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Financial Institutions and the Greening of FDI in the Mining Sector

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1. Introduction

The OECD conference on Foreign Direct Investment and the Environment aims to examine the lessons learned from the mining sector on how the various stakeholders in FDI can achieve better environmental performance. This paper has been prepared to provide some background for the conference on the potential role of one kind of stakeholder: the financial sector.

The paper aims to examine the role that public and private sector financial institutions can play in helping to green FDI in the mining sector. More specifically, it looks at the following issues:

- the different ways in which financial institutions have a stake in mining FDI
- Motivations for financial institutions Fis to address environmental issues
- Approaches of financial institutions to addressing environmental issues and experience so far in the mining sector
- Key levers and instruments that financial institutions have
- Main strengths and weaknesses

In keeping with the theme of the conference, the emphasis of this paper is on environmental issues associated with FDI, addressing social issues only where these are linked with environmental issues, for example the effect of river pollution on local livelihoods. The paper does not address the role of financial institutions in relation to purely social issues in the mining sector such as forced labour issues or the spread of AIDS. Although clearly important, these are not necessarily linked with environmental issues.

This paper is primarily a desk study based on available literature and is not intended to be a rigorous survey of financial institutions' practice in relation to the mining sector. However, it draws heavily on research carried under the Mining Minerals and

Sustainable Development project (MMSD) which is a joint initiative of IIED and WBCSD. In particular it refers to presentations and discussions at two workshops on mining finance and sustainability sponsored by MMSD, World Bank and UNEP.

2. The Role of Financial Institutions in FDI in Mining

Most corporate decisions on investing overseas involve the participation of a financial institution either directly through project finance or indirectly in the form of insurance. Financial institutions have a key role in any productive activity but in mining, given the huge amounts of initial investment required, they are particularly important. A typical FDI mining project requires an investment of US$700mn to 1 billion and is unlikely to go ahead without financial backing from a syndicate of financial institutions as well as political risk insurance and other types of insurance. Equity used to be the only way to finance projects in countries with high political risk where mineral resources are often found. But as a result of liberalisation of investment and financial and technical support from multilateral and bilateral agencies, the range of finance available for mining FDI has extended[1].

Mining FDI is often financed through project finance where funds are repaid from the cashflow of the project and the assets of the project are used as security. There is limited recourse to the assets of the sponsoring companies involved. This is typical of large projects requiring substantial amounts of investment and where the risks are high.

A range of financial institutions both public and private have a role in mining FDI. – depends on the stage in the mining cycle, the type of company, junior or major and the type of finance involved:

- Public institutions
    - Multilateral and bilateral development finance institutions
    - Export credit agencies

- Private institutions
    - Commercial banks
    - Equity investors
        - Asset management institutions
        - Venture capital
    - Insurance institutions

2.2 The role of Public Financial Institutions

Development Finance Institutions

Given the magnitude of mining projects, their development and revenue-generating potential and the fact that they are often located in remote regions of developing countries, multilateral and bilateral development finance institutions take a keen interest in the sector. The International Finance Corporation (IFC) the private sector arm of the World Bank Group is a significant financier for mining projects in developing countries, providing both debt and equity finance. It also catalyses other debt and equity funds from private sector sources as well as other official institutions. IFC invests in both small and large scale projects and in both greenfield projects and expansions but does not normally finance exploration activities[2]. Oil, gas and mining constituted about 7% of IFC's committed portfolio in 2001 equal to about US$1 billion

in total.[3] Over the period 1993-2001 the IFC financed 61 mining projects (including expansions) providing US$ 1.53 worth of equity and debt financing equal to on average 35% of the project investment.[4]

Other institutions within the World Bank Group, namely IBRD/IDA while not working directly with the private sector like IFC, play an important facilitating role for mining FDI. By providing assistance to governments in mining sector policy reforms, they help set a framework in which FDI can take place.

The Multilateral Investment Guarantee Agency (MIGA) also within the World Bank group, plays a role in promoting FDI in developing countries through its political risk insurance programme under which it insures project sponsors and/or project lenders against non-commercial risks such as expropriation, breach of contract, or war and civil disturbance. Its outstanding gross coverage for the mining sector is US$524 mn or 13% of its portfolio. Since 1990 it has offered more than 50 guarantees in the mining sector, in some cases in conjunction with other agencies[5]. One of its largest transactions in this sector has been for the Bulyanhulu mine in Tanzania involving a US$115 mn guarantee to a syndicate of banks for their loan to Kahama Mining, a wholly owned subsidiary of Barrick Gold Corporation and one of US$56 mn to Barrick[6].

At a regional level the most important player in terms of volume is the EBRD which has provided US$300 million to the mining sector in Eastern Europe and Central Asia, and for which mining is the second largest sector after oil and gas. The European Investment Bank, which has a specific mandate to promote private sector activity also has some involvement in the mining sector but small by comparison. The regional development banks ADB, IADB etc which work primarily with the public sector and to a lesser extent with the private sector are also relatively minor players.

