, 'Money Markets and Financial Stability' at FRB New York, India Infoline News Service <www.indiainfoline.com/Markets/News/Archived/Vice-Chairman-Donald-L.-Kohn-at-the-Federal-Reserve-Bank-of-New-York/760186196> accessed on May 30, 2008.
[56] Laurence H. White, 'The Rule of Law or the Rule of Central Bankers?' (2010) *The Cato Journal* 30(3): 451-464.
[57] Chad D. Emerson, 'The Illegal Actions of the Federal Reserve: An analysis of How the Nation's Central Bank has Acted Outside the Law in Responding to the Current Financial Crisis' (2010) *William & Mary Business Law Review* 1(1): 109-137.
[58] *Supra* 56.
[59] Friedrich A. Hayek, *The Road to Serfdom* (Psychology Press 1944) 75.
[60] Thomas Jordan, 'A New Role for Central Banks?' at the Zürcher Volkswirtschaftliche Gesellschaft, Zürich, January 16, 2014 <www.bis.org/review/r140117a.pdf>.

empowered central banks.[61] During the GFC, most central banks did not limit themselves into the orthodox policies for crisis management, but explored renewed UMPs. For example, there are special rules and procedures for bankruptcies of financial institutions in the US; if those known rules were complied with, the falling institutions should have been acquired or liquidated, rather than bailouts made at the firm level.

In this context, the Dodd-Frank Act has sought to rectify the legal authority of the US Fed as the LOLR. As described in Chapter Four, the amendments to Section 13(3) include the requirements for lending through a program or facility with "broad-based eligible collateral", the executive input by the Treasury into the decision-making of the US Fed and enhanced transparency through detailed reporting obligations under auditing. Amid the GFC, the US Fed had become the LOLR for systemic insolvency risks, while the above legal changes have restated the intended purpose of Section 13(3):[62] lending freely against eligible collateral, the US Fed should work as the LOLR for systemic liquidity risks.[63]

A similar analysis can also be made about the BOE. In principle, the "light-touch" regulation of British banks, including the "soft law" corporate governance strategies, which was earlier believed to have spurred the development of the City of London as an international financial centre, failed to effectively monitor financial institutions and remedy their failures.[64] As a result, the Financial Services Act 2012, along with the Banking Act 2009, intended to correct the FSA's "principles-based" regulation and also brought an orderly manner to deal with the bankruptcy of financial institutions.

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[61] *Supra* 56.
[62] Alexander Mehra, 'Legal Authority in Unusual and Exigent Circumstances: The Federal Reserve and the Financial Crisis' (2010) *University of Pennsylvania Journal of Business Law* 13(1): 221-273.
[63] Kenneth N. Kuttner, 'The Federal Reserve as Lender of Last Resort during the Panic of 2008' (December 30, 2008) <www.capmktsreg.org/pdfs/The_Federal_Reserve_as_Lender_of_Last_Resort_during_the_Panic_of_2008.pdf>.
[64] Roman Tomasic, 'The Failure of Corporation Governance and the Limits of Law: British Banks and the Global Financial Crisis' in William Sun, Jim Stewart and David Pollard (eds.), *Corporate Governance and the Global Financial Crisis: International Perspective* (CUP 2012) 50-74.

Broadly, the GFC has challenged our prevailing legal orders in relation to central banking. Initially, market-oriented central banks did not strictly apply the rule of law, but large-scale law reforms *ex post facto* were intended to legitimize the adjusted two-tier relationships of the US Fed and the BOE respectively. Overall, their rule makings and law reforms were intended to reflect their two-tier relationships, aiming to ensure their legal commitment to market principles. By contrast, the BOJ Act 1998 defined how it operated under its statutory objectives but, since end-2012, the Japanese government has intensified its direct controls over the BOJ to enhance interference in markets without touching its legal status. In China, most legal changes focused upon domestic reforms, while the PBC continued to perform its quasi-fiscal duties and maintain direct market controls under intensified orders from the government. Accordingly, government intervention in Japan and China emerged more visibly and directly, whereas few material statutory changes really affected the core two-tier relationships of their central banks. As a result, the gap between their respective legal frameworks and the real two-tier relationships increased, and their governments have enhanced their roles more easily. Therefore, due to the GFC, both the BOJ and PBC had moved away from their respective operational scopes prescribed by law, and hence, their legal frameworks have to a great extent been weakened to reflect their real two-tier relationships.

Overall, both historical and contemporary evidence presents that the market-oriented and government-controlled central banks were differently disposed towards their respective legal orders, and the GFC has further increased such divergence.

9.3.2 How the GFC Challenged the Government-Market Nexus

Above all, in this thesis, central banks have been grouped into two categories: market-oriented or government-controlled. The GFC not only challenged central banks to focus upon restoring financial stability, but also changed the nexus between government and the market; the latter would bring potential far-reaching effects upon their orientations propositioned.

As explained at the very beginning of this thesis, the market-oriented reform sought to minimize the involvement of government in the markets, promoting more prudential regulation over the financial sector, and self-regulation was still espoused in the UK. It was argued that the markets could regulate themselves, and that financial institutions would judge it in their own interest to ensure financial stability.[65] For decades, it was argued that financial markets had flourished with continued liberalism-oriented deregulation; but as a result of the GFC, neo-liberalist doctrine was finally called into question with critical challenges spreading through the financial sector.[66] It is argued that excessive confidence upon rational market behaviours, along with de-regulation since the beginning of neo-liberalization reform, had triggered problems extensively existing in the financial sector and beyond. [67] Consequently, many of these features have been, or needed to be, revised or even replaced.[68] For example, the shadow banking boom, which was one trigger for this crisis, has gradually been placed under an official system-wide oversight framework, with central banks modifying their LOLR facilities to support an untraditional banking sector. [69] The prevailing arrangement protecting systemically important financial institutions (known as the "too big to fail" policy) turned out to be rarely under scrutiny, and thus, various tools have been redesigned to regulate them.[70] It might still be too early to judge whether the financial sector will end up under too much regulation or whether excessive government intervention could trigger the next

[65] Roman Tomasic, 'Beyond "Light Touch" Regulation of British Banks after the Global Financial Crisis' in Iain G. MacNeil and Justin O'Brien (eds.), *The Future of Financial Regulation* (Oxford: Hart Publishing 2010) 103-122.
[66] Ulrich Brand and Nicola Sekler (eds.), *Postneoliberalism—A Beginning Debate* (Development Dialogue, No 51, January 2009) <www.dhf.uu.se/pdffiler/DD2009_51_postneoliberalism/Development_Dialogue_51.pdf>.
[67] Elmar Altvater, 'Postneoliberalization or Postcapitalism? The Failure of Neoliberalism in the Financial Market Crisis' (2009) *Development Dialogue* (January): 73-86 <www.dhf.uu.se/pdffiler/DD2009_51_postneoliberalism/Development_Dialogue_51-art7.pdf>.
[68] *Supra* 64.
[69] *Supra* 43.
[70] Arthur E. Wilmarth, Jr., 'Finding a Solution to the 'Too-Big-to-Fail' Problem' in John Raymond LaBrosse, Rodrigo, Olivares-Caminal and Dalvinder Singh (eds.), *Managing Risk in the Financial System* (Edward Elgar Publishing 2011) 208-232. It is also reported that the joint effort was initiated by both the BOE and the FDIC to deal with the cross-border "too-big-to-fail" financial institutions since end-2012. See the news, Emma Rowley, '"Too Big to Fail" Plan Outlined by UK and US Authorities (Telegraph online) <www.telegraph.co.uk/finance/newsbysector/banksandfinance/9733463/Too-big-to-fail-plan-outlined-by-UK-and-US-authorities.html> accessed on December 10, 2012. For a short summary of important policy stands, refer to, Paul Tucker, 'Solving Too Big to Fail: Where do Things Stand on Resolution' at the Institute of International Finance 2013 Annual Membership Meeting, Washington DC, October 12, 2013 <www.bankofengland.co.uk/publications/Documents/speeches/2013/speech685.pdf>.

financial crisis.[71] However, obviously, governments have gradually been playing a more active role, introducing regulation regarding systemic stability,[72] and financial markets have thereby shifted toward less self-regulation but more government intervention.[73] Therefore, due to the GFC challenge, the "market" should be understood differently in the West: much of the financial sector has become different from what it used to be, but has developed with different "re-regulation" measures.[74] As emphasized by both the US Fed and BOE, macro-prudential regulation seeks to keep central banks committed to furthering systemic stability, even after they finally exit from directly supporting market players.[75]

However, the market in the East was customarily viewed in a different manner. It was argued that Asian countries had state-led economic growth: they had progressed from underdeveloped financial markets, weak legal systems, dysfunctional governance and unbalanced industry policies, and the key to their rise lay largely with the active role played by their governments.[76] Accordingly, these Asian governments led the way through "latecomer" industrialization and actively governed their domestic markets to develop,[77] unlike the West, where classic neo-

[71] Since the very beginning, it has been argued that the US government's actions, including its housing policy and money excess, actually caused and prolonged this crisis. Also, the markets seriously deteriorated under the unpredicted government intervention around 2008. For a detailed explanation, see, John B. Taylor, *Getting Off Track: How Government Actions and Interventions Caused, Prolonged, and Worsened the Financial Crisis* (Stanford: Hoover Press 2009). Furthermore, it points out that government intervention has brought immense legacies, and thus, macroeconomic policy, including monetary policy responses, should "get back on track". See, John B. Taylor, 'Getting Back on Track: Macroeconomic Policy Lessons from the Financial Crisis' (2010) *FRB St. Louis Review* 92(3): 165-176.

[72] Samuel Gregory Hanson, Anil K. Kashyap and Jeremy C. Stein, 'A Macroprudential Approach to Financial Regulation' Chicago Booth Research Paper, No. 10-29, 2010 <http://business.nd.edu/uploadedFiles/Academic_Centers/Study_of_Financial_Regulation/pdf_and_documents/amacroprudential.pdf>.

