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**Pushing Lenders to Over-comply with Environmental Regulations:**

A Developing Country Perspective\*

Parashar Kulkarni\*\*

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\*\*Researcher, CDF. The author thanks Nitya Nanda (TERI) for comments. The views expressed in this note are entirely those of the author and should not be attributed to the Institutions with which he is associated.

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**Abstract**

In the past few years, the number of lenders adopting voluntary environmental codes, such as the Equator Principles, is increasing. The main reasons for this form of over-compliance include warm glow preferences of agents, credit risk and incentives arising from regulation. Empirical evidence suggests that lenders that over-comply are generally bigger than those that don't. In particular, they are likely to be MNCs. In addition, the behaviour of over-complying lenders differs from other lenders, for instance they are more likely to incorporate environmental risks in their lending practises. In the context of developing countries, incentives that promote over-compliance exist to a much lesser degree. Analysing the regulatory environment in developing countries, we find no compelling reason for regulators to encourage voluntary initiatives such as the Equator Principles.

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## 1. Introduction

In several countries, lenders are required to comply with environmental regulations. These regulations vary from minimal requirements to strict lender liability for environmental problems caused by borrowers. A number of lenders have also adopted voluntary environmental codes in the form of undertakings to impose environmental assessments on borrowers, seeking action plans for tackling environmental risks, and increasing the amount of public scrutiny. These codes usually surpass the requirements imposed by regulation. Some of these codes are adopted as part of an alliance such as the United Nations Environment Program - Finance Initiative (UNEP-FI) adopted by 160 financial institutions or the Equator Principles, which had 61 signatories until 2008.<sup>1</sup> In addition, several lenders do not participate in a formal alliance, but prepare periodic reports that substantiate their environmental performance. These are often guided by global movements such as the Global Reporting Initiative (GRI).

In the past few years, the number of lenders adopting voluntary environmental codes is increasing. A KPMG Report (2005) of 1600 global companies in 16 countries found that from 2002 to 2005, the growth in the number of companies preparing CSR reports was highest in the financial sector, at 170 percent. This trend is not restricted to developed countries. 20 Members of the UNEP-FI and five signatories of the Equator Principles are from developing countries (See Annexure 3).

On the other hand, a majority of the world's lenders have not adopted these codes. While the signatories of the Equator Principles hold 80 percent of the market share in global project finance, they represent less than one percent of the total number of industry participants. If all lenders benefit from going green, why isn't the adoption rate higher?

We survey the limited theoretical and empirical literature on whether lenders benefit from environmental over-compliance. Section 2 analyses the incentives that lead lenders to over-comply. Section 3 discusses whether over-compliant and other lenders behave differently?

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<sup>1</sup> See Annexure 1 and 2 for a brief note on the Equator Principles and UNEP-FI respectively.

Section 4 analyses whether regulators in developing countries should promote over-compliance. Section 5 provides concluding remarks.

Some limitations of the paper need to be stated upfront. Given the dearth of related literature in over-compliance, we rely on corporate social responsibility literature, as a proxy for environmental over-compliance. Since environmental over-compliance is considered as a form of corporate social responsibility (see Reinhardt et al. 2008), we find merit in this approach. Second, we assume that adoption of environmental codes such as the UNEP-FI and Equator Principles implies environmental over-compliance. It is likely that some lenders over-comply in spite of not being Members of these initiatives, while some lenders might not over-comply in spite of being Members. In the latter case, these initiatives would serve as window dressing.

## 2. Why do lenders over-comply?

Several arguments are used to justify why lenders over-comply with environmental regulations. Typically these have dealt with the issue through the lens of strategic interaction between agents such as regulators and lenders or borrowers and lenders. Some models have also proceeded beyond the assumption of rational agents, towards altruism or 'warm glow' preferences in the utility function of specific stakeholders. However, Reinhardt et al. (2008) conclude that there is no evidence that firms sacrifice profits for social interest, implying that firms over-comply to maximise profits. The bulk of the available evidence suggests that most firms view socially responsible actions in the same way that they view more traditional business activities, such as advertising and R&D.