A number of bilateral development finance institutions (the private sector arm of development assistance agencies) such as CDC, FMO, DEG, Proparco etc give support to mining in the form of loans and equity. For example CDC Capital Partners (formerly the Commonwealth Development Corporation) has targeted the oil, gas and mining sector and established a dedicated team. It currently has over US$130 million invested in the mining sector across Asia, the Americas and Africa. This includes US$30m equity in 2000 in Konkola Copper Mines in Zambia which acquired the privatised Zambia Consolidated Copper Mines.

In many cases a number of these institutions both multilateral and bilateral are involved. For example the Sadiola gold mine in Mali involved a US$250 million investment of which US$160 million was in the form of senior loans provided by IFC (60 mn), EIB (40mn), DEG, FMO, Proparco and others.[7]

Development finance institutions within developing countries also play a role, the prime example being the Industrial Development Corporation of South Africa which extended its mandate from South Africa itself to SADC countries in 1996 and again in 2000 to the whole of Africa. It has invested in mining projects in Botswana, Namibia, Zimbabwe, Zambia amongst others [8]. Similarly, Corporación Andino de Fomento (CAF) which is a multilateral financing institution owned primarily by the five member countries of the Andean region, has invested in mining projects in these countries. Examples of CAF's involvement in Bolivia include a US$6mn loan to Comsur (an affiliate of Hemlo Gold and Battle Mountain) in 1991 and a US$15mn loan to Inti Raymi (an affiliate of RTZ, now Rio Tinto) in1992[9].

Export Credit Agencies

ECAs were originally set up to promote trade by providing government-backed cover to companies for the risks involved in exporting or by assisting buyers with finance. Nowadays their functions are much broader and extend to investment guarantees, political risk insurance and in some cases project finance. Their rationale is that they provide finance or insurance cover for situations too risky for the private sector to get involved. Unlike the development finance institutions, the mandate of the ECAs is normally to promote exports and industry of the home country and for this reason they are usually regulated by the government department concerned with trade and/or industry rather than the development assistance agency. The characteristics and range of functions of ECAs varies considerably. The UK's ECGD is a separate Department of the British Government, reporting to the Secretary of State for Trade and Industry. Similarly, Canada's EDC is a Crown Corporation. Others, like Coface of France and Hermes of Germany are private companies which manage these functions on behalf of their respective governments. The government-backed component of their activities is generally quite minor in relation to the rest of their activities. For COFACE, the state backed activities accounted for around 8% of its sales in 1999/2000[10].

Information on the projects that the ECAs support is considered by some of the agencies to be commercially sensitive and for this reason it is not possible to estimate their total support to mining FDI projects specifically. More generally, the NGO Eca Watch estimates that ECAs are the largest source of public international finance in the world, exceeding development assistance and accounting for 24% of all developing country debt[11]. Examples from specific projects illustrate clearly the importance of the ECAs to mining FDI.

- The Antamina zinc and copper project in Peru which involved a total investment of US$2.27 billion (1,339 debt and 935 equity) received:
    - Project finance from JEXIM (US$245 mn), EDC (US$135mn), KfW US$200mn and Leonia Bank (US$55 mn) in total equal to 47% of total debt financing for the project
    - Political risk insurance cover from Finnvera (US$54 mn) JEXIM (US$105mn) and a syndicate of official and private institutions led by EDC (US$335mn)[12]

- EDC issued C$163 million in political risk insurance to Cambior Inc to cover its investment in Omai Gold Mines Ltd. Omai Gold Mines Ltd is jointly owned by two Canadian companies Cambior (65%) and Golden Star (35%) and the Guyanese Government (5%).

- The Export-Import Bank of Japan (JEXIM) in 1997 signed a loan agreement totaling 450 million US dollars for the Los Pelambres Copper Mine Project in the Republic of Chile. This was a project finance loan cofinanced with The Industrial Bank of Japan and The Bank of Tokyo-Mitsubishi, Ltd., both serving as lead banks, ABN-AMRO Bank N.V., Credit Lyonnais and the Union Bank of Switzerland.

For countries with a significant mining sector, this has been reflected in the activities of its official ECA. For example, the mining sector constituted 15% of the export finance commercial exposures of EFIC, the Australian ECA in 2000, mainly political risk insurance.[13] The share of mining decreased however in this year and only one

finance facility for a mining project (a feasibility study) was issued constituting less than 4% of the total that year.

2.2 The Role of Private Financial Institutions

The type of finance involved depends on the stage of the mining project cycle. Prospecting and exploration activities, given the uncertainty over future cash flows, are financed by equity from private investors or venture capital funds or from funds raised on the junior stock exchanges, primarily in Canada, US and the UK. One estimate is that throughout the 1980s and 1990s almost half of the finance raised for exploration activities in the world was raised on the Vancouver and Toronto stock exchanges[14]. Official financial institutions do not generally get involved at this stage.

Lending Institutions

Once the construction stage is reached, project finance is the main instrument used. Banks are important providers of debt finance at this stage sometimes in conjunction with official institutions. A rule of thumb is that lenders do not usually accept a project with a debt:equity ratio higher than 70:30[15]. Commercial banks provided the bulk of the finance for some 160 mining projects in developing countries worth over US$50 billion between 1996 and 2001.[16] Commercial banks are therefore important drivers of FDI in the mining sector.