[73] Neil Brenner, Jamie Peck and Nik Theodore, 'After Neoliberalization?' (2010) *Globalizations* 7(3): 327-345.

[74] It is argued what is decisive is the nature and substance of regulations offered by government rather than the quantity. Refer to, Mathias Siems and Gerhard Schnyder, 'Ordoliberal Lessons for Economic Stability: Different Kinds of Regulation, Not More Regulation' (2014) *Governance* 27(3): 377-396.

[75] For a theoretical analysis, see, Erlend Walter Nier, 'Financial Stability Frameworks and the Role of Central Banks: Lessons from the Crisis' IMF Working Paper, WP/09/70, 2009 <www.imf.org/external/pubs/ft/wp/2009/wp0970.pdf>.

[76] World Bank, *The East Asian Miracle: Economic Growth and Public Policy* (OUP 1993). But this report did not include information about China's economic reform and development.

[77] Robert Wade, *Governing the Market: Economic Theory and the Role of Government in East Asian Industrialization* (Princeton University Press 1990). The AFC had challenged such economic development model among Asian countries, but hardly claimed the success of the neo-liberalization. See, James R. Crotty and Gary Arthur Dymski, 'Can the Global Neoliberal Regime Survive Victory in Asia? The Political Economy of the Asian Crisis' University of Massachusetts, Political Economy

liberalism sought deregulation, privatization and depoliticization. As far as Japan is concerned, a tight nexus of political, economic and bureaucratic actors had effectively cooperated to guide economic development until a bubble-burst cycle brought Japan into recession.[78] After the "Big-Bang" liberalization, Government continuously urged the BOJ to spur economic growth subsequently in domestic crisis and the GFC.[79] In terms of China, Government has explicitly been defined as the maker of the market, leading the market-oriented reform throughout.[80] The previous relevant chapters have established that the Chinese government, under the Party's absolute leadership, has continued to control the markets comprehensively. At the macro level, central planning has not been entirely eliminated, and market principles still only operate under rigorous administrative authority. The Party controls macroeconomic policy-making and the PBC is employed to control the monetary market. At the micro level, Government pursues direct control through continued state ownership: the indirect-financing model is dominated by the SOCBs, while the SOEs control China's pillar industries and sectors. Therefore, China's government still directly controls the markets at both the policy-making and firm levels.[81] This is the context in which the PBC achieved recovery from the GFC, while also making it increasingly unclear what the Party really intends about its market-oriented reform.

During the GFC, governments have generally increased their intervention into financial markets from the West to the East, but the challenges for market-oriented and government-controlled central banks are different; this can be illustrated in Figure 9.1.

Research Institute Published Studies No PS 5, January 2000 <http://economics.ucr.edu/people/dymski/pe_asian_crisis.pdf>.

[78] Mark Beeson, 'Competing Capitalisms and Neoliberalism: The Dynamics of, and Limits to, Economic Reform in the Asia-Pacific' in Kim England and Kevin Ward (eds.), *Neoliberalism: States, Networks, People* (Oxford: Blackwell 2008) 28-47.

[79] It is difficult to make a critical assessment about Japan's reform. On one hand, the Japanese development state had achieved its long-term economic gains, different from other countries following a similar way; on the other hand, none radical reforms could possibly happen. See, Mark Beeson and Iyanatul Islam, 'Neoliberalism and East Asia: Resisting the Washington Consensus' (2005) *The Journal of Development Studies* 41(2): 197-219. It is further argued that Japan's model had actually denied neoliberalism but to develop a "non-socialist centrally planned economy"; refer to, Robert Locke, 'Japan, Refutation of Neoliberalism' (2005) *Post-Autistic Economic Review* 30(1) <www.paecon.net/PAEReview/issue23/Locke23.htm>.

[80] It is named "neoliberalism with Chinese Characteristics". Refer to, David Harvey, *A Brief History of Neoliberalism* (OUP 2005) Chapter 5.

[81] Jing Ma and Lihui Tian, 'Global Financial Crisis and China's Transition: Balancing Market Power with Active Role of the Government' (2012) *International Economic Journa*l 26(3): 379-389.

Figure 9.1: GFC Changes Government-Market Nexus

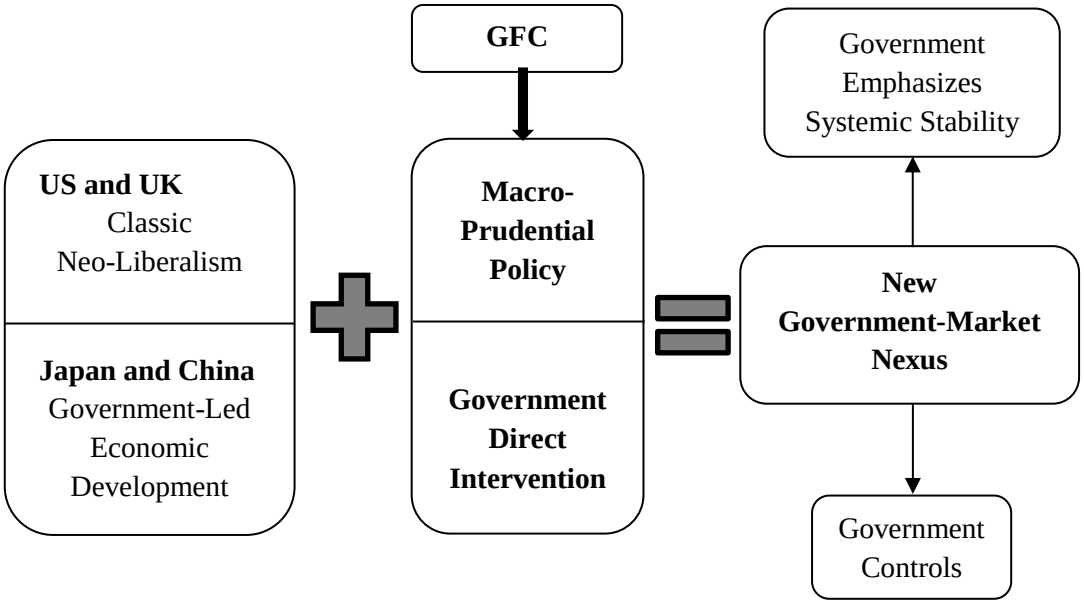
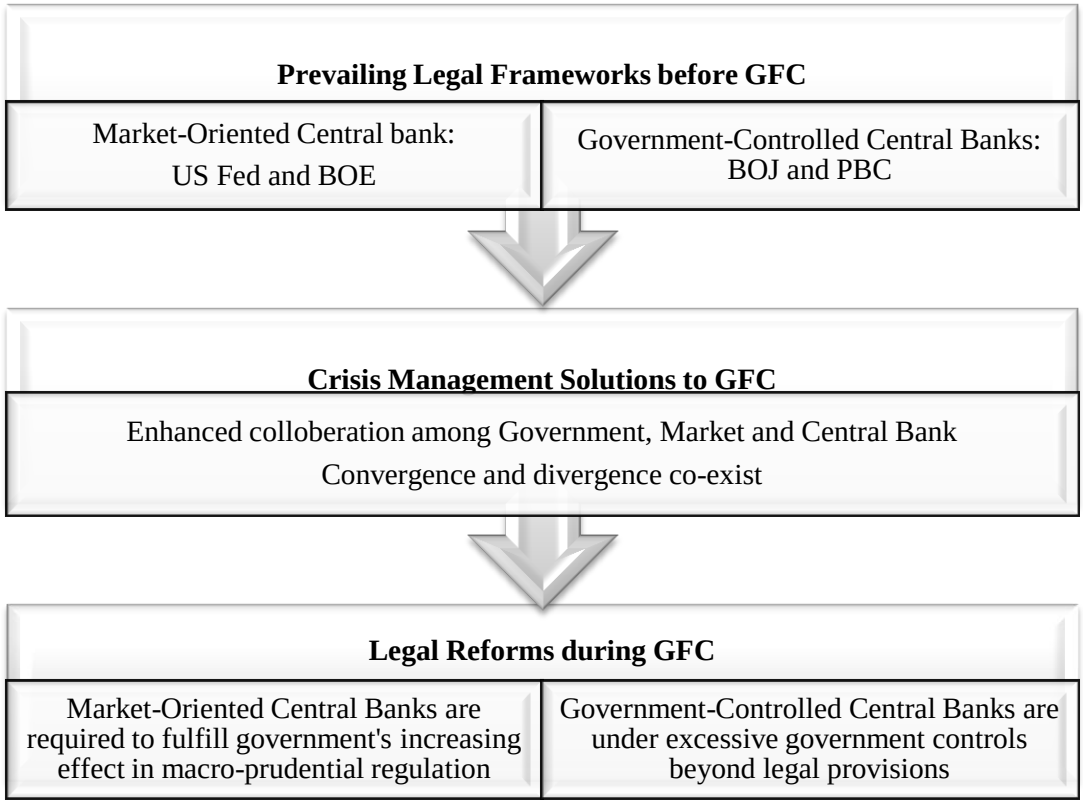


Figure 9.1 shows different directions of the government-market interaction in response to the GFC. In the West, with reduced feasibility attached to self-regulation, governments have resorted to macro-prudential policy to achieve systemic stability, and hence, how the US Fed and BOE have committed to their market principles should be re-examined in the context of a changed government-market nexus. For both China and Japan, their government-controlled central banks have been challenged to face further direct and explicit government intervention. These changes that have occurred in regard to their market or government orientation can be summarised in Figure 9.2.

