Corporate environmental performance considerations within bank lending processes : the social construction of risk perception.

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Thesis submitted in fulfilment of the Degree of Doctor of Philosophy

University of Durham, Business School

September 1997

To my mother

Doreen Coulson

For her gifts of knowledge and love

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Abstract

This thesis seeks to open up a new area of debate and investigate the seemingly recent phenomenon of corporate environmental performance considerations within bank lending processes. By drawing initial evidence from professional banking literature which addresses this issue, risk management is identified as the foundation for such considerations. The critical question posed is how 'reality', and thus environmental risk, is perceived and its associated management rationalised by bank lending officers.

Accounting research, which addresses bank lending processes, and interdisciplinary debates on theories of risk perception are reflected upon. Drawing on theoretical findings, initial evidence of corporate environmental performance considerations by bank lending officers is re-examined. Based on an analysis of the social construction of perception within a bank, it is argued that a plural rationality for environmental management is constructed according to the social roles, relationships and responsibilities of its members. 'How' and 'why' a bank lending officer interprets reality become interrelated questions which are addressed.

The central proposal made is that banks can be characterised as hierarchical cultures with views of physical nature founded upon myths of tolerance. Environmental risk management within bank lending processes is thus rationalised as an effort to maintain human impact with the environment at natural threshold limits. Hierarchical cultural preferences explain a bank lending officer's support for environmental legislation designed to sustain corporate activity at these limits. Empirical evidence to support this proposal is based on a hermeneutic evaluation of environmental risk perception by bank lending officers. Research participants are drawn from bank communities within Switzerland, Ireland and the UK.

The thesis concludes by drawing upon evidence that corporate environmental performance is considered within bank lending processes to highlight the need for further research in this area. The central proposal establishes a provisional basis for future research of this kind.

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Introduction

The term environment has been subject to varied use. A broad interpretation of the term environment is 'all that surrounds us, man-made or seemingly natural'. When discussed within the context of management, a popular inference made at present is that the environment issue in question is one which arises from human interaction with the natural environment: raising the question what is natural? However, each issue raised is subject to a myriad of interpretations, and opens up debate founded upon different perceptions of reality, sustainable development and accountability.

Contributors to environmental debate include individuals from a range of organisations/institutions each offering a different view of environmental issues and social roles and responsibilities. Over the last few decades, following pollution incidents and 'signs' of global warming and resource depletion, interest in environmental issues has increased. It is almost impossible currently to read a newspaper, listen to the radio or watch television without witnessing debates regarding environmental management. Questions have been raised regarding the scale of human impact on the environment and the associated risks to society. Increasing uncertainty has resulted from the variety of answers provided.

Government representatives have developed environmental legislation, as a response to debate, in an attempt to manage human impact on the environment and potential social risks. Corporate representatives, for their part in consumption and production, have portrayed a proliferation of environmental policies and examples of management best practice to counter claims that they damage the environment.

A new area of debate has centred on ethical investment and accounting practice as mechanisms of environmental management. As a result, financial institutions have been drawn into the environmental arena. The thesis[1] opens up this area of debate by examining corporate environmental performance considerations within bank lending processes.

Bank lending processes are defined for the purpose of research as encompassing applications for loans and loan monitoring procedures. 'How' and 'why' corporate

environmental performance considerations form part of bank lending processes are examined as a function of a lender's perception. The construction of perception is explored as a basis from which to understand and interpret a lender's definition of 'environment' and their associated rationality for environmental management. The issue of environmental risk perception evolves as a specific area of theoretical attention from a literary review which addresses evidence of environmental consideration within bank practice.

As this thesis addresses perception, it is necessary to provide a background from which to evaluate the author's position. The author was schooled within the discipline of accounting, through an undergraduate degree and working as a corporate financial auditor in an accountancy practice. Given an interest in environmental issues, the author's attention has become focused on the function of finance in environmental management and the potential to adopt a monetary representation of environmental value. The pursuit and direction of this thesis resulted from the author's personal desire to explore the relationships between environmental management and finance. The author found a specific research challenge on recognising that, despite increasing signs of environmental issues within commercial bank lending practice, debate which addressed this area was scarce.

Thesis format

Given the selection of bank lending processes as a focus for research, the natural starting point of the thesis in Chapter one, is a review of prior research which addresses this area. The purpose of the review is to analyse theoretical foundations developed within the research area, in particular those which address environmental consideration. The review identifies a wide range of research grounded predominantly in accounting which address bank lending issues.

It is revealed that the primary research focus to date has been the nature and functional value of information demanded and used by bank lending officers within lending processes. Findings show that financial and non-financial information demanded and used in lending processes are both complementary and supplementary sources of information. In a number of studies, a bank lending officer's preference for, and use of,

information was found to be influenced by a combination of lending officer characteristics, bank policy and bank culture. However, as secondary considerations, the degrees of influence of these variables on lending processes and their inter-relationships have not been fully explored and remain questionable.

Further analysis of research findings is complicated by the lack of common research questions and associated methodologies applied. In addition, comparisons drawn between research findings are limited given the unique nature of lending decisions and problems of research access. Thus, attempts by researchers to model 'the' lending process and provide a theoretical foundation to explain findings have been limited.

Environmental considerations within bank lending processes, by both bank lending officers and researchers, were found to have been scarce. This appears surprising when reflecting upon the emergence of environmental accounting research, particularly over the past decade. However, a key research study by Gray et al. (1993) identified a proliferation of 'professional literature', encompassing publications and journal articles by bank lenders and their representatives, highlighting an emergence of environmental considerations within banks. It was noted that environmental accounting, in particular lending considerations of financial institutions, has emerged as an area of increased research interest and practice during the last decade. A tendency for theory to follow practice in this area is recognised.

It is concluded from the review that there is a need to develop a theoretical framework for the lending process from which to take research forward. As a basis for the specific exploration of corporate environmental considerations within bank lending processes, an extensive review of professional literature which addresses environmental lending considerations by banks is carried out in Chapter two.

Undertaking a historical analysis of professional literature identifies the 1980's as the first time when environmental lending considerations were raised by lenders. Potential US lender liability for the environment under the US Comprehensive Environmental Response, Compensation and Liability Act 1980 is recognised as the initial basis for debate. It is proposed that the observed lack of academic attention to the research area

may be partially explained as the consideration of environmental issues by bank lenders appears to be a relatively recent phenomenon.

The review reveals that as environmental legislation has developed at an international level, concern regarding lender liability for the environment has become a subject of sustained international debate. A number of bank advisers have proposed that evidence of developing environmental policies and procedures within banks should be attributed to liability management. To address this proposal a wider review of the situation is undertaken.

An initial examination is made regarding the existence, availability and conditions of environmental insurance that may be viewed as a means to offset such a risk. Environmental insurance is found to be relatively scarce and conditions are perceived as deterring purchase. As a result it appears unlikely that the risk of direct or indirect environmental liability of lenders is offset with insurance.

Analysing in detail environmental considerations within lending processes the remainder of Chapter two assesses further the questions of how, and why, environmental issues are considered by bank lenders. Analysing the approach of individual banks, initial evidence provides support for the proposal that environmental considerations are part of a bank's risk management. However, an apparent contradiction arises as an ethical position on the environment is noted among a number of bank lenders. Consequently, bank lenders' rationalities for environmental management remain questionable and in need of further examination.

The resulting direction of research is to address at a theoretical level a bank lending officer's perception of, and associated management rationality for, environmental management. This is undertaken through an initial exploration of possible theoretical linkages between: environmental 'risk' perception and 'ethics'; and the role of bank policy and functional lending policy. Particular emphasis is placed on defining how lending officers' perceive risk and environmental risk given the recognised adoption of the phrase 'credit risk management' in practice.

Chapter three begins by considering risk definitions and their theoretical foundation drawn from social science debate. The core ontological question addressed is how environmental risk, and thus reality, is perceived by an individual. The result is the narration of a search for, adoption, and justification of a social constructionist perspective on risk perception. Thus, the epistemological stance adopted is to analyse and seek to understand 'how' social reality is constructed by assessing specific social processes supporting a proposed rationality. This stance in turn addresses the related question of 'why' reality is perceived in such a way. Particular emphasis is placed on cultural theories proposed by social anthropologists Mary Douglas (Douglas, 1966 to present) and Michael Thompson, and scholars in political science Richard Ellis and the late Aaron Wildavsky (Thompson et al., 1990).

It is recognised that the reduction of issues to 'mere' social constructions may be self defeating. However, the author proposes that grandiose social theories provide more than a sterile alternative to scientific reductionism; they provide a foundation for analysis and debate regarding social practices. The end result may be to provide that the development of these practices reflects a bias towards methods of scientific reduction. The role of policy in communicating risk messages to and from individuals is viewed as a representation of perception and management rationality.

In Chapter four, the bank is taken as the subject of analysis and the findings in Chapters one and two are re-examined from a social constructionist perspective. Attention is focused on social relationships and responsibilities inherent within a bank organisation, and representations of environmental risk perception. Social relationships are viewed as 'hierarchical' arrangements supported by what is termed a 'complex web' of risk communication. Bank and lending policy is a formal part of this communication web representing bank members' plural rationality for environmental risk management. This process of rationalisation is viewed as the fundamental 'ethic' of the social group concerned. It is proposed that a bank's apparent environmental management activities and rationalisation reflects a view of physical nature founded upon a myth of tolerance (Holling, 1979). It is argued that, under such a classification, the recent phenomenon of bank lenders examining corporate environmental performance is a reaction to developing environmental legislation and a consequent adjustment to their perception of natural environmental threshold limits.

In Chapter five a methodology is proposed to facilitate an empirical examination of the central proposal developed in Chapter four that, according to Thompson et al.'s Cultural theory (1990), ***banks can be characterised as cultural hierarchies with views of physical nature founded upon myths of tolerance.*** The methodology chosen reflects the ontological and epistemological assumptions on which the central proposal is based. Classification of the research as qualitative is therefore insufficient. The method of analysis selected is a hermeneutic evaluation of social meaning and shared understanding. Examining prior research findings and the results of pilot studies it is recognised that a number of research access problems may arise in an effort by banks to maintain client confidentiality and a competitive position. These issues were factored into the research design.

Bank community case studies were selected as a basis for research. Communities were delineated according to the national geographic boundaries and associated legislative and regulatory regimes affecting banks. This basis of selection facilitated an analysis of the potential influence of issues such as legislation, regulation and culture through comparison of similar and dissimilar bank situations. Research was established with bank participants from three communities: Switzerland; Ireland; and the UK with banks classified according to their head office location. The cases encompassed ten banks: three Swiss; two Irish; and five from the UK. One Swiss bank was the subject of a cross community study additionally assessing the bank's subsidiary UK operations.

Initial bank contact was established with bank representative responsible for formulating bank lending policy. Research within each bank was pursued using a questionnaire to provide a semi-structure to interviews. Follow up research with each bank varied according to researcher and participant views on access, confidentiality and the nature of the bank's lending process.

In Chapter six research findings are outlined by evaluating trends displayed within and between banks within individual communities, including findings from the cross community study. Issues addressed include the social structure of banks, the environmental management activities of bank members, and the rationalities underpinning environmental management. Adopting a social constructionist

perspective, it is stressed that the trends illustrated are the author's view of research findings and may be subject to alternate interpretation.

In Chapter seven the application of the central proposal is discussed with respect to these findings and additional contrast is drawn between banks across communities. This proposal is evaluated in a number of cumulative stages which follow the theme set by the theoretical development process undertaken in Chapter four.

Initial support for the central proposal is provided by evidence that banks are hierarchical social structures within which bank members share common values. This is achieved by drawing comparison between the nature of social roles, relationships and responsibilities illustrated and adhered to within each bank. Attention is then devoted to the development of, and adherence to, environmental policy by bank members, and the communication web supporting the social construction of perception and management rationality within a bank. The next stage is to compare and contrast environmental risk perceptions illustrated by banks between, and across, communities to highlight the unique nature of values held by members of each bank. Finally, comparison is drawn between environmental management rationalities portrayed within each bank to reflect a common view of tolerant nature.

Drawing on these findings it is concluded that bank members examined adhered to hierarchical ways of life and tolerant myths of nature, supporting compliance with environmental legislation and management of exceptions through bank activities. This analysis explains how, and why, corporate environmental performance has been considered within bank lending processes according to the social construction of perception. The recent emergence of environmental policies and procedures within banks is interpreted as a reaction to developing environmental legislation as opposed to a change in an ethical position.

The thesis concludes by drawing upon evidence of corporate environmental performance consideration within bank lending processes and establishes the central proposal as a means of explaining this phenomenon as a provisional basis for further research. It is argued that the provision of a social constructionist perspective from which to interpret and understand the nature of lending processes and associated

information requirements aid researchers or practitioners understanding of practice. Due to its descriptive nature much of the research undertaken may be subject to claims of positing an illegitimate tautology. Alternatively, it is proposed that the exploratory nature of the research serves to establish a foundation from which to initiate debate.

Note

[1] The term 'thesis' has been adopted to represent the full textual document presented as opposed to any theoretical proposal contained within the document.

Chapter 1

A theoretical insight into bank lending processes

Introduction

This Chapter reviews academic literature, predominantly in the field of accounting, relating to bank lending processes[1]. The purpose of the review is to analyse theoretical foundations developed within the research area and examine environmental considerations.

Given the breadth of research which addresses bank lending processes, attention is first devoted to identifying distinct areas of interest. This provides a context within which the validity and contribution of research findings can be discussed. Areas of interest are categorised according to different aspects of the lending processes examined, in particular, the influence of: the bank; the bank lending officer[2]; the borrower situation; and the banking environment.

Research findings fall into two primary categories financial and non-financial considerations within lending processes. Findings show that financial and non-financial information demanded and used in lending processes are both complementary and supplementary sources of information. However, further analysis of research findings is complicated by the lack of common research questions and associated methodologies. In addition, research findings are limited given the unique nature of lending decisions and problems of research access. Thus, attempts by researchers to model 'the' lending process and provide a theoretical foundation to explain findings have been problematic.

Environmental considerations within bank lending processes, by both researchers and lending officers participating in research, were found to have been relatively scarce to date. However, key research identifies a proliferation of 'professional literature' highlighting environmental considerations within banks. It is noted that environmental accounting has emerged as an area of increased research interest and practice during the last decade. In particular, research which addresses environmental issues within financial institutions has highlighted the emergence of environmental considerations by other lenders and a tendency for theory to follow practice in this area.

Areas of research interest

Decision process and decision only research

Research which addresses bank lending processes has centred on what has been referred to as 'decision process' research (Stephens, 1980). 'Decision process' research examines the method of, and influences on, decision making supporting applications for and of less prominence monitoring of loans. Research questions centre on *how* decisions are processed and *why* particular processes are adopted. In particular, accounting research has addressed the importance placed by bank lending officers on the source, demand for, and utilisation of information and the rationalities for their preferences.

Decision process research may be distinguished from 'decision only' research which has centred on an analysis of the nature of information influencing the final lending decision. In particular, bank lending officers have been recognised as potential users of accounting information and questioned regarding the adequacy and format of financial statements (Chandra, 1974). The results of decision only research have been used to design decision process research. (Abdel-Khalik, 1973; Eyes and Tabb, 1978; Fertuck, 1982; Stanga and Tiller, 1983; Wilkinson, 1984; NEDC[3], 1986; Berry et al., 1987; Duchessi et al., 1988; Danos et al., 1989; Berry, Crum and Waring, 1991[4], 1993; Deakins and Hussain, 1991, 1994; Berry et al. 1993a)

Financial and non-financial information

A common distinction in research focus has been made between research which addresses financial and non-financial information. While a number of studies have considered both these categories of information, financial information has undoubtedly received greater prominence (Berry et al., 1984; Berry et al., 1987; Innes, 1990; Berry, Crum and Waring, 1991, 1993; Deakins and Hussain, 1991, 1994; Berry et al., 1993a). A number of researchers, in particular those undertaking decision only studies, have exclusively considered financial information (Abdel-Khalik, 1973; Stephens, 1980; Cooper et al., 1981; Stanga and Tiller, 1983; Danos et al., 1989; Kemp and Overstreet, 1990; Holt and Morrow, 1992; Hutchinson and McKillop, 1992).

Research has been undertaken to establish types of information demanded and used within each category, and their relative importance. As part of such examinations, a number of researchers have attempted to evaluate the functional value of information with respect to the form of the lending process. A number of studies have considered the value of financial information in isolation (Abdel-Khalik, 1973; Stephens, 1980; Cooper et al., 1981; Danos et al., 1989). However, when considering the functional value of non-financial information the relative value of financial information has additionally been addressed (Berry et al., 1984; Berry et al., 1987; Innes, 1990; Berry, Crum and Waring, 1991, 1993; Deakins and Hussain, 1991, 1994; Berry et al., 1993a).

Influences on lending processes/decisions

Research has addressed various combinations of influences on lending processes. Areas of consideration have included the influence of the bank, the bank lending officer, the borrower and the bank environment on lending processes and information for decision making. These considerations reflect the founding rationalities upon which research methodologies, and the degree to which general characteristics of lending processes, have been modelled. Before critically reviewing research literature in this area, there is a need to outline these influences to gain an insight into potential research limitations.

The bank

Whilst it is recognised that there are differences between banks, the structure of a bank lending process is typified as an organisational hierarchy. Within such a structure, authority for decision making is formally delegated to lending officers based on authorised financial lending limits and referral conditions (Mansfield, 1979; Stephens, 1980; NEDC, 1986; Berry, Crum and Waring, 1993; Deakins and Hussain, 1994).

A number of research studies and professional commentaries have noted the operation of lending committees. Lending committees were found to have been established to approve loans either above the authorised lending limits of an individual lending officer or for particularly large amounts (Mansfield, 1979; Stephens, 1980; Cooper et al, 1981; Danos et al., 1989; Berry, Crum and Waring, 1993). However, the literature review revealed an absence of research examining the committee decision process. In a number of studies the existence of such a committee constrained research examination to loan

applications below the level at which a committee was perceived to operate (Stephens, 1980; Cooper at al., 1981).

Research has examined the influence of bank policy and culture on the decision style adopted by individual bank lending officers (Abdel-Khalik, 1973; Eyes and Tabb, 1978; NEDC, 1986; Nutt, 1989; Berry, Crum and Waring, 1991, 1993; Deakins and Hussain, 1991, 1994). Findings revealed that bank policy may vary in application according to borrower size categories. Thus, loan size categorisation as determined by bank lending officers has been examined by a number of researchers as a potential influence on the lending process (Stephens, 1980; Cooper et al., 1981; Danos et al., 1989; Holland, 1988) The size and/or location of a bank with respect to its primary market has also been considered as a basis for borrower size definitions (Heard, 1980; Stanga and Tiller, 1983; NEDC, 1986; Holland, 1988; Mansfield, 1979; Hutchinson and McKillop, 1992).

The bank lending officer

The opinions of lending officers have been at the centre of research into bank lending processes. A number of research studies have focused upon the influence individual lending officers have had on lending processes considering a number of factors such as: age; gender; academic qualification; career profile; professional training; and experience. Subsequently, the effect of a lending officer's hierarchical position within a selected bank and/or range of banks was considered along with the influence of organisational constraints, incentives and bank culture on individual behaviour. (Abdel-Khalik, 1973; Eyes and Tabb, 1978; Stephens, 1980; Cooper et al., 1981; Berry et al., 1984; Wilkinson, 1984; NEDC, 1986; Berry et al., 1987; Nutt, 1989; Innes, 1990; Berry, Crum and Waring, 1991, 1993; Deakins and Hussain, 1991, 1994; Berry et al., 1993a).

The borrower

The dominant form of research has been to question bank lending officers about the influence of borrower characteristics on lending processes. Alternatively, research has addressed borrower requirements and the associated view of the lending process. Of particular interest have been the views of small business managers (Bannock and Morgan, 1988). However, research examining the lending process from the point of

view of lenders and borrowers within the same research studies were scarce. It has been widely noted that research requests to examine real 'borrower' situations, have been declined by banks bound by client confidentiality guarantees. These restrictions on research access have precluded an examination of the views of associated parties within a given lending situation. (Holland, 1988; Berry, Crum and Waring, 1991, 1993; Deakins and Hussain, 1991)

A particular area of research attention has been the influence of borrower size on bank lending processes. Research has compared bank relationships with small companies to those with large companies (Stephens, 1980; Cooper et al., 1981; Stanga and Tiller, 1983; Berry et al., 1987; Holland, 1988; Danos et al., 1989; Nutt, 1989; Innes, 1990). Further examination of small business borrowing requirements has complemented this research (Heard, 1980; Midland Bank, 1981; NEDC, 1986; Bannock and Morgan, 1988; Deakins and Hussain, 1991,1994; Fulmer et al., 1992; Hutchinson and McKillop, 1992; Berry et al., 1993a; Berry, Crum and Waring, 1993). Interest in small business lending appears to have been evoked in response to a number of UK government committee reports which address the role of banks within the monetary system[5]. (H. M. Environment, 1971, 1979; Midland Bank, 1981 and Hutchinson and McKillop, 1992).

A primary problem comparing research results which address issues of borrower size has been the variety of definitions provided for a company. A number of studies which address small businesses have attempted to avoid ambiguity by leaving company size undefined (NEDC, 1986). Company size has conventionally been defined by financial indicators such as asset value, turnover, profit levels and number of employees. Specific reference has been made to recognised size definitions such as those proposed by the UK Company Acts (Berry et al., 1987; Berry et al., 1993a). However, other considerations have been organisational structure, ownership structure, and subscriptions to business forums perceived by researchers to be characteristic of a size category (Bannock and Morgan, 1988; Holland, 1988).

The banking environment

Recognising the potential influence of the local economic and regulatory environment on borrowers and lenders performance, research has focused upon research participants within specific geographical locations. For example, considerable effort has been made

to examine the use of accounting information by US bank lending officers (Abdel-Khalik, 1973; Stephens, 1980; Cooper et al. 1981; Stanga and Tiller, 1983; Berry et al., 1984; Bannock and Morgan, 1988; Duchessi et al., 1988; Danos et al., 1989; Nutt, 1989; Holt and Morrow, 1992; Kemp and Overstreet, 1990). This compares with research which addresses lending practice within the UK which has been primarily devoted to examining small business lending (Egginton, 1977; Wilkinson, 1984; Berry et al., 1984; NEDC, 1986; Berry et al., 1987; Bannock and Morgan, 1988; Holland, 1988; Innes, 1990; Berry, Crum and Waring, 1991, 1993; Deakins and Hussain, 1991, 1994; Hutchinson and McKillop, 1992; Berry et al., 1993a).

Research which addresses bank lending practice within other countries has been scarce (Eyes and Tabb, 1978; Berry, Crum and Waring, 1993). However, notable research includes that of Eyes and Tabb (1978) who examined lending practice in New Zealand and research by Berry, Crum and Waring (1993) which includes an examination of the lending activity of 4 'foreign' banks in contrast to 4 UK banks. To maintain requests for anonymity they referenced findings to: American; Commonwealth; and European banks examined.

Research examining bank lending practice according to geographic location has been concentrated on banks domiciled within the country and/or area noted. However, attempts have been made to examine the practice of banks of various domiciles operating within the UK market, in particular comparing the practice of UK and US banks (Berry et al., 1984; Berry, Crum and Waring, 1993). Few cross-community studies have been undertaken, probably due to problems of feasibility or comparability associated with conducting research under varying conditions. For example, variance of accounting standards between locations restricts the comparability of research findings. However, extensive research was undertaken by Bannock and Morgan (1988) comparing and contrasting the lending experience of small business borrowers in the UK and the US, taking into consideration local differences.

The range of research considerations and perspectives affecting lending processes complicates the interpretation of research and its significance. Consequently the formulation of theoretical foundations for lending processes have been problematic and research conclusions are predominantly restricted to the context of specific research.

Research findings within both financial and non-financial categories illustrate this problem.

Research findings

Loan applications

The importance and use of financial information

The dominant theme of research which addresses bank lending processes has undoubtedly been the importance attached to the demand for, availability, and subsequent use of financial information in decision making. Research findings have been used to offer advice to providers and regulators of financial information as well as companies seeking finance. Research which addresses bank lending officers as potential users of accounting information has been particularly topical when changes in accounting policy, regulation and practice have been proposed and/or adopted. This may explain why non-financial information has frequently gone unrecognised or has been recognised only as a secondary consideration or a by-product of research.

The most popular way of examining the importance of financial information within lending decisions has been to ask bank lending officers to rate and/or rank the importance of given data sets or proposed categories of information. Financial data has primarily been drawn from the financial statements and provided in a detailed form (Stephens, 1980; Cooper et al., 1981[6]; Stanga and Tiller, 1983), according to imposed categories (Eyes and Tabb, 1978; Berry et al., 1984; Berry et al., 1993a) or by name only in comparison with other forms of financial and non-financial information (Egginton, 1977; Berry et al., 1987[7]; Danos et al., 1989; Berry, Crum and Waring, 1991, 1993; Berry et al., 1993a; Deakins and Hussain, 1994).

A number of researchers have built upon prior research findings (Stephens, 1980; Berry et al., 1984). For example, Stephens (1980) used a data set considered by Chandra (1974) in examining the differential weighting of financial information by users groups. However, the findings of Stephens and Chandra lack direct comparability due to differences between research questions and methodologies.

Problems of research comparability exist on a greater scale due to the range of research questions and methodologies applied in analysing lending processes. Research methodologies have ranged from extensive postal questionnaire surveys (Egginton, 1977; Eyes and Tabb, 1978; Stanga and Tiller, 1983) to detailed interviews (Berry et al., 1984[8]; Danos et al., 1989; Berry, Crum and Waring, 1991, 1993; Berry et al., 1993a; Deakins and Hussain, 1994). Research has addressed bank lending officers within and between banks of various geographic locations and considered borrower information ranging from genuine applicants (Deakins and Hussain, 1994) to financial statements drawn from 'real' but anonymous companies (Stephens, 1980; Stanga and Tiller, 1983) and 'realistic' case examples (Danos et al., 1989; Berry, Crum and Waring, 1991, 1993). Such problems highlight the importance of recognising research findings within the context of examination.

Financial Statements

Financial statements, in particular the profit and loss account and balance sheet, have undoubtedly been one of the primary data sources demanded and used by bank lending officers. A wide range of research carried out in the US, UK and New Zealand supports this view noting little difference in demand or use of financial statements between and within banks (Egginton, 1997; Stephens, 1980; Berry et al., 1984; Berry et al., 1987; Innes, 1990; Kemp and Overstreet, 1990; Berry, Crum and Waring, 1991, 1993; Deakins and Hussain, 1994).

When evaluating research findings the date at which research was undertaken and the geographical location of borrowers is of particular relevance given the influence of accounting regulations. For example, on examining Egginton's research findings in 1974 it is noted that funds flow analysis was not a mandatory requirement of financial statements in the UK[9]. Evaluating the use of funds flow statements Egginton found, that while of notable importance, they were a less popular source of information than the profit and loss account and balance sheet (Egginton, 1977). Despite changes in UK accounting standards, requiring the inclusion of funds flow statements within financial statements, Berry et al. made similar findings in 1984. However, Berry et al. (1984) provided an explanation for their findings, noting that a number of respondents rating funds flow statements of reduced importance prepare a more revealing, version of the statement.

While financial statement information is publicly available within published annual accounts, this information was found to be requested directly from companies as part of their lending application. By approaching a borrower the bank lending officer was able to request up to date un-audited financial statements.

Research has compared the importance of audited with un-audited financial statements. Increased demand was found for information which had been validated by an audit, although un-audited financial statements which up-dated existing audited accounts also remained an important source of information (Egginton, 1977; Innes, 1980; Berry et al. 1984). The consideration of un-audited financial statements as a secondary source of information is unsurprising given findings by Berry et al. (1988) that by the time audited accounts had been released they were already on average three months out of date.

A number of research findings additionally recognised the timeliness of information provision as a primary concern of bank lending officers and in need of improvement (Egginton, 1977; Eyes and Tabb, 1978; Berry et al., 1984). A study of bank lending officers in New Zealand by Eyes and Tabb (1978) found that the filing of late accounts was likely to effect a bank lending officer's opinion of the management ability associated with a borrowing company.

Annual reports

An extensive review of the use of other information contained within annual reports was undertaken in the UK by Berry et al. (1984). Supporting previous findings, it was noted that the auditor's report was examined to determine the reliability of data and ensure there were no accounting problems requiring further investigation. Additional emphasis was placed by all respondents on reading the notes to the accounts thoroughly. One respondent provided a reasonable explanation for this, noting that the information contained within the notes was the first to be read and determines the direction of the subsequent analysis, indicating where to look for potential problems. Additionally, the Chairman's report on company performance was read with a critical eye. The research noted by exception that respondents appeared not to read the five to ten year summary and statement of value added within the annual report. While there

was no obvious reason for the lack of interest in value added statements, evidence was provided that bank lending officers prepared their own financial summaries.

Management accounting information

Research has shown that, as a standard part of the lending process, financial information used for management purposes by the borrower has been requested by the lender. Bank lending officers were found to request past, present and future management accounting information including aged debtor and creditor analysis, budget figures, projected cash flows and valuation reports (Egginton, 1977; Eyes and Tabb, 1978; Berry et al., 1984; Berry et al., 1987; Berry, Crum and Waring, 1991, 1993; Deakins and Hussain, 1994). Researchers have attempted to rate or rank the importance of specific items of managerial accounting information but varying priorities were found.

Research in general has shown that the importance and use of management accounting information closely follows the importance attributed to the financial statements. A number of research studies found that bank lending officers evaluating a borrower's future performance, placed most emphasis on management accounting information (Berry et al., 1984; Berry, Crum and Waring, 1991; Deakins and Hussain, 1994). In view of the financial statements historical view of the company such a finding is not surprising.

Considering the potential influence of borrower size on requirements for financial information, Berry et al. (1987) revealed that bank lending officers dealing with large companies use management accounting information less than those dealing with small businesses. One of the main explanations for their findings was that bank lending officers view large companies as more financially secure, reducing emphasis on management information within the lending decision. Berry et al. (1987) further proposed that greater delays existed in the publication of financial statements by small businesses[10], meaning that information was out of date and management accounting information was considered as a substitute. Berry, Crum and Waring (1991) recognised that problems of information availability existed irrespective of size and could be attributed to problems of access due to poor lender/ borrower relations.

Bank records

Egginton (1977) addressed UK bank lending officers and noted that information generated by the bank as a result of past lending experience was of prime importance. A number of studies noted that existing bank records regarding a borrowing company were one of the most commonly used sources of information available without recourse to the borrower. These findings are not surprising given the reliance which bank lending officers may place on such information in contrast to potential problems of availability and reliability associated with other sources of information. Little investigation has been undertaken to identify specific categories of bank information drawn on beyond an impressionistic review of financial 'account' performance and, in the case of security consideration, the register of charges. (Egginton, 1977; Berry et al., 1984; Berry et al., 1987)

Third party information

There is some evidence that financial information regarding a borrowing company may be requested from: financial institutions such as Dunn and Bradstreet[11] (Danos et al., 1989); companies house (Egginton, 1977); press or governments offices (Berry et al., 1984; Berry et al., 1987; Berry, Crum and Waring, 1993). Berry et al. (1987) found that such sources of information were used when evaluating loans to larger companies.

It is proposed that the importance and subsequent use of financial information is a function of availability, timeliness and reliability according to specific circumstances and a range of information sources. While some of these factors may be indicative of borrowers of particular sizes, it is likely to be the nature of information which influences its use. When limited to financial considerations only, it is proposed that where information is available, timely and reliable, prominence will be placed on financial statements. Secondary consideration will be given to management accounting information, with emphasis placed on performance projections. This will be considered parallel to information from reliable bank records.

The functional value of financial information

An important research study which addressed the functional value of financial information on the structure of lending processes was undertaken by Stephens (1980)[12]. The research centred on a Delphi study in which the preferences of US bank lending

officers for financial information were considered with respect to various decision parameters within lending processes. Stephens found decision processes to be structured in three stages beginning with a determination of information adequacy with reference to primary indicators[13]. Stephens recognised subsequent stages of analysis involving the use of three financial cues[14]: loan size; loan type; and inflation rates, to establish a decision context according to which sub-sets of information were selected and analysed.

It was concluded from the study that financial information is drawn on by bank lending officers to structure their decision processes. However, Stephens recognised that lending decision processes are very complex. Stephens stressed that findings do not mean that bank lending officers limit their information requirements to financial statements or that all items of information within properly prepared financial statements are used for every loan.

In support of Stephens conclusions it is noted that Abdel-Khalik (1973) found that US bank lending officers requested detailed accounting data and analysed primary indicators drawn from aggregate information. Similarly Danos et al. (1989), when conducting interviews with US bank lending officers, found further evidence to suggest that officers reached a high level of confidence early in the lending process based on primary indicators and background data. Danos et al. (1989) also found that bank lending officers' initial confidence in their judgements were materially altered as more detailed forms of financial information were made available. In particular, information relating to the perceived risk level of the borrower was found to be very influential.

Stephens (1980) additionally proposed that, within the limited scope of his research findings, properly prepared financial statements were viewed as a minimal requirement for initiating the lending process. In direct contrast to this conclusion, Eyes and Tabb (1978), provided evidence that financial statements are not used within the loan evaluation equation unless non-financial consideration such as a borrower's management characteristics are acceptable. However, it should be recognised that while considering a relatively similar time scale, these studies lack direct comparability.

Later research adds further controversy to Stephens' findings regarding the effect of loan size on the lending process. For example, research by Stanga and Tiller (1983), based on a survey of US bank lending officers, showed that their financial information needs to make a term loan do not differ substantially between large public companies and small private companies. Similarly Berry et al. (1987), as a result of a number of interviews with UK bank lending officers, proposed that the importance of audited accounts and frequency of their use was similar for large and small businesses. However, considering the use of a wider range of financial information, Berry et al. (1987) added that a different emphasis was placed on information due to the complexity of the business, the availability of up to date information, and the relative uncertainty of the performance of small businesses.

The main point of criticism of Stephens' research is the application of a Delphi methodology to the research area. It is proposed that by seeking a consensus of opinion among bank lending officers, drawn from various banks and bank roles, the adoption of a Delphi methodology fails to take into account the potential effect of bank policy and the specific role and experience of a lending officer on the lending process. The importance of considering the potential implication of such characteristics on individual decision style and the lending process has been noted by a number of researchers (NEDC, 1986; Nutt, 1989; Berry Crum and Waring, 1993).

Examining characteristics of lending officers, Eyes and Tabb (1978) found greater emphasis was placed on financial information by officers with more banking and accounting experience and those based in city offices. It was noted that city locations may be indicative of proximity to borrowers in manufacturing industries given additional findings that more emphasis was placed on the financial statements of borrowers involved in manufacturing than agricultural sectors. Alternately, in light of Stephens' findings, Eyes and Tabb may be criticised for failing to examine the size of the loan under consideration. It may be argued however that their distinction between bank lending officers working in city and rural branches may be representative of levels of delegated lending authority and thus considerations of loan size. Research by Abdel-Khalik (1973) provides evidence of the impact of bank customs and traditions on a lending officer's decision making rationality.

Given the context of research findings, evidence which addresses the functional value of financial information on the structure of the lending decision is viewed as inconclusive. These factors may be considered in addition to the potential influence of availability, accuracy and timeliness of financial information noted previously. In comparison, considerable evidence exists highlighting a functional role in financial performance evaluation for what have been termed 'primary indicators'.

Primary indicators

Research has revealed that primary indicators are impressionistic data used in basic ratio formulation to analyse financial performance. Less evidence was provided of their use in more complex methods of evaluation such as break-even and sensitivity analysis. However, it was noted that methods of analysis may vary between and within banks, and between officers of varying financial training (Eyes and Tabb, 1978; Berry et al., 1984, Berry Crum and Waring, 1993). General trends identified within research findings have centred on the frequent use of indicators which address: profitability and earnings capacity; financial stability and net worth; liquidity and gearing; cash flow and income retention; and security (Abdel-Khalik, 1973; Egginton, 1977; Eyes and Tabb, 1978; Mansfield, 1979; Berry et al. 1984; Berry et al., 1987; Kemp and Overstreet, 1990; Hutchinson and McKillop, 1992; Berry, Crum and Waring, 1993).

A number of research studies illustrated the primary importance attached to the evaluation of profitability by bank lending officers, closely followed by financial stability (Abdel-Khalik, 1973; Egginton, 1977; Eyes and Tabb, 1978; Mansfield, 1979; Berry, Crum and Waring, 1991, 1993). These findings are not surprising given the importance found to be placed on the profit and loss account and balance sheet by bank lending officers. Research by Berry et al. (1984) provided a more extensive analysis of the importance placed on primary indicators by asking bank lending officers to rank identified indicators in order of importance. Their results were as follows (in rank order): profitability; financial stability; liquidity; consistency of performance trends[15]; cash requirement and income retention policy; and security. Considering these wider research findings, surprise was expressed that given the recognised value of liquidity analysis as a primary indicator such little importance was attached to funds flow statements (Egginton, 1977; Berry et al., 1984). To explain this discrepancy Berry et al.

(1984) provided evidence that bank lending officers prepare their own funds flow statements.

Berry et al. (1987), extending the scope of their initial study, noted that when evaluating small businesses bank lending officers provided a variation in ranking the importance of primary indicators. Bank lending officers evaluating smaller business placed greater emphasis on security ranking it fourth with less importance on consistency of trends ranked sixth. Assessing the experience of borrowers in the US and UK, Binks, Ennew and Reed, and Bannock and Morgan (1988) provided further evidence to suggest that banks request more security and personal guarantees from small businesses[16]. Distinguishing between research undertaken in the US and UK, they explicitly recognised that US banks placed less importance on security than UK banks (Bannock and Morgan, 1988).

The role of security, and the reason for its emphasis in small business lending, has been the subject of considerable research and continuing debate (Eyes and Tabb, 1978; Midland Bank, 1981; NEDC, 1986; Bannock and Morgan, 1988; Berry et al., 1987; Berry et al., 1993a; Hutchinson and McKillop, 1992; Deakins and Hussain, 1994). It has been proposed that these findings may partially be due to the nature of lending to companies of different sizes in varying situations or, the unrealistic expectations of the borrower and/or lender. Berry et al. (1993) and Deakins and Hussain (1994) noted that problems of information availability or reliability resulted in a trade off between variables such as profitability, gearing and security, and an emphasis on general trends. For example, Berry et al. (1993) found that a borrower in a financial loss making situation may be an acceptable loan candidate if a growth potential was demonstrated by their sales trends and a strong liquidity or security position was found to exist. However, while it has been proposed that these problems may be more prevalent in association with small business borrowers they have additionally been associated with larger borrowers.

A suspicion has been expressed that excessive security requirements are being imposed on small business due to lending officers' lack of experience in deal with a range of lending circumstances. It has been proposed that lending decisions may have been inappropriately judged on the basis of capital rather than income gearing. Such

problems are perceived to be have been exacerbated by high staff turnover within branch banks and a non-specialist approach to lending (Bannock and Morgan, 1988; Deakins and Hussain, 1994).

Examining further lending to smaller businesses, borrowers were found to offer security as evidence of commitment and view equity capital as leading to a loss of control (NEDC, 1986). Reflecting on this, it has been noted that bank policy has precluded the refusal of security when it was offered, promoting the taking of security to offset risk (Midland Bank, 1981). Thus the role of, and the reason for the apparent emphasis on, security in small business lending remains uncertain.

The functional role of primary indicators of financial performance in contributing to the lending decision has been highlighted by research. Consideration of primary indicators of profitability and financial stability adds support for previous findings that placed importance on financial information from the financial statements. Additional emphasis was found to be placed on the availability and reliability of financial information on lending processes, in particular concerning small business borrowers. However, the influence of primary indicators on the structure of the lending decision remains questionable.

The importance and use of non-financial information

In the above review it was recognised that bank lending officers draw on financial information and carry out quantitative assessment to support what are essentially judgmental decisions. However, while most studies have centred on the importance and use of financial information, they have recognised that non-financial information may have a role in the lending decision (Abdel-Khalik, 1973; Egginton, 1977; Stephens, 1980; Cooper et al., 1981; Stanga and Tiller, 1983; Danos et al., 1989; Innes, 1990; Kemp and Overstreet, 1990). In a number of these cases, the research focus and methodology has been limited to the consideration of financial information. Where a review of the importance and use of financial and non-financial information has been undertaken, the dominant use of financial information has been questioned (Eyes and Tabb, 1978; Mansfield, 1979; Heard, 1980; NEDC, 1986; Holland, 1988; Berry, Crum and Waring, 1991, 1993; Berry et al., 1988, 1989, 1993a, 1993b; Deakins and Hussain, 1991, 1994). Research which addresses the role of the interview and visit to a

borrower's premises was, by its nature, centred on the consideration of non-financial information (Berry et al., 1988, 1993b). However, no research studies that considered only non-financial information were found.

The prominence of financial considerations identified by research may be explained due to problems of identifying and representing less tangible non-financial information. For example, Egginton (1977: 177) noted "the experienced banker may form an opinion on the abilities of a firm's management by a subconscious process which absorbs a variety of pieces of information often over a lengthy period of dealing with the firm. The fact that this process cannot be explained need not detract from the validity of the banker's conclusions ...although there are always dangers of prejudice in inexplicable value judgements".

Research concerning non-financial information has been primarily undertaken in the UK and centred on small business lending (NEDC, 1986; Berry et al., 1993a; Deakins and Hussain, 1991, 1994). Research in the US has noted the consideration of non-financial information by bank lending officers when debating research design. However, the majority of research in the US has been designed to deliberately avoid consideration of non-financial information basing case evaluation solely on financial information[17] (Abdel-Khalik, 1973; Stephens, 1980; Danos et al., 1989). Consequently there has been little opportunity to provide evidence to suggest that non-financial information is considered by US bank lending officers beyond reference to such methodological discussion.

A number of research methodologies have precluded the identification of non-financial information in lending decisions. A quantitative methodology, while permitting an examination of the importance placed on categories of non-financial information, does not provide an opportunity to examine the methods of analysis of non-financial information. Such analysis would require, as a minimum, a number of personal interviews with bank lending officers. Given the problems of research access, in particular restriction imposed due to client confidentiality noted previously, the lack of research which addresses non-financial information is unsurprising (Berry et al., 1988; Deakins and Hussain, 1991, 1994[18]).

Where research has been undertaken to examine the potential inter-relationships between financial and non-financial information attention has been devoted to the availability, accuracy and timeliness of information. The role of non-financial information has been a focus of research which addressed lending to small business (NEDC, 1986; Berry et al., 1989a, 1993a; Deakins and Hussain, 1991, 1994). It has been proposed that where the availability or reliability of one type of information is problematic more emphasis may be placed on the alternative. Conversely, where one type of information provides a valuable contribution to results a review of the other may depend on the nature of findings. Thus, circumstances where one type of information is favoured over another have been examined (Eyes and Tabb, 1978; NEDC, 1986; Berry et al., 1989a, 1993a; Berry, Crum and Waring, 1991, 1993; Deakins and Hussain, 1991, 1994).

Character of management

One of the most frequently identified and reviewed categories of non-financial information was found to be the management ability of a borrowing company. In the case of a small company this has involved an evaluation of the personal, managerial and technical skills of one person[19] or a small group of executives with respect to their role and responsibility. Bank lending officers have recognised that in a small company the role of such 'characters', in shaping the direction of the company were perceived as critical success factors (Berry et al., 1993b). Research has shown that in the case of a larger company such a character evaluation is prohibited by the scale of management involved. Alternatively, the management ability of a larger company has been analysed through a review of investment in human resources or the personnel records of key members of management in connection with a specific purpose loan. (Abdel-Khalik, 1973; Heard, 1980; Fertuck, 1982; NEDC, 1986; Deakins and Hussain, 1991, 1994; Fulmer, 1992; Berry et al., 1993b)

To analyse a borrower's management ability bank lending officers were found to examine such personal characteristics as: integrity; competence; entrepreneurial flair; financial awareness; and industrial knowledge (Heard, 1980; NEDC, 1986; Berry, Crum and Waring, 1991, 1993). Examining a borrower's attitude and apparent motivations was recognised as a means of determining a borrower's willingness, as well as ability, to repay a loan (Abdel-Khalik, 1973). When considering future

company performance, bank lending officers distinguished between a person's 'push' or 'pull' characteristics. A 'push' characteristic recognises a borrower has nothing to lose in a venture and a 'pull' characteristic recognises a drive to succeed (Berry et al., 1988).

