Report on

Inclusion of environmental & social risk factors in infrastructure financing: Creating a better Development Finance Institution for India

Praachi Misra

CFA
Centre for Financial Accountability

REPORT ON

Inclusion of environmental & social risk factors in infrastructure financing: Creating a better Development Finance Institution for India.

Author: Praachi Misra

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PREFACE

This report titled – "*Inclusion of environmental & social risk factors in infrastructure financing:*
Creating a better Development Finance Institution for India" authored by Praachi Misra was submitted to the Centre for Financial Accountability (CFA) as part of the summer internship training undertaken for the MA. Economics programme, Amrut Mody School of Management, Ahmedabad University, Gujarat.

On 28th March 2021, the Indian Parliament passed the legislation to form a new Development Finance Institution (DFI) in the country named as - National Bank for Financing Infrastructure and Development (NaBFID). This was in some sense a logical end to the ongoing public debates and discussions on the efficacy of such an institution for financing India's mega development projects. It also comes with a realisation that in the post liberalisation period, commercial banks which were supposed to fill in this gap in financing had failed to do so resulting to the massive problem of NPAs. It is hoped that the formation of this new institution might be a step in the right direction to overcome some of these financing challenges. In the context of the National Infrastructure Pipeline (NIP) the new DFI would also be expected to play a significant role in the execution of the projects under NIP.

However, as it appears the new institution falls short on creating tangible mechanisms for compliance of environmental and social safeguards (ESG) by the financial institutions for their investment and project financing decisions. Internationally as well as nationally, there are discussion currently on incorporating safeguard policies into their operations. ADB is undertaking a review and update of its safeguard policy architecture to consider implementation challenges and good practices, and recommendations to strengthen the safeguard policy as well as benchmarking its policies against the peer multi-lateral institutions. The report of the task force for NIP also talks in great details about the significance of ESG standards for compliance and effective implementation of infrastructure projects.

The report provides a historical perspective of development finance institutions in India and its larger role in providing finance to infrastructure projects in the country. It also touches upon the challenges that these projects are facing resulting into cost overruns and delays in implementation while also giving an overview of the ESG compliance policies of financial institutions like the Reserve Bank of India. The report also documents and maps the voluntary and mandatory standards adopted by financial institutions in India, Bangladesh and China. In terms of international standards, the report looks into the policies put into places by institutions like the International Finance Corporation, Asian Infrastructure Investment Bank and the Equator Principles.

This report would be useful for civil society organisations, social movements, organisations working on development projects and their financing, etc to understand the historical context of DFIs and also the rapidly developing landscape of ESG standards and mechanisms nationally and internationally at the institutional level. On behalf of my colleagues at the Centre for Financial Accountability, I would like to take this opportunity to thank Praachi and sincerely appreciate her thoroughness and dedication in putting this together.

- Gaurav Dwivedi
  Associate Director, Centre for Financial Accountability

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Prof. Amol Agrawal, Ahmedabad University

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ABBREVIATIONS AND ACRONYMS

BRSR	:	Business Responsibility and Sustainability Reporting
DFI	:	Development Finance Institution
ESG	:	Environmental, Social and Governance
GDP	:	Gross Domestic Product
GOI	:	Government of India
GRI	:	Global Reporting Initiative
ICMA	:	International Capital Market Association
MoEF	:	Ministry of Environment & Forest
MoP	:	Ministry of Power
MoSPI	:	Ministry of Statistics and Programme Implementation
MoWR	:	Ministry of Water Resources
NB Act	:	National Bank for Financing Infrastructure and Development Act 2021.
NBFID	:	National Bank for Financing Infrastructure Development
NIIF	:	National Investment and Infrastructure Fund
NVG	:	National Voluntary Guidelines on the Social, Environmental and Economic Responsibilities of Business issued by the Ministry of Corporate Affairs.
PTI	:	Press Trust of India
RBI	:	Reserve Bank of India
SBI	:	State Bank of India
SDG	:	Sustainable Development Goals
SEBI	:	Securities and Exchange Board of India
SLR	:	Statutory Liquidity Ratio

ABSTRACT

Compliance by financial institutions with ESG requirements for credit decisions, and disclosures has become increasingly prevalent over the last two decades. While some of these requirements are imposed via legislation, others have been voluntarily adopted by financial institutions. Project finance is central to the development of ESG standards.

In the case of India, the Securities Exchange Board of India has become the primary source of ESG requirements for financial institutions, the primary source is the Securities Exchange Board of India. The Reserve Bank of India currently does not mandate that lending decisions take into account ESG risks. In this regard, the RBI's main tool is the 'Priority Sector Lending' requirement, which was expanded in the year 2015 to include renewable energy and social infrastructure.

As a first step, this study documents the ESG compliance landscape of financial institutions in India. It reviews academic literature studying ESG compliance and disclosure by Indian financial institutions. Experience from China and Bangladesh, including literature reviewing the effectiveness of mandatory ESG requirements is drawn upon. The practices being followed by the Asian Infrastructure Investment Bank and requirements under the Equator Principles will also be discussed.

This exercise is being undertaken as the Union Budget for 2021-22 announced the creation of a new Development Finance Institution for India (DFI). The DFI is expected to reduce the infrastructure funding gap and lead the way in developing superior risk management practices for infrastructure finance in India. Historically, weakness in risk assessment and asset-liability mismatch in project finance, led to the presence of significant non-performing assets on the books of the financial institutions. It is therefore imperative that ESG risks be better understood in project finance.

The author suggests that mandatory ESG requirements for project finance are imperative. This exercise will require investment of significant resources and time. The RBI has to build significant skills in this area not only within itself but also across the financial sector as a whole.

1. Introduction

India's annual budget for 2021-22 announced the creation of a new Development Finance Institution for India. [1] The ***National Bank for Financing Infrastructure and Development*** (NBFID) is going to be India's newest development finance institution (DFI)[2]. NBFID is being created to support long-term debt financing for infrastructure projects. The three-year lending portfolio target is Rs. 5 lakh crores (GOI 2021b, 8). Initially, NBFID will be completely government-owned[3], with an initial capitalization of Rs. 20,000 crores (PTI 2021a). The NIP will also be receiving private-sector funding (GOI 2020, 20, 22)

The roots of NBFID lie in India's ambitious infrastructure development plan - the *National Infrastructure Pipeline* (NIP). The NIP itself is part of the larger goal targeting GDP of USD 5 trillion by 2024-25[4]. The NIP initially consisted of 7,400 projects involving an investment of Rs. 1.10 lakh crore over the next 5 years (GOI 2021c).

The creation of a new DFI was recommended by the *Task Force for Creating National Infrastructure Pipeline* ('TFNIP' or Task Force). The Report by the Task Force (2020) noted that during the period 2012-17, investment in infrastructure had fallen to 5.8% of the GDP, compared with approximately 7% in the previous 5-year period (GOI 2020, 20, 22). It has been estimated that underdeveloped infrastructure shaves 4-5% of the country's GDP (GOI 2020, 20, 22). Therefore, the NIP is targeted towards energy, roads, urban development, and railways (PIB 2019).

Figure 1 below shows the addition of fixed assets made by our neighbouring countries as a percentage of their GDP. A downward trend is noted for India, while an upward trend is visible for China and Bangladesh.

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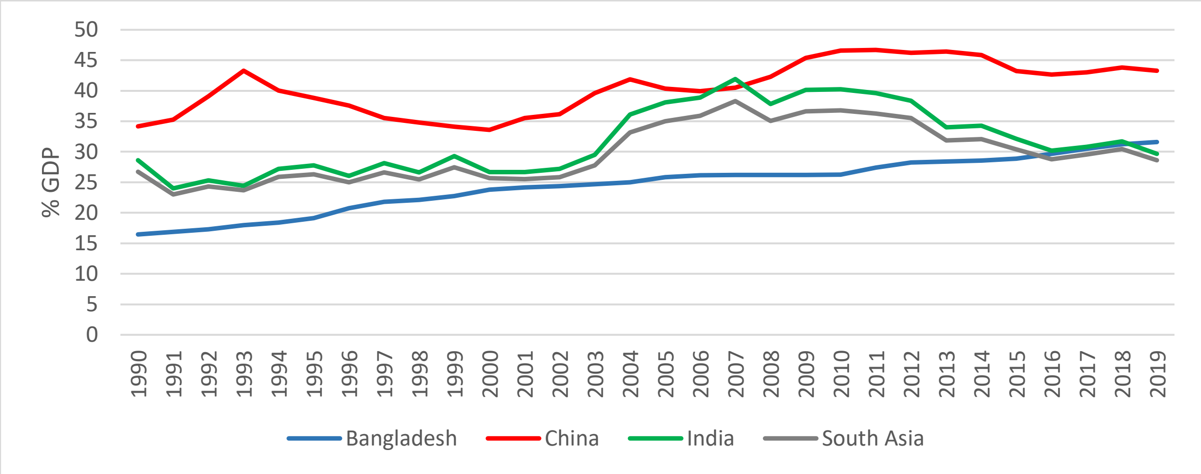
[1] The legislation creating NBFID came into effect on 28 March 2021 (GOI [2021] 2021). NBFID is currently not functional, and consultants have been invited by SIDBI, on behalf of the Government of India, for setting up the DFI (PTI 2021c).

[2] Some key preexisting DFI and their year of creation are: IFCI (1948), ICICI (1955), UTI (1963), IDBI (1964), REC (1969), NABARD (1982), EXIM Bank (1982), PFC (1986), IREDA (1987), National Housing Bank (1988), SIDBI (1990).

[3] Per section 5(3) of the National Bank for Financing Infrastructure and Development Act, 2021 ('NB Act') its shares can be held by "*Central Government, multilateral institutions, sovereign wealth funds, pension funds, insurers, financial institutions, banks, and any such institution as may be prescribed*"

[4] Due to the adverse effect of the Covid-19 pandemic on the economy, the goal is now sought to be achieved by the year 2030 (PTI 2021b). India's GDP in 2020-21 was USD 2.62 trillion, and USD 2.87 trillion in 2019-20 (World Bank Indicators 2021).

Figure 1*: Gross capital formation (% of GDP)*
Data Source: World Bank. "Gross capital formation (% of GDP)" The World Bank Group. Accessed July 10, 2021. https://data.worldbank.org/indicator/NE.GDI.TOTL.ZS?locations=IN-8S-BD-CN.



The *Economic Survey, 2018* estimated that India will face an infrastructure financing gap of USD 526 billion up to the year 2040. The reasons attributed to the shortfall are "*collapse of Public Private Partnership.... stressed balance sheet of private companies; issues related to land & forest clearances.*" (GOI 2018, 130).

While a problem as large and complex as the stability of India's financial system has multiple moving parts. Independent reviews have identified the absence of ESG risk assessment and management as a source.

It is with this backdrop that the NBFID is being created. It is expected to meet 2-3% (*see* table on page 16) of the credit requirements of the NIP, and more significantly bring better asset-liability management practices to infrastructure financing in India.

Infrastructure projects by their very design involve the management of risks over the long term. The risk may arise due to issues internal to the project such as contract or man-management, or factors outside the control of the management such as public opposition, natural disasters etc. The *Report of the Committee on Financial Sector Reforms* under the Planning Commission in 2009, noted that the management of risk over a long duration with significant sunk cost required sophisticated risk management practices (Planning Commission 2009, 181). This complexity is also acknowledged by the TFNIP (GOI 2020, vol. I: 19, II: 184-185).

