THE ROLE OF FINANCIAL INSTITUTIONS IN ACHIEVING SUSTAINABLE DEVELOPMENT

REPORT

TO THE EUROPEAN COMMISSION

BY

DELPHI INTERNATIONAL LTD
IN ASSOCIATION WITH ECOLOGIC GMBH

NOVEMBER 1997

EXECUTIVE SUMMARY

Introduction

The European Community Programme of Policy and Action in Relation to the Environment and Sustainable Development (the Fifth Environmental Programme) (OJ 93/C 138/27) recognised the importance of financial institutions by stating that "financial institutions which assume the risk of companies and plants can exercise considerable influence - in some cases control - over investment and management decisions which could be brought into play for the benefit of the environment". Despite this, little work has been done by the Commission on the role of the financial institutions in achieving sustainable development.

An even more fundamental relationship is indicated by an alternative definition of sustainable development: *"a process of development which leaves at least the same amount of capital, natural and man-made, to future generations as current generations have access to".* This makes it clear that sustainable development is about capital allocation and thus should be at the core of financial markets activity.

On a more practical level, financial institutions interact with the environment in a number of ways:

- as *investors* - supplying the investment needed to achieve sustainable development.
- as *innovators* - developing new financial products to encourage sustainable development - e.g. in energy efficiency.
- as *valuers* - pricing risks and estimating returns, for companies, projects and others.
- as *powerful stakeholders* - as shareholders and lenders they can exercise considerable influence over the management of companies.
- as *polluters* - while not "dirty" industries, financial institutions do consume considerable resources.
- as *victims* of environmental change - e.g. from climate change.

Financial markets present an opportunity for environmental policy, particularly useful in view of the need for a wider range of policy instruments. In view of the indirect nature of many of the interactions above, policies are likely to be most effective if they aim to complement and work with existing financial activity.

To that end, a transactional model of the financial markets is used, to indicate how it is possible to influence financial transactions. It illustrates the key roles of information and analysis.

The Commercial Banking sector

The greatest potential of the commercial banking sector is in its relationship with Small and Medium sized Enterprises, where banks can be very influential through their lending practices and by providing information. Commercial banks have less influence over most larger companies. There is, however, scope for them to influence consumer behaviour through the financial products they offer.

To date the most commercial banks have focused on two areas: Firstly. many have made considerable progress in developing *internal environmental management* systems to reduce their own environmental impact. Secondly, most banks include some environmental analysis into their *credit assessment* process although this tends to be focused on liability.

The United Nations Environmental Programme (UNEP) has established a statement on Banks and the Environment which over 90 banks have signed, including a substantial number from the EU. It is the leading international initiative on banks and environment and is certainly encouraging a number of banks to take the environment seriously.

A smaller number of leading banks have taken their activities further, and for instance have started to take a *wider view of environmental factors in credit assessment*, including developing checklists and other procedures.

One particularly encouraging area of activity is providing *practical support to small businesses* on how to manage their environmental impacts, through information packs and other support.

Where banks have been less progressive is in developing *new financial products* with an environmental perspective for both business and individuals, such as energy efficiency loans. Encouraging the development of such products appears desirable.

There has been considerable work in developing *environmental management systems* (EMS) and reporting for banks, including possibly an extension to EMAS. It is important that such initiatives focus on the environmental impacts of financial products rather than merely the impact of internal operations. In view of the generally systematic approach to business by commercial banks, further use of EMS appear to be an effective way forward for the sector.

The Investment sector

The potential of the investment sector lies in the influence it has over large companies. It can send signals to industry in the pricing of new capital for companies and in the on-going valuation of quoted companies as well as directly through the use of its rights as shareholders and owners.

To date, as whole, investors are probably less interested in the environment than bankers. However, a number of pressures are emerging on the investment sector:

- *Leading companies* have become increasingly frustrated with the failure of the investment community to recognise and reward the environmental progress they have made. In particular, the international business organisation, WBCSD, has been active in this area, developing the concept of eco-efficiency and encouraging its use among investors.
- There is growing interest from *individual investors* in environmentally responsible investment, and this has led to the development of some progressive environmental investment funds. Institutional investors have also started to explore this area, reassured by the good investment performance of such funds. As a "green" product with no price or quality premium, the potential market for such products is likely to be substantial.
- Another avenue that some investors have pursued is *shareholder activism.* They have become frustrated with the indifference of investing institutions and are taking their concerns directly to large companies. This has proved effective in the US, but is more limited in Europe where shareholders' rights are less developed - there may be scope to develop it in the EU.
- *Environmental NGOs* have also started to target fund managers and investment banks over their investments and involvement with environmentally damaging companies. To date they have not had major success, but have started to influence the sector.
- Finally, a few organisations among the investment sector have started to take environmental issues more seriously and may be creating some *peer pressure* for change. While much scepticism exists and should not be underestimated, there are signs that attitudes may be changing.

A key concern for the investment sector is the relationship between environmental performance and investment performance. Here the evidence on balance suggests that environmental performance does contribute to good financial performance. However, many in the investment sector remain unconvinced, and action is needed both to persuade doubters and reinforce signals, e.g. through the development of environmental taxation.

To encourage the investment sector to incorporate environmental issues a number of obstacles need to be overcome. Two key obstacles are market inertia in investment practices, and the balance

between long term and short term analysis. However, the most important issue is probably difficulties in obtaining good quality information in ways that the sector can understand and use. Ways need to be found to provide relevant information to the sector.

The Insurance sector

The potential of insurance sector in achieving sustainable development lies in its ability to price various types of environmental risk and to help pay for environmental damage. Potentially environmental issues can affect risks in a number of areas, but to date the industry has taken an issue based approach and has focused on the environment in two main areas:

- *Environmental liability* has had a seriously adverse affect on the industry, particularly in the US and has resulted in the industry taking a very cautious approach to environmental issues. It is important that in any development of environmental liability in the EU the insurance industry be actively involved and reasonably supportive. Unrealistic expectations of the extent to which the industry can price environmental risks accurately should be avoided.
- The industry has also become clearly concerned about the potential impact of *climate change* on its business. Changing climate at best undermines the historic basis for evaluating risk and at worst could significantly increase losses, from increased storms and floods, to the extent that even the very viability of the industry could be threatened. In response, the leaders in the industry have developed a comprehensive set of measures, ranging from an increasing lobbying at the climate change convention, through working with governments on research and preventative measures, to adjusting premiums and their areas of activity.

UNEP has also launched an Insurance Industry Initiative on sustainable development. It too has been successful and has strong European representation. Members of the initiative have been particularly active in the areas of climate change and asset management.

Beyond these areas, however, there has been little research by the industry of the implications of sustainable development for the insurance sector at a fundamental level. Similarly, many outside the industry have a poor understanding of the practicalities of the industry, leading to limited work on how insurance could contribute to sustainable development.

Companies, Investors and the Environment

Companies increasingly see environmental issues as being of relevance to their business development, yet financial markets, particularly investors are uninterested. Companies are increasingly aware of the environmental pressures they are under and have developed a range of practical tools to address them.

There is increasing understanding of the financial implications of these pressures among leading specialists, yet most in the financial community pay only limited attention to them. *Information* is the key to financial evaluation, but there is limited useful information on environmental performance and management. The main existing sources of information are not geared to financial audiences:

- Environmental reporting is targeting multiple audiences and many companies do not report.
- The potential with annual reports is erratically exploited and lacks standardisation.
- Publicly available information faces substantial practical obstacles.

To address this there is potential to *develop standardised and financially useful environmental reports*, potentially as part of the annual reports, encompassing financial information, environmental performance data and qualitative information on environmental policy and management.

An alternative approach is through the development of *environmental rating agencies* who can provide a summary analysis geared to the needs of the financial markets. At present such services

have only limited appeal, but they offer long term potential. An effective way of encouraging the development of these services would improve the quality of information made available through the public regulators.

The Environmental Business Sector

The environmental business sector consists of businesses ranging from traditional environmental businesses, such as waste management, to emerging "green" pioneers, such as renewable energy and eco-tourism. They have a critical role to play in achieving sustainable development and thus ensuring they have access to private sector finance is crucial.

Despite apparently good prospects, with rapidly growing markets, the financial performance of the sector has been disappointing to date. Indeed, the poor performance of many high profile companies has been a major factor in creating a negative impression about the environment with financial institutions.

A number of factors are identified for this. Several of them are closely related to the public sector and policy issues, both in the way that the environmental markets are often dependent on policy development and in the active role of public sector finance in this area.

In response to the challenges faced by environmental sector companies, a number of innovative approaches and specialist organisations have developed, including project finance, venture capital, leasing, environmental and ethical banks, specialist environmental financiers, and environmental funds. However, the sector may place excessive emphasis on emerging sources of finance or stretch existing finance into new areas and there is a continuing need for innovation.

To encourage the financial markets to support the sector, there is a need for measures at both a macro level, such as clear policy development and dissemination, and micro level, such as training on financial markets for environmental entrepreneurs. There is scope to support innovation in finance to the sector. In addition, public sector financial support programmes to the sector could be adapted to work more closely with the financial sector.

Environmental Policy

Environmental policy can be developed in a number of areas to encourage financial institutions to support sustainable development.

- The EU directly *provides funding* to protect the environment in a number of ways. Particularly where such support is targeted at the private sector there is scope to ensure that it complements and encourages the involvement of financial institutions.
- There is scope for the European Environment Agency to improve the *quality of information* made publicly available, so that it can be used by financial institutions, and additionally to brief financial institutions on environmental pressures and policy development within the EU.
- There is increasing pressure to alter the structure of *taxation* in favour of environmental issues. Such issues would help strengthen the contribution that environmental performance enhances financial performance. There is widespread support for such taxes among the financial community.
- *Liability* is potentially another effective market mechanism. However, as it requires the involvement of the insurance industry to be effective, they should be actively consulted as to how best make it work.
- There is scope to expand both the *EMAS scheme* and the *Eco-label scheme* to encompass financial institutions and products. EMAS would encourage financial institutions to take a systematic approach to environmental management. An Eco-label on green financial products would aid marketing and reward innovation.

Financial Policy

Existing European financial policy regarding banks, insurance and investment services is principally focused on creating a single market for financial services. There appears only modest scope to encompass environmental issues in most areas, as it is not evident that the environmental risks are sufficient to warrant special treatment by regulators.

In *bank regulation* there is a potential argument for making some form of environmental management compulsory or by requiring the disclosure of lending to high risk sectors.

There is a potential for action in the areas of *consumer protection*, where the Commission has a clear mandate and effective policy actions are possible, desirable and justifiable.

The EU also regulates *disclosure and listing requirements* for companies and there is potential to develop a formal standard for environmental disclosure by companies.

Analysis

A key issue in the inclusion of environmental issues is the *significance* of environmental issues - while potentially of some relevance, many environmental issues are of insufficient importance to be a priority, particularly in view of other concerns and practical difficulties.

Improving information flows would be an effective way of making it easier for financial institutions to incorporate environmental considerations.

There is still potential to reinforce the link between environmental performance and financial performance, notably through the use of economic instruments such as environmental taxes.

Recommendations

Ten policy options are recommended for consideration by the Commission. The options have been chosen on the basis of the potential to have a major long term environmental benefit. In addition many of the policy options chosen do not involve the expenditure of substantial public funds or impose major burdens on industry. Indeed, one of their key aspects is that they are likely to improve the functioning of existing policy measures.

The Commission should take a lead role in *improving the flow of environmental information* relevant to the financial markets. This could be done:

1. through standardisation and improvement of information currently being collected and made available by environmental regulators
2. through the development of environmental reporting standards targeted at the financial markets.

The Commission should also consider taking action to *increase the demand for environmentally responsible investment.* Such actions would create substantial demand based incentives for financial institutions to develop environmental expertise and products. Actions include:

3. as part of its involvement in consumer investment protection, requiring financial institutions to ask investors if they are concerned about how their money is invested environmentally or ethically
4. developing, as part of its eco-labelling scheme, a label for environmentally responsible investments.

The Commission should encourage the *development of environmental management* at financial institutions, through:

5. supporting information dissemination on best practice for financial institutions

6. the extension of the EMAS scheme to include financial institutions. This would require a greater focus on impacts of products.

More formal control through the financial regulatory mechanism is possible, for instance by making environmental management mandatory, by requiring disclosure of exposure to high risk sectors, by looking at the potential for voluntary investment agreements, and by looking at the role of the European Central Bank. However, they are probably not a priority at present.

The Commission should consider ways to encourage the *development of environmental financial products* for business and consumers. One cost effective mechanism for the Commission would be:

7. to support awards for innovation in environmental finance. This would provide an incentive for companies, and would enable publicity and dissemination.

The Commission could also consider the use of direct financial support in the product development stage of new environmental financial products and initiatives, recognising that the cost and risks of product analysis and development are a major obstacle to their deployment, although this may be best left to Member States.

The Commission is also advised to consider ways to *improve its existing support* to the environmental business sector:

8. by investigating the potential role for public sector investment banks to take the lead in encouraging private sector finance to support the sector
9. by improving the quality of information on the Commission's environmental support activities, and using financial institutions to disseminate it more widely
10 by involving the financial markets more closely in these support activities, thus ensuring that the recipients are aware of broader financing issues and the financial sector is able to step in as public sector support ends.

Taken together these policy actions could help actively involve financial institutions in achieving sustainable development and could be a powerful tool in achieving the objectives of the Fifth Action Programme.

TABLE OF CONTENTS

Executive Summary i

1. INTRODUCTION AND OVERVIEW. 1
   1.1. INTRODUCTION AND APPROACH 1
   1.2. THE ROLE OF FINANCIAL INSTITUTIONS 1
   1.3. MOTIVATING THE FINANCIAL SECTOR. 4
   1.4. SECTORS AND CLIENTS 6

2. COMMERCIAL BANKS 8
   2.1. THE POTENTIAL FOR BANKS. 8
   2.2. CURRENT PRACTICE 9
   2.3. BEST PRACTICE AND BEYOND 11
   2.4. ANALYSIS AND WAYS FORWARD 14

3. THE INVESTMENT SECTOR 16
   3.1. THE POTENTIAL OF THE INVESTMENT SECTOR 16
   3.2. CURRENT ACTIVITIES 17
   3.3. ANALYSIS AND WAYS FORWARD 28

4. THE INSURANCE SECTOR 31
   4.1. THE POTENTIAL OF THE SECTOR 31
   4.2. CURRENT ACTIVITIES 33
   4.3. ANALYSIS AND WAYS FORWARD 35

5. COMPANIES, INVESTORS AND THE ENVIRONMENT 37
   5.1. HOW THE ENVIRONMENT AFFECTS COMPANIES 38
   5.2. INDUSTRY'S RESPONSE TO THE ENVIRONMENTAL CHALLENGE 39
   5.3. COMMUNICATING ENVIRONMENTAL PERFORMANCE: THE PRESENT 40
   5.4. THE FUTURE: ACHIEVING EFFECTIVE COMMUNICATION 43
   5.5. ANALYSIS AND WAYS FORWARD: 48

6. THE ENVIRONMENTAL SECTOR 50
   6.1. DEFINING ENVIRONMENTAL INVESTMENTS 50
   6.2. THE ENVIRONMENTAL SECTOR IN PRACTICE 51
   6.3. PERCEPTION OF THE SECTOR 52
   6.4. FINANCING THE ENVIRONMENTAL SECTOR 54
   6.5. ANALYSIS AND WAYS FORWARD 59

7. ENVIRONMENTAL POLICY 60
   7.1. INTRODUCTION 60
   7.2. DIRECT INTERVENTION 60
   7.3. REGULATION 63
   7.4. ECONOMIC INSTRUMENTS 64
   7.5. INFORMATION INSTRUMENTS 66
   7.6. CREATION OF NEW MARKETS AND PRIVATE SECTOR FINANCING NEEDS 69

8. FINANCIAL MARKETS POLICY AND SUSTAINABLE DEVELOPMENT 70
   8.1. GENERAL PHILOSOPHY 70
   8.2. COMMERCIAL BANKING 70
   8.3. THE INVESTMENT SECTOR. 71
   8.4. CONSUMER PROTECTION AND PENSIONS 72
   8.5. INSURANCE 73
   8.6. ACCOUNTING AND LISTING PARTICULARS 73

9. ANALYSIS 75
   9.1. OVERVIEW 75
   9.2. LEVERS FOR CHANGE 76
   9.3. DEVELOPING POLICY OPTIONS. 77

10. RECOMMENDATIONS 79
   10.1. PRIMARY POLICY RECOMMENDATIONS 79
   10.2. OTHER POLICY MEASURES AND INTERACTIONS 85
   10.3. CONSIDERATIONS FOR MEMBER STATES 87

11. CONCLUSIONS AND RECOMMENDATIONS 88

1. Introduction and Overview.

1.1. INTRODUCTION AND APPROACH

The European Community Programme of Policy and Action in Relation to the Environment and Sustainable Development (hereafter called the Fifth Environmental Programme) (OJ 93/C 138/27) seeks to take the European Union (EU) "towards sustainability" by building "a new development model for the Community" while at the same time recognising the relationship between industrial competitiveness and the environment (OJ 92/C 331). The Programme recognises the importance of financial institutions by stating that "financial institutions which assume the risk of companies and plants can exercise considerable influence - in some cases control - over investment and management decisions which could be brought into play for the benefit of the environment". So far, the role of financial institutions has not yet been explored in detail at EU level.

This report is intended to redress this. The aims of this report are to:

- understand how financial institutions can contribute to sustainable development; and
- identify measures which could best help focus financial institutions more positively and actively on the environment.

Chapter One provides an overview of how financial markets interact with sustainable development and how they can be motivated to integrate environmental considerations into their business. Chapters Two to Four look in more detail at the key financial market sectors of Commercial Banking, Investment and Insurance. For each sector, the areas of potential involvement are discussed, then current activities in the area of the environment are reviewed, including both company and industry wide initiatives, and finally examples of best practice and ways forward are considered. Chapter Five looks in more detail at the corporate sector and the role of information. Chapter Six looks at the particular case of the environmental sector and its financing challenges and opportunities, including the current activities in this sector. Chapters Seven and Eight then look at the policy activities of the EU in both the environmental and financial sectors, to see how existing and future policy help enhance the role of financial institutions in achieving sustainable development. Chapters Nine to Eleven present analysis, key recommendations, and conclusions.

This report has been prepared by Delphi International Ltd, in conjunction with Ecologic GmbH. The project team consisted of professionals with substantial experience of financial markets and of environmental policy. The approach consisted of face to face interviews with a wide range of individuals in financial institutions, industry, Non-Governmental Organisations (NGOs) and government organisations, complemented by a number of telephone interviews and exchanges of correspondence, both in the EU and outside. In addition a comprehensive literature review has been conducted of relevant research and publications.

It is worth noting that the European financial institutions encompass a very wide range of activities, ranging from small credit card transactions to the management of investment portfolios of over ECU 100bn. While this report has endeavoured to provide an overview of most financial activities, even individual financial organisations are not always aware of all their environment related activities, and so some minor areas may have been omitted. Similarly, a detailed analysis of individual activities with environmental implications is beyond the scope of this study - indeed a key finding of this report is that there appears to be a wide range of environmental opportunities for financial organisations, but realising their potential will depend on thorough analysis and attention to detail and here there is often a shortage of resources.

1.2. THE ROLE OF FINANCIAL INSTITUTIONS

It is reasonable to ask what the roles of financial institutions are in achieving sustainable development. Financial institutions have tended to play down their potential role in moving towards

sustainable development, believing that such matters are primarily the role of government. Indeed, their view has often tended towards dismissing environmental concerns as of marginal importance to their business, and at first sight, the short term expediencies of the financial markets and the altruistic, long term concerns behind sustainable development might appear to have little in common.

However, one alternative definition of sustainable development is *"a process of development which leaves at least the same amount of capital, natural and man-made, to future generations as current generations have access to"*. This definition makes explicit that sustainable development is about capital - the core of financial markets activity. Financial markets normally supply financial capital with the intention that is should ideally increase, and at least should be safeguarded. There is clearly a distinction between financial capital, and the broader understanding of capital in sustainable development, which includes the natural environment - the source of much of the debate over financial markets and the environment - but this merely should be seen as helping define where change is necessary.

On a practical level, achieving sustainable development will require substantial investment - in environmental technology, new energy systems, environmentally sensitive infrastructure and information technology. It is increasingly recognised that the public sector can only provide a limited proportion of the necessary investment. While the financial markets cannot alter the fundamental viability of such investments, (the most important requirement of financiers), they can help by removing any unnecessary obstacles to accessing finance, and by ensuring finance is readily available at the lowest practical cost. This may require financial innovation to develop new mechanisms for the new markets that sustainable development will create. It may also involve working with policy makers to ensure the most appropriate structures are established to enable ready financing.

Financial institutions can respond quickly to new opportunities, particularly when the potential is presented to them in a clear and consistent manner, and although large, the financing needs of sustainable development in Europe are well within the scope of the European financial markets. However, inconsistent or ineffective policy development will send a negative signal to the market, and can result in adverse market sentiment against environment projects, something which may have occurred over recent years.

In addition, as was recognised in the Fifth Action Programme, financial institutions exercise considerable influence over most areas of economic activity, from the individual struggling to make this month's mortgage payment, to the directors of a multinational company facing investors and analysts at the company Annual General Meeting (AGM). Of all the stakeholders of a company, financial institutions are usually the most powerful, yet have frequently been ignored from the perspective of achieving environmental change. Thus it is not surprising that to date financial institutions have rarely used their influence for environmental matters.

From the perspective of environmental policy makers, this situation represents a potential opportunity, particularly useful in view of the fact that the Commission has recognised the need for a wider range of policy instruments, especially the use of market-based tools (as identified in the 1996 review of the Programme (OJ 96/C 647)). Ideally, environmental policy makers would like to see financial institutions complementing and reinforcing the signals that policy makers are trying to establish, including financially "rewarding" environmentally superior behaviour (e.g. with a lower cost of capital or a higher share price) and penalising the bad.

Clearly, financial institutions cannot be expected to send market signals on environmental matters unless they recognise it as being in their own interest, and thus realistically and practically this goal may be difficult to achieve. However, as Europe's financial markets generally operate on an efficient basis, changes need be only fairly marginal to have materially significant impacts.

Financial institutions also have some direct environmental impacts from their own operations - such as power usage, paper use, and business travel. While not thought of as major polluters, as with most businesses, there will be scope to reduce this impact, and often to do so without incurring financial costs. The service sector is becoming increasingly important within European economies and as a

whole its environmental impact is significant - given their influence financial institutions are well placed to play a leadership role within the sector in demonstrating environmental responsibility.

Financial institutions can also be affected directly by environmental issues - this has happened with environmental liability for contaminated land on the business of insurers and banks, and the emerging concerns from the insurance industry over climate change. When this happens it can be a powerful force.

In looking for mechanisms to achieve this change, policy makers have a number of options. Existing environmental legislation can be modified or interpreted in ways to make it more relevant to the financial markets. New environmental legislation can be developed to encourage or coerce the financial markets to consider environmental matters. Financial instruments can be used to persuade the financial sector to get involved. Finally, the financial markets themselves are highly regulated and subject to legislation, and there may be scope here to adapt legislation to incorporate environmental aspects - indeed the Commission has recognised that progress towards sustainability will require environmental protection requirements to be integrated into other policies of the Community and Member States.

Others have also studied the role of financial institutions in sustainable development and the environment. Below is a summary of the issues which the United Nations Environment Programme (UNEP) identified when developing its initiatives with the financial sector. It provides a useful complement to the above.

Reasons for an Increased Involvement of the Financial Services Sector in Environmental Issues - UNEP

1. With the growth and increasing globalisation of the world economy, foreign direct investment is growing at a phenomenal rate, increasing foreign direct investment particularly in areas such as the fast growing economies of South East Asia. Therefore, it is imperative that attention must be paid to the issue of environmental responsibility with the investment and development process if sustainable development is to become a reality.
2. The Financial Services Sector (FSS) is amongst the most important contributors of private sector credit. The signals they send their clients about the relationship between environmentally sound management practices and credit lending rates is an important component in building sustainable development.
3. To implement sustainable development (SD) a total global funding level of US $100bn (plus or minus 50bn) per year was estimated [agenda 21, UNCED 1992]. In terms of locus of financial capital, the private sector is already three times larger than the public sector and is still increasing.
4. The FSS harbours skills, technologies and economic resource, which can contribute to sustainable development. For instance, it can be argued that the capital markets are an excellent system for information sharing, and that the sum of decisions shape the world economy and ultimately the achievement of a more sustainable future.
5. The FSS is inextricably linked by lending and investment practices to the economic activities that degrade the natural environment.
6. The FSS can be held responsible for financing possible environmental disasters (usually referred to as the issue of potential liability)
7. Investment in the provision of environmental goods and services has become big business. Because attractive returns are available, emerging environmental markets offer the highest expected growth rates, governments and international organisations are offering support etc.
8. In order to be competitive the FSS will have to develop a superior ability to identify tomorrow's key drivers of sustainable profitability. One of the most important new drivers will be companies' and projects' environmental efficiency and their ability to create new "green" technologies and opportunities.
9. Actors of the FSS which seek high performance investments in this new competitive environment will have to do much more than simply avoid environmental liabilities. They will have to search pro-actively for leading edge companies / projects and opportunities. Over time this will necessitate a strategic restructuring of current lending and investment practices.

10. For the FSS, change, anticipation and adaptation to customer needs is a matter of competitive survival. In sum, the FSS can make many valuable positive contributions to achieving sustainable development while also achieving a healthy bottom line.
11. The FSS has an interest in sustaining the biosphere's capacity to regenerate life without which economic activity would be impossible.
12. There is now a clear realisation that sustainable development will not and cannot be achieved by governments acting alone. In this context, the expertise of the private sector plays an important role, not as matter of corporate philanthropy, but rather because it is in the business self interests of the private sector to capitalise upon the fast moving "green" national and international agendas.

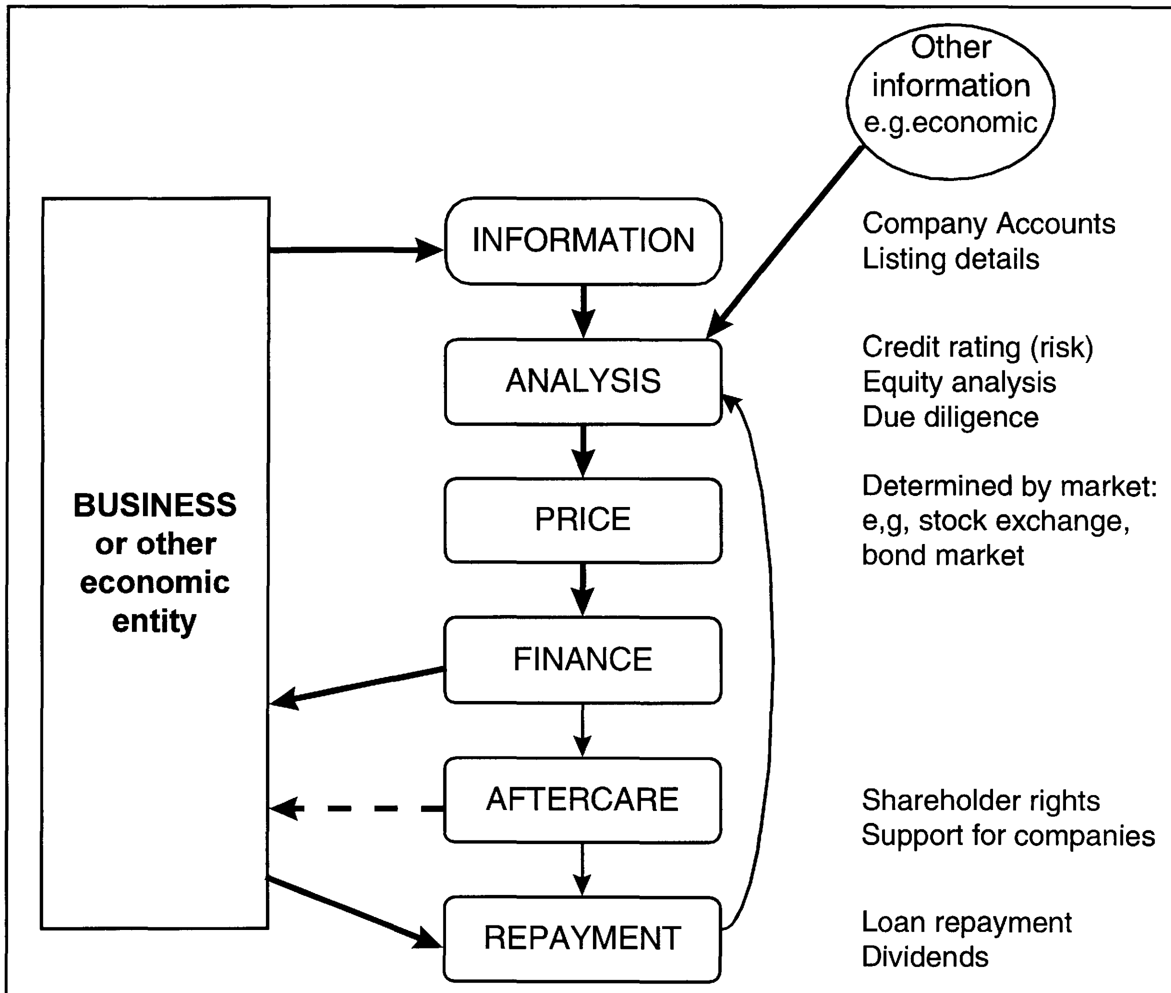
1.3. MOTIVATING THE FINANCIAL SECTOR.

Financial markets will only use their influence for the benefit of the environment if they see that this is in their broad interest - i.e. it will help them generate profits, either directly or indirectly (e.g. by improving the quality of their business or their reputation). The indirect considerations are particularly important in the investment business, where they can be interpreted as improving investment performance through better advice or management.

While this is straightforward, to apply it is rather more difficult. Beforehand it can be very difficult to know whether a particular activity will be profitable or will enhance investment returns. Past returns are no guide to future performance. Before considering any new or different activity, financial institutions will want to consider what they are letting themselves into very carefully.

As a result, it is useful to understand how the financial markets work in supplying capital. The diagram below provides a model of the financial markets operations in this matter.

Figure 1: Transaction Model of Financial Markets



Analysis is the key part of the process, and will be largely driven by the objective of making profitable investment decisions. A key factor in analysis will be the estimation of the actual and perceived risk involved. One important aspect of analysis is that it involves costs, which can be quite substantial. Thus an initial estimation is often made of the likely outcome of the analysis, with many propositions being rejected at an early stage. The *price* (e.g. the interest rate) will primarily be determined by the market, and is largely dependent on the type of finance and the risk once it is known. *Aftercare* refers to the fact that most financing lasts for a period of time and thus the financial institutions have a valid interest in supporting their investments once finance has been provided - which can be done through shareholder actions, through covenants on loans or through general provisions of services which enhance the business. Feedback loops clearly exist in this model - notably the analysis function will be updated in the light of actual financial experience.

This model applies both to individual financing transactions and to the development of new business lines - although the latter can be far less quantitative, and will be expected to offer the potential to recoup the initial costs several times over.

This model highlights that for a financial activity (or modification to an activity) to make sense to a financial institution, not only does it have to make sense in simple financial terms (i.e. to offer a fair return / be correctly priced), but also it has to be broadly viable and relevant to business, including covering the various costs involved in going through the steps above.

Thus if financial institutions are to integrate environmental considerations into their decision making they need to be convinced that, not only are they profitable in the narrow sense, but are sufficiently important to merit their attention. This may in practice be the more serious obstacle - increasing evidence is emerging to show that good environmental performance is good business, but whether the arguments are sufficiently strong to make environment a key issue for financial institutions facing challenges ranging from monetary union to competition from new, external competitors is more questionable. Practically, the model suggests information and analysis may present key obstacles for the environment as historically obtaining good environmental data is a challenge. This will increase the costs and reduce the reliability of analysis, and make it more difficult for financial institutions to justify many environmental actions.

That said, there is often considerable latitude in decision making in financial institutions - rarely are decisions black and white. Thus, in terms of individual transactions, environmental factors may play a significant role in marginal financing decisions, even if information is incomplete. At the company level, while it may be difficult to justify new environmentally related activities in narrow business terms, they may offer other benefits to a financial institution such as good publicity, and appear a good proposition in overall terms.

Analysis has found that there are broadly two approaches financial institutions can take to integrate the environment in their business.

"Niche" Strategies

Financial institutions could see the environment as offering the potential for profitable lines of business. Examples include:

- building expertise in providing finance for key environmental sectors (such as environmental technology, renewable energy, water and waste) - see Chapter Six;
- developing financial products to assist in the use of environmental services (e.g. energy efficiency);
- developing "green" investment products for clients and customers.

For this approach to offer attractive opportunities to financial institutions it will require the existence of growing, profitable market segments. The extent to which such opportunities exist is clearly open to debate, but there is some evidence to suggest that substantial unexploited opportunities exist. These opportunities represent a "niche" approach in terms of a bank's business - although some of the niches could be quite substantial. The impact on the environment will depend on the extent to

which finance is mobilised towards key sectors, but if finance is mobilised the environmental benefits are fairly direct, and, for instance, could help accelerate the growth of key industries important in the move towards sustainability.

General Strategies

Alternatively, financial institutions could see the environment as an opportunity to improve the overall quality of their business, for instance by:

- improving the quality of their loan book by managing risks such as environmental liability;
- improving the quality of their investment decisions by including environmental factors;
- improving the quality of advice offered to clients, e.g. in investment research.

This opportunity represents a "broad" approach, cutting across sectors, which could in theory have far reaching consequences for many industrial sectors. However, the immediate impact on the environment is harder to quantify as it will depend on the extent to which such actions change the behaviour of the businesses and other economic entities involved. Initially, it may be that the effect is to remove an obstacle to environmentally responsible behaviour by companies, who appear to find the financial markets ignoring and possibly unsympathetic to the actions many progressive companies are taking. Longer term, as companies see that the financial markets are prepared to recognise and reward environmentally superior behaviour the effects could be substantial.

A key factor in such an approach is whether environmentally responsible behaviour does contribute to superior financial performance (corporate profitability, credit worthiness and investment returns), and thus is a matter worthy of the attention of financial institutions. This is a matter of ongoing debate. However, discussions with commercial banks indicated that most who had considered this subject need little convincing of the relevance of environmental issues to their lending activities, having seen directly the consequences of contaminated land and environmental damage. (It should be noted that lending banks are concerned about the downside risk created by environmental factors and less worried about the impact on profitability and the upside potential of environmental considerations, which is a more controversial area).

In contrast, the investment banking and asset management sectors remain more sceptical about the relevance of environmental considerations to the performance of the typically larger companies they invest in. Some still see it as having negative implications (i.e. increased costs), whereas others see it of marginal relevance. However, increasing evidence is emerging to suggest that superior environmental performance has a positive impact on financial performance (see Appendix V), although, as discussed in Chapter Three, this has yet to be widely accepted.

1.4. SECTORS AND CLIENTS

The financial markets cover a wide range of different functions, products and serve a wide range of different clients. It is useful to divide the markets into commercial banks, investment banking / asset management and insurance, and these are discussed in separate chapters.

These different organisations have fundamentally different attitudes to risk - commercial banks are generally highly risk adverse; investment banks and asset managers will trade off risk against potential return and are interested in upside potential; insurers actively aim to adopt risk and offset it internally[1]. These different attitudes to risk can clearly result in a different attitude of each sector to environmental issues.

Similarly different financial institutions have differing customer groups (e.g. industry large and small, individuals, the public sector and NGOs) and differing levels of influence over them. This will also affect where and how financial institutions can have an environmental impact and where they can develop best environmental practice. The main customer groups are reviewed below briefly.

---

[1] It should also be noted that, as a result of these differences, the precise interpretation and use of the concept of risk vary between the financial sectors.

Large Companies

While large companies use commercial banks for some activities, it is the investment community that is their main source of finance and influence. They are also discussed in more detail in Chapter Five, which focuses on how the environment affects them and how they communicate with the financial markets. While industry as a whole has a major environmental impact, leading companies at least have made substantial progress in controlling their environmental impact - without pressure (and, arguably, any reward) from the financial sector.

Small and Medium Sized Enterprises (SMEs)

Most financing for SMEs is provided by commercial banks, rather than the investment community, and so they are covered in that chapter. SMEs are growing in economic importance and have a significant environmental impact, one which has proved difficult to address effectively. Many environmental sector companies, discussed in Chapter Six, are SMEs, and share many of the problems of other SMEs, as well as more specific concerns relevant to their sector.

Individuals and Households

Individuals obtain most of their financing needs from commercial banks. However, they are a major provider of capital, both directly and indirectly, to the investment sector and thus a potential source of influence on them. Despite clear signs of awareness of environmental matters by individuals, the environmental impact of individual consumers shows little sign of abating. Access to and perceptions of finance may play a part here. Thus financial institutions may be able to play a role in providing information and finance to help reduce the impact of individuals and households.

The Public Sector

The public sector comprises a major part of the economy of most EU countries, and thus will contribute directly to a large part of the environmental impact of the country, particularly if sectors such as water, waste, energy and transport are in state hands. Financial institutions are major suppliers of capital to governments and public sector organisations, and thus theoretically could have some influence over how that capital is provided and used. However, in most cases public sector funding carries an explicit or implicit sovereign guarantee and thus there is little scope for individual public sector activities to be assessed on either their environmental or financial impacts by financing organisations. In extreme cases, it could be argued that if environmental mismanagement at a national level threatens the productive capacity of a country, then this should be reflected in the overall credit rating of the country, but this does not apply to any members of the EU. If public sector financing is provided at a more local level, without recourse to the central authorities, then environmental impacts might possibly be significant enough to merit the attention of the financial markets, but this is still very unusual. Funding of the public sector is not discussed further in this report.

However, when projects sponsored by the public sector are financed privately with only limited recourse to the public sector, then financiers are likely to start to look at the environmental aspects of a project. This can be a significant advantage of public - private partnerships (private ownership, as in privatisation, is not always necessary, and other arrangements can be structured). Here the issues and mechanisms which are raised above with private sector companies can apply.

NGOs

NGOs include organisations such as charities, co-operatives, academic institutions, and trade unions. While having both modest needs for finance and environmental impact, they can be very important at the margin, as they can be working in critical areas or are actively seeking to apply financial innovation to the solution of key environmental problems - thus they can play a role in financing the environmental sector, see Chapter Five.

Environmental NGOs have also increasingly sought to target financial organisations, criticising them for their impact on the environment by financing controversial activities. This is discussed in more detail in section 3. To date, however, NGOs have often experienced difficulty in understanding and communicating with the financial sector.

2. Commercial Banks

2.1. THE POTENTIAL FOR BANKS.

Banks in the EU have total assets of over ECU11,000bn, total primary capital of ECU 440bn and in 1996 generated profits of some ECU 69bn. Thus they have an enormous influence on the economy of the EU and consequently on its environmental impact.

The impact that banks have on the environment is the direct effects of banks' operations and indirect effects through the financial services they offer clients. Because of the relatively low environmental impact of banks' direct operations and the extent of their influence, the latter effects are more important, albeit harder to measure. Banks' services cover a wide range, including: deposits and lending, providing cheques and other transaction processing, and selling financial products and services. A key factor in determining the influence of banks on the environment will be the nature of the clients. Thus it is worth looking at the key client groups individually, including large companies, SMEs and individuals.

2.1.1. Large Companies

While commercial banks are substantial lenders to large companies, as well as providing a variety of other financial services, such as transaction processing and treasury management, their ability to influence larger corporations is relatively limited, as competition is strong and these services are rarely central to large corporations. The greater influence on larger corporations will come from the investment sector and is discussed in the next chapter. Some companies may be more subject to bank influence (typically in the absence of investment community influence) such as private (unlisted) companies or those with tightly held shares, smaller listed companies more dependent on commercial banks, and companies in financial difficulties.

However in certain sectors commercial banks can have a greater influence, particularly where high levels of lending are normal. These include property (real estate) lending and project finance (lending for stand alone infrastructure projects - this can be relevant for the environmental sector and is discussed in Chapter Six). Here the bank can impose a variety of conditions relating to construction and operation of the facility, through conditions and covenants on lending. These can include environmental considerations. While many banks will conduct an environmental risk review as part of the credit assessment this tends to be historic, and few (other than development banks) appear to actively impose and enforce environmental conditions. Environmental impact assessments can be a useful tool with such projects for identifying environmental project risk and suggesting risk management procedures. Liability regimes will also have an impact on risk assessment of such financings.

2.1.2. Financial Services to SMEs.

Banks are the most significant source of external finance to SMEs, and can exert considerable influence on them - most SMEs have a banking relationship.

- **Influence management through lending arrangements.** When lending to SMEs, banks consider the quality of management and other risks, which can include environmental factors. Thus banks can explicitly factor in environmental considerations when deciding whether to extend funds, in conditions (e.g. covenants) they impose on lending and in the terms they offer.
- **Supporting companies with information.** Financial institutions are a major source of information for companies, particularly SMEs, and there is potential for financial institutions to act as a conduit of information in the environmental area. There are already a number a very promising initiatives here.

- **Specialist environmental financial services.** There is scope for banks to develop financial products which contribute to the environment, e.g. energy efficiency loans or leasing of environmental technology. To date, there has been limited activities in this area, although the tax based leasing of environmental technologies in Chapter Five provides an example.
- **Specialist support for environmental companies**. Most emerging sectors can face difficulty getting recognition from the financial markets, because they are new, the risks are unknown, the technology unfamiliar and the markets uncertain. The environmental business sector certainly faces these difficulties. By actively trying to understand the sector and the issues it faces, financial institutions can at least try to reduce some of the obstacles these emerging businesses face, although one cannot expect them to forgo normal financial judgement. Financing for this sector is covered in Chapter Six. Interestingly, while several banks are actively involved in areas such as renewable energy financing, often neither their environment nor their publicity departments seem to be aware of such activities.

2.1.3. Financial Services to Households and Individuals

Individuals have a major impact on the environment through their activities and consumption of goods and services, and in some cases their impact is proving more intractable than commercial impacts. Financial institutions can have a major impact on the activities of individuals by the provision of suitable financial arrangements - for instance, access to cheap mortgage finance is a prerequisite of widespread home ownership, and car ownership has been greatly increased by the availability of car loans and hire purchase. In the absence of suitable financing arrangements, products or goods may struggle to achieve sales, particularly if they have high capital costs and long lifespans (in economic language, most consumers have a marginal discount rate far higher than the financial market norm). This may often apply to environmental goods and services which involve an up front capital cost. The obvious example is energy efficiency, which in theory offers very attractive financial returns, but is impeded by the fact that individuals are unwilling to fund such investments and the financial markets to date have largely failed to provide suitable financing vehicles.

2.2. CURRENT PRACTICE

Banks have been looking at the environment, particularly since the early 1990s. As with insurance companies, one of the initial triggers was concerns over environmental liability. Since much lending is asset backed, reduction in asset value through liabilities could have a major effect on the quality of the lending portfolio. Even more worrying for banks was the suggestion that they could be deemed owners or operators of contaminated sites, particularly if they provided guidance or placed requirements on companies, or through foreclosing on a property and thus become directly liable for the damages from contamination. While the latter concern has diminished in Europe (although it is not completely eliminated), environmental liability has served to trigger many banks into taking the environment seriously as an issue.

A number of other activities have helped encourage banks to become involved in the environment - notably the UNEP statement on Banks and Sustainable Development - see below. As a result, many banks have started to develop initiatives on the environment - although several, particularly smaller banks and those in southern Member States have yet to look at the area significantly.

The 1994 *Global Survey on Environmental Policies and Practices of the Financial Services Sector* was carried out at official level with 88 respondents from banks and securities houses. European institutions indicated that they were fairly closely involved in environmental activities. The greatest involvement was seeking data on environmental regulations and the least was environmentally related venture capital. US institutions were more involved in environmental credit risk analysis than their European counterparts. The survey has been partly updated (Ganzi, J. and Tanner, J. (1997)) and found that environmental due diligence and monitoring had indeed increased, and was expected to continue increasing. The 1997 survey found that the nearly 80% of European banks had targeted some lending activities at the environmental sector, and a significant number expected an increase.

Among the banks who are taking action, a few banks stand out as going further than others - the activities of these banks constitute emerging best practice, and are discussed in the next section. However, most banks have really focused their activities to date on two main areas:

Internal Environmental Management

Banks are increasingly aware of their direct environmental impact and are taking steps to reduce it through improving energy efficiency, reducing paper use (or at least limiting its growth), recycling, and sound waste disposal (e.g. sending redundant computers to a specialist recycling broker or giving them to community groups when sensible.) Although banks are not normally considered to be in the environmental front line, their size means they have fairly sizeable impacts. Such measures are also useful in making employees more environmentally aware. In particular they can play a leadership role for others in the services sector, demonstrating the way forward. One area where they have done this most visibly is in the development of energy-efficient buildings - the ING Bank headquarters in Amsterdam was one of the most high profile "green" buildings in the 1980s and the new Commerzbank headquarters in Frankfurt is likely to have a similar impact in the 1990s.