Figure 9.2: How Central Banks' Orientations have Evolved



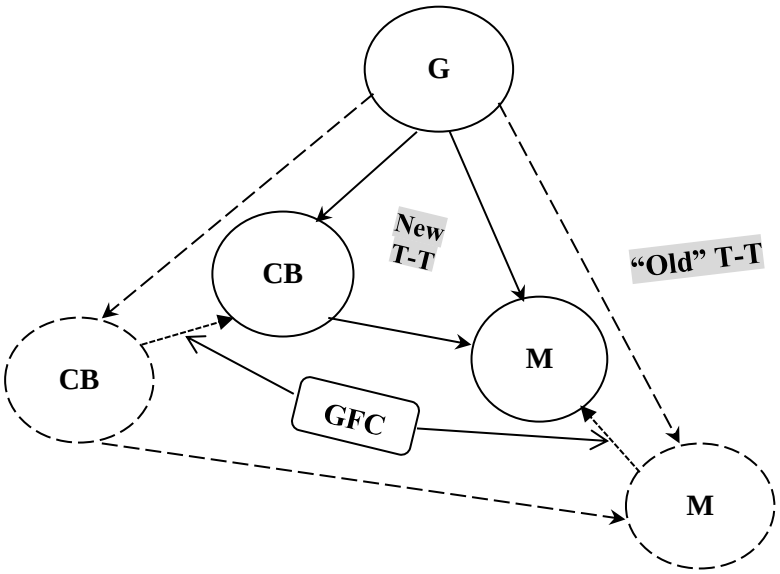
According to Figure 9.2, how the market or government orientation relating the selected central banks has evolved. With different orientations, they had all been challenged by the GFC by bringing them closer to the wider policies of their governments. But the post-crisis reforms have displayed evident divergences. Both the US Fed and BOE were required to seek systemic stability through macro-prudential regulatory policy. When compared, both the BOJ and PBC have continuously been challenged by direct government intervention to explore the use of more effective crisis management techniques.

9.3.3 Comparative Summary

As demonstrated by the previous case studies, the new two-tier relationship governing central banks is generally characterised by reduced central bank

independence but increased direct governmental intervention. This change can be displayed in Figure 9.3.

Figure 9.3: Comparison between Old and New Two-Tier Relationships



Note:
T-T=Two-Tier Relationship
G=Government; M=Market; CB=Central Bank

Figure 9.3 helps explain how the two-tier relationship has generally changed throughout the GFC. Crisis management solutions moved central banks closer to their governments and also financial markets; meanwhile, governments have pursued increased powers in financial markets. Even so, the core value for a central bank – as Government's banker and bankers' bank – remained relatively unchanged. In addition to the changed two-tier relationship, the GFC has also changed the pre-existing Government-Market nexus, requiring the central bank to reshape its role as government's banker and as bankers' bank. This can be summarised in Figure 9.4.

Figure 9.4: How GFC Challenged Central Banks

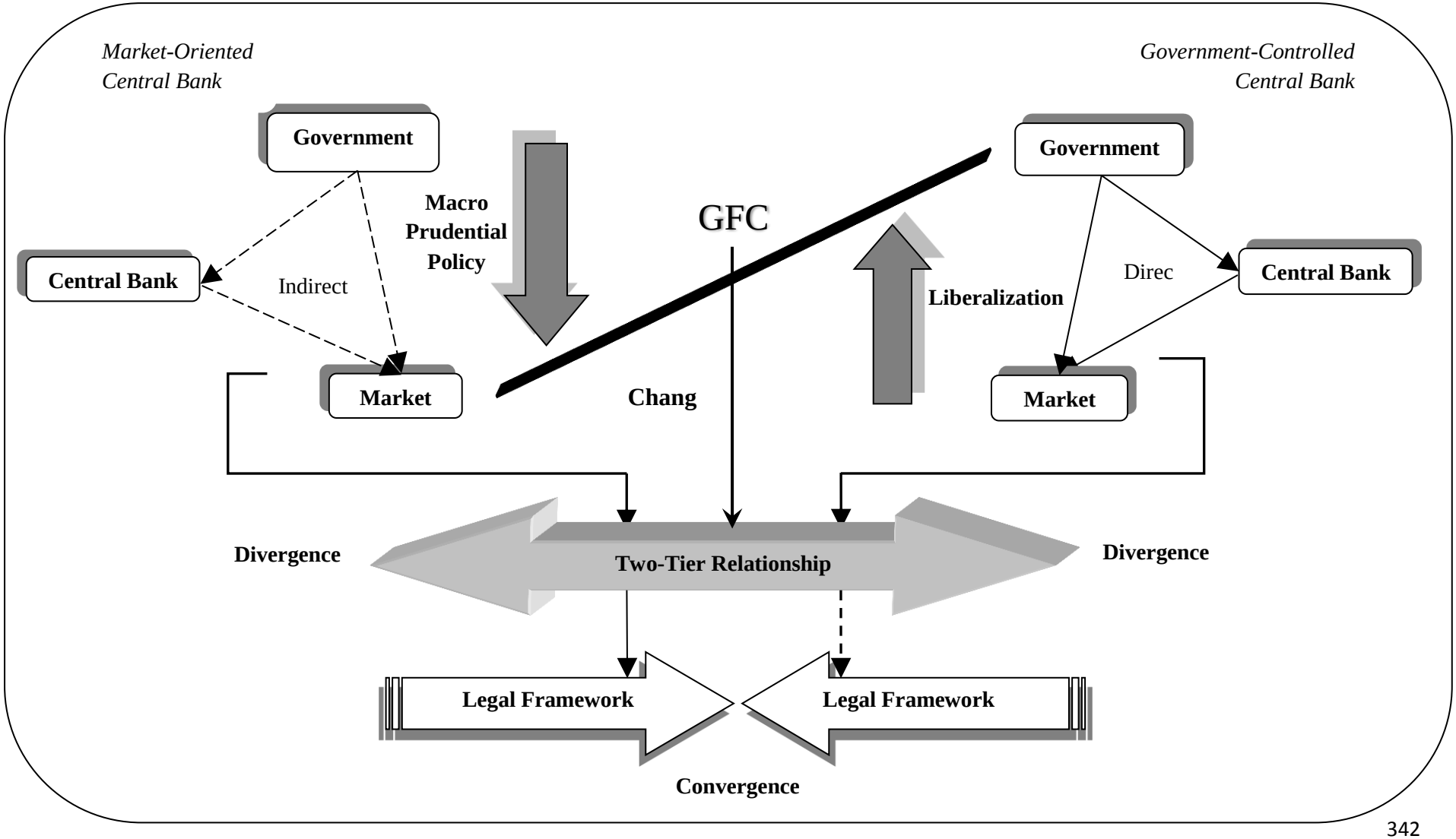


Figure 9.4 has represented the real effect of the GFC upon central banks. Inter alia, the core value of the central bank should be re-examined given that the GFC has changed the relationship between government and the market on the most fundamental. In this context, for market-oriented and government-controlled central banks, their triangular interactions were and continue to be different. With operational independence, both the US Fed and BOE should indirectly affect financial markets through prudential regulation with a focus upon systemic stability. By contrast, the BOJ and PBC were under direct governmental control and maintained their direct controls over financial markets at the firm level; this has become firmly proved since the crisis. From a legal perspective, the different ways in which statutes have dealt with the two-tier relationships has widened, though this thesis has found that there have been many similar legal elements across all four central banks. On a deeper level, the new government-market nexus has promoted macro-prudential policy, whilst requiring different changes in Japan and China, where direct government intervention should be replaced by resort to indirect regulatory means. This has reshaped the role of central banks, challenging how they continue to commit to their orientations. It is thus argued that the GFC has challenged central banks to manage changes so as to strike an improved balance between government and the market.

9.4 The Effects of "Nipponization" and Globalization

Until now, this chapter has explored some significant implications based upon the previous comparative studies. Further analysis can also be made from an international perspective before we re-visit China's central bank. There is limited comparability between the BOJ and the PBC, but continuous UMP has thrown Japan into the spotlight. Meanwhile, besides providing challenges for central banks, the GFC has added uncertainty to further collaboration and globalization.

9.4.1 "Nipponization" and BOJ's Performance

During the GFC, especially after the US Fed had launched sizeable asset purchases, the BOJ attracted increasing attention due to its experience in dealing with earlier post-bubble negative effects. In particular, the term "nipponization" has been repeatedly used to refer to, and warn of the possible threat posed by such crisis management solutions.

Among many studies into Japan, as well as comparative analysis with the US, a general consensus has not yet been reached in regard to the value of Japanese experience,[1] but certain relevant issues can be highlighted, based upon the analysis earlier. Chapter Six has found that the BOJ changed its policy responses during Japan's economic crisis, in sometimes quite misleading ways. It was argued that central banks should adjust their measures during different stages of a bubble economy and after its bursting.[2] From 2001 to 2006, the BOJ introduced the UMP into its toolbox of strategies. It was judged to provide positive support to resolving the domestic banking crisis, but its real economic effect was not that convincing.[3] On one hand, severe economic problems were dealt with by a combination of policy instruments, making it difficult to identify the exact role played by the BOJ.[4] On the other hand, when dealing with NPLs and bank failures, both fiscal and monetary stimuli were criticised for having noticeable timing lags, and also for generating forbearance at the cost of government expenditure.[5] Any alleviation of its domestic crisis was not therefore attributed to crisis management solutions coming from the BOJ alone.[6]

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[1] E.g., see, Takeo Hoshi and Anil K Kashyap, 'Will the U.S. Bank Recapitalization Succeed? Lessons from Japan' at the Macroeconomic and Policy Challenges Following Financial Meltdowns Conference, IMF, April 3, 2009 <www.imf.org/external/np/seminars/eng/2009/macro/pdf/akth.pdf>; C E V Borio, 'Comparing Monetary Policy Operating Procedures across the United States, Japan and the Euro Area' BIS, Monetary and Economic Department Papers No 9, December 2011 <www.bis.org/publ/bppdf/bispap09.pdf>.

[2] Masaaki Shirakawa, 'Future of Central Banks and Central Banking' BOJ Monetary and Economic Studies, Opening Speech, November 2010 <www.bis.org/review/r100527b.pdf>.