Banks also play a role as advisers to act on behalf of the owners to find sources of equity and debt finance and negotiate lending terms without lending any money themselves, or as arrangers where they both lend and find other banks to form a consortium[17]. For example, Apex Silver Mines last year appointed Barclays Capital and Deutsche Bank Securities as lead arrangers for the project financing of its silver zinc mining project in Southern Bolivia[18].

Asset Management Institutions

Mining companies listed on the major stock exchanges eg LSE, NYSE are held by private investors and institutions, managing funds on behalf of others.. Anglo American, BHP Billiton and Rio Tinto are all in the FTSE 100 as well as other major stock exchanges and therefore likely to be included in institutional portfolios and index tracker funds. There are also specialist mining funds, for example the Merrill Lynch World Mining Trust. In most cases such institutions hold only a small proportion of the shares of each company and so individually have little influence but as a collective group the institutional involvement is significant. There are exceptions though. The insurance group Old Mutual and the Butterfield Trust for example, are both substantial shareholders (ie more than 3%) of Anglo American. These institutional investors have an indirect role and interest in the financing of FDI, insofar as this affects their perceptions of the overall performance of the company. More directly, acquisitions of companies overseas, or the equity contribution to new mining projects may be financed by new share issues.

Nevertheless, the mining industry is very small, constituting only 0.7% of the MCSI and returns to shareholders over the long-term have been poor relative to other sectors. Mining companies are not an obvious choice for pension funds with a long-term focus. Some institutions like Storebrand for example typically take only short

term positions in mining to take advantage of short term fluctuations in metal prices and exchange rates[19].

Insurance Institutions

Mining FDI projects often require various types of insurance to cover both risks associated with the construction and operation of the mine, and political risk. At both stages this includes loss or damage to property and third party liability Specialised environmental cover covering more gradual environmental problems is available but is very rarely taken.[20] Reinsurance companies such as Munich Re and Swiss Re which provide cover to the primary insurance companies are also important players. However, many of the larger mining companies prefer to self-insure their mining projects so the involvement of insurers is limited[21].

Insurance institutions also have a role as investors as they hold significant amounts of assets to meet their potential liabilities.

3. Motivations for Financial Institutions to Address Environmental Issues

Very few mining companies are vertically integrated to include manufacturing of final products. Mineral product or supply chains are highly complex such that there is little connection between mining companies and the final consumer. For this reason consumer pressure cannot be expected to drive environmental improvements in the mining sector except in niche markets. Governments in host countries are often not in a position to ensure improvements in environmental performance because of lack of resources for enforcement and concerns about competition from other countries as investment destinations. The spotlight is therefore increasingly on financial institutions as a driver of environmental improvement in the mining industry. But it is important to be clear on the reasons why they should take on such a role.

Three different types of motivation can be distinguished:

- The need to be coherent with government or international policy and sustainable development goals
- The belief that addressing environmental issues make good business sense
- Ethical reasons or the belief that financial institutions should be responsible for their financing decisions

The relative importance of these different motivations depends on the type of institution. There are also different views amongst the various stakeholders as to how important these different motivations should be.

3.1 Coherence with Wider Government Objectives

The first type of motivation clearly applies more to official institutions than to private institutions. Most if not all multilateral and bilateral development finance institutions have a mandate to promote development in the host countries where their investment activities are focused. Increasingly the concept of development used by these institutions is being broadened to encompass environmental and social equity issues, ie sustainable development. It would be incompatible with this goal to finance projects which adversely affected the local environment.

The mandate of export credit agencies has not traditionally been concerned with overseas development but rather with the industrial development of the home country. It is only since the mid 1990s that the need for these agencies to be coherent with the other objectives of government such as sustainable development has been highlighted first by NGOs eg ECAWatch, and more recently by government institutions. For example, in a foreword to a review of the mission and purpose of the UK Export Credit Guarantee Department, the Secretary of State for Trade and Industry noted that:

"In addition to its trade facilitation role, ECGD should take account of the Government's wider international policies to promote sustainable development, human rights and good governance throughout the world, while still helping UK firms to compete effectively compete for business internationally."[22]

While most NGOs argue the need for coherence with sustainable development objectives, some NGOs believe that this is not possible to achieve for mining. They are calling for a moratorium on public funding or backing to mining and fossil fuel projects as they consider these to be inherently unsustainable[23].

3.2 The Business Case

For private financial institutions whose primary objective is profit maximisation, the idea that addressing environmental issues can make good business sense is a potentially powerful motivation. Given the low returns to shareholders in mining over the last 15 years [24] this is particularly important as it appears to offer a way of increasing shareholder value through environmental management rather than destroying it.

For lending institutions, environmental issues are increasingly being recognized as an important element of risk assessment. Environmental and social risk for financial institutions can be classified as:

- Direct - where the financial institution finds itself liable for clean up costs or third party claims for pollution damages. This may occur where a bank forecloses on a loan and takes possession of land offered as collateral

- Indirect – where tightening environmental regulation, or liability claims affects a company's cashflow and ability to repay loans or generate a return on investment

- Reputation risk – where failure on the financial institution's part to give careful consideration to environmental impacts of a project can result in bad publicity both for the institution and the company concerned[25].