Basic Environmental Credit Assessment

Most banks appear to at least have some form of assessment of environmental factors before approving commercial loans. The 1997 survey mentioned above found that 49% of banks in Europe and North America always or usually require environmental due diligence on project finance transactions and 46% require them on building financing. These numbers were expected to increase. Factoring and lines of credit less often involved environmental due diligence. Most banks have a two or three tier approach to assessing environmental risks. Typically, an initial basic assessment of whether the loan is likely to carry an environmental risk is made - looking to see if it is in a high risk sector and whether it is likely to be based on a site with contamination problems. If problems emerge then the application is referred to the regional office, and a more detailed assessment including looking at any environmental management is made. Finally, if concerns still exist, it will be passed to head office (or outside consultants) to enable a full scale assessment. Banks have developed internal tools to help in this process, including checklists and detailed environmental information manuals.

UNEP Charter for Banks

UNEP has recognised for several years that with the growing role of private finance and foreign direct investment in the development process, attention must be paid to environmental responsibility by the financial community if sustainable development is to be achieved. Thus in 1992 UNEP brokered the Statement by Banks on the Environment and Sustainable Development (see Appendix VI). The statement includes a commitment to environmental management, the adoption of best industry practice in such core areas as credit risk management, energy and other efficiency, environmental impact assessment and the implementation of the precautionary principle.

Since the Statement was founded it has attracted some 93 signatories. Western Europe has attracted the largest number of signatories, with 42 signatories from the EU, with banks from the UK and Germany being particularly involved. One aspect of the initiative is that it has attracted a high level of interest in particular countries, but little interest from other countries, including France, Italy and until recently the Netherlands. This partly reflects the fact that signing the statement is often driven by particular individuals, but once a major bank in a country signs up, the others start to do so. UNEP is looking to get more signatories, but its priority is to get new signatories from the US (to date only two, relatively minor, US banks have signed). To this end, it recently amended the statement, making it slightly broader but less prescriptive, to increase its appeal and to allay some of the concerns of the US banks over its use against them in liability actions.

UNEP has organised three "round table" sessions on finance and the environment as part of this initiative - in Geneva in 1994, and in London in 1995, on "Investing in the Environment", and New York in May 1997, which focused on "Environment and Financial Performance". They have attracted increasingly large audiences - over 350 attended the recent event in New York. These sessions enable the financial services sector to discuss ideas and approaches to environmental issues, and help to

identify best practice. The round tables have been backed up by various background papers and research, some commissioned by UNEP. It should be noted that much of the focus of the programme has been on investment related issues, which are discussed in the next chapter, rather than the potential for commercial banks, particularly in key areas such as the development of new environmentally friendly financial products.

Some have suggested that the UNEP initiative is largely a marketing initiative, signed by banks keen to appear "green". While the initiative has intrinsic limitations - UNEP has a limited budget, lacks detailed financial expertise and credibility and can only work through tools such as persuasion and information dissemination - the Statement has proved a useful tool in getting the banking sector to take account of the environment, and has had a number of positive effects, including:

- It has succeeded in getting commitments from the highest level at major banks, and at alerting other banks to the importance of the environment.
- While the statement does not oblige the banks to do anything, by making such a high profile statement, the signatories have put themselves in a position where inaction could have adverse consequences. There are plenty of examples where other businesses have seen their "green" claims backfire because they have not been backed up by action.
- The Initiative has also sought to move the attention of banks away from the issue of liability onto the more constructive issues such as performance and opportunity, with some success.

The Green Alliance Survey: "Banking on the Future"

In a UNEP sponsored study, the Green Alliance surveyed 26 banks worldwide who had signed the UNEP charter about their activities in promoting sustainable development. Key findings were:

- Credit risk assessment is the area where banks see greatest opportunity to promote better environmental performance amongst business clients - there is a growing awareness of the different ways in which environmental factors can affect a borrower's ability to repay a loan;
- Some far-sighted banks are beginning to extend their interpretation of environmental credit risk to encompass more strategic issues - for example, the risk that a company's product will no longer be wanted by society in future decades because of its environmental impact;
- The most popular government signals for banks were taxes on environmentally-damaging substances or activities, particularly relating to energy; and switching taxation from 'environmental goods' (employment and income) to 'environmental bads' (energy);
- The strongest integration of environmental considerations occurred in internal banking operations, where many savings were highlighted - e.g. one bank that saved over £200,000 in envelopes by eliminating multiple statement mailings to customers with more than one account; and another that realised savings in excess of £8mthrough energy conservation.

The report also recommended as priority areas for further action by banks. Banks should:

- develop a harmonised and transparent approach to environmental credit risk assessment;
- incorporate environmental considerations into their investment activities.
- Develop products and services which promote sustainable development. This was the weakest area of implementation of the Statement's principles

2.3. BEST PRACTICE AND BEYOND

While the adoption of "current" practice described earlier is to be welcomed, it is clear that there is scope for banks to take action in a number of other areas. A small number of banks recognised this and have started to develop activities in other areas. They can be regarded as being at the forefront of the banking community. These include the Deutsche Bank, the Co-operative Bank (both featured in the case studies in Appendix II), National Westminster Bank, ING Bank, and the big three Swiss banks (who are behind the Swiss Bank Association initiative in the case studies). However, even these banks are probably only addressing a small number of the opportunities which banks could exploit. There are a considerable number of activities which have been identified as constituting best practice, some of which banks are only just starting to investigate.

Broaden Credit Risk Assessment

The basic risk assessment conducted by most banks focuses largely on risks presented by current and future land contamination and other direct liability. However, the environment creates other risks in lending activities - for instance, suppliers who fail to take account of the environmental pressures from customers could lose key business. As well as purely financial risks, by becoming involved in controversial projects banks can expose themselves to a negative reputation - NGOs are increasingly targeting financial organisations (see section). A few banks are starting to look at some of these risks (see Deutsche Bank case study) but other banks could do much more in this area. A key lever here is likely to be providing information on likely environmental developments and business implications to the financial community.

Inform Clients on Environmental Risk Assessment

According to the Green Alliance, although banks' approaches to credit risk share common elements, there is a reluctance to discuss - with clients and other banks - the basis on which judgements are made. However, clients need to know the extent to which environmental factors have determined the outcome of their loan application if they are to be motivated to improve their environmental performance, and thus communicating the bank's approach to clients could have a major incentive effect. In addition, greater harmonisation among banks would ensure that business receives a more consistent set of signals about how to deal with environmental problems. The Swiss Bank Association has identified advantages for the industry in at least a partly common approach - see the case study. This opportunity could be linked to the next point.

Provide Environmental Information to SME Clients

This is an area where leading banks have developed some interesting activities - see the Co-op Bank and the Deutsche Bank case studies. National Westminster Bank are about to launch their "Better Business Pack", a series of manuals on environmental management targeted at smaller businesses. It was written in conjunction with the Worldwide Fund for Nature and a number of small business practitioners, and appears to a be a practical and effective guide for SMEs. From the perspective of banks such measures offer good publicity and should help to improve the quality of the lending portfolio (although this will be difficult to measure). While it is too early to evaluate the success of such initiatives, these measures appear to offer very promising potential and may be an effective way of reaching and influencing the small business sector, an area of concern for the Commission. It should be noted that there is also scope for financial institutions to act as a supplier of information to individuals / households in the form of advertising.

Integrate Environment into Investment Business

While investment is discussed in more detail in the next chapter, most major commercial banks have substantial investment banking and / or investment management subsidiaries. However, even the more progressive banks have only just started to integrate the knowledge they have developed about the environment into their mainstream investment businesses. A few banks have developed specific environmental investment funds, but these are limited in scope. Perhaps the leader in this regard is the Union Bank of Switzerland, who do not want to develop niche investment strategies, but have developed some impressive tools for environmental information and are seeking to use these across their asset management activities.

Develop "Green" Financial Products for Consumers

There is a wide range of potential financial products which could help contribute to sustainable development (see box below). Many of these could help encourage more environmentally sustainable behaviour by consumers, another area which is proving difficult to address.

This was an area with only sporadic activity - some of the "green" niche financial institutions (see Chapter Six) had activities in this area, as well as a few larger groups such as ING Bank who offer some "green" mortgages. The Green Alliance found that "Few banks had anything that they could describe as ["green" products], citing lack of customer demand as the main reason for this. Given the

high level of public concern in many countries about the environment, it is difficult to see how banks have come to this conclusion. The Green Alliance recommends that exploring appropriate new products and services should be a priority area for banks." One key factor for banks is such products may involve expensive and risky development costs and may present practical difficulties - e.g. processing and checking applications may be expensive - there may be scope for external assistance here.

Possible environmental consumer finance products	
Location Efficient Mortgages	Offer larger mortgages (and / or better terms) to individuals who have low travel to work expenditures.
One / no Car mortgages	Similar to above, but based on car ownership
Energy Efficient Mortgages	Similar, to those who have low energy costs.
Energy Efficiency Loans	Loans for energy efficient improvements.
Third party energy efficient loans	Similar to above, but energy supplier guarantees.
Home office conversion loans	Loans for those seeking to start home working.
"Green" Audits on mortgages	Free energy audits of new property (marketing ploy).
Community housing / facilities loans	Loans for communal housing / facilities.
Private transport finance packages	Loans for combined transport services, equivalent to but cheaper than a private car.
Alternative fuel conversion	Loans for conversion of vehicles to cleaner fuels (linked to fiscal incentives).
"Green" savings products	Saving products where the money is invested on "green" projects (e.g. the above).
"Green" children's accounts	"Green" savings accounts for children, provide information
"Green" investment products	Selling through the branch network investment funds (equities) which invest in environmentally sound companies. (see Chapter Six).

Develop "Green" Business Products.

As well as "green" consumer products, banks could develop products for the business community (both large and small), which would offer environmental benefits and could present business opportunities. Again, there is only limited evidence of major activity in this area such as the Co-operative Bank (see the case study). Another noteworthy example is the recently launched environmental lending initiative by National Westminster Bank, who are making an initial £50m available for lending to environmental projects by businesses. The loans are cheaper than normal, which is partly justified by the profitability improvement that they are intended to bring, and are targeted at the medium sized business market. The following are some examples of environmental financial products that could be offered to business.

Possible environmental business finance products	
Brownfields redevelopment	Offer financing for the development of brown field sites, would need relevant insurance, local partnerships.
Environmentally sound construction	Provide lending at favourable terms for such activities.
Energy efficiency lending	For businesses, municipalities etc.
Energy efficiency performance contracts	Finance and contacts for third parties undertaking such work.
Environmental technology leasing	Provide business leases for "green" technology
Vehicle efficiency lending	Provide lending for vehicle conversion / improvement
Information technology financing	Provide finance for home working, video conferencing etc.
Environmental business financing	see Chapter Six.

Microcredit and Environmental Niche Banks

Microcredit is the provision of small amounts of finance particular to the poorest members of the community. Microcredit organisations recognise that the poorest areas, in greatest need of investment, can actually experience severe capital flight and so targets investment back into these areas. Microcredit organisations believe that the availability of even modest amounts of capital can encourage entrepreneurial activity and create employment. They often fly in the face of conventional financing wisdom, lending to those with no track record and no security, instead relying on aspects like community endorsement of a business. Default rates have been low, justifying the approach, but costs and the availability of funds remain obstacles. While many microcredit organisation do not have a direct environmental focus, the activities they support often have an environmental focus, (e.g. eco-tourism ventures in the Mediterranean region). Microcredit certainly helps address the social aspects of sustainable development. The Commission (DG XXIII) has recently commissioned a study on "Opportunities for development of social economy banking".

In addition, there are a number of ethical and environmental banks, which are in many respects like microcredit organisations, but their lending, to both individuals and small business is more focused on environmental issues. There are discussed further in Chapter Six.

Use Environmental Management Systems and Reporting.

Just as businesses have done, banks may also wish to systematise environmental management, through the use of formal management systems such as EMAS (Eco Management and Audit Scheme) and ISO 14000. In Austria, EMAS is being used directly by the financial sector. In addition, a small group of leading banks, led by National Westminster, is investigating a formal extension of EMAS to the financial sector (FEMAS). While they are developing the programme in private, it is understood that crucially it will encompass the impacts of bank lending and other financial activities as well as the direct environmental impacts of banks. If this is the case, it may prove an effective tool in encouraging banks to look more broadly at their operations. The Swiss Bank Association guide to environmental management, featured in the Case Studies, represents the most comprehensive initiative at present, although not a formal system.

In addition a number of banks have started to investigate the production of environmental reports. While a welcome development and one that is to be encouraged, most reports to date have focused on the internal bank operations.

2.4. ANALYSIS AND WAYS FORWARD

Two features stand out in the way banks address environmental issues.

- There is a considerable variation among banks: A select group of leaders are showing the way and demonstrating by their actions the potential to contribute to sustainable development. Many banks have started to consider environmental issues but have yet not fully integrated them into the business; and finally a not insignificant number of banks who have yet to take much action on environment issues.
- The approach that many banks are taking to environmental issues appears to be systematic in character. They have formed environmental management units with specialist expertise, are developing risk assessment procedures, and are steadily addressing new areas of the business. Thus it is not surprising that banks have the greatest interest among financial institutions in systems such as EMAS.

Although the handling of environmental risk in credit assessment appears reasonably well established among many banks, there is probably scope to extend and improve this, particularly in those areas of the EU where such assessment is less common. There might be a case for regulators to require some form of formal environmental risk assessment as part of a bank's overall management. On a more practical level, accessing environmental information for risk assessment remains a concern, particularly with smaller corporate customers.

One very positive development is the way the most progressive banks are now starting to look at how they can help businesses, particularly SMEs, incorporate environmental management into their normal activities. This is particularly encouraging in view of the high priority placed on SMEs by the Commission, an audience which has proved difficult to address on environmental issues. These measures are providing practical help which should result in real environmental benefits (as well as financial savings). Encouraging other similar activities would appear desirable, both through direct support and by removing obstacles which may deter such activities. Thus to avoid liability concerns the Commission should consider making it clear that they welcome such initiatives and do not perceive such activities as in any way constituting involvement in management.

Where the commercial banks are possibly being less creative is in their provision of environmental financial products, particular to the personal sector and small business sector. There are a number of ways that either existing products could be modified or new products offered which would help encourage more environmentally responsible behaviour by consumers. Among the reasons for the cautious approach by banks are the lack of clear information on the scale and profitability of the potential opportunity and the cost of developing such products. While it will be difficult for authorities to require the development of such products, there is scope to encourage and support both general research and more specific product development, through a variety of ways: financial support, innovative partnerships with financial institutions, dissemination of information, and recognition for best practice, e.g. through awards.

3. The Investment Sector

The investment sector includes those who invest in tradable securities, notably equities and bonds. It includes the investors (e.g. pensions funds, insurance companies, individual investors) on the "buy" side, and the investment banks and stockbrokers who trade the securities, do a lot of the analysis, and organise activities such as the new issues of shares and bonds and merger and acquisitions. It should be noted that the distinction between investment banking and commercial banking can become indistinct in areas such as project finance and trading of debt instruments.

3.1. THE POTENTIAL OF THE INVESTMENT SECTOR

The potential influence of the investment sector in environmental matters lies primarily in the signals it can send to those it invests in about the advantages of environmentally sound behaviour[2]. The signals it can send will depend on who is seeking finance. As noted earlier, the influence of investors over the public sector is limited, and largely confined to monetary macroeconomics. The most significant influence of the investor community is therefore on industry, particularly large companies, and is discussed below.

3.1.1. The Influence on Industry

The investment community can send some powerful signals to industry.

- **Pricing of new capital for companies**. When a company first obtains a listing or seeks to raise new capital, the process of due diligence provides an opportunity to examine a company's overall strategy and management including environmental issues. Full consideration of environmental factors could influence the amount and price of capital available to companies, rewarding good companies with cheaper debt (due to lower environmental risk) or access to equity at better ratings. Conversely, investors may avoid companies with too great an environmental risk.
- **Share ratings and company valuations by equity markets**. If investors were to reward companies with a superior environmental track record with higher share prices, this would send a powerful signal over the merits of good environmental behaviour to industry. For this to be effective investors should anticipate the results of good environmental initiatives, rather than wait for the results to become evident. Financial markets need to be convinced that such behaviour leads to superior financial performance. To date, this has been a source of much contention and analysis, but evidence is emerging to support this hypothesis. Financial markets need convincing of the significance and validity of the findings.
- **Ownership of companies via their share capital**. Financial institutions control the majority of the share capital of most public companies, either directly (e.g. insurance companies) or on behalf of their investors (e.g. fund managers), and are the most powerful of all stakeholders. In theory, they have the power to direct companies to take account of the environment in their management or strategy. In practice, action has been limited; shareholdings are normally diffuse, making majorities difficult to achieve and institutions are reluctant to become active, if the financial benefits are uncertain. Other stakeholders thus enjoy more influence on the management of major companies. But if financial institutions are persuaded of the financial benefits of superior environmental performance, they can encourage such action.

[2] While the investment sector does have some direct environmental impacts, these are relatively modest. Generally the same issues arise as for commercial banks, although investment banks are probably less active in this area (although not oblivious to its implications - publishing the prospectus of the Halifax Building society for its floatation was one of the largest printing runs in the UK, and the society did promise to plant sufficient trees to replace the damage!)

3.1.2. The Private Investor's Perspective

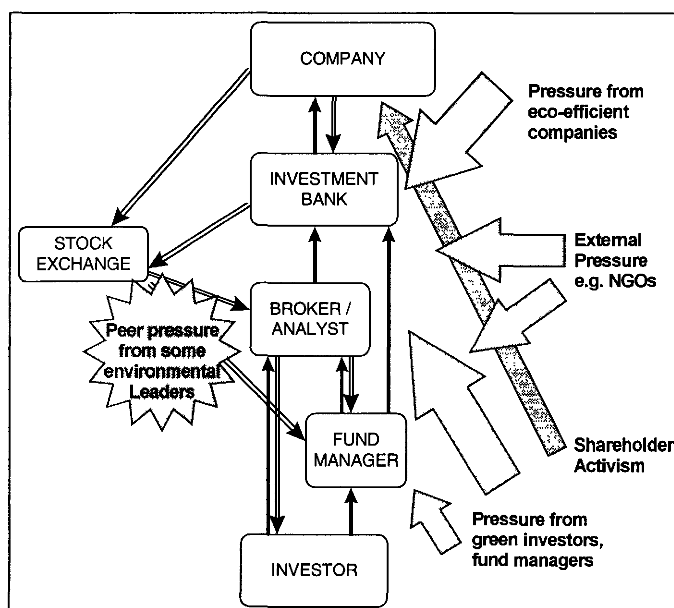
At the other end of the financial chain, individuals are important as the major source of capital to the financial sector and through them to industry, the public sector and other individuals. The EU's 1995 Eurobarometer survey shows that "green" consumerism remains popular. While green consumerism has focused on products with obvious environmental impacts such as paper and food, it could equally apply to financial services. Potentially, individuals as investors could be very interested in "green" financial products, particularly if there is no harm to investment returns. One survey by the insurance company NPI found in 1995 that 53% of individuals considered the environmental behaviour of companies to be important or very important in their investment decisions yet only 8% of respondent had actually got around to investing in environmentally sound investment products. The limitations in this market appear to come from the financial institutions themselves who are often reluctant to offer "green" products. 26% of respondents in the NPI survey were interested in such products but had either not been offered one or had not considered them before - three times the number that had invested.

3.2. CURRENT ACTIVITIES

It is evident that much of the investment sector still sees the environment as being of at best marginal relevance. However it is also noted that pressure for, and interest in, change is increasing. Specifically there are four sources of pressure on the investment sector, illustrated in the Figure 2:

- **Industry** - progressive industrialists are becoming increasingly frustrated with the level of financial market understanding of their actions.
- **Investors** - both individuals who are growing increasingly interested in "green" and ethical investment products, and institutions who are looking both at such funds and at shareholder activism; together with their specialist fund managers.
- **NGOs** - are increasingly targeting the investment community, notably for funding environmentally damaging activities
- Within the **Investment Industry**, some individual organisations are showing signs of interest in environmental issues, and may pave the way for change. This is reinforced by some clear wake up calls where companies have already demonstrated to the financial markets the importance of environmental considerations.

Figure 2: The environmental pressures on the investment sector



3.2.1. Actions from Industry

Although it was not possible to survey industry comprehensively, a number of companies and groups were contacted. Among those who are progressive environmentally, there is a clear sense that there was a frustration with the financial markets and their perception of the environment. Many large companies feel they are already taking significant action to reduce their environmental impact and improve their "eco-efficiency" (environmental management). This is not as yet recognised by the financial markets, and companies find their desire to invest in eco-efficiency is thus at odds with short term pressures to reduce costs and improve financial performance.

For example, the group chief accountant of Shanks & McEwan, a leading UK waste company, stated in a written response as follows "The financial markets do not sufficiently discount the value of companies with less sound environmental policies compared with the penalty to future earnings which that represents. There is definite advantage in not making sufficient long term provisions for short term gains and this is encouraged by the lack of disclosure requirements."

Another major company in the retail sector has a slightly different perspective. They saw a key function of their environmental activities was to reduce and eliminate risk for the whole group. While financial markets would clearly penalise them if some of these risks did materialise, they were not prepared to recognise or evaluate the work in risk reduction. The most important activities in bringing together the views of business on the investment sector have been those of WBCSD. These are looked at below.

World Business Council for Sustainable Development (WBCSD)

WBCSD was formed in 1995 from the merger of the Business Council for Sustainable Development (BCSD) and the World Industry Council for the Environment (WICE), the organisations that provided the business sector input to the Rio Earth Summit in 1992 (UNCED). Its membership consists of over one hundred leading industrialists, including a few from finance. In 1992, the BCSD published "Changing Course" which identified "Eco-efficiency" as the key way business could contribute to sustainable development. Eco-efficiency is the process of adding more value as a business while consuming less goods and producing less pollution. Changing Course also identified financial organisations as a key stakeholder group who would play an important role in achieving sustainable development, but this was not investigated in any great detail.

In 1993 the BCSD formed a financial markets task force, which as the WBSCD, eventually published the book *Financing Change*. This was the first broad and systematic look at the role of the financial markets in achieving sustainable development. Its significance was further increased because it was from a grouping of leading multinational companies. *Financing Change* is an important publication, although the need to achieve a degree of consensus somewhat constrained its criticisms of the financial markets. From the perspective of the financial markets it presents a challenge which many financial organisations have yet to address. In addition, poor marketing has meant that many financial organisations had not heard of the publication.

Financing Change looked at the key actors in the financial markets, and looked at what they had done so far to incorporate environmental issues. While it also covered markets such as insurance and banking, it was as a business voice addressing the investment community that it was most relevant and interesting, and its key conclusions here were:

Company leaders. Company leaders had been the first to feel the effects of environmental change and most large concerns had become more eco-efficient. They found SMEs need to catch up fast, however. Company leaders should build sustainable development into their corporate activities so that when the markets come to reward sustainable development more systematically, they will be prepared.

Investors: Most investors dismiss environmental concerns as being outside their realm, focusing on their duty to maximise returns. Some investors had looked at environmental costs and others took a broader interpretation of fiduciary duty. Financial markets need help to understand the environment, probably by putting a price on it. They also felt that the individual "owners" of capital (pensioners and so on) should be supplied with the information to influence those who manage their capital.

Accountants. Accountants help eco-efficient companies communicate progress and business benefits to markets; then help markets understand the benefits so as to bestow the rewards.

Raters. Accountants could be helped by raters (those who judge the credit-worthiness of companies and countries) who are starting to include environmental issues in their judging process. Their slow progress has created potential for others to provide specialised services in the environmental area. Opportunities exist for eco-efficient companies to communicate their progress to the markets through ratings. They thought it probable that traditional ratings agencies will make even greater efforts to reflect environmental risk in their products, and urged them to identify such opportunities.

After *Financing Change*, WBCSD has continued its work in the financing area. The report "Environmental Performance and Shareholder Value" on how environmental performance can contribute to a company's share value was published in 1997. Its main findings are:

- financial markets to date have generally recognised only negative environmental performance;
- environmental drivers can provide competitive advantage to any company;
- environmental issues drive financial performance in a number of ways;
- the quality of a company's environmental management is a good indicator of the overall quality of business management.

The report backs up these findings with 14 case studies from its membership, illustrating how environmental drivers can enhance profitability. They felt that financial analysts and investors should have no great difficulty in incorporating environmental analysis into their assessments.

WBCSD continues to play a major role in the debate over finance and the environment, representing those in the business community, who have already taken on board environmental issues, and are now seeking to address the financial sector. They have a credibility that many outside agents would find difficult to achieve. The difficulties that they have faced, and the need to educate the financial community, is evidence that many in financial markets remain reluctant to consider environmental issues seriously.

3.2.2. Activities by Investors

The vast majority of investors are basically interested in maximising returns - they may not know or care how their funds are invested, and judge by results. A small, but growing number of investors, however, are showing interest in how their funds are invested, and wish to support companies whose activities they approve of and avoid those who they disapprove of, with environmental performance being a key consideration here. This has given rise to interest in ethical and "green" funds. While a few investors may not be too concerned about returns, most such investors will be still reluctant to sacrifice substantial returns. This is particularly true of some institutional investors who are starting to express an interest in entering the market. Thus there has been much concern among managers of such funds to show that they can perform as well as conventional funds. More radically, a small number of investors and fund managers are starting to go beyond this and argue that the environment can be a source of superior performance, in a similar way to WBCSD. Other investors are taking an alternative tack - rather than deal with financial institutions, they are taking their concerns over environmental issues directly to companies through shareholder resolutions. This trend, which originated in the US, is increasing in Europe and is discussed later.

While the total influence of such "green" investors is small in purely numerical terms (it is estimated that around 0.05% of all managed funds have some explicit environmental aspect) it is growing quite rapidly. In certain key markets they are more substantial. For instance in the UK, ethical and environmental funds represent around 2% of personal unit trusts. As potentially a "green" product with no premium (if concerns about investment performance are overcome) it seems reasonable to suggest that they could reach a significant 10% of this market in the next few years, if various market obstacles can be overcome. Interest could also grow rapidly in other sectors of the investment market.

Overall pressure from investors interested in the environment is likely to grow, and while it might never be a majority of the market, it could still be sufficient to make environment an issue which most in the industry have to address.

What is a "Green" Company?

While investors can say they would like to invest in "green" companies or companies which do not harm the environment, defining such companies is a major challenge. One key issue is whether companies are assessed on what they do or how well (environmentally) they do it. The following are some of the practical interpretations used by different funds and investors.

Environmental Companies

Environmental companies are those where the environment is not merely a concern, but in some sense a core part of their business, often being the "source" of their business. They can be divided in the traditional environmental sector (waste disposal, water) whose job it is to handle industry's impact on the environment and the "green" pioneers developing new, environmentally sound approaches to business. Such companies are a relatively small part of the market and are discussed in Chapter Six.

Low Environmental Impact Companies

These are companies who have relatively low environmental impact (measured by data such as toxic releases or regulatory fines). For investors this can be an attractively simple definition. However, because it does not make allowance for relative impacts of different industries, it tends to exclude whole sectors like chemicals. (Water companies, often regarded as environmental companies, are often excluded because their front-line position makes them vulnerable to regulatory action). Thus the signals such selection can send to the market is limited. It is often used in a negative sense - i.e. avoid the worst offenders.

Eco-efficient Companies

Instead of applying absolute standards to companies, some investors are seeking to distinguish between the good and the bad companies within a sector, by comparing aspects such resource efficiency and pollution levels. In the paper industry, for example, the difference between the best companies in the sector, in environmental terms and the worst, can be considerable. Investors looking at companies from this perspective are also starting to look at the profitability implications of good environmental management, through peer group comparison. The advantage of this approach is that by discriminating between competitors it can send clear market signals. However, many investors who are making environmental investments out of principle may still be reluctant to invest in the most polluting sectors, (e.g. chemicals, conventional energy) even if they are the least bad in the sector. Analysing companies in this manner requires high quality information on the performance of companies, information which must be comparable and useable.

Sustainable Growth Companies

Some environmental investors are looking at those businesses which have a long term role in the transition towards sustainable development and are unlikely to be constrained by environmental factors (contrast with, for example, fossil fuel companies, where climate change is likely to form a constraint to long term growth). Such companies are often not thought of having much involvement with the environmental sector per se, for example, telecommunications and information technology. In particular there is interest in companies who combine a clear long term strategy based on their environmental position, with sound current environmental management. However, while there may be sound environmental and financial reasons behind such investments, it is not clear whether targeting such investments has any impact on the overall environmental behaviour of the business community.

The Types of Environmental Investment Funds

Most investors who seek to invest in "green" companies do so through some form of collective investment fund. Just as there are a range of different types of "green" companies, there are a range of environmental funds. Over the past 30 years, these funds have grown increasingly sophisticated, evolved from simple "green" filters avoiding the worst offenders, to more sophisticated approaches aiming to link environmental performance to financial performance. The key types of funds are:

"Ethical" Managed Funds
Ethical funds avoid investing in companies who are involved in certain activities. As many funds have their roots in religious communities, their guidelines reflect Christian ethics: avoiding tobacco, alcohol, armaments, gambling and repressive regimes. Environmental concerns have recently been included, usually by using the environmental impact definition, and excluding the worst offenders. While many of the funds claim a positive focus, seeking out "good" investments, it is not clear how many of them have effectively implemented this side of their investment policy.

Environmental Sector Funds
These funds invest specifically in the environmental sector. Several such funds were launched at the height of environment interest in the early 1990s. Many of the funds have performed poorly - they were launched with little understanding of environmental trends and too narrow a definition - and this is one reason why many in the investment community have a negative view of environmental issues. The current status of such funds is discussed in Chapter Six.

"Green" Managed Funds
As understanding of environmental issues grew, it became apparent that a more sophisticated approach was needed. A new generation of funds emerged, which typically gave environmental issues a much higher priority (although they normally retained some form of ethical screening). The funds developed a sophisticated understanding of the impact of environmental issues on business, and then analysed the environmental performance of companies in detail before making a decision as to whether to invest. In addition, the analysis aimed to identify links to financial performance. The funds have tended to seek out suitable positive investments in the environmental sector, particularly among the "green" pioneers and particularly in this area the detailed knowledge of environmental issues was able to add value to the financial analysis. Among the leading funds of this type are those managed by NPI Global Care Investments in the UK. They focus on identifying either companies who offer opportunities for sustainable growth or companies which represent the "best in class", a concept they see as similar to, but broader than, eco-efficiency. Their performance has been excellent - two of their funds recently won prestigious Micropal awards for their 1996 performance, one of the funds for the second year running.

Another new type of "green" fund is the Scudder-Storebrand Environmental Values Fund which focuses on the concept of eco-efficiency. The fund is a joint venture between Norway's Storebrand insurance group and Scudder Stevens Clark investment management of the US. The fund invests in major listed companies globally. Storebrand carries out environmental evaluation of the companies, which occurs after the initial financial analysis. They assess eight criteria, which are integrated into a sustainability index, which measures a company's environmental performance against the average for the sector. To be included in the fund, a company must be above average for the sector. The fund also reports back on its "environmental dividend". Environmental analysis is still carried out independently of the financial analysis, and does not take formal account of factors such as strategy and product stewardship. There is some question whether enough data is available for proper analysis to take place. The fund is the most ambitious attempt to incorporate eco-efficiency. The fund's ability to invest in all sectors has attracted considerable institutional interest (conversely, it makes it less appealing to individual investors). The back testing of the fund was positive, it grew by 12% in its first seven months when the MSCI-World Index grew by only 9%.

The Size of Environmental Funds

78 environmental, "green" and ethical funds have been identified, including three from Norway and two from Switzerland. Information relating to the capital held was obtained for 73 of these funds. Figures for segregated funds such as municipal pension funds with an environmental investment policy are not available.

Category 1996	Number	Size (£ m)	Range in fund size
Environmental	27	387	1.2 - 65
"Green"	8	41	0.04 -14
Ethical / "Green"	22	307	1.2 - 52
Ethical	14	764	0.4 - 570
Total	**73**	**1,499**	**0.04 - 570**

Research by NPI has demonstrated that environmental and ethical funds have grown in recent years, despite seven continental funds and one UK fund having been closed between 1992 and 1997.

Funds	Continental Europe	UK	Total
1992	£334m	£737m	£1071m
1995	£517m	£902m	£1419m

Interest from Institutional Investors

A number of institutional investors (e.g. pension funds, charities, foundations, churches) have expressed interest in "green" and ethical investment. They have been typically much more cautious than individual investors - they are normally explicitly required to put financial interests first ("fiduciary responsibility") and indeed legal judgements in the UK have placed a limit on how far institutional investors can go. However, reassured by the good financial performance of a number of ethical and "green" funds, some organisation - notably local authority pension funds in the UK - have allocated some of their assets to such funds. To date, the amounts allocated have only been a small percentage of the total assets, but there is scope for this to increase, especially if these funds continue to outperform the rest of the portfolio.

One pension fund has gone beyond this and taken a more systematic approach to looking at "green" issues. The pension fund panel of Nottinghamshire County Council took the view that "green" and ethical considerations could be integrated into their investment strategy if and only if they were relevant to long term investment performance. They noted that despite the long term nature of their liabilities they did not have any tools for long term investment performance, and potentially ethical and "green" issues might be relevant here. Thus Nottinghamshire undertook an investigation into how such issues might affect investment performance over the longer term at a theoretical level. No significant links were found with ethical or human rights issues, but there did appear to be a connection with environmental issues. A more detailed policy model of how such interaction could occur was then developed. It looked at the impact of various environmental issues on different investment sectors and regions, to identify which investment areas were most at risk. This was done for both the current economic impact and the longer term sustainability. A questionnaire was also developed for assessing companies and their specific ability to manage their risks and threats. These tools were then tested, firstly by looking at the historical relationships between the assessment of the policy tool and historic investment returns, and then by asking Nottinghamshire's external fund managers to explore their use. Nottinghamshire were disappointed to find that their fund managers were not particularly able (and possibly unwilling) to use the tools. As a result Nottinghamshire may have to put greater emphasis on alternatives, such as shareholder activism. On the broader policy front, the Treasurer of Nottinghamshire, Roger Latham, considers that a potentially powerful policy development would be to require trustees and those managing investments on behalf of others over the long term to have a explicit requirement to consider long term issues in their investment strategy.

Other institutional investors may start to take a greater interest in "green" and ethical investments. Some insurance companies have begun to look at their investment portfolio, particularly as a result of the UNEP initiative. A few corporate pension funds have started to think about environmental aspects of their pension funds, although they are at a very early stage. (However, despite its other work, WBCSD has not urged its members to look at their own pension fund investments.)

An Alternative Approach: Shareholder Activism

Theoretically, shareholders have considerable leverage over a company - they can propose formal resolutions at the company AGM to take action (for instance, over environmental management). In practice such resolutions are very unlikely to succeed. However, often bringing matters to the company's attention in such a direct manner enables negotiations with the company's management, and can result in concessions, possibly leading to the withdrawal of the proposal. For such activism to succeed, key issues are the rules regarding the tabling of resolutions which can vary widely from country to country, and secondly a degree of co-ordination to gather an appreciable number of votes to have an effect. There is scope for policy intervention here to develop stronger rules on corporate governance and shareholder rights.

The US is where shareholder activity has been the greatest, partly because of the high level of share ownership and the ease of filing shareholder resolutions. A key event in developing activity on environmental issues was the Exxon Valdez disaster. As a result of this a number of leading shareholders, including some of the biggest institutional investors, pressurised Exxon to appoint an environmentalist to the board. Following up from this, the CERES (Coalition for Environmentally Responsible Economies) principles were developed, by a coalition consisting of environmental organisations, "green" investors, religious investors and major institutional investors. These cover a detailed range of environmental principles for businesses to pursue. Companies are required to report in detail on their activities. The organisation has then used a combination of negotiation and shareholder activism to get several companies to sign up to the principles, including a number of S&P 500 companies.

In Europe, shareholder activities have been less effective, but there is a growing interest in this form of intervention. Leading the way has been Pensions Investment Research Consultants (PIRC), an organisation which specialises in co-ordinating and advising on shareholder activism in the UK. Its clients include a large number of the UK's local authority pension funds, and it recently took on Shell over its environmental record.

Royal Dutch Shell (UK / Netherlands) - Shareholders and Accountability

In April 1997 PIRC co-ordinated the proposition of a shareholder sponsored resolution for the 14May AGM of Shell Transport and Trading Plc, calling for Shell to examine its environmental and human rights policies, and to include independent, external audits of the impact of its activities on the environment and people. A similar resolution was put to the Royal Dutch AGM in The Hague on the same day (The Royal Dutch Shell group is split into these two companies). The decision to put the resolution was only taken after prolonged discussion with the company.

PIRC regards Shell as "lagging behind best practice" in the industry, referring to Brent Spar (1995), Peru (1996-97) and Nigeria (1990-97). According to the World Wide Fund for Nature (WWF) and Amnesty, Shell has a potential environmental impact liability exposure in Nigeria of £2-4bn.

Shell's first environmental report, published in May 1997 notes that it fails to comply with Nigeria's new environmental laws, due to inadequate reporting from Shell's operating units. Shell has started to use environmental reporting since November 1995. A separate report on the company's activities in Nigeria was also published in May 1997.

At the 1997 AGM, 11% of shareholders present or by proxy voted for the motion. A number of major institutions abstained. While not a direct success, the number failing to show confidence in the management was substantial and sent a powerful signal to Shell. Shell has now announced that future environmental reports are to be externally verified, thereby meeting one of PIRC's main demands.

Although stakeholder activism can be a powerful force, it tends to polarise and create confrontation. Furthermore, often the most powerful influences on companies come from the informal meetings with fund managers and analysts. Some progressive investors are starting to develop this avenue of communication. The NPI Global Care team has added further 'environmental value' through their programme of research and dialogue with companies. This proactive investor approach has helped companies to improve their environmental performance in numerous ways, such as: stopping harmful activities, avoiding acquisitions with high environmental risks, developing new products and new initiatives in environmental accounting and reporting. When it does so, the team speaks for the whole £10bn NPI has under management.

3.2.3. NGOs

A new development in the 1990s is that environmental NGOs have started to target financial institutions, instead of governments and prominent public corporations. A number of reasons lie behind this development - privatisation and growing private investment flows mean that governments are less involved than they used to be in controversial projects, financial institutions can present a more visible target than the little known company directly involved, privatisation can provide a high profile opportunity to criticise an on going concern etc. Overall, environmental NGOs are recognising the pivotal role of finance in today's economy and are seeking ways to influence where capital flows. The table below summarises some of the actions that environmental groups have taken.

Year	Leading NGOs	Target companies / event	Actions taken
1993	Forest Monitor	Barito Pacific international listing	Wrote to investors asking them not to invest. Provided data on company.
1994	Greenpeace	National Power / PowerGen flotation of 2nd tranche	Published report showing that companies would be loss making if environmental costs where included.
1994	Greenpeace	EVC	See case study below
1994/5	Greenpeace	Oil / carbon fuel companies	Urged large financial institutions to disinvest, transfer funds to solar energy, using direct meetings, seminars etc. Sponsored research.
1996	Friends of the Earth (US)	Royal Dutch Shell	Sent alternative information pack to investors
1996/7	Various groups including Friends of the Earth	Bakun Hydroelectric Corporation / Ekran Berhad	Writing to investors, possible seminar.
1996/7	Friends of the Earth (US)	Freeport McMoran	Sent quarterly information packs to investors and analysts

Environmental organisations have encountered difficulties in understanding how financial institutions work and how best to address them. However, they increasingly understand the language of the financial markets and are, for instance, becoming more effective in arguing about risk. There are limitations on their actions: for example, they recognise that they are most effective arguing against new issues and privatisations, rather than existing, listed companies. They have also tended to focus on financing in the emerging markets, partly because of the shortage of other options for action in these markets.

Some financial institutions are becoming aware of the possible risks that NGOs could present to their business - notably through damage to their reputations - and occasionally they are prepared to concede that the NGOs may have a financial point. While the pressure that NGOs can bring to bear is fairly crude, one key result is that it may encourage financial markets to ensure that they are adequately informed. This is similar to the way businesses attacked by NGOs found themselves

vulnerable because they did not really know what they were doing environmentally. This encouraged them to develop tools such as environmental management systems.

It is also worth noting that environmental organisations are not always consistent in their treatment of financial markets - they have rarely used their marketing power to encourage their supporters to back "green" investment.

EVC (Netherlands) - Greenpeace Beats Union Bank of Switzerland (UBS)

EVC, the joint venture between ICI (UK) and Enichem (Italy) was floated on the Amsterdam Stock Exchange via a placing by SG Warburg and UBS in November 1994. In September and October 1994, Greenpeace International wrote to potential investors advising them not to invest in a company that was Europe's leading manufacturer of PVC. At the same time, 'Lex', the investment market opinion column in the Financial Times, noted that the usage of PVC in appliances such as water bottles was likely to be restricted because of public health concerns. EVC got an environmental indemnity from ICI and Enichem prior to the flotation.

A broker's note by UBS in September 1994 rejected Grenpeace's arguments as "selective". In October 1994 Lex recommended taking up the offer and selling it at the first opportunity. There is no evidence that the Greenpeace note materially affected the valuation of the company during this period.

The shares were issued in November 1994 at Dfl 77 each, rising to a 1994 peak of Dfl 80. Further shares were issued by UBS and SG Warburgs in December 1994 at Dfl 77.1. In January 1995 UBS issued a 'Strong Buy' recommendation at Dfl 66, the share having fallen 14% from its issue price. EVC's shares underperformed the Amsterdam Stock Exchange index by 50% during 1995. In January 1996, the brokers BZW issued at 'Neutral / sell' recommendation at Dfl 50 and NatWest Markets issued a 'Reduce' recommendation at Dfl 55.5 in March 1996. In May 1997, the shares were trading at Dfl 55.7, a 28% discount to the offer price, and had fallen 2% over the previous 12 months while the Amsterdam Stock Exchange index rose 21%.

Environmental factors have driven down the demand for PVC at a time when competition from Asian manufacturers has caused overcapacity in the sector, driving down sales and value. Net profits of Dfl 164m in 1995 became a loss of Dfl 31m in 1996. Greenpeace could argue that its investment advice was sounder than that of EVC's brokers.

3.2.4. The Mainstream Investment Industry

Of all the forces for change on the investment sector, those coming from within have been probably the least effective. However, while large sections of the investment community remain indifferent or even hostile to the environment, there are exceptions and signs of change.

Equity analysts have on occasion investigated the impact of the environment on investments, particularly in the surge of interest in the environment in the late 1980s and early 1990s. Published reports have ranged from seeking "green" stories in all sectors (e.g. UBS Philips and Drew's 1989 'Investing in a "Green" Europe'), to devoting resources to covering the environmental sector on a regular basis, most notably by James Capel and Paribas. Another example was James Capel's 1993 survey of environmental impairment liabilities and the composite insurance sector.

Since then there have been fewer such reports. Despite this there are signs of a changing attitudes to the environment among many in the industry. Pressure is starting to come from the commercial banking side of some entities - for instance National Westminster Bank is in the process of developing a best practice note for investment management, and UBS has developed an impressive environmental information system, which they are starting to demonstrate to their investment managers. The Global Care team at NPI has a clear mandate to increase environmental awareness in all its asset management, not just its "green" funds. The insurers that have signed the UNEP declaration (including NPI) have undertaken to look at their environmental implications of their investments, and there is an active working group looking at the practicalities of this. Prudential, the UK's largest life insurance company, announced in May 1997 that they regard the management of a

company's environmental risk as affecting the ultimate interest rate payable on capital raised. However, the most extensive example of an investment institution taking a constructive attitude to environment is Salomon Brothers Inc., discussed below.

Salomon Brothers Inc.

Salomon Brothers is one of the largest investment banks in America and the world. It is the only pure investment bank to have a high profile environmental unit. Originally established to provide an internal housekeeping function, the unit realised the opportunity to provide services to the rest of the Bank. The approach of Linda Descano, head of the environmental unit has been a gradual one, aiming to help provide information and win over the business officers. In providing advice, she focuses on providing information on legislation, key business risks, environmental management and other aspects which help judge the quality of business management, rather than detailed quantitative information on environmental impacts. Sometimes, a scenario based approach to environmental issues is used.

Measures of success in a organisation like Salomon are difficult to quantify, but, for example, analysts and business officers are now actively seeking out the advice of the environmental unit. Salomon's environmental expertise has occasionally offered them a competitive advantage over other financial institutions - some client companies have indicated that their capacity on the environmental side has been a key factor awarding Salomon business. Salomon's environmental expertise has caused them to walk away from a few business opportunities which they have seen as being too risky (they are concerned over their reputation for instance). More constructively, they have also advised clients on modifying their approach to certain businesses - for example Salomon were asked to advise on a potential acquisition. They recognised that it could be potentially far more controversial than their client was expecting. They advised the client to engage the local community far more actively than planned, with the result that the deal went through with very little controversy.

The industry has also received some clear "wake up" calls - well publicised cases such as British Gas and contaminated land in 1993-94 and Hanson's environmental liabilities after acquiring Beazer at the same time, have indicated that the environment is not lightly ignored. Below, are other case studies where environment has materially effected a company's market valuation. T&N shows the impact liability can have a companies valuations, Caird shows how weak environmental reporting can fail to warn investors of forthcoming dangers, Kemira shows how investors can fail to understand the sense behind a company's environmental activities until the results are self evident, and finally Bröderne Hartmann indicates that some companies at least may reap some reward from their environmental actions.

Caird Group (UK) - Caveat Emptor?

After a reverse takeover in March 1987, Caird changed sectors from property to waste management. From 1988 to 1990, £79m was spent on acquiring 52 companies, with the aim of becoming a UK market leader. Caird produced a series of qualitative environmental reports, which looked at its management, rather than assets. From 1987 to June 1990, Caird's share price rose from 25p to 234p.