The *Report of the Task Force for Creating National Infrastructure Pipeline* highlights sustainability and climate resilience as part of the rationale behind the NIP. Particularly, the necessity of infrastructure development for meeting the UN 2030 Sustainable Development Goals. It notes the necessity of climate change and disaster-resilient infrastructure, and infrastructure necessary for a low carbon society (GOI 2020, vol. I: 19, II: 184-185).[5]

This research aims to study sustainable financing approaches. It will primarily focus on the process of incorporation of environmental, social, and governance (ESG) practices in financing in general, and infrastructure financing in particular.

In the absence of a public policy statement regarding practices to be adopted by NBFID, it is not possible to conjecture the role sustainable finance will play in its lending decisions.

Given the same, this study aims to highlight the processes and practices that are prevalent internationally concerning sustainable financing. Application of these principles can become particularly challenging in India, as can be seen from our prior experience with infrastructure project.

1.1. The objective of this Study

This report aims to accomplish the following:

- Chapter 2:Brief introduction of the evolution of DFI's in India, and the objective behind the setting up of NBFID;
- Chapter 0: India's legal requirements concerning ESG compliance and reporting standards, as applicable to companies and banks in general, and DFI's specifically;
- Chapter 0: A case study of the approaches adopted by India's neighbours: Bangladesh and China, and an analysis of the impact of the voluntary domestic standards.
- Chapter 0: Some sources of inspiration for the DFI- The Asian Infrastructure Investment Bank & the Equator Principles;
- Chapter 0: Conclusion about the way forward for India

[5] While acknowledging the sustainable finance principles adopted internationally, the Task Force recommends (GOI 2020, vol. II: 8):

1. Better understanding of internationally prevalent ESG standards
2. Standardized disclosure metrics in line with India's Nationally Determined Commitments for Climate Change
3. Regulatory changes to improve investments in India by ESG focused funds

2. Expectations from the new DFI

2.1. Historical evolution of DFI's in India

The long-term funding of infrastructure is a problem that India has grappled with since its independence. While the first DFI was set up in 1948 (IFCI), over the years DFI's have been required to change to one of the following:

- Scheduled banks;
- Non-deposit taking systemically important non-banking financial corporations (NBFC-ND-SI);
- Refinancing agencies[6]

The process of conversion had to be undertaken in response to the 1991 reforms, in the wake of the withdrawal of facilities that had previously allowed DFI's access to low-cost funds. Earlier DFI's had access to low-cost funds from the RBI, and the bonds issued by them qualified towards the SLR requirements and were backed by government guarantees (RBI 1998, 22–23).

The *Report of the Working Group on Development Finance Institutions* set up by the RBI notes that as banks had access to funds at a lower cost compared to DFI's, they were able to diversify their risk by lending across sector and project types, allowing for better risk management. Additionally, the DFIs by this time were facing significant issues related to NPA's and returns on assets (RBI 2004, para. 1.6.1, 2.2.3).

As regards the current ability of financial institutions to manage long term risk, the *Financial Stability Report of the Reserve Bank of India,* for December 2015, noted the increased risk arising from the longer duration of infrastructure loans. It noted that the current risk processes were not adequate for capturing the risk. Further, several exogenous factors affected the time it took for the projects to commence commercial operations (RBI 2015c, para. 3.21-3.24).

The Economic Survey 2016 (GOI 2017, Ch. 4) provides a succinct overview of the recent NPA crisis which has popularly been referred to as the "*twin balance sheet problem*", i.e., stress in both the financial and the corporate sector. The main source of the NPA's were the public sector banks, particularly lending to infrastructure projects). The sectors worst affected were power, steel, and telecommunication (GOI 2017, Ch. 4 paras. 4.10, 4.15). In the case of public sector banks, the NPA's, stressed and restructured assets were estimated to amount to approximately one-fifth of corporate loans (4.24).

[6] e.g., ICICI, IDFC, IDBI were converted to schedule banks. IFCI, PFC to NBFC-ND-SI. Exim Bank, NABARD, NHB, and SIDBI as re-financing institutions.

While the problem of NPA's persists in the banking system, it has been argued that the infrastructure needs of the country will be better served by a new DFI. K.V Kamath has argued that the presence of long-term investors in the market – insurance and pension funds will allow better asset-liability management compared to banks. Additionally, the infrastructure requirements range from roads, ports, railways, urban development etc., which will allow the DFI to diversify its risk profile (Partha Mukhopadhyay 2021, 8). On the role of ESG requirements he recommends that in its first year of functioning, the new DFI should exclusively focus on ESG compliant projects, as compliance with ESG requirements is a good practice in development finance (Partha Mukhopadhyay 2021, 10).

In a similar vein, Partha Mukhopadhyay notes that following the principles of '*ethical investing*' will help the new DFI in accessing low-cost funds from international institutions. He contends that this may even allow the new DFI to access funds at a lower cost than the sovereign (Partha Mukhopadhyay 2021, 30–31)

Box 1: *What is sustainable finance*

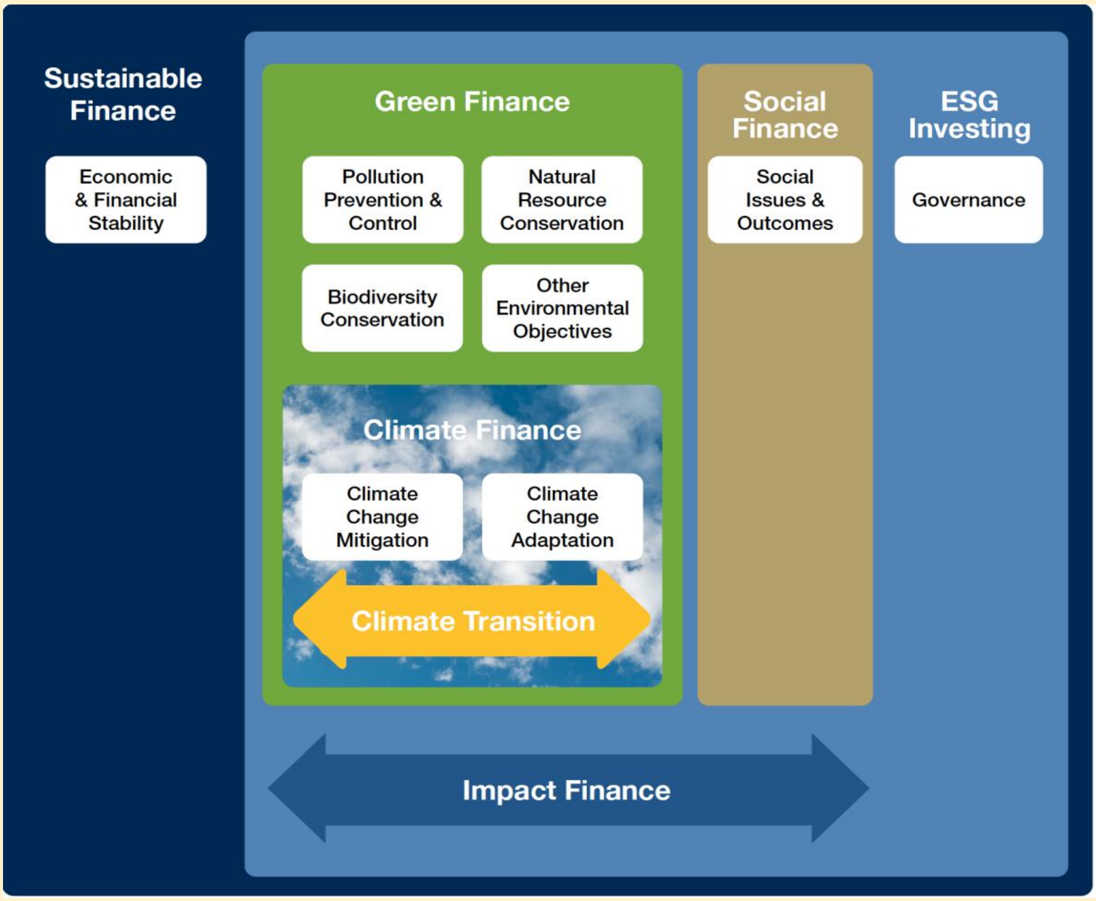
'***Sustainable finance'*** has been defined by the International Capital Market Association (ICMA) as:

> *"Sustainable Finance* ***incorporates climate, green and social finance*** *while also adding wider considerations concerning the longer-term economic sustainability of the organisations that are being funded, as well as the role and stability of the overall financial system in which they operate."* (ICMA 2020, 5–6)

The definitions adopted by the ICMA draws upon the UN, EU and G20 definitions. **Figure 2** below provides a handy guide to understanding the scope and components of sustainable finance.

Figure 2: Components of sustainable finance

Source: ICMA. 2020. "Sustainable Finance: High-Level Definitions.", pp 6. Available here.



2.2. Role of the new DFI

The *Task Force on Creating the National Infrastructure Pipeline* reviewed the funding source for infrastructure currently being utilised and suggested steps for strengthening existing institutions. It also recommended the creation of a new DFI to provide long term infrastructure finance necessary for the NIP. The new DFI is to be initially financed by GOI. As per current estimates, a funding gap of approximately 15% exists in the NIP (GOI 2020, vol. 2: 245).

The new DFI is expected to contribute to meeting 2-3% of the gap. The breakup of the sources per the Task Force is provided in **Table 1** below. Aggregating the sources of finance, the expected contribution of the Central government is 39%, the state government is 40% and the private sector is 21% (GOI 2020, vol. 1: 36).

***Table 1**: Funding gap of the NIP*
Table: GOI. 2020. "Report of the Task Force for Creating National Infrastructure Pipeline.", vol. 2 Pp. 246. Available at https://static.pib.gov.in/WriteReadData/userfiles/DEA%20IPF%20NIP%20Report%20Vol%201.pdf.