For companies of all size, management ability was determined in part by reviewing the financial performance of the company. Evaluating the priority placed on non-financial information, Eyes and Tabb (1978) found that bank lending officers in New Zealand provided personal factors as their most important consideration when evaluating loans. While the research failed to distinguish borrower size it has been proposed that such prominence is more likely to be associated with small businesses given restriction of scale. The problems of judging the management ability of a larger company have resulted in greater emphasis being placed on financial information. However, considering small business lending, Deakins and Hussain (1991 and 1994) found that bank lending officers relied on financial information that could be generalised across industry[20]. In support of these findings Berry et al. (1993b) identified that additional emphasis was placed on judging the character of management of a small company only when financial information was unavailable, unreliable or out of date.

While prominence has been given to non-financial information for small businesses lending the importance placed on financial information remains uncertain. Deakins and Hussain (1994) distinguished the case of start up venture from these findings. In the case of a start up venture, beyond information regarding the performance of a borrower's past ventures, no financial performance record is available to judge the commercial management ability of a borrower. Thus, they proposed that emphasis will be placed on the character of a borrower.

In evaluating the accuracy of financial information in general and management accounting information in particular, bank lending officers examined the experience and relevant qualifications of a borrowing company's employees who have responsibility for preparing such information. A number of studies found a focus by bank lending officers on the role and credibility of external financial advisors[21], including auditors (Eyes and Tabb, 1978; Berry et al., 1984). Research found an emphasis was placed on reviewing small company employee's as frequently their

accountants had been found to lack experience and appropriate qualifications. Berry, Crum and Waring (1991) noted a particular absence of accounting qualifications among management and employees within 'family businesses'. A review of key personnel was recognised as part of evaluating a loan for which human resources were considered as an important factor in project success (Heard, 1980; Berry, Crum and Waring, 1991, 1993).

Nature of the business and the loan application

Research has identified other non-financial information considered by lending officers when evaluating the nature of the borrower's business including: stage of development; products and services; and stakeholders[22]. Emphasis was placed on the present and future performance of the borrower according to the purpose of the loan and credibility of the application (NEDC, 1986; Deakins and Hussain, 1991, 1994; Berry, Crum and Waring, 1993). In a number of research studies the ability of the bank to service the loan was considered, with particular emphasis on the bank's lending policy.

Research undertaken by Holland (1988), reviewing small business and middle corporate banking relations, proposed that a bank restructuring was taking place to tailor bank products and services to borrower size and associated requirements. However, a number of research studies have recognised that UK bank lending officers lack knowledge of specialist industrial processes and business practices. These findings may be explained by, or themselves explain, a bank lending officer's preference for standardised financial information. (Deakins and Hussain, 1991; Berry, Crum and Waring, 1993a)

The relative function of non-financial and financial information in lending processes

Interviews

An evaluation of management and the nature of the business was found to be undertaken during interviews held on bank premises, followed in some cases by project presentations to the bank (Berry, Crum and Waring, 1991, 1993) The interview was conducted on a one to one basis involving the lending officer and 'the' borrower. A presentation by the borrower, however, often involved additional borrower personnel such as an accountant, or other specialist support staff, depending on the purpose of the presentation (Berry et al., 1988, 1989). Particular emphasis was placed on a borrower's

ability to put together and defend the loan application, and add support for the quality of financial information provided.

Site visits

Site visits were frequently recognised as a part of the lending process, in particular when dealing with small businesses. A dual function has been attributed to site visits in relation to what have been termed 'call and care' and 'call and check' factors, and the priority given to each function varied with the individual lending situation considered. A 'call and care' function has the aim of increasing a lending officer's understanding of the business and developing their relationship with the borrower. A 'call and check' function has the aim of confirming the existence and quality of assets and impressions of company performance gained through financial information. Thus, a site visit may be used to verify financial and non-financial information or provide a new context within which to review information. It has been suggested that the importance placed on site visits was a response to the poor quality of financial information obtained from small company borrowers (Deakins and Hussain, 1994; Berry et al., 1993a, 1993b, 1993c).

A site visit was found to provide a lending officer with an opportunity to observe social relationships within the borrowing company, and the level of efficiency and effectiveness with which the company appears to be operating. As the scale of operations increase it was recognised that the lending officer gains a limited view of the business from a visit, but impressions contain valuable information in the overview of an ongoing project (Egginton, 1977; Heard, 1980; Berry et al., 1984; NEDC, 1986; Danos et al., 1989; Berry et al., 1988, 1993b; Berry, Crum and Waring, 1991, 1993; Fulmer et al., 1992).

Other methods of data collection

Additional information was found to be gained through other forms of contact with the company: letters; telephone calls; and meetings with members of staff. However, bank lending officers noted that such information was unlikely to alter their decision to lend. Other secondary sources of information used included a lending officer's previous experience of a particular person and/or company and a borrower's personal financial position and management reputation (NEDC, 1986; Danos et al., 1989; Berry et al., 1993a; Berry, Crum and Waring, 1991, 1993; Deakins and Hussain, 1991, 1994).

A lending officer was also found to draw on external sources of information such as specialist press to evaluate the relevant professional skills required from an applicant. However, lending officers recognised that these were given little consideration and were not viewed as a substitute for reliable primary information.

Bank guidelines

Research has revealed that lending officers are provided with various 'mnemonic' guidelines. A review of guidelines identified within a range of banks illustrated the emphasis placed by bank policies on the evaluation of various borrower performance characteristics.

Research evidence suggests that these guidelines are used by new, relatively inexperienced, bank lending officers to guide their decision process. It is noted that consideration of each factor is given equal weighting, including financial and non-financial considerations. Research revealed that a number of experienced bank lending officers use aide-memoirs while others questioned their value (NEDC, 1986; Berry et al., 1988; Berry, Crum and Waring, 1991, 1993; Deakins and Hussain, 1991).

Table 1. Bank mnemonic guidelines

THREE C'S	**CAMPARI**	**PARSER**	**PARST**	**SAPACTRPS**
Character Capital Capability	Character Ability Margin Purpose Amount Repayment Insurance	Person Amount Repayment Security Expediency Remuneration	Purpose Amount Repayment Security Terms	Standing Ability Purpose Amount Contribution Term Repayment Profitability Safety
Egginton, 1977; NEDC, 1986.	NEDC, 1986; Berry, Crum & Waring, 1991, 1993; Deakins & Hussain, 1991.	NEDC, 1986; Deakins & Hussain, 1991.	NEDC, 1986.	NEDC, 1986.

Evaluating the nature of alternative guidance documents and procedures has provided little evidence as to the priority attached to either financial or non-financial information and their role within the decision process remained questionable. However, research

findings highlight the individualistic nature of bank policy and procedures as a potential influence on lending processes.

Credit scoring/rating systems

There was further evidence to suggest that bank lending officers apply judgmental rates, or credit scores, according to bank guidelines. These rates and scores were found to be applied to financial and non-financial information to support final lending decisions (Wilkinson, 1984; Fulmer et al., 1992).

Cultural preferences

One explanation for the lack of an obvious priority attached to information categories between banks was provided by Nutt (1989). Undertaking research with senior bank lending officers in the US, Nutt found that the most important determinant of information preference was bank culture. He proposed that bank officers equated the use of standard operating procedures as representative of a unique set of beliefs shared by bank members. Research findings by Abdel-Khalik (1973) provided additional evidence to support this proposal highlighting that bank customs and traditions influenced information demanded by bank lending officers examined.

Lending contingencies

A number of other studies have found that bank lending officers preferred to base their decisions on ad-hoc rules of thumb. Such studies have equated the individualistic nature of lending decisions with a need for bank lending officers to rely on their experience in evaluating corporate performance (NEDC, 1986; Berry, Crum and Waring, 1993; Deakins and Hussain, 1994).

Evaluating financial risk and return

Bank lending processes have generally been characterised within research findings as founded upon an evaluation of financial risk versus financial return. Considerations of 'risk' highlights the uncertainty that money credited to a borrower will be returned in whole or in part. Under principles of risk compensation it is proposed that lenders establish a level of credit risk according to which they are willing to gamble their financial stake for a potential higher financial return. In managing a portfolio of such risks

it is proposed that a lender will seek an aggregate profit. Based on such principles the function of the lending process is seen to be one of 'credit risk management'.

Considering the functional emphasis of lending processes on financial risk and return, the conclusion drawn from the literature review is that financial information is prioritised in the lending decision. However, under conditions of uncertainty the value of non-financial information should not be underestimated. It is proposed that the functional influence of information characteristics on lending processes is an area requiring further research attention. In particular, the influence of bank policy and procedural guidelines on the nature of lending processes.

Monitoring loans

Financial emphasis

Limited research attention has been devoted to observing the monitoring function of the lender. Where comments have been made, emphasis was found to be placed on interpretation of financial information to provide an indication of problems that may require attention. From a review of account performance noted by Berry, Crum and Waring (1991, 1993), monitoring was found to require a borrower to provide regular management accounting information and timely interim and final financial statements. Such requirements were based on the same information recognised as valuable by bank lending officers in considering the application process.

Within monitoring processes particular attention was found to be placed on the evaluation of a borrower's short term financial performance[23]. Financial information used for monitoring was thus standardised to a similar extent to information within the application process. In a number of research cases information requirements were found to be formalised by their inclusion within loan covenants and/or lending agreements. Non-financial monitoring considerations identified by research included requirements on the borrower to inform the bank of any significant change in management or business practice that may influence corporate performance. Thus, non-financial considerations were reported by exception.

Environmental considerations

'Natural' environmental issues were found to be considered in only two studies. In a questionnaire survey of US bank lending officers Kemp and Overstreet (1990), found that 'social and environmental' information ranked 45th in order of importance in a data set of 48 items and other *intangible factors* also appeared to be of less importance than tangible factors. They concluded that although such factors affected a firm's performance they were perceived to be less important as they proved difficult to interpret. This could explain the lack of research which addresses environmental issues.

Gray et al. (1993) reviewing what shall be termed 'professional literature[24]' alternatively identified increasing consideration of environmental issues by banks. Literary reference illustrated environmental issues were initially considered by lenders in the US and then later within the UK in response to the development of environmental legislation and potential lender liability[25] for the environment. Given the research findings by Gray et al. (1993), the failure of other recent accounting research studies to examine and/or recognise environmental considerations by bank lending officers is surprising. These findings are examined by reflecting on the development of environmental accounting theory and practice.

The development of environmental accounting

Environmental considerations within accounting research became a fluctuating area of debate among theorists in the 1970's and 1980's as part of a wider interest in social accounting. During the 1990's a sustained interest in environmental accounting theory and initiatives in environmental accounting practice, in particular environmental reporting, has emerged[26].

Recognising the recent development of environmental accounting practice as a potential source of information for lenders, the apparent absence of environmental considerations within bank lending decisions may be partially explained. A further contrast may be drawn between research which addresses environmental considerations by bank lenders and other institutional lenders to explain the lack of research in this area.

Ethical environmental investments

A proliferation of accounting research provides evidence of the development of environmental investment funds[27] in the US and UK over the last two decades (Dunham, 1989; Kemp and Overstreet, 1990; Fisher, 1992; Gray et al., 1993). Research has revealed a range of investment criteria and assessment methodologies applied between funds and over time by single funds[28]. This has created problems for researchers analysing rationalities for investment[29] and relative performance of funds within the market[30]. While the rationale for environmental consideration remains questionable, an estimated £1 billion of environmental investments in the UK highlights the importance of environmental considerations to investors (Dunham, 1989; Wood, 1991; Koechlin and Müller, 1992; Lascelles, 1992; Perks et al., 1992; Corbett and Van Wassenhove, 1993; Luther and Matatko, 1994; Burnett, 1995; Coulson and Dixon, 1995).

From a review of research which addresses environmental investment it appears that theoretical questions addressed by research have followed evidence of practice in this area. Thus, the lack of interest in environmental considerations by researchers and bank lending officers participating in research is partially explained according to evidence of the recent emergence of environmental considerations by banks and a tendency for theory to follow practice in this area. It is proposed that a detailed analysis of professional literature is needed to provide evidence of environmental considerations by bank lenders as the basis from which to open up debate.

Summary

The review indicates that the primary focus of research which addresses bank lending processes has been the influence of financial and non-financial considerations. Environmental considerations within bank lending processes by both researchers and lending officers participating in research, were found to have been relatively scarce to date. However, this can be explained due to the apparent emergence of environmental issues as a new area of bank consideration and a tendency for theory to follow practice in this area.

Findings drawn from the review emphasise that research which addresses bank lending processes is problematic due to access restrictions imposed by banks and the contingent

nature of lending situations. The subsequent range of questions and methodologies addressed by research has therefore limited the scope of theoretical conclusions.

Research has provided evidence that financial *and* non-financial information is considered within lending processes. The priority attached by lending officers to financial information is explained according to the emphasis of lending decisions on financial risk return evaluation. Attempts to distinguish the functional value of categories of financial and non-financial information has been complicated by the apparent inter-dependence of such information and the range of variables influencing information characteristics. The findings show that financial and non-financial information demanded and used by bank lending officers are both complementary and supplementary sources of information. The availability, timeliness and reliability of information relating to the borrower were found to influence lending officers' demand for, and use of, information to support lending processes.

In a number of studies, a bank lending officer's preference for, and use of, information was found to be influenced by a combination of lending officer characteristics, bank policy and bank culture. However, as secondary considerations, the degree of influence of these variables on lending processes and their inter-relationship has not been fully explored and remains questionable.

It is concluded from the review that there is a need to develop a theoretical framework for lending processes from which to take research forward. By maintaining a research focus upon bank lending officers, two streams of theoretical questioning are posed:

1. How is the lending process influenced by a bank lending officer's personal and social characteristics? Research should include a consideration of a lending officer's decision rationality, including an analysis of social and psychological determinants such as bank policy, and an individual's role, responsibility and personal characteristics.
2. How do variables within a lending situation influence a bank officer's lending decision? Research should include a consideration of borrower, loan, and bank environment characteristics, comparing how the demands of bank lending officers are met and information is subsequently used within given situations.

The inter-relationship between these two streams of questioning may then be considered.

As a basis for the specific exploration of corporate environmental considerations within bank lending processes, an extensive review of professional literature which addresses environmental lending considerations by banks is carried out in Chapter two. The streams of questioning noted previously and their inter-relationship will be considered when evaluating this professional literature.

This will be followed in Chapters three and four by the development of a theoretical foundation from which questions drawn from research and professional bank literature may be further addressed. Once a theoretical proposal has been formulated which can be used to explain the literary findings, an appropriate methodology will be selected and adopted to empirically test the proposal. Chapter five will be devoted to the search for a methodology to empirically investigate the linkages between the theoretical proposal and bank practice. This will be followed by a critical review of findings obtained. The remainder of the thesis will be devoted to drawing conclusions from the findings of the initial literary reviews and evidence gathered from the empirical study.

Notes

[1] It is recognised that practitioners making reference to areas of personal specialisation, interest or experience have provided *a priori* accounts of decision processes within their affiliated banks (Mansfield, 1979; Heard, 1980; Midland Bank, 1981; Wilkinson, 1984; Carter, 1988). Alternately, specialist business advisers, working closely with banks, have commented on various issues such as commercial loan agreements and relationship management (Simmons, 1972; Dietz, 1988). On rare occasions borrowers have sought to provide advice to lenders (Brown, 1985).

[2] To maintain clarity within the text the term bank lending officer will be used to refer to bank employees with responsibility for making lending decisions.

[3] NEDC refers to the National Economic Development Council.

[4] In order to distinguish between authors Berry, R. H., Crum, R. E., and A. Waring and Berry, A. J., Faulkner, S., Hughes, M., and R. Jarvis, the forma group shall be referred to in 'full' in textual reference notes and the later as 'Berry et al.'.

[5] The Macmillan report raised initial research interest by identifying a 'gap' in the sources of finance for small businesses. It noted that small businesses were too small to obtain funds by the issue of quoted securities, but had exhausted the resources of its proprietor. Attempts to close the Macmillan gap in post war years were a particular focus of research and later government reports. For example, the introduction of the term loan pioneered by the Midland Bank following the Radcliffe report call for banks to address the methods of borrowing and the total finance made available. (Midland Bank, 1981 and Hutchinson and McKillop, 1992) As financial markets developed the Bolton and Wilson reports (1971-1979) were more critical of the terms and conditions of small company finance compared to larger companies evoking new research interest (See H. M. Environment, 1971, 1979).

[6] The publications Stephens (1980) and Cooper, San Miguel and Stephens (1981) consider a common research study.

[7] Berry et al. (1984 and 1987) refer to the same research study.

[8] Additional difficulties were highlighted by Berry et al. (1984) who recognised the use of, at best, partially comparable data sets and arbitrary means of gauging the importance attached to information by bank lending officers.

[9] Statement of Standard Accounting Practice No. 10 (SSAP 10), issued in July 1975, sought to establish the practice of providing statements of source and application of funds as a part of audited financial statements and to lay down a minimum standard of disclosure in such statement. SSAP 10 was later superseded by Financial Reporting Standard No. 1 (FRS 1), issued in March 1992, which established a standard for cash flow reporting.

[10] NEDC (1986) additionally recognised that some small businesses were permitted to file only abbreviated accounts or were exempt from disclosure.

[11] Noted as an important source of information by research conducted in the US by Danos et al. (1989).

[12] See endnote 5. The reference Stephens (1980) and Cooper et al., (1981) provides results of the same research study. Within the text the research is referenced to Stephens (1980).

[13] Alternatively referred to as "lead indicators".

[14] Stephens (1980) considered: loan sizes of $50-250k, $250-1000k and >$1000k; term, seasonal and industry types loans; and inflation rates of 5%, 10% and 15%.

[15] Reviewing consistency of performance trends was primarily found to be based on analysing profitability.

[16] Research by Binks, Ennew and Reed, and Bannock and Morgan (1988) also noted other areas of borrower criticism such as high rates of interest and high borrowing charges.

[17] Emphasis has been placed on representing the loan applicant as a company rather than a person, thus, removing the potential to consider the character of management.

[18] Deakins and Hussain (1991, 1994) recognised that a problem faced by researchers in analysing decision making was to observe as near as possible the actual conditions and processes of decision making. The innovative methodology which they applied in acting the role of a real loan applicant may be perceived to be as near as possible which one may get to the truth. However, despite attempting to mirror the replies and enthusiasm of the real entrepreneurs the research remain surrogates and any reading of their behavioural characteristics should be questioned. In addition, as with any behavioural evaluation the sub-conscious assessment of the lending officer as to a persons character can not be explicit. Further, when evaluating the delicate issue of behaviour a full explanation for a conscious decision, especially where the researcher is acting a part may not be given. Although these criticisms are not easily rectifiable it is necessary to note that they may influence the results.

[19] Berry et al. (1993a) noted that lending officers frequently used the term 'lending to a person' when evaluating the borrower of a small company.

[20] These findings were confirmed by Smith (1994) who reused Deakins and Hussain 'real' case example with Scottish bank lending officers during 1993 and found remarkably similar results. However, it should be noted that direct comparability problems do exist due to a difference in the timing of the research and a new researcher playing the role of the borrower. There may be differences in economic conditions between the summer of 1991 when Deakins and Hussain undertook their study and 1993 when Smith undertook the second study, a factor perceived to be important to risk assessment by Deakins and Hussain. Further, the validity of using the same business plan may be questioned given that its entrepreneurial proposals may not be as innovative or appealing two years later.

[21] Such consideration was additionally extended to the credibility of other external advisers such as legal representatives (See Eyes and Tabb, 1978).

[22] Stakeholder identified included customers, suppliers, competitors and regulators. Consideration were made of: existing and potential market size; the nature of competition; distribution channels; and advertising and marketing. Product strengths and weakness in light of demand, competition and potential improvement in production methods and pricing strategies. Supplier adequacy, reliability, and quality.

[23] The monitoring process has additionally been recognised as a way of developing lender borrower relations. In particular, getting to know the management of the company and the specialist nature of the business. An improvement in the lenders understanding of both of the company has been identified by research as an area of importance to the borrowers but an area subsequently criticised (NEDC, 1986; Berry, Crum and Waring, 1991, 1993).

[24] Professional literature includes publications: by bank practitioners; by bank advisers often quoting practitioner examples; and comments by bank trade organisations.

[25] More recent work has been undertaken by Thompson, P. (1995 and 1996) to examine the impact of environmental issues on bank lending decisions. The research focused upon the use of environmental information within annual reports by bank lending officers within the UK. Research participants were drawn from a list of signatories to the UNEP statement by Banks on the Environment and Sustainable Development (see later) as at January 1995, including banks of UK and foreign domicile. Research findings were based on a postal questionnaire survey complemented in some cases by a follow up interview during 1995/6. Thompson found evidence that 'commercial considerations' were leading to a number of bank to consider environmental issues with little evidence of adoption of ethical codes and socially responsible behaviour ascribed to under the UNEP statement.

[26] At the same time interest in environmental issues has not been limited to accounting but has become a popular area of debate across the disciplines.

[27]Environmental considerations were first highlighted within the investment criteria of social/ethical funds and later within green funds based solely on environmental criteria (Dunham, 1989; Fisher, 1992; Gray et al., 1993). The consideration of social criteria has for a long time been an issue for churches and charities. Socially responsible, or ethical investment, funds have been researched since they became available to the

private investor when launched in the US in the early 1970's and later in the UK in 1984 with the development of the Friends Provident Stewardship Trust (Gray et al., 1993). The 'Merlin Ecology Fund', was the first green fund introduced in the UK in 1988 (Dunham, 1989; Fisher, 1992; Gray et al., 1993).

[28] Most research effort has been expended to define the term green investment or green fund. The result has been a general bifurcation of this definition One approach is 'green opportunity stocks' in which investors seek a profit from companies operating environmental services. The second approach has been investment in companies who have adopted a 'positive' attitude towards environmental issues and avoidance of companies perceived to have a 'negative' impact on the environment.(Lascelles, 1992; Perks et al., 1992)

[29] The rationale behind such environmental investments have been the subject of research debates centred on whether or not the search for profit and ecological concerns can be compatible.

[30] A recent study by Luther and Matatko (1994)addresses the question of an appropriate choice of benchmark against which to measure the performance of ethical investments. Luther and Matatko found that ethical investment in the UK is characterised by largely but not entirely, investment in smaller companies. However, they concluded that the 'systematic' component of ethical investments returns appears to be better described by a benchmark made up of both a market and a small company index which could cause problems in assessing their results.

Chapter 2

Practitioners' insights into environmental issues within banking

Introduction

In Chapter one it was highlighted that academic literature which addresses bank lending processes has largely failed to recognise environmental considerations. However, with reference to professional literature, one key study by Gray et al. (1993) identified the recent emergence of environmental considerations by bank lenders to assess potential lender liability issues. The apparent absence of environmental considerations by both researchers and bank lending officers engaged in research was attributed, at least in part, to the recent development of environmental accounting theory and practice, and a tendency for theory to follow practice in this area. This Chapter provides an extensive review of 'professional literature' which addresses bank lending processes, and reveals that banks are increasingly considering environmental issues. Thus, a need for further research to address corporate environmental performance considerations within bank lending processes is highlighted.

An extensive review of professional literature confirms that environmental concerns by bank lenders were first publicised in reaction to a new and increasing potential for lenders to be held liable for environmental damage. Thus, the initial experience of US lenders with respect to the development of strict liability principles for the environment becomes the starting point for the Chapter. This is followed by a review of non-US lenders' experience of liability for the environment. Initial evidence, particularly from the US, shows that banks have incorporated environmental considerations into their lending processes with a view to managing liability risk.

Insurance is an important part of environmental risk management, and an examination of lenders' efforts to obtain insurance for both themselves and their borrowers is carried out. One proposal considered is that if environmental liability can be mitigated by insurance then the associated credit risk, and management of that risk, may be reduced. Little evidence emerges that banks have undertaken insurance to mitigate their potential environmental liability, and the availability and suitability of insurance are questioned.

In the last section of this Chapter, environmental bank principles and motives for environmental considerations are addressed in detail, starting with organisational policy and progressing to specific lending issues. Evidence is provided that banks have adopted ethical positions on the environment in addition to lending policies founded on credit 'risk' management principles. Two questions emerge from these findings: what is the relationship between a bank's ethical/environmental policy and environmental credit risk management approach, and how do bank lending officers' define risk?

Lender liability for the environment

The US experience

As noted by Gray et al. (1993), literature which addresses environmental consideration within banks has emerged in response to concern regarding potential lender liability for the environment. Such concern was first noted in response to the US Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) 1980, a remedial legislation requiring the clean up of contaminated sites. In support of this legislation a 'Superfund' was established to finance the response activities of the US Environmental Protection Agency (USEPA). Under CERCLA commercial owners of contaminated land could be held *strictly* liable for site clean up[1]. Thus, when a bank calls in security for a loan it becomes the owner, or operator, of the property and absorbs responsibility for liabilities attached to the property including site clean up.

Published interpretations of CERCLA legislation and associated legal cases have been dominant in literature which has addressed US environmental lending issues. As environmental legislation has developed at an international level, experience of strict liability principles within the US has been extensively quoted by bank advisers and representative bank organisations (Fettig, 1991; Obermann, 1991; Skaddens et al., 1991; Cook, 1992; Ries and Christel, 1992; Tay, 1992; ACBE, 1993; Anon., 1994b; Anon., 1994c; ASTM, 1994; Barrett, 1994; Dybhahl, 1994; Eggert, 1994; Gleason, 1994; O'Brien, 1994; Robbins and Bissett, 1994; Rutherford, 1994; Steven, 1994; Williams, 1994; Vaughan, 1994; Clark, 1995; Olaf de Senerpont Domis, 1995; USEPA, 1995a, 1995b)

A number of US legal decisions have led to speculation that lender liability for the environment may be extended to lenders who participate in the management of the borrowing company and are thus responsible for undertaking, or allowing, polluting activities to continue. A landmark case in this area, extensively reported, was that of Fleet Factors 1990[2]. In the case a bank was deemed to have participated in the financial management of the company to the extent of influencing the corporate treatment of hazardous waste. On these principles the court held the bank financially liable for the clean up costs attached to resulting contaminated land. However, following the Fleet Factors ruling it was recognised that other courts failed to rule against a lender in a CERCLA context based on the 'capacity to influence' theory adopted in the case (See Appendix A). Many writers have therefore claimed that Fleet Factors was a worst case scenario of lender liability for the environment and somewhat of an anomaly (Ries and Christel, 1992; Bennett, 1993; Eggert, 1994; Robbins and Bissett, 1994; Rutherford, 1994; Vaughan, 1994).

The reaction of US banks to the development of legislation and the Fleet Factors case has been of particular interest to representatives of the local bank community such as the American Bankers Association (ABA). In a survey of US banks, following the Fleet factors ruling, the ABA found that 62.5% of community banks had rejected loan applications for fear of environmental liability and 48.8% had discontinued financing 'dirty' industrial sectors such as chemicals processors and petrol stations (Anon., 1994c; Barrett, 1994). These findings were drawn on by the ABA in lobbying the US government for clarification of legislation, and later by those who have addressed the potential effect of similar legislation outside the US. Further evidence of these trends was provided by Sarokin and Schulkin (1991) who reported that a survey by the Mortgage Bankers Association of America revealed that more than 70% of all US commercial estate transactions were undergoing environmental assessment.

In response to such fears among lenders, the USEPA attempted to clarify legislation by adopting a ruling on 29 April 1992 according to which Superfund liability for a contaminated property under CERCLA would not be arbitrarily attributed to a lender merely by virtue of their normal service activities. However, the rule was soon challenged in the case of Kelly and Chemical Manufacturers Association v EPA by the US Court of Appeal for the District of Columbia (Anon., 1994f; Eggert, 1994; Robbins and Bissett,

1994). The court held that the EPA lacked the authority to define and limit a party's liability under law and found determinations of liability the exclusive province of the federal courts. In the absence of new legislation to clarify the lender's position with respect to environmental liability, the EPA rule has been extensively quoted to lenders attempting to avoid liability (Anon., 1994b; Anon., 1994d; Eggert, 1994; Steven, 1994; Vaughan, 1994; Olaf de Senerpont Domis, 1995).

Following the invalidation of EPA rule, a survey by the ABA of small US banks in 1993 found that lenders' fears remained, and 90% had changed their lending policies in an attempt to avoid environmental lending liability. Furthermore, many feared that their capital base would be wiped out by a single claim (Anon., 1994c). Similar findings were made with regard to lenders of all size through an environmental survey of financial institutions in the US by Dun and Bradstreet and Environmental Data Resources (EDR). They concluded that "environmental risk management procedures are....institutionalised in the banking ..industries of the US" (EDR, 1994). US surveys, publications by bank associations, and a number of bank reactions[3] indicate that US lenders see environmental liability as a real threat (Lascelles, 1992; Cocheo, 1993; Gleason, 1994; Griggs, 1994).

In response to lender fears, the ABA has developed an environmental risk task force from key bank members to: review legal development; discuss community action; and guide best practice (ABA, 1995a). In addition, the Environmental Bankers' Association was formed in January 1994 by 25 US banks to focus on the growing need for banks to manage environmental risk (EBA, 1994b; Anon., 1994a). Both associations have been driven by a perceived need for environmental risk management. Consequently they have been responsible for the proliferation of guidance materials to support risk management by bank members across the US (Ries and Christel, 1992; Cocheo, 1993; McQuiston, 1993; EBA, 1994a, 1994b, 1994c, 1994d, 1994e; Greenfields Group, 1994; Griggs, 1994; USEPA, 1994, 1995a, 1995b, 1995c; ABA, 1995b).

Environmental Data Resources (EDR) is a US organisation specifically founded to provide information to lenders regarding environmental legislation and company performance (EDR, 1994, 1995). In addition, the American Society for Testing Materials (ASTM), among others, has begun to develop environmental standards regarding risk management, due diligence and auditing. The value of these standards have been widely

recognised (Bennett and McCarter, 1993; EDR, 1994; ABA, 1995b). Other published environmental initiatives have included the establishment of voluntary standards to promote the clean up of Brownfield, and less frequent, Greenfield sites (O'Brien, 1994; Anon, 1995; Shearman and Sterling, 1995).

A number of US legal bills have been drafted in an attempt to clarify lender liability for the environment, but none were adopted (Vaughan, 1994; ABA, 1995b). However, during the Superfund reform bills in 1995 a number of provisions clarifying lender liability in specific situations were agreed. These provisions, which took effect from 6 December 1995, were extensively promoted by the ABA. They include, for example, an exemption from lender liability where pollution was associated with underground tanks involving petrochemicals' storage. In 1995, the ABA additionally recognised the adoption of the EPA rule of 1992 as a basis for official guidance by the regional offices of the EPA (ABA, 1995b[4]).

Some literature has presented a broader view of the effects on lenders of a borrower's environmental liability. A borrower's solvency can be jeopardised by increased liabilities due to environmental issues, and the lender may face a loss of repayment. In such circumstances, lenders' face the prospect of paying twice, directly and indirectly, for the same liability of the borrower. Such debates have been addressed by those concerned with the development of potential lender liability outside the US, where potential loss has been viewed as relatively limited (Bryce, 1992; Napier and Clabon, 1992; Segal, 1992; ACBE, 1993; Bennett and McCarter, 1993; Long, 1993; Redman, 1993; Hellawell, 1994; Rutherford, 1994; Smith, 1994; Vaughan, 1994; Williams, 1994; Clark, 1995). A number of publications have additionally highlighted the benefits to the borrower of lenders' reactions to environmental liabilities[5] (Anon., 1989; ACE, 1993).

Historically, lender liability for the environment within the US appears to have been less frequent than anticipated during the development stage of CERCLA and the establishment of strict liability principles. However, the lender's legal position concerning environmental liability remains unclear. US lenders' experience of environmental liability over of past two decades has been of interest at an international level as environmental legislation has developed. Examining the experience of lenders and their representatives

regarding environmental liability outside the US, further evidence is provided of concerns by banks.

Experience outside the US

Lenders and their representatives from many countries outside the US have reflected on the historical trends concerning lender liability in the US. Although environment related legislation has a long history in many countries the scope of more recent developments, and the potential introduction of strict liability principles, for the first time pose significant challenges to lenders. It is on this basis that the experience of US lenders and interpretation of the US legal situation has been debated.

United Kingdom

Environmental legislation, notably the UK Environmental Protection Act 1990 (EPA), is based on a fault based system of liability. The introduction of the UK EPA 1990 highlighted the need to finance corporate environmental management improvements to avoid penalties. The development of European legislation has shown signs of opting for a strict liability regime[6]. Lenders' concerns regarding developments in strict legislation have been publicised through a variety of responses to EU discussion papers and the advent of the Fifth Environmental Action Programme (1993-2000) calling for an integrated approach to environmental liability[7].

In 1992 the common law case Cambridge Water v Eastern Counties Leather caused considerable debate when the Court of Appeal held that no-fault liability principles in nuisance law applied to an industrial company causing long term groundwater pollution. The case was finally overturned[8] on the basis that strict liability should be imposed by Parliament rather than by the courts (ENDS, 1992c, 1993c).

Lenders' fears also escalated in response to the potential introduction of a contaminated land register under the EPA 1990. The land register was originally proposed to take effect from 1 April 1993, however consultation led to a number of deferrals and plans for the register were abandoned due to impracticalities in Spring 1994. The UK Government's review of contaminated land and liability in the consultation paper 'Paying for our Past' evoked considerable response from the bank community. (ENDS, 1992b; Napier and Clabon, 1992; National Westminster Bank, 1992; 1993c; Thompson,

1992; Anon., 1993a; ENDS, 1993a, 1993b, 1993c; Gapper, 1993; Long, 1993; Barrett, 1994; BBA, 1994; Hellawell, 1994; Rutherford, 1994; Wheatley, 1994; Stallworthy, 1995)

The first reported instance of a bank in the UK exercising caution in view of environmental considerations, was the case of Elm Energy in 1992. When attempting to raise thirty five million pounds for the development of an electricity generating plant[9] Elm Energy found that its bankers questioned the environmental impact of the plant. The finance negotiations took over one year and legal costs were accordingly high (Lascelles, 1992).

This was followed in February 1993 by a report by the Financial Sector Working Group of the Advisory Committee on Business and Environment (ACBE)[10] which addressed the need to clarify the position of lenders with regard to environmental liability. They found that uncertainty had resulted in lenders refusing loans in a number of situations (ACBE, 1993). The British Bankers' Association (BBA) also published a position statement on behalf of their membership and an issue brief to all UK banks in September 1993 (BBA, 1993a, 1993b). The statement called for EU and UK legislation to contain appropriate exemption from liability for lenders who have acted in the ordinary course of their business and have not directly contributed to environmental damage caused by the customer. The ACBE and the BBA have continued to comment on environmental lending considerations as new risks and environmental lending practices have been recognised (ACBE, 1994, 1995a, 1995b, 1996a; BBA, 1994, 1995b).

By 1995, the BBA's Risk Management Committee had established a special Environmental Issues Advisory Group that became actively involved in government liaison during the development and introduction of the Environment Act 1995. The Group's principal aim was to achieve lender exemption from environmental liability (BBA, 1995a). However, interpretation of the legislative terms 'owner', 'knowingly permitting' and 'appropriate person' within the Environment Act 1995, remain problematic and have become a focus of concern for bank advisers and representatives (Boulton and Lascelles, 1995; Smith, 1995; Stallworthy, 1995; Warren, 1995). In addition to the BBA position, the National Westminster Bank published a number of

special discussion papers and commented on lender liability issues in their annual environmental reviews (National Westminster Bank, 1992 to 1996; Thompson, 1992).

The first, and only, reported case of environmental lender liability was noted in 1995. The case involved Midland Bank becoming liable for environmental clean up costs attached to a site following its repossession. Midland had failed to carry out an inspection which would have revealed the existence of an old tyre dump on the site. The local waste regulatory authority prosecuted the owner for unlawful deposit of waste and the bank mortgagee in possession as the occupier under the UK Environmental Protection Act 1990 (Nicholson et al., 1995).

Europe

At a European level the Federal Bank Association of the European Community[11] has continued to address environmental liability issues following their initial response to the European Commission's 1993 discussion document on remedying environmental damage. In 1994, the Federal Bank Association established an environmental working group with bank representatives from member states. Whilst the existence of the working group is acknowledged in literature relating to environmental liability, the Association does not appear to have published any further comments on the issue (Clark, 1995).

A notable distinction has been made between lender liability for the environment within common law countries, such as the UK and Ireland, and countries with civil code law, such as continental Europe. As already noted, under common law in a situation of bankruptcy or foreclosure the lender frequently becomes mortgagee in possession and potentially liable as owner of the site. However, in countries with a civil code law ownership devolves to the courts, so the lenders are more worried about loss of collateral than inheriting extensive liability (Clark, 1995).

Environmental concerns have also extended to Europe's central banks who have expressed fears that potential liabilities will be a long term drain on the industry's capital base. In addition, concern has been shown regarding the potential impact of attempts to quantify environmental liabilities within the banks' capital. Under international rules set by the Basle Committee of central bankers, capital can qualify as

tier one (or core) capital only if a bank can quantify the contingent liabilities attached to it (Barrett, 1994). The uncertainty as to the level of environmental clean up costs faced by a bank makes contingent liabilities impossible to quantify. Thus, to avoid placing lenders in difficulties, central banks have been reluctant to force clearing banks to provide for environmental liabilities and reduce core capital. It has been proposed that once environmental liabilities are defined and quantified they will have to be accounted for (Anon., 1994b).

Fears and uncertainties over the interpretation of legislation have been expressed, yet few cases of lender liability have been reported outside the US. Further, despite the trends indicated by EU directives, to date regulation regarding strict environmental liability has not been introduced outside the US. Rather, other countries have looked towards strict liability regulation in the US as a test scenario.

Canada

Canada has paid particular attention to the US situation. Canadian legislation at both federal and provincial levels lacks clear definitions of potential environmental liabilities faced by lenders. It has been proposed that this is largely due to the complexity of the Canadian legal system. While no court decisions have been made regarding direct lender liability issues, there are court cases (see Appendix 1) which have suggested that environmental liability could be imposed on a party taking possession of a business which has caused environmental damage (Fettig, 1991; Prevost, 1991, 1992; Farlinger, 1992; Tay, 1992; Ferrer, 1993; Vaughan, 1994).

Australia

Under Australian law, lender liability appears particularly pronounced as environmental clean up costs are assigned to the current owner-operator regardless of their responsibility for pollution. Unsurprisingly, the Australian Bankers' Association has set out a 'financial institutions exemption' clause, on a similar basis to the BBA position statement, which they would like to see adopted (Knapman; 1991; Welch, 1993[12]; Vaughan, 1994).

Netherlands

In the Netherlands the approach has been proactive. Uncertainty over potential environmental liabilities has led to an environmental liability insurance scheme involving a pool of 48 insurers and 6 re-insurance companies (Vaughan, 1994). This system highlights the potential role of insurance in mitigating environmental risks to the lender.

Internationally

The UNEP has produced reports which address lender liability issues at an international level. Further, it has provided access to conference papers presented by bank representatives as an example of bank views and environmental management activities (Bank Handlowy W Warszawie S. A., 1994; European Investment Bank, 1994; Smith, 1994; Vaughan, 1994; Bank Handlowy W Warszawie S. A., 1995; BBA, 1995b; Credit Suisse, 1995; European Bank for Reconstruction and Development, 1995a; Green Alliance, 1995; Swiss Bank Corporation, 1995; UNEP, 1995b, 1995c, 1995d; UNEP and Salomon Brothers Inc., 1995; Union Bank of Switzerland, 1995; Hill et al., 1997).

From a review of professional literature it is evident that bank members and their representatives are concerned about potential environmental lender liability, arising directly and/or indirectly from lending activities. Some banks have incorporated environmental considerations into a corporate borrower's performance evaluation and in some cases have refused to lend. Environmental considerations may support the lending functions traditional principle of financial risk versus financial return. However, without analysing environmental considerations within general bank policy and lending processes further, the attribution of environmental consideration purely to liability and so called risk management responses may be premature.

Adequate insurance against environmental liability is likely to form a distinct part of a bank's efforts to manage environmental risk. Thus, evidence that lenders have purchased environmental insurance themselves, or requested their borrowers to undertake specific cover, implies that risk management principles have been incorporated into lending processes with respect to environmental consideration. However, for such a proposal to be valid the availability, cost, and cover provided by

environmental insurance must be examined to determine whether it meets the requirements of both lenders and borrowers. The assumption would be that if lenders recommend insurance they see it as both valid and valuable. A literature review is necessary to examine environmental insurance considerations by banks.

Insurance considerations

In seeking to spread environmental risk, it has been recognised that a number of US banks have turned to insurers for help. Banks have required high risk borrowers to underwrite their loans by taking out specific insurance cover. Such requirements were applied to borrowers on a case by case basis, although there was one reported exception, Rhode Island Fleet Bank. In June 1992 the bank announced the introduction of a policy under which all new and renewing commercial real estate borrowers with loans in excess of one million dollars would be required to carry environmental liability insurance (Cocheo, 1993). The effect of such a requirement has been debated by banks who have stressed a need to offer competitive finance, and questioned the ability of the bank to exert power over a borrower in such a market. In the US the range of environmental insurance policies available to the lender to avoid environmental lender liability has increased (Dybhahl, 1994). However, the take up of such insurance within the US remains unconvincing (Skaddens et al., 1991; Ries and Christel, 1992; Street, 1992; Cocheo, 1993; ASTM, 1994, Italiano, 1994).

The extent to which specific environmental insurance is available to lenders outside the US is doubtful. There is no evidence to suggest that banks outside the US have taken out environmental insurance. Little evidence has been found to suggest that non-US banks have required borrowers to undertake environmental insurance, and the implication has been that there is a lack of availability of adequate insurance (Street, 1992; Cocheo, 1993; Payer and Weidmann, 1993; Robbins and Bissett, 1994).

An examination of the international insurance market illustrates that insurers have been concerned about the implications of their environmental liability and by the prospect of facing the costs of environmental protection alone[13] (Lapper, 1994). This concern has been emphasised by their experience of claims in association with asbestos, natural disasters and pollution clean ups. Claims of this nature have, for example, resulted in over

five billion pounds being drained from the London insurance market (Anon., 1992; Anon, 1993c; Anon., 1994e; Atkins, 1995a, 1995b; Burt, 1995; Simonian, 1995; Atkins, 1996).

Consequently insurers have been re-appraising their approach to underwriting and the services they offer. In particular, they have recognised that environmental insurance requires a scientific background to underwriting coupled with a high level of risk management based on a comprehensive environmental performance assessment[14] (Napier and Clabon, 1992; Street, 1992). It is generally recognised that insurers have reacted to pressures surrounding environmental liability by endorsing their public liability policies to restrict pollution cover to 'sudden and accidental' incidents and avoid gradual pollution claims (Rutherford, 1994). Liability cover for gradual contamination and leakage was provided by 'Environmental Impairment Liability' (EIL) policies on a 'claims made' basis (Street, 1992; Gray, 1993; Smith, 1994).

In the past general liability policies were frequently written on an 'occurrence' basis. As a result attention has been focused on problems in apportioning liability where one policy follows the other. It has been recognised that cover may still exist under a number of old policies. In terms of insurers covering a lender's liability, it is possible for banks to have been included in the cover supplied through old borrower policies (Napier and Clabon, 1992; ACBE, 1993; Cocheo, 1993).

Insurers currently offering EIL cover are mainly large international groups with world-wide experience of dealing with environmental liability. The UK market for insurance of this type may be subdued due to stringent requirements laid down by EIL policy providers, as well as high costs attached to policies[15] (Anon., 1992; ACBE, 1993; Smith, 1994; Hyslop, 1996).

Retrospective liability poses further problems for insurers in assessing risk to be managed. Prior to the judgement in the Cambridge Water Case, the Association of British Insurers noted that existing partial pollution exclusion wording was likely to be withdrawn in favour of absolute exclusions if principles of retrospective liability[16] were upheld (Environmental Liability Report, 1993b). Absolute pollution exclusion in general liability policies already exists in the US, Italy and more recently Germany and France[17] (Anon., 1992; Anon., 1993a, 1993b; Coulson and Dixon, 1995).

Whilst product scarcity, high costs and strict conditions of cover may explain the apparent lack of borrowers seeking insurance for themselves, lenders have been slow to use insurance to mitigate their environmental liability. However, in March 1995 a more proactive stance was adopted by the insurance industry through an initiative by the United Nations Environment Programme (UNEP). The UNEP initiative launched a 'Statement of Environmental Commitment by Insurers'[18] to illustrate commitment to environmental management; to facilitate the development of methods of assessing environmental risks; and to share experience of premium setting in the environmental sector. Signatories[19] to the statement have explicitly stated an ambition to price insurance policies to reflect their client's commitment to the environment (Fossli, 1995a, 1995b; UNEP, 1995d). Thus, the role of insurance cover with respect to the environmental liability of both the borrower and, more particularly, the lender is brought into sharp focus.