[3] Michael Schuman, 'Does QE work? Ask Japan' (Wall Street & Markets, Times) <http://business.time.com/2010/11/04/does-qe-work-ask-japan/> accessed on November 4, 2010.

[4] Yutaka Kurihara, 'Recent Japanese Monetary Policy: An Evaluation of the Quantitative Easing' (2006) *International Journal of Business* 11(1): 79-86.

[5] Luc Laeven and Fabian Valencia, 'Systemic Banking Crises: A New Database' IMF Working Paper, WP/08/224, 2008 <www.imf.org/external/pubs/ft/wp/2008/wp08224.pdf>.

[6] The debates continue, doubting whether the bad loan problem has been resolved. Refer to, Richard Koo and Masaya Sasaki, 'Japan's Disposal of Bad Loans: Failure of Success? A Review of Japan's

The BOJ has pioneered orthodox tools and strategies to add to its existing crisis management solutions, offering some valuable lessons. First, in contrast to delayed policy responses in the 1990s, the BOJ made more timely responses during the GFC, [7] whilst innovative policy instruments have developed to restore market functions and confidence; this was in line with the statutory objectives of a central bank responsible for systemic financial stability.[8] Secondly, the BOJ was the first central bank to deal with lasting low inflation rates after the 1930s Great Depression, and has continued the ZIRP for over a decade, constraining its capacity to make further changes to loosen money.[9] Such a combination had altered the transmission of monetary policy,[10] and also affected the functions of quantitative easing.[11] Given that both the US Fed and BOE had already continued the zero-based approach to interest rates during the GFC, it is thus the case that relevant matters discussed above, including the changed transmission mechanism of monetary policy and deflation threat, should be taken into account.[12]

However, Japanese experience did have obvious limitations. As demonstrated, the BOJ operated under such a situational two-tier relationship that the government continued direct control, and the central bank maintained certain direct intervention at the firm level. From the beginning, therefore, such a direct collaboration between the government, BOJ and financial markets is different from the triangular

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Experience with Bad Debt Disposals and Its Implications for the Global Financial Crisis' NIR Papers No 151, 2010 <www.nri.com/global/opinion/papers/2010/pdf/np2010151.pdf>.

[7] Uwe Vollmer and Ralf Bebenroth, 'The Financial Crisis in Japan: Causes and Policy Reactions by the Bank of Japan' (2012) *The European Journal of Comparative Economics* 9(1): 51-77.

[8] Kiyohiko G Nishimura, 'Unconventional Policies of Central Banks—Restoring Market Function and Confidence' at the Money and Banking Conference 2009, Central Bank of Argentina, Buenos Aries, September 1, 2009 <www.bis.org/review/r090907d.pdf>.

[9] It was argued that due to the bubble-burst cycle, the links between monetary policy and the real output were broken. Ryuzo Miyao, 'The Role of Monetary Policy in Japan: A Break in the 1990s?' (2000) *Journal of the Japanese and International Economics* 14(4): 366-384.

[10] Shigeru Iwata, 'Monetary Policy and the Term Structure of Interest Rates When Short-Term Rates Are Close to Zero' BOJ Monetary and Economic Studies, Vol. 28, November 2010 <www.imes.boj.or.jp/research/papers/english/me28-5.pdf>.

[11] Kazuo Ueda, 'The Bank of Japan's Experience with Non-Traditional Monetary Policy' for the Policy Panel at the 55th Economic Conference of the Federal Reserve Bank of Boston "Revisiting Monetary Policy in a Low Inflation Environment", October 14-16, 2010 <www.bostonfed.org/economic/conf/conf55/papers/Ueda.pdf>.

[12] It is reported that such transmissions were broken: M.C.K., 'The Broken Transmission Mechanism' (The Economist) <www.economist.com/blogs/freeexchhttp://www.economist.com/blogs/freeexchange/2012/10/monetary-policyange/2012/10/monetary-policy> assessed on October 3, 2012. For a comparative analysis, see, William C. Dudley, 'Lessons at the Zero Bound: The Japanese and U.S. Experience' at the Japan Society, New York City, May 21, 2013 <www.bis.org/review/r130522a.pdf>.

relationship positioning the market-oriented central banks. Moreover, Japan's direct-financing model was fundamentally different from that operating in the US and UK which had better developed securities markets, where financial intermediaries played more important roles when UMPs were conducted to restore financial stability.[13] Furthermore, few references were made by the BOJ to the aftermath of the UMP. After 2006, its current account balance reduced by more than two thirds within six months when compared with its peak in 2005. However, it had not yet sold any of its purchased JGBs, but continued such outright purchases. Japan encountered contagion from the GFC in late 2008, just two years after the BOJ terminated monetary easing, making it too short a period in which to judge the outcome of its balance sheet repairs. [14] Overall, there is lack of consolidated evidence to demonstrate the success of the BOJ's strategies when introducing and expanding innovative monetary policy; even so, it has aggressively moved towards unprecedented monetary expansion by further inflating its own balance sheet, especially since 2012/2013. At the very least, the so-called BOJ experience from the late 1990s to the mid-2000s might have had little effect in assisting Japan's economic recovery during the GFC, let alone providing a potential global solution.[15]

9.4.2 Globalization during the GFC: Challenges from the Co-existence of Convergence and Divergence

Given that as systemic risk has become cross-border through continued globalization, central banks must also collaborate to restore financial stability. However, the foregoing analysis has identified some challenges for globalization in the future.

Broadly, the GFC has brought different implications across countries, drawing an

[13] In a market-based financial system, banking and capital market developments were inseparable and the driving power behind was the growth of mortgage backed securities. It is thus argued that financial intermediaries linked closely monetary policy with financial stability. Refer to, Tobias Adrian and Hyun Song Shin, 'Financial Intermediaries, Financial Stability, Monetary Policy' FRB New York, Staff Report No 346, September 2008 <www.newyorkfed.org/research/staff_reports/sr346.pdf>.

[14] Masaaki Shirakawa, 'Central Banking: Before, During, and After the Crisis' at A Conference Sponsored by the Federal Reserve Board and the International Journal of Central Banking, March 24, 2012 <www.bis.org/review/r120329b.pdf>.

[15] NRI, 'Summary of Discussion at Financial Markets Panel' 20th Meeting "Policy Issues and Administration for Central Banks in Japan, the US and Europe in 2012", February 6, 2012 <www.nri.com/global/opinion/sdfmp/index.html> accessible on April 4, 2012.

observable geographic division.[16] As suggested by the PBC case study, East Asian regionalization has promoted inter-region trade and investment, as well as a mechanism for temporary liquidity shortage.[17] As a key step towards globalization, regionalization depends upon creating necessary institutional and political frameworks for deeper integration of markets and the removal of trade barriers; this is generally directed by government.[18] Inter alia, economic liberalization, being a force to help channel the resources of economies and labour into activities where they are most likely to excel, can reinforce regionalisation.[19] Allowing market forces to operate supposes a political willingness to enable the market to provide information and incentives, reward and punish, advance efficiency among many unwilling and willing actors; during this course, government reacts to external and internal pressures for changes.[20] However, during the GFC, liberalization was somewhat suspended in the biggest developing country China as part of its crisis management solution, presenting the significant obstacle from government.

In this thesis, all the observed co-existence of convergence and divergence has displayed diversity worldwide, renewing the conflicts between horizontal integration and localization: in the global context, effective crisis management is subject to both individual measures and cross-border collaboration, and reforms also require efforts at not only national but also international levels.[21] As found, the four selected central banks have jointly cut interest rates, set up currency swap lines, and taken other actions for ensuring systemic stability. But on the other hand, global imbalance, helping trigger this crisis, is argued to have been accelerated,[22] with a protectionist

[16] Xinbo Wu, 'Understanding the Geopolitical Implications of the Global Financial Crisis' (2010) *The Washington Quarterly* 33(4): 155-163.
[17] Opposite opinions have emerged, arguing that what have been conducted by Asian countries have turned the solutions to regional losses from the GFC to the domestic and global levels. Refer to, Saori N. Katada, 'Seeking a Place for East Asian Regionalism: Challenges and Opportunities under the Global Financial Crisis' (2011) *The Pacific Review* 24(3): 273-290.
[18] Jeffrey A. Frankel and Shang-Jin Wei, 'Regionalization of World Trade and Currencies: Economics and Politics' in Jeffery A. Frankel (ed.), *The Regionalization of the World Economy* (London: The University of Chicago Press 1998) 189-226.
[19] Paul Mosley, John Hudson and Sara Horrell, 'Aid, the Public Sector and the Market in Less Developed Countries' (1987) *The Economic Journal* 97(387): 616-641.
[20] Alex E. Fernandez Jilberto and Andre Mommen (eds.), *Regionalization and Globalization in the Modern World Economy: Perspective on the Third World* (Routledge 1998) 1-26.
[21] Philip R. Lane, 'Financial Globalization and the Crisis' for the 11th BIS Annual Conference on "The Future of Financial Globalization", Lucerne, June 21-22, 2012 <www.bis.org/events/conf120621/lane.pdf>.
[22] Controversy has continued. E.g., see, Claudio Borio and Piti Disyatat, 'Global Imbalances and the Financial Crisis: Link or No Link?' BIS Working Paper No 346, 2011

threat.[23] Meanwhile, with the profound resetting of the government-market nexus, localization would "represent a radical break with neoliberal universalism". [24] Moreover, the limited role played by the rule of law allows scope for *de facto* circumstances to influence central banks and wider financial markets. This, in addition to evident divergence in financial oversight, has brought added uncertainty to improve cross-border crisis management,[25] while the enforcement of laws and rules are argued to decrease with further requirements for new uniform rules.[26]

9.5 Revisiting the PBC in a Comparative Context

This thesis has endeavoured to make a systemic analysis of the PBC, covering its relevant experience during China's market-oriented reform and amid the GFC as well. The following section will re-examine the PBC by summarising 1) findings from the previous analysis; 2) lessons suggested during the GFC; and 3) its role in the context of globalization.