It is also frequently argued that the way a company deals with environmental issues provides a good indication of its management capability, which is one of the most important factors in any financial decision, whether debt or equity finance. Effectiveness in dealing with complex environmental challenges implies an ability to handle other management areas as well[26].

For equity investors, the upside possibilities associated with environmental issues should also be important – the ability of companies to use environmental or sustainability strategies to differentiate themselves in the market place, build new markets, reduce costs and increase competitive advantage.[27]

Some recent mining accidents eg the cyanide spill at Baia Mare in Romania have illustrated the importance of environmental risk for financial institutions. Both lending institutions involved in this project wrote off their loans to Aurul, the company concerned[28]. Dresdner Bank one of the banks concerned became the target of an NGO campaign[29].

The business case argument has been used by UNEP to persuade financial institutions both public and private to join its Financial Institutions Initiative. This argument is also being taken up by the official institutions to stress that they can be both coherent with Government objectives and operate on a fully commercial basis. This applies to development finance institutions for example, CDC Capital Partners, which has stated a commitment to implement social, environmental and ethical good practice in its investment activities, believing that this will contribute in the longer run to the financial performance of its portfolio[30]. Similar arguments are being used by export credit agencies, for example Coface:

"Coface's environmental project review is consistent with the French government policy to foster sustainable development. Environmental project review reflects the principle that environmental risk is an integral part of the financial risk insured by Coface. In developing its methodology, Coface's goal is to promote a win/win approach for all interested parties including the Host Countries in a logic of co-operation.[31]"

Nevertheless, opinions remain divided on the extent to which business case arguments apply, particularly for longer term environmental issues and the less tangible social issues associated with them. A survey carried out by UNEP in 1998 found that one of the barriers to financial institutions addressing environmental issues was a perception that these were not material to profitability[32].

Empirical evidence is rather inconclusive and mostly centred on equity markets. While numerous studies have been conducted to examine the link between financial performance and environmental performance, they have produced varying results and mostly relate to the US and to US operations only. They are therefore not very relevant to the environmental challenges facing mining companies. Results also appear to be a reflection of the regulatory context and investors' perception of it. In a strong regulatory environment, the more likely it is that there will be a link between environmental performance and financial performance[33].

Some believe that the risk to reputation of the financial institutions because of their retail base may be more important for them as a driver to consider environmental issues than the financial implications of the environmental performance of the mining companies to which they lend[34].

3.3 Responsibility for Financing Decisions

The third type of argument implies that financial institutions, both public and private, should take an interest in the environmental impact of their financing decisions for ethical reasons. That is, they should take responsibility for the external environmental costs associated with their financing decisions.

For official institutions, this is closely linked with the argument that their activities should be coherent with wider government objectives. For private institutions it is important to distinguish between the socially responsible (SRI) segment of the

finance sector and the mainstream. In the case of SRI funds, taking responsibility for external impact is not controversial and is a reflection of the values of the investor clients that choose this type of investment.

For other types of private financial institution, this argument is much more debatable. The view has been expressed that this is akin to asking financial institutions to take on a global policeman role. Moreover it is felt that while financial institutions are good at assessing at narrow health, safety and environment risks associated with mining, they are ill-equipped to decide whether a mining project contributes to sustainable development. As they are essentially unaccountable and undemocratic institutions it is also not clear that they are appropriate for this role[35]. The fact that there is some debate on this highlights the limitations of the business case arguments.

4. The Approach of Financial Institutions to Environmental Issues in the Mining Sector

4.1 Attention given to Environmental Issues

There are differences between the different types of institutions in the extent of interest given to environmental issues, reflecting to some extent the different arguments above.

Official Institutions

The development finance institutions, given their development mandate, have given the most attention to environmental issues. Nevertheless, some of them have lagged behind their counterpart development assistance agencies, in particular the bilaterals. In 1996 the OECD Development Assistance Task Force observed that with a few exceptions the environmental assessment requirements imposed on the bilateral aid agencies did not apply to their commercial arms[36]. Many of these agencies have since introduced environmental review procedures for projects.

The ECAs have typically given little attention to environmental issues with the exception of the two US agencies, OPIC and Ex-Im Bank which have followed approaches similar to those of the World Bank Group (true?). This is now changing in response to calls for coherence as discussed in the previous section and a number of them eg: ECGD (UK), EFIC (Australia) and Coface (France) have introduced environmental policies and procedures over the last three years. Moreover the OECD has been working with the ECAs of member countries to develop common environmental guidelines. An agreement on common approaches on the environment and officially supported export credits was agreed by 24 of the 26 OECD export credit agencies in December 2001 to come into force in January 2002[37]. It is hoped that this will address concerns about competition and inconsistency between the official institutions. These are illustrated by the Lihir Gold Mine in Papua New Guinea illustrates (Box 1).