In this paper we assume over-compliance to be a rational, non-altruistic pursuit. We proceed to classify the incentives for over-compliance based on whether they affect the supply side or the demand side (See Figure 1 in Annexure 4 for a representation of demand and supply side incentives to over-comply).

Supply side incentives are those that affect the supply schedule of the lender, e.g. incentives that affect costs, while demand side incentives are those that affect the demand schedule of the consumer, e.g. incentives that affect quantity of services purchased (See Brau and Carraro, 2004). These incentives may differ in their impact i.e. they may cause a change in the slope, a shift in the curve and/or a change along the curve. For instance, an increase in green preferences of consumers (a demand side incentive) will lead to a steepening of the demand curve, since the price elasticity of demand reduces on account of an increase in the importance of other variables (D1 to D2 in Figure 1, Annexure 4). Similarly, a decrease in cost of funds (a supply side incentive) due to green preferences of investors, will lead to a shift in the supply curve to the right, since the firm uses more capital to equalise the marginal cost of capital to the marginal productivity of capital (S1 to S2 in Figure 1, Annexure 4).

### *2.1 Supply-side incentives*

#### Credit risk

Weber et al. (2005) review literature on why lenders incorporate environmental variables in their credit appraisal system. The authors conclude that environmental problems pose a direct credit risk. Environmental contamination can reduce the value of collateral. Environmental regulation can impose unforeseen and/or substantial costs on borrowers, affecting their ability to service loans. In some instances, lenders are held liable for environmental externalities of their clients.

Mazzocco (1991) analyses the issue of credit risk, from a legal perspective. Environmental regulations affect lenders in three broad areas: lender liability, borrower liability, and constraints on borrowers' actions. Lenders have been held accountable for costs of cleaning environmentally damaged sites in certain instances, such as those in which the lender is found to have exercised management control of the borrower or acquired title to real estate by foreclosure or other means. In the context of borrower liability, a court judgment ordering a borrower to pay for environmental damage will impair the borrower's ability to satisfy his debt. Finally, with regard to constraints on borrower's actions, some environmental regulations may directly affect a borrower's ability to continue as a viable

enterprise. Obvious are the costs of regulatory compliance and their impact on the financial strength and borrowing capacity of the borrower. For instance, a regulatory ban on the use of certain dyes in the chemical industry, will impair the viability of firms specializing in those dyes. Empirical evidence is available to validate that lenders do incur these costs. In a survey of 2000 lenders conducted by the American Bankers Association in 1990, 220 incurred environmental clean-up costs.<sup>2</sup>

Mazzocco (1991) also discusses various measures adopted by lenders to be protected from damages, such as seeking guarantees from borrowers regarding environmental compliance and collar mortgages, which exclude riskier components of the borrower's business. In the American Bankers Association Survey 1990, 62.5 percent of the respondents indicated that they had rejected loan applications because of potential environmental liability and 45 percent discontinued financing certain types of loans, many dealing with fuels, chemicals, and underground storage tanks. Thus, lenders respond to credit risk not only by over-compliance, but also by reduction and redistribution of credit.

Lenders incorporate credit risk by setting aside a provision from gross profits. This provision is an estimated percent of the loan portfolio, which is based on a probabilistic model of default. Environmental risks, when included in the risk model, obviously increase the probability of risk. This leads to an increase in the provision, and consequently lower profits. Environmental risk assessment prior to lending leads to a reduction in this provision. If environmental regulations are inadequate, lenders will over-comply to manage credit risk.