A series of profit warnings from September 1990 resulted in a loss of shareholder confidence as Caird refocused towards becoming a niche player. Caird announced that its environmental reports would not comply with BS 7750. In September 1993, Caird wrote down £23.2m in exceptional provisions, including £10.5m for its landfilling activities and £3.0m for other liabilities. The company's 1993 turnover was £18.1m and after the write-downs, gearing rose to 117%. Caird's share price fell further, to 28.5p and then to a low of 5.0p.

Caird returned to profit and resumed paying its dividends in 1996, after its bankers agreed to writing off its debts and capital restructuring. Throughout its landfill acquisition period and in subsequent years, the failure to quantitatively audit these sites as to their prior use, suitability and operational management proved costly to company and shareholders alike.

T&N (UK) and Asbestosis Liabilities

T&N was an asbestos miner and manufacturer. During the 1960s, it was found that exposure to asbestos fibres causes asbestosis, a potentially fatal lung disorder. Payouts relating to asbestosis and the costs of leaving a contracting market put T&N into debt. From 1986 to 1996, £350m was paid in settlements, more than £300m of which went to individuals in the USA. The peak year for payments was 1994 (£140m in provisions), followed by £51m in 1995. 140,000 sufferers and their relatives have been compensated to date, at an average of US $ 20,000 per case. 30,000 more claims are outstanding. The main problem is that individual cases are expensive, and to date 60% of the payouts have been absorbed by legal and administrative costs.

A class action (collective action by a group of individuals) would be cheaper and swifter, and the Georgine Settlement was drawn up to resolve outstanding claims. This would have saved £150m in legal fees, etc. This claim was challenged by the US courts and rejected by the US Court of Appeals in May 1996, which decided that this did not constitute a class action. The case has been sent to the US Supreme Court. At the same time, the relatives of two cancer victims who worked at their UK factory in the 1930s were awarded a total of £115,000.

T&N needed to be able to quantify its outstanding claims, so as to provide for them. In November 1996, T&N reached a £465m settlement covering it against £1.2bn of potential claims. The company made a provision of £373m for potential claims, that will realise a total of £690m including interest payments over the life of the claims period, based on their auditors' worst case scenario. Extra insurance cover for £500m was obtained at a cost of £92m from Centre Re, Munich Re and Swiss Re. T&N will be liable again if total payments exceed £1.2bn.

The company's share price in the first half of 1996 peaked at 187p. The blocking of the Georgine Settlement saw its share price fall from 162p to 120p. It recovered to 144p and rose to 176p after the settlement was announced in November.

Kemira (Finland) - Financiers Catch up Eventually

The Finnish chemicals company Kemira was privatised in November 1994 at FM 38 per share. 28% of the shares were floated, 20% going to international investors and 8% to Finnish investors. Kemira's traditional products were fertilisers and titanium dioxide for the paints industry. The company announced that it would lower the environmental impact of its activities and concentrate on selling non-chlorine bleaches for the pulp and paper industry and developing new products for water and waste water treatment.

This was not popular with international investors. With the shares usually trading between FM 37 and FM 41, the company's share price performed poorly over the next 18 months during which, international holdings fell from 20% to 13%. The growth of its environmental chemicals from 26% of operating profits in 1995 to 37% in 1996 allowed the company to continue growing at a time of problems in its paints activities. Kemira's shares outperformed the Helsinki market by 29% in 1996, with a current trading range of FM 57 to FM 62. A further 17% was placed in 1996 at FM 55. The stock market disliked Kemira's environmental policy until rewards were reaped. Thus when long term - short term conflicts emerge they can only be resolved when a company is able to demonstrate the benefits of its policies. Indeed, if Kemira had heeded the financial sector's demands and abandoned its environmental activities, the company would be in worse straits today

Bröderne Hartmann (Denmark): Sustainable Packaging Can Pay

Since about 1990, all the company's packaging (75% of 1995 turnover) has been made from recycled paper, accounting for about 25% of Denmark's waste paper. From 1990-95, the company spent DKr 60-80m in developing environmentally friendly industrial packaging, based upon its core competencies. Product development has emphasised eco-efficiency and life cycle product assessments, which are available to their customers. The packaging meets all client specifications and is competitively priced, while offering sustainable development advantages. In early 1996, the company traded on a price earnings ratio of 18 compared with the Copenhagen market's average ratio of 15. Local commentators attributed 20% of this market premium to the company's environmental track record.

3.3. ANALYSIS AND WAYS FORWARD

As the above shows there is growing pressure from a variety of sources on the investment sector to incorporate the environment into their activities, and there are encouraging signs of emerging change. Nonetheless, mainstream attitudes typically vary from the complacent "we already factor everything in our analysis" to the negative "what's environment got to do with making money?". Those actively incorporating environmental issues into investments decisions are the exception rather then the rule.

Key obstacles preventing a more positive attitude to environment issues will need to be addressed if the investment sector is to incorporate sustainable development into its thinking. Beyond this, the financial markets will also need to accept that environmental performance can help contribute to financial performance if they are to become more active in supporting good environmental behaviour. These points are examined in more detail below.

3.3.1. Obstacles

Despite the evidence outlined above, environmental and sustainable development funds remain at best a fringe activity and the financial markets take little notice of the environmental sector. There are practical reasons for this.

Market Inertia

Financial markets can be very conservative. The rewards from acting in a new or different way are often outweighed by the risks. For example, trustee investors who are required to invest prudently on behalf of others (e.g. in pension funds) often find the least risky course is to invest a similar manner to their peers. Regulators also often act as a brake on innovation, with some justification. While certain areas of the financial markets can be highly innovative, for instance in derivative products, inertia remains a significant problem for areas where financial institutions ought to be promoting sustainable development.

Long Term Versus Short Term Conflicts

Financial markets, particularly those that are developed along an equity-driven, Anglo-Saxon model, are often accused of short termism. Many listed companies feel under pressure to deliver immediate profits at the expense of longer term business development. Sustainable development is perhaps the ultimate long term issue. While this is a concern, it is not always insurmountable: Long term projects have been able to attract funding despite a long delay until payback. Biotechnology companies have gained listings despite their work being years from commercial application.

Most investment (e.g. pensions funds and life insurance) is essentially long term. Thus concern has been expressed that organisations with a long term view are investing in companies taking a long term view, but through the short term perspective of the financial markets. Many in the markets would respond that maximising short term returns is the best way to maximise long term returns. One interesting observation here is that for this to happen a necessary condition is that short term investment in any one period does not affect the ability to generate returns in any future period. This condition is essentially the same as that of sustainable development. The implication is that short termism in investment will only maximise long term returns if sustainable development is achieved.

This debate could be largely resolved if accounting systems could reflect all of a company's capital, including aspects such as reputation, human development and environment. This in itself provides a reason to support the development of broader accounting systems.

Information and Awareness Deficits

A key limitation to the inclusion of environmental factors is the patchy quality of information on environmental issues, and a lack of understanding or awareness of the potential of such information. While the quality of such information is improving major gaps remain, making it easy for sceptics to

ignore environmental issues. Examples including inadequate reporting of risks, where for instance a company can appear to improve profitability by failing to take out adequate insurance, or the tendency by analysts to ignore one-off gains and losses despite recent accounting reforms intended to incorporate them. Analysts rarely see as material one-off write downs and exceptional losses relating to environmental liabilities and higher than expected capital expenditures on projects and instead concentrate on year-on-year or 'normalised' earnings figures.

3.3.2. Financial Performance and Environmental Performance

Central to the discussion about finance and environment, particularly in the investment area, is the debate about the relationship between environmental performance and financial performance. If improving environmental performance has a negative effect on financial performance, then it will be very difficult for investors to view environment positively. If it is irrelevant, then there may be some opportunities for "green" investors to encourage environmental good behaviour, but overall the impact will be weak. It is only if there is a positive effect that the financial markets are likely to have an interest in encouraging good environmental performance.

This still remains a point of contention and debate. Many businesses have becoming increasingly convinced that environmental performance can contribute to good financial performance. Many in the financial markets however remain sceptical. They present a number of arguments:

- good environment performance implies costs: reducing environmental investment often involves major investment for little return;
- environmentally conscious companies are diverted from a clear focus on financial bottom line performance and may make poor business decisions;
- investing on an "environmental" basis reduces choice and thus limits investment returns.

Indeed at one level there is some truth in these statements - environment has imposed costs on some industries. However, these industries have tended to be the ones with the greatest environmental impact, and thus it can be argued to support the fact that environment performance contributes to financial performance. The point about lack of a clear focus may be valid among some companies in the environmental sector (see Chapter 6) but there is little evidence to suggest it is a significant factor more generally. The point about investment choice and diversification is often made by those seeking to avoid action. However, if an analytical approach can be used to incorporate environmental issues, then it would be immediately undermined. Even if a simple screening approach is used, investment theory suggests that the impact on returns and risk is likely to be negligible unless a high level of restriction is used.

In contrast, those who already incorporate environmental information into the investment process cite a number of reasons why environmentally sound companies may also be good financially including:

- companies can reduce costs by improved environmental management (eco-efficiency);
- environmental management is a sign of good overall management;
- low environmental impact and good environmental management imply reduced risk, which should justify a higher rating;
- companies with good environmental management strategy will make better strategic investment choices, focusing on high growth areas, avoiding future risks and unconstrained by environmental limitations.

A number of studies have looked at the relationship between financial performance and environmental performance. Overall several studies have found a positive relationship. A number of the more important ones are listed in Appendix V. In addition, a number of studies have had inconclusive results. However, few, if any studies, have found a clear relationship supporting the idea that good environmental performance has an adverse effect on financial performance.

While this is an area which still merits further investigation, it is probably fair to say that "the balance of evidence suggests a discernible positive impact on financial performance from superior environmental performance". There is very little evidence to support the counter-claim that good environmental performance will harm financial performance. Financial organisations should not feel factoring in environmental considerations will harm investment performance.

Nonetheless the financial markets remain unconvinced, and the evidence is still not conclusive (although many investment decision have been made on far less impressive evidence). The uncertain evidence is partly driven by the poor quality of information - it is no surprise that many of the stronger results are from the US where information is more readily available. In addition, the absence of environmental information means the financial markets cannot react to and anticipate the consequences of good environmental performance, which means such performance can only be rewarded over the longer term, making it harder to distinguish the impact on financial performance.

3.3.3. Moving Forward

The challenge within the investment sector is primarily the subtle one of changing the attitudes of the sector - in the way they assess and value companies. The sector by nature is very individualistic, self confident and international. Direct approaches, whether voluntary or mandatory are unlikely to be productive. Instead it is probably most important to work with some of the existing levers for change, reinforcing them and making it clearly in the interest of the investment sector to incorporate environmental considerations.

The most important activity which will make the financial institutions integrate environmental considerations are measures to enhance the return signals, by rewarding companies with good environmental performance and penalising those who perform badly. Typically this will mean measures to internalise environmental costs, such as environmental taxation and stronger rules on liability. Such measures feed directly through to the bottom line, and so will influence perceptions directly. This is clearly an area where policy makers need to take the lead, but without policy "overreach" where promised policies are not delivered. Ideally, investors should be able to anticipate policy developments, and send the right signals to companies.

There is clearly scope to improve the flow of environmentally related information to the financial markets. As the transactional model makes clear, good information is essential to the inclusion of environmental factors. Many financial market participants are keen to see the development of such information. Chapter Five discusses further the role of information, particularly from companies.

There is scope to strengthen the pressure from investors, by increasing the flows of environmentally concerned investment. By increasing the demand for environmental sound investment products, leading investment institution will have a clear incentive to develop the relevant expertise. There is evidence to suggest that opportunities for retail and other investors to invest in environmentally responsible ways are unnecessarily restricted, e.g. because of reluctance on the behalf of fund managers to provide "green" products. There are a number of policy measures that could be taken to remove obstacles and increase demand for environmentally responsible investment, and can be justified in terms of consumer protection - ensuring consumers get the investment product they want. More generally, there is scope to improve the links between individual investors and those who manage their money on their behalf - "investor accountability".

In addition, there may be other actions such as engaging senior investment bankers in the debate over sustainable development and finance, supporting organisations which help and advise investors, or working with publicly owned financial organisation to provide leadership examples.

Shareholder activism has also been an effective tool in the US. It could have potential in Europe, but there are number of obstacles which need to be overcome before such actions are likely to be effective - such as improving shareholder rights generally, and increasing the level of interest in environmentally responsible investment among investors in general.

4. The Insurance Sector

4.1. THE POTENTIAL OF THE SECTOR

Insurance covers a number of different areas. This chapter will largely focus on general insurance. This involves a legal contract whereby the insurer promises to pay the insured if a particular event happens which causes the insured to suffer a financial loss, with the insured paying a premium for this cover. There is also life insurance, which provides for a payout in the event of premature death, but is also usually combined with long term investment. It should also be noted that most insurance business involves the management of substantial assets, collected from premiums. Asset management has been covered in the previous chapter, so will not be covered here except where specific issues arise.

The original involvement of insurers with the environment arose because of the interest of policy makers in using liability regimes as a market mechanism to help encourage sound environmental practices by businesses, and to complement other forms of environmental regulation. Although existing liability regimes often included some aspects of environmental liability, this has been sometimes strengthened through legislation.

As public liability insurance has always been a major line of business for insurers, such regimes inevitably involved the insurance industry. For the environmental policy maker, the role of the insurance sector has been largely focused on two potential functions:

- to provide funds to remediate environmental damage, particularly where the liable party has insufficient resources themselves;
- to provide a mechanism to turn environmental externalities into financial numbers by putting a price on environmental risks (thus implementing the polluter pays principle).

Insurers are not in the business of providing large sums for remediation which have not been anticipated in premium income, and so over the long term the first aspect is essentially dependent on the second (in an efficient market system, although not necessarily in practice).

Furthermore, it is generally desirable to prevent damage rather than remediate it - funds for remediation rarely provide full recompense. Sending clear market signals to industry by accurately pricing environmental risks and rewarding environmentally well managed, low risk companies with lower premiums, is potentially a valuable tool. Conversely, if insurance is available but not accurately priced (or without adequate terms), it can undermine the prevention / deterrent effect of liability regimes, as once insurance has been obtained by an organisation, the deterrence effect of liability is reduced and there is less impetus to take further risk reduction measures.

In practice, the promise of liability based regimes has not been fully realised, as is discussed in section 4.2.1., and the potential for liability to provide a useful market function without major economic dislocation is probably less than the environmental community hoped for. Indeed, since the introduction of liability regimes has created major problems for the insurance industry, particularly in the US, the industry has become wary of initiatives led by environment policy makers.

Environmental liability was an issue the insurance industry had to address as a result of the actions of policy makers and the courts, albeit in response to a genuine environmental problem. The next environmental issue to influence the industry came directly from environmental change itself - the potential effects of climate change, which the industry has come to realise could have profound effects on much of its business. This is discussed in section 4.2.3 and the appendices, but it is interesting to note that it has provoked a much more creative and positive response than liability.

While these two major issues have had a major influence on the industry, it is surprising to note that there has been limited public research and discussion at a strategic / conceptual level on the influence of the environment generally on the insurance industry.[3] Possibly, such research might have helped alert the industry in advance to some of the challenges it now faces. As the table below shows there appear to be a wide range of potential interactions between the insurance and the environment.

Risk	Environmental links
"Acts of God:" e.g. Storm / Flood / Subsidence	Environmental factors may increase risks of "acts of God" - climate change, wetland loss.
Accidental damage to insured property	Environmental damage often linked to industrial accidents (e.g. factory fires). Good environmental management may reduce such incidents.
Theft / criminal damage to insured property	Little direct link with environment (but link with social aspects of sustainable development). Potential link with resource theft?
Health Insurance	Pollution / contamination can lead to direct health risks. Environmental change may lead to increased indirect health risks.
Social Insurance e.g. unemployment insurance	Little direct link to environment (links to social aspects of sustainable development).
General / Public Liability arising against insured.	Liability for environmental damage, particularly accidental, can arise here. Increasingly excluded against.
Environmental impairment liability.	Specific insurance for environmentally related damage.
Employer liability - against injuries to employees	Mainly linked to health and safety, with some links to environmental issues. Good environmental management may reduce risks here. Asbestos related claims were significant.
Directors' and Officers' liability	Potential links to environmental incidents. May impact the effectiveness of environmental regulation, by reducing threats.
Product liability	Environmental consequences from use of products - e.g. pesticides. May be particularly important with new technologies such as genetically modified organisms.
Financial loss (e.g. mortgage indemnity)	Possibly, environmental impairment could increase the losses in these policies.

There may also be other links in specific insurance products to environmental issues, including the way insurance is structured - e.g. most motor insurance is charged on a lump sum basis which essentially does not reflect car usage, thus encouraging car use as well as failing to reflect risks accurately. Some insurers are starting to address this.

As a background point it should be noted that the insurance industry has only ever provided part of the insurance function for society as a whole - the state has generally had a substantial role, ranging from healthcare provision to disaster relief (and much risk also goes uninsured). There is a trend across the EU to seek to increase the role of the private sector, and reduce the role of the state, partly in response to budgetary constraints. This is resulting in increased insurance industry involvement in areas such as health provision, pensions and potentially social security and unemployment.

Building on greater understanding of the interaction between the environmental and insurance there is likely to be some potential for practical action and business opportunities.

- Using sustainable development as a risk management tool - companies that are acting unsustainably are likely to present greater risks than those that are not. The precautionary principle would appear to be fundamentally about risk reduction.
- Looking at the potential for industry-wide actions to reduce environmental risk, e.g. by developing standards, lobbying etc. - such action is common in certain areas.

[3] We note that the industry research body, the Geneva Association, and academics such as the Wharton School of Risk Management have started to explore this area, although the established level of understanding is still at an early stage.

- Looking at the potential to reduce risk across the portfolio - e.g. by disseminating information on good environment practice to SMEs, as leading banks have been doing.
- Looking at the opportunities for the development of new insurance products to address environmental challenges
  - insurance of key conservation sites against disruption or development;
  - insurance of new risk categories e.g. technology risk, reputation risk. Some insurance already exists in this area;
  - insurance to reduce uncertainty in environmental policy development, e.g. policies which would provide a maximum cost for the affected industry;
  - products for the environmental sector - e.g. insurance against weather variability for the renewable energy sector.

Industry based action is to be welcomed and encouraged, although the extent to which the industry may be willing to explore all the potential opportunities on its own is debatable - a key issue for the insurance industry is the relevance and significance of much of the interaction between the insurance and the environment. Thus, an industry centred approach will go only so far in identifying ways in which insurance can contribute to sustainable development, as the industry has its own priorities.

To go further, it will probably be most productive to develop a collaborative approach involving policy makers, environmentalists and the industry - rather than seeking to impose policies on the industry. As the list of insurers' activities makes clear liability insurance is only one part of the business, and there are a considerable number of ways in which the industry may interact with the environment (many of which have been little explored). This, together with the fact that insurance is a technical and little understood product confirm the potential for a more collaborative approach.

4.2. CURRENT ACTIVITIES

4.2.1. Insurance and Environmental Liabilities.

While environmental liability has been a concern in the EU, it was events in the US that really alerted the insurance industry to the issue. It is therefore worth reviewing the key events there. The industry introduced "sudden and accidental" to its general liability policies as early as the early 1970s, partly in response to potential liability concerns which were starting to emerge from asbestos. Also some insurers decided to offer specific environmental liability insurance. In December 1980, the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) often known as "Superfund", became law. This introduced strict, retrospective and "joint and several" liability for contaminated sites. Initially the impact on the insurance industry was limited, as few were expecting major losses but as the extent of the contamination became apparent, and as court cases established that insurers would have to pay, even under the sudden and accidental clauses, it became evident that the insurance industry would face major losses.

In 1985, the insurance industry established a complete pollution exclusion clause in its general liability policy. This exclusion seems to be holding up and has limited the damage, to at least historic losses.

In 1994, the potential consequences made headline news when AM Best, respected industry researchers and raters, projected the potential future losses at US $132bn, 72% of the industry's capital, with a worst case estimate of US $ 252bn. Later that year, the impact was confirmed when AM Best downgraded three leading insurers, notably CIGNA who were downgraded from A- "investment" grade to B+ "speculative" grade. The next step in making consequences for the insurance industry even more apparent was the introduction of "Footnote 24", which required insurers to list detailed information on their asbestos and environmental liabilities, together with any

reserves. Announced in the March 1995, most listings had been prepared by March 1996 - and saw reserves for losses increased by US $ 10bn initially, with the prospect of much greater losses.

Within Europe the system of environmental liability has generally been less demanding and the consequences for the insurance industry have been far less marked - policy makers have tended to recognise the limitations of the US approach, and although there has been some tightening of legislation, they have avoided introducing joint and several or retrospective liability. The courts have also tended to be more conservative in their interpretation of legislation. In the UK, "unforseeability" has been upheld as a defence against liability. Indeed the UK industry only introduced a sudden and accidental clause (albeit more rigorous than in the US) in 1991, and this appears to be upheld by the courts. Germany is the European country which has developed environmental liability to the greatest extent, introducing a compulsory insurance system, discussed in the case study in the Appendix II.

As a result, the insurance industry has not experienced major losses in Europe and concern over environmental liability is limited at present. This has not stopped the insurance industry offering some specific environmental liability products. However, except where the product has been made compulsory, take up by industry has been limited as the products are seen as offering only limited coverage and as being quite expensive. (For instance, cover is provided on a claims made basis as opposed to an occurrence debate, to limit insurers long term exposure.) As long as some cover (i.e. for sudden and accidental environmental risks) exists in general liability policy, the market for such insurance is likely to be in specialist markets such as brownfield site restoration, where a number of targeted products such as clean up cost caps have been developed. Arguably, the insurance industry may be being too cautious about environmental liability insurance - it is interesting to observe that through its insurance subsidiary, National Westminster Bank has entered the environmental impairment liability market. They feel that their environmental expertise, originally developed for banking, enables them to be competitive in this market.

4.2.2. UNEP Charter for Insurance Companies

After the success of the Banking Statement, UNEP was persuaded to develop a Statement of Environmental Commitment by the Insurance Industry, which was launched in 1995. It is enclosed in Appendix VI. The insurance industry had already become sensitised to environmental matters by environmental impairment liability and growing concern over climate change (see section 4.2.3), and as a result the number of signatories has risen rapidly to 63 by January 1997. Western Europe contributes an even greater proportion of the signatories than with the Banking Statement, with around 31 coming from the EU and a further 10 from the EEA. Germany, Switzerland and the UK are particularly active, along with a significant Scandinavian presence.

The Insurance Initiative works in a similar way to the Banking Initiative, and has to date organised one round table meeting in London in 1996, with a second planned in Japan at the end of 1997. However, in some respects it has already gone further than the Banking initiative, as the signatories have started to become involved in the policy area, particularly over climate change, and have issued a statement on *Climate Change and the Insurance Sector* (see Appendix VI and also the case study in Appendix II). The insurance initiative has also recognised the importance of its investment portfolio from the start, and has started to look at asset management in an environmentally responsible manner.

On 8 July 1997 the insurers went one step further, and formally launched an association based on the initiative. They see this as offering a number of advantages: in particular, they will be able to secure their own sources of funding from members, and they will be freer to become involved in policy activities (including formal NGO accreditation) without the complications that arise with a direct link to a supranational body like UNEP.

4.2.3. Other activities

One environmental area where the insurance industry has been particularly active is climate change. As is discussed in more detail in the case study in Appendix II, the industry has come to recognise that climate change presents a major threat to the industry. What is striking about the response of the leading players is the range of actions which they have taken, which occurs at almost every level of our transactional model - for example:

INFORMATION:	Understanding climate change in detail.
ANALYSIS	Assessing the hazards for major risk categories.
PRICING	Improved, more specific, pricing of risks such as flood.
FINANCE	Avoiding exposure to high risk areas.
AFTERCARE	Improving "after the event" support.

In addition, they have increasingly become involved in lobbying decision makers on the seriousness of climate change, and have worked with the public authorities on practical measures such as damage prevention / abatement approaches, including priority areas for sea defences, guidelines for land development, and enforcing or improving building standards.

Insurers have also been fairly active in looking at integrating the investment side of their business, as has been discussed in Chapter Three. In addition, in recent years some niche environmental insurers have emerged, particularly in Germany (see the case study on Versiko in Appendix II), which combine a green investment strategy with other incentives to promote a green lifestyle. These niche players have also encouraged other more mainstream insurers to look at environmental opportunities.

4.3. ANALYSIS AND WAYS FORWARD

The insurance industry has shown that in the right circumstances it can respond creatively to specific environmental challenges it has had to face. In particular, their responses to climate change concerns are among the most positive and creative in the whole area of finance and the environment. They present a model of how financial institutions can provide a route to achieving sustainable development. However, only a limited number of insurers are involved, and it would clearly be desirable if more could be encouraged to take an interest in the implications of climate change. Supporting information sharing and dissemination activities would be one way of achieving this.

The response to date has largely been issue based. On a broader environmental front the industry has to date made only a fairly limited and reactive response. A number of reasons for this can be identified including:

- Insurance business is split into a wide number of product lines, many of which may have some interaction with the environment, but of these most have insufficient interactions to make environment a priority area for analysis.
- Insurers are not in the public eye to anything like the same extent as banks.
- Insurance is a highly technical product and is less well understood by those outside the industry than, for example, investment.
- The industry is much more fragmented than the banking sector, with few really large groups.
- The use of reinsurance means than much risk is transferred, and there is a degree of separation between those close to the risk (i.e. the underwriters) and those bearing much of it, making analysis and pricing harder. Against this reinsurers can provide a focus for specialised risk analysis and can influence the underwriting policies of insurers.

- While sustainable development may be partly about reducing risks and externalities, it is not clear to what extent it is in the insurers' interest to reduce risk generally in society. It is after all their raw "material", although changing and unpredictable patterns of risk are of concern for the industry.

A key issue for much of the insurance industry is the difficulty in determining the relevance and potential of many of the environmental interactions it faces. While there may be a number of areas where insurers could both improve their business and help address environmental challenges, in many cases the business benefits are unlikely to be large and are difficult to assess. It is far from clear that it is worth devoting time and resources to following up opportunities such as new products or improved methods of analysis and pricing, particularly in the absence of "soft" budgets (e.g. for public relations) or external sources of funding. Thus there would appear to be scope for policy makers to investigate the other possibilities for insurers to help contribute to sustainable development, by supporting research and information sharing. Such activities should be industry orientated rather than academic, and should be done in constructive and positive manner - insurers are understandably wary of policy initiative because of their past experiences.

The insurance sector also has a central interest in the issue of environmental liability and will have a critical role to play if it is to function as a successful market mechanism. Experience from the US has made the industry rather cautious over the liability debate in Europe. A priority should be placed on establishing a more constructive debate and getting the industry to see environmental liability as an opportunity rather than a problem for the industry. Liability is discussed more in section 7.4.2.

It is also worth reiterating that because insurers have had the most direct exposure to environmental impacts they are in a good position to encourage their fund management sides to look at environmental risks and opportunities and provide them with useful information. Leading insurers are starting to use their experience and knowledge in this way, although there is scope to take this much further.

5. Companies, Investors and the Environment

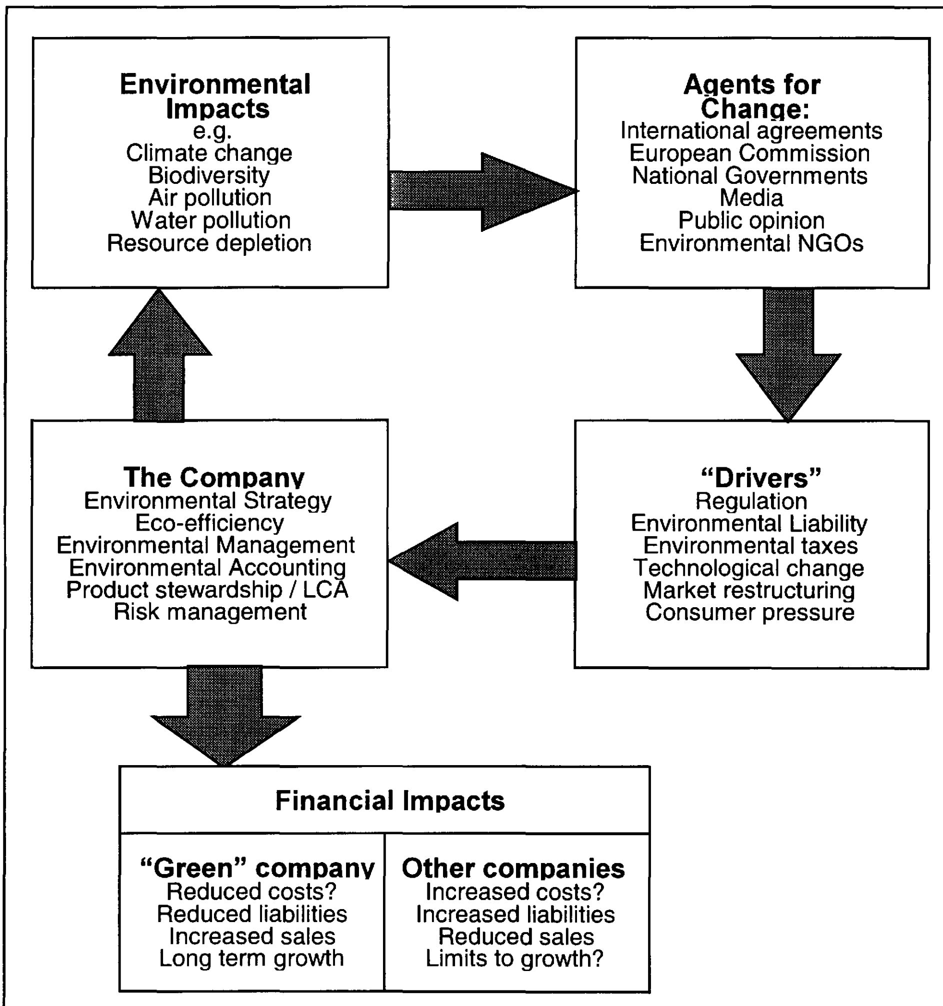
Companies are already concerned about the environment and see environmental issues as being of importance to their business development. Yet they find financial markets uninterested and unaware. This chapter explores the relationship between companies and the environment, from a financial perspective, with the aim of identifying how financial institutions can be encouraged to accord environmental issues appropriate consideration, particularly focusing on the effective communication of environmental information.

Understanding the financial implications of the environment on companies involves:

- identifying how environment affects companies - this rarely happens directly but instead occurs as a result of actions by various agents, creating clear business drivers on companies;
- knowing how company management can respond, using tools such as: environmental management systems, eco-efficiency, and risk management;
- communicating relevant information;
- understanding the financial implications of the environmental impacts and the management response.

The following diagram illustrates this relationship.

Figure 3: The Relationship of Companies, Investors and the Environment



The diagram also helps identify where information is likely to be useful to the financial markets.

Information on the company's approach to environmental issues is desirable, including strategy, management systems etc. Such information is often qualitative but financial analysts are used to assessing management quality from such information. Environmentally relevant financial information on costs and liabilities is likely to be useful. However, such information will only cover certain areas and may not provide a guide to future financial performance and risk.

Company environmental information will be useful, as an indicator of the pressures it experiences, and the risks it runs. While the feedback process in the model is imperfect, companies having a larger environmental impact will come under pressure to change. As the WBCSD and others have argued, environmental performance may also be an indicator of the effectiveness of the management of the company. Responsible analysts should also keep track of the pressures or "environmental drivers" that companies face directly. Companies can not report on this sort of information themselves, as it is outside their control.

5.1. HOW THE ENVIRONMENT AFFECTS COMPANIES

It is important to understand some of the basic issues and dynamics of the interaction between the environment and the corporate sector, as well as the financial markets' perspective on the various drivers used to achieve environmental change. For the purposes of this report is not important to understand the detail.

The main pressure on companies to change their environmental performance comes from a variety of different drivers, of varying degrees of effectiveness. These drivers are created and implemented by a variety of different agents. Policy makers (local, national, EU) probably have the most significant role, but other actors can be important. The role of EU environmental policy is discussed in Chapter Seven. The table below summarises the key drivers and their impact from a financial perspective.

Driver	Agents for change / implementation	Financial / business impact
Environmental Regulation (e.g. permits / fines)	National Governments, European Community, Local governments	Negligible bottom line impact. Can affect the "licence to operate". May indicate other risks.
Environmental Taxation / Tradable permit	National Governments European Community	Affects the bottom line. Financial markets sceptical about probability of policy action.
Environmental liability	Affected parties (general public) Civil courts National governments } provide European Community } framework	Can have a major affect on the bottom line. Insurance may be available. Uninsured risks ignored by markets.
Consumer pressure	General public / Other companies Environmental NGOs National governments } provide European Community } framework	Positively, creates major opportunities. Negative campaigns rarely have impact on bottom line, long term shifts can. Potential source of risk, especially in business to business transactions.
Land use / planning	Local governments Public / environmental NGOs National governments	Can provide a "limit to growth" (e.g. out of town developments).
Technological change	Other companies National governments } support European Community } research	Can radically change the cost effectiveness of change. Requires additional investment. New technology can present new environmental risks.

While analysts are aware of the more obvious drivers, it is less certain how well informed they are about changes, particularly longer term, or the more indirect consequences of many environmental drivers. To understand the issues more fully analysts need to:

- Assess the prospects for actions: how serious are the issues, how affected are the various parties. This should also include an understanding of long term trends and shifts.
- Understand the likely drivers to be used, their scope and effectiveness.
- Understand the consequences for individual companies: here information is needed from companies that will enable analysts to understand of the extent of their vulnerability and a company's ability to address these issues.

There are information gaps at all levels, but the last probably presents the greatest challenge. Without company level information, financial markets will find it difficult to respond, and understanding policy information will be of limited use, thus many analysts will not want to spend time studying it.

5.2. INDUSTRY'S RESPONSE TO THE ENVIRONMENTAL CHALLENGE

Since the early 1990s, industry has developed an impressive array of tools to address environmental and sustainable development issues, such as environmental management systems and environmental reporting. These tools were developed by industry as practical, business orientated response to the concerns of regulators, environmentalists and the public. Leading businesses feel they have made substantial progress in using these tools to address environmental issues. If business finds them of use, then they should be relevant to financial institutions.

5.2.1. Environmental Management

Environmental management has emerged as a central component in industry's attempts to address environmental concerns during the past decade. A number of formal environmental management systems (EMS) have been developed such as BS 7750, the EU's EMAS and ISO 14000. Such systems normally include a commitment to continuous improvement and include elements such as measuring environmental impact, setting objectives, implementation, monitoring and reviewing. They allow businesses to feel that they have some control over the environmental issue.

Financial markets have mixed views on the need for such systems. Commercial banks appear fairly keen on them, particularly when lending to business areas exposed to environmental regulations or liabilities. Here, the adoption of a recognised EMS can assist in addressing the bank's concern about a client's potential risks. They can provide a simple reassurance to banks that the business is able to address its environmental risks and reduce the need for further (costly) analysis.

In contrast, the investment community, in general, and equity analysts, in particular, have largely ignored EMS. Although financial analysts place a high level of importance on the quality of senior management (along with financial results), they focus on broader management issues such as acquisitions and disposals, cost reductions and product development. The tools used to address these issues are of subsidiary importance. (This is not surprising as, for example, quality management systems have also not been a major concern of financial analysts).

Other research has found that financial markets are not significant drivers for EMS. The key drivers tended to be national regulation, EU regulation, company image and public opinion. (For example, the Ernst and Young study *Environmental management systems in European industrial companies.*).

5.2.2. Other Management Tools

Environmental strategy. Business strategy is a relatively important factor in investment analysis. This can include environmental considerations, as many environmental issues evolve over the long term. The general thrust of change may be evident, even if specific measures are not. Over many

years strategic changes brought on by sustainable development may be some of the most powerful forces for longer term profitability of companies. Examples of companies taking a strategic approach to environmental issues are British Telecom (BT), which is making a major thrust into areas such as homeworking, a growing market arising partly for environmental reasons. (However, BT's environmental reporting tend to concentrate on more immediate but probably less important issues.) Monsanto, a chemical company is making a strategic shift into biotechnology, partly driven by a vision of sustainable development. Environmental strategy must be well thought out and address key issues. Tools such as the Swedish "Natural Step" methodology can be useful here.

Eco-efficiency is the concept developed by WBCSD to show how companies can contribute to sustainable development - reducing environmental impact while improving financial performance. It emphasises that environment is not just a cost and encourages companies to seek out alternative approaches to business which bring environmental and financial benefits. Thus it should appeal directly to the financial markets. At an operational level it can be quantified e.g. emissions per unit value of turnover, providing useful guides to performance. Sometimes eco-efficiency is used in a broader, more strategic sense. In doing so it becomes harder to use and quantify. It is also not clear how useful it is in addressing major changes when such changes are required in the longer term.

Environmental Management Accounting. This aims to identify in detail where environmental costs and savings arise, such as accurate overhead allocation, and quantifying risk reduction or improved publicity. They aim to make applicable the concept of Full Cost Accounting, as highlighted by the EU's Fifth Action Programme, at a corporate level. The development of accounting systems lag some distance behind management systems. Where effective they create financial incentives for good environmental behaviour. For example, Dow Europe saw significant reductions in wastes when it started charging internally for the use of company owed landfills. For financial markets, the existence of such accounting systems as a sign of good financial management is more important than the detailed information. Some information may be usefully included in the annual accounts, and other information can impact financial numbers, e.g. in the case of Dow, reducing the overhead charges.

Product stewardship. It is increasingly important to focus on the environmental impact of products rather than the internal processes. Policy makers and environmentalists devote greater resources to this area. Life-cycle analysis is a tool businesses increasingly used to manage this issue. The consequences of selling unacceptable products can be devastating, particularly if human health is affected, as in the asbestos industry.

Risk management. This is an area of increasing focus in companies. Risks managers look at risks ranging from financial (e.g. exchange rates) to accidents and personnel issues. Tools used to address risks include insurance, management systems and contingency planning. Risk management should incorporate environmental issues, particularly in companies in high risk sectors. The quality of risk management should be relevant to financial analysts. But, there are difficulties in communicating risk management policies, particularly in a standardised form. Companies can be reluctant to admit the existence of risk.

5.3. COMMUNICATING ENVIRONMENTAL PERFORMANCE: THE PRESENT

Companies have made progress in their internal handling of environmental issues. Successfully communicating their impacts and response has proved more of a challenge, particularly to the financial markets. Three different approaches seem to exist;

- voluntary environmental reporting;
- disclosure through financial reporting - annual accounts, stock exchange listings etc.;
- disclosure through the environmental regulators.

5.3.1. Environmental Reporting

In recent years an increasing number of leading companies produce stand alone environmental reports, although coverage is far from complete among leading companies (e.g. Europe top 200 companies), and still the exception in smaller companies. Environmental reports have evolved through experience, the quality of such reports generally improving - moving from simply "green glossies" to more thorough and detailed reports. Reports typically cover aspects such as environmental policy and management, emissions, and product stewardship.

There is a wide potential audience that environmental reports can address. The most important are often employees, local communities and regulators. The Deloitte Touche / IISD / SustainAbility survey *Coming Clean: Corporate Environmental Reporting* of 1993 found that in Europe, the financial community was regarded as one of the least important audiences for the report. The leading reason was "duty to the environment" followed by "public relations". "Competitive advantage" and "future legal requirements" also featured in Europe, while "shareholder pressure" was only of some concern in North America and Japan.

Although a number of guidelines and standards exist for environmental reports, there is little standardisation and comparability between reports - very important to the financial markets. Environmental reporting is being allowed to evolve, to encourage innovation and development, rather than be subject to regulatory overview.

A number of studies have looked at what environmental reports should disclose (see Appendix IV). Many have been a 'wish-list', (for instance, SustainAbility has proposed a fifty point reporting check list for companies) reflecting the wide range of audiences as well as confusion over the nature of sustainable development for a company.

A key issue for environmental reporting is the development of "performance indicators", comparable standardised indicators of companies' performance covering greenhouse gas emissions and toxic releases. Such indicators are more useful to financial analysts than long lists of various emissions. While defining some indicators may be difficult, it should be possible to agree on key indicators.

Compliance and bad news is another area of concern. Companies can be reluctant to disclose compliance matters, particularly where they have not been convicted, as they do not want to admit guilt or possible liability. Different enforcement systems around the EU make this more complex.

KPMG has published a number of surveys on environmental reporting in the UK, Europe and North America. They found that North America leads in disclosing environmental costs, as opposed to simple statements of intent. In Europe, the UK leads in producing environmental reports, while Germany and Belgium have a higher rate of mentions of environmental costs. Again, the UK leads in statements of intent, but intent is not necessarily translated into numbers, especially in the reporting of bad news such as fines. In contrast to the media image of southern Europe lagging in terms of corporate environmental activism, France and Portugal score relatively strongly in the reporting of quantitative targets and bad news.

5.3.2. Environmental Disclosure Through Formal Financial Reporting

An alternative approach to environmental disclosure is to use the formal financial disclosure mechanisms that already exist. A number of studies by accountancy organisations have looked at the disclosure of environmental information in the annual reports, notably "Environmental Issues in Financial Reporting" from the Accountancy Advisory Forum. They have tended to conclude that existing accounting standards and practices do permit businesses to provide reasonably comparable, quantified information on the material effects of environmental performance, although they have suggested a number of areas for clarification and development. However, existing standards do not make such disclosure necessary.

- **Environmental liabilities:** Existing standards cover the need to disclose environmental liabilities including, on a contingent basis, those likely to be incurred. However, many companies are reluctant to record liabilities until absolutely necessary.
- **Capitalisation of environmental expenditure:** Where such expenditure is incurred to prevent or reduce future environmental damage or conserve resources, they may qualify for recognition as an asset if they are intended for use on a continuing basis and improve the assets owned by the company or prevent contamination and losses.
- **Environmental costs:** These can be separately identified where relevant and disclosed as a note to the accounts. However, it is not clear how useful they are to analysts, as they can be subjective and it is not clear whether a company with high environmental expenditures is being prudent, inefficient, compensating for past poor performance or seeking good publicity.

The accounting approaches here are welcome, and particularly the first two are likely to alter financial analysts perception of companies, as they will impact on profitability and assets. However, the measures fall some way short of full cost accounting at a corporate level envisaged by the Fifth Action Programme. The reason is that accounts must reflect financial reality and so if there is no mechanism by which externalities are to be internalised it is difficult to incorporate them in the report and accounts. There is scope for more radical inclusion of environmental considerations, including:

- **Provisioning for potential liabilities:** Contingent liabilities only have to be recorded when they are likely to occur. Arguably companies should at least indicate, and possibly provide for, potential losses on a probabilistic basis, especially where they are not insured.
- **Capitalising of environmental assets:** Companies could be allowed greater scope to capitalise expenditure when it contributes to their ability to do business. Examples, indirectly linked to sustainable development, include human resource development (training) and research costs. Such measures would have to avoid changing the tax treatment of such expenses.
- **Accounting for intangible assets:** It could be argued that companies should account for intangible assets, such as their "licence to operate" or their relationships with stakeholders, where these are key components of their financial valuation.
- **Shadow pricing of externalities:** In the absence of market instruments, companies could still provide figures for their estimated externalities, based on independent estimates of the costs involved. Such figures could radically alter the perception of corporate profitability.

As the Association of Chartered Certified Accountants concluded at its recent environmental reporting awards "much theoretical explanation and practical experimentation required has yet to be carried out before accounting for sustainability in financial terms becomes a viable option".

An alternative approach to formal environmental disclosure targeted at financial markets is seen in the US where the Securities and Exchange Commission (SEC) requires listed companies to file key environmental information over their liabilities, costs, management and other issues as part of their annual 10-K filing of information. The SEC also liaises informally with the US Environment Protection Agency to check on the information provided. While the information does not go as far as some would like (for instance it includes no environmental performance indicators or figures for emissions) it goes considerably beyond what the is currently covered in financial reports in Europe, and much of the data is useful to the financial markets.

5.3.3. Disclosure Through the Environmental Regulators

Environmental regulators collect a wide range of information from companies they police. EU regulation on the disclosure of environmental information requires that this information be publicly available. In theory, much information on environmental performance should already be available.

In the US, this has happened to a large degree with the development of the Toxic Release Inventory (TRI) and other disclosure requirements. These provided comparable summary data on environmental performance across a wide range of data, which financial markets can use. The existence of TRI is one reason why most studies comparing financial and environmental performance are US based.

In contrast, within the EU practical difficulties mean that much information is not accessible by the financial markets. A position paper by NPI looking just at the UK identifies a range of problems in accessing information in one market. Across Europe problems are likely to be greater still. Key issues which NPI believe need to be addressed include:

- **Company identification** - identifying the parent company, and being consistent.
- **Cost** - information needs to be available at a reasonable cost.
- **Accessibility** - obtaining information should involve contacting as few sources as possible, ideally electronically.
- **Standardisation** - information collected by different regulators should be comparable.

A study by the Swedish Government *Improving environmental information for the Financial Sector* identified similar problems. Addressing these issues would make this source of information effective and useable. There are a number of advantages, notably comprehensiveness and comparability. This will enable its use by financial markets. There will still be some limitations. Companies in low impact sectors will not be involved as they are not regulated, and the data does not cover issues such as product stewardship.

5.4. THE FUTURE: ACHIEVING EFFECTIVE COMMUNICATION

5.4.1. The Financial Markets' View of Environmental Reporting

Considerable research has been made into environmental management and reporting, but there is little practical interaction between environmental reporting systems and the financial services sector, especially among equity analysts. A number of studies have investigated this. For example, a MORI poll of equity analysts in November 1994 found that 69% had never seen a corporate environmental report while only 3% had seen two or more.