Source	**Assumptions to projections**	**% NIP being financed**
Centre's Budget	Capital expenditure @ 1.25% of GDP	18-20%
States budget	Capital expenditure @ 1.7% of GDP	24-26%
PSU: Internal accrual	Projected to meet NIP requirements	1-3%
Banks	Grow at an average rate of 8%	8-10%
Infra NBFC's	Public sector NBFC's expected to grow at an average rate of 12%. Private sector NBFC's at 15%	15-17%
Bond markets	Grow at an average rate of 8%	6-8%
Equity	Grow at an average rate of 15% supported by the NIIF	2-4%
Multilateral/ Bilateral	Half of external aid flows	1-3%
Others		3-5%
	Total	**83-85%**
Financing of funding gap of 15-17%		
New DFI		2-3%
Centre: Asset Monetization		2-3%
State: Asset Monetization		1-2%
	Shortfall	8-10%

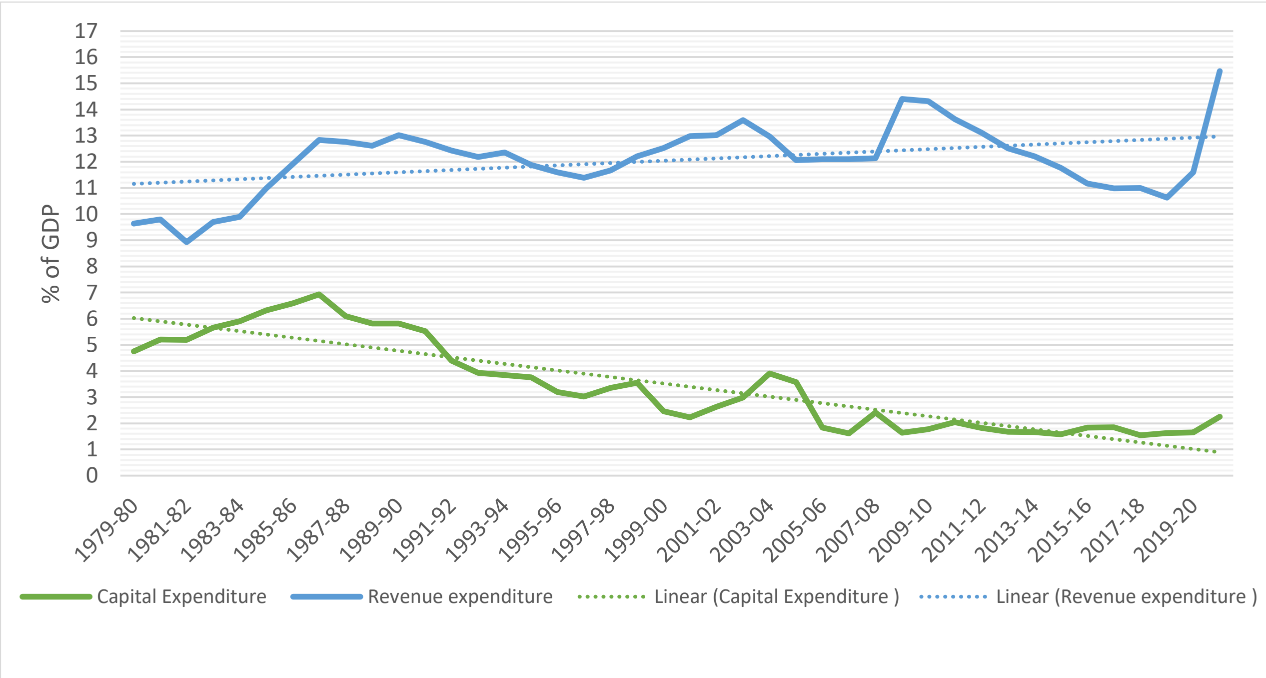
Government spending & multiplier effect

Government capital expenditure (GCE) is estimated to have a multiplier of 2.45 i.e., Rs. 100 spent by the government increases the national GDP by Rs. 245. The multiplier becomes greater than 4.5 when assessed over 7 years (Bose and Bhanu Murthy, 2015, pp. 393, 398; Goyal and Sharma, 2018, p. 4). The Government capital expenditure multiplier is significantly more than the transfer payment multiplier of 0.98. An increase in GCE has the effect of '*crowding in'* private investment, i.e., it "stimulates public investment in a significant way" (Bose and Bhanu Murthy, 2015, pp. 393).

Per an RBI estimate, India has a peak multiplier of 3.25 for Central government, and 2.0 for State government capital expenditure (Reserve Bank of India, 2019a, p. Box III).

However, India has not been able to maintain a steady rate of increase for year-on-year capital investments. Bursts in investments are followed by sharp reductions (Goyal and Sharma, 2018, p. 11) as can be seen in **Figure 3** below.

***Figure 3**: Capital v Revenue Exp as % of GDP*
Source: RBI: Public Finances, Table 96



In discussing the role of banks, the Task Force noted that to successfully fund infrastructure projects, a stronger risk-based pricing model will be required to be adopted. They would also be required to improve in-house skills in project assessment (GOI 2020, vol. 2: 220).

The two main financial institutions discussed by the Task Force are the *India Infrastructure Finance Corporation Ltd* (IIFCL) and the *State Bank of India* (SBI). It noted that both institutions require capacity building to enable long term lending to infrastructure projects (GOI 2020, vol. 2: 218).

At the time of the publication of the report, in the case of IIFCL, the government was expected to increase its equity capital by 15,000 crores. The Task Force recommended improving the human resources component of IIFCL, for better risk assessment practices. As regards SBI which is already the largest bank in India, it was recommended that the '*infrastructure vertical'* of the business be strengthened, to increase exposure to the infrastructure sector (GOI 2020, vol. 2: 223).

The Task Force has also recommended adoption of the model tripartite agreement created by the National Highway Authority of India, for funding by the Infrastructure Debt Fund's (IDF) (GOI 2020, vol. 2: 217).

Prerequisites to the new DFI

As the existing infrastructure funders take a sector specific approach, the Task Force recommended the creation of a new DFI, with the following characteristics (GOI 2020, vol. 2: 222):

1. Part of an ecosystem for undertaking greenfield financing of long-term projects, alongside retail investors, pension funds, and insurers
2. Domain expertise in project appraisal and continuous credit monitoring
3. A well-capitalised institution with access to low-cost sources of finance. As bond issuance is expected to be utilised, the Task Force recommended that either a '*positive tax-free'* or a *'low tax regime'* be created for bond issuance.
4. Diversified asset base towards risk reduction

A review of the existing public sectors DFI's was also recommended by the Task Force (GOI 2020, vol. 2: 223).

The next section discusses the country's experience with large infrastructure projects. It analyses the ESG related issues that have led to delay and cost overruns. The analysis of the data highlights the scale of the problem being dealt with by financial institutions.

2.3 Hurdles to infrastructure development

The Annual Report 2020-21 published by the Ministry of Statistics & Implementation (MoSPI), GOI states that approximately ***33%*** of the projects being monitored[7] by it were delayed and involved a total cost overrun of Rs. 4,28,042.62 crore (MoSPI 2021b, para. 1.21, pg. 9). Of the 24 reasons identified as causes of delay, 12 are related to environmental and social issues[8] (MoSPI 2021b, 94). Similarly, '*High cost of environmental safeguards and rehabilitation*

[7] The MoSPI is mandated to monitor Central Sector Projects costing more than Rs. 150 crores in 16 sectors (MoSPI n.d.).

[8] The environmental issues are: Environment, Forest and Wildlife Clearances; Eco Sensitive Zone Clearance; Tree Cutting Permission; No Objection Certificate under Forest Rights Act; Consent to establish and operate from State Pollution Control Board; Diversion of forest.

The social issues identified are: Grant of Right of Way (with both Union and State governments); Land Acquisition issues; Removal of encroachments; Relief and Rehabilitation plan; Law and Order issues *measures*', '*Spiralling land acquisition costs*', and '*Disturbed conditions*' are 3 of the 9 causes of cost escalation (MoSPI 2021b, 95).

The Project Management Institute and KPMG undertook a joint review for MoSPI, in 2019, to identify the causes of delay in projects. They utilised, interviews with 25 PSU's, impact assessment of the recommendations given earlier (2012), and 9 case studies across 5 sectors, in preparing their report. The analysis showed that ESG factors[9] contributed to only 10% of the time overrun, and 6% of the cost overrun.[10] The main causes of delay were the lack of skilled manpower, deployment of technology, and sub-optimal process planning (PMI, KPMG, and MoSPI 2019, 13, 18).

With regards land acquisition, 65% of the respondents identified '*civil unrest'* as the primary reason for the delay in land acquisition (PMI, KPMG, and MoSPI 2019, 73–74). The sectors that were particularly affected by land acquisition related issues were: Railways, Power, Roads & Highways, and steel (PMI, KPMG, and MoSPI 2019, 119).

Box 2 below provides an example of ESG issues faced by some of the large infrastructure projects currently underway.

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[9] i.e., delay in regulatory approvals, delay in land acquisition, and market factors such as price escalation and economic factors

[10] The recommendations made specifically for improving the management of land acquisition, and regulatory approvals are: (PMI, KPMG, and MoSPI 2019, 17):

- Stakeholder management plan implementation
- Creating linkages between project sanctioning and regulatory approvals
- Social cost-benefit analysis
- Buy-in of competent authorities
- Land records and workflow digitization for land acquisition.
- Market rate-based land database

Box 2: Case study of delayed infrastructure projects
Source: MoSPI, Projects identified from the "Project implementation status report of central sector projects costing Rs. 150 crores & above: January-March, 2020-21 (QTR – 4th)"

New B.G. Line from Tetelia to Byrnihat

The project is for linking the state of Meghalaya with Assam by a railway line. The project was initiated in the year 2006, with the original commissioning estimated for 2019. The revised date of completion is March, 2023. The project is currently 48 months behind, with a 170% cost overrun (MoSPI 2021a, 270).

Public protest and *land acquisition* are the main sources of delay.

The Khasi Students Union (KSU) has opposed the project because a direct railway link will lead to an influx of migrants from outside Meghalaya. The impact on the tribal identity and possible effects on the demographic constitution of Meghalaya being the cause of concern (*The Economic Times* 2012). KSU has demanded the introduction of 'Inner Line Permits' before commissioning the project. In May 2017, opposition to the project led to violent protests and the subsequent arrest of several KSU leaders. (*The Shillong Times* 2020).

NOC for land acquisition has not been granted by the Khasi Hills Autonomous District Council (Northeast Frontier Railway 2020, 66).

Another project: the *New BG line from Byrnihat to Shillong* is also similarly delayed. Together the current estimated cost of the projects is approximately Rs. 5126 crores (MoSPI 2021a, 273).

Lata-Tapovan Hydroelectric power project 3X57 Mw

This project is part of a group of 24 hydroelectric projects that have been stayed by the Supreme Court of India in the case of *Alaknanda Hydro Power Co. Ltd. vs Anuj Joshi & Ors* (Radhakrishnan and Misra 2013). The cases were taken up by the court after the devastating floods of 2013 in Uttarakhand (Singh 2014).

The project was approved in 2010, with 2017 as the expected date of commissioning. It has been on hold since May 2014, under the orders of the Supreme Court. No new date of completion has been provided, and there is a 17% cost overrun. Per the response of the Ministry of Power to a parliamentary question, the new estimated date for completion of the project is 2025-26 (Ministry of Power 2021, 54).

Environmental clearance and related litigation are the primary cause of delay of the project.

An application for review was filed by the project owner -NTPC, pursuant to which the Supreme Court sought project-wise reports from the Ministry of Environment & Forest. The expert body constituted by the Ministry recommended allowing work on the project. On submission of the expert body recommendations, the court sought filing of affidavits by the following 3 ministries by May 2016:

- Ministry of Environment & Forest (MoEF)
- Ministry of Power (MoP)
- Ministry of Water Resources (MoWR)

Requisite affidavits were filed by MoEF and MoP. In 2019 it has been communicated by the MoWR that the Lata Tapovan Project is not amongst the projects that have been cleared for construction. No affidavit has been filed by the MoWR (MoSPI 2021a, 176).

Understanding ESG related delays & overruns

For the purpose of this report, a review of the causes of delay and overrun of the 1779 project being monitored by MoSPI was undertaken for ongoing projects. The information was obtained from the quarterly MoSPI report for the period January- March 2021. The aim was to identify the projects that have been delayed due to ESG issues[11]. A summary of the results is available in

Figure 4 below.

