THE POTENTIAL OF MULTILATERAL DEVELOPMENT BANKS IN GREENING THE BELT AND ROAD INITIATIVE

How MDBs can Use their Characteristics to Green the BRI through Financing Solutions, Coordination Activities, and Policy Support

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The IIGF is an independent and non-profit think tank established in China in September 2016. It conducts research on green finance on a wide array of topics such as credit, bonds, funds, insurance, carbon-trading, local pilots, international cooperation, ESG rating, as well as risk assessment. The IIGF is specialized in Chinese green finance at national and local level and additionally conducts research on green finance internationally from a Chinese perspective.

The IIGF works with numerous stakeholders in green finance both within and outside China. Within China, the IIGF is an executive member of Green Finance Committee of China Society for Finance and Banking and works closely with the People's Bank of China, the Chinese Ministry of Finance, the National Development and Reform Commission, the Chinese Ministry of Ecology and Environmental Protection, as well as with a number of national, regional and local government institutions, financial institutions, and research organizations. Internationally, the IIGF conducts joint research with a plurality of organizations such as UNEP, UNPRI, the European Investment Bank, Cambridge University, Climate Policy Initiative, the International Institute for Sustainable Development, and many more.

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Abbreviations

ACFIC	All-China Federation of Industry and Commerce
ADB	Asian Development Bank
AfDB	African Development Bank
AIIB	Asian Infrastructure Investment Bank
BRI	Belt and Road Initiative
CBRC	China Banking Regulatory Commission
CDB	China Development Bank
CIRC	China Insurance Regulatory Commission
CSRC	China Securities Regulatory Commission
EBRD	European Bank for Reconstruction and Development
EIB	European Investment Bank
EU	European Union
EXIM Bank	China Export-Import Bank
FSB-TCFD	Financial Stability Board’s Taskforce on Climate-related Financial Disclosure
IaDB	Inter-American Development Bank
IDA	International Development Association
IDFC	International Development Finance Club
IFC	International Finance Corporation (WBG)
IsDB	Islamic Development bank
MDB	Multilateral Development Bank
MEE	Ministry of Ecology and Environment
MEP	Ministry of Environmental Protection
MFA	Ministry of Foreign Affairs
MOFA	Ministry of Finance
MOFCOM	Ministry of Commerce
NDB	New Development Bank
NDC	Nationally Determined Contribution
NDRC	National Development and Reform Commission
OECD	Organization for Economic Cooperation and Development
PBOC	People’s Bank of China
PPF	Project Preparation Facility
PPP	Public-private partnership
SAFE	State Administration of Foreign Exchange
SASAC	State-owned Asset Supervision and Administration Commission
SBN	Sustainable Banking Network
SDGs	Sustainable Development Goals
SPV	Special Purpose Vehicle
UN	United Nations
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
WBG	World Bank Group

Preface

Green finance can be understood as financing towards environmental purposes, within the broader context of sustainable development. These benefits broadly include climate change mitigation, climate change adaptation, natural resource conservation, biodiversity conservation, and pollution prevention and control. It is estimated that green financing must be scaled to tens of trillions of dollars in investments in the coming decades, to meet global environmental ambitions.

As momentum is growing in mainstreaming green finance into the architecture and practice of financial and capital markets, progress is being made in areas of policy, regulations, standards, guidelines, principles, and fiscal incentives. The current challenge is to take the groundwork that has been laid and turn it into real and significant flows of private and public capital to investments that both support sustainable development objectives and bring secure long-term prospects for investors. This paper aims to provide a piece to this puzzle regarding the role of Multinational Development Banks (MDBs) in greening the Belt and Road Initiative (BRI). The purpose of this paper is to assist MDBs in developing their role, by providing an understanding of how MDB characteristics can be used to comprehensively green the BRI.

This research on MDBs in green finance is a strategic research priority of the International Institute of Green Finance. Based on the IIGF's previous research the current practice of MDBs in green finance and on MDB cooperation in green finance, this paper goes into detail with MDBs in the BRI. Looking forward, the IIGF will continue its research on MDBs such as within green bond development, green finance standards, and local green finance development.

The paper aims to make concrete and actionable recommendations to MDBs and their stakeholders. Therefore, the paper gathers input from a wide range of sources such as a selection of MDBs themselves, governments, research institutions, and financial institutions. This ensures that the paper is rooted deeply in current practice and discussions on the topic, ultimately improving the practical applicability of the recommendations put forward.