The previous literature reviews shows that banks, particularly in the US, are concerned about potential environmental liability and the indications are that banks have reacted by incorporating environmental considerations into their lending processes. However, the extent and nature of their actions remain questionable. A number of US banks have secured their own environmental insurance cover or requested borrowers to underwrite potential environmental liabilities. Outside the US, no evidence was found to suggest that banks have undertaken environmental insurance or that it was available. Little evidence was found that banks outside the US required borrowers to undertake environmental insurance; or that, where environmental insurance was available it offered suitable cover. On this basis a detailed review has been undertaken to examine further evidence of environmental risk management by banks.

Environmental management

Bank principles

The above review highlighted the management of potential environmental risk within lending decisions. Bank practitioners and their advisers, at an international level, have confirmed that environmental risk management in lending policy has increasingly been adopted by the international bank community (Sarokin and Schulkin, 1991; Cocheo, 1993; Welch, 1993; Anon., 1994c; Barrett, 1994[20]; Griggs, 1994; Robbins and Bissett, 1994; Smith, 1994; Williams, 1994; ACBE, 1995b; Clark, 1995).

The following section focuses on an analysis of literature which addresses environmental principles within bank strategy and the lending function. Particular reference is made to the deployment of formalised environmental policies. Evidence is drawn from national and international bank associations and representative groups, and comments by bank advisers and bank members.

In May 1992, a UNEP working party of bank members developed a 'Statement by Banks on the Environment and Sustainable Development' (ENDS, 1992a; UNEP, 1992; Williams, 1994). The Statement was part of a recognised need for banks, along with governments, businesses, and individuals, to acknowledge their social environmental responsibility (see Appendix 2). The content of the Statement explicitly recognised the need for 'ecological protection' and 'sustainable development' as interrelated goals. The implication of the Statements wording is the promotion of ecological development to sustain economic development, reflecting an anthropocentric as opposed to an ecocentric philosophy. Through public subscription to the Statement, banks have declared their intent to "endeavour to ensure that .... their.... policies and business actions promote sustainable development" (UNEP, 1992).

The UNEP statement has been extremely popular, by 31 January 1995 66 banks from around the world, with the exception of the US, had subscribed[21] to its principles (see Appendix 2). The absence of subscription by US banks has been examined in light of other research findings. A number of ABA and EDR surveys have revealed that a high proportion of US banks have developed environmental policies in reaction to potential lender liability for the environment (Anon., 1994c; EDR, 1994; Green Alliance, 1995; Hill et al., 1997).

A global survey on environmental policies and practices of the financial services industry was undertaken in 1994, with support from UNEP and Salomon Brothers Incorporated, New York. Slightly less than 50% of the 90 respondents, including 27 from the US, revealed that they had a documented environmental policy[22] (Lascelles, 1995a). Motivations for the development of environmental bank policies were addressed within the survey by reflecting on functional principles and environmental management activities. Ethical principles were not addressed directly by the survey and there was nothing to imply that environmental management was founded upon ethical

principles beyond reference to subscription to the UNEP statement. Of respondents 22% were signatories to the UNEP Statement and 35% claimed to be unaware of the Statements existence. The primary motive for functional environmental consideration indicated by the survey was one of risk management and the requirement of developing environmental legislation.

Recognition has additionally been given to the development and deployment of environmental policies by international agencies such as the World Bank, the European Bank for Reconstruction and Development and the European Investment Bank[23] (Bank of America, 1995; European Investment Bank, 1994; European Bank for Reconstruction and Development, 1992, 1995a, 1995b, 1995c). In these organisations the adoption of an ethical stance on the environment supports the principles of social responsibility upon which the organisations were developed. The environmental principles of banks has been further demonstrated by initiatives taken by a small number of banks to publish environmental policy statements.

Contrasting approaches have been illustrated in the UK by the National Westminster Bank which developed an environmental policy based on principles of 'ecological protection and sustainable development' in 1990[24] and the Co-operative Bank which developed and published an 'ethical' mission statement[25] containing environmental principles in May 1992 (Cooperative Bank, 1992; National Westminster Bank, 1992). It should be noted that National Westminster Bank was one of a small number of banks involved in the initial design of the UNEP Statement. It is thus unsurprising to find that a number of clauses within the National Westminster Bank policy have been reflected in the UNEP Statement.

In summary, a number of banks at an international level, including those based in the US, have subscribed to environmental principles in formulating bank policies. The rationality supporting subscription to environmental bank principles appears to be a mixture of ethics and risk management. However, the absence of US banks from subscription to the UNEP Statement, and emphasis on environmental risk management, suggests that environmental considerations within US banks are not founded on ethical principles.

These findings are a little surprising given that literature at an international level has focused on lender liability, and social and ethical responsibility of banks has been relatively scarce (Sarokin and Schulkin, 1991; Lascelles, 1993). However, as recognised by Lascelles (1993), this may be due to the fact that environmental issues have been translated into risk terms as a more familiar 'language' of banks. Such reference therefore does not necessarily deny that there has been a more fundamental change in values underlying identified trends in risk management.

This proposal may be extended to address the translation of environmental bank principles into practice at a functional level. Evidence outlined in this section has addressed environmental considerations with respect to bank 'principles and policies'. Literature which addresses lender liability provides initial evidence that functional bank lending policies and procedures have been developed to incorporate environmental considerations. Theoretical issues raised by accounting research, and practical issues within professional literature, focus on how bank principles and policy influence functional bank policy and procedures.

Credit risk management

An analysis of environmental considerations in lending processes may show how environmental bank principles and policies have been translated into practice. However, it should be noted that the term 'risk management' refers to the credit assessment process of financial risk versus financial return noted in Chapter one. Thus, 'risk' indicators may be perceived as having a positive as well as a negative consequence.

Such terminology may create problems of interpreting bank motives for incorporating environmental considerations, though as noted previously, subscription to the UNEP Statement is an acknowledgement of social ethics. As part of the Statement explicitly subscribed to by banks, they 'recognise that environmental risks should be part of the normal checklist of risk assessment and management'. Furthermore, examining lending issues specifically it is declared that 'as part of ...credit risk assessment, we recommend when appropriate environmental impact assessment'. It appears that these ethical principles underpin the strategic functional principles of risk management in lending practice.

A number of banks, while subscribing to the UNEP ethical principles, have reported separately the need to adopt risk management principles[26]. (Bank Handlowy W Warszawie S. A. 1994, 1995; Smith, 1994; Vaughan, 1994; Credit Suisse, 1995; Union Bank of Switzerland, 1995). Similarly, while adopting ethical principles, the European Bank for Reconstruction and Development has based it lending function on a risk management approach[27]. This evidence suggests that the incorporation of environmental considerations within credit assessments, and refusal of loans to polluting companies, can both serve objectives of risk management and meet ethical principles.

A further insight into motives for environmental consideration within lending processes comes from the global survey 1994, supported by UNEP and Salomon Brothers, New York. The survey explicitly addressed the influence of environmental liability exposure and corresponding risk management strategies on credit procedures. The survey revealed that respondents focus heavily on effective environmental risk management in relation to debt extensions in the pre-contractual stage of the credit review process. Over 80% of respondents indicated that environmental liability risk equal to, or greater than, a specified financial value was considered in all debt financing decisions[28] (Williams, 1994; Lascelles, 1995a; UNEP, 1995b; UNEP and Salomon Brothers Inc., 1995).

Findings from the global survey further revealed that while environmental considerations within lending processes were recognised, the existence of a 'documented' environmental policy was not a necessary pre-requisite to such consideration. Some 94% of respondents indicated performance of environmentally orientated credit risk management, and over 50% of respondents indicated such performance on a regular basis, compared to less than 50% of respondents with a documented environmental policy (UNEP and Salomon Brothers Inc., 1995).

These findings raise further theoretical questions as to the definition and purpose of a bank policy. It is proposed that a bank's principles and policy may be inherent within bank practice without the production of a formally documented policy statement. Provision of a documented policy may be one of a number of ways to communicate and deploy standard procedures. There is evidence to show that the basis for environmental

considerations within lending processes is one of environmental risk management. It is proposed that this strategy may be based on a general environmental risk management approach of the bank, particularly in the case of US banks, or the translation of ethical principles into functional strategies.

The role of a bank wide environmental policy may, or may not, be important in the translations of principles to a functional level. More detailed findings indicate the existence and role of functional lending policies and procedures. Further, an examination of the potential interface between general and function specific lending policies and explanations for their development may prove fruitful. There may be an indication of rationality in environmental considerations in bank procedures.

Individual bank approaches to the incorporation of environmental consideration within lending practices are noted among banks within the US, UK, Switzerland, Germany, Canada, Poland and Australia (CIBC, 1991; Bruns, 1992; Cocheo, 1993[29]; Mayo, 1993; Welch, 1993[30]; Anon., 1994c[31]; Bank Handlowy W Warszawie S. A. 1994, 1995; Barrett, 1994[32]; Griggs, 1994[33]; Klump-Bickert, 1994; Robbins and Bissett, 1994[34]; Smith, 1994[35]; Williams, 1994; ACBE, 1995b[36]; Clark, 1995[37]; Credit Suisse, 1995; Union Bank of Switzerland, 1995). With the exception of the Canadian Imperial Bank of Canada (CIBC) the procedural approaches of individual banks have not been discussed in detail or in their entirety. However, a number of common characteristics are recognisable[38] (Robbins and Bissett, 1994).

Comparing these characteristics with findings from accounting research discussed in Chapter one provides an insight into the nature and level of integration of environmental considerations within lending processes. Where the existence of documented environmental lending policies were identified, their development and deployment within a bank was found to facilitate procedural direction (Barrett, 1994). No reference was made to the relationship between the documentation of general bank policy and lending policy. However, documenting lending policies was found to be one means of communicating and establishing founding principles for environmental lending procedures and a method evidenced within only a few banks. On this basis it is proposed that a lending policy is built on a bank's general principles and policies, and

the interpretation of the term 'bank policy' will be subject to a variety of interpretation depending on the individual bank situation and the role of its members.

Training programmes with explicit lending policy objectives, and documented standards for the guidance of bank members are more easily recognised than developing or even established internal practices. Communication of lending policy, whether implicit or explicit within such mechanisms, was viewed as facilitating the integration of environmental considerations within the cultural principles of the bank. (Barrett, 1994; Robbins and Bissett, 1994; Union Bank of Switzerland, 1995). Bank policy makers recognised that adherence to environmental policies by individual bank lending officers was dependent upon the effectiveness of policy deployment, and constraints and incentives influencing the behaviour of the individual.

Literature which addresses the existence of environmental lending policies makes little reference to the rationality for environmental considerations. Thus, there is a clear need for research which addresses environmental considerations within lending processes to examine the nature and role of bank policy at a general and function specific level.

There was some evidence of environmental assessment which varied with the industrial activity in which the borrower was involved and the associated risk perceptions[39]. Bank guidelines on industrial sectoral analysis was found to vary from cataloguing a borrower according to a list of high risk industries, to a more complex risk exposure matrix (Bank Handlowy W Warszawie S. A., 1994, 1995; Griggs, 1994; Smith, 1994). These findings were in contrast to those previously noted within accounting based research which recognised a lack of attention to industrial issues. Loan value was considered by one bank[40] who noted that in the case of loans to small companies, categorised as approximately twenty thousand pounds, the cost of environmental assessment was an important issue (Barrett, 1994).

Compared with findings from accounting research which addressed lending procedures, the use of interviews[41] (Gleason, 1994[42]; Robbins and Bissett, 1994) and site visits were recognised as a means of gathering environment related information (Gleason, 1994; Griggs, 1994; Robbins and Bissett, 1994; Smith, 1994; Bank Handlowy W Warszawie S. A., 1995). However, special purpose environmental impact assessments

and audits were found to be undertaken where the perception of environmental risk was high, security was being agreed and/or foreclosure procedures were being considered (Robbins and Bissett, 1994; Smith, 1994). In some cases special environmental units had been formed to support policy deployment and specialist environmental credit assessments[43] (Smith, 1994; Union Bank of Switzerland, 1995).

It was noted that, compared to financial management previously recognised, little monitoring of environmental considerations was undertaken once funds were committed (Robbins and Bissett, 1994; Smith, 1994; UNEP, 1995b). The application of environmental principles to loan agreements, or facility clauses, was noted as an attempt by banks to mitigate environmental risks[44]. However, in the US where banks try to avoid environmental liability, the application of such clauses were not common raising questions as to the value of the clauses and bank motives for environmental assessment (Gleason, 1994; Griggs, 1994; Robbins and Bissett, 1994[45]; Smith, 1994).

In contrast to accounting research findings, there was only limited reference to the use of financial accounting information. It was noted that independent property valuers use subjective financial valuation to quantify environmental risk, whereas qualitative information was used for environmental management and scientific information in cases of property contamination. A number of banks noted problems with the financial quantification of risks given the poor availability and lack of standardisation of accounting information (Barrett, 1994; Robbins and Bissett, 1994; Smith, 1994; Lascelles, 1995b; UNEP, 1995b). In Chapter one it was noted that availability and reliability were key factors influencing the importance and use of financial information, these findings support this view.

Analysing the integration of environmental considerations within standard lending procedures, there is some indication that due to the nature of environmental information, any environmental assessment carried out by the borrower is predominantly a stand-alone process. Support for this proposal is provided by reference to environmental checklists, questionnaires[46] or worksheets, provided by banks to guide environmental assessment procedures[47]. Accounting research revealed the existence of such checklists as reference tools denoting all elements of credit assessment used by inexperienced lending officers. However, it is proposed that with the recent

introduction of environmental considerations within lending processes these tools may additionally be relied on when applying new lending procedures with which lending officers are unfamiliar. Emphasis has been placed on environmental guidance documentation as tick-lists rather than judgmental tools[48] (Lascelles, 1993; Barrett, 1994; Griggs, 1994; Smith, 1994).

To represent corporate environmental performance considerations, banks commonly refer to documented conclusions drawn from environmental assessments, including scientific examinations, which are compared to results of other credit considerations. One bank member referred to the development of an environmental scoring system[49] and another recognised the incorporation of environmental consideration within a standard credit scoring system (Barrett, 1994; Smith, 1994). It has been argued that the nature of methodologies applied in conducting environmental impact assessments appear to be leading to the introduction of new tools and techniques within lending processes (Clark, 1995). However, further empirical evidence is required to justify such a conclusion.

While bank policy makers have provided accounts of standard policy and procedures it has been recognised that the experience and role of individual lending officers vary considerably. Policy makers have placed emphasis on the communication of standard lending principles and procedures as a means of providing a foundation for action, whilst recognising that procedural application differs between lending situations and lending officers.

Despite the recognition of commonalties between banks, individual bank techniques and approaches were found to vary considerably. Similarly, findings from accounting research highlighted common methodological themes within lending processes, but noted that the contingent nature of individual bank and lending situations limited the possibilities of extrapolation of commonalties.

In summary, bank motives for environmental consideration stem from two main approaches: an ethical approach; and a risk management approach. Examinations of subscriptions to the UNEP statement, regional bank association position statements, and responses to survey categorisation support this view. There was an apparent

division between the motives of US banks and other banks. Evidence suggests that US banks have based their environmental considerations purely on risk management motives. However, this apparent distinction is unsurprising given the prominence of the debate regarding potential lender liability for the environment in the US. More detailed analysis of individual bank approaches beyond these broad categorisations is needed before further conclusions can be drawn.

Professional literature which addresses environmental credit risk management suggests that banks are integrating environmental considerations within lending processes as a function of risk management. The term 'credit risk management' reflects this. It is proposed that, as noted in Chapter one, the lending function is based on an evaluation of financial risk against financial return according to the subjective analysis of financial and non-financial information. Environmental consideration simply adds a new variable to this process. Considering the relationship between general bank principles and functional bank lending principles there is initial evidence to suggest that in deployment these principles are inter-related. Thus, questions have been raised as to the relationship between a bank's ethical motives and functional risk management principles.

Summary

Chapter one indicated that environmental considerations within bank lending processes were scarce within academic research. In this Chapter an extensive review of professional literature provides considerable evidence to suggest that environmental issues are an emergent risk management consideration by banks. It is recognised that this is partially in response to increased potential lender liability for the environment, particularly in the US. However, ethical environmental bank policies and principles were recognised outside the US.

Evidence that environmental policy and procedural development within banks is a relatively recent occurrence, taking place over the last five years, explains the absence of environmental considerations within academic research findings. This places additional importance on the potential contribution of academic research in this area.

To establish a theoretical foundation from which to explain how, and why, corporate environmental performance considerations form part of bank lending processes, it is proposed that an examination of a lender's perception of environmental risk is necessary. In addition, an analysis of the apparent relationship between a bank's ethical policy position and credit risk management policy and practice is required. Founded upon evidence that bank policy and communication mechanisms contribute to the development of a bank lending officer's rationality for environmental management, an examination of the social theories of risk construction is proposed as the start point for theoretical investigation. This examination is undertaken in Chapter three.

Notes

[1] Under principles of strict liability it is necessary to prove only a causal connection between a polluting act and the resultant environmental damage, permitting defence only in certain circumstances.

[2] Fleet Factors referral 1992.

[3] For example, Harrisons and Crosfield, a UK company learnt of their financiers environmental worries when negotiating a US $120m private placement with a group of US institutions in 1991. The company owned 110 chemical sites in the US and the financiers requested an environmental assessment at each one during financial negotiations. The financiers later agreed to visit only a sample of the sites and accept documentation for the remainder. The cost of delay and legal fees attached to the negotiations were reported to have added noticeably to the costs. (See Lascelles, 1992)

[4] Additional reference was made to the promotion and discussion of environment related issues by the ABA and its members during a telephone interview with John J. Byrne, Senior Federal Counsel Government Relations, ABA in 1995.

[5] For example, in 1987 Beazer, the international building and construction group acquired the US company Koppers borrowing US $700m. As part of the take-over Beazer also acquired Kopper's US timber and chemical divisions. The timber treatment division was sold with a costly clean up guarantee in 1988 while a £296m provision appeared in the balance sheet due mainly to potential pollution liability for the chemical division. No environmental assessment was required in raising acquisition finance. (See Contract Journal, 1989)

[6] European Community legislation calling for strict and/or joint and several liability principles included: EC Draft Directive on Civil Liability for Damage caused by Waste; EC Green Paper on Remedying Environmental Damage; the Council of Europe's Draft Convention on Civil Liability; and the European Commission's Green Paper on Liability for Environmental Damage.

[7] The EC Directive on Civil Liability of the Damage caused by Waste caused particular concern requiring waste disposers to demonstrate some form of financial security as a means of compensation for those suffering as a result of environmental damage caused by waste disposal activities (Street, 1992).

[8] House of Lords, December 9th 1993.

[9] The plant was designed to burn using rubber tyres to produce fuel. The main issues under consideration were waste disposal and land contamination.

[10] The Advisory Committee on Business and Environment was established to promote dialogue between the Government and business to support the introduction of environmental objectives of the EPA 1990. In January 1991 ACBE formed a Financial Sector Working Group to address among other things, how best to apportion civil liability for environmental damage. (See ACBE, 1993 to 1996b)

[11] Federation Bancair de la Communautee Europeenne.

[12] Case of Westpac Banking Corporation, Australia.

[13] The US General Accounting Office has suggested that the cost to the USEPA and private sector could be US $300bn over the next 30 years.(See CBI, 1993) In the UK the clean up of derelict land has been estimated at £20bn with a cost of making it fit for use at twice as much (See ACBE, 1993).

[14] Where available, environmental insurance schemes may require a site survey to be carried out as part of a corporate risk assessment policy, prior to insurance being granted. Further, given that a site survey only identifies the condition of certain aspects of the site, at a given point in time, insurers may frequently request the adoption of a corporate environmental management system to support insurance provided. This could greatly increase the cost of environmental insurance. The Loss Prevention Council are currently undertaking research on this issue. (See Wilkinson, 1994)

[15] One method of tackling this problem was illustrated by the Chemical Industry Association who have set up their own insurance fund and sharing the associated costs (See CBI, 1993; Lascelles, 1993; Wilkinson, 1994).

[16] The principles of retrospective liability open up a debate considering how best to apportion liability for environmental damage, both historic and current. Unanswered questions remain as to the length of limitation periods for claims and types of loss recoverable.

[17] From 1 January 1994 the French insurance market has restricted pollution cover under general liability insurance to a maximum of FFr 10m (US $1.7m). All risks above the limit will have to be insured separately through the pollution insurance pool Assurpol, with a separate premium and a more restrictive EIL wording. Assurpol has also replaced the previous claims made policy wording with a form of 'discovery trigger'. This action has followed a decision by the French courts that claims made policy wording was invalid and that the only valid trigger of coverage was the causative act (Anon., 1993b) In Germany environmental insurance became compulsory for 'dirty industries' in 1993.(Anon., 1992)

[18]The statement explicitly recognises under its general principles the need to identify, quantify and respond to environmental risk and under environmental management the need to reinforce attention given to environmental risks in core activities.

[19] At 12 July, 1996 signatories to the Statement totalled 60 with 7 further insurers having expressed an interested in signing (UNEP, 1996).

[20] Barrett (1994) extensively quotes comments by UK lenders from National Westminster Bank, Barclays Bank and the Co-operative Bank providing evidence of their environmental lending practices.

[21] Subscription at 12 June 1996 totalled 88 banks. Research is currently being undertaken based on this statement see previous reference to Thompson, 1995 and 1996. The Green Alliance have reviewed bank actions following subscription to the statement (See Green Alliance, 1995; Hill et al., 1997).

[22] Those with an environment policy revealed that on average these had been in place for 4 years

[23] However, it has been acknowledged that environmental lending assessment procedures have been adapted by financial intermediaries given local social and economic conditions and individual organisational philosophies.

[24] The follow up activities of the bank were published in first annual environmental report in 1993 and subsequent editions. (See National Westminster Bank 1993-1996).

[25] SBN a Danish regional savings bank produced the first 'ethical accounting statement' in 1993. However, this make no mention of environmental issues. (See SBN, 1993)

[26] Among others references, in particular UNEP discussion papers, opportunities as well as liabilities have been recognised by environmental credit 'risk' management (See Lascelles, 1993; Gentry et al., 1995; UNEP, 1995c).

[27] The European Bank for Reconstruction and Development training programme for financial intermediaries is based on the use of a 'Environmental Risk Management Handbook' produced by the Bank of America (See European Bank for Reconstruction and Development, 1995).

[28] Over 75% for corresponding equity financing.

[29] Fleet Bank, Rhode Island, US.

[30] Westpac Banking Corporation, Australia.

[31] National Westminster Bank, UK.

[32] National Westminster Bank, Barclays Bank and the Co-operative Bank, UK.

[33]First Union Bank, US.

[34] Canadian Imperial Bank of Canada.

[35] Royal Bank of Canada, borrower questionnaire appendix.

[36] National Westminster Bank and S G Warburg, UK.

[37] Swiss Bank Corporation.

[38] A number of the lending process characteristics identified form part of the ABA Environmental Risk Program. Based on the Federal Deposit Insurance Corporation's guidelines on good environmental lending practice the ABA program recommends the adoption of a documented environmental lending policy and detailed supporting procedures to the local bank community.

[39] A representative of National Westminster Bank, UK revealed environmental credit procedures incorporating sectoral analysis (Barrett, 1994) ABA guidance recognised a need for industrial sector assessment and it was noted that the European Investment Bank promote the use of industrial summary sheets and recognition of acceptable categories of industrial activity to their financial intermediaries.

[40] See Barclays Bank, UK (Barrett, 1994)

[41] Consideration of existing bank records which address the borrower were noted in one case (See Gleason, 1994).

[42] Reference to guidance by Texas Bank Association.

[43] The use of central credit committees for high risk loans was additionally noted in the case of a Polish Bank.

[44] 55% of respondents to the UNEP survey stated that they include specific environmental covenants and conditions within contractual agreements.

[45] Note CIBC use a generic environmental clause for loan agreements.

[46] It was noted that in a number of instances an assessment questionnaire was used to examine borrower characteristics in detail. A tool noted to be used by Royal Bank of Canada and First Union Bank, Australia and recommended by the ABA.

[47] Barclays Bank use a 12 point environmental checklist while the Co-operative Bank has a general assessment checklist including environmental considerations (Barrett, 1994).

[48] The use of such checklist were noted within ABA guidelines.

[49] It was recognised that corporate ratings were available from specialist financial institutions but banks have questioned there applicability to lending decisions (Lascelles, 1993, 1995b, Barrett, 1994)

Chapter 3

The social construction of environmental/ risk perception

Introduction

This Chapter provides a theoretical examination of the questions how, and why, risk and subsequently environmental risk are perceived by individuals. From this basis the questions of how, and why, environmental management rationalities develop may be explored. The purpose of this Chapter is to provide a foundation from which to understand, and further examine, corporate environmental performance considerations within bank lending processes identified in Chapters one and two.

Through an examination of risk perception and definitions across a range of disciplines and situations, a social constructionist perspective is proposed as a basis from which to understand and interpret risk, and environmental risk, management. The core ontological question addressed is how environmental risk, and thus reality, is perceived by an individual.

The basic epistemological stance is to analyse and seek to understand how, and why, social reality is constructed by assessing specific social processes supporting a proposed rationality. By adopting a social constructionist perspective, the roles of formal and informal communication mechanisms in constructing a plural rationality for risk perception become central issues. In particular, the role of policy communication in the social construction of perception is examined as the basis for considering research questions raised in Chapter two.

By applying principles of social construction to environmental risk perception, a basis is provided from which to examine an individual's view, or 'ethical position', on environmental management. Taking the bank as the subject of analysis, and reflecting on findings in Chapters one and two, the appropriateness of applying a social constructionist perspective to environmental/risk perception within bank lending processes is discussed in Chapter four.

The social construction of risk perception

Defining risk

Given the present proliferation of literature which addresses various questions centred on the nature of risk, it is recognised that one definition would not meet the requirements of all disciplines. Disciplinary and interdisciplinary risk debates reflect different views of the world according to which risk definition becomes an issue of science and perception.

Risk definition has traditionally been recognised as a function of scientific assessment. Historically the most dominant definitions of risk have been founded upon principles of linearity within determinate modern systems. These principles have been upheld in discussions within the social as well as natural sciences, where social scientific knowledge has traditionally been modelled on positivistic, rational models. Following such principles risk definition has centred on the 'probability', or likelihood, of a risk outcome occurring and subject to quantitative linear evaluation.

During the 1980's and 1990's, as theories of chaos and complexity[1] have emerged, the limits of scientific authority as a basis for risk assessment have been questioned. Objective quantitative evaluation of risk has been rivalled by subjective assessment of 'possibilities' based on principles of non-linearity and uncertainty. Social theories of risk have emerged which have questioned the role that human conceptions reproduced in scientific discourses play in risk perception. Risk definition has been considered as a function of an individual's view of the world and how knowledge is constructed. The view that a separation can be maintained between objective and subjective or perceived risk has come under attack to the extent that it is no longer a mainstream proposition[2].

As a minimum it is upheld that the choice of a linear evaluation method is in itself a judgmental process of risk perception. When defining risk, emphasis has therefore been placed on recognising the context within which scientific information is valuable. It is argued that defining risk should be viewed primarily as a function of individual perception. The role of 'the social' in influencing individual perception is dependent upon beliefs concerning knowledge construction.

Social constructionist perspectives

Individual analysis

Early studies of risk perception centred on a psychological evaluation of knowledge construction. These studies have been extensively replicated and extended within engineering accounts to explain how individuals rely on cognitive heuristics and mental rules of thumb for decision making[3]. For example, Tversky and Kahnemans' work on 'availability heuristics' denoted an individuals judgement of probability by their ability to recall or imagine a probable event (Tversky and Kahneman, 1973). However, accumulated empirical evidence from psychometric and social psychological investigations support the view that a purely psychological, individual-based analysis can account for only part of risk perception and risk behaviour (Fischoff et al., 1981; Kahneman et al., 1981; Kahneman et al., 1982; Slovic et al., 1982; Perrow, 1984; Slovic et al., 1985; Heimer, 1988; Pidgeon et al., 1992; Glendon, 1994; Adams, 1995). In particular, research studies of individual perceptions of risk have come under criticism from researchers in the fields of anthropology and sociology for their inability to account for motivational and emotional explanations for risk taking behaviour (Douglas, 1982; 1992; Fessenden-Raden et al., 1987; Fitchen et al., 1987; Thompson et al., 1990; Beck, 1992; Royal Society, 1992).

Risks have been conceptualised as components of increasingly complex systems in which accidents will occur and there has been a movement away from perceiving risk as a product of isolated human error within controllable mechanistic systems[4]. In response, risk research has expanded beyond purely individual explanations for human response to risk towards a plural rationality for risk management based on a social construction of risk. It has been recognised that the perceiver of risk is rarely an isolated individual but a social being who necessarily lives and works within a network of informal and formal relationships with others. Such relationships are manifest in a wide range of both small and large scale social and institutional arrangements within and across societies (Rayner, 1979, 1986; Comfort, 1988; Braithwaite, 1989; Bellaby, 1990; Reason, 1990; Ashby and Diacon, 1994; Chicken, 1994; Fleming et al., 1994; Guest, 1994; McGregor and Hopfl, 1994; Waring, 1994; Mitchell, 1995).

An integrated approach to risk perception, management and blame has developed in which the individual is considered as part of social, cultural, institutional and/or political processes. Examining the social construction of risk, research focus remains on the individual in that an individual's attitude is viewed as being shaped by the extent to which he or she is incorporated into a bounded group and social relationships are conducted according to rules rather than ad hoc negotiations and actions (Douglas and Wildavsky, 1982; Johnson and Covello (eds.), 1987; Thompson et al., 1990; Beck, 1992; Krimsky and Golding (eds.), 1992; Royal Society, 1992; Hopfl, 1995; Grove-White, 1996).

The 'modern' debate

Examining the social construction of risk, particular attention has been devoted to providing grandiose theories of social construction (Douglas, 1982; Beck, 1992; Wynne, 1989b; 1992; Lash, 1994). A number of theorists have taken modernist views on risk as their starting point and environmentalism as the central issue on which to illustrate their argument and evoke debate. Together these theories are attempting to move beyond the earlier view of the social sciences, that the environment exists as a "material substrate of the social defined by scientific enquiry"(Lash et al., *1996*: 1). This research rests upon a fundamental questioning of knowledge construction. It is the interpretation of knowledge construction that is explored as a basis from which to determine the appropriateness of adopting a social constructionist to analyse the research area in question. The views of these social theorists are first addressed in the abstract to clarify their perception of knowledge construction and later situated in the environmental risk debate to test the application of these principles.

An important catalyst for such theorising has been German sociologist Ulrich Beck's reflection on 'Risk Society' (Beck, 1992). Beck proposed that society had entered a phase of 'reflexive modernity' in which real physical-biological dangers have been extended beyond the limits of calculability contained within conventional modernist systems of prediction and control. In reaction to this, Beck provides that a process of individualisation has/is taking place with social agents becoming ever more free from the normative expectations of social institutions. Subsequently epistemic authority becomes removed from groups of scientists, politicians and industrialists, and fragmented across a huge range of social groups interacting and establishing a new

means of self-critique. Beck emphasises that his is not a critical theory of society but a theory of critical society - critique is endemic to the risk society (Grove-White, 1996).

The most common challenges to Beck, question the privilege which he gives to scientific knowledge and the strict division drawn between scientific and lay knowledge. Post or anti-modernist writers such as Lash have challenged Beck's position by privileging the hermeneutic truths of lay actors over the propositional truths of scientists in the risk debate. Alternately Brian Wynne, drawing on his extensive research which addresses the sociology of science[5], has presented a sustained effort to challenge both neo-modernist writers such as Beck and their post modern rivals (Wynne, 1989a; 1989b; 1992; 1996; Wynne and Mayer, 1993). Wynne proposes a need to go beyond the strict division between 'propositional' scientific and 'formulaic' lay knowledge.

Wynne argues that we have never been modern, claiming that scientific knowledge itself is pervaded with an indeterminate and formulaic set of communications and practices. Accordingly, scientific knowledge produces unanticipated consequence and knowledge itself is indeterminate and uncertain. Wynne proposes a moral realism in which public reactions to technocratic projects resist the imposition of inadequate models that create not physical but 'identity' risks and increase reflexivity (Wynne, 1989a; 1992; 1996; Lash et al., 1996).

A similar argument has been put forward by post structuralists who argue that natural meaning forms from interpreting signs in nature and the world. Post structuralist argue that language, cultural meaning and the 'order of things' are part of a world in which social practices and nature are interwoven, interpreted and 'ever already given'. Research for post structuralists is concentrated on exploring perception as a determinant of what is rational and hence managed. As previously argued, post-structuralist thinking on risk highlighted the view that the minimisation of risk through increasingly rational behaviour is an unattainable goal under conditions of indeterminacy (Jackson and Carter, 1984; Carter and Jackson, 1992; Lash et al., 1996).

A common principle shared by these social theorists, and highlighted by Wynne, is the recognition that expert definitions incorporate implicit assumptions about the social and

institutional processes of risk management. This places emphasis on interpreting the different aspects of risk and rationality that are expressed to aid understanding, rather than on interpreting any particular framework as more accurate than another.

Cultural modes of analysis

Following social constructionist principles a stream of theorists have modelled risk interpretation according to recognised systems of meaning and ways of life shared by members of a particular culture. These cultural theorists have illuminated a world of pluralistic rationality, discerning order and pattern in risk taking behaviour and the beliefs and biases that underpin it. Risk, according to this perspective, is culturally constructed and the deterministic rationality of physics is replaced by conditional social rationality. Cultural theorists, proposing that no complete theory of risk exists, have applied cultural principles to analyse the difference premises from which decisions are made (Holling, 1979; Rayner, 1979; Wildavsky, 1979; Douglas and Wildavsky, 1982; Mars, 1982; Douglas, 1985; 1992; Jasanoff, 1986; Rayner, 1986; 1987; Fitchen et al., 1987; James and Thompson, 1989; Bellaby, 1990; Thompson et al., 1990; Dake, 1991; 1992; Mars, 1994; Adams, 1995; Hopfl, 1995; Milton, 1996).

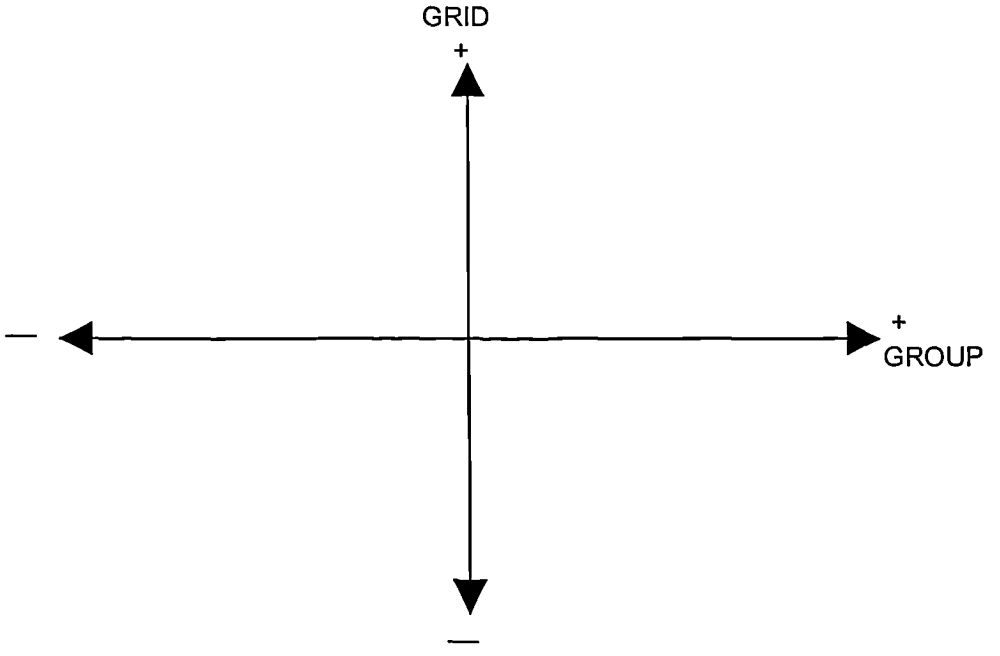
Given the theoretical foundations of cultural theories it is unsurprising to find that a myriad of definitions of culture has been proposed. However, within risk debates one mode of cultural analysis has dominated discussions, namely Grid-group analysis proposed by social anthropologist Mary Douglas (Rayner, 1979; Douglas and Wildavsky, 1982; Rayner, 1986; 1987; James and Thompson, 1989; Wynne, 1989b; 1992; Bellaby, 1990; Thompson, 1990; Dake, 1991; Krimsky and Golding, 1992; Royal Society, 1992; Adams, 1995; Lash et al., 1996).

An analysis of Douglas' work 1966-present illustrates her rationality for developing and re-working the Grid-group theory[6] during extensive field studies[7] (Douglas, 1966, 1970, 1975, 1978, 1982a, (eds.)1982b, 1985, 1986, 1989, 1992, 1996). The most frequent interpretations of her theory are taken from her paper "Cultural Bias" (1978) It is this form of Grid-group theory which is considered here as a mode of analysis (Douglas, 1978, 1982a; Thompson and Wildavsky, 1986; Wildavsky, 1987).

Grid-group analysis was founded on the theoretical principle that the variability of an individual's involvement in social life can be adequately captured by two dimensions of sociality: group and grid. *Group* refers to the extent to which an individual is incorporated into bounded social units. The greater the incorporation, the more individual choice is subject to group determination. *Grid* denotes the degree to which an individual's life is circumscribed by externally imposed prescriptions. The more binding and extensive the scope of the prescriptions, the less of life that is open to individual negotiation.

Figure 1. The Grid-group dimensions

("root definitions" described by Douglas, 1970)



Douglas contends that individual choice may be constricted either through commitment or control that binds an individual to group decisions, or demands that an individual follow the rules accompanying their position in life. According to Douglas, analysing social construction under principles of constrained relativism permits social relationships, and cultural bias to be modelled. Douglas denotes four types of individual, categorised according to their social relationships: hierarchists; individualistic, egalitarian or enclavist; and the isolated or eclectic.

- hierarchist - individuals in this social context are subject to both the control of other members in the group and the demands of socially imposed rules. They favour strongly incorporated groups with complex structure and formality and compartmentalisation;

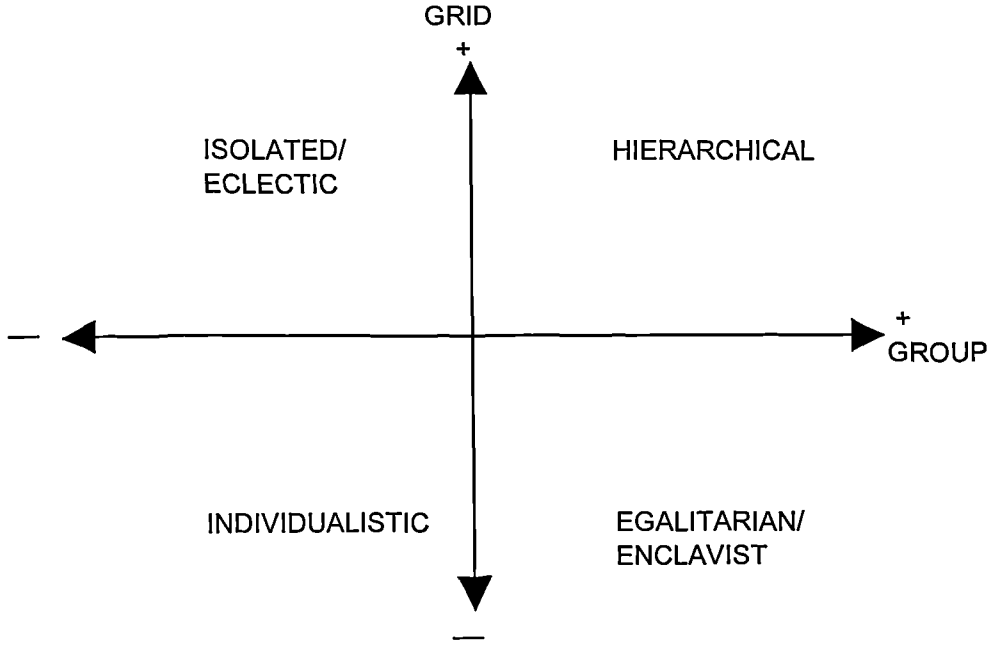
- individualist - bound by neither group incorporation nor prescribed roles, inhabits an individualistic, competitive social context with a weak structure and weak incorporation;

- egalitarian/ enclave - an individual within strong group boundaries and with minimal prescriptions, in favour of equality within the group, spontaneity and free negotiation. Individuals exercise control by acting in the name of the group;

- isolate/ eclectic - will not be able to exert influence and will not expect to use force to attain their ends. Isolated by choice or compulsion in complex structures. (See Douglas, 1996)

Figure 2. The Grid-group typology

(adapted from Douglas, 1982)



Relativistic claims by social theorists are open to challenge by realists dissatisfied with this formula. A realist may argue that because we all inhabit a single world and share a single genome, the multiple natures that are needed to keep social theory viable are not available to us. However, it is proposed that there is enough irreducible uncertainty in the world to be able to bias convictions about knowledge construction.

In adopting the logic of functional explanation, cultural theorists rely on theories in which the consequences of some behaviour or social arrangement are essential elements of the causes of that behaviour. It is noted that if functional theory is found to be defective in principle cultural theories will collapse. A major criticism of functional explanations is the lack of precise definition of boundaries and conditions for the survival adjustment or adaptation of the system under examination. Evaluating cultural theories on such distinctions, increasing reference has also been made to 'Cultural theory' or 'Socio-cultural viability theory' proposed by social anthropologist Michael Thompson[8] and scholars in political science, Richard Ellis and the late Aaron Wildavsky (1990).

Thompson et al. (1990) argued that criticisms and abuses of functional theory are the result of attaching functions to society as a whole. They proposed that functional explanations were vulnerable to the charge of positing an illegitimate teleology. An illegitimate teleology exists when it is presumed that social processes and structures come into existence and operate to meet goals, without being able to document the causal sequences whereby goal attainment creates and regulates these structures and processes involved in their attainment.

It may be posited that to move from the system maintaining consequence of a behaviour to the cause of that behaviour seems to require a group mind. Through Cultural theory, Thompson et al. (1990) demonstrate not only how a behavioural pattern sustains a social system but also how that system maintaining consequence, in turn, sustains the behaviour pattern, without anything resembling a group mind. Thompson et al. argued that breaking down societies into their constituent ways of life and tying functions to them, 'rehabilitates a functional explanation'. Thus, functional explanation may be provided for risk perceptions according to alternative ways of life.

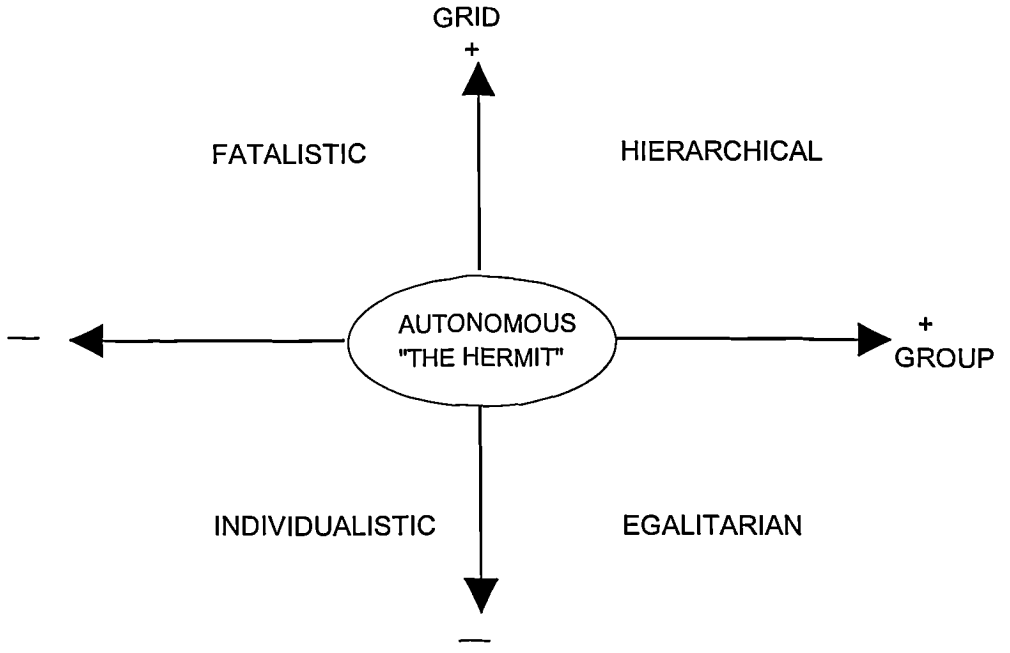
Drawing on the Grid-group typology proposed by Mary Douglas, Thompson et al. (1990) sought to extend her theory on culture and bring further clarity to cultural definitions by distinguishing between three terms: cultural bias, social relations, and ways of life. They defined five ways of life subscribing to the egalitarian, hierarchical and individualistic typologies proposed by Douglas but expanded her isolate definition distinguishing between a fatalist's and a hermit's way of life:

- fatalist - an individual who is excluded from group membership yet find themselves subject to binding prescriptions was termed as exemplifying a fatalistic way of life;

- hermit - an individual who withdraws from coercive or manipulative social involvement altogether. The hermit in transcending all other ways of life transcends the two dimensions of the grid-group.