The 1994 Business in the Environment survey *City Analysts and the Environment* on environmental attitudes among leading investment analysts painted a picture of widespread indifference. When assessing a company, four analysts out of 67 interviewed regarded environmental policy as 'very important' while 16 saw it as 'quite important'. 12% regarded "green" funds as impacting their stock assessments. The usual view is that environmental issues are simply not relevant, there is insufficient investor demand for it to be taken into account and any moves towards sustainability could threaten short term profits. 42% felt that non-standard reporting practices were a barrier to assessing the performance of companies, along with 40% who regarded the attitude of investors as a barrier.

Only analysts following the utilities sectors regarded themselves as being well informed about environmental aspects affecting their own sector. In contrast, 67% of analysts following the financial sector saw themselves as being poorly informed. Without prompting, 43% of analysts stated that they never used environmental information. The survey concluded that:

- environmental disclosures of companies is not trusted;
- information provided is seen as subjective;
- information is of a technical nature and shrouded in jargon;
- lack of standardisation makes information inapplicable;
- current levels and qualities of disclosure are insufficient for decision making;
- analysts want data to be trustworthy;
- to be of value, information needs to help them identify leaders within a sector.

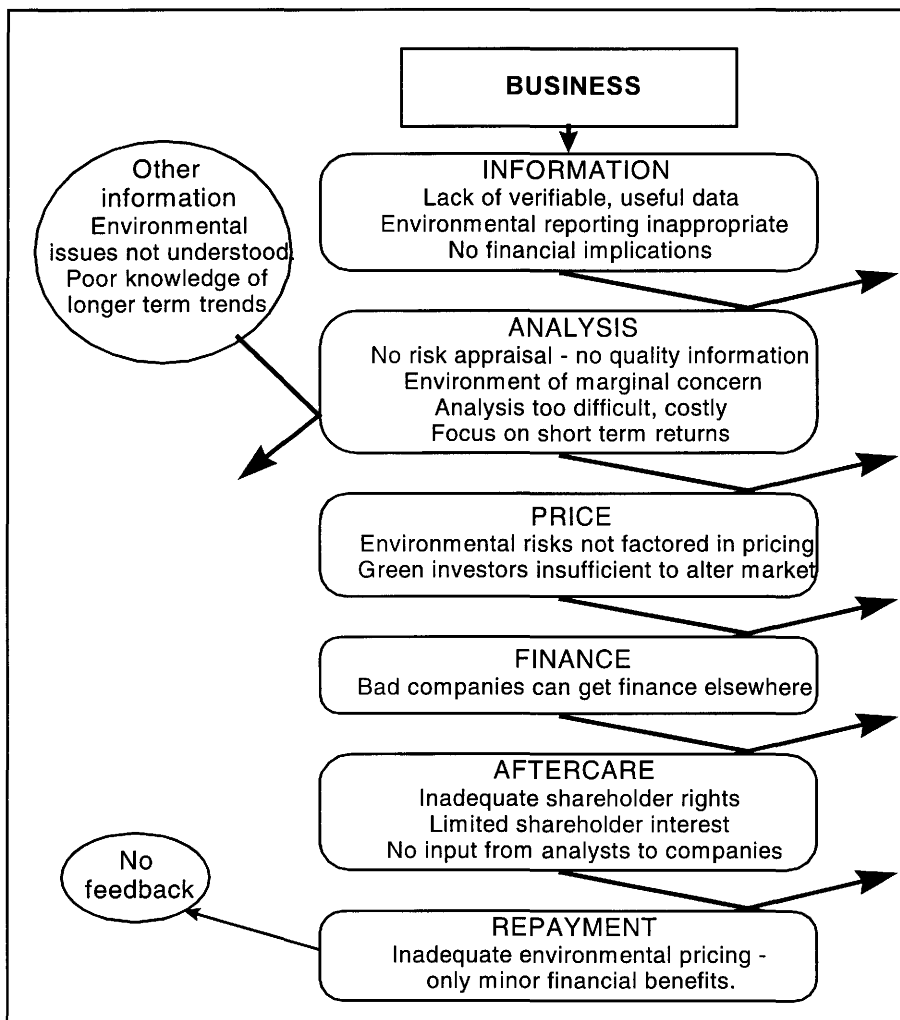
The financial services sector usually sees any potential source of information in a positive light. Environmental reporting's current lack of credibility is highlighted by the fact that only just over half of fund managers regarded an externally verified environmental report as being useful, with lesser numbers supporting other forms of disclosure.

MORI's 1996 survey *Institutional Investors and Analysts in the UK* found that only 6% of investors and equity analysts saw environmental responsibility as important when making their judgement about companies, compared with 94% for financial performance and 93% for management quality. Environmental concerns are seen as being peripheral. The proportion of investors who take note of environmental concerns has not increased during the four surveys carried out from 1993 to 1996.

However, investors saw as being quite important a number of issues where environmental factors undoubtedly play a part - such as quality of products and services (70%) and image/reputation (14%). When looking at quality of management, strategic thinking was considered the most important aspect of senior level management. A substantial majority agreed with the statement that environmental pressures and companies' response to them will have an increasing impact on profitability. It appears evident that while environment may not be a primary influence on company valuation it has scope to be a significant secondary influence. It is not unreasonable to conclude that the absence of appropriate environmental information limits greater consideration of environmental issues.

The following diagram summarises the current perception and use of environmental information by financial analysts:

Figure 4: Why Sustainable Development is Marginalised by the Capital Markets

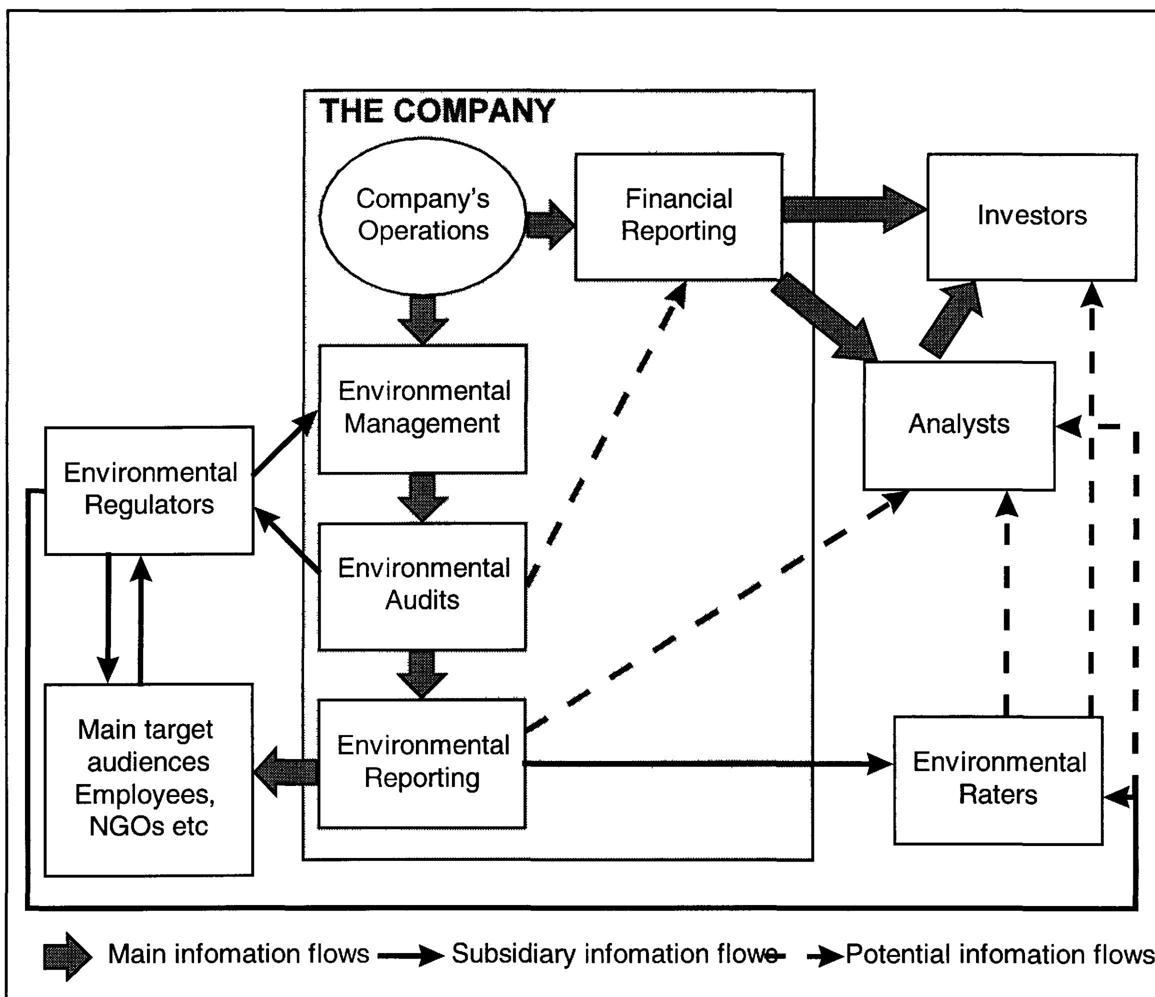


5.4.2. Making Environmental Management and Reporting Meaningful

The diagram below shows the current status of information flows in a company. One set of largely financial information flows out to investors and analysts, while a separate flow of information on environmental issues flows off to various audiences. To bring the environmental information to the attention of financial audiences there appear to be two main options.

- Information can be supplied directly to the financial community in a form that analysts can assess and use, either separately or via existing channels, notably the annual report.
- Alternatively, environmental information could be gathered and processed by specialist "raters", who could then present the information to financial markets in a summary form.

Figure 5: Environmental and Financial Information Flows: Existing and Potential



If either of these approaches is to prove useful, the investment community must be supplied with information geared to its needs, not those of environmentalists or public relations officers. This involves recognising firstly some basic realities of investment:

- Equity analysts and fund managers receive excessive amounts of information, much of it "noise". Unless information has some direct, readily apparent applicability, it will be ignored.
- Information needs to be relevant to the key investment analysis criteria. These include: financial results, management quality, business risks, strategy and growth prospects.
- Information needs to be available and comparable across a range of companies.

This is not intended to imply that financial markets are always efficient users of information - indeed they are prone to gossip and "fads" (and indeed may be prejudiced against environmental information at present). However, in seeking to persuade the financial markets to use environmental information, it is necessary to work within their existing patterns of activity.

The following are to be avoided in addressing the financial sector:

- Unnecessary detail and information - comprehensive listings of various emissions, irrelevant environmental information (e.g. donations).
- Targets, and year on year comparisons without reference to hard numbers (whether in financial or quantity terms.).
- Approaches such as the idea of a 'triple bottom line' (economic / environmental / social accounting and reporting), which are likely to send the wrong signals to the financial markets as they imply a diversion from the primarily financial focus that investors expect. Instead the emphasis should be on environmental performance as a contributor to, and indicator of, superior financial performance.

5.4.3. Environmental Reporting for the Financial Sector

Some studies have started to look at the environmental information needs of the financial sector, notably the Advisory Committee on Business and the Environment (ACBE) in the UK, and VfU in Germany, Switzerland and Austria.

ACBE saw the financial implications of environmental issues as being primarily in the area of risk - arguably a rather narrow perspective. Its starting point was existing company accounts. It saw three areas where environmental information could be included:

- Existing financial disclosure requirements: e.g. balance sheet provisions for liabilities, contingencies, provisions for long term decommissioning costs, asset impairment.
- Discretionary financial disclosures: e.g. environmental expenditure, capitalised environmental expenditure, fines and penalties. There is some debate over the ease of identifying such information (particularly expenditure) and its actual usefulness.
- Non-financial discretionary disclosure: e.g. analysis of the environmental issues, policy concerning environmental protection, the extent of implementation of measures to meet future legal requirements. The operating and financial review should cover identification of environmental risks, their management approach, the existence of EMS and the extent to which environmental policy has been integrated in the overall business plan.

ACBE felt that such disclosures should be in the main financial report rather than in the environmental report. A stand alone environmental report was a complement to, and not a substitute for, environmental information in the financial accounts.

VfU recommendations are broadly similar but with a slightly different emphasis. They see a key component being the development of environmental performance indicators, such as greenhouse gas emissions, the production of waste and the use of energy and water. Such indicators should be driven partly on a sectoral basis.

Such developments are compatible with, and can build on, the suggestions of the Accounting Advisory Forum, discussed in section 5.3.2 . There is substantial interest in the development of such information disclosures, for example from the asset management working group of the UNEP Insurance Initiative.

Overall there is scope to develop an approach for reporting issues to financial institutions, building on much of the work done so far. It should probably consist of three parts:

- financial measures where useful and quantifiable;

- non-financial but quantified performance indicators, relevant to the particular industry and calculated on an industry agreed basis;
- an environmental review, consisting of factual statements regarding EMS, environmental policy, compliance, product stewardship etc.

A key aspect of such reports is that they should be concise - a maximum of a few pages - and standardised. Industry is likely to be reasonably sympathetic to such proposals.

5.4.4. Environmental Rating and Analysis

Instead of providing information directly to the financial markets, an alternative approach is for information to be analysed by an intermediary who can provide an assessment of companies. There is a clear precedent in the bond markets where credit analysis is largely carried out by independent rating agencies. They offer a number of advantages: they provide a standardised evaluation of companies, they provide a summary assessment of companies suitable for use by hard pressed analysts, and they can take the time to shift through complex and detailed environmental information to arrive at their conclusions.

A number of organisations have developed services offering environmental ratings, summarised in the table below.

Agency	Coverage	Companies	Research	Markets
CEP	USA	N/A	In-depth	Ethical investors, etc.
Ecco-Check	Europe	>850,000	Basic	Broad base
ERI	Europe	N/A	In-depth	Financial services sector
IRRC	USA	S&P 500	In-depth	Industry and finance
Oko-Invest	Europe	c30	One-off	Environmental investors
SERM	UK	250-1000	Detailed	Corporations
SYBERR	UK	350,000	Basic	Banks, equities and insurance
Triumvirate	UK	500-2500	In-depth	Financial services sector

A key issue with environmental rating is what aspect of environmental performance / risk exactly it is measuring. The main possibilities are:

Measure	Main Audience	Comments
Environmental Performance	"green"/ethical investors	Broader audience depends on direct acceptance of the idea superior environmental performance leads to enhanced financial performance.
Downside risk - the prospect of environmental risk will materially affect company viability.	Banks and other lending institutions. Insurers	Should largely be factored into existing credit rating where they exist.
Relative environmental performance, eco-efficiency	"green" investors, mainstream investors?	Potential demand at present limited.

At present, there is minimal interest in environmental rating services amongst equity analysts and mainstream fund managers. It is worth noting that credit ratings themselves, while noted by equity analysts, play a fairly minor part in their determinations. There may be a greater level of interest among lending institutions, but even here most of the larger banks prefer to develop their own approaches. As with debt raters, assessment criteria is usually propriety, which given its limited applicability, makes this even less attractive to the conventional financial markets. Another key issue

is cost - credit ratings are normally paid for by the companies themselves, whereas most environmental raters charge financial institutions for their services.

Yet the principle is potentially sound, especially if it can be extended towards broader issues such as potential risks and rewards. This will require quantifying issues such as management strategy, strategic risks and opportunities and eco-efficiency. The BiE Index of corporate environmental engagement (see Appendix II) presents an interesting attempt to address these issues. However, while there is a need for brevity and simplicity in communicating environmental performance, a single benchmark may be too concise, given the complexity of environmental issues.

A key issue in encouraging the development of environmental rating will be to improve environmental information generally, including that made available through the regulators. This will reduce costs and improve credibility of the data.

In terms of assessing downside environmental risk, the existing credit reference agencies may be best placed to look at environmental issues - indeed they should already be factoring much of the information in their assessments. To date, however, they have shown only modest interest in such concerns. There are signs that this may be changing. Recently, in a survey of American power utilities, the rating agency Fitch & Co made reference to the relative high levels of carbon emissions by certain utilities as a potential risk factor. It is worth noting that this was made possible based on the public availability of the information together some original research by an environmental NGO.

The Swedish government study on environmental reporting favoured this route and concluded that extending the existing activities of the credit information agencies to include the provision of environmental information was the best way to enable the financial sector to assess environmental risks. It recommended that credit reference agencies should be given access to information held by the public agencies and that the content of environment reports submitted under the Environmental Protection Act should be reviewed taking account of the needs of the financial sector, together with a review of the types of companies required to submit such reports. The potential for the use of information technology should also be investigated.

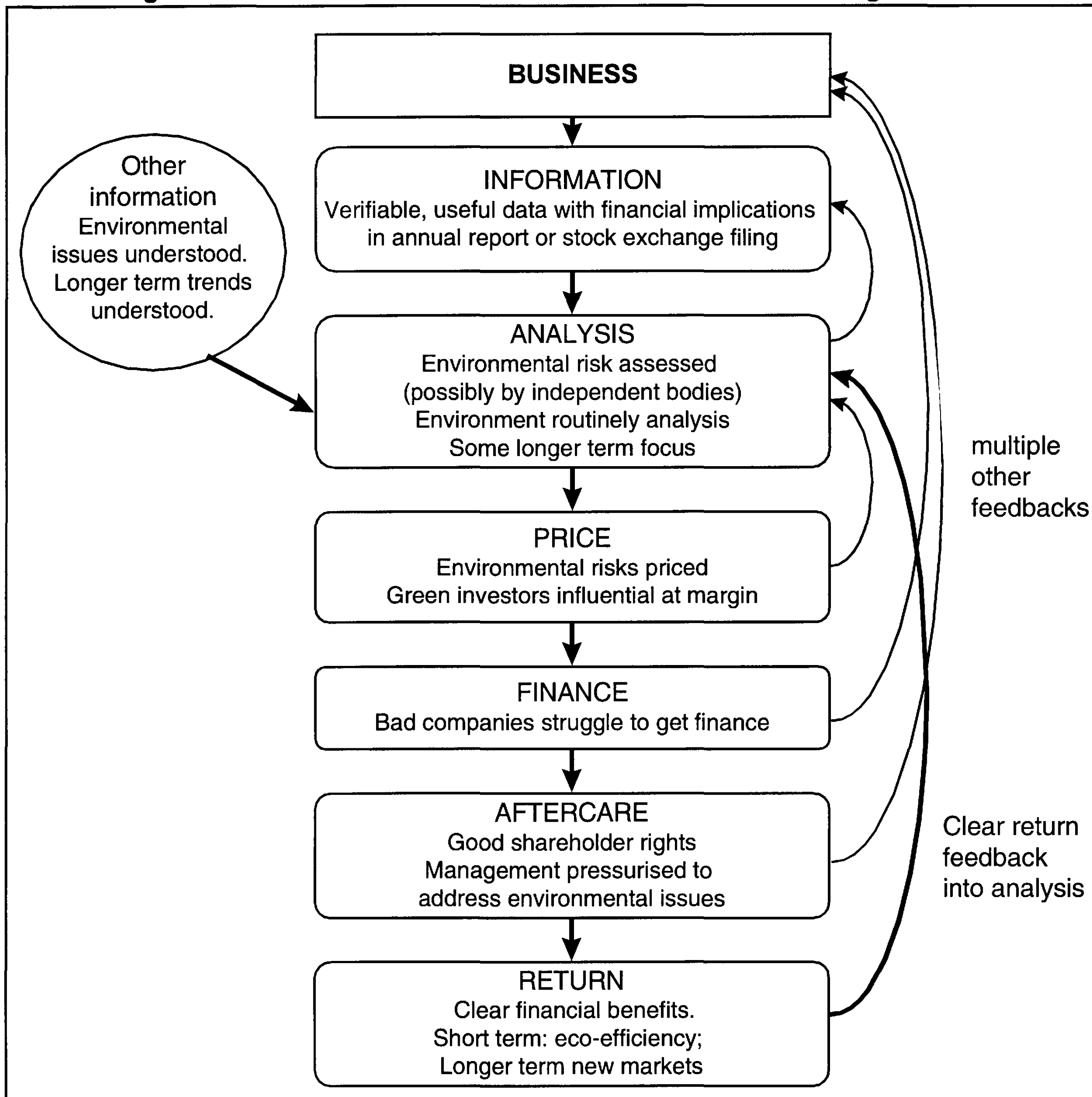
5.5. ANALYSIS AND WAYS FORWARD:

Companies have made considerable progress in understanding and responding to environmental challenge, and see it as material to their business performance. They have become increasingly interested in communicating their environmental performance and over the last few years and considerable progress has been made in developing environmental reporting and accounting. However, the existing avenues of communication are not yet commonly accepted by the financial markets, with key reasons including a lack of standardisation, incomplete coverage and too broad a focus. There appears to be a clear role for policy makers to take a lead in overcoming these obstacles, and developing standards for environmental reporting.

Policy makers can also help overcome the information deficit by making available publicly held information in a way that financial markets can easily access and use.

If materially applicable environmental information can be communicated and acted upon, the blockages at the information and analysis stages for capital raising can be overcome, enabling the market to respond to, and reward, environmentally responsible companies. The diagram shows the transactional model, with environmental information effectively included and factored into the financial decision making process.

Figure 6: Environmental Information in the Decision Making Process



6. The Environmental Sector

6.1. DEFINING ENVIRONMENTAL INVESTMENTS

By the broad nature of its interactions with the economy, the environmental sector evades a satisfactorily hard and fast description as a corporate entity. Definitions have been discussed at length in the OECD, the Commission and others. For the purpose of this report the environmental sector is regarded as being those companies whose principal business activities centre on the environment, in some sense. The sector can be split into:

- The traditional environmental sector: those industries whose business is working with industry and other organisations to reduce their impact on the environment (e.g. measuring, managing, or correcting environmental damage).
- The "green pioneers": companies in various areas of economic activity but whose approach to environment is clearly different from their industry norms. Often their approach to environmental issues will be a defining part of the way that company ways does business.

Four main segments of the traditional environmental sector can be recognised:

Water Companies. Water companies manage the supply of water and the treatment of waste water. Many also have significant waste management businesses. They are among the largest environmental companies. They can be controversial investments, because they are in the environmental front-line, and even the most conscientious water company may be responsible for occasional regulatory lapses. EU legislation has driven them to make major investments in upgrading treatment facilities. The UK, France, Spain and Belgium are the EU countries with major private water companies

Waste Management and Recycling. Various companies provide services to companies and local authorities to handle various waste streams. Much activity is still performed by municipalities. Increasingly the focus is on recycling and waste reduction rather than disposal, and this has boosted the performance of those focusing on the new markets at the expense of those committed to landfill.

Environmental Technology. A variety of companies provide hardware and systems, to measure, control, prevent and clean up various forms of pollution. Defining the sector is difficult because with the shift to cleaner production and avoiding pollution at source, often the best environmental technology is the best production technology. This shift has been a major issue for those who over-focused on end-of-pipe solutions.

Other areas. Derelict land remediation, environmental consulting and laboratory services are related to the water and waste management sectors, usually operating as small companies or parts of major entities either in the above sectors or within the construction and business services sectors.

The traditional environmental sector is very much tied up with the public sector, in that regulations will often determine the extent of market opportunities and the development of the sector. In the water and waste industry, the public sector is also often involved as a customer and even a competitor. The sector is generally capital intensive and technologically orientated.

Examples of "green pioneers" include:

Clean Energy Companies. This includes renewable energy (e.g. solar, wind and biomass) and energy efficiency. Danish, German, Dutch and Scandinavian companies are important in the renewable energy sector. It is not yet fully competitive with conventional power so most operators are supported by various public mechanisms. Energy efficiency is a rather diverse sector. It is often economically worthwhile, but structural difficulties impede its take up. Companies in the sector provide products and services such as energy efficient equipment, energy management systems, and energy contracting.

Organic Agriculture and food distribution. There is increasing interest across Europe for organically produced food and products such as cotton. While equity investment in farmers that are shifting to organic agriculture is rare, such businesses often require loan assistance. The distribution and processing sub-sector, which many feel is a priority focus, can present equity opportunities. A key challenge is the range of subsidies almost predominantly available for non-organic agriculture.

Eco-tourism. Tourism is the world's largest industry, and is expanding rapidly. Eco-tourism is a small, but even faster growing, niche. Eco-tourism uses natural resources as part of the holiday's attraction and aims to have a minimal effect on the environment. No defined standards exist for eco-tourism and some ventures may have an adverse effect on the environment. Most eco-tourism companies are small and privately held.

"Green" retailing. These are retailers who provide products with a reduced environmental impact, most famously the UK's Body Shop. Most are smaller, but the rewards for finding the right concept can be significant. Some like-minded manufacturers have also emerged, such as France's Borion and Ecover of the Netherlands.

In addition some other companies might be regarded as "green pioneers" if they are sufficiently different from their peers to merit special attention - examples include companies involved in developing electric vehicles, or companies who are developing radically improved process technologies - "clean technologies". The development of ecologically sound buildings and industrial sites, and / or the brownfield sites are also possible environmental sector businesses.

Most "green pioneer" industries represent niches within a broader industry (organic farming in the food sector, renewable energy in the power sector), thus creating considerable problems in definition. This can also make companies vulnerable, in that once the niche players have developed a market the mainstream competitors can move in and take it over. In contrast the traditional environmental industry often comprises entire industries, such as water.

6.2. THE ENVIRONMENTAL SECTOR IN PRACTICE

Environmental companies come in many different forms and types. Listed companies are the most well known to the financial community, but there are a great number of other entities, most notably independent companies (Biwater Plc, a management buy-out), privately owned SMEs. (especially the environmental consultancies) and divisions within major companies such as the renewable energy division of Siemens. There are believed to be some 25-35,000 environmental entities currently operating within the EU. More than 99% of these are not listed companies.

It is also useful to distinguish environmental entities into ventures, projects and utilities. This helps to identify potential capital market needs.

Ventures	A company involved in a on-going activity, aiming to grow and develop. May be involved in services (e.g. recycling) or technology (pollution monitoring). While a few larger companies are listed, a great many are private and are SMEs.
Project	A company which owns a single stand-alone entity and aims to recoup its capital costs through its revenues (e.g. a wind farm, an individual water plant). Generally at least fairly large (ECU 5m or more). Rarely publicly listed.
Utilities	Typically a company owning a number of projects (e.g. in water, sewerage, waste management) on their balance sheet, and / or operating long term management contracts. Generally large and publicly quoted.

Listed Environmental Equities
Because many larger companies have a mix of activities, there is rarely such a thing as a 'pure' environmental company, especially amongst the listed entities. In the early 1990s, the definition of an

'environmental play' in Europe was a company where at least 10% of its turnover was in one of more of the 'hard' activities noted above. Now minima have broadly risen to at least 25-50%. In the USA, 50% minima have been accepted since the late 1980s. Some 65 listed traditional environmental sector companies have been identified in the EU, along with seven in Switzerland and Norway.

As far as stock exchanges are concerned, the environmental sector exists largely as a marketing concept rather than a defined sector. Companies within the sector are found in the following standard market sectors in Europe: Water / Utilities; Construction / Building Materials; Support Services; Chemicals; Engineering; and Electronics. The only clearly standard sectors with are environmental are the UK's Water sector and the US Pollution Control sector.

The problems of definition noted above will remain until there is sufficient incentive for a more formalised definition to exist. There might be some merit in a formal standardised definition from the perspective of "green" investors (wanting to know what they were investing in), or so that banks and others can report their lending to this sector (and so permit benchmarking). However, reaching such a definition is likely to prove difficult. More broadly it is not clear what damage is being done by such confusion at present and there does not appear to be sufficient incentive for change.

6.3. PERCEPTION OF THE SECTOR

6.3.1. The Future Potential: High Growth

For the financial services sector to take an interest in the environment, it needs to be both substantial and growing. Helmet Kaiser Unternehmensberatung's (HKU) 1997 survey "The Reorientation in the Environmental Technology Industry" concludes that the market is set to be one of few major growth industries over the next 13 years.

Year (DM bn)	Western Europe	Eastern Europe	World Total
1997	217	51	686
2010	316	115	1,100
Growth	46%	125%	60%

The survey is restricted to the "traditional" environmental sector. It is of interest to note that HKU says one of the main constraints to growth in Europe is the lack of understanding about the financial resources available from the EU. Prospects appear good for many of the green pioneers: demand exceeds supply in organic agriculture; the EU is committing itself to substantial increases in renewable energy and the industry is growing between 15 and 25% globally; eco-tourism is the fastest growing market segment of a fast growing industry.

Thus many would conclude such high growth means the sector has to outperform - investments should grow in value as the sector's proportion of GNP increases. While the underlying growth trends provide an encouraging backdrop to the sector, high growth does not always result in high performance.

Other Reasons to Invest in the Sector

As well as purely financial reasons to support the sector, a number of individuals wish to invest in the sector because it is seen as doing "good" things with their money. Such investors can range from those who would like to invest in environmental companies but still expect a commercial return to those who are not really interested in the returns and primarily want to support the sector. Some of these may take the more radical view that without a healthy environment there will be no future, thus to invest in the environmental sector is an imperative.

These investors have certainly helped fund the sector, and have helped create a number of key investment vehicles and intermediaries discussed later. However, it is also probably fair to say that

such investment attitudes have helped create and perpetuate some of the investment problems the sector faces and may have even helped to deter mainstream investors by their very presence i.e. "if "green" investors are backing this, then it can't be a good investment".

6.3.2. Historic Performance: Disappointment

It is evident that while the sector offers excellent potential, it has performed poorly to date. Environmental companies often depend on external intervention where the market for resources and services remains unfairly biased against sustainable development. They may have to compete with companies supported by hidden subsidies or uncorrected externalities, in areas such as industrial agriculture, waste generation and conventional energy.

To illustrate: the value of Clerical Medical's Evergreen Fund has grown by 37% in the five years to May 1997, while the UK's FTSE 100 Index advanced by 67%. The fund was notably limited to a strict interpretation of companies in the environmental sector, rather than the broader approach of its competitors.

At the corporate level, the experience of several listed companies highlights this: CFF of France suffered several years of losses in the early 1990s because its iron and aluminium recycling activities were hit by low commodity prices for metals. Its share price fell by more than 75% during this period. Germany's BUS, which specialises in the recovery of metals from industrial process slags suffered difficulties in selling on its reprocessed materials in the early to mid 1990s. Bimec of the UK found that a decline in the environmental engineering market, after a period of over-expansion meant there were no financial resources to face a recession. Bimec went bankrupt in 1993. Kenetech, a US wind energy company (one of the few listed renewable energy companies) was seen as an exciting growth stock, but over-expansion and a collapse in the US wind energy market lead to bankruptcy. The experience of Caird, a waste management company, was discussed is chapter Three. Such examples are extreme, but cast a deep shadow over the sector from the perspective of financial institutions.

6.3.3. Market Perception of the Sector

Environmental equities have been subject to broad generalisations as far as the financial markets are concerned. Some of these are pertinent to their performance:

- **'Recession proof': 1988-91.** The enactment of environmental legislation would force the growth of the sector irrespective of a recession. Environmental activities seen as the growth element in mainstream companies, sometimes by spinning off subsidiaries.
- **'Recession resistant': 1992-94.** Companies were seen as being in a growth market and their management and long term positioning would enable them to hold their own in difficult markets. Environmental activities were seen as part of a portfolio of cyclical and counter cyclical activities, and thus part of one's general corporate growth package.
- **'Environmental utility': 1995-97.** Erratic development and enforcement of legislation and regulation means that environmental services need to be seen as utilities. They have no special growth attributes, but when factors operate in their favour, the better placed companies will perform strongly. A sector seen as having its own difficulties as well as attractions, where growth cannot be taken for granted.

The sector and its followers have been learning through experience. There was no such thing as an environmental sector in Europe prior to 1988, and a little pragmatism will be of benefit in selling the sector to the financial services sector and investors alike.

6.4. FINANCING THE ENVIRONMENTAL SECTOR

In analysing the environmental sector separately, a key issue is whether it faces financing difficulties fundamentally different from the mainstream sector or whether it can be broadly regarded as having the same challenges as other business sectors. Analysis suggest it does differ in two key areas:

- the sector faces a number of specific problems largely unique to the sector;
- the sector may place undue emphasis on emerging financing forms; stretch existing financing mechanisms into new areas; and require a degree of financial innovation.

Policy makers may be interested in intervening to support the sector if this is an effective way of achieving policy goals. Certainly such intervention would fit the objective of finding new policy instruments. A number of EU mechanisms already provide support for the sector. Understanding some of the financing challenges faced by the sector is likely to help refine and increase the effectiveness of policy actions.

6.4.1. Specific Problems Facing Environmental Sector Companies

Analysis of disappointing performance of the environmental sector indicates six key problems.

1: Vulnerability to policy developments

Problem: Many companies in the sector are particularly linked to public policy. Uncertain or unpredictable policy development means that companies can fail to fulfil their potential for no reason of their own. Even when policy is developed, the long delay between the announcement of legislation and its effective enforcement creates uncertainty. The failure of legislators to deliver expected policy development can penalise progressive companies seeking to anticipate such development.

Response: Those involved in the public policy process need to be fully aware of the consequences of their actions. In particular, policy “over-reach” is to be avoided. Adequate communication of the effects of legal changes is needed, along with their consistent and timely implementation.

2: ‘Eye on two balls’

Problem: Many companies in the sector may be driven partly by environmental goals - the desire to “save the planet”. While in theory entrepreneurs should recognise that their financial success is essential if they are to achieve their environmental goals, in practice conflicts often appear to arise with the demands of financial performance, for instance, resulting in the failure to bring in key business expertise or leading to unrealistic over-expansion.

Response: Identify opportunities to train and educate environmental entrepreneurs in good business practice and working with the financial markets.

3: Public perception

Problem: The environment is a subject that leads to exaggeration and distortion, including by many environmental companies. Hyped up expectations, allied with “fads” (by investors, consumers, media and the companies themselves) lead to backlashes when undue expectations are not met. Certain companies have traded on image rather than genuine environmental performance.

Response: Information and education, especially for companies and the financial sector. Engaging the media so that the appropriate message is disseminated in a pragmatic and orderly manner.

4: Eco-efficiency and changing business practices.

Problem: Many environmental companies have based their business on handling industry’s waste. However, industry is pursuing eco-efficiency and actively seeking to reduce waste, eliminating key markets for the environmental sector. (Conversely, end-of-pipe waste management systems are not outmoded in a day, so markets move at an unpredictable rate.)

Response: Encourage the sector to move upstream and understand its customers' priorities; educate financiers of the potential of eco-efficiency and potential for waste reduction.

5: Front-line

Problem: The high profile presence of the sector and close relationship with the environment can be a dubious business benefit. Leading environmental companies will get the blame for any failings because of expectations that they will be perfect. Regulators will often target them, rather than the upstream perpetuators of environmental damage (as in the case of Anglian Water and Severn Trent in the UK, where they have to spend £900m on lowering nitrate and pesticide levels in drinking water which came about from industrial agriculture). This can lead to high operating and capital expenditure, diversion of management's time, concern over potential liabilities (visible through published environmental reports).

Response: Development of appropriate policy mechanisms which do not allow such companies to become a "sink" for environment concern - ensure they can implement the polluter pays principle too. Education of the public, the media, regulators and markets, and long term approach by investors.

6: The centrality of public finance

Problem: Many environmental companies may depend on public finance, especially SMEs e.g. for research grants. This creates problems: companies may have difficulty learning about the availability of these sources of finance as well as problems in applying for them; successful applicants can become dependent on such sources of grant money. In particular, it can reinforce the "eyes on two balls" problem as companies become used to extolling their environmental credentials. This can lead to major difficulties when grant money runs out and companies are thrust into the real world. The drying up of public funds before companies are ready to attract private capital has been termed the "the valley of death" by some observers.

Response: Develop improved communications strategies to inform companies about funds available. Integrate and streamline application procedures. Consider the use of financial intermediaries (already used on some EU programs, e.g. ECIP). Develop mechanisms to arrange a handover to private sources of finance at the end of such programs.

6.4.2. Sources of Finance

The environmental sector has in theory access to most generally available financing mechanisms from commercial banks and the investment sector - in an ideal world this might be sufficient. However, given the problems above, the sector has particular need for innovation in accessing finance geared to its needs. The sector also has a particular demand for certain types of finance which may less frequently available or present special problems. While some of these have been touched on in the earlier chapters they are discussed in more detail here. The sector is supported by a number of specialist institutions providing finance, and a number of specialist funds and investment vehicles have been set up. The most relevant categories of financing are summarised in the table below.

Financing type	Target activity	Scale	Service
Project Finance	Projects	Large	Mainstream
Leasing	Projects / sales	Micro - Medium	Mainstream
Ecological / ethical banks	Projects (some ventures)	Small	Specialist
Venture capital	Ventures	Medium	Mainstream
Initial Public offerings	Ventures (utilities)	Large	Mainstream
Rights Issues, bond issues	Ventures, utilities	Large	Mainstream

"Green" advisory boutiques	Ventures / projects	Medium-large	Specialist
Environmental sector funds	Ventures or projects	Medium-large in investments made	Specialist
NGOs	Ventures or projects	micro-medium	Specialist

Scale: micro: under ECU 50,000, small: ECU 50-500,000; medium: ECU 500,000-5m, large ECU 5m+

Project Finance

Project finance is investment into specific, stand-alone projects, with only limited recourse to outside parties if the project runs into difficulties. In the environmental sector, projects can involve water, renewable energy and waste management (eco-tourism facilities and public transport systems can also be project financed). Project finance normally depends on a key contract to supply or charge for the services provided (e.g. power or water). Negotiating a viable and robust contract can be difficult and controversial, particularly in sectors like water where it may result in increased consumer costs. If these contracts are secure there can be some flexibility over ownership of the facility - such as build-own-operate-transfer (BOOT) structures. There has been growing interest, particularly in developing countries, in project finance and it can provide an effective way of providing infrastructure funding.

One key issue for the environmental sector is the need to achieve a certain scale. To justify the transaction costs involved, project finance normally requires sums of ECU 20m and above. This can restrict its applicability in certain areas such as renewable energy where few projects reach this size.

Leasing

Leasing is the provision of finance to acquire a piece of capital equipment, with the finance secured by title to the equipment. It is a highly flexible form of finance used throughout business to finance everything from photocopiers to aircraft. Leasing works best where the equipment is movable and saleable, although it has been used more generally. It can be regarded as a form of sales financing - i.e. it helps customers of a company buy that company's equipment. Leasing has been used to buy various sources of environmental technology from monitoring equipment to wind turbines. It has not been possible to identify any leasing company focused on the environmental sector. Indeed, there may well be scope to increase the links between the leasing industry and the environmental sector.

Leasing can often be combined with tax advantages (by transferring a tax credit to an organisation that can use it). If environmental equipment is given particular tax allowances, then it can play a very useful role - see the Netherlands case study in the annexes.

Ecological / Ethical Banks

A number of ecological or ethical banks exist in the EU and Switzerland, including: the Ökobank and UmweltBank in Germany (see case studies in Appendix II), Triodos Bank of the Netherlands, Belgium and the UK, and the Ecology Building Society in the UK. (The UK's Co-op bank discussed in the case studies lies somewhere between a mainstream bank and an niche ethical bank.) These banks are typically very small (although growing) and they focus on providing lending for "good" projects which results in a major interest in small projects and business in the environmental sector, where they can be a significant force. They have also been behind the formation of a number of the environmental funds discussed below.

Venture Capital

Venture capital is a specialist form of investment which provides equity capital to small, new companies. Small companies with no track record can have difficulties raising capital from most investors, and venture capitalists aim to fill the gap. Venture capital is normally high return / high risk - venture capitalists expect to see returns of over 25% from their investments but accept that a certain number will fail. Normally, venture capitalists have a relatively long term focus, aiming to hold

companies for several years before selling them. Venture capitalists generally take a significant stake in a relatively small number of companies and have a more active approach than most other types of investors, in terms of participating in management of the company. They will often have a seat on the board and will aim to advise and help companies in business strategy, finance etc. Venture capital often has a focus on technology, with information technology and biotechnology being recent favourites. Venture capital has been strongest in the US, although it has grown substantially recently in the UK and there is increasing interest in venture capital in the rest of Europe as it is seen as encouraging entrepreneurial activity and economic growth. At the end of 1995, European venture capital had made some 4749 investments totalling ECU 5.4bn.

Venture capital management companies are often part of banking groups, but many are independent organisations, usually privately quoted. CDC of France and 3i of the UK are examples of major institutional investors who put pre-listing finance into developing companies.

Initial Public Offerings:

Obtaining a stock market listing and using the opportunity to raise capital is a mainstream financing activity which has been used by the environmental sector, e.g. Sto and Sero in Germany in the mid 1990s. The growth of second tier stock exchanges around Europe should help make it easier for environmental sector companies to obtain listings and raise finance. This process would be made easier still if investors were properly informed about the environmental sector and had faith in the development of environmental policy.

Rights Issues and Bond Issues

Once listed environmental sector companies can access the whole range of financing options such as rights issues (the issuing of new shares) and the raising of bonds. For example, Waste Recycling Group in the UK sought money from shareholders to expand its recycling and waste collection activities in 1995 and 1996. Again, companies will be vulnerable to the overall perception and understanding of the sector.

Investment and Financial Advisory Boutiques

Several small financial boutiques have emerged in recent years who aim to help environmental sector companies access finance, both from publicly known sources and from private sources such as high net worth individuals. Examples, with typical activities, include Delphi International / VTZ (venture capital / investment advisory work); Sachem (corporate finance), Impax Capital (project finance for renewable energy companies), Ecofin (traditional environmental sector analysis and investment advice) and Wheb (corporate strategy and finance). Such companies can provide a valuable function by combining a detailed knowledge of the sector together with practical financing expertise, and helping environmental sector companies address some of the obstacles faced earlier.

Environmental Sector Funds

Dedicated environmental sector funds fall into two categories: Those investing largely or solely in listed investments and those investing in unlisted ventures or projects.

Listed funds were the first to be launched and have been the most prominent. Several such funds were launched at the height of interest in the environment in the early 1990s. Many of these funds have not performed well, because they were launched with too little an understanding of environmental trends and too narrow a definition of environment. As a result they invested in waste management and end-of-pipe technologies just as the market was shifting to the cleaner production and waste minimisation.

Buying listed environmental company shares on the market does not channel any new money into the environmental services sector. The money goes into shares which have already been placed on to the market. Funds can contribute to environmental investment by investing in companies at the initial

public offering (IPO) stage, or subscribing to rights issues, investing in venture capital or by investing in specific projects.

Otherwise, buying these equities supports the market valuation of sustainable development companies, thereby encouraging more companies to be bought to the market and highlighting investor interest in the sector. The funds can also become forces for maintaining pressure upon the company's operations.

More recently, the attention has shifted to unlisted funds. These funds focus on providing new money to projects and ventures within the environmental sector. They can make a positive contribution to sustainable development, by channelling funds to key areas.

The most prominent example are the "green" funds launched in the Netherlands (see the case study in Appendix II). These funds have focused on providing debt for environmental projects, and have been made especially attractive with the provision of tax concessions to investors. The other area where there is current activity is in the emerging markets where development banks are keen on developing targeted investment vehicles with a sustainable development emphasis.

As well as providing capital, such funds can help overcome some of the obstacles encountered by emerging environmental industries, by building up industry knowledge and providing financial expertise. However, there does appear to be a gap in Europe in providing risk capital, e.g. equity and venture capital. This is particularly likely to hinder environmental entrepreneurs and the development of environmental technology.

NGOs

NGOs have also played a role in mobilising finance for sustainable development. Notable has been the work of US foundations, such as the MacArthur Foundation and the Rockefeller Brothers Foundation in supporting the development of innovative financing vehicles in areas such as photovoltaics and other renewable energy projects; as well as sustainable forestry. They have helped create vehicles like the Environmental Enterprises Assistance Fund, which provides funding for small scale renewable energy projects and E&Co, which provides pre-development finance for projects. There are some similar examples in Europe, particularly in the fair trade and community development areas, although generally NGOs are less wealthy and less aware of the potential of the financial markets as a lever for change than in the US. Indeed, there is possibly a greater reliance on the public sector for such support. This has its drawbacks as the public sector can be slower to respond and less open to innovation than independent organisations.

Public Sector Investment Banks

Public sector investment and development banks can play a role in encouraging the private financial sector to support the environmental sector, by supporting research and innovation, providing part funding and by working through intermediary financial institutions. A number of development banks have recognised that with the expanded provision of private finance in many markets, they must redefine their roles. A natural step for them to take is to lead in the provision of finance in new or underfinanced areas, particularly those relevant to broader societal goals, such as sustainable development. Thus financing the environmental sector appears a suitable opportunity for them. Among the multilateral development banks, the European Bank for Reconstruction and Development has the need to support sustainable development in its statutes and has an active environment department. One area where it has been particularly active is supporting energy efficiency and the development of energy service companies. The World Bank Group, notably the International Finance Corporation, has also started to focus its attention on the financial opportunities and challenges of sustainable development and has built up a portfolio of activities, featured in the case study. There is potential for corresponding European organisations to take a similar leadership role.

6.5. ANALYSIS AND WAYS FORWARD

In financial market terms the environmental industry represents something of a paradox: great fundamental prospects but poor performance. This study has identified a number of factors behind this, but there is scope for more detailed work. However, one lesson for policy makers is the need for developing policy in a way which is delivered and can be anticipated.