The analysis of the attributed causes of delay shows that in a large number of projects, no cause has been given for the delay. Where information was available,

<table>
<tr><th>Description</th><th>Count</th><th>of which ESG Delay Count</th><th>in %</th><th></th><th>Months</th><th></th><th>Rs. Crore</th></tr>
<tr><td>Total projects</td><td>1779</td><td>161</td><td>9.05%</td><td colspan="4" rowspan="3"></td></tr>
<tr><td>Ahead of schedule</td><td>13</td><td>0</td><td>0.00%</td></tr>
<tr><td>On schedule per original schedule</td><td>234</td><td>0</td><td>0.00%</td></tr>
<tr><td rowspan="2">Both original and estimated dates of commissioning not provided</td><td rowspan="2">813</td><td rowspan="2">20</td><td rowspan="2">2.46%</td><td>Mean time u/construction</td><td>108.29</td><td>Mean cost overrun</td><td>191.36</td></tr>
<tr><td>Median time u/construction</td><td>109.00</td><td>Median cost overrun</td><td>0.38</td></tr>
<tr><td rowspan="2">Original date of commissioning is provided, but estimated date of commissioning is not provided</td><td rowspan="2">123</td><td rowspan="2">24</td><td rowspan="2">19.51%</td><td>Mean time overrun</td><td>99.02</td><td>Mean cost overrun</td><td>379.23</td></tr>
<tr><td>Median time overrun</td><td>78.50</td><td>Median cost overrun</td><td>-</td></tr>
<tr><td rowspan="2">Both original and estimated dates of commissioning are provided</td><td rowspan="2">596</td><td rowspan="2">117</td><td rowspan="2">19.63%</td><td>Mean delay</td><td>68.53</td><td>Mean cost overrun</td><td>679.50</td></tr>
<tr><td>Median delay</td><td>43.00</td><td>Median cost overrun</td><td>103.00</td></tr>
</table>

161 of the projects had been delayed due to environmental or social factors. This figure amounts to ***9.05%*** of the projects under review. This calculation

[11] The key phrases used to identify relevant projects were: Acquisition, rehabilitation, NOC, FRA, water, environment, delay, supreme court, NGT, tree, FC, LAQ Act, ST & OTFD Act, CBA Act, RFCTLARR, compensation, P&MP Act, high court, ROU, ROW, forest, Tiger, NTCA, NBWL, CAMPA, P&MP Act, DPTA, resettlement, EIA approval, termination, abeyance.

MoSPI, "*Project Implementation Status Report of Central Sector Projects Costing Rs. 150 crore & above [January-March, 2020-21]*".

significantly under-counts the impact of environmental or social factors, as the cause for delay or cost overrun has not been provided for all projects.

A review of the data shows that there are 39 projects where no cost overrun has been estimated due to the delay. The delay for these 39 projects ranges between -12 (i.e., ahead by a year) to 264 months (delay of 22 years).

Figure 4: *Analysis of project delay*
Data Source: MoSPI, Projects identified from the "Project implementation status report of central sector projects costing Rs. 150 crores & above: January-March, 2020-21 (QTR – 4th)". Calculation by author

Description	Count	*of which* ESG Delay Count	in %		*Months*		*Rs. Crore*
Total projects	1779	161	9.05%				
Ahead of schedule	13	0	0.00%				
On schedule per original schedule	234	0	0.00%				
Both *original* and *estimated* dates of commissioning **not** provided	813	20	2.46%	Mean time u/construction	108.29	Mean cost overrun	191.36
				Median time u/construction	109.00	Median cost overrun	0.38
Original date of commissioning **is** provided, but *estimated* date of commissioning is **not** provided	123	24	19.51%	Mean time overrun	99.02	Mean cost overrun	379.23
				Median time overrun	78.50	Median cost overrun	-
Both *original* and *estimated* dates of commissioning are provided	596	117	19.63%	Mean delay	68.53	Mean cost overrun	679.50
				Median delay	43.00	Median cost overrun	103.00

3. Structural scaffolding supporting the NBFID

A series of interlocking regulations will govern the functioning of the National Bank for Financing Infrastructure and Development (NBFID). They are responsible for its creation, compliances, and even provide for the liabilities in case of default.

Per the NB Act, it has been mandated to perform the following responsibilities[12]:

- Develop long term non-recourse infrastructure financing in India
- Develop the bonds and derivatives market for infrastructure financing
- Financing of infrastructure

The NBFID has been set up as a '*development financial institution*' (Section 3(1)). The Act also allows for the creation of other similar institutions on obtaining a licence under Section 29 of the NB Act.[13]

3.1. 'Infrastructure': How is it defined?

The phrase 'infrastructure' has been defined by the NB Act under section 2(k) as follows:

> *"infrastructure" means the sectors covered in the list of infrastructure sector notified by the Central Government from time to time;" (GOI [2021] 2021)*

Therefore, sectors are required to be notified by the GOI, for projects financed by the NBFID to qualify as infrastructure projects. As the bank is not currently functional, as of 20 July 21 no such notifications have been issued by GOI.

The Companies Act, 2013 will also govern the functioning of the NBFID. Per the Companies Act, 2013, under sections 55 and 186, the phrase '*infrastructure project'* covers the list of projects defined under Schedule VI of the Companies Act. Part 9 of Schedule IV specifically covers the following sustainability related projects (GOI 2021a, sec. 2(2)):

> *"(9) Other miscellaneous facilities/services, including the following: — "*
>
> *(d) environment related infrastructure;*
>
> *(e) disaster management services;*

[12] *See* Preamble, section 4(2) and (3), section 17(1)

[13] For the definition of the phrase 'financial institution' *see* Section 2(m) of the Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002

(f) preservation of monuments and icons;

(g) emergency services (including medical, police, fire and rescue)."

The classification of projects under the heads allows for the issuance of long-term redeemable preference shares for their funding.

3.2. RBI & ESG regulations for financial institutions

The NB Act provides that the NBFID is subject to the provisions of the Reserve Bank of India Act, 1934 and the Banking Regulation Act, 1949. Separately, the Reserve Bank of India (RBI) has to be consulted by the Board of the bank when making regulations for its conduct (GOI [2021] 2021, sec. 17(1)(ii), (xxv)).

Therefore, the adoption of any social or environmental related practices by the NBFID, whether as best practices or through delegated legislation by GOI, will necessarily require at the least consultation, and possible approval by the RBI. In this section, we will look at the recognition and adoption by the RBI of socially and environmentally conscious practices.

Social & Environmental disclosures

In December 2007, the RBI issued a circular for incorporation of sustainable development and corporate social responsibility (CSR) goals in the functioning of banks (RBI 2007). The circular was more in the nature of advisory, aiming to familiarise the institutions with international development in the area. Banks were '*advised*' to prepare action plans and seek board approval for the same banks (RBI 2007, 2).

Historically, the banking sector has relied on voluntary compliance measures for sustainability goals. However, ESG risks are now being reviewed by central banks internationally and processes and guidance are provided on their management and disclosure.[14] Economic growth and poverty alleviation have been at the centre of RBI's policy initiatives (Chakrabarty 2011, para 15-17). Voluntary international mandates are discussed in Chapter 0 below.

The most significant RBI policy regarding ESG issues is the priority sector lending mandate of banks in India. Pursuant to the 2015 Report of the *Internal Working Group to Revisit the Existing Priority Sector Lending Guidelines*, '***Priority Sector Lending***' was expanded to include both ***renewable energy*** and ***social infrastructure*** (RBI 2015a, 9–10, 54; RBI, 2015a). The SEBI is currently the main source of broad-based ESG requirements. These however are

[14] *e.g.,* The European Banking Authority launched public consultation in march, 2021 on the draft technical standards on Pillar 3 disclosures of ESG risks.

currently limited to listed financial institutions, that fall within the largest 1000 listed entities by size. **Box 3** below lists the ESG initiatives instituted by financial regulators in India.

***Box 3**: Sustainability initiatives by financial regulators in India*

2007: RBI circular on CSR goals & the functioning of banks **[Voluntary]**

2011: Ministry of Corporate Affairs issues the *'National Voluntary Guidelines on Social, Environmental and Economic Responsibilities of Business'* **[Voluntary]**

2012: SEBI introduces the '*Annual Business Responsibility Reporting'* requirements for largest 100 listed entities by market capitalization. The requirement was expanded to first cover 500, and subsequently 1000 largest entities in the years 2015 and 2019 respectively. **[Mandatory]**

2015: RBI expands the scope of 'Priority Sector Lending' to include renewable energy and social infrastructure. **[Mandatory]**

- The '*National Voluntary Guidelines for Responsible Finance'* are issued by the Indian Banking Association. **[Voluntary]**
- YES Bank issues the first green bonds in the country. EXIM Bank and IDBI also issue green bonds the same year. IFC issued the first green bond in the offshore rupee market - the 5-year 'Masala bond' issued on the London Stock Exchange.

2016: SEBI issues the '*Guidelines for the Issuance and Listing of Green Bonds'*. **[Mandatory]**

2017: SEBI issues the '*Disclosure Requirements for Issuance and Listing of Green Bonds'*. **[Mandatory]**

2021: SEBI issues circular for mandatory reporting of *Business Responsibility and Sustainability Reporting by listed entities.* Disclosure by the largest 1000 listed entities is voluntary in 2021-22, and mandatory from 2022-23. **[Mandatory]**

Countries have adopted various models for introducing reporting requirements by banks and financial institutions. Some have introduced them as part of listing requirements e.g., *India*, while others have utilised risk assessment or even climate change goals as their basis.

The central bank of Bangladesh -*Bangladesh Bank* introduced CSR requirements in 2011, with the aim of better risk assessment for investments (Khairunnessa, Vazquez-Brust, and Yakovleva 2021, 6–8). It has since expanded their scope to include assessment of social and environmental risks, (*see* section 0 below).

In the case of *France*, the mandatory requirements were introduced as part of the climate change law passed in 2015. Under the Energy Transition for Green Growth Law, 2015 banks are required to report risks arising from climate change. Institutional investors are required to disclose how their internal policies align with the national climate change strategy and the utilisation of ESG principles in the making of investment decisions (Republic of France 2016).

The Green Financial Measures Database lists over 500 mandatory and voluntary regulatory requirements covering over 75 jurisdictions (Green Financial Measures Database 2021, 1). The OECD, drawing upon the database in its annual *Business and Finance Outlook* for 2002 noted that over half of the requirements dealt with '*reallocation of capital*' and '*responsibilities of institutions*'. **Table 2** below shows the number of ESG regulations that have been passed in Asia & the Middle East. As can be seen, India significantly lags both large and competing emerging markets on the measure (*see* **Figure 6** below for the level of ESG integration in regime).

***Table 2**: Sustainability regulation in the banking sector*
Source: OECD (2020), OECD Business and Finance Outlook 2020: Sustainable and Resilient Finance, pp. 133. OECD Publishing, Paris, https://doi.org/10.1787/eb61fd29-en.

Name	Count
China	8
Indonesia	7
Japan	6
Bangladesh	5
Singapore	4
Lebanon	3
Kazakhstan	2
Malaysia	2
Pakistan	2
UAE	2
Vietnam	2
Cambodia	1
India	1
Nepal	1
Thailand	1

In the area of '***non-financial reporting***' the main thrust of the RBI has been towards 'financial inclusion' (Chakrabarty 2011, paras. 24–25). All scheduled commercial banks and regional rural banks are required to file monthly information on compliance with the 'National Strategy for Financial Inclusion' (RBI 2016; RBI, 2020)[15].

However, compliance requirements have been prescribed by other regulatory authorities, or have been introduced vide legislations. The Companies Act, 2013 creates a mandatory CSR requirement for all companies above a specified threshold[16], with the expenditure details required to be included in the statement of profit & loss, and the consolidated financial statements (GOI 2013, secs. 135 & Schedule VII).