### *Regulatory Incentives*

Models which analyse lender-regulator relationships argue that incentives emerging from regulation can lead lenders to over-comply. Since regulations affect the cost of service, these are supply side incentives. Maxwell, Lyon and Hackett (2000) develop a model in which firms use self-regulation to pre-empt government regulations. When it is costly for consumers to organize and influence the political process, firms can match the net utility

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<sup>2</sup> See Boyer and Laffont (1997) for a brief description of court cases in the US, wherein banks were held liable for clean-up costs



consumers expect from regulatory controls with a lower level of voluntary controls. This strategy can deter consumer groups from entering the political process to demand stricter regulation. As the threat of regulation grows, for example, because of reduction in consumers' informational and organizational costs, self-regulation becomes more stringent. In this model, lenders over-comply in expectation of regulatory reform or a threat of stricter regulation.

Denicolo (2000) models environmental over-compliance in the absence of regulatory threats, as a signalling device used by firms to influence governments to increase environmental standards. Firms face heterogeneous costs of environmental compliance, on account of which, the firms for which costs are lowest, voluntarily over-comply. This sends a signal to the government that compliance costs are low, and they make regulations stricter. This leads to a comparative advantage to the firms that have over-complied, on account of heterogeneous productivity.

Lenders also over-comply to have better access to regulatory authorities and increase their ability to influence regulation through clubs. Lenders that adopt voluntary codes in the form of Equator Principles or UNEP-FI are able to work with governmental and non-governmental organisations. Based on a dataset of 3700 US facilities, Potoski and Prakash (2005) estimate that joining ISO 14001 reduces facilities' time spent on compliance by about 7 percent or about 25 days out of a year. The authors argue that voluntary environmental programs are similar to club goods, which have characteristics of reputational benefits and exclusion mechanisms.

#### *'Warm glow' preferences of employees and investors*

Baron (2007) provides four explanations for why firms engage in CSR (over-compliance being a form of CSR), assuming that CSR is a form of social expenditure or public goods provision by the firm. First, consumers value social expenditures and hence are willing to pay more for a firm's product. Second, CSR can improve productivity by inducing employees to work harder or better. Third, managers may engage in CSR as a consumption activity or for public acclaim. Fourth, investors value CSR, in which case they may hold shares in the

firm even if, because of its corporate social expenditure, its financial return is lower than returns available elsewhere in the capital market. Amongst these, consumer preferences affect demand side incentives, while those of investors and employees affect supply side, by reducing the cost of capital and cost of labour respectively.

Employees, with warm glow preferences, work for an environmentally responsible lender, at a lower productivity-adjusted wage, compared to an environmentally indifferent lender. This reduces wage cost for the lender, leading to an increase in the supply of services, since lenders equate the the wage rate to the marginal productivity of labour. Similarly investors, with altruistic preferences are willing to invest in an environmentally responsible lender, in spite of a lower rate of return. This reduces the cost of capital, and again leads to an increase in the supply of services. However, neither of this is empirically validated. In fact, MNCs pay more than domestic firms in developing countries, and also provide higher returns.

OECD (2008) surveys empirical studies on MNC wage premia to conclude that MNCs pay higher wages than local firms in several countries even after controlling for other plant characteristics such as labour productivity or educational attainment.

Empirically a number of papers find a positive relationship between environmental and financial performance, which suggests that investors do not receive a lower return from environmentally conscious firms or over-compliant firms. UNEP (2004) surveyed 11 brokerage firms to conclude that environmental, social and corporate governance issues (ESG) affect long-term shareholder value. UNEP (2007) reviews twenty academic research papers that examine the link between ESG factors and investment performance. Approximately ten papers find a positive relationship between ESG factors and portfolio performance, three papers report a negative association and seven report a neutral relationship.

Dowell et al. (2000) survey literature linking superior environmental performance to financial performance. They find several channels through which environmental performance affects financial performance, both in terms of stock prices as well as

profitability. With reference to stock prices, they find empirical support for the following - news of high levels of toxic emissions results in significantly negative abnormal returns, firms with strong environmental management practices have better stock price returns than firms with poor practices after a major environmental disaster and environmental performance awards result in significant positive abnormal returns.