In terms of supplying capital to the key areas for sustainable development (such as water, waste, environmental technology, energy efficiency, renewable energy), there are a few financial institutions already providing specialised assistance in this area and new approaches are also helping. There are also policy opportunities for encouraging capital into these areas as the Dutch tax incentives in the case studies demonstrate. However, environmental sector companies still face substantial difficulties in raising finance and it does appear that more could be done if the sector is to develop its full potential.

There is scope to encourage financial markets interest in the environmental sector at a macro level by the clear and consistent development of policy, combined with information dissemination strategies targeted at the financial institutions on environmental change and the potential for the environmental sector. In addition, the public sector can help encourage the financial markets to become involved in environmental projects by structuring contracts appropriately and through developing partnerships with the private sector.

At a more micro level, there is also scope to ensure that entrepreneurs are made aware of the needs of the financial markets at an early stage, through the provision of information and support for training, and to improve the links between scientists, entrepreneurs, financiers and business through support for networking and conferences.

There appear to be validity in providing external support for the development of financial innovation. There are many opportunities to develop new financial products, such as "green" investment funds and venture capital environmental opportunities. It is interesting to note that the World Bank has increasingly recognised the role it can play here - see case study. Direct support which reduces the costs and risks of developing such new financial products could be an effective way of encouraging investment in the sector with substantial leverage.

The EU has a number of programmes which directly support and fund the work of the environmental industry. While clearly of major use to the industry, they are provided without reference to the financial markets, and indeed may divert the environmental industry from addressing the concerns of financiers. Where such funding is provided for research and demonstration (LIFE, THERMIE etc.), the focus of such support is technological, and the tendency has been to regard demonstration projects as an end in themselves, rather than as a step towards the development of successful and financially sound businesses, which is the best way to achieve the dissemination and uptake of new technologies. Measures to enhance the effectiveness of EU funding are discussed in the next chapter.

7. Environmental Policy

7.1. INTRODUCTION

European environmental policy was a reaction to pollution levels that had become intolerable. Its main purpose at the end of the 1960s and in the early 1970s was to avoid the creation of new barriers to trade and artificial distortions in competition within the European Community (EC) that might have resulted from uncoordinated legislation by the Member States. From this reactive approach with its main emphasis on end-of-pipe pollution reduction, EU environmental policy has developed towards the prevention of pollution and the promotion of the rational use of natural resources. The need to further the development of the Single Market and eliminate barriers to trade remains an important aspect of EC policy.

The Fifth Action Programme underlines the importance of applying environmental considerations to the most polluting and most resource-intensive economic sectors as a way to effect improvements (e.g. the Integrated Pollution Prevention and Control Directive). The Programme pays increased attention to market-based instruments (e.g. environmental taxes) and also highlights the importance of instruments through which awareness of and information about environmental issues and potential solutions can be spread (e.g. the Freedom of Access to Information Directive, the Eco-label Scheme).

The EC (as well as many Member States) recognised that the partial failure of environmental policy stemmed from the fight against single phenomena, overlooking the common roots of these phenomena. The integration principle, which calls for an end to symptom-orientated therapy, represents a transformation of the prevention principle. By including environmental considerations at the outset of planning in each sector of the economy and of society, the creation of environmental problems can be avoided. A key principle is "Environmental protection requirements shall be a component of the Community's other policies" (Article 130 r).

Every Directorate is asked to take environmental considerations into account while acting on its own, and the Environmental Directorate is obliged to make sure that this is done appropriately. EU environmental policy has facilitated and accelerated a process of structural change with the result that environmental protection requirements are no longer seen as the exclusive responsibility of one segment of the public administration.

EU environmental policy can impact on the financial services industry in two ways. Firstly, certain measures can be directly relevant to the industry, examples include EMAS, potentially the Eco-label, and direct financial interventions by the EU involving private sector financial partners. Secondly, and more importantly, EU environmental policy has an indirect influence on the activities of the financial sector through its impact on those it lends to and invests in. As the financial sector is a processor of information and thus an amplifier of changes in market conditions it can have a major impact on the efficacy of environmental policy. The financial sector, with power to influence activities of other commercial sectors and the public at large, is an important facilitator of industrial restructuring.

Key environmental policy areas particularly relevant to the financial sector are described and analysed for their effect on the financial services industry and with a view to the impact this industry has or could have on their efficacy. Seen in the light of the development of EU environmental policy so far, treating the financial sector as a new type of target sector would appear to be a necessary step and a logical continuation of current trends.

7.2. DIRECT INTERVENTION

In the area of procurement policy, EU institutions have not taken any steps so far to increase demand for environmentally orientated financial services through their own actions. However, as major

purchasers of financial services, they have the potential to use this power to encourage environmentally oriented financial services by including ecological as well as economic criteria in their selection assessment.

7.2.1. Funds

Within the EU, LIFE (L'instrument Financier pour l'Environement), the Cohesion Fund and the Structural Funds are the most important funding schemes for environmental projects. Other funds include the Fourth EU Framework Programme for Research, Technological Development and Demonstration Activities, Thermie, SAVE, and ALTENER.

LIFE aims to support the environmental policy of the EC. It offers financial incentives to individuals and companies for projects for priority areas notably the protection of endangered species and habitats (LIFE- Nature; 46% of total) and demonstration projects in industrial activities or preparatory measures to implement EU policies (LIFE environment, 46%) The fund is administered by the Environment Directorate.

The Cohesion Fund aims to strengthen social and economic coherence within the Community. The fund is available only to those Member states with a Gross National Product below 90% of the EU average. Unlike LIFE, funding is limited to public infrastructure. Two kinds of public infrastructure projects are supported: those to enhance the environmental and the transport infrastructure. Equal funding should be given to both areas. The minimum project size is ECU 10m.

The Structural Funds comprise a number of funds which aim to promote the economic and social development of disadvantaged regions, sectors, and social groups within the EU. Most can include environmental projects. Application of the funding varies from Member State to Member State since the Structural Funds are largely administered by national or regional authorities, with policy set by DGXVI.

In some Member States, the substantial amounts of money involved are opening new markets. For instance, construction of sewage treatment plants in some southern European countries, required by EU Directives, in part depends on these funding schemes. Similar funds available for demonstration programmes under LIFE and the Framework Programme create new technologies and business.

Funds for environmental projects are also provided by other European institutions, notably the European Investment Bank, which has the environment as one of its key areas of activity, and European Investment Fund, a partnership between the Commission, the EIB and several financial institutions. The EIF has set up a programme "Growth and the Environment", to provide 50% guarantees of loans made by selected financial institutions to small companies for environmental projects to a total amount of ECU 150m. There are also limited funds for supporting activities.

The financial sector has a number of potential ways of being involved with these funds:

- informing clients about the availability of these funds, thus ensuring the funds are as effectively distributed as possible;
- providing co-finance for projects together with the European Funds;
- particularly with the funds for demonstration projects, providing finance for future projects and business development.

While in many cases the funds were welcome, and for instance reduced risks on a number of transactions, financial market institutions do have a number of concerns about these funds, and see a number of ways in which the funds could be made more available.

In many Member states private sector banks have an important role in counselling business, particularly SMEs, about the official funding programmes for which they are eligible. Bank officers have difficulty keeping abreast of the various different programs and clients are rarely properly

informed. EU environmental funding programmes could be better used if it were easier for bank officers to find out about the existing programmes at both a Commission and a Member State level.

Some banks and bank associations have set up data bases which contain the necessary information but this is too costly for most smaller banks. The EU ought to set up a data base of its funding programmes accessible to interested parties, this would be consistent with general efforts by the EU environmental policy-makers to improve transparency and increase public awareness.

The processes involved in the application for and disbursement of such funds often alienate financial institutions, for example complex and bureaucratic application procedures and long decision times. This is particularly where such funds are intended to support demonstration projects with the intention that private companies should take up and commercialise the demonstrated technology. Commercialisation will normally require additional private finance, yet is often not thought about until too late. The centrality of public finance is already identified as a problem for environmental business. A number of actions could be implemented to improve the links between EU funding and private finance, which should considerably enhance the effectiveness of EU schemes, including:

- The provision of information packs, seminars, and contacts on obtaining finance after the EU support finishes.
- "Partnerships" where a financial institution is appointed to work with the developers of an EU supported project, helping to ensuring that the project developers consider financial issues from the start and have good financial management.
- Active involvement of financial institutions in the selection of projects. Financial institutions would be able to bring their project analysis skills to bear to ensure that the applicants were viable and likely to succeed in the longer term.
- Alternative modalities for disbursement of funds - e.g. through a financial institution on a risk sharing basis. This might dispense with the need for detailed analysis of the project viability by the Commission, as banks will not lend to non-viable projects.

7.2.2. European Environment Agency

The European Environment Agency (EEA, Regulation 1210/90) was set up in October 1993 to collect and cross-check the environmental information provided by the Member States. The EEA co-ordinates the European Environment Information and Observation Network (EIONET), which comprises environmental research institutions and other organisations in the Member States. The Agency's mandate is confined to information gathering; the information is to be used to improve the decision-making of the Commission and Member States, and to enhance the public's knowledge about the state of the environment within the EU. As information has already been identified as a key element for the financial markets to address the environmental issues, the European Environmental Agency (EEA) could play a key role in enabling financial markets access relevant information.

Specifically EEA could improve the availability of useful environmental information on individual companies across the EU, by developing standards in conjunction with Member States. The EEA should familiarise itself with the needs of the financial markets, including the key issues mentioned in section 5.3.3 of company identification, cost, accessibility, standardisation. These considerations should be borne in mind in the development of projects such as the proposed Pollution Emissions Register.

In 1994 the EEA Management Board laid out the specific work programme for the period 1994 - 1999 including a number of areas of relevance to financial markets, including:

- pool experiences with EIA, BATNEEC, eco-audits, eco-labelling;
- guidelines for developing 'green accounting' indicators;

- guidelines for developing programs and projects for environmental infrastructure - technical and financial aspects;
- environmental liability - state and prospects;
- sustainable development in main economic sectors - state and trends;
- application of economic instruments - state and prospects.

Work has yet to start on a number of these projects. These projects suggest further ways EEA could help enhance the role of the financial sector in promoting sustainable development. EEA could inform the financial markets of underlying environment trends, the implications of policy developments and the potential of new tools and instruments such as EMAS. Similarly EEA could inform itself on the operations of the financial markets and then conduct research with the financial markets consequences in mind, such as environmental liability and environmental reporting.

Such an extension of the activities of EEA would be in line with Regulation 1210/90's objective to ensure "the broad dissemination of reliable environmental information".

7.3. REGULATION

The regulatory measures of the EU environmental policy are not directly focused on the financial services industry. Regulation has been directed more towards the clients of the financial sector. The IPPC Directive and the follow-up move have been selected, together with the current discussion on deregulation, to demonstrate the indirect implication of EU Regulation for the financial sector.

7.3.1. Integrated Pollution and Prevention Control (IPPC)

The Directive on integrated pollution prevention and control (96/61/EC) came into force on 30 October 1996. The Directive is broadly based with certain industrial activities having to be authorised in the future to ensure that "a high level of protection for the environment as a whole" is guaranteed. Industrial plants coming under the Directive need a prior permit to operate. The permit imposes emission limits based on the "best available techniques" (BAT), in economic and technical terms the Directive will apply to new plants from 1999 and to existing plants in 2007.

By referring at the same time to emissions into the air, water, and land, the Directive differs from previous legislation which dealt with these emissions separately. Merely shifting the emissions from the air to land to water will be prevented by the new Directive. The integrated approach is thought to open the way to 'clean technology' instead of 'end-of-pipe-technology'.

The new Directive assists the financial sector in another aspect as well. Establishing best available techniques is the starting point for a process of environmental risk standardisation for industrial technology. Eventually, this may simplify risk assessment for the insurance industry.

The determination and information exchange process between Member States on emission limits may assist in the development of environmental performance benchmarks for industry, providing information for the financial services industry. IPPC has yet to be extended to small and medium sized plants. The EU is reconsidering its approach here.

7.3.2. Competitiveness and the Protection of the Environment

The issue of undue environmental regulation has been looked at by the Commission in its *Communication on industrial competitiveness and the protection of the environment* in 1990, and the1992 *Council Resolution concerning the relationship between industrial competitiveness and environmental protection (EC/92/331).* These emphasised the importance of consulting business interests in the development of new environmental policy initiatives. Furthermore, environmental

legislation was required to be predictable, flexible, adaptable and cost effective. Finally the Council asked for an extensive report on the issue.

One concern is that less direct control of industry might end in more risk-taking and thus more accidents causing environmental damage and resulting in claims for financial compensation. Especially in cases of unclear legal liability, moves towards deregulation might cause problems for the financial services industry. Less regulation can be compensated for by clearer liability rules. Where these rules exist the financial services industry can fulfil its role as a control unit within the market. Higher environmental risks leads to higher insurance premiums and higher costs of capital.

7.4. ECONOMIC INSTRUMENTS

Economic instruments such as tradable permits, environmental taxes and charges or compensation through liability regimes gain more and more importance as the limitations of the traditional command and control approach become more evident. The number of environmental taxes in particular is increasing in the Member States of the EU.

7.4.1. Taxes

Tax on Carbon Dioxide Emissions and Energy

The original proposal for a Council Directive introducing a tax on carbon dioxide emissions and energy (COM (92) 246) put forward in 1992 aimed at improving energy efficiency and stabilising CO_2 emission levels by the year 2000 at the 1990 level. The receipts should be used in such a way as to make the measure tax neutral. The proposal met stiff resistance in the Council and has been amended subsequently to include a 'transitional period' from 1 January 1996 to 31 December 1999. The new proposal is in suspense, as some Member States oppose any obligation to harmonise taxation systems at the Community level. Recently the Commission has approved a proposal for a directive on energy products taxation.

The financial services sector is supportive of energy taxes. They would benefit directly in that as a low-energy economic sectors they would not be heavily affected and would benefit from any recycling of the tax. A second advantage would be in diminishing global climate change, which is of concern to many in the financial markets. Partly due to these activities, about a third of the Member States have introduced or are about to introduce taxes on energy / carbon dioxide. In order to prevent the market distortions likely to arise from the different taxes, Community action is called for.

Use of Economic and Fiscal Instruments in Environmental Policy

Since the publication of the Fifth Action Programme a number of initiatives have been undertaken by the Commission to promote "green" taxes at EU level. Voting procedures in the Council requires unanimity in such cases, so little progress at EU level has been made to date.

With more and more Member States implementing "green" taxes at the national level (EEA 1996b), the Commission has reacted in the meantime by issuing guidelines on the use of "green" taxes and charges (COM(97)9). The intention of the communication is both to support the use of such instruments by providing legal clarification and to ensure compatibility with EU legislation in the single market. The paper acknowledges that the EU treaty leaves considerable room for Member States to implement "green" taxes, but points out that the introduction of environmental taxes must be supported by sound arguments (EU-Commission 1996).

The development of environmental taxation is one of the most effective ways of getting the financial markets to incorporate environmental considerations. They feed directly through to the bottom line and thus directly influence analysts' perception of companies. They are widely supported by financial institutions. The development of such taxes should continue to be a high priority for the Commission. There may be scope to enlist the support of leading financial institutions in developing a consensus

over the move to environmental taxation, for instance through organising seminars of senior individuals at financial institutions or by commissioning research in partnership with the industry.

In the long run, the example of income and capital gains tax exemptions for certain "green" projects in the Netherlands suggests an alternative EU strategy. It might be easier for the EU Member States to come to an agreement on tax exemption schemes than on "green" taxes. Thus, Community-wide "green" niche markets could be supported and the financial services industry as well as the public would become more aware of "green" financial products.

With the opening of the financial markets and the possibility of similar actions being taken by other Member States, such a step would be warranted. Without EU action there is a serious risk of market distortion and consumer confusion.

"Green" taxation is primarily the application of the polluter-pays principle. Therefore, the reduction of taxes on "green" financial products is a logical consequence. Because they incur lower external costs, "green" investments should not be taxed as highly as normal investment.

7.4.2. Civil Liability for Environmental Damage

The Green Paper on remedying environmental damage of 14 March 1993 set the basis for a consultation process on liability which is still under way. Liability is seen as an instrument for enforcing the polluter-pays principle. Penalties based on fault or strict liability are meant as a disincentive to pollute. Joint compensation systems are proposed in cases where the normal liability system is not suited to cover the cost of environmental damage, e.g. where liable private parties cannot be identified.

A number of options are under consideration. One is a Directive based on strict liability and establishing a broad liability regime. Another is a Directive concerned only with public liability and focused on ecological damage in the narrow sense, i.e. damage to ecosystems, habitats, etc. and the contamination of soil and water, excluding personal damage or damage to property. Since Member States disagree as to which if any of these options should be implemented, a White Paper on the question has been commissioned. Work on this White Paper is currently under way (Commission 1997; Bjerregaard 1997; ERM 1996; Bjerregaard 1996).

As a market based instrument which implements the polluter pays principle, the development of environmental liability should be an effective instrument in encouraging the financial market to incorporate environment issues. However, environmental liability differs from other market instruments in that for it to function efficiently it requires the active support and involvement of the financial sector, especially the insurance industry, in providing appropriate insurance cover.

During research a range of views was gathered about the practical operations of environmental liability. The insurance industry believes the following points should be considered if liability is to be an effective market mechanism.

- Establishing liability and quantifying damage can be difficult. While a stricter liability regime may be supportable by insurers, it will still take some time for risk levels to become evident, and thus to determine appropriate premium pricing.
- Even with a stronger environmental liability regime a substantial proportion of environmental damage may not be covered by insurance. Compulsory insurance is likely to result in unfair premiums and economic dislocation until liability regimes have stabilised and claims patterns are reasonably predictable.
- "Long-tail" liability risks are a major concern for insurers. Allowing for potential liabilities that can emerge after many years can make it impossible to close accounts, and insurers may charge higher premiums as a result. One response is to provide insurance on a claims made basis - but this is currently illegal in some European States and also means that

liability cover lapses if payments are not made. An alternative would be to limit the liability time frame to some period, e.g. 10 years.

- Most insurers feel that the scope for price premiums to accurately reflect environmental risks and so provide accurate feedback mechanism is fairly limited. While for specific environmental insurance attention is paid to site audits, environmental management and other factors, most insurers will use this data to decide whether or not to insure, rather than adjusting prices. Pricing is often at best an estimate and reflects the available capacity of the insurance market as much as fundamental analysis of risks. In general liability, pricing the environmental component of risk is even more difficult, particularly with SMEs. For larger companies, self insurance schemes may offer a better alternative as they keep the risk within the company, at the same time as making it explicit.
- The concept of replacing traditional regulatory regimes with authorisation based on insurance, as is being tried in Germany, may merit investigation. However, insurers are wary of becoming "environmental policemen". It should be noted that most civil liability regimes are backed up by criminal law and regulations.
- Insurers believe that any EU liability regime should avoid both the retrospective and the joint and several liability aspects of US liability. These have caused major economic dislocation, particularly to the insurance industry, with uncertain environmental benefits.

The Commission believes that if liability is restricted to accidental pollution and gradual pollution where causal links can be established at reasonable costs, the financial sector is likely to gain from an EU-wide liability regime.

In developing liability regimes, it is important that policy makers work closely and constructively with insurers. Although insurers may be over cautious initially, they will ultimately be responsible for making liability an effective policy instrument. The key test is that insurers should feel environmental liability provides them with a good line of business. Policy makers may find it desirable to provide some direct support to facilitate this, for instance, to help develop tools for accurate pricing.

Banks also have concerns over liability, though being deemed effective owners/operators or through the temporary ownership of relevant assets. The Commission has indeed recognised that lenders should be largely protected against liability incurred by their borrowers. Without such protection banks could be deterred from lending to certain areas of economic activity or from taking some of the positive actions on environmental dissemination and finance they are developing. However, such protection will require careful wording of the legislation.

7.5. INFORMATION INSTRUMENTS

7.5.1. Freedom of Access to Information

The Directive on the freedom of access to information on the environment (90/313/EEC) was introduced in order to ensure that public authorities make this information available to the public on demand. The financial sector is potentially a major user of this information, and access to this information is important if the financial sector is to incorporate sustainable development into its considerations. The need for improvements in access to environmental information to create practical freedom of access to information, not merely theoretical, has been discussed under the EEA.

Potentially the requirements on freedom of access to information could apply to financial institutions themselves, and could be relevant in areas where the financial services industry is directly involved in activities relevant to the environment, for instance in project financing. However, as commercial confidentiality is one reason for exemptions, the scope for its use is limited. Nonetheless, there may be scope to use the Directive to find generic information on the attitude of individual financial

institutions to the environmental, such as overviews of risk assessment criteria and approach to investment.

7.5.2. Eco-Management and Audit Scheme (EMAS)

The Regulation allowing voluntary participation by companies in the industrial sector in a Community eco-management and audit scheme (1836/93) came into force on 13 July 1993. The regulation establishes a system which allows companies to register one or more of their sites. A review of the scheme is being carried out.

EMAS seeks to promote EMS within the industry and continuously to improve the environmental performance of the participating industries. Furthermore, the Regulation aims to inform the public about the environmental performance of participating sites. Stark differences in participation, have been found among the Member States. By far the most sites are registered in Germany, whereas in the southern Member States industry participation has been limited by the delay in setting up the required structure for EMAS.

The partial success of the scheme has led to considerations to extend it to other sectors, and potentially this could include financial institutions. A working group of leading European financial institutions, lead by National Westminster Bank, is investigating the potential. In Austria, there is already a provision for an eco-audit in the banking sector. In Germany, talks are underway to include not only the banking industry but insurers and other sectors as well (Meuche 1996; Troge 1996). The idea of expanding the EMAS scheme to the financial sector seems well founded. The basic assumption of the regulation that "the industry is responsible for mastering the environmental effects of its own activities" applies to the financial services industry no less than to other sectors of the economy.

Extending the EMAS Regulation outside of its current scope to the financial sector will require more emphasis on investment and product policies as these indirect channels are the areas where the financial sector has its greatest impact on the environment. Thus EMAS for the financial sector will involve a broader approach, including aspects such as consideration of the investment / risk assessment methodologies of the institution and the amount of capital supplied to both environmentally high risk activities and to environmentally beneficial activities - either in the environmental sector or for environmental projects by individuals and businesses.

The financial sector could also find EMAS of use in a different sense, as a tool to help determine the credit risk or risks in insurance contract. EMAS certification acquired by a corporate client should reflect the operation of that company's environmental and risk management. Indeed in Germany the rapid acceptance of the EMAS by German industry has been based in part on expectations for lower interest rates or insurance premiums. In practice these expectations so far have not been fulfilled but the potential exists and can be developed. This appears a desirable use for EMAS, and the Commission should consider consulting the financial services sector during the review of EMAS to determine how the EMAS could be made of most use in risk assessment. An advantage of this is that if financial institutions are convinced of the advantages of the scheme they are likely to be effective in disseminating information on the scheme and encouraging its uptake.

7.5.3. Eco-label

The *Regulation on a Community Eco-label award scheme* (880/92) which came into force in March 1992 set up a voluntary scheme for the award of eco-labels to so-called 'green products', with less environmental impact throughout their life cycle than comparable products in the same category. The scheme guarantees a uniform high standard with respect to the environmental performance of the products to which the labels have been awarded.

Currently, the financial services industry has little involvement in the eco-label scheme. The fact that a product has been awarded an eco-label is unlikely to affect the financial assessment of its parent company. However, an eco-label scheme for financial products might be a potential extension of the scheme itself. It appears consistent with the objectives of the scheme. As stated by the Council, the "eco-label scheme is one element of a wide-range strategy aimed at promoting sustainable production and consumption ... (the) strategy consists in promoting environmentally aware behaviour patterns, in particular by identifying and promoting "green" financial products".

A factor behind the introduction of the current eco-label scheme has been the growing confusion of consumers within EU, who are faced with an increasing number of labels and environmental claims on the part of producers. The number of 'green financial products' is rising steadily and there is clearly potential for similar confusion. It could also educate consumers about the environmental problems connected with financial products and might stimulate the market for 'green financial products'.

The eco-label scheme has to focus on widely sold products with a large environmental impact. This is the case for the products of the financial sector. Even though the direct bearing on the environment is negligible, the secondary effects of these products are substantial and a redirection of financial flows could lead to an amelioration of environmental impacts by substantial changes in the financial markets. An eco-label would be a suitable instrument to promote any changes.

Further most "green" financial products are nationally based. The development of a single European financial market and the proposed introduction of the Euro could result in a much broader market. Consumers might find an eco-label a useful tool in comparing financial products across the EU.

The environmental criteria used in the evaluation of financial products would be quite different from other products. The life cycle approach does not apply to products which physically cannot be consumed. Moreover, the approach would have to be different for the various product categories of the financial services industry. "Green" funds would have to be evaluated differently from "green" accident insurance. Given the contentious nature of awarding eco-labels to domestic cleaning products, such an assessment process may prove very challenging. The difficulty of defining environmental companies, let alone environmental financial products was outlined in Chapter Six. However, an approach which focuses on methodology and the assessment process might overcome many of these problems.

7.5.4. Environmental Impact Assessment (EIA)

The Directive on the assessment of effects of certain public and private projects on the environment (85/337) was one of the first pieces of EC legislation with a clear focus on prevention of environmental impairment. Member States are free to decide for or against any project, the EIA notwithstanding. The Directive only calls for a procedural framework. During the EIA process, the public and certain authorities must be consulted and the developer has to produce specific information.

Since none of the projects in the annex is typically carried out by companies in the financial service sector, the Directive does not have an immediate impact on this sector, but the sector is involved in the financing of many of these projects. Although the EIA process increases the initial development costs of a project and might delay the start of construction, it can have a positive influence from the point of view of the banking and insurance industry. Having conducted a thorough check of a project's environmental risks at the beginning, the results of the check can be used by companies financing the project. Credit risk and insurance risk assessment will be improved by the procedure. Furthermore, the EIA is likely to reduce the threat of claims for compensation, since concerns can be voiced at the beginning of the development process.

7.6. CREATION OF NEW MARKETS AND PRIVATE SECTOR FINANCING NEEDS

Certain Environmental Directives have effectively created new markets, driving the growth of the environmental sector. Examples include the Directive on packaging and packaging waste (94/62/EC) which came into force at the end of 1994 and the urban waste water treatment Directive (91/271/EC).

These Directives have expanded existing markets or created new markets for environmental services and technology. They create substantial lending and investment opportunities for the financial institutions, as companies seek funds for compliance with the new standards. In addition, there is also substantial business for investment banks and stockbrokers in advisory work on restructuring of key sectors (privatisation and corporatisation). Especially in Member States with relatively undeveloped markets for environmental technology, the engagement must be financial and intellectual.

While the existing systems for the provision of finance are capable of supplying the necessary capital, as the section on the environmental sector makes clear there are a number of obstacles which have deterred investment in the sector. There are a number of actions which the Commission could consider which might reduce or eliminate these obstacles.

- Providing information to the financial markets on the new environmental markets with their specific characteristics so they are properly understood - a necessary requirement before financial services are provided.
- Working with the financial markets to optimise the cost effectiveness of legislation - for instance by allowing the use of tradable permits or new financing technique.
- Looking at mechanisms to encourage the supply of finance for the sector, such as the voluntary initiatives to supply capital to the sector, possibly with support, such as guarantees from the European Investment Fund.

Finally, new markets for environmental technology brought about by EU legislation are an opportunity to use the necessary investments as a starting point for the creation of new financial products, i.e. "green funds". These funds, based on shares or bonds deriving from the new markets could give fresh impetus to the market of "green financial products".

8. Financial Markets Policy and Sustainable Development

8.1. GENERAL PHILOSOPHY

The central objective of EU financial markets policy has been the development of the single market in financial services. Indeed the Directorate General, DGXV, responsible for financial services is also responsible for the Single Market. Also involved in financial markets policy is Directorate General XXIV through its responsibilities for Consumer Protection.

A number of measures have helped establish a single European market for financial services, notably through the various Banking and Insurance Directives[4]. These have typically been based on the "passport" concept where authorisation in one member state has served across the Union. The Directive have served to establish basic requirements for regulations. The development of the European Monetary Union will further accelerate the process, making many financial products in one country identical to those elsewhere, without requiring further financial markets legislation.

During the 1990s, financial policy has moved from a Directive-led philosophy to a "less but better" approach towards legislation. This is highlighted by the SLIM initiative (Simpler Legislation in the Internal Market), concentrating on examining the implications of other DG texts and the effective integration of EU law. By moving towards Green Papers, potential problems can be addressed by involving all parties prior to a new Directive being put forward. A reflective regulatory approach is the current aim, not passing judgement on new financial products, but taking a wait and see approach. The EU only wants to investigate financial market matters when there is a manifest need to do so. DGXV, however, is active in warning decision makers within the Commission and Member States about the potentially adverse effects of policy proposals in other areas on financial institutions.

In contrast, consumer protection is seen as needing a pro-directive and activist approach, seeking guarantees for financial controls with respect to investments, companies to be made safer to invest in, and to be allied with the protection of consumers in relation to the marketing of these products. This stems from the need to act on the consumers' behalf, backed by ideas and feedback from a broad network of national and local consumer organisations across the EU.

The various areas of financial markets' policy were examined to see what scope there is for policy to incorporate environmental issues that help contribute towards sustainable development.

8.2. COMMERCIAL BANKING

In developing an EU market for the banking sector, the focus has been on banks' capital requirements to ensure they remain acceptable risks and the potential for bank failures is minimised. The principal tool has been the requirements for banks to maintain adequate capital behind the lending portfolio. Capital requirements are largely determined by asset class (corporate loans, government bonds etc.).

Although environmental risks may be a significant factor in lending risk, the risks should essentially be factored into the capital requirements for asset classes already. If environmental issues merit special consideration, the implications would be that certain types of lending activity (e.g. lending to high risk sectors) should require larger capital requirements. At present there is insufficient evidence to warrant such a move, which would directly affect the cost of capital for affected companies and cause major economic dislocation. In addition, it would be difficult for the authorities to distinguish between good and bad companies, and so there would be little incentive for companies to improve.

---

[4] The First Banking Directive (77/780/EC); the Second Banking Directive (89/646/EC); Solvency Ratio Directive (89/647/EC); the Capital Adequacy Directive (93/6/EC); the First Life Insurance Directive (79/267/EC); the Second Life Insurance Directive 90/619/EC); the Third Life Insurance directive (92/96/EC); the First Non-Life Insurance Directive (73/239/EC); the Second Non-Life Insurance Directive 88/357/EC); Third non-Life Insurance directive (92/49/EC)

While such a direct approach is not appropriate, there may be scope for the regulatory authorities to take some action in the area of the environment. As a first step, banks could be required to have some capacity in environmental risk management, and to disclose their procedures to the regulators. This could be supported by information dissemination activities e.g. the production of guides. While many leading banks do have expertise in this area it does not appear universal. It should be noted that it is neither appropriate nor necessary to be more specific in this area - environment risk assessment is a fairly new area and far from standardised, but the greatest risks are likely to arise through ignorance rather than inappropriate assessment.

There are valid reasons for requiring such a move. Without it banks without such expertise might undercut banks with appropriate skills, thus leaving the more responsible banks the difficult choice of lending at uneconomic rates or losing business. This would not be fair competition. Instead it amounts to high risk borrowers obtaining unjustly cheap credit, and is a form of uncorrected externality. While this type of competition does not appear a particular problem in the EU at present, with increased competition after Monetary Union, it could become a problem, particularly if banks start competing in markets they are not historically familiar with.

A complementary measure which might help to assess the need for environmental risk management would be to require banks to disclose their current level of lending to environmentally high risk sectors. As most banks already collect information on their lending on a sectoral basis and disclose this to the regulators, this should not be difficult. The key issue would be to determine the basis for deciding high risk sectors - this could be done on the basis of those activities that require e.g. IPPC authorisation or by an analysis of those areas that have experienced major environmental problems. Practically, the data could be made public or could be analysed privately by regulators, in conjunction with environmental authorities who could inform regulators about environmental factors.

The other side of environmental activities, lending to the environmental sector or for environmentally beneficial activities by companies and individual, does not appear appropriate for direct regulation. While it might be desirable to encourage lending in such areas, it would run counter to much financial markets regulation for banks to be coerced into lending to the sector, or for unjustified incentives, such as reduced capital requirements. The best way forward would probably be through the development of voluntary initiatives, where leading financial institutions agreed to commit to lend a certain minimum amount in such areas. Such commitments could be encouraged and reinforced by the support from EU financial institutions, such as guarantees from the European Investment Fund.

8.3. THE INVESTMENT SECTOR.

In the area of investment a number of Directives have sought to establish a common European market for financial services such as stockbroking and asset management, through the "passport" system. Such regulations[5] cover aspects such as capital adequacy (the need for deposits of core capital before services can be offered), suitable protection for clients' money and for barriers between potentially conflicting activities within an integrated securities house. As such regulation is focused primarily on the risks of short term positions and prudential behaviour, making it difficult to see the scope for environmental concerns to be factored into such requirements. Potentially there might be a case, particularly if environmental investments and products become more common, that those offering such products should be required to demonstrate in some way their abilities and expertise in offering such products and providing advice. There is insufficient grounds for action at present.

The Commission is also interested in the development of new areas and types of financial market activity. Two areas are worthy of mention as being of potential relevance to the environment.

[5] Undertakings for Collective Investments in Transferable Securities (UCITS) Directive (85/611/EC, amended 88/220/EC & 95/28/EC); Own Funds Directive (89/299/EC, amended 91/633/EC, 92/16/EC & 92/320/EC); Investment Services Directive (93/22/EC, amended 95/26/EC)

The first is the development of specialist stock exchanges, such as AIM (UK), FIT (Austria) and the pan-European EASDAQ and Nouveau Marche, which are intended to make it easier for relatively new and fast growing businesses to obtain a listing and access new capital sources. Such markets could potentially be of great value to the environmental sector, given the large number of suitable companies in this area. However, these exchanges are seen as having too few successes and too many problems to date. High technology stocks are too risky so far to be suitable for the general public to invest in, thus the need to protect the small investor remains paramount. There also seems to be a shortage of sophisticated investors prepared to invest in such companies.

Another area is the development of trading in pollution permits and other financial mechanisms for pollution control. The Commission recognises that such markets would create new opportunities for financial markets activities and encourage the development of innovative new financial products.

Finally, there may be scope to further the development of corporate governance and shareholder activism, by enabling shareholders' rights such as the ability to lodge resolutions, equal shareholder rights for all, and the ability to appoint directors and supervisors.

8.4. CONSUMER PROTECTION AND PENSIONS

The May 1996 Green Paper *Financial services: Meeting consumers' expectations* for banks, insurance and securities is currently being re-examined. The Green Paper's main concern is with the safety of investments for the public. It believes that this is best carried out via providing full information to the consumer, based upon access to services across the EU. It also covers the treatment of complaints, issues relating to excessive indebtedness, financial intermediaries, electronic payments and the development of distance selling of financial services via telephone, fax and E-mail. From the consumer protection viewpoint, there is some concern that the Green Paper needs to adopt a more consumerist rather than a liberal (i.e. information is all that is needed) approach. Specific measures are called for especially with regards to the notification of all charges, including for cross border transactions, dispute procedures and payment devices.

On the more general consumer protection front there a number of activities which indirectly relate to sustainable development, notably the action plan *Priorities for consumer policy, 1996-98* (DGXXIV), which concentrates on information gathering and availability.

Existing measures already recognise that financial services differ from other products in the degree to which consumers need be informed about them and have their options explained. There is clear scope for these measures to be extended to include ensuring customers are asked whether they would like to buy ethical or environmental financial products, particularly when dealing with long term investment products. Such a move would appear consistent with the objectives of ensuring the customers are adequately informed, that financial intermediaries know their customer and that consumers are supplied with suitable financial services. The key issue here is to allow consumers, if they wish, to express preferences over how their money is invested, and to give them the opportunities to consider options which aim to have more positive environmental consequences.

Such a move is likely to be effective at increasing the demand for environmentally responsible financial services, as evidence suggest that a significant number of investors who might be interested in "green" financial products are not offered them. It would also encourage a large number of financial institutions to develop such products if they do not already have them.

A Green Paper on pensions policy is due later this year. It is expected to reflect concerns about the implications of long term demographic change in the EU. It will highlight the fact that private pension arrangements are needed to supplement existing arrangements. Pension funds will also need level playing fields with other financial institutions such as life assurance. Differences between national taxation policies on supplementary pensions also need to be addressed. Pensions will remain

a national concern, partly to assuage fears that the more prudent Member States will have to subsidise those who have underprovided.

Where individuals purchase "unitised" private pensions the same remarks about offering investors a "green" or ethical choice apply. With company pensions or pensions purchased from a life insurance company (as a direct obligation of that company) the issues are more complex because of the collective nature of the investment makes individual choice more difficult to implement. While there is concern that the fund manager should have freedom of choice to invest to maximise returns without unjustified restrictions, there may be scope to incorporate environmental considerations to some extent. The key would be to require those managing assets on a long term basis to have a written investment policy which explicit takes a long term approach, explaining how the managers look at important risks and trends over the longer term (implicitly including environmental issues). Such a policy might also relieve some of the concern over short termism which may arise if Member States develop investment markets on a more Anglo-Saxon model, with powerful institutional investors.

8.5. INSURANCE

The Commission has sought to establish a single market in insurance, covering aspects such as solvency requirements. There appears to be limited scope for the direct inclusion of environmental issues into the legislation covering insurance generally. However, a few areas might merit further investigation.

Firstly, there is the possibility for similar risks to accumulate on both sides of the balance sheet with insurers - thus there may be a case for requiring insurers to ensure that they manage their assets so as to avoid the accumulation of similar risks to the underwriting side, through establishing effective communication between the two sides of the business. Environmental issues would be a clear case in point.

Secondly, climate change has the potential to profoundly alter the risk profile of many insurers. Thus it could be worth investigating the impact of climate change on the solvency requirements and risk management of insurers, with the possibility of revising the regulatory framework.

Another aspect is that the insurance industry (both life and general) is seriously limited in its ability to invest in the environmental sector, because many such investments are unlisted and illiquid. Regulations over solvency requirements mean that such investments are treated very harshly by regulators, resulting in reluctance to invest. There may be scope to enhance the attractiveness of such investments, by the use of mechanisms such as contingent guarantees (guaranteeing a minimum value of the investments in the instance where the institution needs to realise them) to overcome concerns about liquidity. Such mechanisms would need to be carefully structured to gain acceptance by the regulators, but could prove a solution to the shortage of equity investment in the sector.

The area of environmental liability is a key issue for the insurance industry. It has been discussed in section 7.4.2. In terms of insurance market regulation there are a couple of measures which might help enhance the effectiveness of such a scheme.

- enabling the underwriting of claims made or time limited liability policies in regimes where there are currently restrictions on them;
- enabling the use of self insurance schemes by removing tax and accounting restrictions.

8.6. ACCOUNTING AND LISTING PARTICULARS

The Commission has developed a number of Directives and other measures to ensure that companies listed or seeking listings on stock exchanges have broadly similar listing requirements and accounting

standards recognised by different stock exchanges.[6] Much work is being carried out at the industry level, seeking to encourage the development of these reporting standards via the leading companies, rather than by legislation. This ought to lead to easier access for EU companies to international sources of capital, along with improving the comparability of consolidated accounts, so as to help investors make international comparisons.

The Accounting Advisory Forum's document, *Environmental Issues in Financial Reporting* published in 1995 and discussed in section 5.3.2 is a set of suggestions for environmental reporting, covering the company's attitude towards the environment, along with the impact of environmental risks and liabilities on the company's financial position. Given the importance of environmental information such moves are to be welcomed. However, the measures are purely advisory and without further impetus may fail to meet the needs of the financial markets. This will involve addressing the key issues of standardisation and comprehensiveness.

There is a clear case to take the work developed so far, codify it in detail and produce a formal standard for environmental reporting. Such a process would result in consistency and comparability between reports, greatly enhancing their effectiveness. Coverage would depend on the take up by business, but may be quite good as companies tend to welcome standardisation (for example, compare the take up of other voluntary schemes such as EMAS). In due course it might be appropriate to look at making the scheme mandatory, at least for larger listed companies.

As discussed in Section 5.3.2. there is scope to look at even more radical changes to accountancy practices, to incorporate sustainability more fully. Such measures, while welcome, will require further research before they are a practical proposition.

---

[6] Admission to Listing Directive (79/279/EC); Listing Particulars Directive (80/390/EC); Interim Reports Directive (82/121/EC); Prospectus Directive (89/298/EC); Disclosure of Major Shareholdings (88/627/EC)

9. Analysis

9.1. OVERVIEW

As this report shows, there is already a substantial amount of activity in the area of finance and the environment, with some of the best financial institutions doing some positive and creative work. However, there is a wide variation in the extent to which financial institutions have integrated environmental considerations. This applies across Member States, between different financial institutions and even within different activities with financial institutions. Furthermore, progress on environmental issues has often depended, at least initially, on the enthusiasm of a few individuals who have made things happen.

Thus there is clear scope to bring the majority of financial institutions up to the level of the best, and to encourage financial institutions to explore new areas from an environmental perspective. Furthermore, measures to help standardise and formalise best practice would appear welcome.

A number of themes appear throughout this report which are important to policy development:

The issue of whether environmental performance does indeed contribute to financial performance remains a major concern. Despite increasing evidence to support this contention, many remain sceptical. Policy can play a key role by implementing measures which reinforce this. There may also be a scope to support and disseminate research which explores this connection.

Possibly a more important issue is the question of significance - while many may concede that environmental matters have some financial relevance, they are far from sure whether it is sufficiently significant to be a priority for them in an industry which is facing challenges as major as the single European currency, increasing globalisation and rapid technological change. Incorporating environmental factors in their business involves the expenditure of time and money, and can be difficult to justify. There is scope to overcome this in three main ways:

- Reducing barriers to factoring environmental consideration into their business - i.e. reducing the costs and risks in making such decisions - see the comments on information below.
- Directly supporting innovative environmental activities within banks - those involved will need to cost-justify their activities internally, and this task can be made much easier if part of the costs are covered externally. As such, actions should have the potential to mobilise substantial funds from the financial institutions, they can offer the scope for substantial leverage. Such support is most likely to be justified in the case of new market opportunities.
- Where clearly justifiable, there may be a case for direct regulatory involvement to require financial institutions to consider environmental matters. Such action is likely to focus on risk or on consumer rights as these are the main focus of existing regulation.

Probably the most important issue which has recurred time and time again has been the difficulties in obtaining environmental information relevant to the financial markets. Most important is information on companies' environmental risks and performance, but it also applies to information on environmental opportunities, policy developments and new markets. Often information is incomplete, inconsistent or difficult to obtain. Where it is supplied it is poorly geared to the needs of the financial markets (e.g. corporate environmental reporting). This increases the costs for any financial institution wishing to take environment issues into consideration, as well as increasing the uncertainty about the merits of any such action.

There is also a willingness among many in the financial markets to be involved in the development of policy at an early stage, which could offer policy makers a number of advantages, such as guidance

on most effective ways to encourage sustainable development and which will help mobilise capital, and to provide an independent overview of policy development.

A number of respondents have also mentioned that we should not ignore the overseas impact of European financial markets, in terms of the effect that European capital can have on global sustainable development. While strictly outside the scope of this study, we would note there are likely to be significant opportunities here to encourage European capital to invest in sustainable development overseas. Full support should be given to the progress the development banks have made in this area, and they should be encouraged to go further. In particular, there are likely to be substantial opportunities for European trade, given that Europe has recognised leadership in key areas of environmental business, such as water and renewable energy.

Similarly this report has not focused on the social aspects of sustainable development, although there is likely to be similar potential here to encourage financial institutions to help address key issues such as urban regeneration, social housing and disadvantaged entrepreneurs. There may be an overlap with environmental issues in a number of areas.

9.2. LEVERS FOR CHANGE

Analysis of earlier chapters identifies a number of approaches which have been used to encourage financial institutions to consider the environment in their business, and to investigate the opportunities for them to contribute towards sustainable development. These approaches are likely to form the basis for any policy actions by the European Commission. They include:

- High level initiatives, involving commitments from the senior management at financial institutions, can encourage organisations to start considering environmental issues. The UNEP initiatives are examples of this.
- Similarly, high profile financial organisations, particularly those that are public institutions, can set a leadership example. The activities of the development banks in the environmental sphere illustrate this.
- Businesses who are concerned about the environment, and wish to ensure that financial institutions are supportive of their actions can engage in a constructive dialogue, explaining their actions more progressively and carefully to institutions. Notable in this area has been the work of WBCSD.
- Individuals can encourage financial institutions to invest in ways they would like, and can select financial institutions who take the environment seriously. The growth of "green" and ethical funds and the success of the Co-operative Bank's ethical policy are examples of this.
- Innovative niche financial players can help direct finance to key areas, and can by being successful encourage other financial institutions to copy some of their activities. The Ökobank and the UmweltBank in Germany are examples of this.
- NGOs can encourage financial institutions to start taking the environment seriously. Campaigning environmental organisations can apply their usual direct pressure. Other organisations can take a more constructive approach, engaging the financial markets in dialogue, providing information and conducting research.
- Financial market trade associations can help disseminate information on environmental best practice and help overcome inertia. The Swiss Bankers Association is a leading example of this.
- The public sector can encourage financial markets to consider environmental issues by structuring its policy development to work with the financial markets. A good example of this is various tax initiatives in the Netherlands.

The list above suggests a number of ways policy makers could intervene to encourage financial institutions to take account of the environment. Most of them are indirect - working with other organisations to help achieve change, rather than aiming for it directly.