Box 1 Lihir Gold Ltd

Lihir Gold Ltd is owned by Rio Tinto (16%), Niugini Mining, local landowners and the PNG government. In 1995 OPIC declined to give political risk insurance for this project because of concerns about the environmental impacts, in particular those associated with the ocean discharge of waste. The project uses the open pit cyanide leaching process. While tailings are treated, the treatment water is discharged to a deep submarine outfall. However, other official agencies supported the project: MIGA and EFIC provided US$76.6 mn and US$ 250 mn respectively of political risk insurance cover [38]. In 1996 the EIB agreed to lend 46 mn ECU. The NGO CEE BankWatch questioned why the EIB was willing to give its support when other international financial institutions had decided not to do so on financial grounds. Questions were raised in the European Parliament about the environmental standards applied by the EIB when considering this project. The EIB's response was that the EIB's usual environmental standards had been applied and that the project met all national and international relevant approved demands in particular those of the Environmental Protection agencies of Australia and the US[39].

Private Sector Financial Institutions

Surveys of private financial institutions eg UNEP in 1998 have shown that many have environmental policies and procedures for corporate credit and project finance. 60% of responding organisations had taken steps to integrate environmental risk in to credit decisions. Less interest in environmental issues was shown by asset managers – only 20% of responding organisations had taken steps to integrate environmental risk into strategic credit or investment portfolio management. The mining sector reflects these trends. Many of the commercial banks look closely at environmental issues. For example Barclays expects adherence to World Bank/IFC guidelines as a minimum[40].

Insurance institutions were amongst the first in the finance sector to address the financial implications of environmental issues. Institutions like Swiss Re are incorporating sustainability issues into their risk management process addressing liability, operational and reputational risk[41]. Unlike other financial institutions insurers involvement in a mining project is usually long-term which is important in relation to environmental issues. Insurance institutions are also taking an interest in environmental and social responsibility issues in their capacity as investors. The Association of British Insurers has recently guidelines on social responsibility for companies in which companies are encouraged to include in their annual reports discussion of significant social, environmental and ethical risks facing them and their approach to managing them.

But asset management institutions that invest in mining do not appear to pay much attention to these issues. This is the view of NGOs such as the environmental mining council of British Columbia which states:

"most of the stock exchanges, brokerage houses and industry analysts in Canada have yet to register environment or social issues on their radar"[42].

This view is also shared by asset management institutions as the following quote illustrates:
"Most investors – including Storebrand – generally assume that the companies' environmental, social and political risks are managed (and are reflected in the stocks' prices)"[43].

It is also the view of specialist investment analysis organisation such as Innovest which have been set up specifically to address this gap. Innovest summarises its approach as follows "Innovest's EcoValue 21 TM environmental ratings (ranging from AAA to CCC) identify environmental risks, management quality and profit opportunity differentials typically not identified by traditional equity analysis. As a result EcoValue 21 ratings uncover hidden value potential for investors"[44].

While the SRI segment of the investment market is growing rapidly, there has been little involvement of SRI in the mining sector. Some of the larger players like NPI Global Care in the UK that operate negative screens explicitly exclude mining as an eligible activity, regardless of any progress made on environmental or social issues made by companies within the sector. But there are some institutions that operate best of sector approaches which do invest in mining. Examples include Westpac in Australia which invests in BHP Billiton, Normandy Mining, Alcan and Placer Dome amongst others and YMG in Canada which has invested in Noranda and Falconbridge[45]. (refs?) Storebrand in Norway also operates a best of sector approach but its involvement in mining is relatively minor and often short-term[46].

4.2 Approaches to Assessing Environmental Issues

Project Level Assessment

The approach adopted by the International Finance Corporation provides a model which has been used or adapted by other institutions both public and private[47]. Environmental and social impact assessment at project level is at the heart of this model complemented by sectoral guidelines and policies to provide a reference point for monitoring, and screening techniques to concentrate resources on the most contentious projects. The basic elements are set out in Box 2.

MIGA as a member of the World Bank Group follows the same environmental and social review procedure. Other development finance institutions follow similar procedures and in some cases use the same sectoral guidelines. DEG, the development finance institution of Germany, requires both environmental and social assessments and uses international standards of the World Bank, IFC and EU etc.[48]

The ECAs have adopted or are in the process of introducing similar screening processes as that of the IFC. The OECD Working Party on Export Credit and Credit Guarantees draft recommendation on Common Approaches follows the same approach of dividing projects into three categories to determine the extent of environmental review required: Category A for projects with significant adverse impacts or in sensitive sectors or sensitive locations, B where potential adverse environmental impacts are less severe and more site-specific and C where adverse environmental impacts are minimal. Mining and other extractive industries are included in an illustrative list of sensitive sectors and sensitive areas and as such are highly likely to be classed as category A. This may mean a change in approach for some of the ECAs. JBIC currently classifies mining projects as B. However, where mining projects are located in environmentally sensitive areas eg primary forests and protected areas or areas where ethnic minorities or indigenous people reside they would be placed in category A[49]. In practice the difference may not be that significant.