In the context of a developing country, India, Gupta and Goldar (2005) conduct an event study to examine the impact of environmental rating of large pulp and paper, auto, and chlor alkali firms on their stock prices. They find that the market generally penalizes environmentally unfriendly behaviour, i.e. the announcement of weak environmental performance by firms, leads to negative abnormal returns of up to 30 percent. However, given that lenders are indirect polluters, their stock prices are less likely to be affected by weak environmental performance of their borrowers.

## 2.2 Demand-side incentives

### *Warm glow preferences of consumers*

Demand-side incentives for over-compliance are typically modelled by assuming some form of altruistic or warm glow preferences in the utility function of the consumer. It is important to note that, lenders are not modelled as altruistic. They respond in a profit maximising manner, by factoring the altruistic preferences of consumers in their behaviour.

Increasingly, 'warm glow' preferences are replaced by assuming that CSR is a public good, which a firm provides, along with the private good. This assumption is less restrictive about the preferences of stakeholders than the former. Arora and Gangopadhyay (1995) assume heterogeneous consumers i.e. consumers value environmental quality but differ in their willingness to pay. Thus the market is segmented by income levels, wherein environmentally conscious firms receive a higher price from select consumers who value the environment, while firms that are indifferent receive a lesser price from environmentally indifferent consumers. This model aligns with two empirically observed phenomena – the growing

adoption of environmental consciousness and the over compliance of environmental standards by some firms.

Evidence of warm glow preferences can be demonstrated by case studies on activism and social campaigns against business. Wright (2009) provides cases of a series of civil society campaigns against a number of large commercial lenders, on the grounds of harming the local communities and the environment, validating the existence of altruistic preferences amongst stakeholders in general, and consumers in particular.<sup>3</sup>

### 3. Do over-complying lenders differ from others?

Over-compliance initiatives in the financial sector reveal that few lenders over-comply. In this section, we investigate whether over-complying lenders and other lenders differ at two points – pre-selection and post-selection. In other words, we ask whether some firms are more likely to overcomply than others. Secondly, once a firm overcomplies, is it likely to behave differently than others. Surveying empirical literature, Reinhard et al. (2008) conclude that firms which are more likely to over-comply are usually firms that are large, produce final goods, experience more pressure from NGOs and consumers, produce higher emissions, have poor compliance record, invest more in R&D, have more managerial discretion and are Members of industry associations. On the other hand, Alberini and Segerson (2002) argue that no direct and conclusive evidence is available to identify the characteristics that make a firm more likely to participate in voluntary programs. Using firm-level survey data of 118 firms in China, Christmann and Taylor (2001) find that multinational ownership, multinational customers, and exports to developed countries increase self-regulation of environmental performance. In the context of lending, an analysis of the nature of participants in two key global initiatives – UNEP FI and Equator Principles, suggests that large and multinational lenders are more likely to over-comply.

Prakash (2001) discusses why MNCs or firms with multiple facilities tend to over-comply compared to domestic firms. MNCs adopt uniform policies across various jurisdictions,

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<sup>3</sup> See Annexure 5 for a list of civil society campaigns against lenders.

leading them to adopt the strictest regulation.<sup>4</sup> This leads them to over-comply in jurisdictions where regulations are less strict. Alberini and Segerson (2002) argue that larger firms are more likely to join voluntary programs because they have lower marginal cost of abatement due to economies of scale and the availability of more personnel. According to the authors, large firms may experience greater benefits from environmental stewardship, have greater ability to influence regulators through their over-compliance, and be more exposed to liability because of their 'deep pockets'.