The Securities and Exchange Board of India (SEBI) mandated the inclusion of the 'Business Responsibility Report' in 2012 for the largest 100 listed entities by market capitalization (SEBI 2012). The requirement was expanded in 2015 to cover the 500, and in the year 2019 for the 1000 largest entities (SEBI 2015a, pt. Regn. 34(2)(f); SEBI, 2015).

[15] Quarterly filing is required regarding the 'Kisan Credit Card Scheme'. *See* RBI (no date) *List of returns submitted to RBI*. Available at: https://rbi.org.in/scripts/BS_Listofreturns.aspx (Accessed: 25 June 2021).

[16] Net worth of Rs. 500 crore or more, OR turnover of Rs. 1000 crore more OR net profit of Rs. 5 crores more, during the last 3 financial years

New reporting standards covering the 1000 largest entities have been introduced in May 2021, which require the identification and quantification of material ESG risks, including steps to mitigate the same (SEBI 2021). These newly issued *Business Responsibility & Sustainability Reporting* (BRSR) requirements have significantly expanded the scope of the earlier requirements and draw upon the GOI's *National Guidelines on Responsible Business Conduct* (Ministry of Corporate Affairs 2018), which in turn have drawn from the GRI Sustainability Reporting Standards (GRI Standards).

The SEBI are principle-based, and some of the ESG related principles, under which reporting requirements are mandated are:

- Principle 2: Businesses should provide goods and services in a manner that is sustainable and safe
- Principle 4: Businesses should respect the interests of and be responsive to all their stakeholders
- Principle 5 Businesses should respect and promote human rights
- Principle 6: Businesses should respect and make efforts to protect and restore the environment
- Principle 8 Businesses should promote inclusive growth and equitable development

For each of the 10 principles, there are mandated '*essential indicators'* and '*leadership indicators.*

Climate change as a financial risk

Acknowledging the risk arising from climate is the first step towards its incorporation into the financial structure of the country. The half-yearly Monetary Policy Reports for April 2021 was the first significant policy report to acknowledge climate change risks and discussed the initiatives taken by other Central Banks (RBI 2021a, 98–101). Earlier the *2018-19 Report on Trend and Progress of Banking in India* had discussed developments in green financing under the head of 'Global Banking Developments'

(RBI 2019, 17–18).

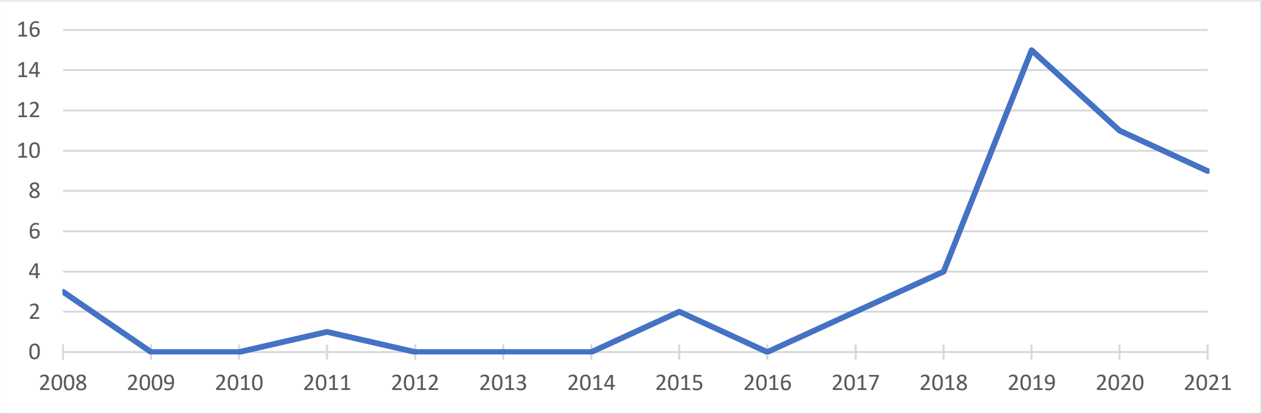
Historically, the advent and strength of the monsoon in India have played a central role in the monetary policy decisions taken by the RBI. The monsoon has been central to the Indian economy due to its direct impact on the agricultural sector, consequent impact on inflation, and effects on demand of agricultural machinery, automobiles, consumption of goods and services. The June 2021 statement of the Monetary Policy Committee takes into account the expected monsoon and its impact on the economy alongside the covid pandemic (RBI

2021c). Climate change however will have a significantly larger footprint on the economy than the monsoon.

The RBI in 2021 has joined the *Central Banks and Supervisors Network for Greening the Financial System* (NGFS), which is a voluntary information-sharing network of central banks (RBI 2021b). The NGFS has been set up as a forum for sharing information and best practices on sustainable economy.

To date, 25 emerging markets[17] have introduced sustainable banking policies (IFC 2021). Central Banks are now actively engaged in matters related to disclosures and risk management that may arise from ESG issues. An analysis of speeches on central bankers as maintained by BIS shows a steep increase in speeches that reference 'climate change' in their title. **Figure 5** below highlights the trend. Mark Carney, the former Governor of the Bank of England has been a strong advocate for incorporation of sustainability practices in banking and finance[18].

Figure 5*: Central bankers' speeches where the title includes the phrase 'climate change'*
Data: Sourced from BIS collection of Central banker's speeches. Available here. Data up to 15 July, 2021



[17] The countries are: ***Bangladesh***, Brazil, Cambodia, ***China***, Colombia, Ecuador, Georgia, Ghana, *Indonesia*, Kenya, Mexico, Mongolia, Morocco, ***Nepal***, Nigeria, ***Pakistan***, Panama, Paraguay, Peru, *Philippines*, South Africa, ***Sri Lanka***, Thailand, Turkey, Vietnam

[18] *See* Mark Carney, "Breaking the tragedy of the horizon – climate change and financial stability", Speech by Mark Carney, Governor of the Bank of England and Chairman of the Financial Stability Board, at Lloyd's of London, London, 29 September 2015. Available here

3.3. Duties of the Director

Apart from obligations placed on entities, there are also duties prescribed for individuals. Under Section 166(2) of the Companies Act, 2013 the directors of a company are to act in good faith for both the *benefit of the community and the protection of the environment*[19]. In the case of non-compliance with the duties prescribed, the director of a company can be fined Rs 1-5 lakhs (GOI 2013, sec. 166(7)).

While the Companies Act itself does not define the words, '*community'* or '*environment*'; the latter phrase has been interpreted by the Supreme Court of India[20] to have the same meaning as under the Environment (Protection) Act, 1986 which has inclusively defined the word as follows (Section 2(a)):

> *"environment" includes water, air and land and the inter-relationship which exists among and between water, air and land, and human beings, other living creatures, plants, micro-organism and property*

The scope of this enlarged interpretation is yet to be tested in a court of law. However, it is limited to recourse of liability against the directors of a company, and not the company itself.

Internationally, the principle of 'lenders liability' has evolved to include liability in case of environmental damage. The same has been discussed in detail in Chapter 0 below.

As can be seen from the mandatory ESG requirements are only relevant to large listed financial institutions. Therefore, it is necessary to study the voluntary compliances that are being undertaken by the financial institutions. The next chapter looks at the same for India, alongside case studies of Bangladesh and China.

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[19] "(2) *A director of a company shall act in good faith* in order to promote the objects of the company *for the benefit of* its members as a whole, and in the best interests of the company, its employees, the shareholders*, the community and for the protection of environment."*

[20] *M.K. Ranjitsinh vs Union of India,* I.A. No.85618/2020 in WP (Civil) No.838 of 2019 (Supreme Court of India April 19, 2021) para. 12

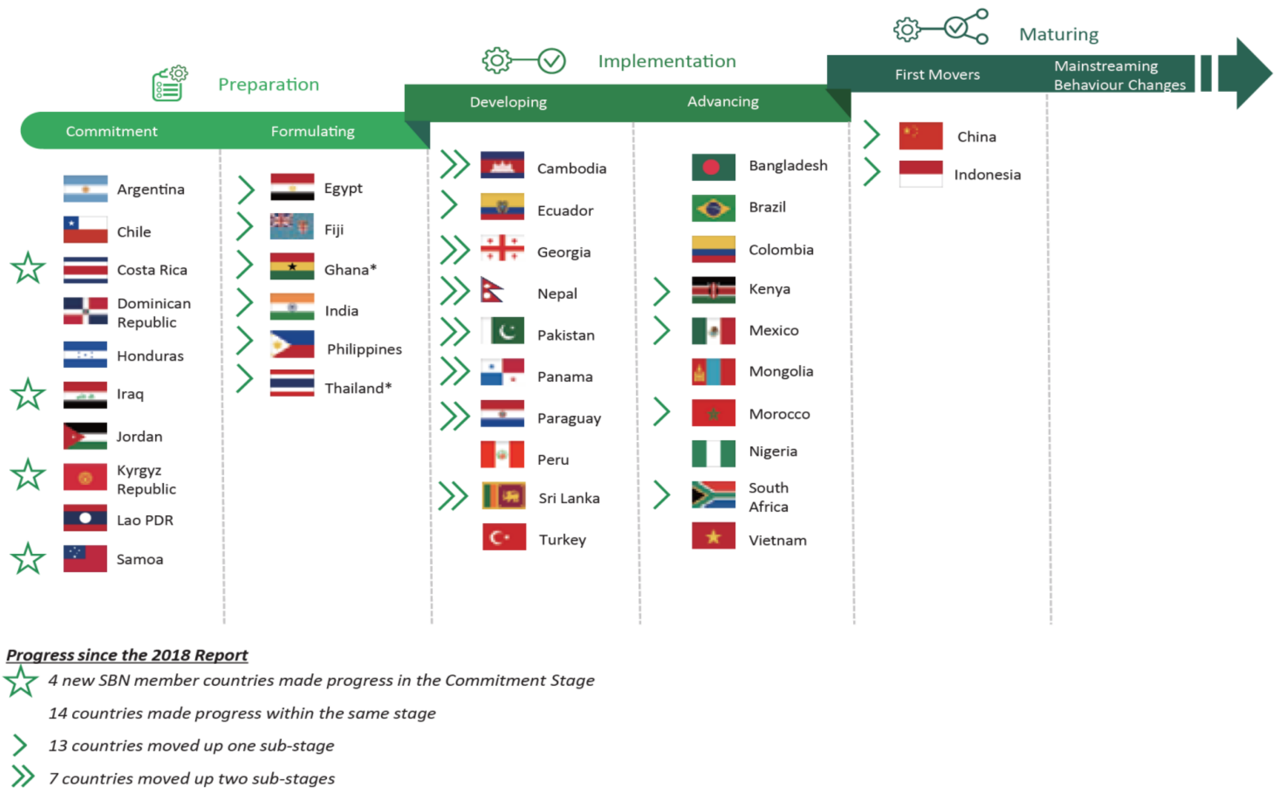
4. India, Bangladesh, & China: The paths taken

In this chapter, we document the voluntary and mandatory standards that have been adopted by India, Bangladesh, and China. As regards financial institutions, India largely follows a voluntary regime, while both Bangladesh and China have instituted mandatory regimes.

While well-meaning policies can be introduced, the effectiveness of the policies can only be gauged by *post facto* analysis of the effects. Therefore, this chapter will provide an overview of the regime, and provide a summary of the research findings on their impact.

Sustainable finance has gained momentum over the last decade. **Figure 6** below provides an overview of the level of development amongst the members of IFC's Sustainable Banking Network.