Box 2 IFC's Environmental and Social Review Procedure

- Safeguard policies for environmental and social issues, for example environmental assessment, natural habitats and child and forced labour. Project sponsors must review these before they proceed to assessment. These policies set out standards and indicate which types of activity will not be supported by IFC, for example projects using harmful child labour or logging in tropical forests (currently under review). If implemented, projects are monitored against these standards

- Sectoral guidelines which are specific to particular industries, sectors or types of project. These provide standards against which a project's performance can be monitored. Projects are also expected to comply with these standards and also with any relevant local, national or international legislation.

- Screening and categorization of projects according to their potential impact in order to determine the appropriate extent and type of environmental assessment required. Category A projects are likely to have significant adverse environmental impacts both on-site and off-site and therefore require an extensive EA, Category B projects have less significant, site-specific environmental impacts and require a less detailed EA while Category C projects require no further EA beyond the initial screening. Mining projects normally fall into category A.

- Environmental assessment (including social aspects) is conducted by the project sponsor for Category A and B projects. This usually involves an EIA for a Greenfield project, an environmental audit for expansions and modernizations and privatization and in the case of Category A an environmental action plan.

- For highly contentious or risky projects the project sponsor is required to engage an advisory panel of independent environmental specialists to advise on all aspects of the project including during implementation

- For all Category A projects and certain types of Category B project eg those involving resettlement, the project sponsor is required to consult with relevant stakeholders and take their views into account. For Category A projects consultation must take place at least twice a) before the terms of reference for the EA are finalized and b) once a draft EA report is prepared.

- Project appraisal – IFC staff evaluate the project in terms of business potential, environmental, social and technical concerns, reviewing information provided by the project sponsor including the EA and stakeholder consultation where applicable.

Another contentious issue is the level of environments standards required and whether these should be based on local standards or international ones. There has been a difference in emphasis between the official agencies on this issue. IFC expects compliance with its own sectoral guidelines, widely considered as the de facto benchmark in the mining sector. The Finnish ECA FINNVERA expects international standards while JBIC puts more emphasis on local standards but noting that where these do not exist or diverge significantly from Japanese or internationally accepted standards the latter should be applied[50]. The Draft Recommendation on Common Approaches requires compliance with the standards of the host country but does not require compliance with international standards. It does however require member agencies to report on reasons for applying standards that are below international standards in their annual reports to the Working Party[51].

For private sector lenders, environmental risks are one of a number of different risks technical, political economic, etc that they need to evaluate to inform their lending decision and to assess whether the return is commensurate with the risk. Like the official institutions, they rely heavily on environmental impact assessment and environmental audit. Larger players in the sector follow the World Bank IFC procedures and standards. For example, Barclays Capital expects adherence to the World Bank guidelines on mining as a minimum[52].

Company Level Assessment

Asset management institutions normally focus on the environmental performance of the company as a whole and the amount of time and resources for assessment is likely to be limited. Some have an in-house research team, others draw on the services of specialised environmental or SRI research organisations. As explained earlier, very few are likely to examine such issues for the mining sector.

Storebrand which has a best of sector approach and invests in companies among the top 30% in terms of environmental and social criteria relies on information from :

- the company: through a customised questionnaire, dialogue with management, company visits and published environmental and social corporate reports
- outside sources: NGOs, consulting firms, SRI research organisations, Industry organisations, media and others.

It uses this information to derive a score for each company against a set of indicators. A weighted rating/score is then calculated The weights for each indicators are determined on a sectoral basis. This provides an investable universe of companies from which the financial analysts/fund managers can choose on the basis of financial considerations. Other best of sector funds follow broadly similar approaches eg YMG.

A similar approach is used also for the development of rating systems and sustainability indices eg Dow Jones Sustainability Index and the FTSE4Good.

The Innovest EcoVALUE 21 model analyses and gives scores to over 60 variables in the following categories:

- Historical contingent liabilities
- Operating risk exposure (eg: toxic emissions, and hazardous waste disposal)
- Eco-efficiency and sustainability risk eg energy intensity and efficiency
- Managerial risk efficiency capacity eg: environmental management systems strength
- Strategic profit opportunities eg: ability to profit from environmentally driven market trends.

A final score is generated based on a system of weights and relative to companies in its sector. This is converted to an alphabetical rating similar to those used by the credit rating agencies. The rating system produces results quite different from those of conventional rating systems. For example, in Innovest's report on metals and mining companies, Newmont, and Noranda were given scores of 687 and 1226 respectively, yet both had the same Standard and Poor Bond rating of BBB.

According to Innovest's analysis, companies receiving above average EcoValue21 ratings outperformed companies with below average ratings by in excess of 50% over the past three years[53].

4.3 Finance-related Instruments to Influence Company Behaviour

There are various ways in which financial institutions can or attempt to influence company behaviour in relation to the environmental performance of FDI depending on the type of institution and type of transaction.

Project Finance

Access
Projects not meeting certain environmental requirements will not get access to finance from multilateral and bilateral financial development institutions or in some cases from private ones as well. For example, it is highly unlikely that IFC funds will be provided for mining projects involving riverine disposal of tailings (check MMSD report). Funds from the development finance institutions form only a small proportion of total mining finance eg IFC 0.9bn[54] in comparison to US$34 bn in total in developing countries over the last five years[55]. Nevertheless they are effective catalysts of private sources of funds. The political comfort provided by the participation of these institutions, the multilaterals in particular is attractive both to the sponsor and to private financial institutions. The involvement of such institutions is seen as a way of reducing certain types of political risk. Failure to repay debt to these institutions as a result of political events will usually trigger suspension of assistance by these and related organisations, World Bank, EU etc[56].