The cost of over-compliance is likely to be a determining factor in deciding whether to over-comply. Very little evidence is available regarding the cost of over-compliance to lenders. Vitaliano and Stella (2006) estimate the cost of the Community Reinvestment Act 1977 (CRA) on thrift banks in the US to be approximately 2.3 percent of variable costs.<sup>5</sup> Elliehausen (1998) surveys literature to conclude that the average cost of banking regulation is 12–13 percent of non-interest expenses, half of which were expenses that would not be undertaken, if the regulation did not exist. While there is no empirical estimation of over-compliance costs, there is no reason to believe that it exceeds the cost of mandatory regulations. Equally relevant is the assumption that the costs are non-negligible, given the low proportion of firms that over-comply.

Since firms have heterogeneous productivity, we can assume that the most productive firms over-comply, to the extent that over-compliance costs do not exceed cost-saving from higher productivity. This view is compatible with MNCs being over-compliant, yet paying higher wages and providing higher returns on capital, since these additional costs are compensated by higher total factor productivity.<sup>6</sup> Claessens *et al.* (2000) find that foreign banks have lower interest margins, overhead expenses, and profitability than domestic banks in developed countries, while the opposite is true in developing countries.

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<sup>4</sup> Stricter regulation is expected to increase costs. On the other hand, standardizing regulation across facilities is expected to reduce cost. MNCs reduce the total cost of regulation.

<sup>5</sup> The CRA was introduced to increase the access of low income/minority communities to commercial credit. Banking institutions subject to the CRA undergo periodic examination in order to assess their compliance with the law's stated objective of meeting the legitimate need for credit and deposit facilities within the geographic area where they conduct business, consistent with sound banking practices.

<sup>6</sup> MNCs may also have an elite bias, which allows them to engage in skimming. In the context of India, Gormley (2008) finds that entry of foreign banks increased the credit access of a very small proportion of very profitable firms, while on average, firms were less likely to have a loan after entry of foreign banks.

We proceed to analyse post-selection behavior i.e. whether lenders that over-comply behave differently from lenders that don't. Cowton and Thompson (2000) compare the policies and practices of signatories and non-signatories of the UNEP FI Statement, to investigate whether the environmental behaviour of lenders that adopt voluntary environmental codes differ from the lenders that don't? In their empirical survey covering 36 national and international lenders located in the UK, they find that 51 percent of non-signatories included environmental factors in their formal corporate lending policy, whereas 74 percent of signatories did. However, this result was not statistically significant. The authors present two reasons for this. First, many non-signatories claimed to incorporate environmental factors into their lending policy even though they had not signed up to the Statement. Second, 26 percent of signatories failed to incorporate environmental factors in spite of their having publicly supported the Statement.

The authors also conduct a survey comprising of 50 lenders in eight European countries. They find that in the costing phase, lenders hardly thought about environmental risks. 32 lenders have either captured credit defaults due to environmental risks partially, or not at all. There were significant differences between lenders that have signed the UNEP Statement and those lenders that did not sign this statement, with respect to integrating environmental risk management in all credit management phases. Signatories of UNEP-FI are more likely to specifically incorporate environmental risks in the credit management strategy and operations in the field.

Scholtens and Dam (2007) analyse the performance of lenders that adopt the Equator Principles vis-à-vis lenders that don't. They find that the social, ethical and environmental policies of the adopters differ significantly from those of non-adopters. The adopters were also significantly larger. The authors state this as evidence that CSR behavior is especially displayed by lenders in the spotlight. They conclude that adoption of the Equator Principles is used to signal responsible conduct. Adoption is undertaken by lenders that pay a lot of attention to CSR policies and conduct, and by adoption of equator principles, these institutions signal this position to the public.

In summary, empirical evidence suggests that lenders that over-comply are generally bigger than firms that don't. In particular, they are likely to be MNCs. In addition, the behaviour of over-complying lenders differs from other lenders, i.e. they are more likely to incorporate environmental risks in their lending practises.