Figure 3. Five ways of life mapped onto the two dimensions of sociality

(adapted from Thompson et al., 1990:8 Figure 1.)



Analysing each way of life, Thompson et al., 1990 further defined associated preferences[9] for: risk; blame; envy; economic growth; and scarcity as a basis for understanding behaviour and sustainability.

Table 2. Examples of cultural preferences (from Thompson et al., 1990: Chapter 3)

Risk	
Hierarchists	accept risks at high level as long as decisions are made by experts
Egalitarians	accentuate risk, mistrusting any part of the system holding danger
Individuals	view risk as opportunity
Fatalists	do not knowingly take risks
Hermits	adopt a myopic risk acceptance strategy for risk attached to them
Economic growth	
Hierarchists	promise that collective sacrifice will lead to group gain
Egalitarians	have little interest in economic growth as abundance makes equality problematic
Individuals	seek new combinations to create new wealth
Fatalists	find growth by chance
Hermits	enjoy growth without effort
Scarcity	
Hierarchists	seek to manage resource scarcity
Egalitarians	believe in resource depletion
Individuals	reject the idea of scarcity
Fatalists	believe in non-renewable resources
Hermits	scavenge from what nature provides
Blame	
Hierarchists	blame deviants and subject them to re-education or asylum
Egalitarians	reject authority and blame the system
Individuals	attribute personal failure to bad luck, personal incompetence or both
Fatalists	blame fate
Hermits	transcendence reference to other ways of life and thus blame
Envy	
Hierarchists	control envy through institutionalising inequality, arguing for specialisation
Egalitarians	prefer a simple life, envy is correlated with social acceptability
Individuals	flaunt what they have and use envy to spur ambition
Fatalists	satisfied with sufficiency
Hermits	satisfied with sufficiency
Apathy	
Hierarchists	see apathy as consent
Egalitarians	justify rejection of authority by arguing there is no real participation
Individualists	see apathy as consent
Fatalists	believe apathy is due to the fact one cannot make a difference
Hermits	transcendence of other ways of life justifies apathy

The viability of a way of life was viewed as a function of the mutually supportive relationship between a particular cultural bias and a particular pattern of social relationships. According to a 'compatibility condition' these biases and relationships cannot be mixed and matched. A change in the way an individual perceives physical or

human nature, for example, changes the range of behaviour an individual can justify engaging in and, thus the type of social relationship an individual can justify living in.

Viability requires each way of life to be resistant to change, proposing that anomalies are noted and rationalised until a persistent pattern of 'surprises' forces individuals to seek an alternative ways of life with a more satisfying fit with their perception of the world. The viability of the four engaged ways of life depends on the presence of the other three, the hermits strategy of withdrawal depends on the presence of the other four ways of life.

To demonstrate how change may occur within, and between, different ways of life Thompson et al. (1990) proposed a theory of surprise. Their theory is based on the premise that members subscribing to each way of life have a recognised view of reality. Their experience at sometime and in some place accords with that view. An individual may change their rationality if they become disillusioned with their way of life. This may happen if an individual is faced with successive anomalies or surprises that they cannot accept from their existing position. Ways of life are viewed as resistant to change. Anomalies are explained and pigeonholed, ignored or just noted. However, as evidence builds up against rationalised ways of life doubts build up which may be followed by defection.

Thompson et al.'s most distinct extension of work by Mary Douglas may be their interpretation of 'myths of nature' corresponding to each way of life (Thompson et al., 1990). From their theoretical explanation for change they build a typology of surprises, based on myths of nature as representations of reality. The typology of surprises depicts events in the 'actual world' which they claim would displace an individuals 'stipulated' view of the world and according way of life. This theoretical develop will be considered in the next section which addresses environmental perception.

Despite the acclaim received by Douglas and Thompson et al., a basic problem recognised in classifying existing social units and risk in terms of the cultural types may be to over simplify more complex shades of social differences (Johnson, 1987; Royal Society, 1992). Further, empirically testing broad characterisations provided by cultural theorists may themselves be problematic due to the inherent complexities of the

model. In light of such criticisms it is not surprising to find that discussions of cultural construction of risk have been centred predominantly on devising formulation for the social construction of perception with little empirical application (Thompson et al., 1990).

Where empirical examination has been undertaken the common point of departure has been to test a grid-group typology as proposed by Mary Douglas. Empirical evidence in support of cultural typologies have been provided at an organisational level in terms of qualitative in-depth case studies of social groups in medical (Rayner, 1986) and industrial settings (Bellaby, 1990) and direct quantitative tests (Dake, 1991, 1992).

Commenting on these works John Adams (1995) notes that Cultural theory, as proposed by Thompson et al. (1990), by its nature cannot be framed as a statistically testable hypothesis. Adam's recognised that grid-group analysis and modelling may be undertaken to examine definition consistency within a pre-defined cultural typology. However, he recognises that this does not test the central contention that only five ways of life exists within which individual views of the world are changing. This he views as defensible by theoretical speculation alone. Adams proposes that it is the theoretical principles of social construction and plural rationality raised by Cultural theory which are important.

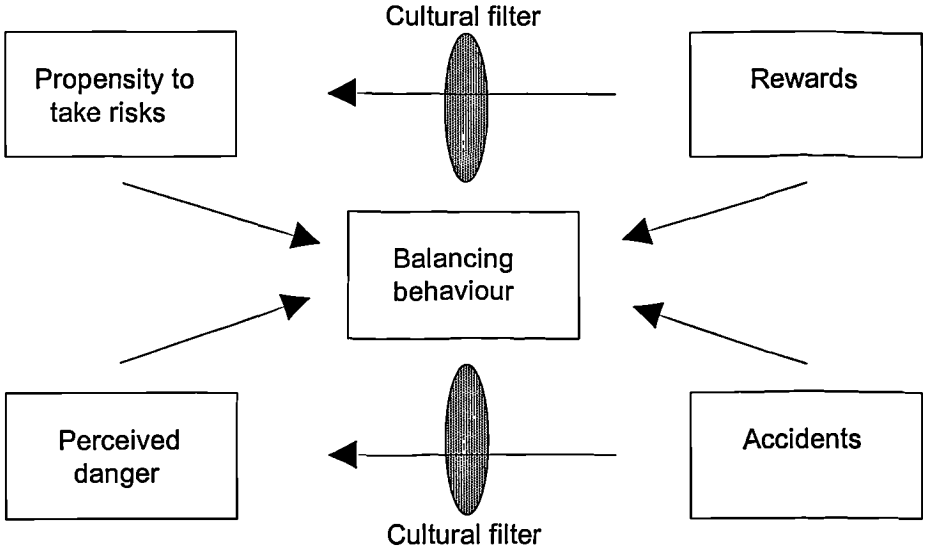
Providing theoretical support for Cultural theory, Adams (1995[10]) builds on the work of Thompson et al. (1990), proposing a practical theory of risk compensation based on the 'risk thermostat model'. Adam's, a geographer extensively researching risk, mainly in terms of road safety, has focused on the theory of 'risk compensation'. This theory "accords primacy in the explanation of accidents to the human propensity to take risks" postulating that "we all come equipped with risk thermostats" (Adams, 1995: ix).

Adams noted that in the "real interactive world of risk management, where the purpose of measurement or estimation is to provide information to guide behaviour, risk (representations and related decisions) will be contingent on behavioural responses, which will be contingent on perceived risk" (Adams, 1995:30). Modelling his theory on perceptions of road safety, Adam's proposed that an individual is not seeking zero risk but to balance risks, rewards, accidents, and perceived danger[11]. He views this

balancing behaviour as analogous to a thermostatically controlled system in which the setting of the thermostat varies between individuals, groups and cultures. Adams draws on Cultural theory to address the question of why he noted large variations in the setting of individual thermostats. As in the case of Cultural theory, risk is viewed as an interactive phenomenon, one persons balancing act has consequences for another.

Figure 4. The risk thermostat with cultural filters

(adapted from Adams, 1995: 43)



Adam's places importance on understanding how and why the balancing act is done as a basis for interpreting resultant risk management information produced and decisions made. Reflecting for example on the work of Beck (1992), Adams proposes that despite his individualisation theory within Beck's argument a number of cultural typologies such as hierarchical governmental arrangement can be recognised. Adams concludes "risk compensation and cultural theory provide a life-raft that saves one from drowning in a sea of reflexive relativism" (Adams, 1995: x).

Cultural theorists, unhappy with the application of such theoretical conditioning, have proposed that risk perception is a function of organisational structure. Proposals have been made that plural rationalities for management within organisations result from the structure of social relationships which motivate and set constraints and obligations on an individual's behaviour and construct broad frameworks for shaping attitudes

(Chartered Institute of Management Accountants, 1984; Perrow, 1984; Doherty, 1985; Jasanoff, 1986; Braithwaite, 1989; Ashby and Diacon, 1994; Fleming, 1994; Guest, 1994). As a result a recurring debate among the social scientists has been whether institutional/organisational structures cause culture or culture causes structure.

Thompson et al. (1990) address this debate with their provision that Cultural theory, defining ways of life according to a functional mode of analysis, provides no reason to choose between social institutions and cultural biases. According to a functionalist theory causal priority is given to neither cultural bias nor structure of social relationships. Social relationships and bias are viewed as reciprocal, interacting, and mutually reinforcing.

Most social theorists agree that the influence of political power and negotiations should be recognised as a primary factor supporting the social construction of perception within and between societies, cultures, institutions and organisations. Within political situations it has been the social construction and reinforcement of 'expert' opinion which has provided a dominant rationality for risk perception and management within a given group and a basis for which others may understand and critically examining such opinion. A dense network of communication stretching across social representative governments, organisations and groups facilitates political debate and acceptance of plural rationalities for risk definitions and subsequent management. (Wildavsky, 1979, 1987, 1988; Irwin, 1985, 1996; Collingridge and Reeve, 1986; Jasanoff, 1986; Lee, 1986; Dietz and Rycroft, 1987; Fessenden-Raden et al., 1987; Wildavsky, 1987; Krimsky and Plough, 1988; Nelkin, 1989; Otway and Wynne, 1989; Schwarz and Thompson, 1990; Fischer, 1991; Wynne, 1992a, 1992b; Hannigan, 1995).

From a review of theoretical debates which address risk perception it is initially concluded that considerable evidence has been provided to support a social constructionist perspective. It is proposed that we come to know about the world through various social relationships. The issue of viewing the social construction of risk perception according to institutional structure and/or cultural arrangement is considered to be a question which should be applied to a given research situation if the proposed answer is to contribute to the risk debate.

At the centre of a perceptual framework of risk determination is the risk communication mechanism inherent within the group, organisation or culture that supports a plural rationality for risk management. It is proposed that observations of group perception and rationality hold direct policy implications both for formal risk communication and risk management decisions (Collingridge and Reeve, 1986; Jasanoff, 1986; Dietz and Rycroft, 1987; Otway and Wynne, 1989). Concentrating on risk communication, in particular policy deployment, therefore additionally allows for some degree of integration between the fragmented categorisation of risk causation and subsequent risk definition at a practical level (Kates, 1975; Whyte, 1980; Irwin, 1985; O'Riordan, 1986; Common, 1988; Brown, 1989; Palm, 1990; Burton et al., 1993; Blaikie et al., 1994).

The interface between risk communication and risk perception

Research issues and concerns at the interface of risk perception and risk communication have been three-fold: the different conceptual approaches that are taken to risk communication to support the social construction of risk; the particular roles of policy[12] development and communication in influencing risk perceptions; and normative guidance on effective risk communication highlighting the role of trust.

Conceptual approaches to risk communication

In carrying out risk research at least four, partially overlapping, conceptual approaches to risk communications have been developed: a top-down one way model; a two way exchange model; a complex web and a political process. These approaches have been recognised within and across different levels of risk communication primarily according to divergent views on knowledge construction.

1. The simplest approach defines risk communication according to an 'engineering communications' framework in terms of a top-down or one way transmission of a message about a risk from a particular 'expert' communicator to a target 'non-expert' audience. Typically such an approach focuses on characteristics of the source, channel, message and receiver that might enhance the achievement of communication objectives (Lee, 1986). The one-way model has been criticised particularly on the grounds of an altruistic communicator which completely devalues the perspectives and knowledge of the risk bearer (Otway and Wynne, 1989).

2. A two way exchange or dialogue has been depicted which characterises risk as an interactive process of exchange of information and opinion among individuals, groups and institutions. It involves multiple messages that express concerns, opinions or reaction to risk messages or to legal and institutional arrangements for risk management. This highlights the interchange of communication in creating risk perception. This exchange may be linked to questions concerning the principles of trust fostered by long term dialogue.(Royal Society, 1992)

3. A complex 'tangled web' of communication has been associated with risk perception and communication within institutional and cultural contexts in which intentional risk messages and unintended signs and symbols are formulated, transmuted and embedded (Krimsky and Plough, 1988). According to a cultural approach it is recognised that all hazards have a history and that this influences an individual's interpretation of messages at a particular point in time (Fessenden-Raden et al., 1987).

Under these principles action and inaction by a risk communicator can, depending on context, send messages which may conflict with official communications. This implies that predicting the outcome of any intended communication may often be far more uncertain than is suggested by the simple one-way source-message-receiver model. Further, significant dilemmas may arise from conflicting goals in risk communication; for example, a message or messages about the same activity may need both to 'reassure' and 'warn'. A dilemma addressed by Otway and Wynne as the risk 'reassurance-arousal' paradox.

4. Finally risk communication has been viewed as an essential part of the wider political processes "that operate or ought to operate within society" (Royal Society, 1992: 121). This approach highlights communication as central to decision making regarding 'social' risk definition and subsequent risk management policy. Considerable debate exists regarding the role of experts and the public, including public right to know issues, in policy making (Jasanoff, 1986; Dietz and Rycroft, 1987; Fessenden-Raden et al., 1987; Krimsky and Plough, 1988; Nelkin, 1989; Otway and Wynne, 1989; Pearce et al., 1989).

It is proposed that by adopting principles of social construction the recognition of a range of risk perceptions represents a desirable rather than a problematic situation through which decisions about risks can be explained and subject to effective critique from a wide range of perspectives. An examination of the social interface between risk communication and risk perception enables this analysis to be addressed at a practical level.

Roles of policy development and communication in influencing risk perception

The most common focus of research attention has been the topic of risk communication pursued to relate theory and findings from basic risk perception studies to the formulation of policy and procedures[13] for risk management. Risk communication, in terms of policy development, has been viewed as encouraging a particular behaviour, guarding against an immediate risk, or illustrating the varied perceptions and frames of reference that different parties may bring to disputes. Hence, it is proposed that fostering appropriate forms of communication between the defined parties of risk perception and management may lead to acceptability of risk bias and contribute in some way to mutual understanding and resolution of disputes. (Lee, 1986; Fessenden-Raden et al., 1987; Krimsky and Plough, 1988)

Examining conceptual frameworks for the social construction of risk at a macro level, attention has been centred on governmental policy making for a given society and associated regulation. Discussions have centred on the need to establish acceptable, or tolerable, and unacceptable risk level for issues of social safety. Psychological studies examining the meaning of risk were the first to identify the need to distinguish between acceptable and unacceptable risks to individuals (Starr, 1969; Fischoff et al., 1981). The question of voluntary and involuntary risk exposure was also raised by these studies and has been considered as an additional question for government policy makers.

Traditionally, it has been the role of risk experts or 'professionals' drawn from dominant scientific traditions to determine the scale and severity of the potential risk incident (Funtowicz and Ravetz, 1990[14]; Dietz and Rycroft, 1987; Renn, 1992). However, recent emphasis has been placed on risk 'perceptions' rather than the 'objective facts' of risk determination. For example, this is demonstrated by the use of policy terms such as 'As Low As is Reasonably Practical' by the UK Health and Safety

Executive as a basis for communicating the need to interpret a 'tolerable' social risk with respect to a given situation (Fischoff, et al., 1981; Royal Society, 1992). This term has been applied, particularly in the case of the nuclear debate, to highlight that a judgement on what is tolerable is a political rather than a scientific question. As noted previously, a debate has arisen regarding the contribution of expert and/or lay opinion and propositional and/or formulaic knowledge. Political challenges to the mainstream view of scientific authority have represented such a variety of risk perceptions through an examination of the role of direct or indirect communication on political negotiations (Wynne, 1989a, 1992, 1993, 1996).

A central debate in government policy making is the rationality for adopting an economic language based on monetary representations of value. As noted by Adams, it is important to remember that monetary and other statistical scales represent the messenger and not the message. Social arrangements for monitoring risks through the collection and analysis of monetary values and other statistics and their subsequent communication reflect the biases of the collectors and analysts (Doherty, 1985; Wildavsky, 1988; Morgan and Henrion, 1990; McGoun, 1993; Murray and Smith, 1995).

For example, disputes regarding the role of cost benefit analysis (CBA) to make decisions about risk have centred on individual rationality. Some economists and accountants have conceded that in undertaking CBA not everything relevant to decision making can be translated directly into money. However, such factors are classed as residuals whose value can be inferred from the values of those things that can be monetarised through market preference. Money has therefore been identified as representing a means of communicating a relative value and not an actual value of a resource (Gray, 1990). A primary economic debate has been how to value a life for the purpose of public policy making, insurance sales and compensation claims. Similarly, establishing a potential 'kill size' of a debated risk has been the subject of policy negotiations (Pearce et al., 1989).

It has been proposed that methods of policy development and other communication mechanisms may be typified by a particular culture or way of life (Jasanoff, 1986; Nelkin, 1989; Kasperson, 1992). Policy development in a cultural context has been

viewed as an explicit representation of beliefs within a cultural group and a means of communicating this position to others. In forming cultural perceptions of risk, emphasis has additionally been placed on more informal communication networks and proposals that risk is subconsciously perceived.

Normative guidance on effective risk perception

In terms of risk communication and risk perception researchers have sought to provide practical advice to risk managers, particularly at an organisational level. The value of reflecting on mental model approaches in order to understand the skills needed to solve specific problems or operate a specialised piece of equipment has been highlighted as a basis for establishing appropriate risk communication mechanisms (Kahneman and Tversky, 1981; Irwin, 1985; Jungermann et al., 1988; Braithwaite, 1989; Brown, 1989; Ansell and Warton, (eds.), 1992; Carter and Jackson, 1992; Ashby and Diacon, 1994; Toft, 1995; Irwin, 1996). Debate has been centred on the use of individual mental models provided by experts and/ or lay subjects (Collingridge and Reeve, 1986; Dietz and Rycroft; 1987; Nelkin, 1989; Otway and Wynne, 1989; Wynne, 1992a, 1993; Wynne and Mayer, 1993; Beck et al. 1994; Lash 1994; Lash et al., 1996).

An issue common to risk communication has been the importance placed on 'trust' in achieving effective communication and influencing the social construction of risk. Emphasis has been placed on the effect of risk communication on perception in terms of the trust placed in the communicator. The establishment of trust has been considered with respect to establishing and understanding the 'social rationality' of the risk communicator and risk perceiver, reflecting on a debate centred on the influence of political power and the relative value of expert and lay opinion. (Wynne, 1980; Lee, 1986)

An examination of the interface between risk communication and risk perception serves two purposes. Firstly, it provides additional theoretical reasoning in support of a social constructionist perspective on risk perception. Secondly, it illustrates the potential practical application of such theorising.

During the discussion of risk perception in this Chapter so far, brief reference has been made to theoretical positioning on environmental perception and communication by

social theorists as a means of illustrating social constructionist perspectives. A detailed discussion of environmental risk perception has been avoided to highlight the general applicability of social constructionist principles, and to dedicate a separate space for the due consideration to environmental risk.

The social construction of environmental risk perception

Defining environmental risk

Environmental risks have traditionally been defined according to the element, individual or group perceived to be at risk, and the perceived cause of the risk under consideration. Interpretation of environmental risk depends largely on the perceiver's ontological and epistemological position on nature and the human interface with nature. Historically within environmental risk debates anthropocentric positions have dominated and eco-centric positions have remained marginalised.

Environmental risks have been perceived as induced by natural phenomena. For example those triggered by climatic or geological variability have been termed 'acts of god'. Alternately, environmental risks resulting intentionally or unintentionally from human interaction with the physical environment have been termed 'acts of man'. Environmental risk causation has further been categorised according to three partially overlapping distinctions 'natural', 'technological' and 'social' risks. These distinctions have been made according to whether the environmental risks being managed are considered to emanate from the physical 'natural' environment, manufactured 'technology' or from within 'society'.

Historically, as the scale of human interaction with the physical environment has increased, the margins between these categories have become increasingly blurred. These categories have been further sub-divided according to specialist risk analysis undertaken within each category and viewed in terms of the perceiver and situation under consideration (Burton et al., 1978; Kates, 1978; Whyte and Burton, 1980; O'Riordan, 1986; Whyte, 1986; Krimsky and Plough, 1988; Daly, 1989; Pearce et al., 1989; Daly and Cobb, 1990; Palm 1990; Burton et al., 1993; Robinson and Timmerman, 1993).

It should be noted that the terms risk and hazard have often been used interchangeably when applied to environmental issues. In distinction the term hazard is more often used to refer to a specific 'risk situation' such as hazardous waste. Additionally, reference to disaster has been made to depict the 'occurrence' or risk 'potential' when considering large scale damage or severe risk 'consequence' (Whittow, 1980; Fisher, 1991; Albala-Bertrand, 1993; Richardson, 1993; Smith, 1993; Fleming et al. 1994; Guest, 1994).

It is proposed that as the scale and severity of human impact on the natural environment has increased, theoretical justifications for the separation of natural and human systems have been displaced and margins between categorises of risk causation have become increasingly blurred. Advocates of anthropocentric and eco-centric philosophies have reduced environmental problems to issues of human relationships and socio-cultural and political theorising (Pepper, 1996).

Communication and the co-construction of nature, culture and society

An examination of the environmental debate from a social constructionist position has centred attention on knowledge construction in terms of ones view on 'reality'. As previously recognised, reifying environmental risks as if they are shaped by 'real' processes in nature alone and as if the range of possible societal responses, is thus determined, is no longer an acceptable proposition. Alternately, the occasional sociological tendency to criticise such scientific reification by advancing the view that all such problems are social constructions, and hence not real, is viewed as equally self-defeating. Such reductionist positions have been viewed as simply reinforcing a traditional debate of nature versus culture.

Social theorists, whether highlighting a need to reflect on modernity or taking a post or anti modern view, have recognised a common need to find new terms to reflect the co-construction of nature and culture or society. Thus, an emphasis is placed on communication as a reflection of socially constructed environmental risk perceptions and associated environmental management rationalities.

Considering environmental risk as an issue of science and perception has resulted in particular attention being devoted to technological development as a source of risk, and the evaluation of associated scientific reasoning and proposed management solutions.

In particular, research has addressed the development and deployment of formal policies as a mechanism supporting the social construction and reinforcement of perceptions of environmental risk and associated rationalities for environmental risk management (Irwin, 1985, 1996; Dietz and Rycroft, 1987; Wynne, 1989a, 1989b, 1992; Wynne and Mayer, 1993).

For example, reflecting on the 'risk society', Beck started from the premise that the environmental crisis is primarily not a natural but a social crisis. Beck recognised a degree of real physical-biological risk viewed as currently beyond modern systems of prediction and control. He viewed the risk society as reflexive with individual critiques modernising the modern to counteract the natural damage of earlier excesses. Beck highlighted the role of environmental risk discourse and communication in terms of technology, individualisation and the transformation and cultural renewal of the political as central to this solution.

Wynne alternately argued that we have never been modern and addressed the need to treat uncertainty and indeterminacy more seriously as potential sources of risk and embrace them in broader debate about the implications of societal commitment to production processes. He notes that "in the rapid escalation of environmental concern, various established norms and perceptions have been cast loose" (Wynne, 1992b: 137) and the political voice predominates in evaluating and processing information about environmental risk.

A common reference within the scientific debate regarding environmental technology and management has been the recognised shift in the goals of environmental policies from end of pipe solutions towards upstream prevention of environmental damage. It is commonly accepted that this shift was founded on the implicit acceptance of the inherent limitations of the anticipatory knowledge on which end of pipe technological solutions concerning environmental discharges have been based. Wynne's interpretation of this shift has gone beyond that of many theorists who have proposed that moving attention upstream exposes uncertainty. Assessing the foundations of environmental/ risk perception Wynne has distinguished between uncertainty and indeterminacy, recognising indeterminacy's, especially social ones. Wynne has advised,

that to fully address risk perception and associated management, we should open up 'natural knowledge' construction and address such foundations.

In a similar vein cultural inquiry into the origins of beliefs about nature and humankind's place in nature has focused attention on management beliefs and perceived responsibility guiding risk taking behaviour. Research has been particularly inspired by the work of Douglas[15] and Wildavsky (1982) who proposed that environmental risk is perceived through culturally constructed filters inherent within typological ways of life. Modelling the selection of technological and environmental risks for public attention on the development of US environmental legislation, they further proposed that public perceptions of risk and its acceptable levels are 'collective constructs'. Douglas and Wildavsky viewed these constructs as the result of politically debated perceptions reflecting different ways of life and inherent views of nature.

Acknowledging that "we cannot know the risks we face" Douglas and Wildavsky proposed that "we must act as if we do", supporting political debate as a medium for developing a plural rationality for management (Douglas and Wildavsky, 1982: 1). Thus, Douglas and Wildavsky, like Wynne, recognised that the final definition of a public environmental risk is dependent upon which cultural/ political voice predominates in the evaluation and processing of information about environmental risk issues[16].

Central to the social construction of environmental risk perception is the communication mechanism inherent within the social form recognised. Considering the communication models proposed previously, it is recognised that as interrelationships between nature, culture and society have been highlighted there has been a movement towards complex webs of communication. However, despite this recognised shift, political communication continues to reflect a predominance on expert opinion with the view of the lay person marginalised.

Reviewing in greater detail social foundations for environmental perception, in particular cultural myths, an insight can be gained regarding risk interpretation and associated rationalities for environmental management.

Environmental myths and rationalities for risk management

Ecologists studying managed ecosystems have provided evidence of risk management tied to socially constructed perceptions of environmental risk. For example, Holling (1979) discerned pattern consistencies in the different approaches adopted by environmental management institutions in apparently similar situations. He noted that when confronted by the need to make decisions with insufficient information in the face of uncertainty they assumed that physical nature behaves in certain ways. He reduced the various sets of assumptions he encountered about how physical nature behaves in the face of uncertainty to four 'myths' of (1) benign nature, (2) ephemeral nature, (3) perverse/tolerant nature, and (4) capricious/resilient nature. These divergent myths were seen to imply "different policy postures ranging from ignoring threats to developing fail-safe designs, designs that are safe in failure, and designs that benefit from changes" (Holling 1979: 98)[17].

Holling warns that the myths are only a partial representation of reality, the acceptance of which leads to the accumulation of new knowledge, that eventually exposes their incomplete nature. In acknowledging these 'myths' an attempt is made to consciously trace the logical consequences of alternative approaches taken to deal with the unexpected. Holling represented these shapes with an analogy of a ball and a landscape.

- Nature benign - represents global stability. A ball moves in a valley shaped like a bowl. Assuming the bowl is infinitely large or events beyond the rim are meaningless, no matter how far the ball moves it will eventually return to rest at the bottom. To forgiving nature, trials and mistakes of any scale can be made and the world will recover once the disturbance is removed.

- Nature ephemeral - is an opposing myth of instability. The landscape is a convex hill rather than a bowl. At the top of the hill the ball is at an unstable equilibrium, if it is displaced slightly it will roll away. Complete instability of this kind leads to extinction. While systems persist the conditions of this myth seems to be impossible but are the subject of philosophical and scientific debate.

- Nature perverse/tolerant - demonstrates a midway condition between the two previous myths. The dominant feature of this myth is the apparent existence of

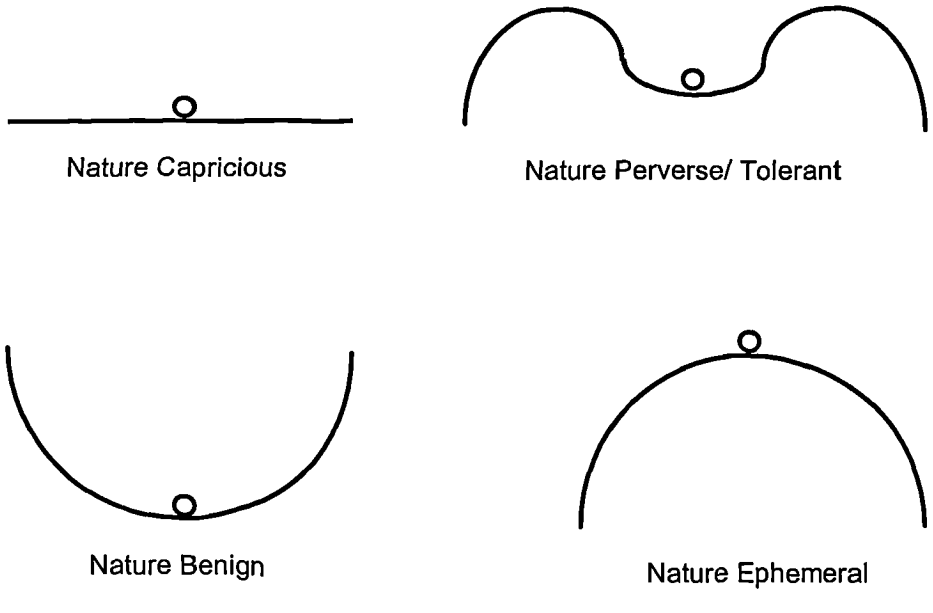
more than one equilibrium state. If a ball travels over the boundary between basins a radical change in behaviour occurs. Incremental trial may not seem to be causing significant error yet could accumulate until one more trial leads to a new state of stability.

- Nature resilient - The ball as nature holds the property that allows it to absorb and utilise change. It reflects a benefit from failures. (adapted from Holling, 1979)

Building upon Holling's work, Schwarz and Thompson (1990) proposed the existence of a fifth myth of capricious nature: Nature capricious - reflecting a random unpredictable world where groups "do not really manage or learn: they just cope with erratic events" (Thompson et al., 1990: 27) It was provided that as ecologists addressed only management action and learning, they did not fully explore this myth. By considering environmental management from the view of management rather than the environment this myth was discovered. Thompson et al. (1990) claimed that nature: capricious, perverse/tolerant; benign; and ephemeral were the four primary myths and nature resilient was a "meta-myth" that subsumes the other four (Thompson et al., 1990: 26).

Figure 5. The four primary 'myths' of nature

(Thompson et al., 1990: 27 Figure 2 adapted)



Cultural theory, proposed by Thompson et al. (1990), expanded this view with the proposition that the five dominant ways of life and inherent views of reality, previously addressed, are illustrative of individuals myths of nature. Under their proposals of constrained relativism, each myth is a partial representation of reality. In modelling ways of life and myths of nature Thompson et al. seek to rationalise an individual's environmental management behaviour:

- Nature benign - in the context of human activity, not something that needs to be managed. The management style associated with this myth is therefore relaxed, non-interventionist, laissez-faire: that of the individualist.

- Nature ephemeral - nature is fragile, in danger of being provoked by humans into careless collapse. The objective of environmental management is the protection of nature for human rights: the egalitarian.

- Nature perverse/tolerant - modified from the first two. Within limits, nature can be relied on to behave predictably. Regulation is required to prevent major excesses, while leaving the system to look after itself in minor matters. This is the ecologists equivalent of a mixed economy model. The managers style is: interventionist and hierarchical.

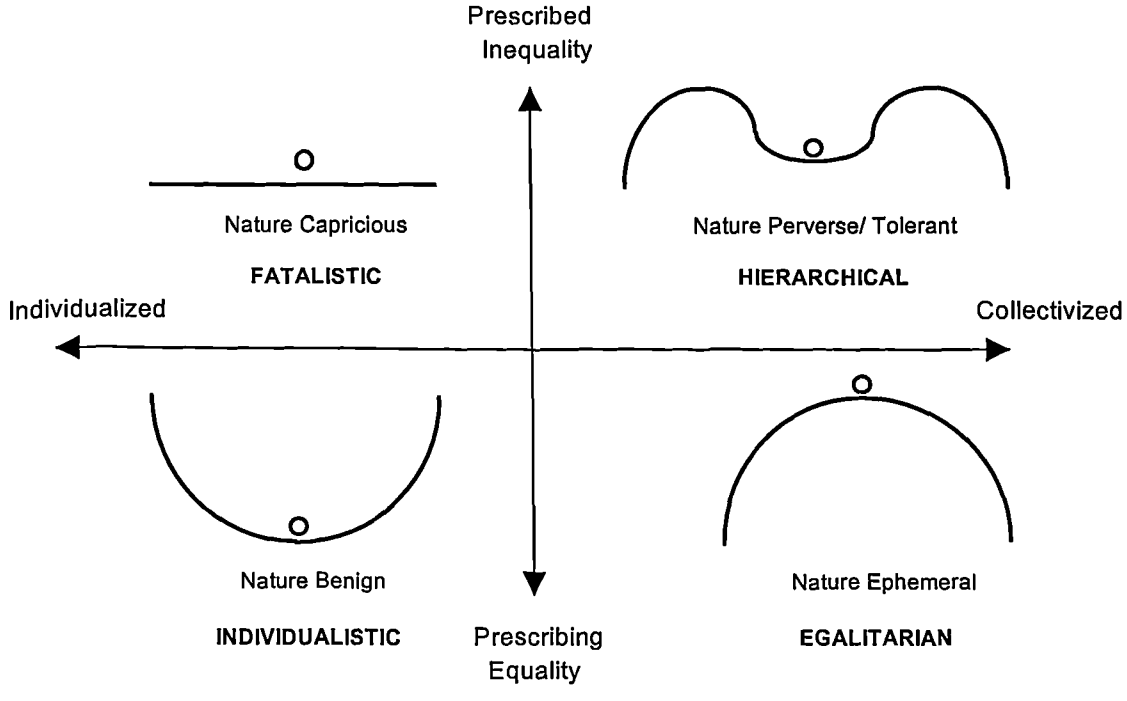
- Nature capricious - represents the view of laissez faire, in the sense that there is no point in management: the fatalist.

- Nature resilient - has been referred to as a "sort of meta-myth" that subsumes the other four: the hermit.

(Holling, 1979; Thompson et al., 1990).

Four rationalities for environmental management illustrated by the: hierarchist; fatalist; egalitarian and individualist are represented on the Grid-group on the following page. The fifth position of the hermit with a resilient view of nature transcends the grid.

Figure 6. The four rationalities for environmental management (adapted from Adams, 1995: 37 figure 3.3)



As noted previously, Thompson et al. (1990) provided a typology of surprises to explain how the myths of nature can be sustained and how a change of myth occurs. The typology illustrates surprise for an individual who stipulates that the world is one way and acts in a world which resembles another way.

Table 3. A typology of surprises (depicted by Thompson et al., 1990: 71 Figure 4.)

Actual world → Stipulated world ↓	**capricious**	**ephemeral**	**benign**	**perverse/tolerant**
capricious (fatalist)		expected windfalls don't happen	unexpected runs of good luck	unexpected runs of good and bad luck
ephemeral (egalitarian)	caution does not work		others prosper	others prosper
benign (individual)	skill is not rewarded	total collapse		partial collapse
perverse/tolerant (hierarchist)	unpredictability	total collapse	competition	

According to Thompson et al. (1990), members subscribing to each way of life have a recognised view of reality. An individual may change their rationality if they become disillusioned with their way of life, when faced with successive surprises that they cannot accept from their existing position. Ways of life are viewed as resistant to change as anomalies are explained and pigeonholed, ignored or just noted. However, as evidence builds up against rationalised ways of life doubts build up which may be followed by defection.

As noted by Thompson et al. (1990), and reflected by Pepper (1996), by tracing the origins and social context of ideas it becomes easier to understand their practical implications and significance. Adopting a historical and ideological perspective, Pepper highlights that there is no one objective monolithic truth about society-nature relationships but different truths for different groups of people with different social positions and ideologies. He notes that by studying and reconstructing the perceived environment the observer is able to explain particular options and actions on the part of the group being studied[18] .

Drawing on this principle Adams (1995: preface) recognised the reflexivity of environmental/risk perception as "the world and our perceptions of it are constantly transformed by our effect on the world, and its effect on us". As individuals' perceive nature through their cultural filters, the important influence on decision making is thus environmental perception and the rationality for perception. Adams noted the importance of recognising that a researcher's position and perceptions influence research choices and perception of results. To understand the environmental debate, the assumptions and perceptions or 'myths' concerning nature should be examined. To address environmental risk Adams modified his proposal for a risk thermostat model to symbolise the impact of human behaviour on nature and all the natural forces that condition the movement of the risk thermostat.

Summary

Conceptualising risk as a social construct provides a basis from which perceptions of environmental risks can be defined and examined, facilitating debate based on corresponding rationalities for environmental management. An analysis of the interface between environmental risk communication and perception provides a practical means

of examining and illustrating mechanisms which support the social construction of environmental risk.

Adopting a social constructionist perspective addresses the question of why individuals in different ways of life behave as they do by seeking to analyse and understand an individual's social role and relationships. The question of compulsion - why must people who live in a given mode of social relationships behave in the way they do - is answered according to the imperatives created by social groups that compel people to behave in ways that maintain their way of life. Explaining behaviour therefore entails understanding the socio-cultural dynamic that generates attitudes.

Testing the basis on which bank representatives perceive environmental risk can thus provide a framework for the recognition of risk management principles. How, and why, environmental issues are managed are examined as interrelated questions according to a social constructionist perspective.

Chapter one highlighted that the social construction of perceptions within a bank has not, to date, been fully investigated by research. Emphasis has either been placed on how 'or' why questions, and the relative nature of these questions and explanations have not been examined. Findings in Chapter two revealed that emphasis has been placed on environmental policy development and communication within banks to support a plural rationality for environmental risk management within the lending process.

It is therefore proposed that the apparent failure of accounting research to date to provide a framework for lending decisions is due to a lack of emphasis on the social context of individuals. In Chapter four the findings drawn from Chapter one and two are re-evaluated from a social constructionist perspective. A theoretical proposal of how, and why, corporate environmental performance is considered within bank lending processes is developed based on social constructionist principles.

Notes

[1] For recent reference on chaos and complexity theory applied in economics see: Arthur, B. W. (1994); Mouck, T. (1994); Parker and Stacey (1994).

[2] For an introductory overview of this debate see papers in Royal Society (1983, 1992) and Krimsky and Goulding (eds.)(1992).

[3] The application and value of such a mental models approach shall be further examined when the development of risk communication mechanisms are considered.

[4] The issue of human error and blame within organisations has been the subject of considerable debate, particularly with respect to crisis management. See, for example: Ashby and Diacon, 1994; Fleming et al., 1994; Guest et al., 1994; and MacGregor and Hopfl, 1994.

[5] Wynne's arguments are illustrated through various research examples. For example, sheep farmers and of 'craft based knowledge' of Andean potatoe farmers, see Wynne Chapter. 2 in Lash, Szerszynski and Wynne, "Risk, Environment and Modernity" (1996). The Windscale inquiry and wider nuclear debate see Wynne (1989a).

[6] It is worth noting that her early ideas on the Theory stem from an analysis of the concepts of pollution and taboo in her book Purity and Danger (1966).

[7] For an extensive review of Douglas's Theoretical development see Spickard (1984; 1989) and Douglas (1989).

[8] See earlier works as a reflection on the authors progressive theoretical positioning: Thompson (1979; 1980; 1982a and 1982b; 1988; 1989); Thompson and Wildavsky (1986); James & Thompson (1989) and Wildavsky (1979; 1987; 1988).

[9] See also Wildavsky, 1987.

[10] It is noted that Adams publication of "Risk" in 1995 grew out of an ESRC research project called risk and rationality initially undertaken with Michael Thompson.

[11] See Adams (1995) main text for discussion of such bias within information used to support road safety policy development, in particular seat belt legislation.

[12] The term 'policy' may be interpreted widely across different social groups and in different situations. For the purpose of interpretation within the text a 'policy' should be taken to denote anything from a formal documentation to an implicit code of practice accepted by a group.

[13] Based on the same principles as policy interpretation, the term 'procedures' should be taken to denote anything from a formal documentation to the implicit conduct of behaviour.

[14] For example, see Funtowicz and Ravetz (1990) proposal for a means of evaluating the statistical basis of information as a function of the reliability of the information and the qualification of associated experts.

[15] Douglas (1966) provides an introduction to this stream of thought reflecting a symbolic interpretation of the rules of purity and pollution. Douglas shows "that to examine what is considered as unclean in any culture is to take a looking glass approach to the ordered pattern which that culture strives to establish" (1996: preface).

[16] For an extended debate regarding the role of politics in risk perception see also Dietz and Rycroft (1987).

[17] See also Timmerman, (1986) and for a practical example, Dake and Thompson (1993).

[18] A prevalent organisational analysis has been to examine perceptions of environmental risk associated with a given project or activity and the influence on perceptions of accidents or disasters particularly with respect to Tversky and Kahneman's (1973) proposals of the influence of availability heuristics.

Chapter 4

Bank rationalities for environmental management

Introduction

This thesis examines corporate environmental performance considerations within bank lending processes. Questions addressed are thus centred on how the environment is considered by bank lending officers, and their rationalities for environmental management considerations within given lending situations.

From an analysis of research and professional commentary focused on bank lending processes in Chapters one and two, it has been revealed that the nature of bank lending situations are inherently individual and complex, seemingly influenced by a range of variables including: bank lending officers; the lending bank; borrowers/ borrowing companies; and the banking environment. To date, no theoretical foundation has been proposed to explain inter-relationships between these variables. Key questions remain regarding how the lending process is influenced by a lending officer's personal and social characteristics, and how variables within the lending situation influence a bank lending officer's decision process.

Research centred on bank lending processes has largely failed to address environmental considerations. However, a review of professional literature, in Chapter two, provides evidence that banks have adopted environmental lending policies founded on credit 'risk' management principles, in addition to ethical positions on the environment. Questions emerge from these findings regarding how a lending officer defines risk, and what the relationship is between a bank's ethical policy and lending practice.

In Chapter three, a theoretical review of risk understanding highlighted risk definition as an issue of individual perception and social construction. The role of policy as a mechanism supporting the social construction of perception and management rationalities was a central theme addressed. By adopting such a perspective, it has been illustrated that questions of how and why environmental risk is perceived, and associated management effort is rationalised, become interrelated. This may explain

why previous researchers in this area have faced problems of interpretation when addressing these questions.

The fundamental construction of knowledge has been touched on by accounting researchers addressing bank lending processes. For example, psychological evaluations have been conducted of a bank lending officer's decision process and issues of social context have been raised. However, such issues have not been central to research, and their consideration has lacked the support of a strong theoretical framework for research design.

It is proposed in this Chapter that by re-interpreting prior research findings according to social constructionist principles the basis for corporate environmental performance considerations can be explained theoretically, and a method for further empirical testing appropriately designed. Integral to such an evaluation of social relativism is an examination of communication mechanisms supporting the social construction of perception.

A lender's perception of risk

A social construction

By applying social constructionist principles to the research area, 'how' and 'why' a bank lending officer perceives risk become interrelated questions. Accordingly, social influences on perception are considered in terms of social relationships and communication mechanisms supporting bank lending processes and the construction of risk perception.

A bank 'hierarchy'

Through an analysis of accounting research addressing bank lending processes, the social structures of lending functions have been characterised as hierarchies within which authority for decision making is delegated to individual lending officers (Mansfield, 1979; Stephens, 1980; Cooper et al., 1981; NEDC, 1986; Danos et al., 1989; Berry, Crum and Waring, 1993; Deakins and Hussain, 1994). It was proposed that the resultant social relationships and rules inherent within such bank structures construct broad frameworks for shaping a lending officer's perception of risk (Abdel-

Khalik, 1973; Eyes and Tabb, 1978; Stephens et al., 1981; Berry et al., 1984; Wilkinson, 1984; NEDC, 1986; Berry et al., 1987; Nutt, 1989; Innes, 1990; Berry, Crum and Waring, 1991, 1993; Deakins and Hussain, 1991, 1994; Berry et al., 1993a). As research findings have illustrated, the detailed social structure, roles and relationships within individual bank lending functions are varied and each hierarchical arrangement is unique.