***Figure 6**: Sustainable finance country progression matrix based on assessment*
Source: Sustainable Banking Network. 2019. "Sustainable Banking Network - 2019 Global Progress Report." pp viii



4.1. India

The primary thrust of the Indian regime is voluntary compliance (*see* section 0 above). A few studies have been undertaken in the Indian context on the extent of adoption of the practices, and their impact. The main studies are discussed below. The adoption of the voluntary guidelines amongst the financial institutions is provided in **Table 3** below.

***Table 3**: Indian banks & financial institutions and sustainability standards adopted*

No	Standard	Adopting Institutions in India *(Year of membership)*
1	National Voluntary Guidelines for Responsible Finance, Indian Banking Association	*No publicly maintained database of compliant organizations.* Most Public Sector Banks and nearly half of the private sector banks are making disclosures
2	Equator Principle (EP Association 2020a)	IDFC First Bank *(2013)*
3	GRI-G4 Guidelines, Global Reporting Initiative (K. Kumar and Prakash 2020, 10,12) (GRI 2020)	1. Axis Bank (2015- 2018: GRI Standard) 2. Edelweiss Financial Services Limited (2020- Citing GRI) 3. HDFC Bank (2014-2016: GRI Standard) 4. IndusInd Bank (2015- 2018: GRI Standard) 5. L&T Financial Services (2019 - GRI Standard) 6. SBI (2017, 2019: GRI Standard) 7. Yes Bank (2013- 2019: GRI Standard)
4	ISO14001 Certification	Yes Bank *(2014)*
5	Finance Initiative, UNEP (UNEP 2021)	Yes Bank *(2006)*
6	CDP Disclosure, 2020 (CDP India 2021, 56) *Emission grade given in []*	1. Axis Bank [**B**] 2. HDFC Bank Ltd [**B**] 3. IndusInd Bank[**A**] 4. Kotak Mahindra Bank [**C**] 5. L&T Finance Holdings Limited [*private*] 6. SBI [**B-**] 7. Yes Bank [**A-**]

Kumar et al undertook a content analysis of the sustainability reporting practices of the 10 largest commercial banks in India by asset size[21] for the period 2015-16. The study evaluated the sustainability reporting practices of the banks against the prescribed GRI-G4 guidelines, United Nation Global Compact Principles, and the National Voluntary Guidelines. The study showed that only 3 Indian banks published substantive reports, beyond the standards prescribed by

[21] The banks reviewed were 1) State Bank of India (SBI) 2) ICICI Bank 3) Bank of Baroda 4) Punjab National Bank (PNB) 5) Bank of India 6) Canara Bank 7) HDFC Bank 8) Axis Bank 9) Union Bank of India, *and* 10) IDBI Bank

SEBI: SBI, HDFC and Axis Bank. Further, even amongst these 3 banks, only HDFC and Axis Bank were publishing GRI-G4 compliant reports (R. Kumar, Pande, and Afreen 2018, 146). Despite attempts being made to improve their sustainability reporting, in the absence of industry-wide adoption of standards, the quality of data published was found to have wide variation amongst the top 10 banks. Bank of Baroda, Punjab National Bank and Bank of India were found to have the lowest data quality amongst the banks (R. Kumar, Pande, and Afreen 2018, 154).

A 2019 paper analysed the sustainability reporting standards of both public sector and private sector banks during the period 2015-17.[22] The study showed that the disclosure standards varied significantly between PSB's and private sector banks, with the PSB's having a statistically significant, higher level of disclosure (K. Kumar and Prakash 2020, 8–9).

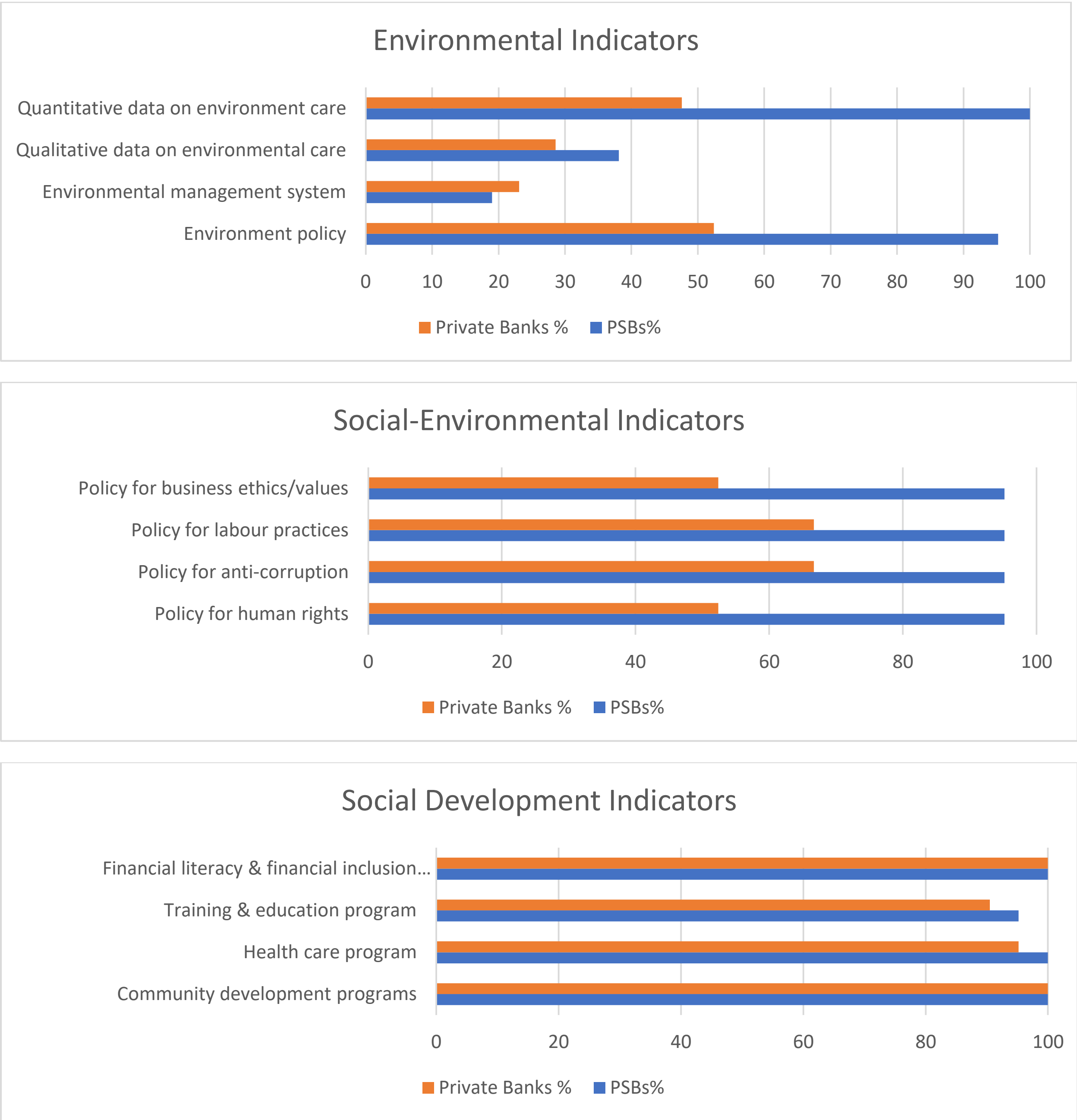
The paper had examined the adherence to the following voluntary regimes:

- National Voluntary Guidelines on the Social, Environmental and Economic Responsibilities of Business (NVGs) issued by the Ministry of Corporate Affairs, India in 2011
- Global Reporting Initiative G4 Guidelines, released in 2013
- United Nations Global Compact Principles released in 2004

In the case of NVG's, while all PSB's were making the disclosures, amongst private sector banks, only half were making the disclosures. The uptake of GRI G4 reporting standards is substantially lesser, with only 6 of the 42 banks surveyed making the disclosure (1 PSB + 5 private banks). The authors conclude that sustainability reporting standards are still at a low level in India.

[22] A total of 42 banks were studied, 21 PSB and 21 Private sector.

***Figure 7**: Variation in ESG metrics for PSB & private banks in India*
Source*: Kumar, K. and Prakash, A. (2019) 'Examination of sustainability reporting practices in the Indian banking sector',* Asian Journal of Sustainability and Social Responsibility*, 4(1), p. 2.*



The Indian Banks Association has been a member since 2016 of the Sustainable Banking Network, under the IFC. The network covers EM regulatory bodies and associations. The Central Banks of the other South Asian countries, including China are currently members of the network (IFC 2021).

India's experience shows that in the absence of mandatory reporting and verification requirements, the standard of reporting will not improve, and neither will internal data collection and utilization. The problems that are being tackled are aggravated by the fact that preexisting issues arising from social unrest, land acquisition and environmental clearances will likely get aggravated in the face of climate change. Requiring, significant improvement in internal risk assessment measures[23].

4.2. Bangladesh

Bangladesh Bank initiated voluntary sustainability reporting requirements in 2011 and has expanded their scope over the years, including conversion to mandatory requirements. This is part of a larger countrywide governance initiative towards tackling climate change and developing sustainability standards (UK AID 2017, 10–24). **Box 4** below provides an overview of the key regulatory initiatives taken.

[23] Solar power tariffs are expected to rise due to increase in frequency of cyclones in Western India. New studies have been commissioned by the developers to understand the likely impact (Bhaskar 2021)

Box 4: Sustainability initiatives by Bangladesh Bank

2008: Circular on "*Mainstreaming Corporate Social Responsibility in Banks and Financial Institutions in Bangladesh*" issued by Bangladesh Bank

2009: Refinancing scheme created for investment in solar, biogas, and effluent treatment plants

2011

- The *'Green Banking Policy Guidelines'* are issued by the Bangladesh Bank (Bangladesh Bank 2011b), requiring adoption of green banking policies by commercial banks & financial institutions in 3 phases:
  - *Phase 1*: Bank level environmental policy formulation and its incorporation into banking operations, including lending decision. Banks were also required to set up a separate Green Banking Unit
  - *Phase 2* (deadline December 31, 2012): Environmental risk to be incorporated in credit risk assessment. Sector-specific environmental policies are to be created, and in-house green targets have to be set. Operationally, green bank branches are to be developed. Disclosure and reporting were also mandated. By this stage banks would be required to have operational Bank Specific Environmental Risk Management Plan and Guidelines
  - *Phase 3* (deadline December 31, 2013): Environmental reporting using GRI, with external verification
- The '*Guidelines on Environmental Risk Management (ERM)'* are issued. They provide for mandatory environmental risk rating for projects above a specified threshold (Bangladesh Bank 2011a, 15).

2012: Uniform reporting requirements were prescribed for reporting green banking activities on a quarterly basis, as part of Phase 2 (Bangladesh Bank 2012). The Bangladesh Bank also set up a separate department '*Green Banking & CSR Department'*. The deadline for adoption of Phase 2 was extended to December 31, 2014, and that for Phase 3 to June 30, 2015 (Bangladesh Bank 2013b)

2014: Banks and financial institutions are required to mandatorily disburse 5% of loans towards direct green finance by 2016 (Bangladesh Bank 2013a). Deadline was subsequently extended to September, 2020.

2015: Banks and financial institutions directed to form a *'Climate Risk Fund'*. The corpus has to be at least 10% of the CSR Budget (Bangladesh Bank 2015)

2016: 'Green Transformation Fund' with corpus of USD 200 million launched for refinancing support to exporting industries, for importing energy efficient plants/ machinery

2017: Updated *'Guidelines on Environmental & Social Risk Management (ESRM) for Banks and Financial Institutions in Bangladesh'* are issued (Bangladesh Bank 2017).