Indeed, one feature of the above list is that none of the actions involve the direct control of financial institutions by policy makers through financial market regulation (e.g. central banks). To date regulators have had only a modest involvement in encouraging finance institutions to consider environment issues. Only a few examples are evident. Perhaps the most significant example is from the US where the Securities and Exchange Commission has required the production of environmental information in companies' 10-K filing - even this is targeted at companies rather than financial institutions. Indeed there are a number of cases where financial regulators have prevented financial institutions from taking account of environment risks and opportunity. (Examples include the insurance regulators in Florida who prevented insurers from either raising prices or leaving the state post hurricane Andrew, and investment regulators in Germany who have hampered the creation of environmental / ethical investment funds.)

There are clearly opportunities for financial market regulators to play a greater role making financial institutions achieve change. We have identified a number of policy options which appear to offer potential in this area, which are discussed in more detail later. However, in the EU context there are two major issues which will need to be addressed.

- Firstly, as regulators have to date had little involvement in environmental issues, there is little interest in or understanding of environmental issues. Engaging them is likely to meet with similar problems to engaging financial institutions.
- Secondly, the details of financial regulation are largely the preserve of Member States, with European legislation focusing on establishing a single market and setting basic standards, and many regulators may feel that such action needs to be developed at a national level.

To overcome these obstacles it may be necessary to first develop a dialogue with the various regulators in Europe, for instance, by organising meetings and seminars, possibly using the policy options presented, as topics for discussion.

9.3. DEVELOPING POLICY OPTIONS.

The model of financial transactions identified in chapter 1.3. is useful in identifying the scope for policy options at different levels:

Information The difficulties financial markets have in obtaining reliable and useful environmental information has been a recurrent theme throughout this report. Policy makers can play a key role in improving the flow of such information.

Analysis Financial markets have difficulty justifying the incorporation of environmental factors into its analysis, or into the development of new financial products - the costs may not justify the risks. Policy makers can help encourage new analysis by supporting the development of new tools, disseminating best practice and possible requiring the use of certain practices.

Price Policy makers can intervene to alter the pricing of financial products - two approaches are offering tax incentives and providing guarantees to reduce risk.

Finance The Commission could provide finance directly through one of its existing financial mechanisms. Such finance can be provided in conjunction with, or through, other financial institutions.

Aftercare Policy makers can support actions to enable financial institutions to ensure their clients adopt environmental practice, either through direct support or by removing obstacles to such actions.

It is worth observing that the costs of policy options increase through the first four options. Thus, information related options offer considerable leverage and are broadly applicable across a range of industries and activities, whereas the more expensive options of dealing with price and finance are likely best reserved for specific tasks such as supporting key environmental industries and projects.

A number of policy options have been developed and considered. Policy options have been assessed on six principal criteria:

Short term environmental impact - will the policy option bring environmental benefits in the relatively near term (two to three years)? Such benefits should at least be clearly identifiable.

Longer term environmental impact - will the policy option bring environmental benefits in the longer term (post 2000)? Such benefits may be rather intangible or difficult to quantify

Appropriateness of action at EU level - is the policy option suitable for action at a European level, or is it most appropriate at a national level?

Complexity / cost of policy development - will the policy option be very difficult and controversial to develop, or is it likely that consensus will be readily achievable?

Impact on affected parties. Does the policy option offer support or conversely does it impose costs on affected parties (financial institutions, companies)? Are there job implications?

Broader socio-economic impact At a European level, does the option improve competitiveness? Will it help create jobs? Does it help consumers?

Clearly at this stage it has not been possible to analyse the potential implications of all the policy options in detail and thus the analysis represents a first estimate, based on the reaction of financial markets participants, combined with any relevant experience elsewhere.

The analysis has generated a number of primary policy recommendations, which are introduced in the next chapter. The options selected appear relevant at the EU level, avoid imposing major cost burdens on industry and appear to make a significant contribution over the long term towards transforming the financial markets perception of the environment and achieving the goals of the Fifth Action Programme. In developing the options, a working assumption has been that the Single currency project will proceed.

10. Recommendations

10.1. PRIMARY POLICY RECOMMENDATIONS

10.1.1. Environmental Information Actions

Making effective use of information is the key to sound banking, investing and insuring. Better information, whether more timely, accurate or simply more to the point can result in better decisions being made - there is always a need for more and better information, subject only to the constraint of the resources available to process. The problem for sustainable development has been that the information provided on environmental issues to the financial markets can rarely be relied upon to improve decisions. This is partly because environmental data given to the markets is usual appropriated from other areas, such as regulatory compliance, and has not been designed for use by the financial markets, partly because it is not comparable or verified and can be costly and time-consuming to make useable. Concise and strictly applicable data is needed, of a sort than can be made use of by analysts and sold as part of the company evaluation process to institutional investors. For company analysis, figures need to relate either directly or indirectly to a company's management, earnings, balance sheet or its potential growth. They should help illuminate what a company stands to gain or lose because of its environmental impacts (or lack of them) under current and future market conditions.

Two policy options have been identified as appropriate to helping to free the environmental information logjam. Because of the importance of the issue and the fact that they are to some degree complementary it is recommended that both options are pursued together.

The Commission has already undertaken a number of initiatives in the area of the environment, and these policy measures will build on, and reinforce the effectiveness of existing measures. Further, there is a direct need for standardised environmental information if companies are not be unfairly discriminated against.

OPTION 1.	**Environmental Reporting/Disclosure to Financial Markets**
Description:	Develop standards for disclosure of environmental information targeted at financial audiences. Disclosures should be standardised, both in extent of minimum disclosure and in calculation, brief, and quantifiable as far as possible. Information must be relevant to assessment of risk or financial performance. Progress is probably best formulated through the formation of a working group consisting of both accountancy professionals and users in the financial markets. Probably initially voluntary, the standards could be made mandatory for some - possibly listed companies. Action should be co-ordinate with other organisations investigating this, such as UNCTAD and groups within member states.
Advantages:	- EU level intervention appropriate, e.g. to enable EU wide comparisons; - Overcomes information obstacles, will help financial markets integrate environmental considerations longer term; - Can build on EMAS reporting; - Considerable support for it within industry.
Disadvantages:	- Limited near term impact; - Potential disagreements over disclosure.

OPTION 2.	**Environmental Data Collection Through Regulators**
Description	There is clear scope to improve collection of environmental data (waste generation and its fate, CO_2 emissions, effluent and sewage generation, discharge treatment and recovery and disposal) by national environmental agencies, under the co-ordination of the EEA, with the specific objective of increasing the usability of such information. This would include standardising information across countries, making corporate parents explicit, improving access. The views and support of financial markets should be sought. The necessary change in the role of the EEA is possible through an explicit change of Article 20 of the current EEA/EIONET regulation or through a review of the EEA multi-annual work programme.
Advantages	- Improved transparency through an improved information base; - Fewer externalities and improved efficiency; - Possible advantages for other economic sectors as well; - Options for further measures; - Special information workshops for the financial services industry; - Collecting data on liability, environmental reporting and the financial service industry, on environmental criteria with relevance for eco-labels for financial products.
Disadvantages:	- May contradict the subsidiarity principle, although a voluntary opt-in mechanism might be possible initially; - Practical problems of standardisation are immense; - Harmonisation of data collection is difficult in decentralised states; - Possibly cost intensive.

The table below summarises the key differences in the two approaches.

	Financially targeted environmental reporting	**Disclosure through regulators**
Coverage of sectors	Potentially All	Limited (those regulated)
Coverage within sector	Limited if voluntary	All regulated companies
Issues / indicators disclosed	Broader - management, resource use, products	Narrow - controlled releases, fines
Financial relevance	Potentially explicit.	Only implicit.
Potential source of difficulties in implementation	Industry	Member states.

10.1.2. Environmental management / regulation in finance

A number of leading financial institutions and trade associations are developing more systematic approaches to environmental management, and commercial banks in particular seem to find such an approach effective. The Commission could play a more active role in supporting the development and dissemination of these existing activities. Beyond this the development of EMAS to cover financial institutions would potentially be an effective tool in changing the behaviour of many in the financial markets.

Such activities will also have to address possibly the greatest challenge for the financial markets themselves, which is the need to address the gap between senior management and environmental units on the one hand and front line staff on the other. The relatively positive attitude of some financial institutions at the official level often reflects good intentions, concern at the policy making

level and perhaps seeking good publicity rather than with the willingness and ability of their staff, particularly in the investment banking and investment management areas, to factor in sustainable development considerations into their decision making processes on a regular basis.

OPTION 3.	**Support Dissemination of Information on Environmental Management for Banks**
Description:	Promising activities are underway on providing information on good environmental management for financial institutions (e.g. VfU, Swiss Bank Association.) The Commission could help by providing support to develop and disseminate such activities, e.g. to Member States where little action has been taken.
Advantages:	- Low cost and controversy; - Appropriate action for Commission.
Disadvantages:	- Negligible short term effect and longer term benefits will depend on uptake.

OPTION 4.	**Extension and Modification of EMAS**
Description	A review of the existing regulation on EMAS (1836/93) is being carried out. One result of the review process may be the inclusion of the financial sector within the scope of the regulation (FEMAS). The partial success of the scheme has induced several member states to make use of current provisions, which allow for enlarging the range of possible participants, to include the financial sector or parts of it. Several pilot studies have been carried out. The different experiences to date seem to justify the amendment of the regulation.
	The amendment should provide not only for including the financial services industry in the current regulation, but also for adapting it to suit to the specific needs of this sector. Notably, the impacts of product (lending, investment, etc.) will need to be emphasised, because internal environmental performance is not the most important environmental aspect for the financial service industry.
Advantages:	- Fits well into the current strategy of EU environmental policy; - Furthers the general objective of the regulation of 1993; - Instigates a process of continuous improvement of the environmental performance of the financial services industry; - Increased awareness of the whole sector towards environmental issues. - Official recognition of "environmental leaders"; - Raises awareness of the general public and thus reallocation of capital due to increased transparency; - Basis for further improvements: the FEMAS might be connected with eco-labelling of financial products, and might enhance furthers steps towards environmental benchmarking and environmental reporting.
Disadvantages:	- Possible false impression of consumers: private investments managed in an environmentally friendly way merely because of an Eco-audit; - Limited short term potential.

10.1.3. Consumer investment protection measures

Increasing demand for environmentally responsible investment would be a highly effective way of making investment institutions take greater interest in the environment. Two option to do this have been identified based on the Commission activities in consumer protection and in product labelling. Both options are based on the fact that individuals are the ultimate suppliers of much capital to the financial markets, are often environmentally concerned, yet are poorly informed about the availability of environmental and ethical investment vehicles for all their personal investment needs.

If there were to be dramatic increase in the size and scope of such funds (say to 10% of the personal finance market) then most leading financial institutions would feel the need to offer suitable investment vehicles and such investments would become mainstream. Such vehicles should increase finance flows: as new venture, project and development capital for environmental businesses and projects, as expansion capital for established "green" companies; and as equity investments into a broad universe of environmentally responsible companies leading the move by business to sustainable development.

OPTION 5.	**Consumer Protection over Advice on Environmental Investment**
Description:	There is a relatively poor level of awareness about ethical/green investment products among the general public, and considerable misconceptions about their performance. Yet as green products with no significant drawbacks they should be able to command far greater market share. Thus, as part of consumer regulation over financial markets, there is potential to require those offering investment products to the public to ask about their ethical / green concerns and then if appropriate, to offer them suitable investment advice and products.
Advantages:	- Would greatly increase demand for environmentally responsible investment; - Short term environmental benefit might arise if investment went into specifically funding the environmental sector; - Appropriate at a EU level as single market in financial services emerges.
Disadvantages:	- Might be controversial, and impractical at an EU level.

OPTION 6.	**Defining / Labelling Environmental Funds Across the EU**
Description:	Subject to some remaining restrictions, the existing environmental funds can be traded throughout the internal market, and it can be expected that the introduction of the single currency will "Europeanise" marketing and investment. However, there is evidence of consumer confusion over the definition of such funds even at the relatively low level of economic importance and cross-border trade such funds enjoy, and there is scope for clarification and definition of the various funds types. In particular, by amending the current EU regulation on the eco-label award scheme (880/92), eco-labels for services, especially for environmentally oriented funds could be included in future.
Advantages:	- Raises public awareness and reallocation of capital due to increased transparency; - Increased awareness by the financial sector of environmental issues; - Official recognition of 'environmental leaders'; - Furthers the general objective of the regulation;
Disadvantages:	- Costs to participating funds; - Difficulties in establishing the framework.

10.1.4. Development of new financial products

There is potential for the development of new financial products which help address environmental issues and problems - such products could range from innovative loan financing for energy efficiency through high risk venture capital to information measures such as new rating products. Developing such products can be costly and time consuming, and even within an environmentally conscious financial institution such activities have to be justified. This can prove difficult, even if the end product would be viable and worth investing in. There is potential for the Commission to provide targeted support which could have a major impact in leveraging money out of financial institutions and there is limited potential to do this already in certain mechanisms such as LIFE and THERMIE. However, the national focus of many financial institutions means that action is more probably appropriate at a Member State level, although this should be kept under review.

An additional approach which could be useful is to support the development of awards for innovation in environmental finance. While not quite so useful in actually supporting product development this would have advantages in gaining publicity and automatically help dissemination. Financial institutions also tend to respond well to such recognition.

OPTION 7.	**Awards for Innovation in Environmental Finance**
Description:	Sponsor awards for innovation in environmental finance - for actions by financial organisation which have helped the environment. Could work in partnership with UNEP and with other sponsors. Would offer the opportunity to attract press attention, disseminate best practice and would appeal to competitive nature of the financial markets. Particular awards could be given for specific categories (e.g. SMEs, Mediterranean region) or individuals.
Advantages:	- Would encourage positive action, at a low cost, and with potentially near term environmental benefits; - Straightforward to organise; - Likely to have a modest positive impact on companies and more generally on growth and competitiveness.
Disadvantages:	- In the global financial markets, the Commission might not be the best organisation to sponsor awards (although EU financial organisations may figure highly).

10.1.5. Interactions with EU programs and institutions

Financial markets have a poor perception of the environmental sector, partly reflecting impact of public policy and policy implementation. There is scope to improve this, particularly as the EU already provides significant support to the sector. Much of this support is provided without reference to the financial markets or the need for continuing private sector finance. Financial markets could be involved much more actively so they are willing to provide finance once public support ends.

Three options are proposed in the area. The first looks in more detail at the role of the EIB and other European financing institutions, to see how they could encourage private sector finance in this area. The second looks at reducing some of the obstacles to obtaining EU finance, and the third at improving the links between EU finance and the private financial sector.

OPTION 8.	**Investigate the Role of the Public Sector Investment Banks**
Description:	Public sector investment and development banks can play a key role in encouraging private financial institutions to use influence to achieve sustainable development by providing leadership, disseminating and requiring expertise, and supporting innovation and product development. EU institutions, notably the European Investment Bank (EIB), may learn from the experience of other development banks. It would be useful to review the potential opportunities for EIB to act as a catalyst for change by the broader financial markets.
Advantages:	- Significant long term potential; - Appropriate for EU action.
Disadvantages:	- Limited short term potential.

OPTION 9.	**Disseminating Information on Ecological Support Programmes**
Description:	EU institutions should improve the knowledge of banks and their customers about support programmes. There is evidence of barriers to their uptake, particularly by SMEs. This can be done by creating a central database accessible to all EU banks. EU institutions should also further the disseminating activities of institutions by the private financial sector, e.g. through grants or part funding.
Advantages:	- Improved use of current programmes; - Short term effects; - Motivation for further activities ; - More transparency; - No preferential status for customers of the financial service industry in Member States where banks have their own databases on programmes; - More visibility for EU environmental programmes; - Helps SMEs specifically.
Disadvantages:	- Some costs.

OPTION 10.	**Improve Links Between Commission Environmental Support and Financial Institutions.**
Description:	There is evidence that much community financing does not have the impact that it could have due to poor links to financial markets (who will be responsible for the on-going success of supported ventures). This is particularly the case where financing goes to small commercial organisations for demonstration projects. There is scope to develop enhanced links between community environmental financing (LIFE, THERMIE etc.) and the financial communities. The EU should conduct a review of those programmes which provide support to the private sector to identify how they could best be enhanced through improved interaction with the financial sector.
Advantages:	- Possibly short term environmental benefits; - Should have good long term environmental benefits; - Very appropriate at an EU level; - Positive implication for growth, competitiveness and employment; - Helps SMEs specifically.
Disadvantages:	-

10.2. OTHER POLICY MEASURES AND INTERACTIONS

There are number of areas which may be worthy of attention, but are not a priority to the same extent as those above. In many cases further research and investigation is likely to be warranted. As well as formal policy options, encouraging financial institutions to help achieve sustainable development could have implications for a number of other policy fields. While not at present justifying explicit policy actions these interactions should be borne in mind and as policy develops there may be scope to initiate policy actions or to integrate environmental finance concerns.

Possible Action in Bank regulation

1 Compulsory Environmental Risk Management

There may be a case for requiring banks (and possibly other financial institutions) to have an environmental risk assessment management process, and to disclose the nature of this process. While there is insufficient consensus to specify actual management in detail initially, there is certainly a case to say that banks should have at least some risk management here. Over time best practice can emerge and be enforced in more detail.

This would ensure all banks are involved in environmental assessment, making it harder for environmentally risky companies to obtain finance. Action would be appropriate at an EU level (otherwise bad risks will easily obtain finance elsewhere), and the measure should help reduce risk and provide consumer protection. The compulsory nature might be unpopular with both banks and local financial regulators, although justifiable.

2 Disclosure of Exposure to High Risk Sectors

Financial institutions could be required to publish their exposure to environmentally high risk industries or areas based on an externally determined list of relevant activities (e.g. on an industry code basis). A bank, for example, might state that 13% of their lending went to high risk activities. If this was significantly above the market average, they would come under pressure to state how they were managing these risks. Such a measure could be applied to all types of financial activity (e.g. investment funds) and could also be linked to the introduction of environmental risk assessment (e.g. make it mandatory above a certain trigger point). It would help raise the awareness within financial markets of environmental issues and would potentially bring consumer protection benefits. One area of difficulty might be determining the list of relevant activities which might prove controversial and unpopular, although there are precedents (e.g. EIA, IPPC measures).

3 Voluntary Agreements for Environmental Finance

The Commission could explore the potential for voluntary agreements with financial institutions where the financial institutions would agree to channel a certain volume of funds to environment purposes, either to business in the environmental sector or for environmental activities by general business and individuals. Agreements could be supported by guarantees mechanisms from the European Investment Fund, and might prove effective in encouraging support and innovation in financing of such projects.

4 The European Central Bank

The proposed European Central Bank (ECB) will have a substantial influence over the financial community and financial regulators in Member States. The Commission should consider in the structuring of the European Central Bank that adequate regard is given to sustainable development, both in the formal arrangements, such as the statutes and the supervisory structure (e.g. potentially consumer and / or environmental representation on an advisory board) and in the management and resources of the ECB, e.g. for research and dissemination activities related to sustainable development.

Tax Harmonisation

The need for (indirect) environmental taxes to internalise environmental costs has been emphasised elsewhere in this report. Separately from this, there are a number of ways that tax measures have been used to encourage environmental investment at a national level (preferential investment taxation, preferential depreciation allowances). These measures, at present, probably interfere with the functioning of the single market, albeit modestly. If European tax harmonisation measures start to address direct taxes (income tax, corporation tax), possibly as a result of the single currency, these environmentally useful measures could be threatened. Instead the opportunity should be taken to broaden their use. This should also increase their effectiveness by applying them to a wider market.

Procurement

The Commission could investigate the potential for incorporating environmental criteria in the procurement of financial services by EU institutions.

Pensions

If actions are taken to strengthen pensions legislation on an EU wide basis the opportunity should be taken to ensure that pension fund trustees or managers are required to take an explicit long term focus, such as the inclusion of sustainable development concerns in investment policy.

Corporate Governance and Shareholder Activism

If shareholder activism is to fulfil its potential as a mechanism for controlling companies and changing corporate attitudes to the environment, it will require action to strengthen shareholder rights (equal voting rights, rights regarding attendance of AGMs, proposal of resolutions etc.). At present there is probably insufficient investor concern over the environment to justify doing this for purely environmental reasons, although there are sound reasons more generally to consider this, including: the development of a single market, enhancing the rights of individuals, and reducing the need for public sector control, because shareholders can act as internal controllers. Thus in time, it may well become desirable for action on shareholder rights at EU level and such moves should then be supported for environmental reasons. However, moves to improve shareholder rights may encounter high resistance from certain parties, and could involve some costs to companies.

In the interim there may be scope to develop some momentum in this area by supporting the development of environmentally-oriented shareholder organisations in various ways, e.g. by organising a conference to give more weight to the question, through discussions with environmental NGOs and investors' groups. Such moves could be useful because shareholder organisations can act as social multipliers and can enhance environmental thinking in large parts of the population. However, it should be noted that strengthening shareholder organisations in general does not automatically lead to the improved environmental performance of companies.

Research and Policy Studies

There is potential for a number of research/study activities to aid the development of specific policy and complete the understanding where information gaps exists. Examples include:

- Research on the financial needs of eco-entrepreneurs: what specific challenges and problems do they face, how can they best be helped.
- Research improving the focus of existing research on the market potential for environmental business to address and interest a financial audience.
- Research the development of new standards of financial disclosure which fully integrate environmental and sustainable development consideration into the balance sheet, profit and loss, and cash flow statements (financial environmental accounting). These would include a more radical approach to the depreciation, capitalisation and provisioning for environmentally related expenditures and natural resource assets.

- Fundamental research into the links between insurance and sustainable development.
- Research into the potential for liability insurance schemes to simplify the regulatory approach.
- Research on the consequence of climate change for the supervision of the insurance sector.
- Research on the potential for enabling investment by insurers and others in high risk unlisted companies through the provision of mechanisms such as contingent guarantees.
- Research the potential use of, and obstacles to, self insurance schemes in the EU.

10.3. CONSIDERATIONS FOR MEMBER STATES

Many of the issues and options discussed will also have the potential for policy development at the level of Member States. In addition, the following options are specifically more appropriate at the level of Member States, and would enhance the role of financial institutions in achieving sustainable development at a national level.

Tax Incentives for Environmental Investment.

Member States could consider the potential for tax incentives to encourage investment in environmentally sound areas. Incentives could include tax reductions or exemptions on the returns from investments in environmental ventures and projects, or accelerated tax depreciation for the purchase of environmental equipment. See the case studies in Appendix II for details of how this has been done in the Netherlands.

Support Research on Potential for New Financial Products

Member States could finance research and analysis into the development of new financial products which help protect the environment, particularly for consumers and SMEs. Supporting such research could make it easier for financial institutions to justify the development of such products, which while expensive to develop (and thus not a priority) could be viable over the longer term. Such support is best placed to come from Member States.

The successful development of such products should offer environmental benefit in a relatively short time frame. They should also benefit companies through promoting eco-efficiency and so contribute to growth, employment and competitiveness.

Defining and Regulating of Long Term Investment Products

As part of consumer investment protection regulation, those who purport to offer long term investment products (e.g. pensions, life insurance) should be required to define how they aim to provide the best long term results for their customers. This would include how they factor longer term issues (i.e. environmental) into their investment policy and analysis. Such requirements could have a profound effect on the attitudes of investment community to environmental issues in the longer term. As pension policy is the responsibility of Member States, action would be most appropriate at this level.

Training

Members States could work with the various professional financial organisations and academics to ensure that training on environmental issues and there financial impacts is included in the training of financial professional. Such education could take place at three levels: undergraduate courses, during training for professional qualifications and post-qualification refresher courses for senior professionals. The latter approach has been found to be particularly effective by some financial institutions seeking to extend understanding of environmental issues outside of specialist environmental management functions.

11. Conclusions and Recommendations

This study has found a wide range of activities which leading financial institutions are undertaking that help encourage sustainable development and environmentally responsible behaviour. The potential of the leading activities to help meet the objectives of the Fifth Action Programme and support the move towards sustainable development appears significant, as is evidenced by the difference that the leading practitioners are making. A good illustration is that if banks across the EU made a similar commitment to environmental lending to that made by National Westminster Bank, over ECU 3 bn could be mobilised to finance activities by medium sized businesses seeking to reduce their environmental impacts.

However, progress to date is patchy and inconsistent, and there are a number of substantial obstacles impeding further progress. There is a need for policy actions which encourage financial institutions to move towards sustainable development. A number of such actions have been identified and offer considerable scope for financial markets to play an active role in achieving sustainable development.

Bringing financial markets into the role of environmental policy is an activity which needs to be undertaken carefully and with sympathy to the dynamics of the financial markets. The financial markets' function is to carry out the services their clients require. Innovation is only worthwhile when it is seen to pay. Thus there is limited demand from industrial clients for environmental financial services per se, outside a few specific areas of concern. Environmental companies are too small and diffuse (and undefined) to offer a major financing opportunity for the market as a whole. Environmentally orientated investment funds are at present too small to be a mainstream force. They do not impinge upon the markets' collective consciousness.

Yet there is scope to work within these limitations. The potential for environment factors to be relevant to financing and investment decisions is greatly limited by the lack of useable information on these issues. The demand for environmentally oriented funds could be greatly increased if obstacles to their sales were overcome. Supporting niche activities more directly, such as the development of innovative financing approaches, should help encourage their development. Where the EU is already involved in supporting the environmental sector, it could adapt and modify its approach, so that the financial markets become much more engaged and keen to take over once EU support ends.

A key issue will be to break through the myth of environmental underperformance (that environmental investment does not pay). While recent studies in Europe and the USA have demonstrated that companies with strong environmental management do not underperform their peers, that environmental funds can outperform their underlying markets and that growth opportunities in the field of sustainable development make investing in these fields a responsible proposition for medium and long term personal investment, much scepticism remains. As well as supporting dissemination of information and understanding in this key area, the Commission can help address this directly, by taking further measures to ensure that environmental externalities are internalised (e.g. environmental taxation) and good environmental performance increasingly equates to good financial performance.

The overall consequence of the suggested policy actions would be to make financial institutions a positive force in achieving sustainable development. Such a programme of actions would provide a major complement to, and reinforcement of, other more conventional environmental policy actions and would help achieve the objectives of the Fifth Action Programme.

APPENDICES

The appendices are enclosed in volume 2

Appendix I **Methodology, Approach and Contacts**

Appendix II **Case Studies**

Appendix III **National Studies**

Appendix IV **Environmental Management and Reporting Studies and Surveys**

Appendix V **Environmental Performance and Financial Performance**

Appendix VI **UNEP Documents**

Appendix VII **Glossary**

Appendix VIII **Bibliography**

THE ROLE OF FINANCIAL MARKETS IN ACHIEVING SUSTAINABLE DEVELOPMENT

APPENDICES
TO THE MAIN REPORT

TO THE EUROPEAN COMMISSION

BY
DELPHI INTERNATIONAL LTD
IN ASSOCIATION WITH ECOLOGIC GMBH

November 1997
Version 2.0

PREPARED UNDER CONTRACT:

B4 - 3040/96/ 000412/MAR/HI

PROJECT MANAGER: MARK MANSLEY

36 Great Queen Street

London WC2B 5AA, United Kingdom

APPENDICES

APPENDIX I - METHODOLOGY, APPROACH AND CONTACTS.....93

APPENDIX II CASE STUDIES.....97

II.1 DEUTSCHE BANK.....97
II.2 THE CO-OPERATIVE BANK:.....98
II.3 SWISS BANK ASSOCIATION.....99
II.4 ENVIRONMENTAL IMPAIRMENT LIABILITY IN GERMANY.....100
II.5 THE INSURANCE SECTOR AND GLOBAL CLIMATE CHANGE.....102
II.6 VERSIKO AND "GREEN" FINANCIAL PRODUCTS.....104
II.7 "GREEN" TAX INCENTIVES IN THE NETHERLANDS.....104
II.8 GERMAN ECOLOGICAL BANKS: Ökobank and UmweltBank.....106
II.9 THE WORLD BANK:.....107
II.10 THE BIE INDEX OF CORPORATE ENVIRONMENTAL ENGAGEMENT.....108

APPENDIX III - NATIONAL STUDIES.....109

III.1 AUSTRIA.....109
III.2 GERMANY.....111
III.3 THE NETHERLANDS.....113
III.4 THE UNITED KINGDOM.....114
III.5 FRANCE.....115
III.6 SPAIN.....116

APPENDIX IV - ENVIRONMENTAL MANAGEMENT AND REPORTING STUDIES AND SURVEYS.....117

IV.1 Institutional Investors & Analysts in Great Britain.....117
IV.2 Business Conceptions of Sustainability and the Implications for Accountancy.....117
IV.3 Eco-Efficiency and Financial Analysis. The financial analyst's view.....118
IV.4 Company Environmental Reporting:.....119

APPENDIX V ENVIRONMENTAL PERFORMANCE AND FINANCIAL PERFORMANCE.....121

APPENDIX VI - UNEP DOCUMENTS.....124

VI.1 The Statement by Banks on the Environment (original version).....124
VI.2 The Statement of Environmental Commitment by the Insurance Industry.....125
VI.3 Signatories of the Banking Statement.....127
VI.4 Signatories of the Insurance Statement.....128
VI.5 UNEP Insurance Initiative Position Paper on Climate Change.....130

APPENDIX VII - GLOSSARY.....132

APPENDIX VIII BIBLIOGRAPHY.....134

12. - Methodology, approach and contacts.

Information search

There is a considerable body of literature on the subject of engaging financial services with sustainable development concerns. Please refer to the bibliography for a list of the main publications from recent years. The McCarthy, JADE and F&S Invest databases were extensively used to gain an insight into all of the European mainstream media and investment banking coverage of potentially pertinent topics from 1992 to 1997. A number of specialist libraries were used: The EU Library in London, City Business Library, British Library and institutional databases, especially at NPI. These were used for a broadly based investigation of information relating to DG II, XI, XV and XXIV, along with work on the nature and size of the pertinent financial markets, follow-up work on market components and drivers on various on-line databases and reference to studies on practical issues regarding these markets.

On-line databases and personal databases were used to conduct a broadly based analysis of press coverage over the past 24 month in relevant areas for viewpoints and comments, along with appropriate Commission newsletters and related communications. Company, NGO and Government reports, along with a variety of independent publications, were examined. Investment and other reports by banks and stockbrokers were also used to gain a sense of current investment practice.

It was evident much of this literature had a limited practical value, and even this information rarely impinged upon the financial sector's consciousness. As a result, the overriding aim while developing this project has been to maximise the applicability and utility of its findings and recommendations with regards to the current and future practice of the financial sector.

Evaluating the avenues for investigation

Letters were drafted and mailed to potentially interested parties in commercial banking, investment banking / fund management, and insurance. These letters asked the entities for their views on finance and sustainable development with regards to the following:

- What they were currently doing
- Future intentions
- Areas for suggested policy actions

Recipients were typically those identified as being interested in environmental issues within the organisation concerned. Extensive use was made of Delphi and Ecologic's databases to ensure as comprehensive and representative coverage as possible of organisations. Their responses led to a substantial number of face to face interviews, which along with written submissions which were used as the principal input to much of the report.

To obtain a broader perspective, letters were exchanged or meetings arranged with a variety of other organisations, including NGOs (environmental and financial), international organisations, financial trade associations and accounting bodies, and private companies (both those in the environmental sector and general industrial companies). Visits to relevant individuals at DGs III, XI & XV were made during the first phase of the study.

Verification and confirmation

Certain informal contacts were made with a wide range of equity analysts, institutional investors and company directors in Britain, France and Switzerland. This formed the basis of our reviewing the applicability of conventional ideas and ascertaining the potential demand for any innovative approaches. This non-attributable approach, based upon Delphi's comprehensive financial sector contacts is unique since it has allowed the project to concentrate upon what really matters and what is

required, rather than what the main boards and publicity departments of various financial institutions would like to project.

Contacts

Discussions, in person or by letter, were held with representatives of the following organisations.

Company	Country	Industry
Bank Austria	Austria	Banking
FIFEGA & ÖkoInvest	Austria	Specialist finance
Institut für ökologische	Austria	NGO
Technology Development Corporation	Canada	Specialist financier
Association Française des Banques	France	Banking (body)
Banque National de Paris	France	Banking
Banque Paribas	France	Investment Banking
CDC Participations	France	Fund Management
Crédit Agricole	France	Banking
Ecureuil Gestion	France	Fund Management
FFSA	France	Insurance (body)
Generale des Eaux	France	Utility
HSBC James Capel	France	Stockbroking
International Chamber of Commerce	France	Industry (body)
Lyonnaise des Eaux	France	Utility
Société Générale	France	Banking
Bundesaufsichtsamt für das Kreditwesen	Germany	Banking (body)
Dachverband der Kritischen Aktionäre	Germany	NGO
Deutsche Ausgleichsbank	Germany	Banking
Deutsche Bank	Germany	Banking
Die Grünen	Germany	Political party
Ethik	Germany	NGO
Federal Ministry of Environment	Germany	Ministry
Investiko	Germany	Specialist banking
Oecokapital	Germany	Specialist banking
Ökobank,	Germany	Specialist bank
ÖkoTest	Germany	Rating agency
ÖkoVision	Germany	Specialist banking
Social-Democratic Party in Germany	Germany	Political party
Umweltbank	Germany	Specialist banking
Verband der öffentlichen Banken	Germany	Banking (body)
Verein für Umweltmanagment in Banken und Versicherungen (VfU)	Germany	NGO
Versiko	Germany	Specialist insurance
Amici della Terra	Italy	NGO
ABN Amro NV	Netherlands	Banking
Dutch Bankers Association	Netherlands	Banking (body)
ING Groep NV	Netherlands	Banking
Mees Pierson	Netherlands	Investment Bank

Company	Country	Industry
Triodos Bank	Netherlands	Specialist Bank
Argentarias	Spain	Banking
Credit Suisse	Switzerland	Banking
Elipson	Switzerland	Specialist research
Swiss Bank Corporations	Switzerland	Banking
Swiss Re-insurance	Switzerland	Insurance
Union Bank of Switzerland	Switzerland	Banking
United Nations Environment Program	Switzerland	International Organisation
VTZ	Switzerland	Specialist financier
WBCSD	Switzerland	Industry body
ACCA	UK	Accounting (body)
Association of British Insurers	UK	Industry Body
Barclays Bank	UK	Banking
British Bankers Association	UK	Banking body
Business in the Environment	UK	NGO
Capel Cures Asset Management	UK	Fund Management
Cazenove & Co	UK	Stockbroking
Co-operative Bank	UK	Banking
Credit Lyonnaise	UK	Stockbroking
CSFB	UK	Stockbroking
Deutsche Morgan Grenfell	UK	Investment Banking
Dresdner Klienwort Benson	UK	Stockbroking
Ecofin Holdings	UK	Stockbroking
Enskilda Securities	UK	Stockbroking
General Accident	UK	Insurer
Henderson Investment	UK	Fund Management
ICAEW	UK	Accounting (body)
Impax Capital	UK	Investment Banking
Jupiter Tyndall Merlin	UK	Fund Management
Merril Lynch	UK	Stockbroking
Morgan Stanley International	UK	Investment Banking
National Westminster Bank	UK	Banking
NatWest Markets	UK	Investment Banking
NCL Investments	UK	Stockbroking
Novartis Asset Management	UK	Fund Management
NPI	UK	Fund Management
PIRC	UK	NGO
Paribas Ltd.	UK	Investment Banking
Quilter & Co.	UK	Fund Management
Robert Fleming	UK	Investment Banking
SBC Warburgs	UK	Investment Banking
The Green Alliance	UK	Green NGO lobby
UBS Philips & Drew	UK	Stockbroking

Company	Country	Industry
Environmental and Finance Enterprise	United States	Specialist research
Environmental Bankers Association	United States	Banking (body)
Salomon Brothers	United States	Investment Bank

13. Case Studies

13.1. II.1 Deutsche Bank

Deutsche Bank, (DB) the largest private German bank, regards long term survival as its main business objective and environmental protection is one part of this fundamental goal. DB is the leading German bank in environmental activities and one of first signatories of the UNEP Bank Statement.

There are currently three main sectors within DB which deal with environmental issues:

- **internal environmental management** dealing with internal operations and environmental performance - the responsibility of a board member;
- **corporate clients department** providing information on environmental issues to business clients;
- **credit risk management** dealing with environmental risks stemming from the lending business.

Major improvements have been achieved in internal environmental management within the last years. No major problems are anticipated in undergoing an eco-audit based on current EU standards.

Apart from savings and the immediate environmental gains, internal environmental management has been instrumental in raising environmental awareness amongst the staff and in winning acceptance among the clients for further environmental measures by the bank.

Information for Companies

At the end of the 1980s, the corporate client department provided the first information brochures on pollution control for medium-sized industrial clients. A broad range of activities has since evolved, concentrating on SMEs, as big industrial clients do not need further advice on environmental issues.

Information and consulting activities worthy of mention include the following.

- An environmental check list for client completion: Gerling Versicherung rates the risk involved with the client's activities. Though heavily promoted, there was little response.
- "db"-select and "euro"-select data bases provide information on German and EU funding programmes which support environmental activities.
- Umwelt-Datenbank data base provides information on environmental services, products and technologies. It contains the profiles and product descriptions of almost 3,000 companies, institutions and consultancies.
- DB publishes information on EMAS. In workshops DB tries to convince companies that participation in the EMAS will eventually lead to advantages for their own business.

Credit Risk Management

When it comes to sustainability, the priority within DB is credit risk management. For normal lending and for project finance, DB applies the principle that "no significant risks for the environment" should emerge. This somewhat abstract guideline is broken down on a regional and product basis, and adapted to the different activities of DB.

In project financing, World Bank guidelines or national legal standards serve as benchmarks, whichever are the stricter. Here, the application of environmental standards is relatively easy, since the amounts involved permit environmental impact assessments and cross-checking by a team of specialists. In the case of small credits, it would be too costly to involve experts for an intensive assessment. Therefore, DB relies on a check list which is completed by the credit officers.

Check Lists

Since 1996, DB has developed an environmental credit check list concentrating mainly on the aspect of eco-management. A pilot project is currently being carried out in two main branch offices. Companies are divided into ones with sound environmental management and ones without. The check list monitors compliance with environmental legislation. Question One reads: "Has the company carried out an Eco-Audit?" A positive answer results in no further questions. If not, the check continues to find out if the creditor knows how to handle environmental risks. Straightforward indicators are used so that the check list can be completed easily by client. The aim is to sort out the "truly black sheep" quickly and identify out cases requiring further specialists examination.

The policy is that negative outcomes will not result in the termination of business relations, instead problems are resolved through clients discussion. As a result, clients may obligate themselves to improvements within a certain period. In some countries, DB has required improvements even in cases where the client was in compliance with local laws.

The evaluation of environmental risks forms part of the general risk assessment and is eventually incorporated into a creditor's 'risk factor'. This risk factor determines the final credit conditions offered to the customer. High environmental risks generally result in higher interest rates. DB's general credit check list also contains environmental questions. The market situation and the products of the potential borrowers are evaluated. DB is also improving the system of identifying and assessing old contaminated sites. Together with the land registry offices, DB is establishing a standard procedure for receiving information more quickly and without bureaucratic impediments.

13.2. II.2 The Co-operative Bank: Winning Business and Supporting the Environment

The Co-operative Bank is a medium sized UK financial institution, with total assets of £3.7bn (ECU 4.8bn) with around 1 million personal customers, and 35,000 corporate customers. As its name implies, the Co-operative Bank has a long tradition of association with the co-operative movement and other social organisations including housing associations and local authorities. Its only shareholder is the Co-operative Wholesale Society, the UK's largest co-operative. Thus it has always taken a broader view of its purpose than purely commercial banks, but nonetheless has to generate profits to ensure its future. At the end of the Eighties the bank was in trouble, losing money and uncertain as to its future role. As a result it had to consider radical changes in the way it did business, including updating and revisiting the social part of its mission. It decided to ask its customers in 1991 about their views on the areas it should lend to and whether it should avoid certain sectors. After getting a clear positive response from customers in 1992, it launched its "ethical policy".

The policy includes commitments to avoid investing in areas of oppressive regimes, animal experimentation, tobacco, factory farming and animal fur and positive commitments in areas such as environment and fair trade. The Co-operative Bank followed up adoption of the policy with a major advertising campaign. Although the bank has lost some business because of its ethical stance (i.e. because customers have not met the ethical criteria, with environmental issues being a key concern), the ethical policy has proved very successful in winning new customers. Of particular advantage to the bank is that its new customers have been young, relatively high income, and based in the south of England, providing a excellent complement its traditional working class customer base in northern England. Overall, the net result of the ethical policy has been very successful and has been a major factor in the bank turning round a loss of nearly £6m in 1991 into a profit of £36m in 1995. However, the bank would point out that although its ethical stance has given it a clear market franchise, it still must offer competitive services to its customers.

In the area of the environment, the bank has gone considerably beyond its ethical commitment and has looked at how it can take a more active stance on the environment. In 1994 it established its

ecology unit, to help the bank in its operations and to facilitate the development of ecologically sound enterprises and business practises in the UK. The centre has helped educate the bank's staff about environmental risks and opportunities. In doing this it takes a much deeper, more ecological approach than other banks, using the "natural step" methodology developed in Sweden.

In 1996, the activities of the bank took a major step forward when it helped establish the National Centre for Business and Ecology (NCBE), by providing core finance of £1m for the first two years. The centre is intended to provide access to expertise of environmental matters for business, particular SMEs, at an affordable price. It has been established in partnership with the four major universities in the Manchester area. Businesses can contact the centre with their environmental questions which can vary from process improvement, to product development and market research. The core staff of the centre then locate the relevant expertise within the universities - if necessary they can go outside for specialist skills. Help can take a number of different forms, including the secondment of a graduate student to the business for a period, normal consultancy services, or joint projects with other groups. The centre can also provide businesses with advice on access to other sources of funding.

The Co-operative Bank has been active in promoting the centre among its clients, although use of the centre is not restricted to bank customers. It has adopted a strategy of focusing on one key issue at a time, such as Volatile Organic Compounds (VOCs). Although the centre has not been established for very long, it has already worked with over 200 companies in one way or another, and can boast a number of significant successes. The centre is intended to become self supporting in due course. In setting up the centre, the Co-operative Bank was not acting purely altruistically as it hopes that access to the centre will improve the quality and reduce the risks associated with some of its portfolio, and may also help the Bank access and develop new business.

The Co-operative Bank is also looking at ways to support environmental businesses in financing activities. It is shortly to announce a "green" corporate bank account for environmental businesses. This will feature reduced transaction costs, and concessions on lending such as reduced arrangement fees. The services are not intended to be loss making, and normally credit assessment will apply, but the Bank is willing to reduce its margins in this area, with the hope that it will build up good quality business in this growing area. The bank is also looking at how it can help finance environmental projects and technology, and is, for instance, considering developing small amount leasing products for environmental technology, and aiming to build up expertise so it can provide competitive lending in environmental projects such as renewable energy.

The actions of the Co-operative Bank provide real evidence of the potential consumer interest in "green" and ethical finance and are an excellent example of how banks can help small businesses improve their environmental performance.

13.3. II.3 Swiss Bank Association Informing Banks about the Environment

The "big three" Swiss Banks have been among the most environmentally conscious of financial institutions, for instance, have been involved in the UNEP charter from its inception and have provided considerable input into the World Business Council for Sustainable Development (WBCSD) financial market activities. All three have made considerable progress in environmental management and loan assessment, and have even started to look at environmental issues in areas such as asset management. However, many smaller banks in Switzerland were less informed and less able to deal with environmental issues than the big three. Thus Swiss Bankers Association (SBA), supported and encouraged by the big three, decided to develop a programme to inform other Swiss banks about environmental issues. This was not entirely altruistic of the big three: they recognise that if other smaller banks were not informed about the environment, they could end up out competing the big banks when looking at environmentally risky deals. This would be bad business for the smaller banks because of the environmental risks, but they would not be aware of the risks until too late.

Meanwhile the large banks could have lost customers. The winners would be the borrower who would be able to avoid having to address his environmental problems while still getting a cheap loan - not exactly a desirable outcome.

As a result of this action, the Swiss Bank Association published, on 27 February 1997, a guidebook for banks on environmental management in German and French. "Umweltmanagement in Banken" / "Gestion environmentale dans les banques", combined with a computer disk. This 76 page guidebook is a fairly comprehensive and practical tool for a financial institution to get them started in environmental management, and appears to be the best tool available to date for bankers just starting to look at environmental issues. In particular it goes beyond the internal aspects of environmental management "good housekeeping," to look at the credit and investment activities of the banks. A summary of the contents of the guide are described in the box below. While it is too early to judge the effectiveness of the guide it should prove helpful for smaller financial institutions to integrate environmental concerns into their business, and indeed many banks outside Switzerland could find it useful.

ENVIRONMENTAL MANAGEMENT FOR BANKS, SBA 1997.