#### 4. Should regulators promote over-compliance in developing countries?

The regulatory environment in developing countries is different from developed countries. Reinhardt et al. (2008) emphasise that developing countries face a number of problems that are less prevalent in developed countries. Legal and contractual systems operate poorly in developing countries. Environmental regulations are often not well-enforced. Momtaz (2002) reviews mandatory Environmental Impact Assessments (EIAs) in the water sector in Bangladesh to conclude that in spite of stringent standards, EIAs are less effective due to poor monitoring, lack of coordination among the various organizations involved in environmental decision making, and poor infrastructure to conduct an EIA.

In Section 3 we discussed a number of models that motivate the reasons for lenders to over-comply. However, the incentives for over-compliance that exist in developed countries, where a large proportion of research originates, may not exist in developing countries. The reason for scepticism is that a number of priors that these models rely on, may not apply for developing countries. These include basic assumptions such as altruistic preference functions, perfect information and regulatory efficiency.

Our survey emphasised the importance of 'warm glow' or altruistic preferences for some agents, as a reason for over-compliance. Empirical evidence validates that demand for higher environmental quality is lower in developing countries than in developed countries.<sup>7</sup> In Annexure 5 we list leading environmental campaigns against financial institutions

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<sup>7</sup> Kahn and Matsusaka (1997) validate that individual income is positively correlated with public support for environmental protection. Grossman and Krueger (1995) conclude that pollution rises with income as long as income is relatively low and declines once income has exceeded a threshold level. Jacobsen and Hanley (2008) conclude that the demand for biodiversity conservation rises with a nation's wealth.

operating in developing countries. While all of these issues pertain to developing countries, the campaigns are led by NGOs from developed countries.<sup>8</sup>

Consider the incentive to over-comply on account of pre-empting future regulation. The underlying assumption in the Maxwell et al. (2000) model is that the level of compliance is public information. In the case of developing countries, the level of compliance is often private information, which makes non-compliance with statutory regulations simpler. In such an environment, there might be no robust basis to validate that a firm is over-complying.

Typically, models of over-compliance assume that regulation is costless in the sense that regulators are able to introduce new instruments at no additional costs or that there are no constraints on regulatory capacity.<sup>9</sup> In the context of developing countries, it is likely that regulators are unable to introduce new initiatives, without reducing their resources on competing initiatives. This implies that introducing voluntary programs can lead to poorer implementation of statutory regulation.

Apart from non-applicability of basic assumptions, promoting over-compliance might result in an adverse selection problem for regulators in developing countries. In countries where the agency problem is higher, firms have an incentive to over-comply to establish closer ties with regulators, leading to regulatory capture. A number of studies suggest that MNCs in developing countries are more productive than their local counterparts. Thus they find over-compliance less expensive than domestic lenders. According to Denicolo (2000), MNCs are likely to over-comply to push governments to introduce stricter regulation or for regulatory capture. In addition, MNCs are likely to benefit most from schemes that promote over-compliance.<sup>10</sup>

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<sup>8</sup> This is not to say that most environmental campaigns in developing countries originate from NGOs in developed countries, but that pure environmental activism against lenders (indirect polluters) is not a common strategy adopted by environmental activists in developing countries.

<sup>9</sup> See Heyes (2000) for a survey of models that include enforcement costs in modeling implementation of environmental regulation.

<sup>10</sup> The design of the contribution mechanism is expected to play a critical role in influencing incentives. For instance, if lenders invest in the voluntary initiative, while the government participates as an observer, regulatory capture is likely to be high, since MNCs are most likely to invest. On the other hand, if the government invests and lenders participate, regulatory capture is likely to be lower, since less productive firms



## 5. Concluding remarks

We motivated our analysis by an observation that some lenders over-comply with environmental regulation, while most don't. We review literature on why firms over-comply. The main reasons include warm glow preferences of agents, credit risk and incentives arising from regulation. We also find that the lenders that over-comply are usually bigger firms and MNCs. In addition, significant behavioural differences exist between lenders that over-comply and lenders that don't. One instance is that over-compliant firms are more likely to incorporate environmental factors in the credit approval process.