2018: New uniform reporting format introduced, with separate format for commercial banks and financial institutions (Bangladesh Bank 2018)

2020: *'Sustainable Finance Policy for Banks and Financial Institutions'* was issued in December 2020 (Bangladesh Bank 2020). The policy provides for sustainable finance and green taxonomies, and a rating system for banks and financial institutions.

Several studies have looked at the impact of the ESG regulations. The results of some of the studies are discussed below.

Khan *et al* undertook a review of the quality of sustainability reporting for the period 2002-2014 for banks in Bangladesh. The period of review covered banking practices both before and after the introduction of regulatory requirements by the Bangladesh Bank in 2008. The review showed that after 2008, there was a gradual but perceptible improvement in the quality of reporting undertaken. However, some metrics did not show any improvement post-2008[24] (Khan et al. 2020, 352, 354).

Further, when GRI guidelines were followed by the banks, the same led to improvement in the quality of sustainability reporting, including their relevance and reliability (Khan et al. 2020, 357).

A working paper from the Bangladesh Bank in 2016 (Nabi et al. 2016) reviewed the uptake of green financing in Bangladesh. The review covered the period 20113Q1 to 2016Q2. The review showed an increase in the adoption of green finance between the years 2013 and 2016. It increased from 1.68% in 2013 to 2.23% of the total bank advances by 2016Q2 (2016, 9).

Bose *et al* study the impact of regulatory changes introduced in 2008; on banking performance (Bose, Khan, and Monem 2021). Their paper looked at a sample of 172 firms for the period 2008-2014. The paper analysed the financial performance of banks using the 3 metrics of "*cost efficiency, revenue growth, and non-financial benefits*". The study concludes that banks with stronger green banking initiatives are likely to have a better financial performance. Improved cost efficiency was the main source of financial improvement. They utilised Tobin's Q[25] as a measure to gauge the financial performance of banks. Their research showed that a 1 standard deviation increase in green banking practices led to a 9.43% increase in the standard deviation of Tobin's Q ratio (2021, 164). The presence of political connections and the use of CSR practices in a politically motivated manner were found to have a negative effect (2021, 171).

A study of credit risk management by banks in Bangladesh in the year 2015, after incorporation of environmental risks. It showed that inclusion of sustainability requirements improved the quality of the assessment (Olaf Weber, Hoque, and Islam 2015). The review was undertaken by studying 57 case studies from 7 banks and measured against 4 metrics: conventional criteria, economic sustainability, environmental sustainability, and social sustainability. The

[24] The measures that did not show any improvement over time are:

- Ongoing feedback and stakeholders dialogue i.e., the report provides a mechanism for providing feedback
- Verifiability of reporting i.e., utilisation of external verification mechanisms
- Trend over time i.e., presentation of comparative change over time as part of the report

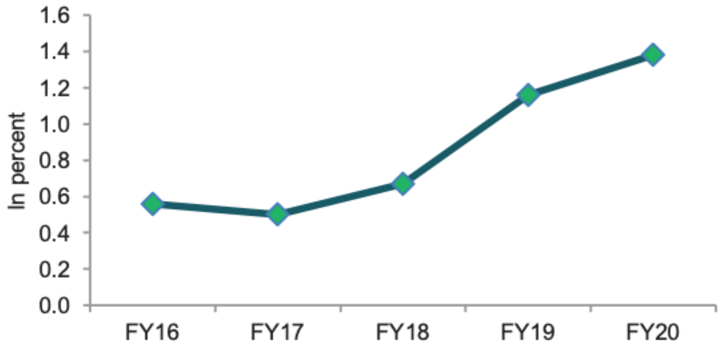
[25] It is calculated as a ratio:

$$(Book\ value\ of\ total\ assets + Market\ value\ of\ equity - book\ value\ of\ equity) / Total\ Assets$$

analysis showed that the inclusion of sustainability criterion had reduced incorrect predictions of default by 33% (Olaf Weber, Hoque, and Islam 2015, 10).

The most recent Annual Report issued by Bangladesh Bank shows an upward trend in the allocation of green financing by banks (*see* **Figure 8** below).

***Figure 8**: Share of green finance in total funded loan disbursed*
Source: *Bangladesh Bank (2020) 'Annual Report 2019-2020', Ch. 6, pp 60*



Though there has been a sustained increase in green financing, and several strategies are being deployed, the process has not been without its challenges. A 2018 review of the Solar Home System program financed by the Infrastructure Development Company Limited (IDCOL) (a DFI) highlighted lack of coordination amongst the agencies, shortcomings in financial governance, and absence of a national policy oversight body as issues (Hossain 2018, 20).

4.3. China

The Central Banking & Insurance Regulatory Commission of China had in February 2012, issued its '***Green Credit Guidelines'*** (CBIRC 2012). Since then, a series of measures have been introduced concerning green finance.

Detailed reporting requirements for financial institutions were introduced in the year 2014. **Box 5** below provides an overview of the developments.

Box 5: Sustainability initiatives by CBIRC

2007: The China Environmental Protection Administration, the People's Bank of China, and the China Banking Regulatory Commission jointly issue voluntary '*Opinions on Implementing Environmental Protection Policies and Rules and Preventing Credit Risks'* which provides guidance on managing environmental credit risk. It also requires corporate environmental compliance as a pre-condition to obtaining credit.

2012: '*Green Credit Guidelines'* are introduced. They cover environmental and social risk identification and management; green product and services; and green banking operations. The policy required inclusion of environmental and social risk in credit decisions.

2014: '*Green Credit Statistics System'* is introduced for standardised reporting. The reporting mechanism covers harm reduction metrics, such as effect on lessening of carbon emissions, water pollution, and water use.

2015: '*Green Credit Key Performance Indicators (KPIs)'* are introduced.

2016: *'Guidelines for Establishing the Green Financial System'* are introduced. These guidelines cover all financial markets and were jointly issued by 7 ministries. The guidelines define the green financial system to include green credit, bonds, stock indices, development funds, insurance, and carbon finance (Deloitte China 2016).

2021: '*Green Financial Performance Evaluation Plan for Bank and Financial Institutions'* is issued. Quarterly review of banks is to be undertaken, and the assessment will be incorporated into the ratings of the banks and financial institutions. Quantitative metrics are to account for 80% of the assessment, and will include metrics such as green finance as a percent of total assets, yearly growth in green finance, risk and NPA's from green finance etc (Fintech Global 2021). Third party verification is required for invest related decision making (IFC 2018, 10).

A review published in 2021 of the '*Green Credit Guidelines,'* noted that it had helped improve the environment, by changing corporate financing and investments (Zhang et al. 2021). The review studied data from 30 provinces, covering 945 listed companies covering the period 2004-2017. The '*two high enterprises*' (2HE) *i.e.,* companies with high levels of energy consumption and environmental pollution were the treatment group. The effect of the policy was gauged by utilising data on Sulphur dioxide emissions, wastewater discharge, and production of industrial solid waste by province (2021, 4–5). The review revealed the following effect on the 2HE enterprises:

1. Short-term financing was incentivized, but long-term financing had a downward trend;
2. Reduction in Sulphur dioxide emission and wastewater discharge by both the 2HE and non-2HE enterprises;
3. State-owned enterprises felt a greater impact of the policy compared with non-state-owned enterprises. With the impact being significant in the case of large enterprises;
4. There was a regional variation on the impact of the policy (2021, 9–10).

The study by *Zhang et al* confirms the previous findings by *Xu and Li* (Xu and Li 2020), and *Ren et al* (2020).

The '*Green Credit Guidelines'* were reviewed to understand their effect on green financing and the quality of sustainability reporting data by *Wang et al.* The study was for the period 2008-2016, covering 320 heavily polluting companies[26] listed on the Shanghai Stock Exchange. Drawing on the 'signal transmission theory', the researchers hypothesized that the quality of environmental information should improve to make it easier for the loan seeker to obtain loans (Wang et al. 2019, 5).

The paper also looked at the impact of local governments in the implementation of the central government policy, applicable to polluting companies functioning in the province. The findings of the paper were adverse, with the authors noting that the quality of the environmental disclosures made by the company did not improve the financing available to the company. The study reviewed long-term and short-term credit data. The analysis showed that there existed no significant correlation between the disclosure of environmental information by companies and any of the credit metrics[27]. Based on the analysis the authors conclude that the policy has not been successful in reaching its intended goal. Further, they state that the same may be due to non-standardized information requirements, and the absence of accessible environmental information (Wang et al. 2019, 10, 12).

This study along with the lessons learned from projects implemented by IDCOL in Bangladesh highlight the importance of policy design taking into account real-world complexities. Further, regular review is essential to gauge effectiveness, which in turn requires the adoption of sophisticated systems for review by the regulatory agencies.

The absence of studies on ESG compliance and disclosures by Indian financial institutions stands in contrast to the plethora of research from China and Bangladesh. Similar, studies are also available for all large economies. These academic studies, though sometimes critical provide independent third-party assessment of the functioning of financial institutions. India stands as an outlier in this regard.

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[26] The companies were based on heavily polluting sectors identified by the Ministry of Environmental Protection of China. The industries covered are: thermal power, steel, cement, electrolytic aluminum, coal, metallurgy, chemical, petrochemical, building materials, paper making, brewing, pharmaceutical, fermentation, textile, tanning, and mining.

[27] The 5 dependent variables analyzed were: 1) Long- and short-term loan 2) Long-term loan ratio 3) Long-term loan matching 4) Short-term loan ratio 5) Short-term loan matching

5. Lessons from international ESG standards

The NBFID has been birthed with the central purpose of facilitating a small component of the National Infrastructure Pipeline. Are there institutions and best practices that NBFID can form, to improve its risk management practices and better mitigate ESG risks?

The inclusion of environmental and social risks by banks allows them to mitigate the impact of liability risk, financial risk, reputational risk, credit risk, and market risk (IFC 2014, 9–11).

In the previous chapter, we have seen the impact of voluntary standards adopted by India, vis-à-vis mandatory standards adopted by Bangladesh and China. Internationally, some of the significant voluntary guidelines are:

- Finance Initiative, UNEP (1992)
  - Principles for Responsible Investment (2006)
  - Principles for Sustainable Insurance (2012)
  - Principles for Responsible Banking (2019)
- ISO 14001 & ISO 14004: Environmental management system (1996)
- The Global Reporting Initiative (2000)
- Equator Principles (2003)
- Sustainability Accounting Standards (2011)
- Taskforce on Climate related Financial Disclosures (2017)
- Principles for Positive Impact Finance, UNEP (2017)

India has not instituted any significant ESG requirements for project finance, while financial institutions have not voluntarily adopted international standards. This situation has led to underdevelopment of risk assessment practices, specifically in the case of public sector banks.

Lessons can be learnt from the recently created Asian Infrastructure Investment Bank. We will also discuss the impact of the Equator principles on the functioning of financial institutions.

5.1. Green Institutions: Asian Infrastructure Investment Bank

Several jurisdictions have created banks and investment funds solely targeting ESG compliant projects. The *UK Green Investment Bank* launched inn2012 by the Government of the United Kingdom was the world's first publicly funded bank aimed solely at green infrastructure projects. Similar initiatives were also undertaken in Australia - Clean Energy Finance Corporation; USA - Connecticut Green Bank etc.