Accounting research provides evidence of the influence of *bank* policy on lending processes (Egginton, 1977; Midland Bank, 1981; Wilkinson, 1984; NEDC, 1986; Berry et al., 1988; Berry, Crum and Waring, 1991, 1993; Deakins and Hussain, 1991; Fulmer, 1992). However, no distinction was made between bank policy and lending policy. Drawing on the conclusion that a bank lending function is characterised as a social hierarchy, it is proposed that a tiered policy structure exists within the framework of the wider organisation. Accordingly, hierarchical social rules and relationships within a bank govern individual functional arrangement and inter-relationships, and lending policy is a derivative/application of bank policy. Based on this proposal, a transient social boundary is drawn around members of the bank, rather than members of the lending function. It is proposed that within this bounded group social rules and relationships support the construction of a plural rationality for management.

Cultural engineering

The construction of a plural rationality for management within a bank lending process may be viewed from two perspectives. It may represent an 'engineered product' of organisational activity (Perrow, 1984; Duchessi et al., 1988; Braithwaite, 1989; Ashby and Diacon, 1994; Chicken, 1994; Fleming et al., 1994) or a 'cultural view' of life (Douglas, 1986; Jasanoff, 1986; Rayner, 1986; Bellaby, 1990; Thompson et al., 1990; Dake, 1991; Royal Society, 1992; Guest, 1994). In each case rationality is a product of an individual's social role and relationships.

Within an engineered organisation, individuals adhere to codes of practice as a result of motivations, constraints and obligations placed on them according to their role within an organisational structure. According to a cultural view, individuals voluntarily select and adhere to socially constructed beliefs and bias which support a particular 'way of life'.

As previously noted, an individual lending officer's role and responsibility is depicted according to their delegated authority to make decisions within defined limits. These limits may be viewed as constraining a lending officer's behaviour and/or as a representation of their role. A lending officer's adherence to delegated bank/lending policies and procedures within their given role may be viewed as an obligation voluntarily adopted, or may be the result of the imposition of organisational constraints.

Reference to bank policy provided by practitioners and researchers include documentary statements of principles and procedures, and the focus of materials and discussion within training programmes, presentations and meetings (Egginton, 1977; Wilkinson, 1984; NEDC, 1986; Berry et al., 1988; Berry Crum and Waring, 1991, 1993; Fulmer et al., 1992; Lascelles, 1993; Barrett, 1994; Deakins and Hussain, 1994; Griggs, 1994; Smith, 1994; Clark, 1995). No evidence has been found to indicate that lending policy and procedures are formally enforced within a bank. A desire for promotion, or the threat of dismissal, may be viewed as a motivational influence on lending officers to meet their obligations, but no evidence has been provided of formal bank inducements. In light of these findings, it is proposed that bank lending officers voluntarily select and adhere to culturally constructed beliefs and bias which support their chosen 'way of life'.

As recognised by Thompson et al. (1990: 4), "the study of culture, however defined, has characteristically emphasised uniqueness. Cultures, in this conception, ...are a collection of people that think a bit differently, employ somewhat different signs, or whose customary practices and/or artefacts have something special about them". From an analysis of findings in Chapters one and two, banks appear to illustrate such cultural uniqueness.

As described in Chapter three, Thompson et al. (1990) went on to propose a 'Cultural theory' reducing basic cultural convictions to a distinctive set of assumptions, bias and beliefs about reality. These core assumptions formed the basis of the proposal that five cultural typologies can be recognised, each representing a partial view of reality. The social characteristic of banks, discussed above, accords with Thompson et al.'s description of cultural hierarchies with strong group boundaries and binding prescriptions.

In viewing a bank as a cultural hierarchy, policy and procedural development is recognised as an inherent characteristic of a 'way of life' with lending officers supporting and following culturally 'engineered' rules and relationships. The delegation of authority within a bank represents such cultural principles. As noted in Chapter three, a reoccurring debate among social scientists is whether institutional structures cause culture or culture causes structure. It is argued according to Cultural theory, as proposed by Thompson et al. (1990), there is no reason to choose between structure and cultural influences as relationships and bias are viewed as reciprocal, interacting and mutually re-enforcing.

According to Cultural theory a number of cultures may exist within an organisation, or a number of organisations may exist within a culture. It may be argued that each bank function reflects the characteristics of a separate culture. However, given the recognised relationship between bank and lending policy, it is proposed that it is more appropriate to draw a cultural boundary around the wider bank. Formulated as a cultural rule, a documented bank policy represents, communicates and re-enforces common perceptions within a bank. As a result, bank officers may adopt a plural rationality for management that they apply to individual functional situations.

Additional evidence is provided to support the conclusion that a bank can be viewed as a cultural hierarchy by addressing the communication mechanism facilitating knowledge construction. Reflecting on this mechanism, questions raised earlier regarding the construction of risk perception within a bank are addressed.

A 'web' of communication

Within such a hierarchy, formal channels of communication follow lines of delegated authority, and definitions of risk inherent within communications are at the ultimate discretion of senior management and functional policy makers. A tiered structure of policy communications relates bank policy to functional policy. Risk communication within this structure may viewed as a one way, top down, message. However, when considering the process and purpose of policy making and its deployment a more complex mechanism of communication is recognised.

Bank members, according to their delegated role communicate, negotiate and to a degree react to information from outside the organisation. The economic provision of services across the organisational boundary is an obvious example of this. Bank members, such as policy makers and lending officers, operating at social boundaries will receive risk signs from outside the organisation. For example, changes in legislation, economic policy, stakeholder pressure or market trends. Recognising these potential influences on lending procedures accounting researchers have drawn participants from specific geographic locations with relatively comparable influences (Eyes and Tabb, 1978; Berry et al., 1984; Bannock and Morgan, 1988; Berry Crum and Waring, 1993).

Policy makers and lending officers will interpret these changes in terms of their influence on the bank and negotiations with borrowers. Within their delegated role, each lending officer may be considered as a specialist with unique functional experience. On this basis, it is proposed that formal policy design will involve consultation with lending officers. An open dialogue is particularly likely to be favoured by policy makers where a risk situation is highly subjective and a pragmatic approach is required (Irwin, 1985, 1996; Dietz and Rycroft, 1987; Wynne, 1989a, 1989b, 1992; Wynne and Mayer, 1993).

Reflecting on the social relationships and rules inherent within the organisation, policy makers will issue messages selected according to their understanding of how lending officers form their perceptions of risk. As recognised in Chapters one and two, communication mechanisms adopted by policy makers include formal documented: policies; training notes; mnemonics guidelines; reference manuals; and work sheets such as checklists and questionnaires (Egginton, 1977; Wilkinson, 1984; NEDC, 1986; Berry et al., 1988; Berry Crum and Waring, 1991, 1993; Fulmer et al., 1992; Lascelles, 1993; Barrett, 1994; Deakins and Hussain, 1994; Griggs, 1994; Smith, 1994; Clark, 1995). Evidence of more informal communication mediums co-ordinated by policy makers include presentations, discussion groups, case referrals and newsletter circulation (Berry, Crum and Waring, 1993; National Westminster Bank, 1993b, 1994b, 1995b; Barrett, 1994; Robins and Bissett, 1994; Smith, 1994; Swiss Bank Corporation, 1995).

The above findings illustrate that communication between lending officers is not restricted to lines of delegated authority. Formal and informal communication channels have been recognised which transmit risk messages up, down, or across a bank and a lending officer may be a sender, messenger or receiver of a documented or verbal message. As noted previously, risk messages may also be received by bank members from outside the organisation. In addition, actions may implicitly transmit intended or unintended risk signals. The sender, message, messenger and the receiver will all have an influence on the risk message and resulting perception of risk (Douglas, 1970, 1975, 1982b; Fessenden-Raden et al., 1987; Krimsky and Plough, 1988; Thompson et al., 1990; Adams, 1995).

Identical copies of a document may be passed among a number of bank lending officers and interpreted differently according to the context of presentation and the frame of reference of the individuals involved. Alternatively, a verbal message may be re-interpreted a number of times as it is repeated and debated between individuals during training programmes, lending committee meetings and loan referrals between lending officers. It is proposed that risk communication according to such processes may be characterised as a complex web of formal and informal interpretation, consultation, and referral (Fessenden-Raden et al., 1987; Krimsky and Plough, 1988; Royal Society, 1992).

A lending officer's transmission and interpretation of risk messages will reflect and re-enforce cultural beliefs and bias within the lending process (Douglas, 1978, 1985, 1986, 1992; Douglas and Wildavsky, 1982; Jasanoff, 1986; Rayner, 1986; Bellaby, 1990; Thompson et al., 1990; Dake, 1991; Royal Society, 1992; Guest, 1994). The transient boundary drawn around bank members is viewed as a cultural filter through which risk messages flow and bank members transmit and interpret 'information' according to a common rationality. These messages will reflect unique cultural perceptions of risk and form the basis of a plural rationality for risk management.

Individuals negotiate a set of risk beliefs capable of supporting their chosen way of life. Social relationships generate risk preferences and perceptions that in turn sustain those relationships. Change occurs when successive events fail to meet an individual's risk expectation to the point that an individual becomes disillusioned by a given cultural

view and seeks an alternative. As shown in Chapter three, changes of perception and rationality may be explained according to Thompson et al.'s (1990) 'typology of surprises'.

The publication of a bank policy statement may act as a basis for negotiation with parties outside the organisation (Smith, 1994; Vaughan, 1994). By placing emphasis on the reflexive nature of a bank lending officer's risk perception the facilitation of negotiations and partnerships within a wider social, political and economic situation may be understood. According to Cultural theory, acceptance of five fundamental ways of life provide a starting point from which negotiable positions may be supported, interpreted and understood. Communication between ways of life is facilitated because the ways of life are limited. Thompson et al. (1990: 269) stressed that "if we had never heard the same argument twice it would be difficult to see how we could ever understand anyone outside our frame of reference".

By putting preferences and ways of life in a means end reasoning chain, individuals and observers can deduce preferences from a way of life. Additionally, preferences emerge as unintended/unanticipated consequences of individuals attempting to organise their lives in a certain way. In choosing how to relate to others, individuals commit themselves to a number of choices. "Functional explanations show that ...how social relationships are sustained and how preferences are generated are the same question" (Thompson et al., 1990: 66).

This method does not deny the existence of cognitive reasoning but provides that for each decision individuals do not necessarily reflect back to their basic beliefs and bias[1]. Individuals have organised life in a way to deal with issues as they arise, depending on the help of other members to support them. For critical matters, individuals will however reflect back on their basic beliefs. By considering banks as cultural hierarchies, each with a set of unique values, and then reflecting on the fundamental biases they hold according to their common cultural way of life, an initial insight can be gained into risk bias displayed by banks.

Bank perception of risk

In the conduct of their activities bank members are required to comply with legislation and bank regulation. As highlighted in Chapters one and two, in reaction to mandatory regulation, bank members seek to manage their 'liability' risk (Eyes and Tabb, 1978; Berry et al., 1984; Bannock and Morgan, 1988; Fettig, 1991; Obermann, 1991; Cook, 1992; Berry, Crum and Waring, 1993; Lascelles, 1993; Dybhahl, 1994; Hellawell, 1994; Smith, 1994; Vaughan, 1994; Clark, 1995). Further, when selecting a specific management approach, a bank will influence and be subsequently influenced by external factors such as economic conditions, and competitors' activities and performance. These factors applied at a national, and to a lesser degree at an international level, may influence a number of banks. For this reason accounting research studies have examined samples selected from banks operating within defined national boundaries (Eyes and Tabb, 1978; Berry et al., 1984; Bannock and Morgan, 1988, Berry, Crum and Waring, 1993).

Addressing risk management it is recognised that when faced with similar situations members of different banks react differently. However, a number of patterns do emerge when considering bank lending processes in general. For example, reference to mnemonic guidelines and checklists by bank lending officers. As noted previously, the unique reaction of bank members is attributed to their set of individual cultural values determined according to a bank's unique social arrangement and risk messages. Similarities identified between banks are attributed to the claim that banks can be characterised as cultural hierarchies sharing a common way of life.

According to this proposal bank members will accept risk at high levels as long as decisions are made by experts who are authorised to act for the group, and are relied on to 'do the right thing'[2] (Douglas, 1986; Thompson et al., 1990). Individual lending officers as experts within their given role apply cultural rationalities to managing unique lending situations, which in turn sustains their role. According to hierarchical ways of life, emphasis is placed on members to manage immediate dangers and those with greatest expertise to be able to counter distant disasters. This may explain why bank lenders place emphasis on short term decision making and refer particular issues to 'specialist' lending officers or policy makers.

In Chapters one and two evidence was provided that lending processes are centred on the function of credit risk management, broadly defined as the management of financial risk versus financial return. Loan transaction represents the product of an alliance between different ways of life which may, or may not, accord to the same cultural typology. From the point of view of members of a hierarchical bank culture, credit risk may be viewed as an externality which they try to internalise by establishing acceptable levels of risk.

By addressing risk as a product of an alliance between two ways of life, it is important to highlight the presence of a web of risk exchange taking place within the elaborate system created by interdependent ways of life. A member of each way of life handles risks in a distinctive way according to risk perception and associated management rationality provided by their cultural bias. Risks that are missed by one way of life can be picked up by others. Cultural theory thus recognises, what economists call, uncompensated risks and benefits as unavoidable transfers of risk within a cyclical exchange system.

While banks have been characterised according to hierarchical cultural typologies sharing fundamental bias, each culture has a unique set of values. This uniqueness will have a subtle influence on lenders' perceptions of risk and resulting rationality for management. By examining the specific topic of environmental risk perception among lending officers from a range of banks, cultural individuality becomes more obvious. However, it is recognised that by adhering to a hierarchical cultural typology banks share a set of fundamental cultural beliefs and bias and thus, a common foundation for environmental risk perception and management rationality.

A lender's perception of environmental risk

In Chapters one and two it was revealed that corporate environmental performance considerations within bank lending processes were an issue of environmental 'ethics' and risk management. In Chapter three it was recognised that the interpretation of environmental/risk management depends largely on the perceiver's ontological and epistemological position on physical nature and the human interface with physical nature. By viewing a lender position on nature as their fundamental 'ethic'/belief, risk perception and management rationality becomes a product of this ethic.

Adopting a social constructionist perspective, as outlined previously, provides a means of addressing the interrelated questions of 'how' and 'why' the environment, and environmental risk, is perceived by an individual or group. Reviewing the social construction of perception among bank lending officers, it has been proposed that individual perception is culturally constructed within a bank. 'How' and 'why' the environment is a risk issue for bank lending officers, becomes an issue of cultural construction. A bank lending officer's perception of environmental risk is viewed as constructed and re-enforced according to a complex web of communication inherent within a bank. A bank lending officer's rationality for corporate environmental performance consideration is viewed as a product of this perception. By examining bank communications, rationalities for corporate environmental performance considerations by bank lending officers can be analysed. From this basis a cultural framework can be applied to explain the environmental position of a bank.

Bank communications

As noted in Chapter two, environmental considerations by bank members were first recognised in the public arena in response to the introduction of environmental legislation in the US based on strict liability principles (Fettig, 1991; Sarokin and Schulkin, 1991; Skadden et al., 1991; Bryce, 1992; Ries and Christel, 1992; Segal, 1992; ACBE, 1993; BBA, 1993a; Gray et al., 1993; ABA, 1995b). Based on this legislation, a number of bank lenders were held liable for environmental damage as a consequence of their lending activities (see Appendix 1). The circumstances surrounding court cases, and the reaction of lenders to these developments, have become a common point of reference for debate among banks regarding lender liability issues. From an analysis of the current position of lender liability in the US, it appears that banks are unlikely to be held liable for environmental damage when acting in their capacity as a lender, although banks remain sceptical (McQuiston, 1993; Redman, 1993; Anon, 1994a; Anon, 1994d; Steven and Dolin, 1994; Vaughan, 1994; Clark, 1995).

As environmental legislation has developed at an international level, lenders and their advisors have reflected on the experience of their US counterparts in addressing and communicating their own position. Strict liability principles have not yet been introduced outside of the US, but the development of environmental legislation by the

European Union has shown evidence of a movement towards the introduction of strict liability principles (Smith, 1994).

In terms of the implications of current legislation outside the US, there has been an absence of test cases addressing the application of legal principles of environmental law, in particular with respect to the position of the lender (Nicholson et al., 1995). Whether or not a lender could be held liable under statute for environmental damage incurred as the result of borrowing activities remains the subject of diverse interpretation by bank members and their legal advisers (ENDS, 1992b; Napier and Clabon, 1992; Thompson, 1992; National Westminster Bank, 1992, 1993c; ENDS, 1993a; Gapper, 1993; Long and Rhoades, 1993; Barrett, 1994; Gleason, 1994; Hellawell, 1994; Rutherford, 1994; Smith, 1994; Lascelles, 1995; Smith, 1995; Stallworthy, 1995).

In common law there have been an array of cases of nuisance pursued according to principles of 'harm' caused by pollution. The primary issues in these cases were the 'foreseeability' of harm and the potential introduction of retrospective environmental liability. These issues were highlighted in the UK case of Cambridge Water Co. v Eastern Counties Leather plc (1994). The questioning of legal principles in this case, under appeal illustrated the high degree of subjectivity which remains regarding environmental issues within the law (ENDS, 1992c, 1993c). As a result a lender's liability, directly or indirectly, for environmental damage or damage in connection with a borrower remains questionable and new legislation continues to develop.

A collective bank position

Evidence has been provided of bank associations establishing environmental working parties to facilitate discussion among bank members regarding their interpretation of environmental legislation and their position on the environment. These associations operate at national and European levels according to legal and regulatory boundaries. Within the US a special Environmental Bankers Association has been established. At an international level environmental initiatives, such as the United Nations Environment Programme (UNEP), have formed bank working parties on the environment to facilitate wider debate on environmental issues (ACBE, 1993; BBA, 1993a; Anon., 1994a; EBA, 1994b; Smith, 1994; Vaughan, 1994; ABA, 1995a).

These working parties have increasingly engaged in political debates centred on the development of environmental legislation and common terminology. The view shared by banks appears to be, that while they support the development of environmental legislation, they are against the adoption of a strict liability regime. Banks have argued this position on the basis that lenders should not be forced to "police" the environmental management activities of corporate borrowers (National Westminster Bank, 1992, 1993c; BBA, 1993a, 1994; Smith, 1994).

Position statements on the environment have also been published by working parties. A common theme of these statements is bank support for 'sustainable' environmental and economic development. For example, banks have subscribed to the UNEP "Statement by Banks on the Environment and Sustainable Development" (see Appendix 2). Through public promotion of their collective ethical environmental position, banks have sought to communicate a foundation for their environmental management approach as a basis for negotiation with regulators and commercial partners (UNEP, 1992; ACBE, 1993; BBA, 1993b; EBA, 1994a; ABA, 1995b, Green Alliance, 1995; Hill et al., 1997).

Individual bank positions

From a review of bank literature, a variety of evidence has been provided that environmental considerations are being incorporated within bank lending processes. Addressing individual bank positions a wide range of surveys, particularly those incorporating US respondents, have noted that environmental considerations are part of bank efforts to manage their risk of lender liability. In addition, as noted in Chapter two, individual banks have published statements of ethical principles as an illustration of their environmental considerations. For example, National Westminster Bank's promotion of an environmental policy statement in 1990 and the Cooperative Bank's publication of their ethical mission statement in 1992 (Cooperative Bank, 1992; National Westminster Bank, 1992, 1993a, 1994a, 1995a, 1996).

The development and implementation of new environmental policies and assessment procedures by banks, reflects changes in environmental management within banking and in particularly lending processes (CIBC, 1991; Bruns, 1992; Cocheo, 1993; Mayo, 1993; Welch, 1993; Anon., 1994c; Barrett, 1994; Griggs, 1994; Klump-Bickert, 1994;

Smith, 1994). Banks have noted that internal communication mechanisms supporting such change have been focused on raising awareness of changes in environmental legislation and developing a bank rationality for environmental risk management where perceived necessary (Bank Handlowy W Warszawie S. A., 1994, 1995; Smith, 1994; Vaughan, 1994; Williams, 1994; Credit Suisse, 1995; Lascelles, 1995a; UNEP, 1995b; UNEP and Salomon Brothers Inc., 1995; Union Bank of Switzerland, 1995).

By examining corporate environmental performance considerations within bank lending processes in detail a number of common communication mechanisms become recognisable. Evidence has been provided that banks have a range of communication mechanisms supporting environmental bank/lending policies including: special environmental guidance materials; environmental training programmes and procedural checklists (Lascelles, 1993; Bank Handlowy W Warszawie S. A., 1994, 1995; Barrett, 1994; Griggs, 1994; Smith, 1994; Clark, 1995). These mechanisms are similar to those recognised in Chapter one when considering commonalties in lending processes. As previously noted, the detailed mechanisms adopted by each bank are unique. However, in the case of environmental guidelines little evidence has been provided of the environmental risk 'messages' communicated by such mechanisms.

Experience of financial loss in connection with environmental lending issues has been noted, primarily among US banks, as a product of legal and market issues (see Appendix 1). It is proposed that when a bank suffers financial loss in association with environmental lending issues, the 'incident' will lead to a change in bank members perception of environmental risk. If the incident is communicated to members of the wider bank community, then the incident may influence the perceptions of other cultural groups.

By adopting a social constructionist perspective an insight can be gained into the relationship between bank ethics and rationalities for environmental risk management activities. The collective view of banks may be attributed to a common bias held by them as cultural hierarchies. The unique risk perception and associated approach to environmental management observed may be considered as a product of unique cultural values inherent within each bank. By examining the ethical position of cultural hierarchies in terms of their fundamental view of nature, and associated way of life, the

collective bias of banks' can be explained. Further, the relationship between common cultural bias and unique risk perceptions can be defined (Douglas, 1978; Douglas and Wildavsky, 1982; James and Thompson, 1989; Thompson et al., 1990).

Managing tolerant nature

Cultural theory, as proposed by Thompson et al. (1990), provides a basis for explaining the rationality for environmental management displayed by a culture according to their accepted 'way of life'. As previously noted, applying Cultural theory to bank characteristics suggests that a bank's culture is hierarchical. Hierarchical preferences provide support for carefully planned frameworks of resource development, allocation, and management.

According to Cultural theory, hierarchical ways of life favour a 'myth' or ethic of tolerance or perverse nature. A myth of tolerance is founded on the principle that physical nature is bountiful within strictly accountable 'tolerable' limits beyond which risk and scarcity needs to be managed (Holling, 1979; Douglas and Wildavsky, 1982; Schwarz and Thompson, 1990; Thompson et al., 1990; Adams, 1995; Pepper, 1996). The way of life demonstrated by bank members supports the development of social rules and regulation internally and in their negotiations with other cultures. Hierarchical managing institutions therefore favour the development, and enforcement, of environmental regulation set at acceptable tolerable limits (Thompson et al., 1990; Adams, 1995).

The form of legislation applied across cultural groups, including the tolerable limits at which environmental legislation is established, are viewed as a social construct to be determined by society's experts collectively. Community views reflected previously provide an example of such a preference and the provision of an expert bank opinion. Members of individual bank cultures will hold a bias as to the level of tolerable limits which they will represent in negotiations.

According to such a position, members of a cultural hierarchy support legislation determined by this process even if it does not conform to their own perception of risk. In the case of environmental regulation, where members of a bank culture view the tolerable limits of nature above those established within the wider social system, they

will accept legal limits as the basis for management. Alternately, if members of a bank culture view the tolerable limits of physical nature below those represented by legislation, they may seek to enforce their own stricter form of regulation among cultural members and in negotiations with others. This partially explains the variance in corporate environmental performance considerations within bank lending processes observed in Chapter two.

Hierarchists will view support for legislation as the role of a socially elected, competent authority. Within such a social system hierarchists illustrate a preference for accountability, or 'blame', centred on deviants who reject socially established rules and regulation (Thompson et al., 1990). Under such principles bank members' rejection of strict liability and the attribution of shared blame, is explained according to such preferences. Bank members view their elected role within society as to provide finance rather than to regulate.

A bank adhering to these principles will support the development of environmental legislation and seek to ensure, where appropriate, environmental legislation is complied with in its activities and the related activities of its borrowers. Developing an environmental risk management approach may thus be viewed as a reflection of such a cultural position. The determination of tolerable limits on which to establish environmental legislation is viewed as a product of political negotiation at a societal level (Jasanoff, 1986; Dietz and Rycroft, 1987; Fessenden-Raden et al., 1987; Krimsky and Plough, 1988; Nelkin, 1989; Otway and Wynne, 1989; Wynne, 1989a; Beck, 1992; Wynne, 1992a; Beck et al., 1994). By adopting a tolerant myth of nature, a bank's environmental management activities will be two-fold ensuring compliance and management of exceptions.

Despite the portrayal of such a common position on the environment, evidence has been provided that environmental considerations among individual banks vary considerably. While banks share common biases and management rationalities which accord to a shared way of life, individual bank cultures hold unique views. Accordingly individual banks will have a unique perception of risk and associated rationality for specific environmental management activities which will be reflected within their lending processes.

Changing perceptions of environmental risk

In order to retain support for the application of Cultural theory to a bank situation, it is important to show that a bank's defined myth of nature and corresponding way of life remain constant, or if one changes the other changes accordingly (Thompson et al., 1990). Testing adherence to this 'change principle' is particularly important given the changes in the legal environment within which the bank is operating and bank policy.

Environmental legislation has existed for many years in varying degrees. However, over the last two decades there has been a significant increase in the range and requirements of environmental legislation at an international level. Over this period, evidence has been provided that banks have shown concern for their position regarding lender liability for the environment. This has led to claims that environmental considerations within bank lending decisions are a reaction to potential lender liability for the environment (Sarokin and Schulkin, 1991; Lascelles, 1992; Cocheo, 1993; Gray et al., 1993; Anon., 1994c; Barrett, 1994; EDR, 1994; Gleason, 1994; Griggs, 1994; Lascelles, 1995a; UNEP and Salomon Brothers Inc., 1995). While the applicability of this proposal is not denied, the rationality for environmental consideration by bank lending officers needs to be examined at a more fundamental level.

By applying Cultural theory, as proposed by Thompson et al. (1990), to bank characteristics, a hierarchical way of life and a tolerant myth of nature has been attributed to a bank's current cultural form. According to this cultural typology bank members support the development of environmental legislation and associated management of human interaction with the environment within tolerable limits.

Hierarchists' view the development of environmental legislation as a reaction to a recognised decrease in nature's tolerable limits relative to human activity. Members of a hierarchical culture will view a potential breach of regulation as a point of risk management, however, the degree of risk management required will vary with levels of regulation. Accordingly, risk management activities will increase as environmental regulation increases. The resulting change in a bank's management activity which has been recognised at a policy and/or practical level gives the impression that banks are for the first time considering environmental issues.

It is proposed that historically the environment has been a consideration of bank members which has only been recognised as environmental legislation has developed and the level of compliance management required has increased. Under such conditions a bank's rationality for environmental risk management has not changed. A risk is perceived in a given situation according to new criteria and this is communicated but the same cultural typology applies.

In summary, on the assumption that knowledge is a social construction, the central proposal made is that ***banks can be characterised as hierarchical cultures with views of physical nature founded upon myths of tolerance.*** Accordingly, members of each culture share unique values, and environmental risk perception and environmental management rationality within each bank is unique. By adhering to a common cultural typology banks share a set of fundamental cultural beliefs and bias and thus, a common foundation for environmental risk perception and environmental management rationality.

Corporate environmental performance considerations

Based on the above proposal, at a fundamental level corporate environmental performance consideration by bank lenders will involve an assessment of compliance with environmental legislation, corresponding environmental management practices of borrowers, and contingency planning. Environmental risk management will be based on perceived risks to the bank in the conduct of their activities, including risks perceived to be indirectly incurred as a result of negotiations with a borrower.

Applying the conclusion drawn in Chapter one, it is envisaged that corporate environmental performance consideration will involve an analysis of environment related accounting information, in particular reported financial liabilities and consideration of the management ability of a borrowing company. Little evidence has been provided of this in practice (Barrett, 1994; Robins and Bissett, 1994; Smith, 1994; Lascelles, 1995b; Thompson, 1995, 1996; UNEP, 1995b). This may be due to the relatively low level of environmental accounting information available. Addressing the nature of lending processes, lending officers' apparent use of standard environmental checklists and questionnaires as a basis of questioning is explained as a reflection of their shared perception of risk and associated management rationality. In addition site

visits, where practical, have been recognised as a method of gaining an insight into a borrower's management ability (Gleason, 1994; Griggs, 1994; Robbins and Bissett, 1994; Smith, 1994; Bank Handlowy W Warszawie S. A., 1995).

It was recognised in Chapter two, that lending officers have called on environmental scientists to provide environmental impact assessments when evaluating corporate environmental performance considerations (Lascelles, 1993; Barrett, 1994; Smith, 1994; Vaughan, 1994; Clark, 1995). It is proposed that while bank lending principles remain centred on financial risk management, evaluation of environmental risk introduces a new variable for consideration within lending processes.

Summary

The approach undertaken in this Chapter has been to propose a basis from which the questions of how, and why, corporate environmental performance considerations within bank lending processes can be addressed. By adopting a social constructionist perspective, based on a functional mode of explanation, the questions of 'how' and 'why' become interrelated.

By re-interpreting prior research findings according to social constructionist principles, it is proposed that banks can be characterised as cultural hierarchies supporting myths of tolerant nature. Accordingly, members of each bank culture share a unique combination of environmental values, risk perceptions and management rationalities supported by a web of social communication inherent within each bank. Banks adhering to a cultural typology share a set of fundamental beliefs and bias which provide a common foundation for environmental risk perception and associated management rationality.

By applying the central proposal evidence of corporate environmental performance considerations by bank lending officers is explained according *to hierarchical cultural values and myths of tolerant physical nature.* In Chapter five a methodology is designed from which this proposal can be empirically tested.

Notes

[1] Cultural biases can be equated to what decision theorists call heuristics.
[2] They concentrate on managing immediate dangers and expect their experts to be able to counter distant disasters.

Chapter 5
Research methodology

Introduction

This Chapter examines the researcher's rationality for adopting a qualitative research methodology, based on three bank community case studies and a cross community study, to examine the central proposal outlined in Chapter four. The Chapter is designed as a narrative of the researcher's decision process, from an initial consideration of methodological foundations based on theoretical assumptions and proposals drawn from a social constructionist perspective, through to the design, testing, and adoption of a research method. Particular reference is made to theoretical and practical limitations, and how these limitations have been accounted for in the research design.

Methodological foundations

Methodological choice involves the selection among methods which embody a variety of assumptions about the nature and construction of knowledge. The first step in deciding an appropriate and adequate research methodology should therefore be to make explicit the ontological and epistemological assumptions upon which the proposal is founded. The second step being to apply the assumptions to the phenomena to be investigated (Burrell and Morgan, 1979; Morgan and Smircich, 1980; Archer, 1988; Burgess, 1988; Berry et al. 1989b; Covaleski and Dirsmith, 1990; Babüroglu and Ravn, 1992; Hamel et al., 1993; Cassell and Symon, 1994; Gray, 1994a; Humphrey and Scapens, 1994). The importance of recognising such a relationship between theory and method is a position reflected by the basis of the central proposal on a social constructionist perspective.

The core ontological foundation of the proposal addresses how 'reality', and thus risk, is perceived. This makes the environment a social construct. The basic epistemological stance is to analyse and seek to understand 'how' and 'why' social reality and risk definition is constructed by addressing specific social processes supporting a rationality.

Applying these principles to the area of research it is proposed that environmental considerations within bank lending processes are dependent on a lender's perception of environmental risk and their associated management rationality. Evidence seemingly shows that individual bank members determine the need for environmental risk management according to culturally constructed beliefs and bias developed as a product of hierarchical social relations and an individual's role within a bank. Within such a hierarchical arrangement it is proposed that the social construction of perception is reflected through a complex web of environmental risk communication. By examining this mechanism, the social process of risk construction and plural rationalities for environmental risk management within banks can be outlined and the central proposal tested.

It has been proposed that an individual's perception of the environment and social role will influence their management rationality. A bank lending officer considering environmental issues may perceive that they have no role to play in environmental management as a lender. In this instance, the examination of a bank lending officer's rationality not to act would require an in-depth psychological analysis of the individual concerned. A bank lending officer may, alternatively, perceive a need to undertake environmental management activities within a given role[1]. Accordingly, a bank lending officer's management rationality is likely to be explicitly represented within bank communications and therefore more accessible to examination. In order to explore the applicability of the central proposal, research attention will focus on banks explicitly claiming to conduct environmental management activities as part of their lending function.

Research design

A qualitative study

To open up the perceptual and social process requires by its very nature a detailed qualitative approach[2] with the researcher working closely with members of relevant social groups (Pettigrew, 1973; Burrell and Morgan, 1979; Morgan and Smircich, 1980; Bryman, 1988; Burgess, 1988; Berry et al. 1989b; Wolcott, 1990; Gummesson, 1991; Silverman, 1993; Cassell and Symon, 1994; Humphrey and Scapens, 1994; Miles and Huberman, 1994; Yin, 1994; ICAEW, 1996). In terms of examining social construction, an individual's rationality for action is considered according to their

social role and relationships. Research attention is directed to communication mechanisms and messages which support and reflect an individual's management rationality within a given context. To examine the social construction of knowledge the researcher should therefore engage in what is commonly referred to as an hermeneutic evaluation, interpreting social perception and process through symbolic analysis[3] of human action/ routines, and language/labels (Hakim, 1987; Burgess, 1988; Covaleski and Dirsmith, 1990; Johnson, 1990; Power, 1991; Babüroglu and Ravn, 1992).

Research methods applicable to examining social construction differ primarily in the degree to which the researcher observes and participates in a given way of life. Two principal methods may be distinguished, namely an ethnography and a study of symbolic interaction. Ethnographic methods[4] focus on a researcher subsuming themselves as much as possible into a given way of life, normally over a considerable period of time, and recounting their experience (Burgess, 1988; Power, 1991; Hamel et al., 1993; Humphrey and Scapens, 1994; Steyaert and Bouwen, 1994). Alternately, symbolic interactionism[5] involves a researcher undertaking intensive interviews and/or a limited degree of participant observation with members of a given way of life and more readily facilitates analysis through comparative studies (Burgess, 1988; Bryman, 1989; Cassell and Symon, 1994; Steyaert and Bouwen, 1994; Waddington, 1994).

In choosing which method is most appropriate to examine the central proposal outlined, a consideration will be made of theoretical and practical limitations associated with the research area.

Theoretical and practical limitations

Under principles of social construction and reflexivity it is highlighted that the world and our perception of it are transformed through social interaction. In applying principles of social construction theoretical limitations are acknowledged. In the first instance, these limitations are based on the premise that interpretation cannot be separated from an individual's own beliefs and biased view of the world. A complete understanding of a given way of life can never be achieved by an outsider 'observing' a way of life. A researcher living with members of a given way of life will never gain full membership. However, an individual may discern pattern and order represented within a way of life and rationalise others views. Secondly, under principles of reflexivity, it is

recognised that the research exercise will have an influence both on the researcher and those knowingly observed, and findings will be provisional to the time and circumstances examined. These theoretical limitations should be recognised when undertaking either an ethnographic or symbolic interactionist approach.

The practical limitations imposed as a consequence of the chosen subject area are more restrictive on the research methodology and techniques adopted (Bryman, 1989; Gummesson, 1991). Research studies undertaken with banks have revealed that research access is problematic. Banks are committed to maintaining client confidentiality thus, the examination of 'real' lending cases and associated rationalities for actions are precluded for all research approaches. Participant observation or the examination of documentation of a real lending case is unlikely to be available to a researcher adopting an ethnographic or symbolic interactionist approach.

Research studies have also revealed that on occasions banks have restricted access to bank information, particularly policies and procedures, which they perceive may be useful to their competitors. In a number of research studies, access has been provided on the condition that the bank's anonymity will be maintained in all research references.

In selecting a research design the potential limitations posed by the nature of subject area also need to be considered. In Chapter two it was recognised that environmental management activities by bank lending officers appear to be a relatively new phenomena. It is proposed that such circumstances could have both a favourable and an unfavourable effect on research access. Where banks are in the early stages of policy deployment and communication, access may be restricted to those individuals to whom policy changes have been formally communicated. Alternately, given the apparent uncertainty regarding the implications of environmental legislation, banks may welcome research involvement and insights drawn from findings.

Given that research studies addressing bank lending processes have largely failed to include environmental considerations, a pilot study was pursued from which to evaluate limitations posed by the research subject.

A pilot study to examine limitations

The pilot study was carried out[6] in Canada, with a major Canadian bank. This opportunity arose through an introduction by an academic contact with local knowledge of the bank's interest in environmental issues. Initial research access was not problematic given a friendly introduction and an extensive interview was conducted with a lending officer at a rural branch of the bank. On request, access was provided to relevant bank policy and procedural documentation on the condition that the anonymity of the bank would be maintained in all research references, and no documentation would be reproduced. As anticipated access to client related information was denied.

The participant's comments and documentary reference revealed an established operational framework for environmental consideration within the bank's day to day lending processes. However, due to the participant's role only a limited insight into the process of development of formal bank policy and procedures was provided. As a result research was pursued with policy makers and other lending officers in the bank. The application to extend the research was denied on the basis that the bank conducts in-house research and further dedication of bank resources, in terms of staff time, to support outside research could not be justified.

The results of the pilot study provide additional evidence that practical research limitations exist in the area of proposed study. These centre on access restrictions which may be imposed by banks on the basis of confidentiality and commitment of resources. Questions remained regarding the potential impact of the stage of environmental policy deployment on research access. To undertake additional pilot research to address this question is fruitless given the proposal that bank positions are unique. Consideration will be given to the issue of formal policy representation in the next section when selecting appropriate methodological techniques.

In light of practical restrictions the pursuit of an ethnographic study with a bank appears futile. Alternatively, research based on a symbolic interactionist approach is feasible but will require detailed planning. The research choice now focuses on the research design to be adopted to address the central proposal.

Bank community cases

The central proposal is founded on the principle that a transient boundary can be drawn around a bank's membership. Within this bounded group cultural rules and relationships facilitate the construction of a unique plural perception of environmental risk and associated rationality for risk management. By drawing boundaries around national and international bank 'communities' who face similar circumstances, and taking them as study cases, the proposal that banks reflect individual perceptions of environmental risk may be tested[7] (Morgan and Smircich, 1980; Smithin, 1981; Scapens, 1990; Wolcott, 1990; Hamel et al., 1993; Gray, 1994a; Hartley, 1994; Humphrey and Scapens, 1994; Yin, 1994). If bank perceptions of environmental risk within a given community are the same, the proposal that perception is socially construction within a bank organisation may be disputed. By examining a number of bank communities, additional weight could be given to this proposal.

The central proposal is that banks can be characterised as cultural hierarchies sharing a fundamental set of cultural biases and a view of nature based on a myth of tolerance. By examining a number of banks the existence of such commonalties may be examined. Additionally, by framing bank examination within community cases, it will be possible to test the principle that a culture is not a construct of a particular society but a chosen way of life. If the same cultural biases were found in dissimilar contexts, or conversely if dissimilar biases existed in similar social contexts then support for cultural theory would be weakened.

It is recognised that the selection of national case studies may lead to mis-interpretation and loss of information by research partners during linguistic translations. This was acknowledged and accounted for in later research design.

A cross community case

As noted above, an inherent principle within Cultural theory by Thompson et al. (1990) adapted by the central proposal is that a culture is not a construct of a particular society but a chosen way of life. By examining a bank groups membership based on their operations located within two communities the influence of local factors can be examined and this principle can be further tested.

Informants

Given potential access restrictions initial bank contacts were classed as 'key informants', although further informants were to be pursued within the organisation (Bryman, 1989; Cassell and Symon, 1994). In order to maximise research opportunities it was therefore decided that research informants initially pursued should be those individuals with an overview of the lending process. In particular, those with a knowledge of: social roles and responsibilities; formal communications mechanisms and correspondence; and the development and deployment of formal policy and procedures. As noted in Chapter four, delegated bank policy makers[8] are most likely to be in such a position and were selected as appropriate key informants. It was proposed that 'policy makers' may hold a variety of titles within different banks and thus key informants should be those proposed as appropriate by bank members.

On the assumption that a tiered policy structure exists within a bank, individuals responsible for lending policy have an insight into the wider process of bank policy development. Policy makers are also the bank members most likely to be representing the bank on community association working parties. As such they are the most appropriate informants to provide an insight into the interface within the bank and between the bank and the wider bank community.

The case for selecting policy makers as key informants was strengthened by recognition within bank literature that career profiles of lending officers revealed a tendency for lending officers to remain within the bank and seek promotion through the organisational hierarchy. Thus, as proposed by Berry et al. (1993), policy makers may provide an informed view of the role of lending officers given their personal experience of the role. This insight is of particular importance if the views of other lending officers are inaccessible.

Recognising the need to examine the historical development of bank 'policy' to determine the cause of apparent changes which have occurred in environmental management practice, additional importance is placed on policy makers' views. As noted in Chapter four, the basis for policy change will have important implications for the application of Cultural theory. If it can be demonstrated that a change in an apparent

myth of nature has occurred without a corresponding change to a way of life, the central proposal will be undermined.

In terms of individual adherence to cultural 'views', it is important to recognise that Cultural theory allows for what it calls the multiple self and cultural traitors. Cultural theory asserts that cultural bias depends on social context, and vice versa. On this basis contradictory beliefs may co-exist within different realms of an individual's life, providing what is termed the 'multiple self' within multiple social contexts[9]. It provides, however, that most individuals inhabit one way of life more than others.

In addition to compartmentalisation of biases through a positive belief that different biases in different spheres of life are beneficial, an individual may fail to perceive contradictions between competing biases. Thus, to provide an occasional position not in accord with one's way of life does not provide a 'cultural traitor'. This recognition is particularly important when considering rationality. Were an individual to move beyond the occasional disagreement into a pattern of disagreements, a cultural alliance would become questionable. It is on this basis of preference that 'change' is incorporated into Cultural theory (Thompson et al., 1990). The challenge for research lies in specifying the conditions under which one bias is more likely than the other, and recognising the dominant rationality of a way of life.

Particular emphasis will therefore be placed on determining the meaning of the risk metaphors and associated indexical expressions used by members of a given social group. The value of considering such metaphors and expressions lies in their suggestion of the impact of social relationships on perceptions. In cases where access may be restricted, emphasis will be placed on examination of communication mechanisms and textual representations of cultural bias and risk perception (Pettigrew, 1973; Hakim, 1987; Burgess, 1988; Bryman, 1989; Covaleski and Dirsmith, 1990; Johnson, 1990; Gummesson, 1991; Power, 1991; Puxty, 1993; Forster, 1994; Waddington, 1994).

Interviews and documentary reviews

A semi-structured interview with a bank policy maker was considered to be the most appropriate starting point for the research investigation. This framework ensured that key research questions were addressed according to unique bank situations. Interviews

were to be tape recorded and transcriptions analysed to provide reference to key terminology. A similar process was favoured for follow up research with other bank members. However, given access limitations follow up telephone interviews with bank members and/or additional documentary reference was also an acceptable basis for analysis. Follow up procedures were determined on the basis of initial findings, and subject to accessibility. Requests were to be made for access to documentation representing social roles and relationship, and formal bank policy and procedures referred to by informants (Bryman, 1989; Cassell and Symon, 1994; Forster, 1994; Gray, 1994b, 1994c; King, 1994).

Basis of questioning

A questionnaire was designed to provide a semi-structure to a series of interviews with bank participants. The main elements of the questionnaire were chosen as a product of the theoretical framework to examine the linkages between risk perception and risk communication. To provide a structure from which formal communication mechanisms could be identified and expanded on, questions followed a top down process of environmental policy deployment [10].

To make the questionnaire appealing to the informant the questions were divided into sections to provide breathing space, thinking time and to relieve the monotony of writing a response. Such a structure further facilitated the avoidance of parts of the questionnaire if they were perceived as not applicable[11]. It was hoped that this would improve the response and provide an opportunity for any additional comments to be made by the recipient in a more structured form.

The questionnaire was posted, or faxed, to the participant prior to the interview. This provided them with the opportunity to consider questions and responses in advance, possibly reflecting on previously unrecognised perceptions. Further, this allowed time for the preparation of supplementary and/or supporting information which may require access consent. It is recognised that this approach provided the participant with an opportunity to prepare 'ideal' answers, possibly having discussed their response with their colleagues. However, given the focus of the examination and apparent stage of policy/systems development, it was felt that prior knowledge of questions were justified.

The format of the questionnaire was as follows:

Correspondence details

Information was requested regarding the role and responsibility of the participant policy maker and any additional information which they felt was relevant to their response. In addition to correspondence details, this information provides an important background to the informant characteristics with a potential influence on their environmental risk perception.