The target audience of this paper includes several groups. First, the paper aims to provide valuable information to MDBs, which can be turned into concrete actions. Second, the paper aims to assist stakeholders working with MDBs in understanding the role of MDBs from their respective fields. Third, the paper aims to contribute to the academic understanding of MDBs, inspiring further research on the topic. Lastly, in shining light on this specific aspect of green finance, the paper aims to incite further research in numerous other aspects of green finance in China and across the globe.

Executive Summary

Simply put, global climate and environmental goals can only be met if they are an integral part of the development paths of BRI countries. This is true alone because the BRI collectively accounts for over 30% of global GDP, 62% of population, and 75% of known energy reserves. The central challenge is that today most BRI countries' environments are deteriorating and their greenhouse-gas emission pathways are misaligned with a 2-degree scenario. This is equally the case towards achieving the SDGs for which these countries are only on track to reach one of the 17 Sustainable Development Goals (SDGs). While there are numerous ways to green the BRI, MDBs can play a key role in terms of financing and capacity solutions, coordination activities, and policy support. As such, this report provides an analysis of the current greenness of the BRI, an identification of key MDB characteristics, and an assessment of how MDBs can contribute to greening the BRI.

By varying estimates, the $1-8tn estimated cost of the BRI is a contribution to meeting the need of more than $20tn of total infrastructure financing in BRI countries. While the Chinese proportion of this financing is increasing, more than half comes from European banks today. While being a Chinese initiative, the BRI is an open ended endeavor with all participating countries able to both shape the sustainability of the BRIs central strategies as well as its implementation on the ground. While the rhetoric on the BRI continuously mentions sustainability, climate change, and green development, most data on BRI financing shows limited alignment with these ambitions. For example, the majority of Chinese energy and transport investment in BRI countries is tied to carbon-intensive sectors, and this is similarly the case for many national, regional, and global investors in the BRI. Consequently, while comprehensive and detailed data is lacking, it remains clear that total investment in BRI countries puts countries on development pathways that are misaligned with global climate and environmental goals.

MDBs can contribute to addressing the challenge of greening the BRI through their unique characteristics that set them substantially apart from profit-driven financial institutions, while noting that some characteristics may overlap with national development banks. Key MDB characteristics include:

a) Long-term and stable: MDB financial commitments have substantially longer tenure than commercial banks and are less vulnerable to economic fluctuations.

b) Counter-cyclical: MDBs can counter-balance other investors withdrawing from a country, region, or sector, by increasing their own engagements.

c) Concessional terms: MDBs lending at lower interest rate or grace periods reduces the cost of debt for projects, and consequently makes more projects bankable than purely on market terms.

d) Know-how & technical assistance: MDBs possess valuable expertise on development finance, often owing to their size and history, combined with their geographic and sectorial priorities.

e) Private capital mobilization: MDBs can catalyze private capital at higher leverage rates than other financiers, in particular through policy support and specialized financial mechanisms.

Based on their characteristics, MDBs can contribute to greening the BRI in terms of financing, coordination, and policies. These three ways all require prioritization of greening the BRI from MDBs themselves, as well as active participation of BRI countries:

1. Financing and capacity solutions

At the early-stage of project development, MDBs can effectively de-risk sustainable infrastructure projects in practice and perception by using a number of schemes, including:

a) Technical assistance, such as the International Financial Corporation's (IFC) Sustainable Finance Network.

b) Risk assessment disclosure, such as by following the Financial Stability Board - Task Force on Climate Related Financial Disclosure (FSB-TCFD).

c) Public private partnerships (PPPs), such as the European Investment Bank's (EIB) Med5P program.

d) Concessional and non-concessional loans, depending on the mandate of the MDB.

e) Guarantees and insurance, such as the Global Index Insurance Facility of the IFC.

f) Risk sharing facilities, such as the EIB's Private Finance for Energy Efficiency scheme.