In the context of developing countries, some incentives that promote over-compliance such as environmental preferences of stakeholders exist to a much lesser degree. Second, it is also difficult to validate over-compliance. This is because regulatory compliance is often private information in developing countries. Third, regulators are constrained due to capacity and resources, to introduce over-compliance. Finally, if regulators introduce programs to promote over-compliance there is a higher risk of regulatory capture. Thus, there appears no compelling reason for regulators in developing countries to encourage lenders to over-comply with environmental regulations.

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also participate. If we assume asymmetric information, i.e. access to information is directly proportional to firm size, again MNCs are more likely to benefit.

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## Annexures

### 1. Note on Equator Principles

In October 2002, a number of banks and the International Finance Corporation (IFC) convened to discuss ways to develop a common set of environmental policies, social policies and guidelines for project finance that could be applied globally and across all industry sectors. The Banks present, decided jointly to try and develop a banking industry framework for addressing environmental and social risks in project financing. This led to the drafting of the first set of Equator Principles which were then launched in Washington, DC on 4<sup>th</sup> June 2003.

Some of the principles include using a common terminology in categorising projects into high, medium and low environmental and social risk, based on the IFC's categorisation process, requiring borrowers to demonstrate in their Social and Environmental Assessments, and in their Action Plans, the extent to which they have met the applicable World Bank and IFC sector-specific EHS Guidelines and IFC Performance Standards, or to justify deviations to them, and to insert into the loan documentation for high and medium risk projects, covenants for borrowers to comply with the Action Plan. Where a borrower is not in compliance with its social and environmental covenants, EPFIs (Equator Principles Financial Institutions) will work with the borrower to bring it back into compliance to the extent feasible, and if the borrower fails to re-establish compliance within an agreed grace period, EPFIs reserve the right to exercise remedies, as they consider appropriate. The Principles apply to all projects above the value of US\$ 10 million. Until September 2008, 61 financial institutions have adopted the Equator Principles.

Source: [www.equator-principles.com](http://www.equator-principles.com)

### 2. Note on United National Environment Program Finance Initiative (UNEP-FI)

UNEP FI is a global partnership between UNEP and the private financial sector. Over 160 institutions, including banks, insurers and fund managers, work with UNEP to understand the impact of environmental and social considerations on financial performance and to promote linkages between environment sustainability and financial performance.

Members of UNEP-FI are signatories of the UNEP FI Statements that are aspirational, voluntary declarations of intent. These Statements are in the form of commitments towards practises that promote sustainable development, for instance commitment to complying with local, national, and international environmental regulations applicable to their operations and business services, commitment to identifying and quantifying environmental risks in the normal process of risk assessment and management, both in domestic and international operations, and commitment to seek higher standards of environmental compliance from clients. The Statements are unilateral non-binding commitments and thus non-contractual in nature. However, a breach is expected to affect public perception. Signatories are expected to submit a brief report annually, detailing the policies and practices adopted by them in the previous year, to advance their commitment to the UNEP FI Statements.

Through regional activities, a comprehensive work programme, training programmes, and research, UNEP FI carries out its mission to identify and promote the adoption of best environmental and sustainability practice at all levels of financial institution operations.

Source: [www.unepfi.org](http://www.unepfi.org)