A. General background information

This first main area of questioning was designed to establish requirements on a bank to consider environmental issues within bank lending decisions, and recognise potential influences on environmental policy development. Particular questions were addressed to determine if the bank was a member of a group of companies and, where applicable, the implication of group membership on environmental consideration. Other factors for consideration included the policy maker's views on the influence of bank regulation, legal requirements, industry guidance and pressure groups on the bank. Reference to these factors provided a control against which to ensure that community boundaries had been correctly drawn when defining case study groups.

B. Environmental considerations within 'banking activities'

The second area of questioning was designed to examine the participants understanding of a bank's general 'policy[12]' on the environment. Policy issues were addressed in terms of: definitions of 'environment'; scope of application; and background to policy development, including motivations and peer group support. Particular attention was devoted to determining communication mechanisms through which policy messages were represented. Subscription to public policy statements on the environment were also examined. Addressing the implication of bank policy, questions were designed to determine bank members' roles and responsibilities in terms of environmental management.

C. Environmental considerations within the corporate lending process

To assess the lending process, questions initially examined policy definitions and details as noted above. Consideration was given to the perception of formal and

informal environmental/lending policy and procedures, their inherent objectives, scope, and method of construction. The second stage of questioning in this section addressed risk communication mechanisms within the bank and messages regarding corporate environmental performance consideration. Subsequently, methods of environmental credit risk assessment and management were addressed. The section ended with an examination of the bank's experience of environment related financial lending loss and the impact of such loss on environmental considerations within lending decisions.

D. Bank identification

This last section requested background information for use in categorising results for bank feedback in order to maintain bank anonymity, and provided an additional perspective for evaluation.

A system of cross referencing was operated during evaluation to explore any implicit risk messages and communication mechanisms which may have been revealed during the interview.

It was pre-agreed with the participant, that the purpose of the questionnaire was to provide an introduction to the interview and that the discussion would be flexible enough to diverge from the perceived framework, where necessary, to facilitate an analysis of individual bank perspectives. Additional questions were prepared as a supplement to the questionnaire during the interview. These were based on a series of prompts in the questionnaire.

Areas of supplementary questioning addressed:

- the policy maker's perception of environmental risk - given that the primary focus of the research was to analyse how and why they determined environmental risk. The influence of the participants career history on their perception of environmental risk was considered.
- internal support and/or advice provided to the policy maker from other bank participants in the establishment of bank policy/practice. This support was considered as a potential influence on the policy maker's risk perception and resultant risk messages.

- details regarding the use of external advisers at any stage in the formal establishment of environmental risk perception and/or management activity. The use of such 'expert' advice was considered as a potential influence on the participant's risk perception.
- the perceived roles of bank lending officers were established with regard to their 'expert' or 'lay' perception of environment/risk. Again this provided a background from which to evaluate the purpose and effect of risk messages. It is noted that a lending officer may be identified as 'an expert' in credit assessment but a 'lay person' in the evaluation of environmental risks. However, to some extent a lending officer will always be a 'lay person' with regard to specialist activities of the borrower.

Bank feedback

In each bank a summary report of research findings was presented to key informants and their comments were requested. This reporting process was undertaken to ensure that bank policy and procedures had not been mis-interpreted.

Selection of research participants

From the outset a decision was made not to undertake empirical research in the US. A review of literature in Chapter two revealed that US lenders are in the unique position of government according to a strict liability regime. Evidence was additionally provided which illustrated a variety of legal interpretations on a state by state basis. It is proposed that to justly address environmental consideration within lending processes in the US, case studies would need to be determined according to state boundaries. It is felt that the extent of research required to facilitate such a study was not feasible within, or appropriate to, the scope of the thesis if other community cases were to be considered.

Research participation was to be pursued with bank communities, illustrating a commitment to the environment either through their representative bank associations or subscription to public environment policy statements such as the United Nations Environment Programme (UNEP) 'Statement by Banks on the Environment and Sustainable Development' (see Appendix 2).

As a basis for the cross community case study, once bank members of one community had agreed to participate in the main research programme they would be approached to extend the scope of research participation to their overseas operations. The choice of banks approached would be based on those with operations within two of the final communities examined, to facilitate a comparison with other banks operating in the base communities (Bryman, 1989; Gummesson, 1991; Cassell and Symon, 1994).

Research negotiations

Given planned emphasis on a number of national bank community cases, a research proposal was prepared which promoted participation within an international research programme. It incorporated a statement ensuring the maintenance of confidentiality and anonymity of the bank and participants at all times. It was hoped that this provision would encourage an open dialogue during research activities and facilitate access to internal bank documentation[13] where necessary. As an inducement to potential participants a report of research findings was offered. This provision was taken into account when the questionnaire and interview research was planned to ensure an appropriate feedback format was achieved.

A pilot study of research techniques

To examine the appropriateness of the research methodology proposed a second pilot study was undertaken. The study was based on the UK bank community and involved a telephone survey of community banks to establish their level of environmental management activity and a detailed examination of one bank. The UK bank community was selected given the recognised publication of the community position on the environment through the British Bankers' Association and knowledge of local language and conditions.

Telephone survey

A telephone survey[14] of the main UK commercial lending banks was undertaken which included: Barclays Bank; Lloyds Bank; Midland Bank; National Westminster Bank; Trustee Savings Bank; Royal Bank of Scotland; Bank of Scotland and the Co-operative Bank. Initial telephone contact was made either through a bank's switchboard or details provided in literary bank references. Contact was requested with an environment unit,

person responsible for environmental issues/policy or failing that a marketing/public relations function or personnel officer.

In two cases telephone interviews resulted in the identification of 'key informants' who agreed to take part in the research programme. The first bank contact revealed that the bank was in the middle of undertaking an internal review of environmental considerations within their lending function and thus requested a delay in participation until the review was complete[15]. This confirmed fears that the stage of environmental policy development may prove problematic to research access. The second bank contact agreed access immediately and an interview was arranged. The research was undertaken as a pilot study, documented later.

Members of the remaining banks all provided evidence of their bank's environmental management activities either by quoting their own environmental responsibilities or by providing appropriate public relations literature. However, in a number of cases telephone enquiries proved problematic and written requests to support enquiries were often necessary before contacts could be identified and/or information obtained. In light of difficulties encountered while 'cold calling' UK banks, an alternative approach was chosen as the basis for establishing further contacts, particularly in other communities.

A request was made to representatives of the UNEP for the provision of contact details for individual bank subscriptions to the UNEP statement[16]. Research contacts within the UK, Canada, Switzerland, Germany, and Ireland were recommended. Contacts provided by UNEP were banks considered to be actively undertaking environmental management and had been involved in a number of international conferences and thus perceived to be willing to discuss bank issues. UNEP representatives proposed that banks were sufficiently conducting environmental management activities to warrant such a community research study as outlined. This deliberate bias was adopted in order to facilitate research among communities in which problems of access and policy/procedural development had been recognised.

Considering the results of the telephone survey, it was decided that the pursuit of a community case approach was feasible. A research proposal was issued to all contacts recommended as the first stage in establishing community cases.

A pilot study to test the research design

The pilot study[17] was undertaken to examine the feasibility and appropriateness of research techniques selected. In advance of the interview the bank participant stressed the need for confidentiality but agreed to provide research access as the bank's anonymity was guaranteed.

The study involved an extensive interview with a bank's legal representative responsible for the integration of environmental management procedures within the lending function. Selecting a policy maker as a key bank informant proved to be the most appropriate choice. The participant acknowledged that the bank was in the process of developing a new system of environmental credit assessment. The policy maker in overseeing this process was the one person who was able to provide an outline of: the social relations and roles within the bank; the process of development involved; and draft documentation for consideration. The participant also represented the bank as a part time member of a national bank community environmental working party. As such they were able to provide an overview of formal bank relationships and communication with the wider bank community, in addition to a view on the role of the working party.

The participant was reluctant to have the interview tape recorded and it was decided that notes would be taken during the discussion. The interview lasted six hours and with hindsight it was recognised that the tape recording of such a period of discussion was not feasible. Further, considerable reference was made to on screen presentations, printouts of which were not made available and it was necessary to take detailed notes.

A copy of draft bank documents supporting procedural development were provided. However, despite the provision of a confidentiality statement, access to the bank's guidelines on environmental lending issues was restricted to bank premises at a time set aside during the interview. The provision of access to such reference materials on bank premises added considerable support for the choice of a personal interview with key informants as a means of information collection.

Questions drawn from the draft questionnaire were used during the interview to prompt discussion[18]. The questionnaire format was found to be a useful guide supporting the systematic examination of interrelated issues and evaluation of discussion notes. The

appropriateness of questions were evaluated through a critical review of responses and slight modifications were made to the questionnaire. In particular, the participant noted that questions raised regarding a documented policy statement on the environment were inapplicable as the bank had no such documentation.

The flexibility offered by the choice of questionnaire only as a provisional guide to questioning facilitated a detailed discussion regarding the participant and bank's definition of 'policy'. As a result considerable emphasis was placed on training materials and procedural documentation as a basis for determining 'bank rationality' for environmental management.

As a follow up to information gained during this interview, a formal introduction was provided to a branch lending officer of the bank who had been involved in developing the environmental lending procedures. A telephone interview was initially undertaken with this officer. However, the officer referred a considerable number of issues back to the legal representative of the bank on the basis that they were "policy" issues under review at the time of questioning. A request for further research discussions with other members of the bank was declined by the policy maker, on the basis the policy maker did not want any undue prominence to be given to environmental issues given that the main environmental communication programme had not been undertaken.

While the stage of procedural development in this case restricted the scope of research to key bank informants, earlier arguments for addressing the bank policy maker as the primary contact were supported[19]. As a result the research methodology was pursued as outlined.

Basis of examination

Community cases and bank participants

The research programme was based on three case studies centred on the bank communities of Switzerland, Ireland and the UK[20], as defined by their geographical location. Bank involvement in the research programme encompassed three Swiss banks[21], two Irish banks and five UK banks. In each community examined research was conducted with local bank regulators, trade associations and legislators to identify

potential influences on bank activities which should be considered when evaluating findings. Background information on each bank is provide in Appendix 3a

A Canadian case study was not pursued as two of the major Canadian banks approached refused to take part in the research programme and the remainder failed to reply despite several attempts at following up proposals. Similarly, German banks approached provided copies of a number of useful internal publications and research references but declined full involvement in the research programme. The main justification provided by banks for their inability to take part was "maintenance of confidentiality". This occurred despite the offer of written guarantees. Time commitments foreseen to be required for research also precluded bank involvement in a number of instances.

Cross community case participation

Once bank participation in the community cases had been established an approach was made to Swiss banks requesting the involvement of representatives from their UK operations in the research programme. Research agreement was initially provided by only two of the three Swiss banks. The third bank refused to provide details of a UK contact and requested that no independent approach be made to their UK operations. The justification for this refusal was that UK operations were in the process of developing their credit assessment procedures.

When research was pursued with the Swiss banks' UK operations, problems were encountered in establishing an interview with a member of one bank and research was abandoned in this instance. The cross community study was finally undertaken with only one Swiss bank. It was recognised that the study was further limited as the nature of the bank's operations in the UK were restricted to merchant banking activities. However, research was pursued to examine group influences on bank members' rationality for environmental considerations within lending processes.

Research time frame

The research programme was undertaken between August 1995 and March 1996. Case research was negotiated so that banks within each community were examined during a comparable time period and time specific factors could be accounted for.

The timing of research studies were particularly opportune as changes in environmental legislation were taking place within the bank communities examined, and environmental issues were topical discussion points among banks. For example, research studies were undertaken in the UK shortly after the Environment Act 1995 had gained parliamentary approval in July 1995 and legal guidance notes were awaited. In Ireland the inclusion of the agricultural sector under Environmental Protection Agency Act 1992 industry listing was expected, and in Switzerland the final stages of assessment were being conducted for a contaminated land register. The uncertainty of a lender's position regarding environmental liability and bank members resulting desire to contribute to the environmental debate favoured research access[22].

Bank research

A summary of research methods and evidence obtained from each bank is provided for analysis in Appendix 3b.

Key informants

In all banks initial 'key informants' were policy makers ultimately responsible for environmental lending policy design and implementation. Despite this common responsibility, policy makers held various roles within their individual banks, from heads of lending functions to risk managers, and members of specialist environmental units. In most cases policy makers also represented their bank at community level discussions.

Bank interviews

Initially a telephone interview was undertaken with key informants during which time the research[23] background and the bank's position were discussed and an interview timetable was agreed. A number of banks agreed to provide documentation for review prior to the interview as a basis for discussion.

Interviews lasted on average between two and three hours. A number of interviews were conducted in an informal setting away from bank premises. Where interviews were held on bank premises an observational review was conducted for evidence of the bank's environmental policy and/or housekeeping procedures. Interviews on bank

premises additionally provided immediate access to bank documentation and other on-line reference material.

Documentary reviews

In a number of banks internal policies, procedural guidance and working papers were provided for review. Copies of documents were not always made available for private study and/or removal, and in a number of banks textual analysis had to be undertaken on the premises. In all cases where interviews were held away from bank premises copy documentation was requested and provided by post following the interview.

Follow up interviews

In most cases follow up interviews were carried out in person, with individuals and/or groups, or by telephone. Follow up telephone interviews with policy makers were standard practice. Other interviews were requested on the basis of bank findings. Bank participants involved in follow up interviews included legal representatives, members of environmental working parties, in-house environmental specialists, training officers and lending officers. In a number of cases these participants were involved in policy design and development. A summary of bank members interviewed within each bank is outlined in Appendix 3c.

Research approaches to branch lending officers were frequently denied. The explanation for this was lending officers had recently been introduced to environmental issues and, given legal uncertainty regarding lender liability for the environment, questioning may distort the process of integration and perceptions. In a number of cases interviews with lending officers were not requested as environmental responsibility had not been delegated to lending officers.

Where follow up interviews were not appropriate, or not available, extensive documentary reviews were undertaken to ensure adequate research evidence was provided in all banks examined.

Translation issues

Key Swiss informants expressed a preference for all correspondence to be in English, in particular the questionnaire[24]. Any uncertainty recognised by research participants[25]

regarding translation issues were resolved during interviews. This approach was favoured as it was felt that it minimised the risk of mis-understanding. On a number of occasions bank documentation existing in an English form were made available for review. Where documents accessible for review did not exist in an English form, bank participants provided translations of key terminology and made copy documentation available for full translation.

Language barriers created a research problem during follow up exercises. During the research visits one Swiss bank was undertaking training and presentations but these were delivered in German. The attendance of the researcher at the events was discussed but it was decided between research partners that the language barrier was un-manageable. Alternately, the training and presentation issues were discussed during interview with the member of staff responsible for training design and delivery.

Access to branch lending officers was provided by only one Swiss bank on the basis that correspondence would be addressed in the local language of German, French or Italian, as applicable to the bank lending officer. The bank advised the researcher to initiate contact using a purpose made questionnaire[26] translated to and from German with the help of a University interpreter and bank advisers. This was pursued as the only available means of contact while recognising translation risks. The questionnaire was designed on the basis that questionnaire follow up would be available by means of a telephone interview.

A German questionnaire was issued to eight lending officers selected given their various roles throughout the lending hierarchy. A complete questionnaire was returned directly to the researcher by four lending officers. Follow up research was attempted with participants but was abandoned as lending officers proved unavailable for questioning. This restricted the scope of the findings which could be drawn from the questionnaire results.

Bank feedback

A summary report of research findings was presented to key informants of each bank and their comments were requested. Confirmation of findings were achieved with all but two banks.

Analysis of findings

The choice of research methodology and broad scope of the examination provides a multitude of starting points from which findings can be analysed such as commonalties and/or differences between: banks within each community; banks in different communities; and all banks. Further, the adoption of a theoretical approach based on social perception highlights the findings and conclusions represented as the researcher's interpretation of events, observations and discussions. Publication restrictions imposed by banks precluded: the identification of banks participating in the research; the anonymous reproduction of bank documentation; and in some cases specific details of bank policy and procedures.

With this in mind the findings of the research programme have been documented in two sections within which each bank is identified alphabetically. The first section, in Chapter six, illustrates the research findings of the three community case studies and the cross community bank study. Findings are illustrated by drawing comparison and contrast between banks within individual communities. By comparing and contrasting the UK and Swiss operations of a Swiss bank the influence of locational characteristics on the bank's policies and practices are examined. The second section, in Chapter seven, critically reviews the application of the central proposal made to findings outlined in Chapter six, drawing additional comparison between bank findings across communities.

Summary

This Chapter has outlined the methodology undertaken to empirically examine the central proposal that *banks can be characterised as hierarchical cultures with views of physical nature founded upon myths of tolerance.* The methodology is based on the ontological foundation inherent within the proposal that reality, and environmental risk, is socially constructed. The basic epistemological stance reflected by the methodology is to address the social construction of environmental risk within a bank, through an examination of social processes supporting the development of cultural perception and associated management rationality.

The chosen methodology takes into account practical research limitations, highlighted in Chapter one, imposed by bank research participants. These limitations include:

preclusion of access to borrower information; restricted access to bank members and internal bank documentation; the maintenance of bank anonymity; and preclusion on the reproduction of bank documents within research publications.

The methodology selected was to undertake three bank community case studies within: Switzerland; Ireland; and the UK, and a cross community bank study based on a comparison of a Swiss bank's subsidiary operations within Switzerland and the UK. The findings drawn from the research are outlined in Chapter six. Reflecting upon the adoption of a social constructionist perspective, it is recognised that the research findings are a representation of the researcher's view of given situations.

Notes

[1] It has been proposed that individuals rationalise their responsibility for environmental management according to their social role and corresponding myth of nature.

[2] It has been proposed that discussions regarding research methods in the social sciences have frequently oversimplified the choice of methodology by focusing on the dichotomy between qualitative and quantitative (positivistic) methods almost in abstract. It is stressed that the choice of a qualitative 'approach', is derived from the nature of the social phenomena to be explored.

[3] According to symbolic analysts meanings do not reside in objects but emerge from social processes. Emphasis is therefore placed on the active, interpretative and constructive capacities or competence possessed by social actors resulting in reference to symbolic analysis under 'social action theory'. Within the thesis the term 'members' rather than 'actors' is favoured given affiliations with cultural theories.

[4] In anthropology, an emphasis on the importance of the ethnographic method was initially associated with the functionalist school encouraging the analysis of the internal structure and function of social groups.

[5] Symbolic interactionism emphasises the emergence of meaning from social process and the interpretative and constructive capacity of actors or 'members' of a social group as opposed to social structure and functionalism.

[6] Undertaken July 1994.

[7] From Chapter one the argument is noted that banks facing common regulatory demands, economic conditions and social pressures will have/illustrate similar perceptions of environmental risk.

[8] The proposal that banks are hierarchical social structures implicitly recognises the existence and maintenance of power relationships within banks. Those in a position of power will have a dominant influence on formal risk communication channels and messages. Selecting policy makers as key informants recognises and facilitates an exploration of this dominance.

[9] It is partly because of such an overlap in social contexts that individuals are able to co-operate with inhabitants of other ways of life.

[10] It should be noted that no formal attempt was made to differentiate between lending processes dealing with large and small corporations. However, the interviewer was aware of the possibility of size influencing lending policy and thus the nature of risk communicated.

[11] For example, parts of section 'B' or 'C' may be omitted and a copy of the banks annual report may be attached as a basis of a response to section 'D'.

[12] The definition of policy was left open to interpretation by the informant.

[13] It was recognised that the bank would maintain clients confidentiality agreements at all times. However, the questionnaire, in places, required the recipient to comment on their experience/ knowledge of particular case examples. It was perceived in advance that this area of questioning may be a problematic, as respondents may provide a dishonest response if questioned on an error in practical judgement.

[14] The survey was undertaken December, 1994. It was recognised that the Co-operative Bank and National Westminster Bank had publicised their ethical/ environmental policies which providing a background to the research approach.

[15] Outside involvement in the review was not considered appropriate.

[16] See Appendix 2

[17] Undertaken June 1995.

[18] Further, the first questionnaire was undertaken as a draft, with critical comments requested from the recipient and adjustments made where necessary.

[19] A more extensive review of the results of the pilot study will be given in Chapter six and the appendix. Reference given at this point is an overview of factor influential on the choice of methodology as opposed to theoretical justification.

[20] Banks were examined within their home country, as determined by their head office location. However, consideration was given to the influence of wider group activities where applicable.

[21] The UK operations of one Swiss bank were also examined.

[22] The international scope of the research programme was perceived to be a factor which persuaded many banks to participate as they were interesting in learning about the experience and reaction of their peers regarding environmental liability under a broad range of circumstance, constantly striving to attain best practice.

[23] Extensive questions were asked concerning the perspective of the researcher. It was noted that the accountancy training and experience of the researcher was perceived by bank members to be an acceptable basis from which to investigate the proposed research area.

[24] A translation was offered to Swiss bankers.

[25] The standard of written and spoken English demonstrated by the participants was very high.

[26] This questionnaire provided the only explicit reference made to bank culture by the researcher. All other references to culture were either raised by the participant and discussed or evaluated according to other research evidence.

Chapter 6

Research findings from three bank communities

Introduction

This Chapter provides an overview of research findings drawn from three bank community case studies: Switzerland; Ireland and the UK and a cross community bank study based on a comparison of a Swiss bank's subsidiary operations within Switzerland and the UK. The research was undertaken in the period August 1995 to March 1996. Findings are drawn from: three Swiss banks; two Irish banks; and five UK banks, classified according to location of their principal Head Office.

Community cases are presented in terms of community views represented through local trade associations and then by comparing, and contrasting, findings drawn from individual banks within each community. These findings are supplemented by those from the cross community bank study which addressed the impact of location on the deployment of Group policy and practice. Background details for each community are outlined in terms of: bank regulation; environmental legislation; industry/market profile; bank community profile; and bank trade associations, and the influence of these location factors are discussed.

Research findings drawn from each *Bank* are classified according to a letter of the alphabet to maintain bank anonymity, while still providing a basis for reference. Restrictions imposed by banks participating in the research preclude their identification, reproduction of bank documentation, and specific policy and procedural details.

The adoption of a theoretical approach based on social perception highlights the principles that the evaluation provided represents the researcher's interpretation of events, observations and discussions.

In Chapter seven, the application of the central proposal is discussed with respect to these findings and an additional contrast is drawn within banks and between banks across communities.

Swiss bank community

Background

Bank regulation

Bank activities are regulated by the Federal Bank Commission. When research was carried out no regulation existed which required banks to consider environmental issues.

Legislation

Switzerland is governed by a Confederation who establish federal law to be administered at a 'canton', regional and municipal level. There was no explicit legal requirement on banks to consider environmental issues as part of their lending process but as corporate entities' banks were legally required to manage 'housekeeping' issues such as waste disposal. The corporate activities of borrowers were controlled by individual environmental laws. In August 1995 when primary bank research was carried out, a contaminated land register was in the final stages of development. The register outlines requirements for legislating future clean up activities with potential implications for corporate land owners.

Under Switzerland's civil code of law in a case of bankruptcy, or foreclosure, ownership of property devolves to the courts. In such circumstances banks are more likely to lose their security than inherit extensive environmental liability from borrowers.

Industrial profile

Historically, Switzerland's economy has been dominated by service industries. However, the country provides a base for the subsidiary operations of a number of international groups, in particular, members of the chemical industry. These operations are predominantly located in the canton regions of Basel and Geneva close to Switzerland's borders with Germany and France.

Bank community profile

The research was based on a study of Switzerland's three major banks which dominate the domestic financial services market. The banks examined were part of a large

international group with their primary executive board and supporting policy units based in Switzerland.

Bank trade associations

Liaison between banks within the community was primarily facilitated by the Swiss Bank Association, locally termed the ÖBU. The ÖBU has an Environmental Working Group, which includes representatives from the banks examined. The Group was established in response to environmental initiatives undertaken by the major Swiss banks. The work of the Group has centred on an identification of the environmental issues faced by local banks, including issues of lender liability. No formal guidelines are provided by the ÖBU on procedural issues for banks.

Community views

The banks examined acknowledged a very close relationship with one another. For example, the policy maker for each bank involved in the research programme acknowledged meeting on a monthly basis to discuss their financial performance and topical issues. In contrast to this direct liaison, their involvement with smaller Swiss banks is facilitated by the ÖBU.

Representatives from the large commercial banks claimed to have a considerable influence on the activities of the ÖBU. The banks examined noted that they have encouraged the ÖBU to address environmental issues and have frequently hosted special issue seminars and conducted research on the ÖBU's behalf. For example, the policy maker from Bank A referred to the first Swiss banking Conference on the Environment 1995 hosted by the ÖBU with representatives from over 60 Swiss and foreign banks.

The ÖBU activities specifically referred to by research participants involved liaison with other bank associations within Europe. The ÖBU has worked with bank associations within neighbouring countries such as Germany to harmonise bank approaches to environmental issues[1]. For example, Bank B recognised that the ÖBU were sponsoring European research addressing the development of corporate environmental performance indicators for use by banks and other industries.

Given Switzerland's geographical proximity to Germany, France and Italy the potential for the environmental impact of corporate activities within one country to transgress national boundaries is high. With this in mind the close relationships demonstrated among these neighbouring bank communities is unsurprising. Particular reference was made by the Swiss banks to their relationship with German banks. It is noted that the locations of Switzerland's "heavier industries" are on its border with Germany.

The desire of the Swiss banks to promote their environmental position internationally was further reflected by their involvement in United Nations Environment Programme (UNEP) and the International Chamber of Commerce Environment Group initiatives. These activities represent the involvement of the banks with communities beyond their direct neighbours and an interest in sharing environmental best practice, where relevant, on a broad international scale.

Community Overview

Banks A to C

Group structure

Within Groups examined trading activities varied geographically. Corporate lending activities in Switzerland differed from other Group lending activities on the basis that the banks only offered loans to small and mediums sized enterprises (SMEs) in their domestic market. Bank policy makers associated the Groups' dominant roles within the local economy with high degrees of social responsibility[2] and high public profiles.

Within each Swiss bank examined, responsibilities for lending decisions were delegated to lending officers within specialist central lending units, cantonal centres and local branch networks as a function of the lending situation. In each bank a process of restructuring was taking place to increase the decision making power of lending officers. The nature of lending activities within individual cantons was found to vary significantly depending on the nature of industry within the region.

Environmental considerations

Each bank examined had an "Environmental Management Services" unit based in Switzerland whose members were environmental scientists responsible for co-

ordinating environmental management activities internationally and providing day to day support services to Swiss bank operations. Executive members of each unit reported directly to the board of directors. Outside of Switzerland, each Group had a network of national representatives responsible for local environmental management.

Policy maker interviewed referred to discussions between national representatives to harmonise Group environmental management approaches. The networks were co-ordinated by head office policy makers who referred to examples of consultation. The frequency and method of communication adopted by each Group network varied considerably between banks.

In Bank C the Group's environmental considerations were formally recorded in an environmental mission statement. The mission was launched in 1991 to communicate environmental management responsibilities to Group members as a basis for procedural development. The statement was publicly promoted as a sign of Group environmental commitment. The publication of the mission *initiated the development of functional environmental policy regulations* and management practices.

In Bank A environmental considerations are recorded in *a comprehensive "environmental concept" directive*. The concept was launched in 1993 as a strategy document outlining environmental responsibilities across the Group. Extensive procedural guidelines were issued to members of the Group's Swiss bank operations in tandem with the concept document.

At the time the research was undertaken, a cross functional committee of policy makers within Bank B were in the final stages of developing a Group environmental policy statement. The statement objective was to summarise the *environmental management procedures undertaken* in the Group. The purpose of the policy statement was to provide a medium to communicate the Groups environmental position to the public. From a review of formal Group policies it is recognised that the publication of environmental policy/mission statements should not be viewed out of context as an indicator of environmental management practice.

Motives for environmental management

Social responsibility

Policy makers noted that environmental issues had first been considered by bank members in terms of energy management in the 1970/80s in response to the oil crisis. Members from Bank A referred to the development of an energy policy statement in 1978 as a basis for communicating the need for energy management to bank members. Bank B recognised the production of a similar energy policy statement in 1980 when energy management procedures were implemented.

Bank representatives recognised that given the scale of bank operations they were among the largest consumers of energy in Switzerland. The implication of this was twofold. Firstly, resource scarcity threatened their economic sustainability[3]. Secondly, the banks recognised a heightened degree of social responsibility to efficiently manage their resource use.

The Sandoz incident

Representatives from each bank examined highlighted "environmental awareness and action as the result of incidents such as 'Sandoz' which focused bank considerations, and public attention, on the need to manage corporate environmental risks". The Sandoz disaster[4] occurred in 1986 when water used to put out a fire in the Schweizerhalle Warehouse of the Sandoz chemical company caused massive pollution of the river Rhine. The disaster highlighted the potential extent of industrial impact on the natural environment, the public of both Switzerland and its neighbours, and the cost to the associated company and its stakeholders. As a result of the accident Swiss banks recognised a heightened responsibility for environmental management as a corporate entity and a lender.

By 1991 the banks had responded to these risks by initiating the development and incorporation of environmental management procedures into all of their in-house activities. Reference to bank documentation and comments by members provided extensive evidence of environmental "housekeeping" measures undertaken and corresponding achievements during the period 1991 to 1995. In each bank environmental housekeeping procedures such as energy efficiency and recycling

initiatives were visible during research visits. Environmental management considerations within lending processes were found to vary significantly.

Lending considerations

Specialists from each bank recognised that their bank's lending policies were not formally documented in a position statement but were represented by "policy guidance documentation" that they were responsible for providing. In all Swiss banks examined credit risk specialists with the banks' Environmental Management Services Units (EMU) provided reference to their environmental credit risk assessment activities. In Bank A specialists reflected upon environmental impact assessments undertaken in accordance with requests by lending officers. In Bank B specialists were responsible for all loan facilities to small and very large businesses and, as in Bank A, environmental impact assessments requested by lending officers. In Bank A and B, specialists provided consultation on, and referral of, environmental credit risk assessment by lending officers.

At the time research was conducted, the environmental credit risk specialist in Bank C had sole responsibility for environmental credit risk assessment within lending decisions. However, the specialist was in the process of developing formal procedural guidance regulations to support the delegation of environmental credit assessment to lending officers in Autumn 1995. The specialist noted that environmental issues recognised by lending officers in response to the banks environmental mission objectives were referred to the bank's EMU.

In Bank A the delegation of responsibilities for environmental credit risk assessment to lending officers followed an extensive campaign of environmental awareness raising through in-house publications and presentations. Responsibilities were formally issued through the provision of environmental lending policy documents and an environmental training programme. In Bank A lending officers questioned noted their consideration of corporate environmental performance considerations within lending decisions in terms of standard bank guidelines.

In Bank B far greater emphasis was placed on environmental training. Responsibilities for environmental credit assessment were delegated to lending officers following their

involvement in an environmental training programme and receipt of environmental guidance documentation outlining procedural responsibilities. In Bank B research access to bank lending officers was not achieved and this was recognised as a limitation on research findings. However, it is noted that the environmental credit risk specialist in Bank B provided considerable evidence of environmental credit risk assessment for which they were responsible. In addition, access was provided to standard environmental guidance documentation and training materials. In Bank C lending officers were not approached as they had no formal responsibility for environmental credit risk assessment.

All policy makers proposed that responsibility for in-house environmental management had provided lending officers with a general awareness of environmental issues which could be built on to introduce responsibilities for environmental credit assessment. All corporate loans were to be the subject of environmental credit assessment in each Swiss bank. In each bank a separate process of assessment had been designed for small and medium sized enterprises, corporates and very large projects. While environment credit assessment procedures and definitions of environmental credit risk within policy communication varied considerably between banks, a number of commonalties were recognisable. For example, the primary determinant of environmental credit risk was the nature of a borrower's industrial activities and management ability. However, in Bank A and Bank B environmental credit risk assessment extended to all environmental mediums land, water and air. In Bank C environmental credit risk assessment was to be introduced in stages beginning with contaminated land and later progressing to air and water contamination.

Influence of European standards

Representatives from all the Swiss banks examined recognised that their environmental management practice were influenced considerably by a variety of Swiss and European environmental legislation. However, the degree and nature of influence of legislation varied from bank to bank. For example, environmental considerations within the lending processes of Bank A and Bank B were founded upon recommended European standards of environmental management.

In Bank A environmental credit assessment procedures were conducted with reference to industrial sector requirements based on the strictest environmental legislation demonstrated by a European member state. Whilst recognising developments in European legislation, representatives from Bank C referred specifically to the development of a contaminated land register for Switzerland as the primary influence on corporate credit assessment procedures.

Bank representatives attributed their considerations of European environmental standards to Switzerland's geographical proximity to its neighbours. Further, attribution was made to the impact of the Sandoz incident which, while relatively localised, crossed national boundaries. Representatives from Bank A and Bank B noted an inability to fully predict the potential impact and associated cost of such an environmental incident. It was noted that all Swiss banks examined required corporate borrowers to have adequate environmental insurance which they recognised as being readily available in Switzerland.

Experience of loss

Representatives from Bank A and Bank B recognised that during the early 1990's they had experienced financial loss in relation to lending in excess of five million Swiss Francs on a number of occasions in connection with environmental issues. These cases involved corporate borrowers being required to comply with environmental laws. As a result the banks had suffered loss of repayment for all or part of a loan, and in some cases had incurred clean up cost attached to security before resale was possible. The Swiss banks had not been the subject of direct legal assessment for environmental damage in their position as lenders. Representatives from Bank A and Bank B recognised that the financial loss which their bank had experienced in connection with environmental lending considerations was partially a response to borrowers' inability to comply with developing environmental legislation.

Members of the banks concerned recognised that each experience had influenced their view of the potential extent and likelihood of environmental credit risks. As a result, environmental considerations within lending activities had been increased and the formalisation of an environmental lending policy had been encouraged. It is noteworthy that representatives from Bank C were unaware of such an incident occurring in relation

to their lending activity or that of their peers. The bank remained in the planning stages of introducing formal environmental credit procedures, influenced primarily by the forthcoming introduction of an environmental contaminated land register for Switzerland.

Corporate environmental performance measurement

In Bank A corporate loan appraisals were based on written summaries and were not subject to a risk rating procedure. In Bank B and Bank C final lending decisions were based on systems of credit risk rating. However, it was recognised by representatives of both banks that the incorporation of environment lending considerations within this system were at the time of research future objectives. In Bank C the development of such a system would be part of the final stage of the environmental lending policy regulation.

Irish bank community

Background

Bank regulation

Bank activities are regulated by the Central Bank of Ireland. When research was carried out the governing Central Bank of Ireland Act 1989 placed no requirement on banks to consider environmental issues.

Legislation

There was no explicit legal requirement on banks to consider environmental issues as part of their lending process. The most significant piece of environmental legislation of potential influence on bank 'housekeeping' activities was the Waste Bill which at the time the research study was undertaken was in the process of development.

When the primary research was carried out Ireland's Environmental Protection Agency (EPA) Act 1992 was being introduced by the Irish Environment Agency through a system of licensing corporate activity on a sector by sector basis. Environmental licensing requirements were a potential issue of compliance for a range of corporate borrowers.

Ireland operates under a common law system. In a case of corporate bankruptcy or foreclosure a lender may become 'mortgagee in possession of a property' and liable for associated environmental damage.

Industrial profile

Historically, industrial activity in Ireland has centred on agriculture and there has been an absence of heavy industry and limited presence of large 'international' groups. At the time research was undertaken the Irish Environment Agency was in the process of outlining licensing requirements for agricultural activities.

Bank community profile

The Irish bank market is dominated by four commercial lending banks. Research participation was achieved with two of these four banks. It was felt that this level of participation was sufficient to achieve a basis for comparison within the community. The banks examined were members of international groups with their head offices located in Dublin Ireland.

Bank trade associations

Liaison between Irish banks is formally organised by the Irish Bank Federation (IBF). The IBF has an Environmental Working Group, which includes representatives from the banks examined. No formal guidelines are provided by the IBF on procedural issues for banks. The work of the Group has centred on an identification of environmental issues faced by local banks in particular lender liability issues.

Community views

The bank community liaise primarily through the IBF. Policy makers and legal advisers from banks examined highlighted the role of a special IBF environmental working party, as providing a valuable forum for discussion of environmental issues within banking at both a local and a European level. In addition, the working party was viewed as providing a mechanism for establishing a community response for negotiations with regulators and external bank advisers. For example, Federation initiatives had included efforts to establish standards for property valuations and an industry delegation to address government plans for waste regulation. In addition, legal advisers from each bank had been delegated by the IBF working party members to represent the Irish bank

community at meetings of the European Bankers Association to discuss developments in European legislation.

Reflecting upon the focus of attention of the bank community, bank representatives revealed that the development of environmental legislation was the main topic of consideration. The EPA Act 1992 was viewed by bank representatives as a move towards European environmental standards. The banks' stated their support for the development of environmental legislation, but expressed concern regarding the ability of the Environment Agency to deal with the administration of licensing requirements to 'appropriate standards'.

Community Overview

Banks D to E

Group structure

Within both Groups, trading activities varied geographically. The nature of corporate lending in Ireland was perceived as particularly unique in comparison to foreign operations. Within both banks lending facilities were was divided into three categories: large corporate termed "commercial" loans; small and medium sized enterprise loans termed "retail"; and "agricultural" loans. Due to the nature of the financial services market in Ireland corporate lending activities were centred on retail and agricultural lending. Outside Ireland the Groups offer only commercial loan facilities.

Within each bank a central credit committee retained responsibility for lending decisions associated with facilities over an established limit, primarily commercial loans. The limit was the same in each bank. Responsibilities for lending decisions for facilities below these established limits were delegated to regional/area and local lending officers.

In designing local lending procedures bank policy makers referred to discussions with members of foreign subsidiaries. The requirements of environmental legislation were noted by bank representatives as the foundation for international consultation. The greatest degree of contrast made by bank representatives was with their UK subsidiaries whom they proposed shared a number of common market issues. However, they

reflected on cases of financial lending loss within US operations to note the potential significance of environmental lender liability.

Environmental considerations

Environmental considerations within both banks examined were centred on Group risk management approaches. Environmental risk was viewed primarily in terms of the banks' potential environmental lender liability centring risk management on commercial lending activities. Bank members and documentation referred to 'environmental risk in lending' as opposed to environmental credit risk.

In Bank D members of Group risk management were responsible for credit strategy, policy and review in addition to the development of credit risk assessment procedures. To monitor environmental management activities a working party had been established drawing on members of the central credit committee, policy makers and legal representatives.

In Bank E Group risk management activities were co-ordinated by a steering group drawn from representatives of each bank function. Members of a Group credit control function were delegated responsibility for risk management within credit strategy and developing guidelines for environmental management built on Group risk management policy. In both banks policy makers with responsibility for environmental credit considerations referred to the extensive involvement of the banks' legal representatives in policy and procedural development.

Motives for environmental management

Environmental considerations within bank lending processes were viewed by representatives from both banks as a reaction to the development and subsequent implementation of the EPA Act 1992. Environmental management requirements were established in each bank in 1993 by the banks' environmental working party/ steering committee. As a result policy documentation outlining responsibilities for environmental credit risk assessment were issued by policy makers within each bank in 1994.

Bank E's policy maker recognised that the development of bank procedures had also been influenced by the public demonstrations of environmental pressure groups calling for environmental improvements by large industrial companies in the area. It was noted that public recognition of a bank's association with a corporate polluter represented a risk to bank reputation.

Policy makers' primary concerns were the impact of a compliance requirement on a borrower's performance and the associated implications for environmental lender liability. Environmental credit risk management for both banks was viewed as a weighting of the costs and benefits of a borrower's approach to corporate environmental management. Bank members' viewed the risk of lender liability for the environment as an integral part of credit risk. However, while both bank policy makers acknowledged the same motivation for environmental credit risk assessment, the nature of the management response varied considerably between the banks.

In particular, Bank E's policy maker recognised the potential benefits of encouraging a market for special rate 'environment loans' for small businesses with a good environmental record. Bank D placed much greater emphasis on avoiding the negative consequence of poor environmental management by a borrower. However, it was noted that documentary reference to environmental credit risk within each bank remained centred on avoidance of liability.

Lending considerations

Policy

Working party and steering committee members interviewed referred to standard bank guidance documentation and procedures as bank "lending policy". In each bank the primary document issued to launch the "policy" was a circular. The circulars outlined: potential environmental credit risks resulting from the EPA Act 1992; potential environmental lender liability; environmental responsibilities; and associated procedures for environmental credit risk assessment. In addition, in Bank D a one page summary was provided at the end of the circular termed a policy statement. Policy makers in both banks acknowledged that lending officers had been consulted during the preparation of guidance material.

As a follow up to policy communication, lending officers within each bank were provided with standard environmental credit assessment working papers. In each bank working papers were provided as the basis for recording environmental assessment procedures undertaken within borrower case files.

Adherence to standard environmental credit assessment procedures

Under the banks' lending policies, responsibilities for corporate environmental performance considerations within lending processes differed considerably.

In Bank E all loans were subject to a basic environmental review and then loans exceeding a specified limit, or initially identified as an environmental risk, were subject to further review. Accordingly, members of the central credit committee and regional lending officers had delegated responsibility for environmental decision making. To support policy introduction a special environmental training course was provided to all lending officers. Members of the central credit committee were also members of the bank's environmental steering committee responsible for policy developments, therefore they were already familiar with the standard environmental credit risk assessment procedures.

Research access in Bank E was restricted to interviews with the bank's policy maker and legal adviser, and documentary review. The policy maker, as a member of the bank's central credit committee, provided examples of corporate environmental performance considerations within the lending process and adherence to standard bank procedures. The legal adviser provided reference to formal and informal consultation on environmental lending cases by regional and local lending officers, and members of the central credit committee. The legal adviser was involved in the bank's environmental training course and attributed informal case referrals to this responsibility and lack of familiarity with environmental issues. In addition, the adviser noted the use of standard environmental assessment documentation as a guide to defining environmental credit risk by lending officers and central credit committee members.

Within Bank D only loans greater than a specified limit were subject to environmental review. This limit was considerably higher than that established within Bank E. As a result final lending decisions in relation to environmental issues remained centralised.

Recognition and referral of environmental issues were however made by regional lending officers. To highlight the importance of environmental considerations within the loan process each officer had been provided with a desk top template referring to standard environmental assessment procedures. However, the policy maker proposed that formal environmental training was not necessary. It was recognised that training would be required to support the future delegation of responsibility for environmental decision making to lending officers. The bank policy maker noted that training would be part of the next stage of formal policy development.

In Bank D members of the central credit committee were interviewed regarding their adherence to environmental considerations. Members interviewed provided anonymous case examples of corporate environmental performance considerations within lending decisions, and extensive reference to the use of standard environment credit risk assessment procedures. Reference was additionally made to the involvement of lending officers in identifying environmental credit risk for assessment while processing lending applications. Credit committee members noted that they commonly engaged in informal consultation with lending officers regarding risk definitions and policy issues during the initial stages of policy familiarisation. A regional lending officers from Bank D recognised the use of a desk top template as a basis for environmental considerations within case referral. However, the lending officers noted that where an environmental risk was identified, a process of informal referral took place with a member of the senior credit committee, or the bank's legal adviser. Bank D's legal adviser recounted a number of examples of such case referral.

Corporate environmental performance measurement

In both banks lending officers based their final lending decisions on a risk rating process. However, in Bank D corporate environmental performance was represented within standard working papers by a written summary. Alternately, in Bank E final lending decisions were based on a system of credit risk rating. However, it was recognised by the bank's policy maker that environmental lending considerations had not been fully integrated into the credit rating system. In both banks policy makers recognised the need to integrate environmental considerations into their 'traditional' lending process. In Bank E the policy maker noted a desire to develop a quantitative mechanism for corporate environmental performance consideration.

Lending experience

Irish banks examined had not experienced environment related financial loss and bank members noted that no such loss had occurred within the wider bank community to their knowledge. The policy maker of Bank D described the case of a potential site purchase by a commercial builder where a site valuation had revealed the presence of considerable pollution. As a result the site was cleaned by the vendor before purchase. In reaction to this case, members of central credit committee recognised an increased awareness of potential environmental credit risks and greater emphasis on adherence to 'standard' environmental credit assessment procedures.

Members of Bank E's central credit committee recognised that they had lost potential custom by requesting a potential borrower to conduct an environmental impact assessment to examine potential land contamination. As a consequence the borrower had successfully approached and raised finance with another bank who had not requested such an assessment. Bank E's policy maker stressed the importance of reaching a common approach to environmental issues within the bank community to minimise such loss of business. The mechanism for promoting such standardisation was seen as discussion within the IBF working party. Bank E's policy maker acknowledged providing details regarding the bank's internal environmental lending procedures to other IBF members with the specific intention of "encouraging others to act".