The lack of a pipeline of potential bankable projects and high project development costs are crucial challenges for sustainable infrastructure projects that MDBs can address in a number of ways, including:

a) Feasibility studies, such as the World Bank Group program supporting the Afghan Ministry of Finance.

b) Early stage financing, which is commonly used but often depending on whether an MDB has country presence or not.

c) Special purpose vehicles, such as the African Development Bank's (AfDB) involvement in establishing the Lake Turkana Wind Project

d) Project preparation facilities, such as the Asian Development Bank's (ADB) Green Finance Catalyzing Facility being implemented in China and ASEAN.

2. Coordination activities

With their intergovernmental backing, development-oriented mandate, and authority in financial markets, MDBs can play a key role in coordinating efforts between stakeholders in the BRI. Directly towards the Chinese side of orchestrating the BRI, MDBs can influence and support the development of BRI strategy policies, Chinese financial institutions sustainability practice, and Chinese enterprises involvement in BRI projects on the ground. Highlighting the potential of this role, at the 2017 BRI Forum 6 MDBs signed an MoU with the Chinese Ministry of Finance. Towards all stakeholders, MDBs can contribute to greening the BRI by promoting the adoption of environmental and social safeguards by financiers, by linking global investors to BRI projects, and by facilitating capacity building through proving fora and platforms for knowledge exchange. With European Union (EU) countries as MDB members and with great sustainability investment appetite from EU institutional investors, MDBs can play an important role in directly guiding and facilitating European involvement in the BRI.

Amongst themselves, inter-MDB coordination has great potential through economies of scale as well as on standard setting. With many MDB instruments and projects overlapping, greater coordination of efforts can avoid competition that crowds out private capital or turf-wars that duplicate coordination efforts. Furthermore, MDBs can work as standard setters when speaking with a coordinated common voice. This ability can be used by MDBs in expanding their joint reporting on climate financing, to also jointly report on their green financing such as already done annually by the IDFC, as well as to report on their climate risks such as the European Bank for Reconstruction and Development (EBRD) is already well in the process of doing. This is equally true for mainstreaming standards in sustainable infrastructure best practices such as the Extractive Industries Transparency Initiative, climate mitigation finance tracking such as through MDB-International Development Finance Club (IDFC) cooperation, or harmonizing green bond standards such as the EIB's current effort with China.

3. Policy support

At the financial system level, MDBs can contribute to comprehensively greening domestic and regional financial systems covering all financial tools, all relevant regulations, and all stakeholders. Such a comprehensive approach is relevant given the current situation in which with few exceptions, financial systems are not actively used as tools for a green transition. In terms of policy and regulatory measures, MDBs can provide technical assistance and facilitate dialogue with central banks and other regulators of the financial system. Together with central and local governments MDBs can turn green policy into bankable projects through a number of the de-risking and project preparation financing solutions described in detail above. While some of these tools' impact have a narrower scope, some of them have potential to influence the greening of the financial system as a whole when implemented in coordination with financial policy. An interesting example of a financial tool focused on greening financial systems by support green bonds is the IFC-Amundi Green Cornerstone Bond Fund.

At the economic system level, MDBs can help regional and local government institutions in providing a more beneficial environment for green investments. For example, through technical assistance MDBs can assist BRI countries in developing their Nationally Determined Contributions to the Paris agreement as well as other types of low-carbon and green scenario planning. This simultaneously limits stranded asset risks at both organizational and country levels. As a critical next step, MDBs can help turning Nationally Determined Contributions (NDCs) into a concrete project pipeline through of financial and capacity solutions. Furthermore, MDBs can provide guarantees and insurances jointly with national and local governments in order to lower projects' risk exposure to the market and policy instability that are particularly common for green technologies.

Introduction

Simply put, global environmental and climate targets can only be met if they are an integral part of the development paths of countries under the BRI. Meeting such targets as conceptualized in the Sustainable Development Goals (SDGs) requires both a global transition away from fossil fuels as well as a shift towards sustainable usage of environmental resources. Highlighting the broader picture, the United Nations Economic and Social Commission for Asia and the Pacific estimates that only one of 17 Sustainable Development Goals is "on track" to be met across the Asia-Pacific which encompasses most BRI countries.[1] As the original 65 countries under the BRI collectively account for over 30% of global GDP, 62% of population, and 75% of known energy reserves[2], these ambitions can only be realized if they are included in the BRI. Having expanded to at least 123 countries by mid 2019, these numbers are even more daunting today.[3] Given that most BRI countries' environments are deteriorating[4] and that their NDCs are misaligned with a 2-degree scenario[5], current development pathways must be changed. Incorporating such concerns into the BRI from policy to practice, can play a key role in re-shaping such development pathways.