India too has toyed with the idea of creating a green bank by converting the existing *Indian Renewable Energy Development Agency* (IREDA) into a green bank. However, it is unlikely that the NBFID will take such a form, and is expected to diversify its lending across the sectors and projects commissioned under the NIP.

The Asian Infrastructure Investment Bank was created in 2015, with India holding the second largest share in voting rights, after China. Its Articles of Agreement incorporate sustainable practices as a being part of the bank's operational and financial policies (*see Article 1.1, 13.4*) (Asian Infrastructure Investment Bank 2015). The sustainable practices incorporate both environmental and social impact policies, and a detailed *Environmental and Social Framework* is applied to decision making (Asian Infrastructure Investment Bank 2016).

Per changes effective from October 2021, AIIB has a target of investing 50% of its financing approvals by 2025 in *climate finance* (Asian Infrastructure Investment Bank 2016, sec. Vision: 11)

A December 2020 ratings review by Standard & Poor noted that 50% of its approved projects supported green infrastructure. It also financed gas and fossil fuel projects, while accounting for their increased environmental and social risks (S&P Ratings 2020). AIIB currently holds an AAA credit rating.

Academic research on the working of AIIB has placed it as part of China's desire to expand its footprint. A 2017 article attempted to study the possible impact of AIIB on sustainability in Asia. It concludes that its Environment & Sustainability Framework mirrors that of well-established multilateral agencies. Its sustainability policies can be said to re-emphasise China's adoption of sustainable development goals (Hanlon 2017).

Discussed below is the research pointing to the impact of the voluntary sustainability reporting requirements.

5.2. Equator Principle

The Equator Principle (EP) has been adopted across 37 jurisdictions by 118 financial institutions, with one-third of the members joined after 2015 (*see* country wise breakup on page 51).

The EP draws upon IFC's *Performance Standards on Environmental and Social Sustainability* and the World Bank's *Environmental, Health, and Safety Guidelines* (Wörsdörfer 2015, 4). The principles have successively expanded the scope of their coverage of transactions, reporting requirements, and have prescribed minimum requirements from 2013 (O Weber and Acheta 2014, 11). The latest version EP4 introduced in 2019.

In 2003 the EP covered only ‘project finance’. Over time their scope has been enlarged to cover the following (EP Association 2020b):

1) Project Finance Advisory Services,
2) Project Finance,
3) Project-Related Corporate Loans,
4) Bridge Loans and
5) Project-Related Refinance
6) Project-Related Acquisition Finance

The completion of 10 years of the principle saw several papers being published on its effectiveness and impact.

A 2014 study analysed the impact on stock prices of financial institutions in response to the adoption of EP *vis a vis* those that hadn’t. The sample consisted of 44 financial institutions from the period 2006-2014. The study concludes that there were positive abnormal returns for early adopters (Eisenbach et al. 2014, 381). The study also noted that institutions that have adopted the principles tend to collaborate with other similarly placed institutions (Eisenbach et al. 2014, 389).

A 2018 analysis of the effect of the adoption of EP on bank liquidity concluded that compliant institutions have greater liquidity than non-compliant ones. The study covered the period 2003-2011 and undertook an analysis of 112 major global financial institutions and 8213 banks. Of the 112 major global financial institutions - 58 were EP compliant and 54 were not (Chen, Huang, and Lin 2018, 195–97).

The 2019 paper by Contreras *et al* studied the adoption of the Equator Principles by non-adoptee financial institutions that were collaborating with adoptees, in the funding of large infrastructure projects (i.e., were part of the funding consortium). They also looked at the role played by public pressure in the adoption of the Equator principles (2019, 306). The study covered syndicates created during the period 2003-2014, covering 60 lead arrangers (Contreras et al., 2019, p. 309).

Their study showed that peer pressure positively affected the adoption of the Equator Principles, particularly for those financial institutions that are frequent collaborators of the adoptees (Contreras, Bos, and Kleimeier 2019, 316). However, no acceleration in the adoption of the principles has been noted during the study period (Contreras, Bos, and Kleimeier 2019, 320).

In examining the role of external pressure applied NGO's the study showed that the lead arrangers were more likely to adopt the Equator Principles after participating in a controversial deal. However, the impact is smaller in the case of larger lead arrangers. Similarly, firms with higher profitability were also found to be less likely to adopt the Equator Principles. The authors hypothesize that this may be due to the adoption of the principles being seen as being financially onerous, and the large lead arrangers do not see any reputational gains from the adoption (Contreras, Bos, and Kleimeier 2019, 317–18).

It is highlighted that similarly extensive literature exists as to the impact of other internationally recognised compliance and reporting standards *namely*:

- The Global Reporting Initiative
- Principles for Positive Impact Finance by the United Nations Environment Program
- Finance Initiative by the United Nations Environment Program
- ISO14001 certification

Public pressure has been a strong tool for changing the behaviour of financial institutions in the developed world, necessitating development of standards as a source of risk management. The necessity of mandatory compliance and disclosure requirements are no longer in doubt. Their optimization to local requirements and conditions is an ongoing task.

Conclusion

Way Ahead: Carrot & Stick

Per the climate change related country pledges documented by Climate Action Tracker, India is classified as being on track for the 2°C rise goal, in line with the Copenhagen Agreement of 2009, though not with the goal of sub-2°C rise under the Paris Agreement of 2015. China's commitments and actions on the other hand have been classified as '*Highly Insufficient*' (Climate Action Tracker 2021b; 2021a).

However, there is great scope for improvement in the management of natural resources within the country. India currently ranks at 168 out of 180 countries that are part of the 2020 Environmental Performance Index. Within South Asia, this places it ahead only of Afghanistan (Yale Centre for Environmental Law & Policy 2020).

Chapters 2 and 3 have shown us that as regards sustainable finance, the regulatory framework in India is largely voluntary. Though delays and overruns arising from ESG related issues form only a small component of the hindrances faced in the development of large infrastructure projects, they point to a larger problem of risk management. Transparent information exchange between the conceptualisers of the projects and their financiers will help in weeding out projects that are not financially viable.

It is necessary to provide a base of mandatory requirements, to standardise the industry wide practices. Further, significant skill development in the area of ESG risk identification and management is required, not only within the financial institutions but also at the RBI.

The international experience has shown that there are no standard templates that can be adopted. Optimization is a continuing exercise. SEBI's experience over reporting requirements shows, that capacity development is a time-consuming process.

It is recommended that the RBI:

- Require mandatory disclosures based on internationally prevalent voluntary requirements (*see* Chapter 0 above)
- Create a department for reviewing the disclosure and studying the impact of the policy changes
- Introduce a sub-chapter covering ESG risk assessment in the annual *Financial Stability Report*
- Initiate measures to adopt environment management standards such as the ISO 14001 certification

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Annexure 1: Country wise membership to Equator Principles

Headquarters	Institution	Count
Japan	Development Bank of Japan, Mizuho Bank, Ltd., MUFG Bank, Ltd, Nippon Life Insurance Company, Shinkin Central Bank (SCB), Shinsei Bank, Limited, Sumitomo Mitsui Banking Corporation, Sumitomo Mitsui Trust Bank, Limited, The Norinchukin Bank	9
Taiwan R.O.C.	Bank Sinopac, Cathay United Bank Co., Ltd, CTBC Bank Co., Ltd, E.SUN Commercial Bank, LTD, First Commercial Bank, Taipei Fubon Commercial Bank, Taishin International Bank, Yuanta Commercial Bank	8
The Netherlands	ABN Amro, Coöperatieve Rabobank U.A., De Volksbank, FMO (Netherlands Development Finance Company), ING Bank N.V., NIBC Bank N.V., NN Investment Partners, NWB Bank	8
Canada	Bank of Montreal, Bank of Nova Scotia, Canadian Imperial Bank of Commerce (CIBC), Export Development Canada, Manulife, Royal Bank of Canada, TD Bank Financial Group	7
China	Bank of Chongqing, Bank of Guizhou, Bank of Huzhou, Bank of Jiangsu, Chongqing Rural Commercial Bank, Industrial Bank Co., Ltd, Mian Yang City Commercial Bank	7
Spain	Banco Bilbao Vizcaya Argentaria, S.A. (BBVA), Banco Sabadell, Banco Santander S.A., Bankia, Bankinter, CaixaBank, Instituto de Crédito Oficial (ICO)	7
Brazil	Banco Bradesco, S.A., Banco do Brasil, Banco Votorantim SA, BTG Pactual, CAIXA Econômica Federal, Itaú Unibanco S.A.	6
France	BNP Paribas, Crédit Agricole Corporate and Investment Bank, La Banque Postale, LBO France, Natixis, Société Générale	6
UK	Barclay's plc, Green Investment Group Limited, HSBC Holdings plc, Lloyds Banking Group Plc, Standard Chartered PLC, UK Export Finance	6
Australia	Australia and New Zealand Banking Group Limited (ANZ), Commonwealth Bank of Australia, Export Finance Australia, National Australia Bank Limited, Westpac Banking Corporation	5
Sweden	Nordea Bank AB (publ), Skandinaviska Enskilda Banken AB, Svenska Handelsbanken AB (publ), Swedbank AB, Swedish Export Credit Corporation (SEK)	5
USA	Bank of America Corporation, Citigroup Inc., Ex-Im Bank, JPMorgan Chase & Co., Wells Fargo Bank, N.A.	5
Germany	DekaBank Deutsche Girozentrale, Deutsche Bank AG, DZ Bank AG, KfW IPEX-Bank GmbH	4
South Africa	Absa Group Limited, FirstRand Limited, Nedbank Limited, Standard Bank Group	4
South Korea	KB Kookmin Bank, Korea Development Bank, Shinhan Bank	3
Egypt	Arab African International Bank, Commercial International Bank (CIB)	2
Italy	Intesa Sanpaolo SpA, UniCredit SpA	2
Mexico	Banco Mercantil del Norte S.A., CIBanco S.A.	2
Nigeria	Access Bank Plc, Fidelity Bank Plc	2
Norway	DNB, Export Credit Norway	2
Singapore	DBS Group Holdings Ltd, OCBC Bank	2
Argentina	Banco de Galicia y Buenos Aires S.A.	1
Belgium	KBC Group N.V.	1
Colombia	Bancolombia S.A.	1
Denmark	Eksport Kredit Fonden	1
Finland	OP Financial Group	1
India	IDFC FIRST Bank	1
Kingdom of Bahrain	Ahli United Bank B.S.C.	1
Mauritius	Mauritius Commercial Bank Ltd.	1
Morocco	Bank of Africa	1
Panama	CIFI (Corporacion Interamericana Para El Financiamiento de Infraestructura S.A.)	1
Peru	Banco de Crédito	1
Scotland	NatWest Group Plc	1
Switzerland	Credit Suisse Group	1
Togo	Ecobank Transnational Incorporated	1
United Arab Emirates	First Abu Dhabi Bank (FAB)	1
Uruguay	Banco de la República Oriental del Uruguay	1

Centre for Financial Accountability (CFA) engages and supports efforts to advance transparency and accountability in financial institutions. We use research, campaigns and trainings to help movements, organisations, activists, students and youth to engage in this fight, and we partake in campaigns that can shift policies and change public discourse on banking and economy.

We monitor the investments of national and international financial institutions, engage on policies that impact the banking sector and economy of the country, demystify the world of finance through workshops and short-term courses and help citizens make banks and government more transparent and accountable, for they use public money.

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