Members from both banks stressed the potential for banks to suffer direct financial loss in relation to environmental credit risks and noted that such a loss would lead to a review of lending procedures and an increase in their level of environmental consideration. Representatives from both banks noted the potential extent of corporate environmental liability by reference to a local incident involving a fire at a plant which had led to pollution of a local water course, and action by the Environment Agency.

Representatives for Bank D and Bank E proposed that a lack of large scale manufacturing industry in the area minimised environmental risk to lenders. However, they recognised that a degree of risk existed from Ireland's dominant agricultural sector which, at the time research was undertaken, was soon to come under legislation. Bank representatives additionally recognised that Ireland had inherited a legacy of nuclear waste dumps in unknown locations which could contaminate land offered as security.

The policy maker from Bank E and members of the central credit committee from Bank D reflected upon the experience of their US operations when considering the potential consequences of environmental liability. Environmental guidance documentation issued by both banks referred to loss incurred by US lenders. Documentation issued within Bank D specifically quoted case details and quantified bank loss.

In-house management

Environmental housekeeping issues were found to be a consideration of Bank D and Bank E in terms of efficient resource use and legal compliance. Representatives from both banks recognised that the forthcoming introduction of a Waste Bill for Ireland was causing the banks to re-evaluate their resource management procedures. The development of environmental management procedures to meet the requirements of the Waste Bill were being considered by the banks' respective environmental steering group and working party.

UK bank community

Background

Bank regulation

Bank activities are regulated by the Bank of England. When research was carried out, the governing Banking Act 1987 placed no requirement on banks to consider environmental issues.

Legislation

There was no explicit legal requirement on banks to consider environmental issues as part of their lending process but bank 'housekeeping' activities were subject to minimal environmental regulation.

The most significant pieces of environmental legislation of potential influence on borrower activities were the Environmental Protection Act (EPA) 1990 and the Environment Act 1995.

The UK operates under a common law system. In a case of corporate bankruptcy or foreclosure a lender operating in the UK may become mortgagee in possession of a

property. As noted in Chapter two, the wording of the Environment Act 1995 could be interpreted as extending environmental liability to lenders as 'mortgagee in possession of property'[5].

Industrial profile

The UK has a varied history of 'heavy' industrial activity. At the time research was carried out, pockets of 'heavy' industrial operations were present in the UK along with contamination from past activities.

Bank profile

The research case centred on an examination of five of the eight primary high street banks operating in the UK. Three of the banks examined were operating as part of an international group with their head offices based in the UK. The other two banks were part of groups operating purely in the UK.

Bank trade associations

Liaison between banks was primarily facilitated by the British Bankers' Association (BBA). The BBA conducts research on behalf of the UK bank community and organises special issue discussion groups with bank representatives. The BBA has established an Environmental Issues Advisory Group under their Risk Management Committee. The Group was drawn from BBA members including bank members represented within the research programme.

Community views

As noted in Chapter two, the BBA has issued a number of documents addressing environmental issues on behalf of the UK bank community. These documents primarily address issues of potential lender liability for the environment resulting from developing environmental legislation in the UK and Europe, and outline a unified community response to regulators and the markets. The community view provides that if lenders are to be held liable for the environmental impact of their borrowers they will refuse to lend in cases of uncertainty. These documents are aimed at raising environmental awareness among commercial lending banks and call for regulators to clarify the position of lenders regarding environmental liability for the environment.

At the time the research study was carried out, the key point of debate within the community noted by research participants was the introduction of the Environment Act 1995. BBA members made a special request to government ministers during the writing of the Environment Bill to clarify the wording of the Bill and hence their position regarding environmental lender liability. However, adjustments proposed by the BBA were not made.

Community Overview

Banks F to J and C (UK operations)

Group structure

Banks C, F, H and I operated as part of international Groups and recognised that Group policy was adapted to local markets and legislative requirements. In designing local lending procedures bank policy makers referred to discussions with members of foreign subsidiaries. However, the lending experience and best practice techniques adopted by Group foreign subsidiaries were noted to be of little relevance to UK operations due to difference in market profiles and legislation. In Bank G and Bank J Group policy was incorporated directly into functional policies.

In Banks F, H and I, responsibility for decisions making was delegated to individual lending officers as a function of the lending situation. In Bank G and Bank J central credit committees and branch credit committees were responsible for decision making according to loan value. In Bank C the policy maker had sole responsibility for making lending decisions.

Environmental considerations

With the exception of Bank G, environmental consideration within UK banks examined were centred on commercial lending activities and credit risk management. Policy makers in Banks C, F, H, I and J viewed environmental lending considerations primarily as a risk management requirement of the Group/bank. Environmental housekeeping issues were found to be secondary considerations, reflecting minimal legal requirements and efficient resource use.

In Bank G the policy maker noted that environmental management considerations were part of the Group's fundamental "ethical position". As such environmental management was encouraged as an integral part of all bank in-house activities and service considerations.

Environmental responsibilities

Bank G and Bank I were found to have established "Environmental Management Units" with sole responsibility for co-ordinating environmental activities and providing specialist support within the banks. The degree of in-house environmental management activities within these banks was noted as considerably greater than other UK banks examined. In Bank G corporate environmental lending policy consideration was delegated to the manager of corporate credit strategy. Within Bank I's environmental management unit a risk management specialist was responsible for environmental lending issues. Similarly, in Banks F, H and J responsibilities for environmental lending issues were delegated to group risk management members. In Bank C the policy maker was responsible for the bank's environmental policy considerations in the UK.

All of the UK banks represented were found to have dedicated resources to cross functional environmental committees or working parties to support the development of environmental management activities.

Environmental policy

In 1990 Bank J issued an environmental policy statement to all employees formalising their environmental management approach. In 1992, Banks F, H and I issued similar environmental policy/mission statements. However, the statements by Banks F, H and I were made available to the public. Representatives from all of the UK banks represented noted that policy statements were provided as a basis for raising employee awareness of environmental issues and initiating the development of procedural guidelines and environmental management practices. The primary emphasis of environmental policy statements were in-house management and commercial lending issues.

In Bank C the principles of environmental management adopted were those contained within the Group's environmental mission statement issued in 1990. In 1992, Bank G launched an ethical mission statement. The statement was designed as a representation of the bank's ethical position which was developed in the 1980's in response to "customer demand". The purpose of the statement was to raise public awareness of the bank's ethical position. Environmental consideration was represented as an integral part of the bank's ethical position.

Bank G's mission statement was edited in 1995 to include a specific clause offering financial support to borrowers' promoting environmental best practice. At the same time Bank J also added a clause to their environmental policy as a representation of environmental lending considerations.

Motives for environmental management

Members from Bank C, F, H, I, and J recognised, to varying degrees, that policy developments were responses to the Environmental Protection Act 1990, in particular addressing recommendations for a contaminated land register which was later abandoned in 1993.

For Banks C, F and H environment policy development was a direct response to developing environmental legislation. In Bank J the policy response was also attributed to an environmental audit recommendation by consultants that the bank's position on the environment be made explicit to members. Bank I developed an environmental policy in reaction to an incident where a foreign branch of the bank had been seen to promote the degradation of the natural environment as a result of lending activities. As a result the bank's board of directors clarified their position on environmental issues to bank members and provided an explicit basis for developing additional environmental assessment procedures and raising public awareness of the bank's view.

As noted previously Bank G developed and published a formal ethical mission incorporating environmental principles to clarify their existing ethical position to borrowers. However, a documentary review of lending policy guidance material revealed that considerable emphasis was placed on the bank's liability risk.

It was noted that additions to the policy/mission statements of Bank G and Bank J addressing environmental lending issues coincided with the development of the Environmental Act 1995. Bank G attributed the addition to a desire to encourage a proactive stance on the environment by 'business'. The policy maker of Bank J recognised that a lending clause was added only when the bank's standard environmental procedural guidelines were in place.

A number of banks recognised that pressure group activities were raising the public profile of environmental lending consideration and leading to clarification of the banks' positions both publicly and privately.

Lending considerations

Policy

In contrast to the existence of Group environmental policy statements, bank lending policies were more commonly represented by guidance documentation outlining procedural environmental responsibilities of lending officers. In addition, environmental workbooks, reference manuals and standard working papers were frequently referred to by bank members as representations of "lending policy". The nature of such documents varied significantly between banks.

As noted by policy makers in each bank, following the issue of environmental policy documentation, lending officers had taken part in a formal environmental training event to familiarise themselves with standard environmental assessment procedures and potential environmental credit risks.

Basis of assessment

In all banks lending officers were responsible for undertaking basic environmental credit risk assessments when processing loan applicants and loan reviews. The purpose of this initial review was to identify the potential environmental credit risk and the need to undertake a second, more comprehensive, environmental assessment. In Banks H, I and J lending officers were responsible for undertaking secondary assessments based on one of two environmental credit risk indicators: borrowers operating within specified industrial sectors; or loans exceeding a specified credit limit. In Banks F and G secondary assessments were initiated based on environmental credit risk indicators

founded on industrial sectors *and* credit limits. In Bank C, while influenced by industrial risk categorisation and the level of credit facilities, secondary assessment was determined according to a greater number of variables, in particular, loan purpose.

The most common variable identified within industrial sector analysis was "prescribed processes" under the Environmental Protection Act 1990. However, the method of assessment and specific nature of indicators applied by each bank varied significantly. For example, in Bank J a borrower's environmental credit risk was graded according to a complex risk matrix based on UK standard industry classifications and geographical maps of potentially contaminated sites. Alternatively, in Bank F an environmental credit risk was identified if borrower activities were noted on a general "industry risk list".

Corporate environmental performance measurement

In Banks F, H and I, final lending decisions were made by individual lending officers based on a system of credit risk rating. However, it was recognised by representatives of each bank that at the time research was undertaken environmental lending considerations had not been fully integrated into credit rating systems. In Banks G and J final lending decisions were made by credit committees based on the consideration of borrower case summaries. In Bank C lending decisions were based on a summary report of case issues as determined by lending officers and subject to evaluation by the policy maker.

Adherence to standard environmental credit assessment procedures

In all banks examined policy makers were also responsible for loan approval and, as such, provided extensive reference to cases of corporate environmental performance considerations within bank lending processes. Unsurprisingly, they noted the use of the bank's standard environmental credit assessment procedures and working papers as an important basis for referrals given the potential complexity of environmental issues. A number of policy makers also noted that on a number of occasions they had been informally consulted by lending officers regarding environmental risk assessment on "specialist issues". It was recognised that such consultation and, in some cases, referrals were a more frequent occurrence in Banks G and J which were the smaller banks examined.

In Banks F, G and H lending officers interviewed provided anonymous case examples of corporate environmental performance considerations within lending decisions, and extensive reference to the use of standard environment credit risk assessment procedures.

In Banks F and I members of commercial property management with responsibility for environmental considerations in connection with loan security were interviewed. Property managers provided considerable reference to cases of loan referral by lending officers where an environmental review of security was required. In such cases emphasis was placed on the use of standard bank working papers to outline environmental credit risk assessment. In addition, property managers noted that their security valuation reports took a standard format documenting potential environmental risk according to bank policy definitions. Similar evidence of corporate environmental performance considerations within bank lending decisions, and the use of standard working papers for referrals, was noted during interviews with Bank I's legal adviser.

In Bank J research access was restricted to the policy maker and two environmental managers within the EMU. The environmental managers were responsible for undertaking detailed environmental credit risk assessments on request from lending officers. In such a capacity environmental managers provided evidence of their own corporate environmental performance considerations and that of lending officers.

In Bank C research access was restricted to the policy maker and internal bank documents were provided for review. However, it was recognised that the policy maker had sole responsibility for lending decisions and therefore was able to provide an account of the nature and level of corporate environmental performance considerations within lending decisions. The policy maker noted that particular importance was placed on the application of standard bank terminology to define the fundamental determinants of environmental credit risks and a core set of standard working papers to establish environmental credit assessment as the basis for referral. The use of such standards was viewed as particularly important given the size of loan facilities and potential variety of environmental credit risks unique to each case.

Lending experience

Members of UK banks noted instances of financial loss relating to environmental issues. The policy maker in Bank I provided reference to one case of environment related financial loss exceeding five million pounds. The case details were contained within policy guidance documentation to highlight the nature and potential extent of environmental credit risks to lending officers. Alternately, lending officers in Bank F and environmental managers in Bank J referred to several case of financial loss in excess of two hundred thousand pounds in which environmental issues had been a significant factor leading to loss. Members from both banks noted that the cases had reinforced their view of adopting their bank's environmental lending procedures.

In Bank C the policy maker noted that environmental considerations had been part of financial lending loss on numerous occasions but the amount was not quantified. In such instances, responsibility for loss had been attributed to the lending officers responsible for processing the loan application if it could be shown that standard bank policy and procedures had not been applied. However, the policy maker noted that it was particularly difficult to influence the adoption of environmental practices by large corporate clients. On this basis, the standard policy of the bank was to include detailed environmental representations within warranties, covenants, and conditions on events of default documented with loan contracts.

The policy maker and members of Bank F noted that they had not suffered financial loss in relations to environmental lending issues. However, the policy maker of Bank F provided reference to minor cases of financial loss experienced by other members of the BBA's Environmental Issues Advisory Group as an indication of loss potential.

In Bank G no cases of financial loss were noted by bank members. The policy maker attributed this to the successful implementation of the bank's environmental lending policy. However, in addition the policy maker noted that the bank's extensive promotion of their ethical policy may deter polluting companies from seeking finance with the bank, and noted that the bank's typical client basis was unlikely to pose any significant environmental credit risk. On this basis it is proposed that the adoption of an environmental policy by the bank was a very low risk development, and one likely to have very little impact on the bank's share of the corporate loan market.

Cross community bank study

Bank C

The cross community study incorporated an examination of corporate environmental performance considerations within the Swiss operations and UK operations of a Swiss Bank Group 'C'. An analysis of the Group structure, responsibilities under the environmental "mission", and Swiss lending operations have been included in the Swiss community case findings. An analysis of UK operations has been included within the UK community case findings.

The nature of the Group's corporate lending activities within each location was found to vary significantly. In Switzerland, the Group's corporate lending activities included lending to small, medium and large scale corporate borrowers. In the UK, the Group's lending activities were restricted to merchant banking. However, despite these fundamental market differences the findings from the study provide a valuable insight into the relationship between Group and functional policy.

Basis of examination

In Switzerland the policy maker interviewed was responsible for Group Environmental Management Services and credit risk management in Switzerland. An environmental credit risk specialist responsible for the design of policy documentation and training was also interviewed and standard bank documentation was reviewed. At the time research was carried out the specialist had sole responsibility for corporate environmental performance consideration within lending decisions.

In the UK, the policy maker interviewed was responsible for the development of the bank's UK environmental/lending policy and liaison with Group policy makers in Switzerland. In the UK Bank C's lending function was centralised and the policy maker interviewed had sole responsibility for making final lending decisions. Given this central role research undertaken with Bank C UK was based on an interview with the policy maker and a documentary review of policy and procedural guidelines.

Environmental mission and lending policies

In both Swiss and UK operations, bank members and policy guidance documentation made extensive reference to the foundation of environmental management activities and lending 'policy' on Group principles outlined in an environmental mission statement (1990). Despite this common mission, in each operation environmental management procedures were adapted to local conditions, in particular legal requirements. It was noted that in the case of Group's operations in Switzerland environmental credit risk considerations were based primarily on domestic regulation. This was opposed to European requirements noted by Bank A and B. In the case of Bank C UK environmental credit risk assessment incorporated within merchant banking activities in the UK were based on UK legislative requirements. Policy makers attributed this difference to a Group definition of environmental credit risk based on an interpretation of 'relevant' environmental legislation. In both bank locations trends recognised within the development of European environmental legislation were noted as an influence on policy development but were not explicitly addressed in policy documents.

In-house environmental management

The degree of in-house environmental management acknowledged by the UK policy maker was considerably less than that recognised by the Swiss policy maker. In contrast to the day to day environmental housekeeping initiatives recognised in the Swiss operations, as with all UK banks examined, environmental housekeeping in the UK were found to be a secondary consideration based on legal requirements and efficient resource use. The policy maker proposed that this was partly due to the smaller scale of UK operations and the reduced level of social responsibility recognised.

Environmental lending considerations

The UK policy maker noted that the introduction of environmental credit risk assessment was a response to the Environmental Protection Act 1990, in particular recommendations for a contaminated land register which was later abandoned in 1993. This influence was also reflected to varying degrees by UK Banks F, H, I, and J. Responsibilities for environmental credit risk assessment were outlined in two internal policy documents issued to all members of UK operations in 1993. As in the case of the Swiss operations the 'policy' was developed by an environmental committee comprised of specialists from a number of functions.

The UK policy maker and Swiss Group members noted that at the time research was undertaken lending officers in Switzerland were in the process of being delegated responsibility for environmental credit risk assessment. The difference in the response times to the Group mission publication between the UK and Switzerland was explained due to the reaction to the timing of significant local legislative developments. For example, in Switzerland the development of new environmental credit risk assessment techniques were a reaction to the introduction of a contaminated land register.

In both UK and Swiss operations it was recognised that the emphasis of environmental credit risk assessment was contaminated land. It was noted that the UK lending policy guidelines were issued in 1993 in anticipation of UK land registry. Contaminated land issues were given considerable emphasis in the banks' environmental guidelines.

Policy regulation and standard terms of reference

The use of standard policy documentation as a mechanism for policy deployment and outlining environmental credit risk assessment responsibilities was common to both UK and Swiss operations. However UK operations, in contrast to Swiss operations, did not reflect an emphasis on lending policy as a regulation. The UK policy maker noted, however, that as lending decisions were centralised responsibilities delegated to lending officers were to refer details of corporate environmental performance considered to the policy maker as the basis for decision making.

In the case of Bank C's UK operations, in contrast to the risk rating system used in the Swiss lending procedures, lending decisions were provided as written judgements from case materials. The difference in lending procedure was attributed to the difference in loan size and loan characteristics considered by each operation.

Lending experience

In contrast to the experience of bank members in Switzerland, the UK policy maker noted that environmental issued had contributed to financial lending loss. However, it was noted that in cases of environmental loss factors were not the primary cause of poor financial performance but could be considered along with other factors as a consequence of bad management. Experience of loss was noted as a factor influencing

adherence to standard bank policy and procedures, including specific environmental provisions in loan contracts.

A common rationality for environmental management

From a review of findings drawn from Swiss and UK operations of the Group it is recognised that both operations appear to reflect a common set of environmental management principles. These principles are reflected in the Group's mission statement and when applied to functional policy are translated according to location characteristics on which functional activities are designed.

Summary

This Chapter has presented the research findings from three bank communities, including a cross community study. Findings are represented by comparing and contrasting trends recognised by the researcher within each community. Comparison and contrast between communities is limited to an evaluation of findings from the cross community study. However, it is proposed that findings within the Chapter implicitly reflect additional trends within banks and between banks in different communities. These trends shall be made explicit in Chapter seven through an analysis of findings with respect to the central proposal.

Notes

[1] Bank A noted that the German bank community had a greater number of primary commercial lending banks and trying to reach agreement on a common environmental approach within a more diverse bank community was viewed as problematic.

[2] Considered with respect to the Sandoz incident in Chapter 7.

[3] Economic sustainability was defined by bank members as the ability of the bank to continue to trade. The influence of price rises on the banks' financial situation was not mentioned by bank members but could affect the banks ability to trade profitably.

[4] The disaster occurred when water used to put out a fire in the 'Schweizerhalle Warehouse' of the Sandoz chemical company caused massive pollution of the river Rhine.

[5] To date there has been no test case.

Chapter 7

An examination of the central proposal

Introduction

The research programme was based on an examination of corporate environmental performance considerations within eleven commercial lending banks between August 1995 and March 1996. These banks were drawn from three banking communities: Switzerland, Ireland and the UK. The research programme incorporated representatives, as follows: three Swiss banks; two Irish banks; and five UK banks, including an examination of one Swiss bank's operations in Switzerland and the UK.

The research programme was designed to facilitate an examination of the central proposal that ***banks can be characterised as hierarchical cultures with views of physical nature founded upon myths of tolerance.*** This proposal is evaluated in a number of cumulative stages which follow the theme set by the theoretical development process undertaken in Chapter four.

Initial support for this proposal is provided by examining research findings to reveal that banks are hierarchical social structures within which bank members share common values. This is achieved by drawing comparison between the nature of social roles, relationships and responsibilities illustrated and adhered to within each bank. Attention is then devoted to the development of, and adherence to, environmental policy by bank members and the communication web supporting the social construction of perception and management rationality within a bank. Subscription to a common "way of doing things" by bank members is the first indication of bank "culture".

The next stage is to compare and contrast environmental risk perceptions illustrated by banks between, and across, communities to highlight the unique nature of values held by members of each bank. This indicates that a cultural boundary may be drawn around a bank. The role of this boundary as a filter for communication from third parties is highlighted and an additional dimension of social construction is inferred by the influence of communication across this boundary.

Finally, comparison is drawn between environmental management rationalities within each bank to reflect a common view of tolerant nature. Drawing on these findings it is concluded that bank members examined adhere to hierarchical ways of life and tolerant myths of nature supporting compliance with environmental legislation and management of exceptions through bank activities. This analysis explains how, and why, corporate environmental performance is considered within related bank lending processes according to the social construction of perception.

Social roles, relationships and responsibilities

Bank structure

All banks examined were members of Groups operating at either an international or national level. Each Group can be characterised as a hierarchical social structure within which all members can be positioned according to their reporting line and delegated role and responsibilities. For each Group a board of executive directors had ultimate decision making power. Within Group structures, each bank subsidiary has a local board of executive directors who report to the Group board. Group/bank 'policy' was co-ordinated through central departments and cross functional committees or working parties.

Each bank function was the responsibility of a board member or a senior member reporting directly to the board. The "head" of each function was supported by a tiered structure of functional decision makers and administrative staff. For example, responsibility for lending decisions were delegated to lending committees and individual officers according to the nature of the banks lending activities and the level of facilities processed.

To varying degrees bank members were regarded as specialists within their given role. As bank members moved up through the hierarchy their degree of specialisation was generally seen to increase. The number of bank members at a particular tier of the hierarchy varied largely with the scale of organisation, and the degree of specialisation associated with each role.

Bank policy

Bank members defined their roles according to their functional and reporting responsibilities. Part of each bank member's responsibility was to follow Group/bank 'policies'. Bank members defined a number of bank 'policy' categorises according to the level of application and the mediums through which policy objectives were communicated to various parties. The roles of bank policy makers were to oversee the development and deployment of policy communications.

Within Groups three distinct tiers of top down policy responsibility were noted at *group*, *bank* and *functional* levels. Policies were communicated through documented policy statements or clauses which addressed general *Group/bank* principles and were commonly available for public scrutiny. The publication of such policies was either a means of delegating new responsibility to bank members or highlighting existing responsibilities. *Functional* policy details were communicated to bank members only in the form of a policy statement and/or documents outlining standard procedural guidelines. Such policies were published to deploy new functional responsibilities to members.

Different degrees of responsibility were attached to policy objectives within each bank. For example, the policy maker in Bank C (UK) referred to policy as a "regulation" while the policy maker of Bank J referred to policy as a "guide".

Environmental roles and responsibilities

Bank structure

In each bank the key research informant was the policy maker ultimately responsible for overseeing the development and deployment of the bank's environmental lending policy and reporting achievement to the board for comment and/or approval. The policy makers' roles primarily differed in terms of functional responsibility. Their roles can be categorised between two functions: environmental management or risk management.

In Groups with a central "Environmental Management Unit/ Services" (EMU) members heading the units were responsible for the development of environmental Group policy and domestic functional policies. Under such circumstances policy makers delegated

responsibility for foreign policies to functional heads, as illustrated in the cross community study of Bank C. In terms of domestic functional policy responsibility for policy design was delegated to functional specialists located either in the EMU or a lending department. The degree of delegation varied from bank to bank according to policy objectives and scale of operations. For example, in Bank G members of the environment unit were responsible for the development of bank policy through the co-ordination of functional policy objectives. The responsibility for the development and deployment of an environmental lending policy was delegated to the manager in charge of credit strategy.

Policy makers responsible for environmental credit risk policy were delegated environmental responsibility as part of a Group wide risk policy. Bank members heading risk management functions were in a similar position to those heading EMU's. These individuals were responsible for the development of Group risk policy and domestic functional policies. Responsibilities for foreign risk policies were delegated to bank policy makers and/or functional heads. In these instances, the banks' primary environmental management activities were centred on credit risk management. To promote a common approach to cross functional environmental management environmental committees or working parties were often established.

Depending on the nature of the bank's: environmental policy; degree of policy deployment; and structural form, environmental credit risk management was delegated to central, regional and/or local lending officers. For example, when research was undertaken with Bank C's Swiss operations environmental credit risk management was the sole responsibility of a technical specialist in the EMU, but a policy "regulating" the adoption of standard environmental credit risk assessment procedures by regional lending officers was in the final draft stage and was about to be launched. Alternately, in Bank A responsibilities for environmental credit risk management had been delegated to all bank lending officers.

Bank policy

From a review of the roles of environmental policy makers responsible for the development of environmental lending policies it was recognised that Group wide

environmental or risk management policy formed the basis of environmental lending policies. The specific nature of these policies shall be addressed in the next section.

The findings from the cross community study of Bank C in Switzerland and the UK provided further evidence of the inter-relationship between Group policy and functional lending policy. The importance of defining policy relationships at this stage is to provide a basis from which to examine the nature of environmental policy, and the process of environmental policy development, as a potential influence on the social construction of perceptions within each bank.

In most banks examine environmental lending policies were designed by a second environmental steering committee or working party drawn from members of the lending hierarchy, legal and other specialist bank advisers. Each member involved was characterised as providing an "expert" view on policy implications for their given role and the roles of their subordinates. The policy makers provided an insight on bank community views through their involvement with the local bank association.

The working parties consulted lending officers to gain an insight into their perception of the impact of environmental issues on past lending cases and their level of environmental awareness. Examples of consultation processes provided by policy makers included questionnaire surveys, regional discussion groups with senior lending officers and follow up discussions with lending officers responsible for cases where environmental issues had been noted. This process of consultation was considered by some of those involved to represent the development of an informal bank policy.

In each bank an overview of the policy development process was provided during interview with the policy maker and, in a number of cases, members of environmental working parties and/or bank lending officers were formally consulted. From a review of bank findings the formation of environmental lending policies was recognised as a relatively recent development.

The mechanism for policy development and representation varied between banks in terms of responsibilities delegated, and the nature and subject of communication. However, some general trends were visible from findings. For example, environmental

lending responsibilities were communicated to lending officers through the provision of policy guidance documentation outlining procedural responsibilities. Alternately, or in addition, policy deployment was supported by the formal provision of 'appropriate training' and pro forma working papers to lending officers. As noted previously, standard guidance documentation and procedures were often referred to by lending officers to define bank lending policy.

The primary objective of policy communication in each bank was to delegate responsibility to lending officers based on a standard rationality for environmental management. Standard environmental credit risk procedures were based on the generation of a shared perception of environmental risk.

Policy responsibility

Lending officers were *expected* to follow bank policy when executing their individual responsibilities. However, in each bank the level of expectation placed on lending officers was found to vary. For example, in Bank C's Swiss operations policy makers referred to the deployment of policy "regulations" requiring compliance by lending officers but no penalties for non-compliance were recognised. Alternatively, in Bank J policy makers referred policy "guidelines" issues for voluntary adoption by lending officers.

It was stressed by all policy makers interviewed that lending officers were credit risk experts not environmental experts. Where a technical environmental assessment was required lending officers were advised to contact in-house environmental experts or external environmental consultants. In-house environmental experts included advisers with legal and property management departments who serviced lending officers on a wide range of technical issues and, where available, EMU's specialist. In a number of banks, lending officers' perceived policy makers to be "the expert opinion on environmental credit risk assessment". Policy makers and lending officers recognised in-house referral/consultation applied and reinforced bank policy through its use as a common reference point. Environmental working party representatives involved in policy development were often found to advise lending officers on environmental credit risk assessment.

All banks employed external environmental consultants to conduct detailed environmental impact assessments. In each bank consultants were drawn from a panel of consultants with whom policy makers had negotiated standards terms and conditions of employment. It was noted by lending officers that environmental experts were not credit experts therefore their opinions were reinterpreted in terms of credit risk as defined by bank policy. Through this negotiation process consultants' scientific opinions were presented in a form which was translated according to a lender's perception of a credit risk. Lending officers recognised that the influence of consultants' views on their perception of environmental credit risks were limited to a reflection on case experience. Thus, lending officers' founding rationalities for environment management remained socially constructed within the bank.

Constraints imposed by the required use of standard working papers

For individual lending officers, credit committee members, and referees the use of standard pro forma working papers acted as a control upon the lending officer and provided a basis from which lending processes could be subject to a policy compliance audit. For example, members of central credit committees referred to their informal audit of the lending process applied to each case by reviewing the use of standard bank working papers such as decision checklists. No evidence was found to suggest banks undertook a formal audit of lending procedures.

A number of bank policy makers and lending officers noted that the use of standard working papers provided evidence of lending procedures which could be referred to in court should a legal case review be necessary. Given the uncertainty perceived to exist regarding environmental legislation, emphasis was placed on the need for such a reference point as a means of mitigating lender liability risk.

Constraints imposed by case referral

Constraints were imposed on lending officers requiring adherence to bank policy as a function of their responsibilities and reporting obligations. For example, in Bank D and E the requirement for lending officers to refer lending cases to a central credit committee for decision making also required them to adopt standard procedures prescribed by bank policy and complete standard working papers illustrating their case work.

Reviewing examples of pro forma working papers highlighted them as process checklists providing evidence of lending considerations. Committee members when questioned stressed that a lending officer would be called on to justify any deviations from bank procedures. Such a comment implies the flexibility of policy application but only subject to approval. This in turn indicates the adoption of a shared rationality for management.

Independence

In a number of banks corporate environmental performance considerations within lending decisions were the delegated responsibility of individual officers. It is proposed that without a referral requirement, or formal audit, lending officers in such a position may fail to employ policy principles. All bank members questioned reflected upon their application of standard bank procedures as an illustration of policy application. However, a number of lending officers recognised that standard environmental assessment procedures were not a fully integrated part of credit rating exercises, thus allowing a more flexible approach to the adoption of environmental credit risk assessment procedures.

Attributing blame for financial loss

As noted above, there was no evidence of a formal penalty system to constrain the activities of lending officers. In Bank A a control mechanism was applied by monitoring the bank's credit portfolios to ensure that performance targets were achieved but feedback from this system was in the form of general guidelines to all lending officers.

In a number of banks instances of financial loss were referred to in connection with environmental issues. Such loss was referred to as a system failure to correctly recognise a risk or as an unaccountable event. Blame was commonly allocated to bank policy or the "system". In most cases noted policy makers recognised that instances of financial loss led to the initial development of environmental management policy and procedures. There was no evidence to suggest that a lending officer had been reprimanded as a consequence of a loss, although policy makers proposed that a recognised error could result in career limitations.

Other influences on policy adoption

New policy

When considering environmental issues and the implementation of new lending procedures, policy makers and lending officers noted that reference to guidance materials, informal discussions and referrals were more frequent earlier in the learning process.

Policy makers and lending officers noted that their reference to guidance material was associated with issues of familiarity. Lending officers stressed that corporate environmental performance considerations were a relatively new addition to lending procedures and required reference to guidance materials and training. Both policy makers and lending officers also recognised that a considerable degree of informal consultation took place within the bank with regard to the interpretation of "new" case issues.

A number of central credit committee members, technical environmental credit specialists, and lending officers noted that their involvement in formal environmental policy design and development increased their understanding of standard environmental policy and procedures. As a result they acknowledged a decreasing need to reference environmental guidelines when undertaking corporate environmental performance considerations within lending decisions. A number of policy makers referred such adherence as an integration of a common set of environmental management principles within the bank's 'culture'.

These findings could have two implications. Based on the recognition that environmental policy development and formal corporate environmental performance consideration within lending procedures were a relatively new occurrence these findings may be viewed as a limitation of the evidence drawn from the research. Alternatively, it is proposed that these findings should be viewed as a strength of the research as circumstances provide an opportunity to examine the influence of guidance material on the establishment of standard practice.

Findings drawn from the research programme can be used to expand on accounting research findings, discussed in Chapter one, which revealed that only new lending officers use standard guidelines such as those provided by bank mnemonics.

Critical incidents

Policy development and adherence was also found to be influenced by the realisation of environmental credit risks. For example, experience of financial loss as a result of environmental lending issues were viewed by policy makers and lending officers as the main influence on their perception of environmental credit risks.

In a number of banks, policy makers referred to lending cases which had resulted in the development of standard environmental assessment procedures. These included cases where: financial loss had been incurred by the bank due to a failure to consider environmental issue or unforeseeable circumstances; loans had been refused due to uncertainties regarding potential environmental issues; and cases of assessment where environmental risks were recognised and accounted for through comprehensive referral and consultation. Policy makers in general attributed lending officers acceptance of change to the re-enforcement of policy communication through the occurrence and communication of what risk researchers have termed "critical incidents".

Referring to policy adherence, policy makers noted that where such instances had not arisen there was a need to convince lending officers that environmental credit risks existed. Such comments have two implications: firstly policy deployment should be based on raising a lending officer's awareness of environmental risks; and secondly that adherence to policy guidelines was problematic in some cases. The most important implications for evaluating the central proposal concerns adherence to policy.

Adherence to policy

It has been noted previously that interviews with central credit committee members, environmental credit risk specialists and bank lending officers involved in policy making revealed evidence of adherence to bank policy. However, it was noted that given the unique nature of lending situations the application of standard environmental credit risk assessment was subject to interpretation by individual lending officer's processing applications and/or making decisions.

It is recognised that findings could have been deliberately contaminated by bank members viewing the research exercise as a compliance test of bank policy and providing appropriate answers. The likelihood of this view being taken may have been increased due to the establishment of interviews based on introductions by bank policy makers. However, this method of referral was unavoidable as it was the only means of gaining access to confidential information.

When asked to gauge policy adherence, most policy makers admitted that policy was a guideline not necessarily adhered to. For example, in Bank F a policy maker quoted a lending officer's response to a policy survey as "I will consider environmental credit risk when convinced it is an issue".

It was stressed by all policy makers interviewed that lending officers were credit risk experts not environmental experts. Policy makers stressed, on the basis that an evaluation of financial risk versus financial return was the primary objective of credit assessment, and an evaluation of environmental risks was potentially only part of this process the relevance of policy application was left to the lending officer. However, an emphasis was placed on the process of referral as a general policy control. In addition it was recognised that environmental lending policies were in the early stages of development and the occurrence of environment related financial loss would have an effect on both future policy design and implementation.

The social construction of perception within a bank

Research findings provide evidence of banks as hierarchical social structures within which individual roles and responsibility were socially determined. Within these structures the term *"policy"* was applied to represent *bank*, and subsequently *functional*, responsibilities of bank members. Addressing environmental issues, policy construction and deployment was reflected within a web of communication channels supporting the referral, discussion and interpretation of environmental responsibilities among bank members unique to each bank hierarchy. A hermeneutic evaluation of bank documentation and views of members revealed bank policies representing perceptions and rationalities for management shared by bank members. Communication channels and messages were viewed as central to the development and maintenance of social roles and relationships constituting a 'way of life'.

Within such a framework lending officers were frequently found to contribute to the design of official policy messages and received messages regarding their delegated responsibility for environmental credit risk assessment. Bank members were expected to adhere to policy responsibilities. Policy adherence by members was found to be controlled according to their social roles and relationships.

Policy makers and lending officers recognised that corporate environmental performance considerations varied according to the unique nature of each lending situation, but were based on a set of fundamental policy principles. Bank members referred to "the way we do things around here" and "bank procedures". When questioning *why* environmental considerations were incorporated into a bank's lending process *how* became an interrelated question. However, research limitations were recognised and there was evidence to suggest that policy adherence may vary depending on policy communication and the degree of autonomy of lending officers. It is proposed that the greater the degree of referral and consultation built into the lending process of a bank the greater the likelihood that bank policy will be adhered to.

In the above examination initial evidence has been provided which supports the proposal that perception is socially constructed within a bank. Examining the central proposal that banks can be classed as cultural hierarchies, initial evidence that bank members share a common "way of doing things" according to social roles and relationships within a bank provides support for this proposal. To test the proposal further it is necessary to analyse the social values held by bank members and the influence of communication across the boundary drawn around a bank. In accordance with the proposal that each bank represents a cultural hierarchy, each bank should reflect unique cultural values.

The above analysis revealed that corporate environmental performance considerations within lending decisions were the result of responsibilities delegated to bank members according to bank policy. Evidence has been provided that environmental values held by bank members reflect their environmental responsibilities.

Environmental responsibilities were illustrated by two types of bank policy: an environmental policy and a risk policy. By examining the lines of delegated authority

within each bank, environmental management rationality for corporate environmental performance considerations within bank lending decisions was revealed as a product of environmental risk perception. Placed within this context there is a need to examine environmental risk perception as a product of a bank's fundamental myth of nature. In order to examine environmental risk perception it is therefore necessary to consider the environmental management rationality displayed within each bank.

To facilitate an examination of potential cultural values and boundaries the questions 'how' and 'why' is environment risk perceived are addressed by comparing, and contrasting, environmental policy content and influences within, and across, three bank communities. Community case studies have been selected to examine the alternate proposal that culture is constructed within a given society and to facilitate an examination of banks operating in similar social conditions. Locational factors considered include: bank regulation; legislation; market profile; and community trade associations. To reflect the findings that bank members share common views, during the following analysis perceptions shall be attributed to *a bank* rather than bank members.

Environmental risk perception

Considering environmental management rationality and risk perception as a social construct the primary locational factor of consideration was environmental regulation, or legislation, with which a bank must comply.

Environmental management requirements

Within the communities examined banks, as corporate entities, were required to comply with environmental legislation addressing issues such as waste management, however these were minimal. There was no bank regulations or explicit legal requirements on banks as lenders to consider environmental issues. However, a bank as an owner of property taken as security may be viewed as a potentially liable party for environmental pollution associated with the property.

Under Switzerland's civil code of law, in a case of bankruptcy or foreclosure ownership of property devolves to the courts. In such circumstances banks are more likely to lose their security than inherit extensive environmental liability from borrowers. Alternately,

Ireland and the UK operate under a common law system. In a case of corporate bankruptcy or foreclosure a lender may become 'mortgagee in possession of a property' and liable for associated environmental damage. As noted in Chapter two, the wording of the Environment Act 1995 could be interpreted as extending environmental liability to lenders as 'mortgagee in possession of property'.

In each community environmental legislation existed with which corporate borrowers potentially had to comply. It was recognised in Chapter two that the cost of compliance could affect a company's ability to repay outstanding bank loans. Banks could therefore suffer financial loss as a consequence of environmental compliance requirements place on a borrower.

From a review of legal and regulatory requirements potentially influencing bank lenders to consider the environment it was recognised, as in Chapter two, that legislation regarding the lender's position was unclear. A bank's interpretation of their potential environmental liability as a lender was an issue of environmental risk perception and their environmental management rationality was a reflect of this perception.

Shared environmental management rationalities

From an analysis of findings, evidence was provided of collective bank positions on environmental issues negotiated and publicised at an international, European and a national level.

An international view

With the exception of Banks D, I and J, the banks examined subscribed to the United Nations Environment Programme Statement by Banks on the Environment and Sustainable Development. Their subscription was a public recognition of an international standard for environmental management.

A European view

As members of the European Bankers' Association the banks examined were attempting to reach a European view on environmental issues through an environmental working party. The primary issue addressed by the working party was European

legislation. The view reflected by working party members was that environmental legislation must be clear and liability should rest with the polluter.

A community view

Bank policy makers participating in the research cases were members of a national trade association environmental working party. Within each community examined a communal position on environmental management issues was debated and portrayed through the working party. Across the three bank communities examined two common themes were reflected. First, banks as commercial organisations recognised the need to strive for a sustainable environment and economy. This position mirrored the banks' view reflected through the United Nations Environment Programme. Secondly, as lenders banks supported the development of environmental legislation to achieve such sustainability but recognised that *legislation must be clear and liability should rest with* the polluter. This position reflected that of the European Bankers' Association working party.

A common rationality

Considered together the environmental management rationality reflected by international, European and national bank communities illustrated was two-fold: a need for sustainable development and a need for clear environmental legislation with blame for environmental damage placed on the polluter. This foundation for environmental management may be viewed as a reflection of a tolerant myth of nature, according to which sustainability is achieved by maintaining human impact with the physical environment at tolerable levels achieved through compliance with legislation. The position of blame on the polluter may be viewed as a reflection of preference shared by members of a hierarchical way of life.

Considering these findings it may be proposed that a transient social boundaries can be drawn around banks sharing a common view. However, while banks examined subscribed to shared views on the environment, representatives from each bank distinguished their bank's individual view on environmental management. In addition, bank members stressed that the communication of a shared community view was considered by banks as a basis for negotiation with regulators, borrowers and other interested parties. A number of bank representatives proposed that banks were seeking

to harmonise their environmental lending approaches in an attempt to avoid a market in finance for polluters.

It is argued that a transient social boundary should be drawn around a bank as a unique culture and shared views considered as a reflection of the cultural typology shared by banks with similar ways of life. In communicating with third parties through their cultural filters, individual bank interpretations of sustainability and legislation are explained. Views communicated to third parties by bank groups are interpreted as a further level of social construction facilitating negotiation between different ways of life. To provide support for this interpretation a detailed examination is undertaken of the foundations for environmental risk perceptions and management rationalities illustrated by banks across communities.

Bank views

Individual bank views were provided as a justification for the bank's environmental management activities. To explain each view the environmental management activities of banks were examined through representations made by bank members and responsibilities inherent within communication messages, in particular policy documents. Environmental management activities among banks were twofold: in-house management; and product/ credit assessment. Given the relationship identified between bank policy and lending policy, the foundation for both these activities are addressed.

In-house management

All banks were found to comply with minimal environmental management requirements imposed on their in-house activities by environmental legislation. For Irish Banks D and E and UK Banks F and J, in-house environmental management was restricted to compliance with legislation. It was recognised that Bank E and Bank F had subscribed to the UNEP principles of sustainability. Bank members proposed that, by complying with legislation, they were striving towards sustainability.

In comparison, Swiss Banks A, B and C, and UK Banks G, H and I adopted extensive in-house environmental management practices. These banks had, or were in the process of, adopting a formal environmental policy/mission statement for the bank. In addition, with the exception of Bank H, the banks had establishment Environmental Management

Units through which responsibilities were co-ordinated and policy administered. The rationalitiesr voluntary environmental management practices are examined below.

Issues of scale, social responsibility and sustainability

While the nature of bank in-house activities were similar, the scale of operations among banks examined varied considerably. This was found to have two implications:

1. a higher degree of environmental management and desire for resources efficiency, to conserve financial and environmental resources;

2. a higher degree of social responsibility to manage the environment.

For example, the Swiss banks recognised that they first considered environmental issues in terms of energy management in the 1980s. The common impetus for the development of an energy management policy was the oil crisis. Swiss bank representatives recognised, that given the scale of bank operations, they were among the largest consumers of oil in Switzerland. When a resource shortage resulted the banks recognised efficiency gains could be made through strict energy management and conservation programmes. Given the Swiss banks' dominance within the local economy and limited resources the banks recognised a social responsibility to conserve resources.

In Bank H, considered one of the largest UK banks, an environmental policy was also developed from an energy management approach adopted in response to the oil crisis. However, in this case social responsibility for environmental management was not recognised by the bank at that time. Alternately, in Bank I the development of an environmental mission was attributed to issues of social responsibility given bank scale. In Bank I the oil crisis was not found to be an influence on the banks position.

Findings provide evidence that recognition of social responsibility was not solely attributed to bank scale. Bank G provided an exception to the above findings. Bank G was the smallest bank examined and had developed an 'ethical' social responsibility of which environmental management was part. In addition, social responsibility was found

to be influenced by environmental risk perception in terms of corporate incidents and reputation.

Corporate incidents

The most prominent example of a corporate incident influencing bank perception of environmental risk was illustrated in the case of the Sandoz incident on Swiss banks. Representatives from all Swiss banks noted that the incident had changed their perception of the potential scale of environmental damage resulting from a corporate incident. The incident polluted water in the River Rhine killing fish and contaminating drinking water for miles. Given the scale of Swiss bank activities, for example oil storage for electricity generation, the potential consequence of a bank incident on the environment and society was recognised. As a result the banks had adopted new environmental management procedures.

Bank location

The recognition that other bank communities were not influenced by the Sandoz incident illustrates the influence of bank location on environmental risk perception.

Reputation risk

All Swiss banks explicitly recognised, within their internal policy documentation, a reputation risk as a consequence of an in-house 'environmental' incident occurring or the bank being seen to be involved with a polluting corporate.