The PBC was assumed to be a government-controlled central bank; this proposition has been demonstrated by findings from its recent reforms and the overarching legal framework. Limited statutory reforms had occurred during its comparatively short history, and the reliability of the existing laws was seriously weakened by China's underdeveloped legal system. In terms of its real two-tier relationship, the government has continued to politically control the PBC, extending further into the underdeveloped financial markets at both macro and micro levels. Those conditions, essential to explain the PBC's "success" to deal with external shocks, were further

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<www.bis.org/publ/work346.pdf>. Mattias Vermeiren, 'The Crisis of US Monetary Hegemony and Global Economic Adjustment' (2013) *Globalization* 10(2).

[23] 'Globalization at Risk: Challenges to Finance and Trade' *The Global Journal* <http://theglobaljournal.net/article/view/624/> accessed on March 6, 2012.

[24] Jamie Peck, Nik Theodore and Neil Brenner, 'Postneoliberalism and its Malcontents' (2009) *Antipode* 41(S1): 94-116.

[25] Douglas W Arner and Michael W Taylor, 'The Global Financial Crisis and the Financial Stability Board: Hardening the Soft Law of International Financial Regulation?' (2009) *UNSW Law* Journal 32(2): 488-513.

[26] As briefly introduced in this thesis, the implementation of the Basel III has been delayed due to different priorities given by various countries during the GFC. Overall, this crisis has triggered both arguments for and against further harmonization of laws and rules associated with financial integration. Helmut Wagner, 'Is Harmonization of Legal Rules an Appropriate Target? Lessons from the Global Financial Crisis' (2012) *European Journal of Law and Economics* 33(3): 541-564.

consolidated due to the GFC. China's reformers claim to effect market principles, which failed to withstand external shocks. It is therefore argued that domestic vulnerabilities, caused by both structural shortcomings and crisis management solutions, persist; this, rather than the GFC *per se*, is the top worrying concern for the PBC and beyond.

The GFC has challenged the capacity of market-oriented central banks to restore financial stability, as well as the process of neo-liberalization in the West. In both the US and UK, financial sectors have come under added government intervention directly or indirectly, and the markets have already acknowledged "re-regulation". It is still too early to assess the future of the market-oriented central banks, but certain issues have been commonly highlighted by the US Fed and BOE with implications for the PBC. To start, central bank independence is still considered desirable but, to improve credibility and legitimacy, further oversight and transparency are required. Furthermore, in spite of uneven financial developments, systemic stability is at the top of central banks' agendas, and macro-prudential regulation is one key missing pillar exposed by the GFC. China's financial monitoring system has never been severely tested, but with its further development towards conglomeration, it would be appropriate to explore how its next-step reform might change the existing rigidly sector-based regime, after taking into account both the shortcomings and lessons when leading central banks have continued to explore the options for improving financial oversight. More importantly, both the US and UK have amended rules and laws to confirm on changes which have occurred to the positions of their central banks as a result of the GFC. However, the changed two-tier relationship governing the PBC is characterised by explicitly reduced central bank independence and increased direct intervention, but few statutory reforms bring this into focus. Therefore, if law reforms continue, it would be an important target for the PBC to reduce the enlarged gap between the legal framework and its prevailing two-tier relationship.

During the GFC, benefiting from China's apparent speedy recovery, the so-called Beijing Consensus gained further attention,[27] and meantime, the PBC may enjoy higher international status. Becoming more participative in cross-border issues, as explained, it might have accelerated external liberalization. However, when compared with the delayed introduction of market principles to the domestic sector, the enlarged gap between internal and external reforms could bear negative effects and/or even risks. The PBC should not obscure the larger point: the GFC has, at least, pointed out that further financial sector development requires a different regulatory policy, and misplaced governmental intervention can inhibit more effective crisis management solutions.

Taking into account recent economic issues, Chinese market-oriented reform with its own characteristics has seemingly reached a bottleneck.[28] Further liberalization may require less direct government intervention, but this has become increasingly questionable after the GFC has disturbed market-oriented central banks and also globally raised government's power in restabilising financial systems. After enduring the GFC, the major challenge for the PBC persists: it is still a government-controlled central bank under rigidly political control, which has increased rather than decreased during the GFC; as a result of explicit government intervention, its functions as a central bank have continued to weaken.

[27] "Beijing Consensus" was put forward in 2004, see, John Cooper Ramo, *The Beijing Consensus* (Washington DC: Foreign Policy Centre 2004) < http://fpc.org.uk/fsblob/244.pdf>. In principle, it is argued that China has presented a new development model, where rapid economic growth is attributed to intense government guide and management. But debates and different opinions continue. See, Suisheng Zhao, 'The China Model: Can it Replace the Western Model of Modernization?' (2010) *Journal of Contemporary China* 19(65): 419-436. During the GFC, "Beijing Consensus" has attracted mixed comments. China's quick resilience is argued to have proved the success of this model, but it may also face more domestic challenges. Refer to, Jun Li and Liming Wang (eds.), *China's Economic Dynamics: A Beijing Consensus in the Making?* (Routledge 2013).

[28] Prior to the GFC, there have already emerged discussions about the turning point of China's reform. For details, see, Ross Garnaut and Ligang Song (eds.), *The Turning Point in China's Economic Development* (Canberra: Asia Pacific Press 2006). Recently, it has increasingly argued that China is approaching its fundamental challenge. For example, in mid-2012, the importance to deepen the market-oriented reform has repeatedly been addressed by China's political leaders; for a list, see, Shengjun Liu, 'China have Reached Another Turning Point of Its Reform/Zhongguo Gaige Zaici Zoudao Zhuanzhedian' (FT China) <www.ftchinese.com/story/001047319> accessed on November 6, 2012 [in Chinese].

9.6 Conclusion

This chapter has discussed the main findings from the case studies set out in Chapters Four to Eight. It first made comparisons of the four central banks in relation to their legal frameworks and crisis management solutions, exploring the patterns of their co-existing convergence and divergence. In principle, these selected central banks have relied upon increasingly similar legal frameworks, but still operated under different levels of independence, while occupying varying distances from financial markets. The GFC has brought about important changes and reforms to central banks and beyond. Requiring reinforced central bank regulation towards the goal of system-wide stability, the GFC has changed their pre-existing two-tier relationships, and also modified how four leading central banks converged with and diverged to each other. In particular, differing attitudes toward legal ordering have become further evident between the market-oriented and government-controlled central banks. This chapter has also specified how the GFC changed the government-market nexus in the West, while raising the level of direct government intervention in Japan and China; this requires a re-examination of the market or government orientation adopted by these central banks. Even so, the core value for a central bank – serving both as government's banker and as bankers' bank – has largely remained untouched. Therefore, this chapter has argued that these four central banks have been specifically challenged by the GFC so as to strike an improved balance between government and the market.

Chapter Ten

Conclusion

10.1 Introduction

The GFC has been judged the worst financial crisis since the 1930s Great Depression, prompting profound reforms at both national and international levels. The foregoing analysis has detailed how it has challenged the capacity of leading central banks to deal with financial risk and necessitated further reforms. Drawing upon country-selected case studies, the following observations will conclude the arguments of this thesis.

10.2 Research Question and Contribution

The main research question of this thesis asked how the GFC challenged these leading central banks to maintain financial stability under considerable unprecedented duress. As illustrated by the changes and reforms made during the last few years, they have taken particular responsibility for dealing with financial stability issues. The central question in this thesis has been answered through a comparative analysis. Four major central banks have been compared here: (i) the US Fed; (ii) the BOE; (iii) the BOJ; and (iv) the PBC. The key propositions relating the market or government orientation of these four central banks have been examined. In particular, the PBC has been given special attention due to China's apparent speedy resilience; as a consequence, the strengths and weaknesses of its regulation have been critically assessed.

This thesis has focused upon the rule-based frameworks governing central banks and their reforms before, during and after the GFC. In Chapter Two, the thesis examined the core values of central banks serving, simultaneously, as both the government's banker and the bankers' bank. On this basis, theoretical and legal frameworks were

introduced. Historical evidence disclosed different government incentives to establish central banks but, in principle, rules and laws affect central banks in the context of their distinct two-tier relationships – with Government and with the Market. After reviewing statutes relating to central banks, it is evident that certain legal provisions are commonly prescribed in law, including legal status, ownership, objectives, organisational structure, monetary policy instruments, regulatory and supervisory duties, and mechanisms of accountability, credibility and independence. In the event of financial crises, central banks can evidently accommodate their policy responses together with other government bodies, limiting their own independence. At the same time, they directly intervene in financial markets and even the business operations of individual financial institutions. It is thus argued that the prevailing legal framework regulates a central bank by dealing with its two-tier relationship (Figure 2.4), which has been affected by changed central bank regulation in response to financial crises.

In Part II, key propositions about the selected four central banks were tested. Their respective legal frameworks were shown to have been shaped by whether these institutions were either market-oriented or government-controlled. Table 10.1 lists the basic assumptions which have been examined when testing the key propositions of this thesis.

Table 10.1: Propositions about Four Selected Central Banks before GFC

- **Proposition 1**
  The US Fed was predominantly a market-oriented/laissez fair central bank with consolidated financial regulation and supervision.

- **Proposition 2**
  The BOE was a market-oriented/laissez fair central bank with major financial regulation and supervision undertaken by the FSA.

- **Proposition 3**
  The BOJ was a government-guided central bank with limited functions in dealing with NPLs and bank failures.

- **Proposition 4**
  The PBC was a government-controlled central bank and a proactive regulator as part of China's financial regulatory regime.