A range of estimates exist on the scale of capital needed for the BRI. The most commonly cited estimate of total financing needed is that the BRI will cost more than $1tn by 2027, such as referenced by Morgan Stanley.[6] At the high end of the range an often mentioned $8tn total financing figure stems from a Hong Kong Economic Journal article authored by the Bank of China Hong Kong's Chief Economist Dr. E. Zhihuan citing experts of the State Council[7]. This can be seen in the context of a general need for infrastructure investment in Asia of $22,6tn from 2016 to 2030, which is increased by 13% if adjusted to be climate change compatible.[8] According to the Organization for Economic Cooperation and Development's (OECD) estimates, climate compatible

1 United Nations Economic and Social Commission for Asia and the Pacific (2018). *Asia and the Pacific SDG Progress Report 2017*. Bangkok, Thailand: ESCAP.

2 World Bank Group (2018). *Belt and Road Initiative.* Retrieved from: https://www.worldbank.org/en/topic/regional-integration/brief/belt-and-road-initiative

3 Belt and Road Portal (2019). *China has signed 171 B&R cooperation documents.* Retrived from: https://eng.yidaiyilu.gov.cn/qwyw/rdxw/81686.htm

4 United Nations Environment Program (2018). *GEO-6: Asia and the Pacific.* Nairobi, Kenya: UNEP

5 United Nations Framework Convention on Climate Change (2015). *Aggregate effect of the intended nationally determined contributions: an update. FCCC/CP/2016/2*

6 Morgan Stanley (2018). *Inside China's Plan to Create a Modern Silk Road.* Retrieved from: https://www.morganstanley.com/ideas/china-belt-and-road

7 Hong Kong Economic Journal (2016*). Getting lost in 'One Belt, One Road (一带一路走入迷)* Retrieved from: http://forum.hkej.com/print/130698

8 Asian Development Bank (2017). *Meeting Asia's Infrastructure Needs*. Manila, Philippines: ADB

infrastructure is 10% more expensive, while these costs will be offset three times over by the resulting fuel savings.[9] Given the unsustainable development trajectory and the infrastructure investment need, the BRI poses both a challenge in meeting financing needs while simultaneously making this financing sustainable.

MDBs play an important role in shaping the future of the region, both in terms of meeting the investment need as well as in terms of greening the BRI. Fundamentally, the United Nations (UN) encourages MDBs to examine their role in reaching the SDGs, arguing that given their mandate, size, and influence MDBs play a critical role. In this they highlight the unique characteristics of MDBs regarding concessional terms, longer time horizons, counter-cyclical lending, technical expertise, and private capital mobilization.[10] MDBs have increased their involvement in green finance both by scaling up climate investments and by integrating environmental issues into their general financing requirements as a cross-cutting issue. In climate financing alone, in 2018 all MDBs together provided over $42,1bn, of which 70% were labelled as mitigation and 30% as adaptation.[11] Such increasing green finance ambitions of MDBs are also being integrated into their efforts under the BRI.

For the purpose of this report, the BRI is delimited in terms of geography, sectors, and stakeholders. The geography is defined as countries related to the Silk Road Economic Belt and the 21st Century Maritime Silk Road. According to the *Vision And Actions On Jointly Building Silk Road Economic Belt And 21st-Century Maritime Silk Road* (BRI Vision an Action Plan), which can be regarded as the founding document of the initiative, the BRI is an open initiative open to all countries.[12] With Latin American countries getting involved in the BRI by invitation from China[13], these countries are also included in the scope of the paper. Yet, as India has indicated its opposition to the initiative[14], the country is not included in the scope. In terms of sectors, no economic sector or type of infrastructure can be excluded from the comprehensive rhetoric of the BRI Vision and Action Plan. This comprehensive approach is conceptualized under the five areas, namely, policy coordination, facilities connectivity, unimpeded trade, financial integration, and people-to-people bond. In terms of stakeholders, the paper includes not only officials from the countries but all organizations around the world engaged in the BRI. Finally, it is important to note that while the BRI does not aim to be a master plan or the most significant determiner for the development of all the original 65 and current 123 participating countries, the broad scope of the initiative does indeed influence the future of the region. Therefore, the paper approaches the role of the BRI as one factor amongst many others, and as a broad but not necessarily deep influencing factor.