Representatives from Bank I recognised that the bank's environmental mission had been developed in response to a public "outcry" resulting from the bank 'Groups' involvement with a company who was associated with rainforest depletion. In this case the scale of the bank's activities were seen as an influence on public perception of the banks social responsibility.

The above findings illustrate how bank perceptions of environmental responsibility have changed as a consequence of changes in legislation or 'critical' incidents. Environmental responsibility has been considered as a social responsibility and a need for liability and reputation risk management. In each case events within the wider

community have been interpreted by banks according to their individual characteristics, in particular scale of operations and location. These findings are highlighted further when considering the environmental lending policies of banks.

Credit risk assessment

Addressing the hierarchical nature of bank policy and individual responsibility it was noted that bank objectives, in addition to functional objectives, were integrated into credit management approaches. Where environmental lending policies were developed through Environmental Management Services or Group Risk Management, environmental lending policy was a direct product of the bank's environmental/risk policy.

The shared corporate lending objective of banks was the management of credit risk defined, as in Chapter one, as financial risk versus financial return. Environmental lending considerations were therefore based on perceptions of environmental credit risks in terms of environmental influences on financial risk versus financial return. It was recognised that, under such a definition, banks considered corporate environmental performance seeking opportunity in companies with a "good environmental record" as well as risk of loss.

For all banks the primary objective of environmental credit risk assessment was management of the bank's liability risk. This was centred on a borrowers compliance with environmental legislation and management ability to maintain compliance and avoid an environmental incident.

Analysing the definition of credit risk inherent within bank responsibilities for environmental management, and corporate environmental performance considerations, each bank illustrated a unique definition of environmental credit risk. These definitions are considered in terms of influences on the social construction of environmental risk.

When asked to comment on potential environmental credit risk, views of representatives from each bank varied significantly between loss of financial repayment and security value, and unlimited financial liability of the bank for a pollution incident

or land clean up associated with corporate borrower. The basis and potential for such loss also varied significantly.

Legislation

All banks examined considered environmental legislation to be an influence on credit risk in terms of potential lender liability and borrowers' compliance requirements seen to influence their financial performance. In most banks examined consideration was limited to community legislation. For example, in the UK the Environmental Protection Act 1990 and Environment Act 1995, and in Ireland the Environmental Protection Agency Act 1992 were the basis of risk interpretation by community banks. In Switzerland all of the banks recognised the development of the Swiss contaminated land register. However, in Swiss Banks A and B European legislative standards were considered as a basis for determining environmental credit risk in terms of a borrowers industrial risk categorisation.

Credit risks were evaluated based on two principles: a borrower's requirement to comply with environmental legislation; and the borrower's management ability to achieve and maintain such compliance. Management ability was also examined in terms of contingency plans to manage exceptional incidents. However, each bank examined displayed a unique perception of environmental risk drawn from their interpretation of environmental legislation.

Incidents of bank loss

It was recognised that where banks had experienced financial loss in relation to environmental issues, particularly relating to clean up of contaminated land, their views on the extent of their potential liability had changed. Cases of loss were communicated throughout the bank as a basis for redefining environmental risk. While no test case had come to court, banks had voluntarily cleaned up land taken as security to avoid a legal battle.

Representatives from Bank A and B recognised that they had experienced financial loss in excess of five million Swiss Francs on a number of occasions in connection with environmental issues. In all cases corporate borrowers were unable to meet their repayments due to poor financial position, in a number of cases this was the result of

increased expenditure undertaken to comply with environmental laws. As a result the banks had suffered loss of income as companies failed to repay all or part of a loan, and where companies had failed and security was taken in some cases a clean up cost was necessary before sale of security was possible.

The banks concerned recognised that each incident had influenced their view of the potential extent and likelihood of environmental credit risks, increased environmental considerations within lending activities, and encouraged the formalisation of an environmental lending policy. It is interesting to note that representatives from Bank C were unaware of such an incident occurring in relation to their lending activities or that of their peers. The bank remained in the planning stages of introducing formal environmental credit procedures influenced primarily by the forthcoming introduction of an environmental contaminated land register for Switzerland.

While UK banks did not appear to have experienced lender liability to the same extent as their Swiss colleagues, the UK bank community in a number of cases was found to have experienced financial loss, in excess of two hundred thousand pounds due to environmental issues. In at least one instance a lender was found to have experienced environment related financial loss exceeding five million pounds. In each case examples of financial loss, in relation to environmental issues, were referred to in policy guidance documentation of the bank.

Bank perception was additionally found to be influenced by the experience of other banks within their national community, subject to the same legal principles, and to a lesser extent other international cases of loss. Issues of remoteness of consequences were considered in such comparisons. Banks who had not suffered such loss were often aware of their peers experience through their involvement in trade association environmental working party discussions. A number of bank representatives provided specific reference to cases of financial loss experienced by members of the BBA working party.

Other lending experience

The identification of potential environmental credit risk was seen to have a similar impact on perception. While Irish banks had not suffered financial loss in relation to

environmental issues they recognised that should a loss be incurred this would change their view of risk considerably. A similar view was expressed by UK banks who had not suffered environment related lending loss.

In Bank D members of the central credit committee noted that the recognition of a potential environmental credit risk of considerable size had changed their view of risk considerably. Similar experiences of potential loss resulting in loan refusals were recognised by UK banks as influencing the development and implementation of environmental credit risk assessment procedures.

Corporate incidents

In the Swiss bank community the Sandoz incident had a considerable influence on bank perceptions of the potential extent of environmental credit risk, including a risk to a banks reputation through association with such an incident. Similarly, the Hickson incident in Ireland, while on a different scale and with different consequences, was noted as influencing the risk perception of local banks. The incident involved the pollution of a river by a local corporate while extinguishing a fire at the plant. In such cases the location of the incident with respect to bank activities appears to be the main factor influencing consideration.

Bank location

When evaluating environmental credit risk it was recognised that Swiss Banks A and B based their industrial sector risk assessment on European legislative standards. It was proposed that such consideration was due to the proximity of Switzerland to its neighbours and the possibility for pollution to transgress the border as in the case of the Sandoz incident.

In terms of bank location the industrial profile and historical land use within the community was found to influence bank perceptions of environmental credit risk. This was particularly noticeable in the Irish bank community where banks attributed their lack of environment related financial loss to local conditions.

Reputation risk/ social responsibility

All Swiss banks examined explicitly integrated reputation risk consideration into environmental credit risk assessments. This may be attributed to social responsibility recognised previously. However, Irish Bank E and UK Bank F included reputation risk as part of environmental credit risk definitions within standard environmental guidance documentation but not an item for attention on working papers.

Banks E and F attributed considerations of reputation risk to maintaining the image of the banks and hence market share. Bank E additionally noted that a local demonstration calling for environmental improvements by large industrial companies in the area had influenced the banks consideration of reputation risk.

Internal bank influences

Within the Irish bank community it was noted that the banks examined were of a similar scale, operated in similar markets, had similar experiences environmental lending experiences and recognised similar corporate incident in the local community. At a given point in time the banks reflected different perceptions of environmental risk.

The primary difference was the subject of corporate environmental performance evaluation. The level of facility requiring environmental consideration in Bank E was half that of Bank D. Policy representatives from Bank D recognised that the next stage in policy development would be to lower the limit of the level of facility requiring attention to a level equal to that quoted by Bank E. However, bank representatives at the given point in time did not believe that the level of risk associated with such facilities warranted significant environmental management attention. The difference in environmental risk perception highlighted within these two banks provided evidence that variations in bank perception were not purely a reflection of local conditions.

Similarities between banks

Addressing commonalties reflected by banks within and across communities it was recognised that bank perceptions of environmental risk and environmental management rationalities were influenced by their locational factors including: legislation; economic and social role; market profile; and the occurrence of 'critical' incidents. However, bank interpretations of these factors were found to vary significantly. By comparing

and contrasting the banks' interpretations of local factors across communities it was recognised that bank characteristics such as scale and financial loss were common influences on environmental policy. In particular, by comparing the influence on banks of environmental lending loss and corporate pollution incidents experienced within the bank community with the experience of banks, the social construction of perceptions within each bank are highlighted.

As noted previously, the environmental management rationality reflected by the banks examined may be viewed as founded upon a tolerant myth of nature. The development of environmental management practices by banks were viewed as a response to changing social conditions rather than a change in a fundamental view of reality.

Summary

An analysis of social structure through patterns of social roles, relationships and responsibilities inherent within each bank has provided evidence of hierarchical social bank structures. In each bank it has been revealed that a complex communication web exists within the hierarchy which supports the development and adherence to social rules which bank members collectively term "bank policies and procedures".

In all banks examined, bank members were found to consider environmental issues as a function of their given role, responsibilities and relationships. Addressing environmental messages transmitted and embedded within webs of bank communication, the development of a common risk perception and rationality for environmental management shared by bank members was recognised.

By comparing and contrasting bank perceptions of risk and environmental management rationalities within and across bank communities emphasis was placed on the unique nature of bank views. It is concluded from the results of the research programme that risk perception and rationalities for environmental management within the banks examined may be classed as *cultural hierarchies*. Culture was interpreted according reference by bank members to "a shared way of doing things" and, according to social roles and relationships which in turn sustain their roles and relationships, "a shared way of life". Considering bank perceptions of environmental risk and management

rationality it was recognised that, while unique, each bank's perception of reality was founded upon what may be termed a *myth of tolerant nature.*

Chapter 8

Summary and Conclusions

Summary

The aim of the thesis is to examine corporate environmental performance considerations within bank lending processes at a theoretical and empirical level. In particular, the questions which are addressed are 'how' the environment is considered by bank lending officers, and 'why' it is considered in such a way.

The thesis begins with a review of academic literature which addresses bank lending processes. The review identified a considerable degree of research undertaken in this area, predominantly within accounting. However, an analysis of this research fails to provide a theoretical foundation for bank lending processes, and highlights the relative absence of environmental considerations by researchers or bank lending officers participating in research.

The failure of research to provide a theoretical foundation for bank lending processes is explained, in part, due to the unique nature of each lending decision and consequent range of research questions and methodologies applied. Further, the review identified that research in this area has a number of practical limitations. Banks have placed considerable restrictions on researchers limiting research access, publication of research findings, and largely requesting that their anonymity be maintained in all research related publications.

The relative absence of environmental consideration by bank lending officers within research findings is attributed to the recent emergence of corporate environmental performance considerations by bank lending officers. In turn, the scarcity of specific research which addresses environmental considerations is attributed to a tendency for theory to follow practice when environmental investment issues are discussed.

From an analysis of prior research findings evidence is provided that financial, and to a lesser extent non-financial, information is considered within the lending process. The apparent priority attached by lending officers to financial information is explained

according to their emphasis on an evaluation of financial risk versus financial return. Attempts to distinguish the functional value of categories of financial and non-financial information were complicated by the identification of a wide variety of complementary and supplementary sources of information. In a number of studies, a bank lending officer's preference for, and use of, information was found to be influenced by a combination of personal and social characteristics. However, as secondary research considerations, the degree of influence of these variables on the lending processes and their inter-relationship had not been fully explored. Only one key study by Gray et al. (1993), based on a review of professional literature, provided reference to emerging evidence of considerations of environmental lenders liability by bank lending officers.

From this initial literature review it was concluded that corporate environmental performance considerations within bank lending processes was an area in need of theoretical and empirical research. Two areas of theoretical questions were identified:

- How is the lending process influenced by a bank lending officer's personal and social characteristics?
- How do variables within a lending situation influence a bank officer's lending decision?

As the basis for the specific exploration of environmental considerations an extensive review of professional literature which addresses bank lending processes was first undertaken.

An extensive review of professional literature revealed support for Gray et al.'s (1993) findings that environmental debate among lenders has emerged in response to developing legislation and fears regarding environmental lender liability first identified in the US in the 1980's. Evidence additionally illustrated bank lenders' expression of support for the development of environmental legislation on the condition that legislation placed liability on the polluter. A review of environmental insurance was undertaken to establish its availability and suitability as a means of potential risk mitigation by banks and their corporate borrowers. It was revealed that a limited market in environmental insurance was unlikely to provide a means of risk mitigation for banks.

Considerable evidence was provided that banks were developing environmental lending policies and undertaking corporate environmental performance evaluations of borrowers as a means of environmental credit risk management. The distinction between the 'risk' management and 'credit risk' management approach of banks was however unclear. Further, evidence was provided that banks were promoting ethical policies on the environment founded on principles of environmental and economic sustainability. The relationship between a bank's ethical/environmental policy, lending policy and credit risk management approach was unclear. These findings raised two additional questions:

- How do bank lending officers' define environmental risk? and
- What is the relationship between a bank's ethical/environmental policy and environmental credit risk management approach?

To establish a theoretical position from which to explain corporate environmental performance considerations within bank lending processes, an exploration was undertaken of how risk has been defined. An interdisciplinary review of literature which addresses 'risk' definitions provided evidence that during the 1980's and 1990's, as theories of chaos and complexity have emerged, the limits of scientific authority have been questioned and traditional linear foundation for risk definition have been challenged. Objective quantitative evaluation of risk has been rivalled by subjective assessment of possibilities based on principles of non-linearity and uncertainty. As a minimum it is upheld that the choice of a linear evaluation method is in itself a judgmental process of risk perception. As a result it is argued that risk definition should be viewed primarily as a function of an individual's perception of the world and how knowledge is constructed.

Early studies of risk perception were centred on a psychological evaluation of knowledge construction extended within engineering studies to explain how individuals rely on cognitive heuristics and mental rules of thumb for decision making. However, these studies were criticised by researchers in the fields of anthropology and sociology for their inability to account for motivational and emotional explanations for risk taking behaviour. Based on the recognition that the perceiver is rarely an isolated individual,

explanations for human response to risk have been expanded to perceptions of risk based on the social construction of knowledge.

A number of theoretical models of social construction are examined from grandiose theories of risk, for example by Beck (1992), to more practical reference to the roles of various risk communication mechanisms. At an organisational level considerable support is provided for cultural modes for analysing risk perception, in particular the work of social anthropologist Mary Douglas which has dominated risk debates. Douglas (1966 to present) proposed four cultural typologies to explain 'ways of life', 'cultural (risk) bias' and their interrelationships.

Environmental risk has similarly been defined, according to an individual's view of reality and as a social construction. Individual *'myths of nature' have been addressed as* common to the social roles and relationships inherent within ones way of life. Following the work of Douglas, Thompson et al. (1990) has received considerable support for their theoretical proposal that five ways of life and corresponding myths of nature exist.

Drawing on theoretical proposals from the social science debate, a social constructionist perspective was applied to evaluate findings regarding corporate environmental performance considerations within bank lending processes and address the questions posed.

- How is the lending process influenced by a bank lending officer's personal and social characteristics?
- How do variables within a lending situation influence a bank officer's lending decision?
- How do bank lending officers' define environmental risk? and
- What is the relationship between a bank's ethical/environmental policy and environmental credit risk management approach?

The result of this evaluation was the development of the central proposal that, according to Thompson et al.'s Cultural theory (1990), ***banks may be characterised as hierarchical cultures with views of physical nature founded upon myths of tolerance.***

According to this proposal, the questions remaining once previous research has been analysed and their subsequent answers become interrelated. It is proposed that bank lending officers share a plural rationality for corporate environmental performance considerations based on a unique perception of risk culturally constructed within the bank. Thus, lending officers' interpret variables outside the banks control through cultural filters. Banks' 'ethical' environmental positions are explained according to their 'myth' of nature and given way of life. In adhering to a similar cultural typology banks share fundamental cultural bias.

Bank promotion of environmental sustainability and the development of environmental legislation, was explained according to a rationality shared by bank members for the maintenance of human impact with the physical environment at tolerable levels. Banks apparent support for environmental legislation which attributes blame for environmental damage to the polluter is a demonstration of hierarchical cultural preferences. Unique corporate environmental performance considerations within each bank are explained as a reflection of these cultural values, based on interpretations of sustainability and the impact of environmental legislation.

An empirical study was undertaken to test the application of the central proposal. The core ontological foundation of the methodology was an examination of how 'reality', and thus risk, and the environment was perceived by bank members. The basic epistemological stance was to analyse and seek to understand 'how' and 'why' social reality and environmental/risk definition was constructed by evaluating specific social processes supporting environmental risk perception and management rationality within individual banks.

It is recognised that, as noted by Adams (1995), Cultural theory by its nature cannot be framed as a statistically testable hypothesis. However, it is proposed that the examination of definition consistency reflected by a way of life to a pre-defined cultural typology is a possibility. Resulting cultural typologies can be drawn on to explain the social construction of perception of risk according to an individual's way of life.

A number of banks were examined within and across bank communities to highlight the unique nature of cultural values and cultural bias shared among banks according to their

common way of life. Research was undertaken with bank members from three bank communities: Switzerland, Ireland and the UK. Research involved a hermeneutic evaluation of environmental risk perception demonstrated by members of three Swiss banks, two Irish banks and five UK banks, and a cross community study based on an examination of a Swiss bank's subsidiary UK operations. Findings were first illustrated in terms of similarities and differences identified within each community. Later additional similarities within and between banks across communities were drawn on to examine the central proposal.

By drawing comparison between the nature of social roles, relationships and responsibilities within banks evidence revealed that the banks examined were hierarchical social structures. Within these structures, roles and responsibilities were delegated to bank members *through complex webs of communication representing bank* policies. The development of a bank's environmental *lending* policy was found to be a reflection of *bank* policy. Through an examination of the development of, and adherence to, environmental policy bank members, subscription to a common "way of doing things" was recognised. This was evaluated as a foundation for identifying bank culture.

Bank subscription to community views on the environment were recognised. The views expressed across communities were: support for economic and environmental sustainability; and the development of clear environmental legislation founded upon fault based principles. However, individual banks distinguished between the community view on the environment and their own bank view. An environmental policy basis shared by all banks was one of risk management through compliance with environmental legislation both through in-house activities and loan provision. A number of individual banks were additionally found to provide support for economic and environmental principles of sustainability. Findings from banks examined confirmed indications from a review of professional literature that corporate environmental performance considerations within lending processes were based on risk management principles drawn from bank policy.

Across banks consideration of corporate environmental performance was generally based on a borrower's requirement to comply with environmental legislation and their

ability to achieve compliance. The risk management rationality inherent within this consideration was based on bank perceptions of potential environmental lender liability as part of credit risk. Credit assessments were founded upon principles of financial risk versus financial return. In each bank, environmental risk perception varied according to bank members' interpretations of legislation, with respect to the bank's *situation*.

Within and across communities examined, bank perceptions of environmental risk and management rationality were found to be influenced by a number of situation factors. Evidence was provided that bank characteristics, such as scale of operation, influenced bank perceptions of social responsibility for environmental management. A bank's experience of financial loss in relation to environmental issues was seen to be a primary influence on environmental credit risk perception. However, these factors should not be considered in isolation as evidence was provided that their influences on perceptions were interrelated.

Other factors influencing bank perception were location characteristics. In terms of community issues these included: contribution to the economy and society; environmental legislation; geographical proximity to neighbouring communities concerning pollution transgression; local industrial profile and historical land use; corporate pollution incidents; and instances of financial loss by banks in relation to environmental issues.

Evidence of the unique nature of bank values was illustrated by comparing and contrasting environmental risk perceptions and associated management rationalities illustrated by banks within, and across, communities. These findings provided support for drawing cultural boundaries around the banks examined. The role of this boundary was as a filter for communication to and from third parties and bank members. In each bank the influence of location factors within each community was viewed through cultural filters. This highlighted a wider social influence on bank members' perceptions.

It is argued that evidence of environmental risk perceptions and associated management rationalities, at both a community and individual level, among banks examined reflects a myth of tolerant nature held by each culture. Bank support for principles of

sustainability and environmental legislation is viewed as a means of maintaining support for human impact with the physical environment at tolerable limits. Emphasis on environmental legislation as a management tool, and bank preferences for blame placed on the polluter are viewed as further evidence of bank adherence to a hierarchical way of life.

Conclusions

The thesis provides evidence of the recent emergence of corporate environmental performance considerations within bank lending decisions. Reflecting upon the lack of research which addresses this area, the thesis offers a theoretical and practical insight into 'how' and 'why', environmental issues are considered by bank lending officers as a basis for debate.

The thesis provides initial evidence drawn from professional banking literature to illustrate corporate environmental performance consideration within bank lending processes based on a lender's environmental 'risk' perception and management rationality. By drawing on social science debate regarding environmental/risk perception it is argued that reality is a social construction. The core ontological foundation examined is how 'reality', and thus risk and the environment, are perceived by bank lending officers. The basic epistemological stance adopted is to analyse and seek to understand how and why a bank lending officers environmental/ risk perception was constructed by assessing specific social processes supporting their environmental risk perception and management rationality.

A social constructionist perspective is adopted to interpret findings drawn from accounting and professional literature which addresses bank lending processes and provide a theoretical proposal for corporate environmental performance considerations. The result is the formation of the central proposal that, according to Thompson et al's Cultural theory (1990), ***banks can be characterised as hierarchical cultures with views of physical nature founded upon myths of tolerance.***

Accordingly, it is proposed that lending offices within each bank share a plural rationality for corporate environmental performance consideration based on a unique cultural perception of environmental risk. Bank lending officers subscribing to myths of

tolerant nature view environmental sustainability as achievable through the maintenance of tolerable levels of human impact with the physical environment. Subscribing to hierarchical ways of life bank lending officer support with development of, and compliance to, environmental legislation founded upon fault based principles to maintain tolerable limits. Therefore, corporate environmental performance considerations within bank lending processes will be based on a determination of a borrower's ability to comply with legislation and manage any potential incidents at tolerable environmental limits.

The central proposal is empirically examined through a hermeneutic evaluation of bank perceptions of environmental risk, with representatives drawn from three bank community case studies. Case studies are based on three Swiss banks, two Irish banks, five UK banks, and a Swiss bank operating in the UK. Evidence is provided to support the central proposal that the banks examined can be characterised as adhering to hierarchical cultural typologies with a view of physical nature founded upon a myth of tolerance. The central proposal is established as a basis for further research consideration. In conclusion emphasis is placed on the theoretical and practical limitations reflected by the choice of theoretical foundation and research area. The implications of these limitations are evaluated.

Limitations

Theoretical foundation

As noted previously, the ontological foundation of the central proposal addresses how reality is perceived and the basic epistemological stance is to analyse and seek to understand how, and why, social reality is constructed. From such a foundation the examination and findings portrayed within the thesis are based on, and limited to, the researcher perception of reality. The author's rationality for decisions taken and conclusions reached throughout the research process are conditional on the circumstances outlined. In addition, it is recognised that the researcher and the nature of the research will have influenced the response of participants.

It is emphasised that the conclusions drawn from the empirical study undertaken to examine the central proposal are limited to a depiction of the bank situations examined.

No attempt has been made to claim that findings are representative of a wider bank population. The fundamental methodology employed to examine the central proposal is offered as a means of evaluating other bank situations. Further, the conclusions reached are limited to an analysis of the social processes supporting corporate environmental performance considerations by bank lending officers. These conclusions, viewed within the context of bank policy, should not be extrapolated to other lending issues without alternative investigation.

Practical restrictions

The choice of research area imposed a number of practical restrictions on research. It was recognised from the outset that banks were bound to maintain the anonymity and confidentiality of their borrowers. Thus, as highlighted by previous research in this area, the examination of a 'real' lending decision was precluded. Further, gaining research access was problematic. A number of banks refused to take part in the research. The main reason provided for this refusal was the banks desire to maintain the confidentiality of their policies and practices. An offer to provide a written research agreement assuring bank confidentiality would be maintained had no influence on the outcome. The anonymity of all banks examined was guaranteed as a basis from which to encourage research access.

Where research access to key informants was achieved, in some cases subsequent access to other bank members was restricted and access to internal bank documentation was denied or subject to analysis under restricted conditions. These limitations were recognised when analysing research findings. It was proposed that findings from each bank examined provided an adequate basis from which to address the central proposal. In a number of cases responsibilities for corporate environmental performance considerations were restricted to key bank members therefore extensive research access to bank lending officers was not necessary.

Despite guarantees of anonymity, all banks precluded the reproduction of internal bank documentation, in part or full presentation, within all research publications. This has restricted the presentation of research findings to a narrative account by the researcher. No primary data is available for alternative examination by the reader.

It may be argued, that the choice of environmental considerations as a subject of analysis restricted research findings where environmental policy was found to be in the early stages of development. According to the theoretical position of the central proposal environmental credit risk assessment by a bank lender is not a prerequisite for research. In examining corporate environmental performance consideration within bank lending processes, a lender's rationality not to undertake an environmental credit risk assessment of a borrower is equally as informative as their rationality for conducting a review.

A deliberate bias was integrated into the research methodology by choosing research participants who demonstrated an environmental position. This was adopted given that a rationality for action is likely to be explicit within bank communications and readily accessible for research. Alternatively, a rationality not to undertake environmental credit risk assessment may be implicit within bank communications and not as accessible to the researcher.

To evaluate the contribution of the thesis, the conclusions drawn are considered with respect to the limitations reflected by the choice of theoretical foundation for the central proposal and the research area.

Contribution

The contribution of this thesis is to highlight existing evidence, and provide new evidence, of corporate environmental performance considerations within bank lending processes. The central proposal is offered as a means of interpreting this evidence. It has been argued that corporate environmental performance considerations are based on a bank lending officer's perception of environmental risk. How, and why, bank lending officers' perceive environmental risks has been attributed to the cultural construction of perception, and associated management rationality within a bank.

Given the interdisciplinary nature of the thesis, and its grounding on bank practice, it offers a potential contribution to researchers and practitioners interested in: bank lending processes; environmental management; risk perception; culture; and social constructionist perspectives, or a combination of these subjects. Emphasis is placed on

the potential contribution of the thesis to research within accounting from which point the thesis began, and bank practitioners who provide a focus for research.

To accounting

For accounting researchers the thesis contributes to existing accounting literature and research which addresses lending processes and environmental issues. Through empirical investigation and review of professional literature evidence has been provided of corporate environmental performance as a consideration of bank lending officers. In doing so, a new area for research is opened up and the central proposal is offered as a basis from which to begin debate. Further, it is proposed that the central proposal may be applied and examined regarding other elements of bank lending processes, and a social constructionist perspective may be considered as a foundation for interpreting other accounting research areas.

To bank practitioners

To bank practitioners involved in the research, in particular policy makers, the thesis has provided an insight into how, and why, lending officers' perceive environmental risk and the influence of the web of communication inherent within each bank. To other bank practitioners evidence is provided of corporate environmental performance considerations within some banks. In addition, a methodology is proposed through which they may reflect on their own social situation and rationality for environmental management and interpret the position of other banks.

To other practitioners interested in bank positions

To other practitioners, in particular corporate borrowers and legislators, the thesis provides evidence of corporate environmental performance considerations by bank lending officers. As a means of evaluating this evidence, and their own experience of practice in this area, the central proposal offers a social perspective as a basis from which to begin their interpretation. By adopting a social constructionist perspective an emphasis is placed on the potential value of understanding the position which individuals and groups bring to negotiations.

To environmental debate

As noted previously, due to the interdisciplinary nature of the chosen research area the thesis provides a contribution to a range of researchers and practitioners. This contribution is reflected by the author's attainment of an ESRC Global Environmental Change (GEC) Fellowship to take the research forward. The GEC Programme was established in 1991 and is scheduled to end in the year 2000. It was set up to bring social science expertise to bear on global environmental research and, at the same time, to take environmental concerns "to the heart of the social sciences". Its objectives are: to study the social/economic causes of environmental change; to assess the impacts of environmental change on societies and economies; and to consider the policies and strategies which governments, businesses, and individuals can adopt to mitigate or adapt to environmental stresses.

The fellowship research titled 'Corporate Environmental Assessment by a Bank Lender. A Social Constructionist Perspective' will contribute to the existing Programmes under the Business and Environment topic area. Taking the conclusion of thesis as its starting point, the author will further explore the applicability of labelling a bank as a typological hierarchy with a myth of tolerant nature. Lloyds TSB Group plc have agreed to act as a detailed case study for the research.

The results of the fellowship research, and thus the doctorate, will contribute to the ESRC's wider 'Environment and Sustainability' theme. As a consequence the research will be offered as a contribution to establish closer links between social and natural science research to meet the interdisciplinary challenges posed by global environmental change.

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Appendices

1. Legal cases with implication for environmental lender liability

2. United Nations Environment Programme (UNEP)

   Banking and the Environment, a Statement by Banks on the Environment and Sustainable Development and a list of subscribers at 31 January 1995

3. a. Background information on Banks
   b. Fieldwork summary
   c. A list of Bank members interviewed

Appendix 1.

Legal cases with implication for environmental lender liability

US Cases

US v Fleet Factors (1990)

- Fleet factors foreclosed on some inventory and equipment after obtaining bankruptcy court approval. This inventory and equipment was auctioned through a liquidation company. Fleet was deemed to have participated in the management of the company. The court distinguished actions after foreclosure to be participation in management including auction and removal of equipment. The district court denied a request for a summary judgement and submitted the case to a circuit court. The circuit court held that a secured creditor could be liable without being an operator by participating in the financial management to a degree indicating a capacity to influence management and treatment of waste without the ability to manage day to day operations. (Ries and Christel, 1992; Eggert, 1994; Vaughan, 1994)

Kelly and Chemical Manufacturers Association v EPA (1994)

- US Court of Appeal for the District of Columbia vacated the EPA Rule of 29 April 1992 held that the EPA lacked the authority to act by regulation to define and limit a party's liability under section 107 of CERCLA (Anon., 1994a; Eggert, 1994; Robbins and Bissett, 1994).

US v Maryland Bank and Trust co.(1986)

- Maryland Bank and Trust company in the USA had a US $335k loan go into default at the end of 1986. The bank acquired title to land of equal value in a mortgage foreclosure sale. The Bank was later required to reimburse the EPA US $500k for the cost of cleaning up hazardous waste on the land before it could be sold on. The hazardous waste had been dumped prior to the bank's initiation of foreclosure proceedings, and the bank had not participated in any way in the polluting property. However, no environmental assessment had been carried out as part of the lending process (Welford et al., 1993).

- The court was asked whether a foreclosing bank which owned the site actually operated the site within the meaning of CERCLA. The court held that an exemption covers only those persons who, at the time of the clean up, hold indicia of ownership to protect a then held security interest in the land. The court reasoned that the exclusion did not apply to former mortgagees such as the Bank which held title to collateral after purchasing it in a foreclosure sale and holding title for nearly four years. It court held that the actions of the bank were aimed at protecting the lender's investment rather than protecting its collateral bringing the lender within the definition of owner or operator (Sarokin and Schulkin, 1991; Ries and Christel, 1992; Bennett, 1993; Eggert, 1994; Vaughan, 1994).

US v Mirabile (1985)

- The court held that a hazardous waste site owner's secured creditor may be liable for response costs under CERCLA if the creditor exercised control over the daily operations of the borrower. The court however, distinguished between the day to day operations and financial involvement. The court concluded that a creditor who foreclosed on the collateral property after all disposal operations had ceased and who took all prudent steps to secure the property would NOT be liable. The court also held that a creditor which had authority to participate in the management of the company but which did not exercise that option was NOT liable. In contrast, Mellon Bank, the third creditor was held liable. The court decision was based upon the nature of the Bank's involvement in the site including monitoring the cash collateral accounts, ensuring the receivables went to the proper account, and establishing a reporting system between the company and the Bank (Eggert, 1994; Vaughan, 1994).

US v Whizco (1985)

- The sixth circuit court of appeal held a bankrupt company liable for clean-up or reclaiming an abandoned site despite bankruptcy charge. Liability was however, limited to the non-pecuniary obligation to reclaim the site. (Vaughan, 1994)

Re: Bergsoe Metals Corp. (1990)

- The court stated that 'a creditor must, as a threshold matter, exercise actual management authority before it can be held liable for action or inaction which results in the discharge of hazardous waste' (Eggert, 1994).

Midland National Bank v New Jersey Department of Environmental Protection (1986)

- The State Supreme Court refused to allow a bankruptcy trustee to abandon a hazardous waste site contaminated with PCB's. The court held that where clean up costs exceeded that value of the property, neither the debtor nor the receiver has a right to abandon property in contravention of state, or local laws, designed to protect public health and safety (Vaughan, 1994).

Kelly v Tiscornia (1992)

- A Michigan federal district court examined an array of activities undertaken by a lender in a work-out situation and found none to be 'participation in management' or otherwise inconsistent with a lender's proper oversight function (Eggert, 1994).

Silresim Site Trust V State Street Bank

- The court held that a lender's actions including: a new CEO appointment; forbearance as to loan payments; increases in credit; and direct efforts to collect accounts receivable did not constitute 'participation in management' (Eggert, 1994).

Waterville Industries Inc. v Fame (1993)

- The courts applied the same analysis as that adopted in the EPA rule without relying on the rule. (Eggert, 1994)

Pheonix v Garbage Service Co. (1991)

- A bank was held liable for clean up as personal representative to a will. The estate owned shares in a landfill. During the period of settlement title had temporarily passed to the bank but the bank had never operated, nor received, a beneficial interest in the landfill site at any time (Ries and Christel, 1992).

Canadian cases

Re Hyrodam (Corby) Ltd

- The case considered a bank as a shadow director of a borrowing company in difficulty. The case gives limited reassurance that a bank may not be held liable for a borrowers debts. The case notes a number of actions which the bank can safely take, including exemptions as professional advisers and limited direction (Turing, 1994).

Canadian Trust v Bulara Corporation Ltd

- A court receiver had taken over the assets of the borrower and found itself in control of a group of vacant buildings which had been abandoned on a shut down mine. The buildings were deemed a fire risk. A professional receiver had been ordered to demolish the buildings but recognised that the demolition cost would exceed the market value of the lot. The court held that the receiver had been given very broad and sweeping powers of management in the company and thus had a duty to comply with the demolition order. The court of appeal affirmed that decision (Tay, 1992).

Lamford Forest Products Ltd (1992) (Tay, 1992; Vaughan, 1994)

- A company wanted to file for bankruptcy but failed to identify a bankruptcy trustee as required by Canadian law. Failure to identify a trustee was directly linked to the fact that no one would assume responsibility for the environmental hazards on the company site (Vaughan, 1994). It was held that any official receiver or trustee who accepted an appointment would be liable for clean up (Tay, 1992).

Panamericana De Bienes y Servicios S.A. v Northern Badger Oil & Gas Ltd

- Canadian bankruptcy law established a priority scheme directing payment on claims against the estate to secured creditors. The court issued a strong warning that a secured lender will not be able to realise the assets of a company and leave the liabilities for the public to bear. Further, the decision opens the gates for public authorities to refuse to take action and effectively to seek recovery from the bankrupt's estate by ordering the receiver or trustee to perform that function (Fettig, 1991; Tay, 1992).

Northern Wood Preserves inc.

- A court suggested that environmental liability could be imposed on a party which takes possession of a polluting business (Vaughan, 1994).

Algoma Steel Corp.

- In a receivership one of the main creditors, the Royal Bank of Canada, faced site remediation costs in excess of $20m, deemed higher than the value of the assets (Vaughan, 1994).

Quadion Corp. v Mache (1990)

- The court provided a purchaser of property permission to seek contribution to clean up costs from a bank trustee as previous owner (Ries and Christel, 1992).

Banking and the Environment
A Statement by Banks on the Environment and Sustainable Development

Foreword

We,the undersigned,believe that human welfare,environmental protection and sustainable development depend on the commitment of governments,businesses and individuals.We recognize that the pursuit of economic growth and a healthy environment are inextricably linked.We further recognize that ecological protection and sustainable development are collective responsibilities and must rank among the highest priorities of all business activities,including banking.We will endeavor to ensure that our policies and business actions promote sustainable development:
meeting the needs of the present without compromising those of the future.

(1) General Principles of Sustainable Development

(1.1) We believe that all countries should work towards common environmental goals.

(1.2) We regard sustainable development as a fundamental aspect of sound business management.

(1.3) We believe that progress towards sustainable development can best be achieved by working within the framework of market mechanisms to promote environmental protection.We believe that there is role for governments to provide the right signals to individuals and business,to promote behavioral changes in favor of effective environmental management through the conservation of energy and natural resources, whilst promoting economic growth.

(1.4)We regard a versatile,dynamic financial services sector as an important contributor towards sustainable development.

(1.5) We recognize that sustainable development is a corporate commitment and an integral part of our pursuit of good corporate citizenship.We are moving towards the integration of environmental considerations into banking operations and business decisions in a manner which enhances sustainable development.

(2)Environmental Management and Banks

(2.1)We subscribe to the precautionary approach to environmental management, which strives to anticipate and prevent potential environment degradation.

(2.2)We expect,as part of our normal business practices, that our customers comply with all applicable local,national and international environmental regulations.Beyond compliance,we regard sound environmental practices as one of the key factors demonstrating effective corporate management.

(2.3) We recognize that environmental risks should be part of the normal checklist of risk assessment and management.As part of our credit risk assessment,we recommend when appropriate environmental impact assessments.

(2.4)We will,in our domestic and international operations, endeavor to apply the same standards of environmental risk assessment.

(2.5)We look to public institutions to conduct appropriate,up-to-date and comprehensive environmental assessments in ventures with them,and to share the results of these assessments with participating banks.

(2.6)We intend to update our management practices,including accounting,marketing,public affairs,employee communications and training,to incorporate relevant developments in environmental management.We encourage banking research in these and related issues.

(2.7)We will seek to ensure that in our internal operations we pursue the best practices in environmental management,including energy efficiency,recycling and waste minimisation.We will seek to form business relations with suppliers and sub-contractors who follow similarly high environmental standards.

(2.8)We support and will develop suitable banking products and services designed to promote environmental protection,where there is a sound business rationale.

(2.9)We recognize the need to conduct internal environmental reviews on a periodic basis to measure our operational activities against our environmental goals.

(3) Public Awareness and Communication

(3.1)We will share information with customers,as appropriate,so that they may strength their own capacity to reduce environmental risk,and promote sustainable development.

(3.2)We will foster openness and dialogue relating to environmental management with all relevant audiences,including governments,clients,employees,shareholders and the public.

(3.3)We recommend that banks develop and publish a statement of their environmental policy and periodically report on its implementation.

(3.4)We ask the United Nations Environment Programme to assist the industry by providing,within its capacity,relevant information relating to sustainable development.

(3.5)We will periodically review the success in implementing this Statement and will revise it as appropriate.

(3.6) We encourage other banks to support this Statement.

Status of UNEP Statement by Banks on
The Environment and Sustainable Development

31st January 1995

1. - Algemene Spaarbank voor Nederland, The Netherlands
2. - Arab Bank, PLC, Jordan
3. - Balkanbank Ltd., Bulgaria
4. - Banesto, Banco Espagnol de Credito, Spain
5. - Banco do Estado de Sao Paulo SA, Brazil
6. - Bank Austria, Austria
7. - Bank Depozytowo-Kredytowy S.A., Poland
8. - Bank für Tirol und Vorarlberg Aktiengesellschaft, Austria
9. - Bank Gdanski S.A., Poland
10. - Bankhaus Carl Spängler & Co. Aktiengesellschaf, Austria
11. - Bank of Baroda, India
12. - Bank of Handlowy W. Warszawie SA, Poland
13 - Bank of Ireland Group, Ireland
14. - Bank of Montreal, Canada
15. - Bank Ochrony Srodowiska, Poland
16. - Banky Fampandrosoana ny Varotra, Madagascar
17. - Bank of Philippine Islands, Philippines
18. - Bank Polska Kasa Opieki S.A., Poland
19. - Bank Przemystowo-Handlowy S.A., Poland
20. - Bank Rozwoju Eksportu S.A., Poland
21. - Banco Nacional de Angola, Angola
22. - Banco Portuges do Atlantico SA, Portugal
23. - Bank Slakski S.A., Poland
24. - Bank Bayerische Verinsbank AG, Germany
25. - Bank Zachodni S.A., Poland
26. - Budapest Bank RT., Hungary
27. - Canadian Imperial Bank of Commerce, Canada
28. - Central Hispano, Spain
29. - Commerzbank AG., Germany
30. - Community Capital Bank, U.S.A
31. - Cooperative Bank, Manchester, U.K.
32. - Creditanstalt-Bankverein, Austria
33. - Credit Suisse, Switzerland
34. - Den Danske Bank, A/S, Denmark
35. - Deutsche Bank Ag, Germany
36. - DG Bank, Germany
37. - Dresdner Bank Ag, Germany
38. - Export Bank of Africa Ltd., Kenya

39. - (The) Hong Kong and Shanghai Bank Corporation Ltd., Hong Kong
40. - Kansallis-Osake-Pankki, Finland
41. - Kenya Commercial Bank Group, Kenya
42 - Kreditna banka Maribor d.d., Slovenia
43. - Landesgirokasse Bank, Germany
44. - Landsbanki Islands, Iceland
45. - Lloyds Bank PLC, U.K.
46. - National Bank of Kuwait SAK, Kuwait
47. - National Westminster Bank PLC, U.K.
48. - Österreichische Investitionskredit Aktiengesellschaf, Austria
49. - Österreichische Kommunalkredit Aktiengesellschaf, Austria
50. - Polski Bank Kredytowy S.A., Poland
51. - Pomorski Bank Kredytowy S.A., Poland
52. - Powszechny Bank Kredytowy S.A., Poland
53. - Powszechny Bank Gospodarczy S.A. w todzi, Poland
54. - Powszechna Kasa Oszczednosci - Bank Panstwowy, Poland
55. - Republic National Bank, U.S.A.
56. - Romanian Commercial Bank SA, Romania
57. - Royal Bank of Canada, Canada
58. - (The) Royal Bank of Scotland PLC, U.K.
59. - Thai Investment and Securities Co. Ltd , Thailand.
60. - Scotia Bank (The Bank of Nova Scotia) , Canada
61. - Swiss Bank Corporation, Switzerland
62. - (The)Toronto-Dominion Bank, Canada
63 - Uganda Commercial Bank, Uganda
64. - Unibank (Denmark)
65. - Union Bank of Switzerland
66. - Westpac Banking Corporation, Australia

Background information on Banks

for the Financial Year ended 1995

Bank	A	B	C	C(uk)	D	E	F	G	H	I	J
Group Head Office Location	Switzerland				Ireland		United Kingdom				
Group International Operations	✓	✓	✓		✓	✓	✓	✖	✓	✓	✖
	Billion Pounds Sterling										
Total Value of Group Assets	159	92	103	9	21	19	45	3	81	162	35
Total Value of Group Loans and Advances to Customers	80	62	55		11	12	26	2	39	84	18
Total Value of Domestic Corporate Loans	32	28	25	*not available	3	4	11	1	14	30	6

Fieldwork summary

Community	Bank	Personal interviews with key informant	Personal interviews with other members	Telephone interviews with key informant	Telephone interviews with other members	General questionnaire completion	Specific questionnaire completion	Internal documents supplied	Internal documents reviewed	Public policy information obtained
Swiss	A	1	1	3	6	✓	✓ (4 German)	✓	✓	✓
	B	1	3	1	3	✓		✓	✓	✓
	C	1	1	1	2	✓			✓	
Irish	D	3	4	6	2	✓		✓		
	E	1	1	2	1	✓		✓		
UK	F	1		2	4	✓		✓		
	G	1		3	3	✓		✓	✓	✓
	H	1		2	2	✓				✓
	I	1		2	3	✓		✓	✓	✓
	J	1	2	3	4	✓		✓		
Swiss/UK	C	1		1		✓		✓		

A list of Bank members interviewed

Swiss banks

A	Policy Maker* Senior Manager, Environmental Management Services Manager, Environmental Management Services Assistant, Environmental Management Services Manager, Environment Desk, Environmental Management Services Head of Corporate Sector, Head Office Manager, Corporate Sector, Head Office Manager, Branch Office
B	Policy Maker* Credit Risk Manager, Environmental Management Services Manager, Environmental Management Services Researcher, Environmental Management Services
C	Policy Maker* Credit Risk Manager, Environmental Management Services
C(UK)	Policy Maker*

Irish banks

D	Policy Maker* Senior Manager, Risk Management Manager, Risk Management Manager, Branch Office Legal Adviser Personnel Manager
E	Policy Maker* Legal Adviser

UK banks

F	Policy Maker* Manager, Branch Office Manager, Property Management Senior Manager, Marketing Personnel Manager
G	Policy Maker* Manager, Environmental Management Unit Manager, Branch Office Public Relations Officer
H	Policy Maker* Officer, Risk Management Public Relations Officer
I	Policy Maker* Manager, Property Management Legal Adviser Public Relations Officer
J	Policy Maker* Manager, Risk Management Manager, Risk Management Public Relations Officer

*denotes Key Informants

NB: the titles of bank policy makers have been withheld and the titles of other bank members have been sanitised to maintain bank anonymity.