All these propositions have been examined (in Chapters Four to Eight) by reference to the prevailing legal frameworks of the four central banks. In particular, their respective two-tier relationships have been assessed based upon key legal provisions; as a result, the differences between market-oriented and government-controlled central banks have been clarified. But such a stark distinction has itself been challenged in view of the different modes of central bank regulation that became evident during the GFC. Reduced central bank independence has weakened the market-oriented principles of both the US Fed and the BOE, and they have generally worked as more stringent regulators and supervisors, better able to deal with market upheavals. However, certain differences have become obvious. In the US, the Dodd–Frank Act 2010 has granted the US Fed more macro-prudential regulatory power, but reduced its direct market interventions, while bringing it closer to the broader policies of the US Treasury. Being similarly a market-oriented central bank, the BOE was relocated to the centre of financial regulation and supervision; however, the

Financial Services Act 2012 has raised the power of Government, especially HM Treasury, to control the financial markets via the BOE group. In terms of government-controlled central banks, few substantial legal changes have directly amended their legal frameworks. As "a central bank in crisis", the BOJ has remained under intensified government control to enhance its direct intervention in financial markets. During the GFC, the PBC failed to play a more important role in restoring financial stability as was expected after the Asian Financial Crisis, and its crisis management solutions also bore long-term negative consequences. China's resilience in the face of this crisis has further revealed the extent of official control over economic activities, including a potentially manipulated central bank. Therefore, the PBC's solution has been challenged by the GFC to such an extent that more rigorous political imperatives were subsequently imposed upon it.

This thesis has examined the particular relationship between central bank regulation and financial stability by comparing the pre-existing legal frameworks of central banks with their changed two-tier relationships as a result of the GFC. Table 10.2 displays how their prevailing propositions have been challenged during the GFC.

Table 10.2: Orientations of Four Central Banks following the GFC Challenge

- **Proposition 1:**
  The US Fed has been placed under enhanced oversight from the Treasury and the GAO, and while in contrast to a reinforced role in macro-prudential regulation, its direct intervention in financial markets has been constrained.

- **Proposition 2**
  The BOE has been placed at the centre of financial regulation, but HM Treasury has raised its power over monetary policy and led the regulatory regime.

- **Proposition 3**
  The BOJ has been placed under intensifying government control, seeking to break the limits of monetary expansion to spur economic growth.

- **Proposition 4**
  The PBC has reset direct tools and suspended marketisation as its crisis management solutions; government has further enhanced explicit and direct controls of the PBC and of the overall markets.

The GFC has changed the "old" two-tier relationships of all the selected central banks, whilst demonstrating different focuses and approaches to crisis management and financial stability.

The case studies in this thesis have suggested that convergence has occurred between these different central banks, yet with some continuing divergence, as illustrated in Chapter Nine. A fully detailed comparison has found that the legal frameworks of these four central banks were very similar before the GFC, but they actually operated with varying levels of independence and also at different distances from the markets. Adopting certain similar policy responses during the GFC, they each performed differently, and often faced different tasks. The pattern of convergence and divergence has been illustrated in Table 9.10: explicitly, more divergence has

emerged from the arrangement of financial regulation and supervision; implicitly, their relationships with governments have continued to differ. Moreover, both the US Fed and the BOE faced direct pressures from the GFC to restore financial stability, triggering crisis-driven reforms. In contrast, the BOJ has had to deal with deflation and domestic economic stagnation, and China was challenged to continue its market-oriented reforms; these reforms were thus more domestic-driven in comparison to other central banks. In addition, the gap between the legal orders surrounding market-oriented and government-oriented central banks increased: both the US and the UK governments launched statutory reforms to legitimize the changed two-tier relationships governing their respective central banks, but Japanese and Chinese governments remained silent about their overly extensive political interventions. It is thus concluded that the GFC has affected the earlier differences and similarities between these four central banks.

Significantly, this thesis has demonstrated that the triangular relationship, involving the government, the central bank and the financial market, has shaped how a central bank pursues its goals and achieves its statutory tasks. These four central banks have operated, even during the GFC, around different two-tier relationships, and the widespread co-existence of convergence and divergence needs to be understood accordingly. In addition to challenging central banks to improve their crisis management mechanisms, the GFC has changed the government–market nexus in a fundamental way (Figure 9.1). It has questioned the traditional ideology of neo-liberalism in the West, requiring further government efforts towards system-wide stability; meanwhile, it did lead to further governmental intervention in Japan and China. As a result, the market or government orientation of central banks should be re-examined in the context of this changed nexus (see further Figure 9.2). In terms of the market-oriented US Fed and BOE, both have improved their accountability and transparency, whilst their influences upon the financial markets have been strengthened through macro-prudential regulation. When compared, the government-controlled BOJ and PBC should explore effective crisis management without incurring more, especially over-extensive, political controls. Even so, the core of value for central banks, serving as the government's banker and the bankers' bank, has remained relatively untouched after all these reforms and changes brought about through this crisis. Therefore, this thesis has argued that the GFC has actually

changed the two-tier relationship of central banks so as to strike an improved balance between government and the market, although there is still room for improvement in this regard (Figure 9.4).

China's rise is the example of a case in which economic development has been achieved through active government involvement in the economy; this also explains its resilience during the GFC. After a systemic study, this thesis has argued that limited independence has seriously constrained the PBC's functions, making other reform measures relatively superficial as solutions to various risk management problems. After comparing it with the other three central banks, this thesis has found that domestic vulnerabilities, rather than external shocks, continue to affect the PBC's orientation. Reform measures should revolve around the central bank's specific two-tier relationship, reducing government's direct intervention into both the PBC and the markets. China's top-down reforms are, however, ultimately in the hands of Government or the Party when any effort is made to introduce further market principles. As indicated during the GFC, it is at the very least questionable what the Government/Party in China really intends to achieve with its claimed market-oriented liberalisation, and that the prospects of granting the PBC further independence have become increasingly uncertain, mainly as a result of the extent to which the GFC has shaken the market-oriented US Fed and BOE.

This thesis has endeavored to make a contribution to the existing literature. It has employed the two-tier relationship to examine the GFC challenge from the legal standpoint of central bank regulation. The main research question has been addressed by testing the propositions by reference to four selected central banks, with particular, as well as hitherto unusual, concern for China.

10.3 Limitations and Further Research

In conducting its rule-based analysis of the governance of leading central banks, this thesis has certain limitations. As initially stated, central banks – some of which have not long been public institutions – have long sought to operate amid considerable

secrecy, and only limited research has been conducted into their actual operations at the macro level. As the GFC has reaffirmed the importance of transparency with regard to financial markets, most central banks have been required to improve their communications and transparency. However, it is difficult to determine the optimal transparency level for central banks, and the discretion granted by law has added further ambiguity to central bankers' own discussions about policy and conduct. Overall, there are limited data and other materials to help us to understand "central bank secrecy".

With regard to the case studies, the ECB is not included in this thesis. Its short existence makes it less suitable for comparison here, and its nature, comprising the central banks of member countries, is fundamentally different from the four selected central banks. Also, its legal governance as a supranational central bank for Europe's single currency places it outside the same framework of the two-tier relationship. In addition, the continuing sovereign debt crisis has brought about further debates and challenges beyond the scope of this study, despite some reference to the ECB in Chapter Two. Moreover, the case study of the BOJ is based upon literature available in Chinese and English rather than in the Japanese language. Since certain materials are only available in Japanese, the incomplete referencing might affect the relevant analyses here. What is more, one goal of this thesis has been to critically probe China's central bank, but this might be impeded by the quantity and quality of available data. China is a transition economy with insufficient transparency, uncompleted financial liberalisation, and an unsophisticated legal system. The PBC has thus been much affected by *de facto* circumstances, influencing how best to understand its real two-tier relationship behind its legal framework. In particular, China continues its strict censorship system which constrains freedom of speech, especially on politically sensitive issues. As a government-owned central bank, the PBC is situated within an intervening political hierarchy, and can only release information exactly in accordance with overriding political requirements.

A number of further avenues for research relevant to the subject of this thesis can be envisaged. To begin with, the study approaches central bank regulation from a legal perspective, and one of the key legal provisions concerns the organisational structure where a central bank sits. However, due to its limited scope, this thesis did not

examine this in detail. The GFC has questioned the optimal model for central banking, addressing problems about the requisite institutional environment and prevailing forces. Recent changes could provide valuable lessons and reference points for China, since the PBC has pursued reform toward achieving greater professionalism. More broadly, this has renewed discussions of how best to design central bank law with good governance and institutional structures.

A second avenue for further research is that the essential relationship between central bank regulation and financial stability requires more comprehensive interdisciplinary study beyond the rule-based framework employed here. However, there are still few studies exploring this topic from a legal perspective. The GFC has already exposed particular legal problems and triggered law reforms at different levels, representing the complexity of this issue whilst highlighting its significance. So it is necessary for there to be further in-depth legal analysis of central bank regulation with a focus upon maintaining financial stability. Economic views are important to better understand central banks. At the micro-economic level, the use of unconventional monetary policy has triggered intense concern about longer-term effectiveness, influences upon central banks' balance sheets, and changed transmission channels for conducting monetary policy.

Thirdly, this thesis has identified significant divergence in financial regulation; in particular, radical changes in the UK have displayed much uncertainty when central banks explore feasible solutions to systemic risk. One outcome of the post-crisis reforms is that central banks are needed to take on a reinforced macro-prudential regulation role. But this might exacerbate the worrying over conflicts of interests arising when central banks pursue both monetary and financial stability. In some cases, the adoption of a Twin-Peak model of market regulation has provided benefits in combining prudential regulation and conduct of business regulation relating to systemic stability. This can also be considered for the further reform of China's sector-based monitoring. Overall, debates about financial oversight will continue in the aftermath of the GFC, whilst central banks will be challenged to explore macro-prudential regulation with fresh uncertainty attributed to their enhanced focus upon systemic stability.