Summary

1. *Getting Started*: Outlines why banks should look at environmental issues, introduces the key areas of concern and discusses the opportunities both financial and for the bank's reputation. It outlines a four step methodology: establishing objectives, setting up key projects, involving the whole organisation and then consolidating the process.
2. *The ecology of the enterprise:* Looks at the overall ecology of a financial organisation, the internal consumption of materials, the treatment of waste, the ecology of buildings, energy management, the volume of travel, and introduces the concept of eco-balances.
3. *Credit provision*. Covers economic and ecological risks, site contamination, other risks such as reputation and management, a three step process for examining environmental risks. It also looks at the new lending opportunities in "green" businesses and the potential for new instruments such as eco-credits and specialised environmental financing.
4. *Investments and equities*: Looks at the impact of the environment on listed companies, outlines the different aspects of environmental evaluation and discusses the importance of analysis. It then looks at the growing interest in the environmental funds of various kinds.
5. *Communication*: The importance of internal communication, the method of communicating environmental information, stakeholders and external communication, and designing an environmental report.
6. *Developing a systematic approach:* Establishing lines of responsibility, Environmental Management Systems, certification of such systems.

13.4. II.4 Environmental Impairment Liability in Germany

In Germany, the role of the insurance industry with respect to environmental issues has changed much since a new law (Unwelthaftungsgesetz) came into force on 1 January 1991. The law introduced strict liability for named high risk installations and required the companies to carry liability coverage up to DM 160m in property damage and DM 160m in personal injury, although this requirement has never been implemented. Furthermore, according to the new law presumed causation - the fact that the enterprise in question could have caused injury and / or damage - is sufficient to pursue a claim. One representative of the insurance industry calls the change, "revolutionary, especially since these developments go along with increased and often exaggerated claims awareness. The latter gains even more importance as this development manifests itself all over Europe, regardless of the actual legal liability situation in each country."

Having led to an increased awareness, the main goal of the law (prevention of accidents, not the protection of victims) has been achieved. In fact, more and more insurance companies are setting up consulting services which advise the clients in risk management and avoiding potential environmental dangers. Furthermore, with new environmental liability contracts needed as a result of the law, industry had to negotiate with the insurers about new polices and the insurers proved to be very aggressive over policy terms and very precise in checking the environmental hazards stemming from the company's activities.

Even though the law was passed several years ago and the insurance industry agreed on an standard liability model, German firms still disagree with insurers over rates and terms for compulsory insurance for environmental impairment liability (EIL). Before the introduction of EIL, companies with pollution risks bought coverage under Federal Framework Water Management Act (Wasserhaushaltsgesetz -WHG) policies. These policies covered clean-up costs for contamination on policy-holder property on an occurrence basis. The new EIL policies limit coverage to third party damage becoming manifest during the policy period and thus eliminate coverage for long-tail exposures.

Thus, risk managers contend that EIL coverage took away many of the advantages of earlier WHG policies. They also claim that, more serious than this, is the issue of pre-claim damages. These occur before the policy is signed but become manifest afterwards. Under EIL policies, pre-claim damage would not be covered. Another characteristic of the EIL policies is that any policy starts with a clean slate. As a result, insurers need only to cancel a policy after a big claim in order to free themselves from long-tail exposures.

One common dilemma for buyers and insurers is that the potential for EIL claims in Germany is still relatively unknown. Insurers have no statistical information on pollution losses under EIL policies dating back more than three years. They must therefore resort to calculating premiums on expectation as opposed to experience.

While buyers seek alternatives to traditional insurance cover there are signs that insurers are willing to bend. Last year some concessions were made: policy holders need no longer detail every potential hazard but can make general declarations instead, thus reducing cost and administration. Insurers have made it easier for companies to include coverage of certain substances under existing policies: they only need to be reported to the insurer. Coverage has also been extended to include damage to rented equipment. Insurers say they will not change terms and conditions until they have had more experience with EIL claims.

New Thoughts on Liability

Even though the environmental liability law of 1991 is still controversial, the Ministry of Environment has plans to move further.

Officials are pointing to a potential role for the insurance industry in simplifying construction authorisation procedures. For example the "classical authorisation procedures" could be replaced (optionally) by a combination of liability insurance and independent expert assessment and approval with respect to planning, construction and operation of the plant. This option would be of particular interest for SMEs.

However, the insurance industry opposes the idea for several reasons. Firstly, insurers do not want to become "environmental police" and endanger their client relations, especially since potential financial gains deriving from the new product are small compared to the whole liability business. Secondly, insurers fear the "political risk". They do not want to be drawn into the political debate about which activities are and should be permitted i.e. which risks are acceptable to society. Thirdly, as is the case with the existing environmental impairment liability law, insurers find it difficult to calculate premiums for this type of offer.

In order to overcome the reluctance of the insurance industry, the federal ministry wants to organise further discussions on that matter and is about to develop new models which would reduce the "political risk" for insurers. Since the ministry relies on the voluntary approach, all depends on the willingness of the insurance industry. The ongoing liberalisation process in the insurance market might turn out to be very advantageous in this respect.

13.5. II.5 The Insurance Sector and Global Climate Change

Concern over climate change within the insurance sector has been driven by some very real events: the rising occurrence of major natural catastrophes in the late 1980s and early 1990s, notably windstorms, which resulted in billion dollar losses for the industry. The industry felt that the losses incurred could not be completely explained by existing factors, such as pure chance combined with a rising level of insurance cover. In looking for an explanation the insurance industry noticed the rising concern over climate change and noted that several aspects of climate change could lead to increased incidents of major weather related catastrophes. At the very least, climate change undermines the main tool for estimating catastrophe risk, namely historic weather patterns.

As a result, the industry started to express its concern over climate change. In 1993, the president of the Re-insurance Association of America said that the industry was the first to be affected by climate change, and that it could bankrupt the industry. In the same year Munich Reinsurance, the world's largest reinsurer, called on governments to take "drastic action" to address climate change. In 1994, Swiss Re published a report entitled *Global Warming: An Element of Risk,* which discussed the threat of climate change and, in particular, warned that insurers could not be looked on to absorb all the risk of climate change as there was an element which was beyond their ability to manage, and so should concern whole states and nations.

In 1995, the action started to move onto the political arena, not least because of the work of Greenpeace International in persuading insurance companies to take climate change seriously. At the Berlin Conference of the Parties (the main policy making body for the climate change convention) in 1995, Greenpeace organised a seminar with a number of insurance industry representatives and others from the financial markets. In addition the insurers had a significant informal presence at the conference, and met a number of delegates. The proceedings of the conference were published in *Climate Change and the Financial Sector* which brought the issue to the attention of a wider audience. Concern over climate change was also one reason that motivated insurers to work with the UNEP to produce the statement for insurers at the end of that year. They also contributed a chapter on the impact of climate change on the financial services sector for the latest report of the Intergovernmental Panel on Climate Change, published in 1996 and chaired by General Accident. At the 1996 Conference of the Parties in Geneva, the insurers issued the formal statement enclosed in Appendix 4. The recently formed association based on the UNEP initiative will enable the insurers to have a formal presence at the third conference of the Parties in Kyoto in December 1997.

Insurers have also been active with their national governments in looking at climate change. General Accident have been involved with the UK government, and Swiss Reinsurance has advised the Swiss government on the domestic impacts of climate change. These measures appear to have helped strengthen the resolve of national government over climate change.

It is difficult to gauge exactly how much the activities of the insurers have had on such a complex process as the climate change negotiations. However, according to one observer, the presence of the insurers has been significant: the existence of a business voice other than that of the fossil fuel industry meant there was a no longer a single "business" opinion on climate change. The fact that these views were being expressed by specialists in risk assessment made it all the more persuasive, and helped counteract the fact that the insurers were relatively poorly organised and funded in comparison with the "carbon club".

Insurers have also been actively looking at how they can respond to the challenge of climate change in other areas of their business. They have identified a number of measures which can help mitigate the impact of climate change. According to Andrew Dlugolecki of General Accident, measures which can be taken include:

- Assessing the hazards for the major risk categories and disseminating them internally and externally (as they feel appropriate).
- Advising the public authorities on appropriate damage prevention / abatement approaches, e.g. priority areas for sea defences.
- Internally, reducing the exposure of the insurer to particularly high risk areas, e.g. by selling businesses interests in high risk areas such as the Caribbean.
- Advising the public authorities on guidelines for land development, zoning / planning restrictions, to avoid developing an asset base in high risk areas.
- Improved pricing of risk: for instance, with general house insurance pricing risks based on individual streets and locality, leading to a much wider spread of premiums. This has already happened with insurance for subsidence, and will increasingly be factored into risks such as storm and flood.
- Working with regulators to enforce or improve building standards. Experience has shown that losses are significantly increased by poor quality construction. (This is taking place in countries such as the US, Fiji, the United Kingdom and Australia.)
- Improving after-the-event support such as telephone help lines and authorised contractors which can help reduce losses from consequent damage and in areas such as business interruption costs.

Insurers have also been encouraged to look at the investment side of their businesses, with the aim of firstly ensuring that climate change risks should be factored into their portfolio, and secondly to actively invest in companies which are involved in reducing climate change risks, such as renewable energy and energy efficiency. While this is a difficult area for many insurers as their investment managers are less aware of climate change than the underwriters, some insurers are starting to invest some of their funds in an environmentally responsible manner. For example, several leading insurers have invested in the Scudder Storebrand "Environmental Values Fund".

Although insurers in the US have not been as organised as European insurers (e.g. in the UNEP initiative) they have however become active in the climate change debate. Two initiatives here are worthy of note. A study supported by the US Department of Energy identified several potential linkages between energy efficiency measures and mitigation of insurance risks. For instance, improved ventilation systems can reduce fire risks and energy costs. The report then identified several practical steps insurers could take to capitalise on these links, such as supporting certification initiatives, offering discounts, and looking at their own property portfolio. The other initiative is a partnership between certain US insurers and the Atlantic Global Climate Change Institute based in Bermuda focusing on causes of extreme weather events. By working closely with academics, it is hoped that insurers can help target research to issues of key concern to them, and also help to express the climate change debate in terms that may be more understandable to policy makers.

The insurance industry's involvement in the climate change debate helped develop the overall political debate, although there is still potential for further action by insurers to take both unilateral action and to work with policy makers to reduce climate change risk. It would also be useful if mechanisms could be found to encourage those insurers who have not yet become involved in the climate change debate to start to take the issue seriously.

13.6. II.6 Versiko and "Green" Financial Products

Germany has also seen the development of a niche environmental insurance sector, with an increasing number of competitors and products. Over the last few years Versiko has introduced on the German market several new insurance products which are notable for their environmental aspirations. One of these is VersiRente, a private pension insurance. Set up in 1992 in co-operation with the insurer Continentale AG, VersiRente is the first German example of an ecological investment strategy combined with the tax advantages of an insurance policy. In 1996 contributions exceeded DM 5m, 22% of which went to environmental investment funds.

VersiLife was set up in 1994 as an insurance product combining tax advantages with a more ecologically oriented investment strategy. VersiLife is probably the largest environmental investment funds-based endowment insurance available in Germany. Originally, VersiLife, invested 100% of the capital in equal amounts in OekoSar, the Hypo Umweltfonds and Hypo Eco Tech. Strong criticism followed due to the fact that Hypo Eco Tech contains shares of companies involved in genetic engineering, chemical production, etc. Versiko now offers the option to invest 100% of the contributions in ÖkoVision, a 'pure green' fund.

Most recently, Versiko has created another form of environmental endowment insurance: oeco capital. Unlike VersiLife, funds collected by oeco capital are invested in shares (25%), bonds (Eurofima and Austrian Environmental Bond, 25%), finance for ecological construction projects (25%) and loans for municipal infrastructure projects like small-scale combined heating and power generating stations and sewage treatment plants (25%).

In 1995, accident insurance VersiPlus was created by Versiko in co-operation with Mannheimer Versicherung. VersiPlus supports the insured's environmentally friendly behaviour. In the case of an accident leading to injuries suffered by the policy holder, the insured receives a 'normal' amount of compensation if the accident happened while using a car or an aeroplane, but twice the 'normal' amount if the accident happened while using a taxi, bicycle, or public transport.

The activities of Versiko have had a impact upon the German insurance market. There are now about a dozen other companies: Continentale and Mannheimer offer their own polices, and other insurance brokers such as Excalibur, Securvita, Provita and others have created new environmentally oriented products.

13.7. II.7 "Green" Tax Incentives in the Netherlands

"Green" Investment Incentives

Triodos Bank, one of the first financial organisation with a specific environmental purpose, was keen to encourage project investment. It lobbied the Dutch government for the creation of tax free investment schemes for environment projects. This led to the introduction of legislation for the creation of "green" investment funds, which came into effect on 1 January 1995. The interest from the funds are free of income and capital gains tax, a major incentive in highly taxed Netherlands. The funds are required to invest at least 70% of their assets in "green" projects which were tightly defined. The projects have to be certified as ""green"" by the Government, and the main sectors are:

- renewable energy;
- organic agriculture;
- nature conservation;
- "agrification" - non food crops;
- environmental technology;
- energy efficient / ecologically sound housing - added 1 November 1996.

After lobbying, the scheme was extended to existing "green" projects (especially in organic farming), and the established "Green" Funds run by Triodos were able to benefit from the scheme. There is

currently a lot of interest in the idea of extending the scheme to suitable "green" investments in the developing world, particular in the least developed countries. While this would provide an extra outlet for the funds and potentially would have great environmental and social benefits in areas such as off-grid power, it raises issues such as the increased risks involved and some form of guarantee would probably be required. Nonetheless the Government appears sympathetic to the idea, and progress is likely to made during 1997, although it is still early days.

The funds were extremely successful in attracting new investment, with the first fund launched by Rabobank attracting over five times its initial expected amount - Dfl 430m as opposed to Dfl 80m - and had to be closed prematurely. Other banks such as ABN-Amro and Postbank also launched funds and by the end of the first year eight funds with a total of Dfl 1500m had been launched. The funds have generally provided a lower rate of interest than ordinary investments before tax, of around 3-4%, offsetting the tax benefits to some extent. Because of large amounts of funds available there is major competition for suitable projects, with banks charging around 4½%, as opposed to around 6½% that such projects would normally pay. This outcome is clearly desirable, as the purpose of the scheme is to provide "green" projects with cheap funding, not to provide people with an easy tax break.

Assessing the success of the scheme in terms of encouraging new projects is difficult. Many investments would probably have gone ahead without the incentives, but in marginal cases, it is likely to have helped financial viability. Of more importance is that the scheme has helped the mainstream banks take an interest in the "green" projects and, secondly, the high level of competition has meant the banks are actively seeking new projects and trying to help those looking to develop them. However, there are a number of limitations to the scheme. It is overly bureaucratic, with delay of several months common while projects get formal approval. Secondly, the eligible areas are fairly limited, and, in particular, it is not possible to provide higher risk / higher return capital such as venture capital.

Depreciation Incentives for Environmental Technology.

Another area where the Dutch government has been innovative is in the area of incentives for businesses looking to use environmental technology. Here it has two parallel schemes. The first provides full first year depreciation for the use of environmental technology which is new and the best available. The second provides accelerated depreciation of between 40% and 60% on equipment for energy efficiency. The Dutch government maintains a detailed list of what technology is eligible, updated annually. There is an overall cap on the total amount of the incentives that are available.

What makes these incentives of interest to the financial markets is the opportunity they create for financiers to provide low cost financing, through mechanisms like leasing and structured finance. By structuring the transaction, the overall cost can be reduced. One common approach is where a profitable bank becomes the legal owner of the piece of equipment, so they can claim the depreciation, and they then lease it to a company who uses it. Dutch bankers have been actively involved in developing such financial products and have worked closely with environmental technology developers to ensure that their technology is available with an attractive financial package.

The financiers involved have commented that a key feature of the tax incentives is that it helps focus attention on the better companies, as either the companies have to be profitable to benefit directly or the lessor will need to be satisfied about the prospects for the company. Thus the schemes help reward winners rather than prop up poorer companies. One attractive feature of the scheme is the relatively close co-operation between the Dutch government, the Dutch environmental technology industry, and financiers, which provides a good model for others.

13.8. II.8 German Ecological Banks: ÖKOBANK AND UMWELTBANK

Ökobank

Started in 1988, Ökobank sets itself apart from classical banks in a number of ways: by carrying out ecological and ethical project appraisals, by deliberately not aiming for profit maximisation, by sponsorship programmes, by its consultative committee (*Beirat*), by the transparency of allocation and by the strong involvement of its members in decision-making processes. The bank is structured as a registered co-operative and supports alternative forms of economic management. Shares in Ökobank pay no interest and any profits are transferred to reserves. Each member has one vote, irrespective of shareholding. Members may redeem their shares by giving two years' notice, thus operating losses are not the only way by which the bank's equity can be eroded. The co-operative's top management is its board. The board is monitored by a supervisory council. Members' rights are exercised via the assembly of representatives.

The Ökobank is involved in standard bank business, private and commercial, current accounts, savings books, time deposits and savings certificates plus its additional operations. Loans are only granted to members and only members can hold current accounts. On the lending side, it offers current-account and fixed-rate loans. It makes a clear distinction between normal operations and special sponsorship activities as far as both its assets and liabilities are concerned. For normal transactions, the bank operates at going market conditions and produces surpluses. There are exclusion criteria for normal transactions: no money for weapons manufacturers, nuclear power or for repressive regimes, supplemented in 1996 by the criterion "no money for chlorine chemistry".

Within the sponsorship field, customers renounce some or all of the interest due on deposits, which is passed on by the bank to borrowers. Ökobank also agrees to forego part of its returns. Investors can decide which funds they wish to make their money available to. They can choose between funds for energy, the environment (environmentally friendly products, production processes and services) and social and development concerns. Chlorine-free building (or PVC-free building) is also supported. In 1991, an energy savings certificate scheme was developed. Investors receive a maximum of 1.5% interest, with correspondingly favourable interest conditions for borrowers. Money is for projects such as low-energy construction, modernisation of residential accommodation in energy terms, conversion of coal, coke or oil-fired heating to district heating or gas and the use of renewable forms of energy.

To date, Ökobank has not been able to fund a sufficient number of worthy and profitable projects and sponsored loans. Surplus money is deposited with banks whose objectives are as near as possible to its own. Ökobank's normal business still accounts for 59% of all deposits. Interest rates have been low for several years, which makes it more difficult for depositors to renounce interest. In order to expand its equity base, the Ökobank also offers its members unsecured equity savings certificates with a modest rate of interest. It acts as a go-between for investors interested in acquiring holdings in ecologically orientated companies, such as Waschbär, Germany's largest mail-order company for ecological products, and / or shares in Ökovision, an ecological investment fund.

By the end of 1995, it had a balance-sheet sum of some DM 224m and its liable equity had been built up to DM 17m, deposits totalled DM 200m, and DM 104m had been made available in loans. Of the total sum lent, DM 46m was at sponsored conditions. The bank expects to expand so that more customers can regard the Ökobank as their principal bank. It was accepted for membership of a deposit-protection scheme in 1996 improving growth prospects.

UmweltBank

UmweltBank GmbH is now a competitor for Ökobank. It started trading in January 1997. This bank aims to attract customers interested in environmental issues but unwilling to settle for less than going market rates and who attach no importance to 'grassroots' decision-making structures. UmweltBank

opted for the classical legal form of a bank, a joint-stock company. This has made it easier to attract equity, with its opening balance sheet holding DM 38m of equity. However, its operating assets are also widely scattered, and no one shareholder is entitled to more than 5% of votes.

The bank is managed by two board members. A supervisory board monitors the decisions taken by management and the bank's economic development. Its shareholders can exercise their statutory rights through the shareholders' meeting. UmweltBank has been licensed to carry out all types of banking business. The only investment instrument it has on offer are bank bonds for which there is no deposit protection. The bank has applied to join a deposit-protection scheme, and intends to introduce savings books, saving certificates and savings contracts. It does not plan to do any lending at preferential conditions. The Bank only provides finance to companies that manufacture or sell environmentally and socially compatible products and services. Exclusion criteria are absolute: no money for nuclear power, the weapons industry and any environmentally or socially deleterious projects.

The bank's main focus is to be on financing and promoting the fields of solar energy, wind and water power, co-generation plants, low-energy construction techniques, environmentally compatible manufacturing, closed product cycles, organic farming and recycling. It has already received 35,000 enquiries regarding loans, of which 25% are for financing low-energy houses and 16% for wind-energy installations. When it comes to providing finance for buildings, the bank has developed its own 'eco-house' rating scale: the greater the ecological value of a building project, the lower the interest rate.

UmweltBank provides building loans, private and commercial environmental loans, project funding and loans to businesses along with credit facilities. Any lending proposition is assessed in both economic and ecological terms. An environmental council lays down ecological framework criteria, monitors compliance and provides suggestions on ecological issuess. UmweltBank sees itself as a complement to the customer's main bank.

13.9. II.9 The World Bank: Financial Innovation for Global Environmental Management

Over the past five years, the World Bank (WB) and the International Finance Corporation (IFC) have been increasingly aware of the potential to use financial innovation to encourage environmental projects and initiatives. Most of the work to date has been sporadic, based on learning on the job. The WB now seeks to develop and integrate its experiences for broader application. In particular, these mechanisms below have sought to develop private sector companies, encourage financial sector participation and provide a highly resource effective way of addressing environmental challenges and using limited concessional finance.

Finance for SME Environment Business

IFC's Financial Intermediary Programmes are designed to channel concessional funds through intermediaries to SMEs for renewable energy, eco-tourism, energy efficiency, sustainable forestry and agriculture. Intermediaries have included financial institutions, venture funds and NGOs. They can benefit from IFC's low interest loans, credit guarantees, co-financing and technical assistance. Often the concessional element is used to support the development of financing structures rather than the retail financing element.

Emerging Sector and Market Funds

IFC is helping to create Sector Investment Funds to assist professional and institutional investors to look at biodiversity, renewable energy and energy efficiency. One proposed fund will concentrate on biodiversity in Latin America through investing in business such as sustainable agriculture, well managed forestry and eco-tourism, while another is a global fund for renewables and energy

efficiency (REEF). The funds aim to attract funds from outside as well as from within IFC, and also to encourage other investors to these areas by defining the opportunities for them.

Transforming Inefficient or Non-existent Environmental Markets

IFC's Market Transforming Initiatives recognise that while new environmental markets may offer potential, the risks of developing them can be large and inhibit market development. Examples include photovoltaics, energy efficient lighting and sustainable forestry. The Initiatives aim to minimise the risks of developing them by providing concessional funds for innovative solutions to market development, with the objective of taking the markets to the point where fully commercial operations are viable. Although concessional, the funds are intended to operate in many ways like private sector funds, and projects will be judged on the basis of current and future ability to attract finance, growth potential and replicability.

13.10. II.10 The BIE Index of Corporate Environmental Engagement

In 1996, Business in the Environment (BIE) published "The Index of Corporate Environmental Engagement. A Survey of the FTSE 100 Companies". While not explicitly a rating service, it fulfils a similar role, and provides an interesting example. The index is a response to the BIE 1994 survey, which highlighted that City analysts regarded the quality of a company's management as the most significant factor in assessing investments. It is intended to provide a simple guide to which companies have the most environmentally aware management. Companies were asked about their activities in ten areas, and were then scored and placed into quintiles. 73 of the FTSE 100 members responded. The top four quintiles were relatively closely bunched but the bottom quintile was significantly below the rest. The index is designed to work on an on-going basis, with an update in late 1997.

The report has had an noticeable impact on UK industry, with several companies keen to move themselves out of the bottom quintile (including a number of financial institutions interviewed in the course of this survey) However, as a tool for the financial markets, the survey appears of rather limited applicability at present. Lack of verification, the inclusion of only certain factors, and most importantly the limited number of companies involved are all drawbacks. Research by NPI did not find a significant link between financial performance and index score as it stands at present, although this may change as the index is refined. Extending the list for example to Europe's 250 or 500 leading listed companies would make it more useful, making it more possible to compare similar companies.

However, the results do start to send some interesting signals - for instance, the existence of an oil products company in the bottom quintile should be genuine cause for concern by the financial markets. Some weaknesses do show up - General Accident has genuinely gone further in reducing its risk from climate change than any other UK insurer (see the earlier case study) but the company receives a poor rating. Despite this, with development, the index could prove a handy tool for analysts wanting a quick check on companies' environmental awareness, and provides an illustration of the sort of summarised financial information financial analysts may find useful.

14. - National Studies

14.1. III.1 Austria

In recent years the banking sector in Austria has undergone dramatic structural changes. Erste Österreichische and Bank Austria acquired many smaller banks between 1991 and 1995, with the latter acquiring the Government's controlling stake in Creditanstalt in 1996. These two banks, along with two smaller entities are emerging as Austria's 'big four', although the market remains over-banked and inefficient.

1. Listed companies

The Fifega research institute, a non profit research and information service, provides a comprehensive overview of ethical and environmental investments not only in Austria but world-wide in its fortnightly ÖkoInvest magazine, which assesses firms according to industries or products. This stock market newsletter, dealing with social and environmental issues, focuses on a different industry sector or issue in each issue with up to five environmental company profiles of listed stocks in different countries.

2. Direct investment

The most popular route for environmental investment in Austria is direct investment in projects. Due to the Austrian commercial and tax laws a number of projects are realised by associations or limited companies. In contrast to public limited companies, these organisations do not raise capital by issuing shares on the stock exchange but by attracting direct investment from members or shareholders respectively. These opportunities for direct participation are offered on the capital market and usually refer to specific projects such as, for example, the establishment of a wildlife park in a certain location.

A growing number of environmental projects offer the possibility of direct investment as a co-owner. In Austria, these projects range from residential estates that have been designed with environmental considerations in mind to recycling facilities to projects belonging to the large field of renewable or environmentally benign energy production.

These direct investments are offered on the so-called free capital market, on which businesses try to get into contact with potential investors through advertisements or sales representatives. The free capital market is characterised by the fact that, on the one hand, it deals in venture capital, and on the other, it is not subject to any regulation by the government or other agency. Due to this lack of regulatory agencies both businesses and investors have to exercise special care and attention.

Offers for direct investment are usually designed in such a way that the subscriber becomes a co-owner of the firm. In this way one can benefit from the tax advantages a partnership offers since any allocations of losses can be written off personally by the investor. In contrast to listed shares, the stakes are hardly marketable. This means that taking an interest in such a project is almost always a long-term decision, time horizons of 10 to 15 years being the norm.

Even if the chances to make profits are usually higher than in the case of fixed-term deposit investments, there is (as in the case of listed shares) no guarantee whatsoever with regard to

- the revenues that can be expected (both amount and time)
- the effective life of the project
- industry-specific developments which influence the long-term success of the project

In this sense, an ecologically oriented investment in a wind energy generator project is not any different from a purely profit-oriented investment in an office centre or investments in ships, which at

the moment are frequently being offered on the free capital market. Investors must be aware of the fact that their involvement and the care which they exercise in selecting an investment vehicle in accordance with their personal priorities will partly determine the further development of this market. In Austria, projects for participating in energy power plants based on renewable resources and wind are the most common and popular.

3. Environmentally oriented funds

In autumn 1989 there was a race between the two Viennese capital investment companies of Raifeisen and Zentralsparkasse (which, in the meantime, has become a part of Bank Austria AG), to be the first to offer an environmentally oriented investment fund in Austria. Zentralsparkasse's "z-Umweltfonds" was wound up, however, at the end of March 1994 because, according to Bank Austria AG volumes did not warrant its continuation. At the end - as at the beginning - the fund's value was about ATS 12m.

The positive selection criteria applied by the Raifeisen-Umweltfonds are, for example:

- development of environmental technologies to eliminate or reduce pollution
- elimination, recycling and re-use of wastes
- energy generation which does not cause environmental pollution
- production of alternatives to replace currently used environmentally harmful products

Internal instructions provide the fund management with detailed rules for selection, e.g. under the heading of "environmentally oriented sales: ... at least 10% of total sales; if lower, there should prospects for an increase in the years to come or relevant efforts should be included in the plans of the company".

Both Bank Austria and Raifeisen Landesbank have withdrawn their "ecological funds" from the market in January 1997, since the Austrian market simply seems to be too small for such an instrument. This, however, does not keep most banks from including environmental services in their product range. Therefore, the range of services offered by conventional institutions, such as Bank Austria AG or Österreichische Kommunalkredit AG, includes, among other things, loans on favourable conditions for the funding of ecological investments.

4. Environmental management systems and ecoaudits

At the moment Austria is the only Member State of the European Union whose banking and insurance industry is able to participate in the EU's EMAS scheme, due to the Ordinance on the inclusion of additional sectors passed in on 11 October 1996 (Federal law bulletin no. 550). A relevant draft ordinance concerning the inclusion of additional sectors had already been circulated for inspection and comment in February 1996. In fact, a number of banks have already started to establish environmental management systems or have virtually completed this task.

A case in point is the Österreichische Kommunalkredit AG, which already presented its environmental report in the summer of 1996. Similarly, the Raifeisen Landesbank AG was certified under ISO 14001 in winter 1996 by the ETA GmbH, an accredited environmental verifier to EMAS. Both institutions are now just waiting for accredited environmental verifiers for this sector to be able to register their environmental statements with the Federal Environmental Agency (Umweltbundesamt).

The former members of the ÖGUT working party on "banks and insurance companies" has been working on the development of environmental instruments for years. ÖGUT is an industry sponsored non-profit association for environment and technology. In 1994 and 1995 they had a working group for exchange of information on environmental management for this sector, that focused on the following activities for the performance evaluation of companies seeking credits:

· training of responsible employees

· internal checklists for environmental performance, risks and liability checks

· consulting clients with regard to green funding possibilities.

Raifeisen Landesbank and Bank Austria have already drawn up checklists for the investigation into possible environmental legacies when extending credit secured by claims on property. Moreover, internal environmental training seminars are held in order to increase the awareness of the staff working in the branches.

The IdU (Institute of certified environmental verifiers, auditors and consultants) also launched a working party "banking and insurance companies" in November 1996, in connection with the Ordinance on the inclusion of additional sectors, in order to discuss proper definitions and critical problem areas.

The Department of Environmental Affairs, Youth and Family has initiated a number of pilot projects concerning the planned extension of sectors eligible for participation in EMAS, which will lead to the preparation of sector specific guidelines. The IÖW (Institute for Ecologic research in economics), which, together with the IMU Augsburg and on behalf of the Department of the Environment, has been awarded the contract for the guideline for the implementation of the EMAS Regulation in the banking and insurance industries, will support the work of this group and will bring in its knowledge on existing indicators and experience of other financial institutions in Germany and Switzerland. In the guideline, which has already been drafted, sector specific recommendations for the implementation of the EMAS Regulation are to be given. Another focus is on the clarification of current difficulties in interpreting the Regulation (site - branch, "services" as product).

Under the Ordinance on the inclusion of additional sectors insurance companies can also participate in EMAS. However, they have so far shown very little interest in this matter. The potential lowering of insurance premiums by reducing risks due to environmental management systems does not really seem to be of great interest to the insurance companies.

14.2. III.2 Germany

While German banking is dominated by the 'big three' (Deutsche Bank, Commerzbank & Dresdner Bank), there are almost 4,000 German banks and credit institutions. Within the insurance industry the process of concentration has reduced the number of competitors to a far smaller circle. Other parts of the private financial sector, e.g. independent fund managing companies, rating agencies and the stock exchanges, are of less importance.

Compared to the size of the different financial markets, ecological segments are in every respect marginal. There are only about half a dozen banks and even less insurers which might be regarded as environmentally oriented, and all of these institutions are relatively small. For example the Öko-Bank, Germany's most famous environmentally oriented bank, 1995 assets of DM 224 million compared with Deutsche Bank's DM 722 billion.

The market volume of the environmental oriented financial products is also small. However, due to the demand of clients the markets are growing fast, and there is an obvious move by the mainstream players to pick up some of the innovations made by the newcomers as seen by the environmentally oriented funds set up by one of the major German banks (see the case study on Ökovision) and also environmentally oriented insurance products offered by some major insurance companies (see the case study on Versiko).

Political Activities and Programmes

Up to now, no explicit political programmes or strategies with respect to the role of financial institutions in achieving a sustainable development have been published by the Ministry for

Environment, Nature Conservation and Reactor Safety. Even though the necessity of integrating environmental policy into the activities of the financial services industry is underlined in one of the main documents describing the future political strategies of the Federal Ministry, no concrete proposals are mentioned. In most of the Ministry's reports the whole theme is not even touched upon. Rather, the ministry is following a low profile strategy and hopes to influence the situation through direct discussions with the financial services industry, relying completely on the principle of voluntary action.

In July 1996, the Federal Environment Ministry sponsored a seminar meeting on the subject "The environment and financial services: Responsibility for a sustainable, environmentally-correct development". Representatives from banks and insurance companies met with administrators and scientists to discuss the possible contribution of the financial services branch to environment protection.

Environment Minister Angela Merkel described the German financial sector as vital in several areas of sustainable development: supporting German industry efforts in protecting the climate by means of 'joint implementation', helping industry in its efforts in the international environmental technology market, encouraging the further development of EMAS, and contributing to the deregulation process by enlarging the role of insurers.

The focus of the discussions lies on the FEMAS (to be discussed below), including further activities with respect to the asset side of the balance sheet. The liability side is not an issue at all. The European debate on lender liability has turned out to be a catalyst for the discussions in that it furthers activities by the banking industry itself in order to prevent such legislation.

A major focus in Germany has been on the role of environmental liability and insurance. This is discussed more detail below.

The ministry also supports the proposal of certain insurance companies to offer lower premiums for customers who voluntarily participate in the EMAS. Some insurers have come up with rebate schemes, for example, the Roland Industrie-Rechtsschutz-Versicherung offers a 20% discount for companies which register under the EMAS. Apart from these few exceptions, the industry's expectation that the eco-audit would generally lower the costs for insurance polices or interest rates for credits was not fulfilled.

Nevertheless, high expectations are connected with the EMAS and the Environment Ministry wants to enlarge the scheme to several service industries including banks and insurers. The project has high priority, but no precise time schedule. Initial pilot projects are being carried out, and a first draft of the future ordinance has been written and communicated to the insurance and banking associations.

The proposal focuses on a company's internal management and environmental performance. Little has been said on the financial companies' investment and product policies or the loan policies of banks. Only in the statement of arguments at the end of the proposal are such motivations taken into consideration. The proposal is based on the site principle, not on the operational unit, implying that the banking sector will undergo the EMAS process only for a selected number of branch offices.

Further activities of the political sector

Apart from a research project, commissioned by the federal environment agency, to support the German environmental policy in its preparation for the revisiting of the EU-regulation on EMAS, the federal environment agency is also involved in a project of systematic information exchange with the financial services industry. The project will start this year and will involve between 20 and 30 banks and insurers.

Activities from within the financial sector

Germany has among the highest numbers of signatories of the UNEP Banking and Insurance Statements, including the big three banks. They have been heavily involved in the preparation of the Statements and in the advisory committees.

Banking industry

In Germany, the banking industry is gradually outpacing the insurers with respect to environmental activities. Not only are there several banks which have published environmental reports, but there are even several banks which have started an EMAS process on their own, even though a legal basis is lacking at the moment. Some banks are still resisting the introduction of an EMAS because of fears of an eventual shift from the site-based EMAS to a product-based EMAS.

Further activities of the banking sector are focused through the VfU (Association for Environmental Management in Banks and Insurance Companies). In a survey carried out by the Institute for Environment and Management in 1995 of the 50 biggest financial service companies, almost 80% expressed their preference for standardised environmental reports (on the basis of industrial branches) to allow a serious comparison between companies. The VfU responded by setting up an expert council in order to develop guidelines for environmental reports and benchmarks for banks. Several big German banks and some international banks are participating in the project and initial results have been published in the meantime. The expert council considered three fields: the environmental management system, product policy and internal environmental performance. According to the council, benchmarks are possible at the moment only in the area of internal environmental performance.

Insurance industry

The insurance industry seems to be slowing down in comparison with banking. Fears that their investments might come under scrutiny have reduced their openness towards a progressive environmental policy. Even Gerling Konzern, the most vociferous among the insurers concerning environmental issues, is only prepared to conduct an EMAS and very cautious when it comes to investment policy. Thus, no special investments have been made in areas such as low-energy housing projects. There is, however, a first commitment to invest in Ecoval, a Norwegian investment fund, set up by Uni Storebrand, which invests exclusively in environmental friendly companies.

Generally speaking, the savings for industry due to better premium rates associated with environmental impairment liability policies are much less than the cost of related environmental protection measures. Therefore, the stimulus resulting from lower premium rates will always be a minor one. Furthermore, the premium level has to be calculated according to expected damages and cannot reflect other considerations.

14.3. III.3 The Netherlands

The Netherlands has a large and sophisticated financial market. Along with the UK, it is one of the few European countries to have well developed equity markets and significant pension fund assets. It is also one of the most environmentally conscious and progressive countries in Europe. Thus it is surprising that it has relatively little involvement in many of the international activities in the area of finance and the environment, with only one signatory to the UNEP banking statement, although ABN-Amro has signed the ICC charter on the environment. In fact, the general high level of environmental awareness among business and individuals may be a factor which resulted in there being less incentive for the financial community to become particularly active. However, there is clearly a considerable awareness of environmental issues in the banking community in the Netherlands, and many of the leading banks have adapted credit assessment procedures which incorporate the environment, and have active policies on environmental management.

Other areas of interest include the number of funds launched by Triodos Bank which are focused towards direct investment in environmental projects, rather than venture capital situations or the equity of listed companies. ING's Postbank Green subsidiary as an example of a major bank creating an environmental banking subsidiary which specialises in loan finance for small industrial and domestic projects.

Where the Netherlands appears to be particularly well advanced is the relatively close relations between the banking community and the various government ministries, which has ensured relatively smooth progress on environmental issues of relevance to the financial community. A particularly striking product of this relationship has been the tax incentives the Dutch government has introduced on environmental investment and technology, discussed in the case study.

On the general investment side there is growing interest in shareholder activism, with the recently formed VBDO (Vereniging van Beleggers voor Duurzame Ontwikkeling / Association of Investors for Sustainable Development), which represents investors with around ECU 15bn of assets. The VBDO establishes a dialogue with companies on how to limit the risks and utilise the opportunities associated with sustainable development, from the perspective of investors. The VBDO is calling on companies to report on environmental issues in their annual report and is currently studying what sort of information is required by investors.

14.4. III.4 The United Kingdom

The United Kingdom has Europe's largest international financial market and is particularly pre-eminent in investment banking. In the commercial banking sector it has a relatively small number of large banks, although the number of banks is being increased by the conversion of building societies (essentially mutual mortgage lenders) to banks. It has the highest level of equity investment in Europe, with a large pension industry and significant amount of personal investment in equities.

Along with the Pollution Control sector in the USA, the UK's Water sector is the only discrete sector for 'environmental' equities in the world. This has resulted in some interest by equity analysts and investors as to the financial implications of environmental and public health legislation. We have found that environmental issues have been seen in a consistently negative light by analysts following the sector since 1989, and the coverage of the sector to date, in our opinion, represents an opportunity missed.

The exposure of the composite insurers and the London reinsurance market (Lloyds) to global warming as well as EIL in general, as highlighted by the UK Department of the Environment's 1996 report 'Financial implications of climate change', has resulted in the UK insurance sector taking an active role in supporting proposed measures to prevent global warming. This is a rare voice, since commercial interests are usually represented by the oil and power generation bodies which are typified by a refusal to accept the possibility of man induced climate change.

The commercial banks have been involved in the environment for some time, and all but one of the major banks has signed the UNEP charter. Key in focusing the interest of the commercial banks were discussion about environmental liability for contaminated land that arose in the early 1990s, with the prospect that the UK could follow the US Superfund legislation with banks being deemed owner operators and liable for clean up. This galvanised the banks into action and although the threat over contaminated land has since receded it has encouraged the banks to maintain an interest in environmental issues.

On the policy side, the government established in 1992 a high level Advisory Committee on Business and the Environment (ACBE), which for a period was chaired by the Chairman of National Westminster Bank. ACBE recognised the importance of the financial sector and established a financial markets working group. The working group has discussed issues such as contaminated land and has recently produced guidelines on environmental reporting.

Within the personal investment sector there are a significant number of ethical and green funds, and the UK has much the largest such sector within Europe. Although these funds represent only a small share of the market, they are growing rapidly and are gaining acceptance, not least because of their credible performance over the past three to five years. Many involved in such funds feel that their growth is significantly impeded by the lack of knowledge of such funds among many investment advisors and the fact that only a limited range of institutions offer ethical or green products. Were these obstacles to be overcome their market share could be much higher, perhaps 10% of the market. In addition to individual investors, a number of institutional investors are beginning to look at such funds, notably local authority pension funds, and are starting to place some of their assets in them.

14.5. III.5 France

France is the largest and wealthiest of the EU Member States not to take sustainable development seriously as far as financial services are concerned. The irony here is that at the industrial level France is a world leader in internationalising environmental services. For example, Lyonnaise des Eaux and Generale des Eaux are contracted to provide safe drinking water and / or sewerage services to some 105 million people outside France.

Environmental concerns have a fairly low priority in France, as epitomised by the low profile and power of the Ministry of the Environment. The Ministry of Finance has to date proven loathe to introduce fiscal incentive for the environment. Legal and political pressure for sustainable development remains weak, especially when compared with Germany and the Netherlands, although public opinion has gradually changed over the past decade. Most practical implementation of environmental law takes place at the Départment and municipal level.

French law makes banks potentially vulnerable to environmental impairment liability, but this is mitigated by the banking sector's code of practice which discourages banks from managing companies, especially at the Main Board level. No claims for liability against banks have been won in the courts. Government requirements for guarantees for environmental risk are causing some concern.

The UNEP Charter for Banks has yet to attract any major French signatories, while the Association Française des Banques appears to regard the Charter as threatening to increase the sector's vulnerability towards environmental impairment liability issues. There are indications that at the board level, this viewpoint may be coming under pressure.

Analysing a company's environmental management and risks as part of lending assessment procedures remains the exception. Société Générale, for example, regards the bank's role as responding to environmental demands from their clients, rather than trying to create it. The usual point of view is that a company with a good profits record should have no environmental issues of concern. In contrast, BNP and Crédit Agricole have environmental risk assessment systems for new loans. BNP is developing a software programme for calculating the incremental cost of capital for various types and levels of environmental risk. Crédit Agricole has had some success in introducing environmental concerns to SMEs, mainly because of its tradition as a local banker.

No French bank has yet produced an environmental report, or a section on environmental responsibilities in its Annual Report. Certain utilities, notably Generale des Eaux and Lyonnaise des Eaux, are making some progress in this direction. Otherwise, mainstream companies have shown little interest in the area.

While French environmental / green funds are few, small and poorly performing, investor interest in 'green' equities such as Degremont (water engineering) and SITA (waste management) has maintained their market premia throughout the 1990s, with help from strong earnings growth over the past seven years.

The 'traditional' view of environmental liabilities is that as France is essentially a rural country, it cannot have any contaminated land. Such a view does not enjoy much credibility.

In general, the French insurance industry acts in line with the majority of European insurance companies with regards to sustainable development concerns. The main exception is that instead of seeking financial guarantees against environmental liabilities, French finance and industry is seeking to develop a tax-efficient system for providing reserves against potential liabilities. This is intended to 'internalise' the cost of environmental damage.

The industry is keen to assist in a greater level of information exchange, especially within the financial sector, so that the environmental risks involved with individual companies can be appraised. They regard areas such as environmental auditing as posing a potential threat to the entrepreneur, and see them as being applicable only for established companies. A series of specific policies (e.g. Assurpol for pollution and Surpol for the utilities) are being drawn up for various elements of environmental risk.

14.6. III.6 Spain

Spain is characterised by a low level of interest in environmental and sustainable development concerns at the political, industrial and financial services level. Two banks (Banseco and Central Hispano) and two Insurance companies (MUSINI and Pool Espanol de Riesgos Medioambiente) have signed the UNEP charters to date. The insurance companies are small, specialised firms, while major banks such as La Caxia and Argentaria have yet to indicate a desire to sign. The latter is of concern, given its extensive role in financing water and waste water projects and investing in waste management companies. There is little to be seen in the way of practical steps towards environmental risk assessment systems and environmental management and reporting in the Spanish financial sector.

This apparent lack of interest may change, given that many municipal services such as waste management, water provision and sewerage are already at least partly privatised and compliance costs for the major EU waste water treatment and waste management and recycling directives cannot be met by the companies or municipalities on their own.

Aguas des Barcelona (partly owned by Lyonnaise des Eaux of France) is understood to have made appreciable strides towards developing robust environmental management and reporting systems.

The new Popular Party government is taking a more pro-environmental stance, allied with the further privatisation of environment related services. It remains to be seen if this will be translated into concerted environmental action.

15. - Environmental management and reporting studies and surveys

15.1. IV.1 INSTITUTIONAL INVESTORS & ANALYSTS IN GREAT BRITAIN.

MORI 1997.

This is a general survey of 70 UK based investment analysts and 102 professional investors, typically fund managers, conducted in December 1996. This was the fourth survey by MORI to include environmental issues in their examination of issues and opinions.

What are the most important issues when making judgements about a company? 12 prompted issues were offered.

% Investors	93 (n=147)	94 (n=153)	95 (n=159)	96 (n=102)
Financial performance	98	95	94	94
Image / reputation	16	24	19	14
Environmental responsibility	6	7	6	6
Social responsibility	3	3	2	3

There was not a significant response from either investors or analysts with regards to environmental issues when no prompts were offered.

Social and environmental concerns in 1996, and changes in opinion from 1995

Question	Sector	Yes	No	Change
British companies do not pay enough attention	Investors	28%	33%	+14%
to their treatment of the environment	Analysts	40%	29%	-18%
Industry & commerce do not pay enough attention	Investors	20%	27%	+2%
to their social responsibilities	Analysts	36%	36%	-15%
Environmental pressures and companies' response	Investors	73%	10%	+14%
to them will have an increasing impact on profitability	Analysts	67%	23%	-18%

15.2. IV.2 BUSINESS CONCEPTIONS OF SUSTAINABILITY AND THE IMPLICATIONS FOR ACCOUNTANCY.

J Bebbington & I Thomson, ACCA Research Report No 48. London, 1996.