### 3. Voluntary Initiatives adopted by Financial Institutions

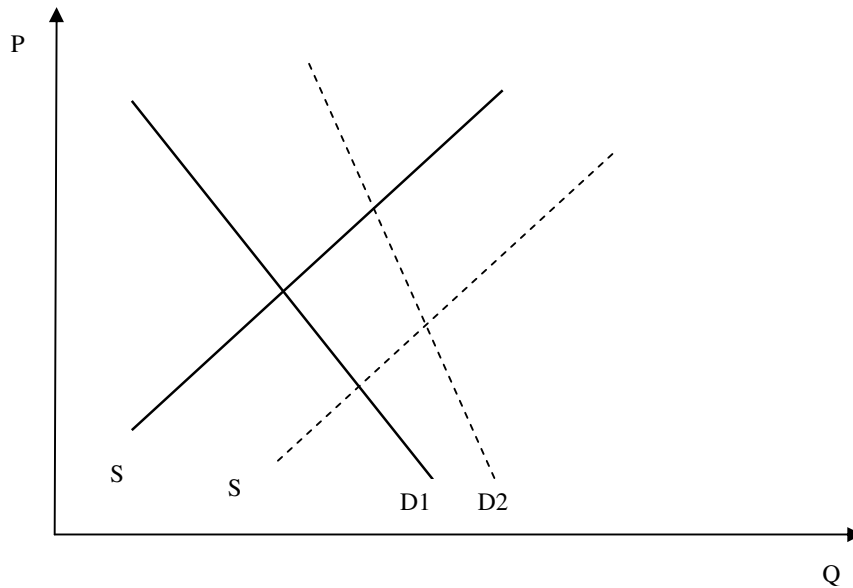
Initiative	No. of private institutions from developed countries	No. of private institutions from developing countries
UNEP-FI	140	20
Equator Principles	56	5

Source: [www.unepfi.org](http://www.unepfi.org) and [www.equator-principles.com/index.shtml](http://www.equator-principles.com/index.shtml)

### 4. Demand-side and Supply-side Incentives to Over-comply

An increase in green preferences of consumers can lead to an increase in demand from D1 to D2, at a given price. In addition, an increase in green preferences can lead to a steepening of the demand curve, also depicted by D2. Steepening of the demand curve is caused by a reduction in the price elasticity of demand due to a decrease in the importance of price and an increase in the importance of environmental attributes, in the demand function of consumers. A decrease in cost of capital due to greening of investor preferences, leads to a shift in supply curve from S1 to S2 i.e. more is supplied at the same price.

Figure 1



Note: Demand-side incentives and supply-side incentives are discussed independently, but represented in a single graph for convenience.

Source: Adapted from Brau and Carraro (2004)

### 5. Select Environmental Campaigns against Financial Institutions from 1995 to 2005

NGO involved in activism	Target Financial Institution	Issue
International Rivers Network*	Morgan Stanley Dean Witter, Citigroup, Merrill Lynch,	Involvement in financing the China Development Bank (CDB), which was financing the Three Gorges Dam, expected to lead to high environmental damage.**

	Chase Manhattan*	
Rainforest Action Network*	Citigroup*	Involvement in financing a number of environmentally-damaging projects ranging from pipelines in Africa to mining in Latin America.**
Amazon Watch*	Fidelity Investment Group*	Pushing the company to exercise its power as shareholder of Occidental Petroleum, to halt oil exploration activities in part of Colombia, that were damaging to the environment and indigenous people.**
Friends of the Earth*	ABN Amro*	Environmental impact of financing of mines in Papua New Guinea and conversion of Indonesian forests to oil palm plantations**
Berne-Declaration, WEED, ECA-Watch*	UBS*	Environmental impact of financing the Illisu dam in Turkey**
Rainforest Action Network*	Citigroup*	Environmental impact of projects financed, namely Chad-Cameroon pipeline, the Oleoducto de Crudos Pesados (OCP) pipeline and Camisea gas fields in Peru. The strategy involved media campaigns and consumer boycotts.**
Amazon Watch, Environmental Defense*	West Deutsche Landesbank*	Environmental impact of financing Peruvian pipeline**
Friends of the Earth*	Barclays*	Environmental impact of financing forestry projects relating to paper and pulp in Asia**
Amazon Watch *	WestLB*	Environmental impact of financing oil pipeline project in Ecuador**

\* originating from developed country, \*\*originating from developing country

Source: Adapted from <http://www.environmental-finance.com/2000/featjul2.htm>