This thesis has acknowledged that financial crises now have cross-border features, requiring more effective institutional cooperation. During the GFC, the global financial architecture has been undergoing reforms towards stronger resilience, which remains incomplete. The co-existence of convergence and divergence illustrates diversification worldwide, creating potential difficulties for improving cross-border crisis management. Historical evidence indicates that the international financial system has developed in response to risk and crisis. Different proposals have therefore been made to strengthen regulation and supervision. Among these, the idea of establishing a global central bank has somewhat been welcomed, but seems almost impossible due to the lack of due legal authority and governance. Central banks have been criticised for their extensive, even illegal, authority of crisis management solutions, but there is also an increasing requirement for them to lead the rejuvenation of global economic growth.

Many research topics triggered by the GFC are only just unfolding. All these offer fertile grounds for further research to identify the optimal model of central bank regulation when seeking to achieve enhanced financial stability.

Appendix 4-1

US Financial Regulation and Supervision System

The 1930s Great Depression brought a highly controlled financial system. At that moment, the US Fed and the Office of the Comptroller of the Currency (OCC) were regulators at the federal level, and other responsible agencies included the Federal Home Loan Bank Board (FHLBB), which regulated savings and loans until the savings and loan crisis in 1989, when it was replaced by the Office of Thrift Supervision (OTS), and their deposit insurance shifted from the Federal Savings and Loan Insurance Corporation (FSLIC) to the FDIC; the Bureau of Federal Credit Unions, which was restructured as the National Credit Union Administration in 1970, regulated credit unions, with insurance from the Federal Credit Union Share Insurance Fund; Securities and Exchange Commission (SEC) regulated investment bank and brokers; insurance regulation remained at the state level under the McCarran-Fergusson Act 1945.

When it came to the GFC, it has argued that, when reforming the US financial regulation and supervision regime, the Dodd-Frank Act has required to resetting institutional structures with different regulatory policy. How this has changed the previous regime can be displayed in the following Table.

Table: Comparison of Financial Regulation & Supervision System Before/After the Dodd-Frank Act

Regulatory Agency	Before GFC	Under Dodd-Frank Act
Federal Reserve		
• **Institutions regulated**	Bank holding companies, financial holding companies, membership state banks, US branches of foreign banks, foreign branches of US Banks	Plus certain subsidiaries of bank holding companies, securities holding companies, savings and loan holding companies, and any firms designated by the FSOC; payment, clearing and settlement systems designated by the FSOC LOLR, modified emergent lending under Article 13(3)
• **Systemic Risk Powers**	LOLR, emergent lending under Article 13(3) of Federal Reserve Act	Establishment of Bureau of Consumer Financial Protection (BCFP)*
• **Others**	Consumer protection regulations	
OCC		
• **Institutions regulated**	National banks, US federal branches of foreign banks	Plus federally chartered thrift institutions
FDIC		
• **Institutions regulated**	Federally insured depository institutions, including non-membership state banks	Plus state-chartered thrift institutions
• **Systemic Risk Powers**	Deposit insurance funds	
OTS		
• **Institutions regulated**	Federally-chartered and insured thrift institutions, savings and loan holding companies	Abolished
NCUA		
• **Institutions regulated**	Federally-chartered or insured credit unions	
• **Systemic Risk Powers**	Central Liquidity Facility	
• **Others**	National Credit Union Share Insurance Fund	

SEC		
• **Institutions regulated**	Firms selling securities to the public to register with SEC Securities exchange, brokers, dealers, mutual funds, investment advisers	Firms selling securities to the public to register with SEC, plus make financial disclosures Plus clearing houses and hedge funds with assets over $150 million Plus nationally-recognised statistical rating organisations Plus security-based swap (SBS) dealers, major SBS participants and SBS execution facilities
• **Systemic Risk Powers**	May unilaterally close markets or suspend trading strategies for limited periods	
• **Others**	Set financial accounting standards for all publicly traded firms	
CFTC		
• **Institutions regulated**	Future exchanges, brokers, pool operators, advisers	Plus swap dealers, major swap participants, swap execution facilities
• **Systemic Risk Powers**	May suspend trading order of liquidation of positions, or raise margins in emergencies	
FHFA		
• **Institutions regulated**	Fannie Mae, Freddie Mac, Federal Home Loan Banks	
• **Systemic Risk Powers**	Conservator	

[*] BCFP is established within the US Fed under Consumer Financial Protection Act 2010, Title X of the Dodd-Frank Act. It is granted with a wide range of general and specific rule-making, and would also work as a watchdog to protect financial consumers by applying non-depository financial institutions with supervisory standards similar to depository institutions. In principle, this Bureau will concentrate upon consumer protection by taking over many powers from banking regulators and other federal regulators; this has consolidated consumer protection in financial markets, and required more balanced legislation and implementation. Its official website is at <www.consumerfinance.gov/the-bureau/>. For some legal analysis, see, David H. Carpenter, 'The Consumer Financial Protection Bureau (CFPB): A Legal Analysis' CRS Report for Congress, R42572, 2012.

Appendix 5-I

Legal Framework of the FSA

During London's "Big Bang", the securities market was reformed through a series of deregulation, and to policy these changes, the Financial Services Act 1986 introduced the Securities Investment Board (SIB) as a leading regulatory mechanism but without an explicit definition of investment business. Ever since, the BOE's regulation and supervision shifted from informal and flexible manners to regulatory surveillance.[1] The relationship between the BOE and the SIB was arranged according to a series of Memorandums of Understanding (MoUs). In principle, the BOE primarily supervised financial position and capital adequacy of institutions under its control, as well as cooperated with them and exchanged information, while the SIB, without monitoring responsibilities, had the ultimate power to revoke a firm's trading licence and impose a public reprimand.[2] As the collapse of Barings in 1995 triggered intense criticism over the BOE's supervision, the RATE model (Risk Assessment, Tools and Evaluation)[3] was introduced to strengthen risk-based supervision, especially through cooperation with overseas regulatory authorities.[4] Finally, the NEWRO was established to centralize oversight authority, named as the FSA on October 28, 1997. Its legal framework, placed by the FSMA 2000, can be summarised to incorporate the following important facets:

Legal Status and Independence

The FSA was an independent non-government body but accountable to Treasury ministers and Parliament.[5]

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[1] Jan Peeters, 'Re-regulation of the Financial Services Industry in the United Kingdom' (1988) *University of Pennsylvania Journal of International Business Law* 10(3): 371–407.
[2] Simon Deakin and Jacqueline Cook, 'Regulation and the Boundaries of the Law' ESRC Centre of Business Research, University of Cambridge, August 1999 <http://webarchive.nationalarchives.gov.uk/+/http://www.dti.gov.uk/cld/may2000/esrc9.pdf>.
[3] Maximilian J.B. Hall, 'The Collapse of Barings: The Lessons to be Learnt' (1996) *Journal of Financial Regulation and Compliance* 4(3): 255–277.
[4] Richard Dale, 'Regulating the New Financial Markets' <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.198.2379&rep=rep1&type=pdf>.
[5] It was argued that compared with the BOE, the FSA had improved its accountability. See, Marianne Ojo, 'The Financial Services Authority: A Model of Improved Accountability?' Munich Personal RePEc Archive, MPRA Paper No 228, November 2005 <http://mpra.ub.uni-muenchen.de/580/1/MPRA_paper_580.pdf>.

Objectives

The objective of the FSA was to ensure "market confidence, public awareness, the protection of consumers, and the reduction of financial crime".[6]

Organisation

The FSA Board consisted of a chairman, three executive directors and eleven non-executive directors, all appointed by HM Treasury.

Functions

The FSA's role was to undertake the BOE's functions under the Banking Act 1987, Banking Coordination Regulations 1992, Financial Services Act 1986, Investment Services Regulation 1995, and Companies Act 1989.[7] The BOE kept its responsibility for overall financial stability by maintaining the stability of the monetary system, financial system infrastructure, systemic effectiveness and efficiency, as well as the official financial operations in exceptional circumstance (LOLR facilities).[8]

Regulation and Supervisory Responsibilities

- **Regulated Activities Order 2001 (RAO)**:[9] RAO defined the range of financial activities. Broadly, the FSA should protect the competitiveness of the UK economy without undermining financial innovation.[10]

- **Principles-based theory**: six tiers of regulation, including high level principles, generally applicable regulatory standards, supervisory rules, prudential rules, specific market regulations, complaints and compensatory mechanisms.[11] These

[6] Alastair Hudson, *The Law of Finance* (1st Edition, Sweet & Maxwell 2009) 172–178.
[7] FSA, *Paying for Banking Supervision* (Consultation Paper, No 3, October 1997).
[8] BOE, 'Memorandum of Understanding between HM Treasury, the Bank of England and the Financial Services Authority' <www.bankofengland.co.uk/about/Documents/legislation/mou.pdf>.
[9] <www.legislation.gov.uk/uksi/2001/544/contents/made>.
[10] FSA, 'Making Policy in the FSA: How to Take Account of Competition – A Guide to Competition Analysis in Financial Services' Economics of Financial Regulation, Central Policy Division, July 2000 <http://hb.betterregulation.com/external/Making%20policy%20in%20the%20FSA%20-%20How%20to%20take%20account%20of%20competition.pdf>; and *Competition Review of the Financial Services and Markets Act 2000: Report Prepared for the OFT by Oxera* (Office of Fair Trading, No OFT 757, November 2004).
[11] Debates continue about the real functions of principles-based regulation. For example, see, Martyn Hopper and Jenny Stainsby, 'Principle-Based Regulation – Better Regulation?' 7 *Journal of International Banking Law and Regulation* 2006: 387-391.

high-level principles, aimed at displaying the big picture of the law relating financial activities as detailed regulation, were not susceptible to regular overhaul and re-writing.[12] In 1998, the FSA set up the outline for the proposed principles when regulating business, in December 2005, the FSA reported its improvement in balancing different requirements for regulation across financial sectors.