This report sought to understand businesses conceptions of sustainability and to investigate how to translate the Fifth Action Programme into a manner which readily corresponds to the financial decision making processes adopted by financial managers in the UK. It found that while industry accepts that sustainable development needs to be pursued, there is widespread confusion as to what it is and what it entails. Likewise, the degree and nature of sustainable development needed is marked by confusion and dissent. Full cost accounting is widely seen as a potentially a useful management tool for developing and costing sustainability policies, but considerable work is needed to translate into a package which can be made applicable for companies. Various levels of financial information were found to exist.

Levels of full cost accounting	
0 -	**Usual costs.** Direct and indirect costs associated with a project, product or any other cost item.

1 -	**Hidden costs.** Additional costs usually found in overheads / general accounts. These include regulatory, environmental management systems, monitoring and health and safety.
2 -	**Liability costs.** Contingent liability costs which may emerge if the legal or regulatory environment changes. Includes fines and clean up costs.
3 -	**Less tangible costs.** Costs and benefits likely to arise from improved environmental management, including loss / gain in goodwill, changing attitudes of suppliers, customers and employees and changes in public image.
4 -	**Environment focused costs.** Costs incurred in an environment focused approach was adopted. Include costs for a zero net environmental impact. This is hypothetical, since it would not apply in the current regulatory and operating environment.

15.3. IV.3 ECO-EFFICIENCY AND FINANCIAL ANALYSIS. THE FINANCIAL ANALYST'S VIEW.

EFAS Commission on Accounting, The European Federation of Financial Analysts' Societies, 1996.

Environmental Reporting & Disclosures. The financial analyst's view.

EFAS Commission on Accounting. The European Federation of Financial Analysts' Societies, 1994.

These studies placed a high emphasis on quantifiable information. The key data they thought useful included:

Profit & Loss Account

- Energy costs
- Waste costs (treatment / disposal)
- Environmental protection and safety costs (safety & prevention / compliance costs)
- Environmental impairment (remediation / abatement / clean-up)
- Environmental impact reduction costs
- Other costs (communication / staff training)
- Depreciation
- Environmental savings

Cash flow statement

- Environmental capital expenditures

Balance Sheet

- Provision for environmental liabilities
- Provision for full compliance with environmental laws and regulations
- Contingent liabilities (off balance sheet)

Check list

- Presence of environmental policy & targets
- Content of environmental policy
- Publication of annual environmental report
- Environmental audits
- Discussion of environmental problems and main challenges
- Insurance cover for environmental risks
- Signatory of ICC Charter for Sustainable Development

- Legal compliance on national and international basis and cost for full compliance
- Data collecting systems on facility and group level
- Pending legal actions

15.4. IV.4 COMPANY ENVIRONMENTAL REPORTING:

A Measure of the Progress of Business & Industry Towards Sustainable Development. UNEP / IE Technical Report No. 24. UNEP 1994, Paris.

The study identified a number of different levels of corporate environmental reporting and a long list of 50 reporting ingredients for possible disclosure by companies.

Stages in corporate environmental reporting (developed by SustainAbility)
1. PR material or brief mentions in annual report
2. One-off environmental report, first formal statement
3. Annual reporting, linked to environmental management systems
4. Performance data on corporate / site basis. Referred to in annual report.
5. Sustainable development reporting, indicators of sustainability, use of full cost accounting

50 Reporting Ingredients
• Management policies and systems (1-13)
• Input / output inventory of the environmental impact of processes (14-30)
• Financial implications of environmental actions (31-36)
• Relationships with environmental stakeholders (37-46)
• Sustainable development agenda (47-50)
1. Management statement - strategic context setting
2. Environmental policy - latest version
3. Environmental management systems - description and standards adopted
4. Management responsibilities - where responsibility lies
5. Environmental auditing - scope, verification and nature of disclosure
6. Goals and targets - quantifying targets over a period of time
7. Legal compliance - compliance levels, reporting incidents, fines and consequences
8. Research & development - size, scope and results
9. Programme and initiatives - descriptions of work carried out
10. Awards - external and internal for company, sites and people
11. Verification - scope, external references and areas for improvement
12. Reporting policy - outline methodology and reporting frequency
13. Corporate context - describe activities in their place
14. Materials use - quantify and classify (renewable / non-renewable)
15. Energy consumption - quantify in a comparable manner
16. Water consumption - m^3 pa for cooling / other uses
17. Health & safety - accidents per year / man-year
18. Environmental impact assessments & risk management - outline work done
19. Accident & emergency response - number and type of accidents
20. Land contamination & remediation - scope and clean up programmes and their costs
21. Habitats - protected and threatened areas
22. Wastes - output by category, minimisation initiatives and results, % throughput lost to air

23. Air emissions - tonnes pa of key outputs and their impacts, % throughput lost to air
24. Water effluents - quantity by category, BOD/COD impacts, % throughput lost to air
25. Noise & odour - complaints and exceedances
26. Transportation - tonnes pa moved by transport type, spillages
27. Life-cycle design - assessments completed, value and outcomes
28. Packaging - use by type, recyclable content, recycled content, scope for reduction
29. Product impacts - emissions for key substances used in product lines
30. Product stewardship - % of products covered, safe disposal / recovery, % of output recycled
31. Environmental spending - definitions, opex and capex, remediation and research spend
32. Environmental liabilities - identified liabilities and values, potential liabilities and costs
33. Economic instruments - charges and taxes paid by category
34. Environmental cost accounting - calculate and allocate external costs
35. Benefits & opportunities - financial benefits from environmental measures
36. Charitable contributions - donations to environmental organisations
37. Employees - training, opinions, suggestions, quality circle and award schemes
38. Legislators and regulators - impact of legislation and policy towards the company
39. Local communities - site emission reporting, liaison, access to facilities
40. Investors - briefings and communications, image of company
41. Suppliers - supply-chain initiatives, supplier challenges during the year
42. Customers & consumers - eco-labels, consumer attitudes, customer education
43. Industry associations - memberships, e.g. ICC Charter
44. Environment groups - relations with NGOs, responses to company's initiatives
45. Science & education - programmes supported
46. Media - reporting of the company's progress and performance, nature of coverage
47. Global environmental issues - attempts to reduce impacts and contributions made
48. Global development issues - Agenda 21 actions taken and planned
49. Technology cooperation - technology transfer by type and amount
50. Global operating standards - global aggregation of environmental performance and impact

Sections 2, 3, 4, 7, 14, 15, 16, 17, 19, 22, 23, 24, 29, 31, 32, 37, 38, 39, 40, 43 were seen as applicable for SMEs.

16. Environmental Performance and Financial Performance

[a] IRRC/ VANDERBILT Study

This study examines the relationship between environmental and financial performance using a new objective data set, detailing the environmental performance of the Standard and Poor's 500 companies. The environmental performance data set was compiled in mid 1995 by IRRC (the Investor Responsibility Research Centre), using US Government data not previously available to researchers. Industry balanced portfolios were constructed and the financial returns of the "high pollution" portfolios were compared with those of the "low pollution" portfolios. The study also examines the stock market reaction to new information on the environmental performance of individual firms, and provides a preliminary analysis of which comes first - good financial performance or good environmental performance.

Overall, the study found no penalty for investing in a "green" portfolio and in many cases, low pollution portfolios achieved better returns than high pollution portfolios and the S&P 500 index. The study suggests that the increasing attention being paid to environmental management issues by both corporations and investors may well be warranted from the perspective of financial self-interest.

[b] Imperial College / Jupiter Asset Management Study

Research by Imperial College, London and Jupiter Asset Management ("JAM") published in May 1997 found that good environmental performers performed better in terms of profitability and return on their capital than bad environmental performers. The study examined 51 British companies which satisfied JAM's environmental criteria and compared their financial performance between 1992 and 1995 with those of their peers which failed to satisfy JAM's criteria. For example, the stores sector saw a 26% return by the green companies compared with 15% for the non-green companies. It may be that the more profitable companies are better placed to be able to develop such policies, since no causal link between environmental excellence and strong financial performance has been identified.

[c] ICF Kaiser Study

In January 1997, ICF Kaiser published the findings of its 1980-94 study of 327 of the leading 500 US listed companies as to the impact of their environmental management on share performance. The study ('Does Improving A Firms Environmental Management System & Environmental Performance Result In A Higher Stock Price?') found that the share values of companies such as ICI, Du Pont and Polaroid outperformed their peers by up to 5% on a risk adjusted basis after the implementation of pro-active environmental policies. Where environmental management was implemented at all levels of a company's operations, stock volatility was reduced, along with a better shareholder perception of potential environmental liabilities. These results only took place where companies marketed their activities to stockbrokers and the media.

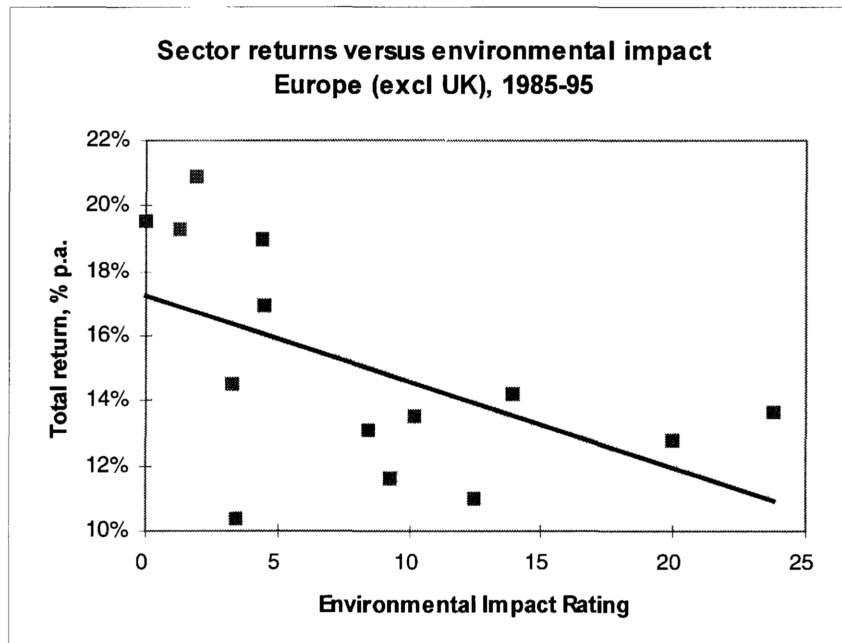
[d] WRI study

In the WRI study "Jobs Competitiveness and Environmental regulation" the authors conducted an extensive examination of the impact of environmental performance against financial performance, in the chapter "How Financial Performance affects Commercial Success". They compared environmental performance, using US publicly available data on Airborne Emission, Water Borne Emissions and Toxic releases, all per unit volume, with financial data on gross operating Margins and Net return on Capital, across many hundreds of companies in several different sectors. In most cases they found no significant correlation between environmental performance and financial performance. In the cases where they did find a significant correlation, it tended to be negative, i.e. a low environmental impact was linked to good financial results.

They concluded that it is as least equally likely and perhaps somewhat more likely for plants with lower emissions - relative to production - to achieve higher operating margins and returns on invested capital. They felt that since superior environmental performance makes firms no less profitable, institutional and fiduciary investors should not expect to earn lower portfolio returns if they invest in stocks with superior environmental performance within each industry or if they systematically screen out the worst performing stocks in each sector.

[e] Nottinghamshire County Council

Part of this study (carried out by Delphi International) looked at the long term performance (over 10 and 20 years) of various investment sectors compared with an assessment of their environmental impact. The environmental impact was based on an assessment of the direct economic impact of each sector in fourteen key environmental areas over recent years - weighted appropriately and then compared with the total stockmarket returns, in the UK, Europe, North America and Japan. An inverse relationship was found in all cases, with higher environmental impact leading to lower shareholder returns. In many cases the relationship was statistically significant at a 5 or 10% confidence level. The relationship was also found to be robust against exclusion of sectors, different weighting systems etc. More forward looking environmental impact indicators have also be estimated for the sectors and it is hoped this will provide a guide to future performance.



[f] Environmental fund performance

The various types of ethical green and environmental funds are discussed in section 3.3. While the extent to which some of the funds are focused on sustainable development is debatable, it is probably true to say that most of these funds have some environmental screen, and their constituent companies are on average "greener" than the market as a whole. Thus their performance should provide some indication of whether being green affects investment performance. Comparing performance of funds can be a debatable business, as it depends on the timeframe used and the comparisons made. Nonetheless the results are encouraging.

Over five years most of the ethical/green funds in the UK have had above median performance against comparable funds, and on average have slightly outperformed the FTSE-100 index. The longest running ethical fund is in the top quartile of comparable funds. Two of the funds with a more

rigorous approach to environmental issues and analysis have been amount the top performing funds over the last year. The performance of ethical/environmental funds can vary, and is subject to certain influences such as an underweight position in larger companies. However, there is no real evidence to suggest systematic underperformance results, and some indication of superior performance.

Ethical / Environmental fund performance in the UK, 1992-97

% increase in 5 years to 1/5/97		
Credit Suisse Fellowship	129	Ethical
Friends Provident Stewardship North America	87	Ethical
Friends Provident Stewardship	83	Ethical
Jupiter Ecology	82	Green
United Charities Ethical	82	Ethical
TSB Environmental Investor	74	Environmental
Scottish Equitable Ethical	71	Ethical
Sovereign Ethical	70	Ethical
CIS Environmental	70	Green
NPI Global Care	65	Green
Eagle Star Environmental Opportunities	64	Environmental
Friends Provident Stewardship Income	63	Ethical
City Financial / Acorn Ethical	57	Ethical
Allchurches Amity	56	Ethical
Abbey Ethical	53	Ethical
Clerical Medical Evergreen	37	Green
Average	**71**	
FTSE 100	*67*	

Source adapted from CIS / Micropal 5/97, in the Independent, 23/5/97

[g] Back testing of new funds

Two of the new funds taking a more sophisticated approach to incorporating sustainability into investment performance, conducted extensive back testing to check their approach. Both found that their proposed management style would have produced and enhanced returns. The Storebrand Scudder Environmental Values Fund (see 3.3) found that had it invested according to its proposed guidelines it would have generated an annualised total return of 22% in the five years to the end of 1995, compared with the Scudder Global Equity Composite which returned 17% or the Morgan Stanley / Capital International World Index which returned 12%. This is a very significance outperformance. Similarly the Tomorrow's Company Investment Trust found it would have outperformed.

17. - UNEP DOCUMENTS

17.1. VI.1 THE STATEMENT BY BANKS ON THE ENVIRONMENT (ORIGINAL VERSION).

Foreword

We the undersigned believe that human welfare, environmental protection and sustainable development depend on the commitment of government, businesses and individuals. We recognise that the pursuit of economic growth and a healthy environment are inextricably linked. We further recognise that ecological protection and sustainable development are collective responsibilities and must rank among the highest priorities of all business activities, including banking. We will endeavour to ensure that our policies and business actions promote sustainable development: meeting the needs of the present without compromising the needs 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 a role for governments to provide the right signals to individuals and business, to promote behavioural changes in favour 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 recognise 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 environmental 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 recognise 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, endeavour to apply the same standard 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 recognise the need to conduct internal environmental reviews on a periodic basis to measure out 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 strengthen 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 UNEP 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.

17.2. VI.2 THE STATEMENT OF ENVIRONMENTAL COMMITMENT BY THE INSURANCE INDUSTRY.

Preamble

The insurance industry recognises that economic development needs to be compatible with human welfare and a healthy environment. To ignore this is to risk increasing social, environmental and financial costs. Our Industry plays an important role in managing and reducing environmental risk, in conjunction with governments, individuals and organisations. We are committed to work together to address key issues such as pollution reduction, the efficient use of resources, and climate change. We endeavour to identify realistic, sustainable solutions.

1. General Principles of Sustainable Development

1.1 We regard sustainable development, defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs, as a fundamental aspect of sound business management.

1.2 We believe that sustainable development is best achieved by allowing markets to work within an appropriate framework of cost efficient regulations and economic instruments. Government has a leadership role in establishing and enforcing long term priorities and values.

1.3 We regard a strong, proactive insurance industry as an important contributor to sustainable development, through its interaction with other economic sectors and consumers.

1.4 We believe that the existing skills and techniques of our industry in understanding uncertainty, identifying and quantifying risk, and responding to risk, are core strengths in managing environmental problems.

1.5 We recognise the precautionary principle, in that it is not possible to quantify some concerns sufficiently, nor indeed to reconcile all impacts in purely financial terms. Research is needed to reduce uncertainty but cannot eliminate it entirely.

2. Environmental Management

2.1 We will reinforce the attention given to environmental risks in our core activities. These activities include risk management, loss prevention, product design, claims handling and asset management.

2.2 We are committed to manage internal operations and physical assets under our control in a manner that reflects environmental considerations.

2.3 We will periodically review our management practices, to integrate relevant developments of environmental management in our planning, marketing, employee communications and training as well as our other core activities.

2.4 We encourage research in these and related issues. Responses to environmental issues can vary in effectiveness and cost. We encourage research that identities creative and effective solutions.

2.5 We support insurance products and services that promote sound environmental practice through measures such as loss prevention and contract terms and conditions. While satisfying requirements for security and profitability, we will seek to include environmental considerations in our asset management.

2.6 We will conduct regular internal environmental reviews, and will seek to create measurable environmental goals and standards.

2.7 We shall comply with all applicable local, national and international environmental regulations. Beyond compliance, we will strive to develop and adopt best practices in environmental management. We will support our clients, partners and suppliers to do likewise.

3. Public Awareness and Communications

3.1 Bearing in mind commercial confidence, we are committed to share relevant information with our stakeholders, including clients, intermediaries, shareholders, employees and regulators. By doing so we will improve society's response to environmental challenges.

3.2 Through dialogue with public authorities and other bodies we aim to contribute to the creation of a more effective framework for sustainable development.

3.3 We will work with the United Nations Environment Programme to further the principles and goals of this Statement, and look for UNEP's active support.

3.4 We will encourage other insurance institutions to support this Statement. We are committed to share with them our experiences and knowledge in order to extend best practices.

3.5 We will actively communicate our environmental activities to the public, review the success of this Statement periodically, and we expect all signatories to make real progress.

Steering Committee :

General Accident, Perth, United Kingdom.

Gerling-Konzern Globale, Cologne, Germany.

N.P.I., London, United Kingdom.

Swiss Re, Zurich, Switzerland.

Sumitomo Marine & Fire, Tokyo, Japan.

Uni Storebrand, Oslo, Norway.

United Nations Environment Programme, Geneva, Switzerland

17.3. VI.3 SIGNATORIES OF THE BANKING STATEMENT.

1. **Algemene Spaarbank voor Nederland, The Netherlands**
2. Arab Bank, PLC, Jordan
3. Balkanbank Ltd., Bulgaria
4. Banco do Estado de Sao Paulo SA, Brazil
5. Banco Nacional de Angola, Angola
6. Banco Nacional de Desenvolvimento Economic e Social, Brazil
7. **Banco Portuges do Atlantico SA, Portugal**
8. **Banesto, Banco Espagnol de Credito, Spain**
9. **Bank Austria, Austria**
10. **Bank Bayerische Verinsbank AG, Germany**
11. Bank of Cyprus, Cyprus
12. Bank Depozytowo-Kredytowy S.A., Poland
13. **Bank fur Tirol und Vorarlberg Aktiengesellschaft, Austria**
14. Bank Gdanski S.A., Poland
15. **Bankhaus Carl Spangler & Co. Aktiengesellschaf, Austria**
16. Bank Ochrony Srodowiska, Poland
17. Bank of Baroda, India
18. Bank of Handlowy W. Warszawie SA, Poland
19. **Bank of Ireland Group, Ireland**
20. Bank of Montreal, Canada
21. Bank of Philippine Islands, Philippines
22. Bank Polska Kasa Opieki S.A., Poland
23. Bank Przemystowo-Handlowy S.A., Poland
24. Bank Rozwoju Eksportu S.A., Poland
25. Bank Sarasin & CIE, Switzerland
26. Bank Slakski S.A., Poland
27. Bank Zachodni S.A., Poland
28. Banky Fampandrosoana ny Varotra, Madagascar
29. **Banque Populaire de Haut-Rhin, France**
30. Basel Landschaftliche Kantolalbank, **Switzerland**
31. **Bayerische Landesbank Girozentrale, Germany**
32. **Bezirkssparkasse Heidelberg, Germany**
33. Budapest Bank RT., Hungary
34. Canadian Imperial Bank of Commerce, Canada
35. **Central Hispano, Spain**
36. **Commercial Bank of Greece, Greece**
37. **Commerzbank AG., Germany**
38. Community Capital Bank, U.S.A
39. **Cooperative Bank, Manchester, U.K.**
40. **Creditanstalt-Bankverein, Austria**
41. Credit Suisse, Switzerland
42. **Den Danske Bank, A/S, Denmark**
43. **Deutsche Ausgleichsbank, Germany**
44. **Deutsche Bank AG, Germany**
45. **Deutsche Postbank AG, Germany**
46. **DG Bank, Germany**
47. **Dresdner Bank AG, Germany**
48. Export Bank of Africa Ltd., Kenya
49. **Föreningsbanken, Sweden**
50. Geo Bank, Switzerland
51. **Hamburgische Landesbank Girozentrale, Germany**
52. **Hong Kong and Shanghai Bank Corporation Ltd., Hong Kong/UK**
53. **Investitionsbank des Landes Brandenburg, Germany**
54. **JAK - Jord, Arbete, Kapital, Sweden**
55. **Kansallis-Osake-Pankki, Finland**
56. Kenya Commercial Bank Group, Kenya
57. **Kreditanstalt fur Wiederaufbau, Germany**
58. Kreditna banka Maribor d.d., Slovenia
59. **Kreissparkasse Geppingen, Germany**
60. **Landesbank Schleswig-Holstein Girozentrale, Germany**
61. **Landesgirokasse Bank, Germany**
62. Landsbanki Islands, Iceland
63. **LBS Badische Landesbausparkasse, Germany**
64. **Lloyds Bank PLC, U.K.**
65. Luzerner Kantonalbank, Switzerland
66. National Bank of Kuwait SAK, Kuwait

67. National Savings and Commerical Bank Ltd., Hungary
68. **National Westminster Bank PLC, U.K.**
69. **Österreichische Investitionskredit Aktiengesellschaf, Austria**
70. **Österreichische Kommunalkredit Aktiengesellschaf, Austria**
71. Polski Bank Inwestycyjny S.A., Poland
72. Pomorski Bank Kredytowy S.A., Poland
73. Powszechna Kasa Oszczednosci - Bank Panstwowy, Poland
74. Powszechny Bank Kredytowy S.A., Poland
75. Powszechny Bank Gospodarczy S.A. w todzi, Poland
76. Republic National Bank, USA
77. Romanian Commercial Bank SA, Romania
78. Royal Bank of Canada, Canada
79. **Royal Bank of Scotland PLC, U.K.**
80. Thai Investment and Securities Co. Ltd , Thailand.
81. Scotia Bank (The Bank of Nova Scotia) , Canada
82. **Stadtsparkasse Munchen, Germany**
83. **Sudwestdeutsche Landesbank Girozentrale, Germany**
84. **Svenska Handelsbanken, Sweden**
85. Swiss Bank Corporation, Switzerland
86. Toronto-Dominion Bank, Canada

87 Uganda Commercial Bank, Uganda

88. **Unibank (Denmark)**
89. Union Bank of Switzerland
90. Westpac Banking Corporation, Australia

91 Zurcher Kantonalbank, Switzerland

17.4. VI.4 SIGNATORIES OF THE INSURANCE STATEMENT.

1. **Aachener Rhckversicherungs (merged with Employers Re), Germany**
2. **Aachener und Mhnchener Versicherung, Germany**
3. AEGIS Insurance Co Ltd., South Africa
4. Bangkok Insurance Public Company Limited, Thailand
5. Basler Versicherungs-Gesellschaft, Switzerland
6. **Bayerische Beamten Versicherung AG, Germany**
7. CIGNA Insurance Company, Japan
8. Daiichi Mutual Fire and Marine Insurance Company, Japan
9. **Delvag Luftfahrtversicherungs-AG, Germany**
10. Dominion of Canada General Insurance Company, Canada
11. Elvia Versicherungen, Switzerland
12. Employers Reinsurance Corporation, USA
13. **Folksam, Sweden**
14. **La Fondiaria Assicurazioni S.p.A., Italy**
15. **General Accident Fire and Life Assurance Corp., United Kingdom**
16. **Gerling-Konzern, Germany**
17. Grupo Fortuna SA, Argentina
18. Helvetica Patria Versicherungen, Switzerland
19. Hyundai Marine and Fire Insurance Co. Ltd., South Korea
20. **Imperio S.A., Portugal**
21. **Independent Insurance Co Ltd., U.K.**
22. **Iron Trades Insurance Group, U. K.**
23. **Istituto Nazionale delle Assicurazioni, Italy**
24. Jl Accident & Fire Insurance Co. Ltd., Japan
25. **Landesschadenhilfe Versicherung VaG, Germany**
26. **Mannheimer Versicherungen, Germany**
27. **MUSINI, Spain**
28. National Corporation of Tanzania Ltd., Tanzania
29. National Insurance, New Zealand
30. **National Provident Institutions, U.K.**
31. **NatWest Insurance Services, U. K.**
32. **Nurnberger Allgemeine Versicherung, Germany**
33. Overseas Union Insurance Ltd, Singapore
34. **Pool Espanol de Riesgos Medioambientales, Spain**
35. QBE Insurance Group Ltd., Australia
36. Rentenanstalt/ Swiss Life, Switzerland
37. **Rheinland Versicherungen, Germany**
38. **Riunione Adriatica di Sicurta, Italy**
39. **R&V Versicherungsgruppe, Germany**
40. Schweizerische Mobiliar, Switzerland
41. Sibrosso Insurance Co., Russia
42. **Skandia Insurance Co Ltd., Sweden**
43. Sovereign Assurance, New Zealand
44. Storebrand, Norway
45. **Stuttgarter Allgemeine Versicherung, Germany**

46. **Stuttgarter Lebensversicherung AG, Germany**
47. Sumitomo Marine & Fire Insurance Co., Japan
48. **Sumitomo Marine & Fire Insurance Co.(Europe) Ltd, U. K.**
49. Sumitomo Marine & Pool Insurance, Indonesia
50. Sumitomo Property & Casualty insurance Co.(Hong Kong) Ltd, Hong Kong
51. Swiss-Reinsurance Company, Switzerland
52. Swiss Union General Insurance Company, Switzerland
53. **Trygg-Hansa, Sweden**
54. Vaudoise Generale Compagnie d'Assurances, Switzerland
55. **Vereinte Versicherung AG, Germany**
56. **VJV Volksfhrsorge-Jupiter Allg. Versicherung-AG, Austria**
57. **Volksfhrsorge Holding AG, Germany**
58. **WASA F'rsakring, Sweden**
59. **Wiener Stadtische Allgemeine, Austria**
60. Winterthur Versicherungen, Switzerland
61. **Whrttembergische Versicherung AG, Germany**
62. Yasuda Fire and Marine Insurance Co. Ltd., Japan
63. Zurich Insurance Company, Switzerland

These Companies have indicated that they wish to sign the Statement:
Badischer Gemeinde-Versicherungs-Verband, Germany
Co-Operative Insurance Society Ltd., United Kingdom
Deutscher Ring Versicherung AG, Germany
Momentum Life Assures Ltd, South Africa
Provinzial Brandkasse Versicherungssanstalt, Germany
Schleswig-Holsteinische Brandgilde, Germany
SGIO Insurance Ltd., Australia
Victoria Versicherungen, Germany
Whttembergische und Badische Vericherungs-Aktiengesellschaft, Germany

17.5. VI.5 UNEP INSURANCE INITIATIVE POSITION PAPER ON CLIMATE CHANGE

9TH JULY 1996

(1) PREAMBLE

1.1 The property insurance industry is the financial sector most likely to be directly affected by climate change, since it is vulnerable to variability in the frequency and severity of extreme weather events. Life insurance and pension fund investment portfolios are also likely to be affected.

1.2 The cost of such events could escalate dramatically as a consequence of the increased greenhouse effect due to human activities. The resultant climate change may alter the frequency and/or severity of extreme weather events and/or their regional distribution. The exact influence is not yet known, due to the limitations of today's understanding of the climate system. It is clear, though, that even small shifts of regional climate zones and/or storm patterns carry the potential of increased property damage, exacerbated by inadequate planning and construction in certain areas.

1.3 The implication of climate change for other lines of insurance cannot be assessed with confidence but cannot be ignored. Changes in human health (e.g. spreading of diseases) may affect the life assurance and pension industries. Returns on long-term investments and capital projects may be affected by mitigation measures that alter the economics of whole industries - for example, shifting from carbon fuels to renewable sources. The economics of selected regions, such as coastal zones and islands, may be disadvantaged.

1.4 Through its experience in managing the risk of natural catastrophes, the insurance sector can help to improve the response to property damage from extreme events by co-operating with the relevant authorities.

1.5 It is anticipated that structural changes in energy-intensive industries in response to measures to control greenhouse gas emissions will result in opportunities and challenges for the investment community, including for example alternative energy, efficiency programmes, and public transit systems. However, without political initiatives, market forces alone may not result in the efficient use of investment potential.

(2) CONCLUSIONS

2.1 Based on the current status of climate research and on their experience as insurers and reinsurers, the member companies of the UNEP-Insurance Industry Initiative conclude that:

2.1.1 Human activity is already affecting climate on a global scale, e.g. through the enhanced greenhouse effect. According to IPCC "the balance of evidence suggests a discernible human influence on global climate"

2.1.2 Man made climate change will lead to shifts in atmospheric and oceanic circulation patterns. This will probably increase the likelihood of extreme weather events in certain areas. Such effects carry the risk of dramatically increased property damage, with serious implications for property insurers and reinsurers.

2.1.3 Potentially there could be large implications for investment activities as society plans for, and adapts to, the new climate regime.

2.2 We are convinced that:

2.2.1 In dealing with climate change risks it is important to recognise the precautionary principle, in that it is not possible to quantify anticipated economic and social impacts of climate change fully before taking action. Research is needed to reduce uncertainty but cannot eliminate it entirely.

2.2.2 In the case of climate change risks, the most efficient precautionary measure is a substantial reduction of greenhouse gas emissions with respect to a "business as usual" scenario of greenhouse gas emissions.

2.2.3 The problem of climate change can be counteracted only by the joint efforts of governments, political and social institutions, industrial and commercial enterprise [including insurers and reinsurers], and of all individuals. This requires an enhanced level of public discussion and international political agreement.

2.3 We insist that:

2.3.1 In accordance with the precautionary principle, the negotiations for the Framework Convention on Climate Change must achieve early, substantial reductions in greenhouse gas emissions.

2.3.2 The Framework Convention on Climate Change should urgently try to establish what concentration level and rate of increase of greenhouse gases is likely to be "dangerous", through further scientific research.

2.3.3 Mechanisms be created for direct inputs of NGOs [including business NGOs] to the negotiations, and for communicating the issues and decisions to all stakeholders.

2.3.4 The position of the insurance and reinsurance sector be represented when discussing or negotiating possible solutions.

2.3.5 A transparent framework of political, social and economic measures be established to promote sustainable development, taking into account the risks of climate change, and considerations of equity between emerging, transitional and mature economies, and over time.

This paper has been discussed and approved for publication by the members of the UNEP Insurance Industry Initiative as a contribution to the climate change debate. It does not claim to represent a unanimous view of UNEP I.I.I. members, nor does it in any way represent a UNEP position.

18. - Glossary

Bonds
A tradable (securitised) form of debt. Normally bonds pay a fixed amount interest each year and are issued for a fixed amount of time after which they are repaid by the organisation that issued them. They normally form part of the general long term liabilities of the organisation that issued them. Bonds are a major investment vehicles and are characterised by a fairly low risk / low return profile.

Capitalisation
The market's valuation of a company; the number of shares in issue multiplied by the share price.

Debt
An obligation to pay certain amounts of capital.

Equities
A form of security issued by companies. An equity holder owns a share of the company, has a vote in the company and has the right (but no guarantee) of payment of a dividend. Only entitled to a pay out after all other creditors (includes banks and bonds) have been satisfied.. The principle is that as a company grows, the value of your share in its assets will also grow. Equities of public companies are traded on stock markets.

Secondary markets for new, fast growing companies.

Easdaq. Like the US's Nasdaq, this exchange is designed to attract investment in potentially fast growing high technology companies, in this case, on a pan-European basis in Brussels. Opened in September 1996. First stock in November. In February 1997 had 6 companies, with a combined market capitalisation of $1.2 billion, including $250 of new money raised. Easdaq aims to have 50 companies listed by 1998.

The Noveau Marché. Unlike Easdaq, this market aims to create a network of markets linked to their local markets. The first was opened in Paris further exchanges have been opened in Frankfurt, Brussels and Amsterdam on a co-ordinated basis via the Brussels based Euro NM. The Paris Noveau Marché was founded in 1996 and has 20 companies with a total market capitalisation of $ 1.15 billion.

AIM. The UK's Alternative Investment Market has gained more than 350 listings since its 1995 launch. Only one to date is an environmental stock and it has been used by leisure groups more than for high technology.

FIT. Finance In Time, the Vienna Stock Exchange's second market.

Futures
An agreement to buy or sell a fixed quantity of products for delivery at a specified date. Futures contracts are based on a definite purchase or sale and therefore contain risk equal to the underlying product. They can be used as a hedge against changes in the price of goods, or for speculation. Financial futures include currencies, interest rates, bond markets and stock markets indices.

Limited recourse
See Non recourse

Liquid (-ity)
1. When referring to a tradable security, a measure of how easy it is to buy and sell the securities in large volumes. Given by the free float of shares (those which are held by investment companies, etc. rather than the company, its directors or in cross shareholdings with allied companies) and

how often they are traded. 2. When referring to an institution such as a Bank, a measure of how much cash and other rapidly realisable assets they have. 3. In investment management , used to indicate holdings of cash and other short term investments as opposed to bonds and equities.

Non Recourse
Used particularly in project finance to refer to financing where there is no potential of financial claims against any other parties in a project (other than contractual obligations) - thus the project must be viable on its own terms. Similarly limited recourse means that with some risks investors can make recourse to other parties, but other risks will have to be borne by investors.

Options
A derivative instrument. The buyer of an option gets the right to buy or sell at a fixed price. Not an obligation, therefore you are buying the right, which you only take up if it is profitable to do so (in the money). The right can either expire on a fixed date only (can only be exercised on that date) or at any point up- to the expiry date. Traded options can be bought or sold at any time and are thus a market in themselves.

Types of futures and options

Financial: Not connected to the delivery of physical goods. Financial instruments such as interest rates, the value of markets and exchange rates.

Hard: Non perishable goods, e.g. non foodstuffs. Typically oil and metals.

Soft: Perishable goods such as meat, grain and coffee.

Project Finance
Financing of a specific project, normally on a non recourse basis (q.v.) which normally has a specific location, and may last for a fixed period of time. Typically used for financing private sector infrastructure projects. Normally the revenues streams are reasonably predictable and this enables finance to be obtained at reasonable cost.

Securities
Usually used to refer to any form of tradable investment instrument, such as bonds and equities.

19. Bibliography

ACBE (1994) Environmental Reporting: What the City Should Ask. Advisory Committee on Business and the Environment. DoE / DTI, London.

ACBE (1997) Environmental Reporting and the Financial Sector: An approach to Good Practice. Advisory Committee on Business and the Environment. Department of the Environment, London.

ACBE. (1997) Environmental Reporting and the Financial Sector: Draft Guidelines on Good Practice. A Consultation Paper. Advisory Committee on Business and the Environment. Department of the Environment. London.

ACCA. (1996) Corporate environmental reporting - Matching stakeholder needs with reporting methods. Notes of a meeting hosted by The Chartered Association of Certified Accountants. The Green Alliance, London.

Asad, M. (1997) Innovative Financial Instruments for Global Environmental Management, Environment Matters, pp 12-13, Winter / Spring 1997, The World Bank, Washington, USA

Apinwall & Company (1997) Guide to Corporate Environmental and Energy Reporting and Accounting 1997, Association of Chartered Certified Accountants

BankAmerica (1997) BankAmerica Environmental Program 1996 Environmental Report. BankAmerica, San Francisco.

Bebbington, J & Thomson, I. (1996) Business conceptions of sustainability and the implications for accountancy. ACCA Research Report 48, ACCA, London.

Blumberg, J., Blum, G and Korsvols A. (1997) Environmental Performance and Shareholder Value. WBSCD, Geneva.

British Telecom (1996) Environmental Accounting in Industry, a practical review

Broby, Louise. (1995) Investment Regulation in Europe. FT Management Report, London.

Business in the Environment/Extel Financial. (1994) City Analysts and the Environment. A survey of environmental attitudes in the City of London. Business in the Environment / Extel Financial, London.

Cassils, J A. (1993) The Financial Services Industry and Sustainable Development: Managing Change, Information and Risk. National Round Table on the Environment and the Economy, Ottawa.

CERES. (1997) 1996 CERES Report Standard Form. Coalition for Environmentally Responsible Economies, Boston, Massachusetts.

Chan-Fishel, M. (1996) Risk Exposure: Revealing Environmental and Political Risk to private Financiers. Friends of the Earth, Washington, D.C.

Company Reporting. (1991) Environmental Information. Company Reporting No. 13, 1991

Costaras, N E.(1996). Environmental Risk Rating. Environmental Auditors Ltd, Cuckfield, West Sussex.

Deloitte Touche / IISD / SustainAbility. (1993) Coming Clean: Corporate Environmental Reporting. Opening Up for Sustainable Development. Deloitte Touche, London.

Delphi International Ltd. (1996) The Transfer of Environmentally Sound Technologies to Small and Medium Sized Enterprises: A Financing Perspective. For the UNCSD.

Ditz D., Ranganathan J., Banks R.D. (1995) Green Ledgers: Case studies in Corporate Environmental Accounting. World Resources Institute.

DG III. (1995) Attitude and Strategy of Business Regarding Protection of the Environment. European Commission, DG III.

DG XI (1992) Towards Sustainability. Commission of the European Communities, COM (92) 23, Brussels.

DG XI. (1996) Economic Aspects of Liability and Joint Compensation Systems for Remedying Environmental Damage: Main Report. European Commission, DG XI.

DG XI. (1996) LIFE - Environment. Information packet 1997-1999. DG XI, Brussels.

EFFAS (1994) Environmental Reporting & Disclosures. The financial analyst's view. EFFAS Commission on Accounting; The European Federation of Financial Analysts' Societies.

EFFAS (1996) Eco-Efficiency and Financial Analysis. The financial analyst's view. EFFAS Commission on Accounting. The European Federation of Financial Analysts' Societies.

Elkington, J. & Fennell, S. (1996) Can credibility be bought? Tomorrow, VI, 5, 58-63.

Elkington, J. & Spencer-Cooke, A. (1996a) How do we measure up? Tomorrow, VI, 1, 42-48.

Elkington, J. & Spencer-Cooke, A. (1996b) Five years on. Tomorrow, VI, 6, 58-63.

Elkington, J. (1996) The vintage of '96. Tomorrow, VII, 1, 58-62.

Environment Strategy Europe 1997. Campden Publishing, London.

Environmental management systems in European industrial companies. (1993) Ernst & Young, Paris.

ESD. (1995) Effective Financing of Environmentally Sustainable Development. Environmentally Sustainable Development Proceedings Series No. 10. The World Bank, Washington, D.C.

European Commission. (1995) Finance from Europe. Representation of the European Commission in the United Kingdom, Cardiff.

European Commission. (1995) Financial Instrument for the Environment - LIFE - Phase 2. European Commission, London.

European Commission. (1996) Economic Incentives and Disincentives for Environmental Protection. Council Presidency Conference, European Commission, Rome.

European Commission. (1997) Tax Provisions with a Potential Impact on Environmental Protection. European Commission, Brussels.

EVCA. (1997) Venture capital investments in Europe, EVCA, in The Guardian, 17/07/1997

FSI (1996) Environmental Investment Funds. Federation of Swedish Industries, Stockholm.

Ganzi, J. and Neubert, B. (1996) Research on the Financial Impact of Environmental Events and Issues on the Property and Casualty Insurance Industry. U.S. Environmental Protection Agency, Office of Policy, Planning and Evaluation, Washington, D.C.

Ganzi, J. and Tanner, J. (1997) Global Survey on Environmental Policies and Practices of the Financial Services Industry: The Private Sector. Environment & Finance Enterprise.

Gentry, B., Durante, G. & Fernandez, L. (1995) Private Sector Flows and the Environment: Defining the Opportunities and Issues. UNEP/Yale Center for Environmental Law and Policy, New Haven, Connecticut.

Hill, J., Fedrigo, D. & Marshall, I. (1997) Banking on the Future. The Green Alliance, London.

Hodges, P., Nichols A. & Richards A. (1993) Composite Insurance. The Environmental Pollution Threat. James Capel & Co., London.

Holland, J. (1995) The corporate governance role of financial institutions in their investee companies. ACCA Research Report 46, ACCA, London.

ICAEW. (1992) Business, Accountancy and the Environment: A Policy & Research Agenda. Environmental Research Group, ICAEW, London.

ICCR (1992) The CERES Principles, ICCR Brief, Vol. 21, No 3.

ICCR. (1992) The CERES Principles, ICCR Brief, Vol. 21, No 3, 1992.

IEA. (1995) Banking on the Environment. Institute of Environmental Assessment, London.

IFSE. (1997) International Federation of Stock Exchanges Annual Report 1996, Paris.

INRA (Europe) - E.C.O. (1995) Europeans and the Environment. Eurobarometer, 43.1 / EU DG XI, Brussels.

IRRC-EIS. (1992) Institutional Investor needs for Corporate Environmental Information. Investor Responsibility Research Center, Environmental Information Service. GEMI, Washington, D.C.

IRRC-EIS. (1996) Environmental Reporting and Third Party Statements. Investor Responsibility Research Center, Environmental Information Service. GEMI, Washington, D.C.

ISO Insurance Issues Series. (1995) Superfund and the Insurance Issues Surrounding Abandoned Hazardous Waste Sites. Insurance Services Office, New York.

Kaiser, H. (1997) The Reorientation in the Environmental Technology Industry. HKU, Hanover.

KPMG (1993) KPMG International Survey of Environmental Reporting, London.

KPMG. (1994) UK Environmental Reporting Survey 1994, KPMG Publication 4263, London.

KPMG. (1996) UK Environmental Reporting Survey 1996, KPMG Publication 5087, London.

KPMG. (1997) KPMG Survey: The Environmental Challenge and Small and Medium-sized Enterprises in Europe. KPMG Milieu, The Hague, April 1997

Lascelles, D. (1993) Rating Environmental risk. Centre for the Study of Financial Innovation, London.

Leggett, J. ed. (1996) Climate Change and the Financial Sector. The Emerging Threat - The Solar Solution. Gerling Akademie Verlag, Germany.

LIFELines. (1995) LIFE at Work. European Commission, Birmingham.

Linder, Ulf. Environmental Issues in Financial reporting. European Commission.

Holden Meehan. (1996) An independent guide to ethical and green investment funds. 6th Edition. London.

Holden Meehan. (1994) An independent guide to ethical and green investment funds. 5th Edition. London.

MORI. (1996) Institutional Investors and Analysts in Great Britain. MORI Financial, London.

NPI (1997) Position paper on freedom of access to environmental information.

OECD (1996) Interim Definition and Classification of the Environment Industry. OECD, Eurostat, Paris.

Schmidheiny, S., Zorraquin, F J. (1996) Financing Change. The MIT Press, Cambridge, Massachusetts.

Smith, Terry (1996) Accounting for Growth, 2nd Edition, Century Ltd.

Spencer-Cooke, A. & Elkington, J. (1996c) Making a statement. Tomorrow, VI, 4, 52-59.

Spencer-Cooke, A. (1993) "Where Silence is not golden." Towards the strategic use of Corporate environmental Disclosure for Company Valuation - Corporate Environmental reporting in the Chemical Industry. European Association for Environmental Management Education.

Sprenger, R-U. (1997) Policy paper on "Environment and Employment." European Commission, DG XI, Brussels.

Storebrand-Scudder & Knight, P. (1997) The Eco Elite. Tomorrow, VII, 3, 32-36.

Tonkin, D.J., Environmental Protection Statements, in Tonkin, D.J., and Skerrat, L.C.L. (eds.), Financial Reporting 1990-91, ICAEW (1991)

Tuppen, C., et al. (1996) Environmental Accounting in Industry: A practical review. British Telecommunication, London.

UNED-UK. (1997) Green & ethical pensions. A report for Local Authorities. UNED-UK, London.

UNEP. (1994) Company Environmental Reporting. A Measure of the Progress of Business & Industry Towards Sustainable Development. UNEP / IE Technical Report No. 24. UNEP, Paris.

UNEP. (1994) Greening Financial Markets. UNEP/Environment and Trade, Geneva.

UNEP. (1996) Banking, Industry and the environment. UNEP, Moscow.

Vaughn S., ed. (1996) UNEP Global Survey: Environmental Policies and Practices of the Financial Services Sector, UNEP, Geneva.

VfU. (1996) Environmental Reporting of Financial Service Providers. VfU, Bonn.