But if a project is not able to get finance from the development finance institutions, it is still likely to find finance elsewhere. The Baia Mare gold project in Romania was turned down by EBRD but managed to secure loans from two private banks[57].

Pricing
While there are no explicit discounts for addressing environmental issues, it is clear that these have a bearing on the pricing of risk and the overall risk profile of a mining company and hence the loan terms and conditions. Finance was secured for the expansion of the Cerro Mateos Billiton project in Colombia despite the concerns about the political risks of operating in this country. This was because the company's good track record of relations with the community made the financial sector comfortable with the overall risk profile. Similarly, Barricks for its Tanzania project obtained a loan for a relatively long period of nine years because of its good environmental and social track record[58].

Conditionality
Financial institutions, typically the development financing institutions impose conditions on the design of projects eg tailings disposal facilities, or require that environmental plans and management systems be developed. The World Bank guidelines, for example, require and erosion and sediment control plan and a mining reclamation plan. More indirectly, the IFC and others generally require that there be some legal framework in place in the host country to regulate the mining industry. A study of foreign-owned mining projects in Bolivia involving the participation of IFC and other regional and bilateral development finance institutions as lenders found that the environmental conditions attached to the provision of finance had been an important driver of environmental performance, and more significant than the regulatory framework in place at the time[59].

Private financial institutions impose conditions also though not as routinely as the official agencies. For example, following the Baia Mare cyanide spill, Dresdner bank? in a subsequent project in Tanzania insisted on a cyanide detoxification plant[60].

Equity Investors

Selection for an SRI or Sustainability Fund or Index
Whether it is selected or not for an SRI/Best of Sector fund may not have much impact on mining company behaviour as holdings of such institutions are likely to be minimal. Whether SRI funds target them or not there is little impact on their share price. However, the exclusion of mining companies like Rio Tinto from the FTSE4Good Index has attracted media interest.

Shareholder Engagement
Shareholder engagement on environmental and social issues may be more effective as a means of influencing company performance but there is little concrete evidence of its impact. It is typically associated with Sustainable and SRI funds but some institutions such as Friends Provident are beginning to employ "responsible engagement" to other mainstream funds under their management. Thus they may discuss environmental and social issues with companies in sectors such as mining, tobacco etc that their negative screening funds would exclude. The rationale is that encouraging these companies to manage their environmental and social risks better will have good implications financial performance. But for mining, given that best of sector investors like Storebrand, only stay invested in the sector for a few weeks at a time, the scope for shareholder engagement may be rather limited.

Where there has been an attempt at shareholder engagement it does not seem to have affected the behaviour of the company concerned. In 1999 Battle Mountain Gold, (now a wholly owned subsidiary of Newmont), was removed from the Domini Social Index, which is composed of 400 US corporations meeting certain environmental and social screening criteria. This was because of concerns over the environmental impact of its proposed Crown Jewel Mine in Washington State and other environmental controversies in which it had allegedly been involved. Kinder Lydenberg and Domini (KLD) which operates the index does not automatically remove companies when controversies arise but looks for evidence of a company's ability to address them, to work in cooperation with other stakeholders and to communicate openly. However, the company refused to provide a detailed response to KLD on its concerns and it was therefore removed[61].

Shareholder Resolutions
Shareholder resolutions by which shareholders submit proposals on specific issues to be voted on at company AGMs are commonly employed in the US to raise awareness on environmental and social issues. In 2001, 226 shareholder resolutions were submitted to 160 companies in the US. [62] They are less commonly used in the UK and other countries. This reflects differences in the level of shareholding required for shareholders to be eligible to bring a resolution. The requirements are considerably less onerous in the US than elsewhere.

Resolutions on environmental issues filed to date in the US have not focused much on the mining sector. Resolutions in the ICCR listing for 2001 relating to environmental issues were mainly addressed to oil companies and only one company involved in mining (Alcoa) appears. The resolution filed requested Alcoa to

review and amend, if necessary, its code for its international operations, relating to environmental, health and safety, labour and human rights issues[63]. 10.6% of shareholders voted in favour.

Company Reporting Requirements
Since mainstream equity investors often consider only whether a company is listed, the company reporting requirements of stock exchanges and/or financial regulatory authorities may be an instrument for influencing the environmental performance of companies. The general principle is that companies should provide information that is necessary for investors to make decisions, that is, information that is material to profitability. The extent to which details of environmental issues should be included is open to interpretation and there is some variation in the extent to which these are explicitly addressed. In the UK, companies wishing to list on the LSE have to comply with a code of practice produced by the Institute of Chartered Accountants which requires them to take account of all significant risks including environmental and social ones, and to report on their approach to managing such risks in their annual report[64].