Risk-Based Regulatory Approaches

- **Supervision Manual** (SUP)

When supervising a firm's exposure, the FSA would take into account the risks associated with each particular market sector.

- **General Prudential Rulebook** (GENPRU)

The FSA should identify the level of risks for any particular market sectors. In the banking industry, for example, all the regulated firms should maintain sound, effective and coherent strategies to manage risk, and to conduct stress tests and scenario analysis of the risks confronting banking activities.

- **Advanced Risk-Responsive Operating Frame Work** (ARROFW)

Initially, the FSA inherited the principal modes from its predecessors, including the BOE's RATE system, the Securities and Futures Authority's FIBSPAM, the Investment Management Regulatory Organization's Relative Risk Assessment Model, the Building Societies Commission Model, and part of the Personal Investment Authority's Evolution Project.[13] Both inherent shortcomings and requirements for coherence have promoted the development of a new risk-based assessment framework incorporating vertical supervision of individual firms, assessment of cross-cutting risks, and internal risk management.[14]

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[12] FSA, *The FSA Principles for Business* (Consultation Paper, No 13, September 1998); *Better Regulation Action Plan: What We have Done and What We are Doing* (December 2005).
[13] Julia Black, 'The Development of Risk Based Regulation in Financial Services: Canada, the UK and Australia: A Research Report' (September 2004) <www.lse.ac.uk/collections/law/staff%20publications%20full%20text/black/risk%20based%20regulation%20in%20financial%20services.pdf>. After proposals were made between 2000 and 2003, a report was published, and replaced by a new release in 2006.
[14] FSA, 'The FSA's Risk-Assessment Framework' (August 2006).

Appendix 7-1

China's Law in Transition

In the late 1970s, the law reform started with the efforts to revive the old constitution and prepare new written rules.[1] Since it is argued that a market economy should be based upon stable legal rules, a large number of statutes regarding trade, company, foreign investment and other commercial issues have first been adopted.[2] After three decades, China's legislative structure has preliminarily developed. In terms of legislative bodies, the NPC has full and highest authority, followed by its Standing Committees and the State Council. Below are the territorial divisions among regional and local governments, as well as the functional bureaucracies of central government administration. The third leg lies in the special law-making power granted to the autonomous minority areas. From the perspective of legal authority, there are three levels. Primary legislation is at the top but below Constitution; and it is often named *falv* in Chinese. At the second level are those issued by the State Council and the regional People's Congresses; in varying forms, they are generally called *fagui*. Also, central government ministers, regional and local governments can issue at the tertiary level, most known as *guizhang*.[3] The overall legislative hierarchy can be classified as follows:[4]

[1] For example, a new Criminal Code was issued in 1980, and the collection of general civil principles (*minfa tongze*) in 1987.

[2] It is difficult to name and identify all the rules and regulations in China. One major reason is that due to dynamic changes, the legal system is continuously updated and modified. For some recent reforms, refer to, *Report on China Law Development: Database and Indicators* <www.law.ruc.edu.cn/fazhan/> [in Chinese].

[3] The autonomous minority areas, under the special legislature authority, can issue autonomous and special regulations (*zizhi danxing tiaoli*). Those regulations are defined between the primary and secondary legislature levels, varyingly depending on the political hierarchy of the administrative authorities.

[4] For an introduction to the legislative structure, refer to, Perry Keller, 'Legislation in the People's Republic of China' (1989) *University of British Columbia Law Review* 23(3): 653-688.

1. *Xianfa*:Constitution
2. *Falv*: laws issued by the NPC and its Standing Committee
3. *Xingzheng Fagui*: administrative regulations issued by the State Council
4. *Difangxing Fagui*: Local People's Congress Regulations issued by the people's congresses and their standing committees of provinces, autonomous regions, cities directly under the central government and major cities and special economic zones

   Zhengfu Guizhang: rules issued by people's governments of provinces, autonomous regions, cities directly under the central government and major cities
5. *Bumen Guizhang*: rules issued by central ministers, commissions, agencies or entities directly under the State Council, including the PBC
6. *Guifanxing Wenjian*: normative documents including all legislation issued by the legislature authorities other than those mentioned above.

As argued in Chapter Seven, the Party's absolute leadership has weakened the legal system from the fundamental. Its prioritized requirement for stabilization has further weakened the authority of law; this is primarily achieved by institutionally defined property rights without changing the state's ownership. For example, joint ventures, equity joint ventures and cooperative joint ventures are legally permitted to utilise FDI, as long as their state ownership is untouched. Private property was not recognised in the Constitution until 2004, and equal protection given to *de facto* private property as to public property until 2007. Therefore, China's legal rules should accommodate rather than interfere with the existing business practice.[5]

Another conflict has existed due to the complexity of Chinese legal system.[6] China's substantial legal system is incomplete, and many rules are still under consideration. For example, a codified civil law is argued to be vital, but drafts have been repeatedly modified without further substantial progress. What is more, mass normative documents do not automatically constitute a coherent and unified body of

[5] Jonathan R. Hay, Andrei Shleifer and Robert W. Vishny, 'Privatisation in Transition Economies: Towards a Theory of Legal Reform' (1996) *European Economic Review* 40(3-5): 559-567.
[6] Yuanyuan Shen, 'Conceptions and Receptions of Legality: Understanding the Complexity of Law Reform in Modern China' in Karen G. Turner, James V. Feinerman and R. Kent Guy (eds.), *The Limits of the Rule of Law in China* (London: University of Washington Press 2000) 20–44.

law. As classified above, different resources of law between various central and local government bodies lead to the fragmented system of positive law. Meanwhile, informal law, including reputation, family relationship, and community judgement, has continued to affect written statutes.[7] Furthermore, China has a considerable long history of receiving foreign laws.[8] Since the late 1960s, however, it was implausible to transplant legal norms and institutions from developed to developing countries without taking into account local political, social and cultural contexts. And thus, the so-called 'pre-tested' best practice cannot be automatically suitable for the recipient.[9] In China's case, international norms and standards have been weakened by transitional arrangements, and cannot work effectively in violation; instead, selective adaptation depends upon political regime, institutional capacity, and legal culture.[10]

Moreover, difficulties have been caused by language and cultural traditions. For example, *falv* is usually translated as 'regulations' in English, while it is hard to find a proper English term for *fagui* or *guizhang*.[11] In particular, there is a substantial difference between the mere existence of a legal system and establishing the rule of law, though they both are *fazhi* in Chinese.[12] How to interpret rules and regulations is another challenge, for the fundamental principle of China's legislature is to draft rules and regulations which exemplify stabilisation (*wendingxing*), flexibility (*linghuoxing*) and generalisation (*yuanzexing*). Accordingly, rules and regulations can be drafted to accommodate local conditions, but maintain internal coherence.[13]

[7] Bernard Chavance, 'Formal and Informal Institutional Change: The Experience of Post-Socialist Transformation' (2008) *The European Journal of Comparative Economics* 5(1): 57-71.
[8] For a brief of historical development, see, Leigh K. Jenco, '"Rule by Man" and "Rule by Law" in Early Republican China: Contributions to a Theoretical Debate' (2010) *The Journal of Asian Studies* 69(1): 181–203.
[9] For example, refer to, Herbert H.P. Ma, 'The Chinese Concept of the Individual and the Reception of Foreign Law' 9 *Journal of Chinese Law* 1995:207-218.
[10] Pitman B. Potter, 'Legal Reform in China: Institutions, Culture, and Selective Adaptation' (2004) *Law & Social Inquiry* 29(2): 465–495.
[11] In practice, more titles are used to represent different normative documents than those above, such as *tiaoli*, *jueding*, *mingling*, and *jueyi*. But even in Chinese, difference from the literature perspective is not as obvious.
[12] There are plenty of studies into the application of "the rule of law" and "the rule by law" in China, as well as its relationship with democracy, e.g., Eric W. Orts, 'The Rule of Law in China' 34 *Vanderbilt Journal of Transnational Law* 2001: 43–115.
[13] Daohui Guo, 'Combination Between Stability and Flexibility in Legislation/Lun Lifa zhong Yuanzexing yu Linghuoxing Jiehe' (1987) *Law Review* 21(1) [in Chinese].

In addition, the full enforcement of law remains in doubt. Historically, lawsuits were regarded as undignified, placing down the basis for China's society to promote shared values and norms; this was further consolidated under the Maoist ideology about a collectivism community. [14] Lacking judicial independence affects the enforcement of law: [15] courts are under the direct leadership of the Party, and integrated into the state bureaucratic system. Courts are supervised by the Supreme People's Court in Beijing and subject to the higher courts in the same region or area, and also depend upon the People's Government for the allocation of buildings, personnel, and finances; this makes little institutional independence.[16] Under this arrangement, courts are directly influenced by local governments, and also local protectionism has shaken the justice system.[17]

[14] For historical review, refer to, Xucheng Hu, *Lawsuit: the Research on China's Traditional Litigation/Su yu Song: Zhongguo Chunatong Susong Wenhua Yanjiu* (Beijing: Renmin University Press 2012) [in Chinese].
[15] Guangzhong Chen, 'Juridical Independence with Chinese Characteristics: from the Perspective of Comparative Law/Bijiaofa shiyexi de Zhongguo Tese Sifa Duli Yuanze' 2 *Comparative Studies* 2013: 1-12 [in Chinese].
[16] Xiao Wang, *The Institutional Choice towards Justice/Zouxiang Sifa Gongzheng de Zhidu Xuanze* (China Law Publishing 2005) 1–48, 106–144, 266–284 [in Chinese].
[17] Zuoxiang Liu, 'Critical Analysis of Localisation of Juridical Power in China: Nationalisation of Judicial Power as the Guideline for Reform/Zhongguo Sifa Difang Baohu Zhuyi zhi Pipan: Jianlun Sifaquan Guojiahua de Sifa Gaige Silu' 1 *Law Studies* 2003: 83-89 [in Chinese].

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