The effectiveness of such approaches will ultimately depend on the level of regulatory scrutiny. Requirements for environmental disclosure in company reports are relatively extensive in the US. Nevertheless, a recent study from the World Resources Institute found significant discrepancies between the exposure to environmental risks reported by companies to the Securities and Exchange Commission and the estimates made independently in the study. Moreover, the SEC has only ever brought one case to court for non-compliance[65].

4.4 Key Concerns

There are limits to the effectiveness or appropriateness of financial institutions attempting to influence the environmental performance of mining companies

Lack of Attention to Long-Term Impacts
The nature of project finance is such that there is considerable emphasis on the initial design of the project and less attention to long-term monitoring. Lending institutions are likely to give less attention to certain long-term aspects eg mining closure and post-closure liabilities eg acid rock drainage. In part this is because of the difficulties of predicting long-term impacts[66]. However, the short time horizon of lending institutions ie only up to recovery of the loan must also play a role. This relates back to the motivations for addressing environmental issues. If it is primarily for business benefits then once the loan is repaid, banks should not be concerned about environmental performance unless there are reputational issues.

Ability to distinguish between good and bad environmental performance companies
Both lenders and equity investors are struggling to differentiate projects and companies on the basis of environmental and social performance. This involves two issues: the ability to obtain sufficient information on project and company performance and secondly the existence of standards against which to compare performance and make an evaluation.

While project finance involves detailed assessment of environmental impacts and risk, there are concerns about the poor quality of EIA and other tools used. In part this is due to the limited capacity of the various stakeholders, financial institutions

and in particular governments to assess the quality of EIA and ensure a better product[67].

SRI investors are heavily reliant on information supplied by the companies and in particular find it difficult to obtain reliable information on the overseas subsidiaries of multinational companies before events hit the media spotlight[68]. While mining companies are considered by SRI investors to produce satisfactory environmental reports, few show trends in quantitative data[69].

It is also believed that the upfront work in assessing the risk of mining including the environmental and social issues creates additional costs and disincentives for financial institutions to get involved in this sector. SRI equity investors are also looking for ways to make rapid differentiation between companies with good and bad environmental performance,.and have highlighted the need for metrics and reliable criteria that companies can report against[70].

Transparency
If it is primarily concern about reputation that is driving the interest of financial institutions in environmental performance, in the mining sector, then greater transparency will be needed for this to take effect.

In the case of official agencies there are significant differences between them in the extent of disclosure. The multilateral and regional and some bilateral development finance institutions and MIGA provide listings of their projects. In contrast the export credit agencies typically do not disclose details of their transactions for reasons of commercial sensitivity. The exceptions are OPIC and Ex-Im Bank which are both subject to the US Freedom of Information Provisions. Their Canadian counterpart EDC is exempt from the Access to Information Act and thus not legally required to disclose which companies it finances[71]. However, in response to recommendations for increased disclosure from a Government review, EDC is now developing a disclosure policy.[72] Other ECAs eg ECGD (UK) and EFIC (Australia) have recently started to give details of their transactions in their annual reports.

Private sector institutions have generally cited concerns over commercial sensitivity as a reason for not publicising their involvement in certain projects.

5. Ways Forward

Strengthening the role of financial institutions in driving environmental improvement requires action from various stakeholders and not just the finance sector itself.

Agreement on minimum standards and certification scheme
It is widely believed that development of a set of acceptable standards for mining activities would facilitate environmental due diligence and ultimately reduce the cost of capital. It is recognised that to ensure credibility and wide acceptability they should be based on multi-stakeholder consultation, combine global principles with criteria that take account of local differences and be externally verified. This takes account of lessons from certification initiatives in other sectors[73]. The challenge will be to ensure that there are incentives for compliance and clear consequences of non-compliance. Financial institutions however, do not want to take on the task of enforcing compliance. It has been suggested instead that compliance be linked to stock exchange listing authorities or competition authorities or permitting procedures[74]. Development of an effective system of standards therefore requires

action from an international agency or an NGO to set in motion a consultation process, and eventual design as well as home country and host country governments to develop compliance mechanisms.

Improved environmental reporting
Introduction of standards needs to be accompanied by company reporting to track performance over time. This requires agreement on indicators that are representative of the mining sector and the diversity within it and that are meaningful to different stakeholders. There are a number of initiatives such as the GRI to improve company reporting on the economic, environmental and social dimensions of their activities. However, there are doubts whether these "off the shelf" approaches can capture all the diversity within the mining sector. The choice of indicators needs to be tailored to the sector and to different stakeholder groups. This implies commitment of time and resources to scope out the issues of most concern to different groups[75].

Long-term Impacts
Requirements of the multilateral development finance institutions and the ECAs generally do not give sufficient emphasis to mine closure. MMSD will recommend that these official agencies and the private sector ones that follow their lead revise their requirements to provide for a detailed, fully costed closure plan and financial provision to cover these costs[76]. Financial institutions have a role in the development of trust funds and other mechanisms to ensure that funds allocated at the outset are kept for the purpose of carrying out the closure plan.

Strengthening the Business Case
Better understanding is needed of the relationship between financial performance and environmental performance and creation of the conditions under which a positive linkage between the two is likely eg stronger regulatory enforcement, greater transparency.

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