9 Organization for Economic Cooperation and Development (2017). *Investing in Climate, Investing in Growth*. Paris, France: OECD

10 Addis Ababa Action Agenda (2015). *Addis Ababa Action Agenda of the Third International Conference on Financing for Development*. Addis Ababa, Ethiopia: United Nations

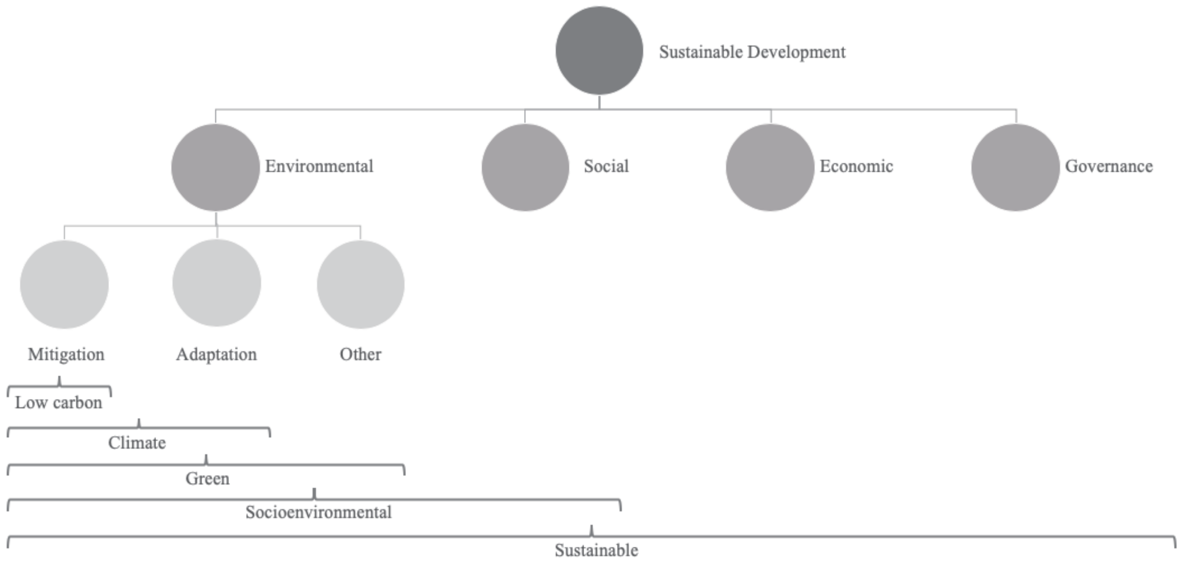
11 African Development Bank et al. (2019). *Joint Report on Multilateral Development Banks Climate Finance.*

12 National Development and Reform Commission, Ministry of Foreign Affairs, and Ministry of Commerce (2015). *Vision And Actions On Jointly Building Silk Road Economic Belt And 21st-Century Maritime Silk Road*

13 Reuters (2018). *China invites Latin America to take part in One Belt, One Road*. Retrieved from: https://www.reuters.com/article/us-chile-china/china-invites-latin-america-to-take-part-in-one-belt-one-road-idUSKBN1FB2CN

14 South China Morning Post (2018). *China fails to win India round to Belt and Road Initiative ahead of Modi's meeting with Xi.* Retrieved from: https://www.scmp.com/news/china/diplomacy-defence/article/2143152/china-fails-win-india-round-belt-and-road-initiative

Figure 1. Categorization and contents of sustainable, green, and climate



Source: Author

A second delimitation relates to the definition of green. In terms of policy objectives, green is defined as climate change mitigation, climate change adaptation, natural resource conservation, biodiversity conservation, and pollution prevention and control. As such, green is broader than climate change concerns, but narrower than sustainable development as shown in figure 1 below. Yet, while countries largely agree on what qualifies as green, a number of technical definitions differ. For example, financing of clean coal is eligible to be defined as green bonds in China.[15] Under such circumstances, based on the lowest common denominator principle any investment defined as green by any party is considered, but when differences of definition exist, these will be clearly highlighted. Being focused on greening the BRI, the paper will not consider other challenges of the initiative commonly discussed such as de-industrialization, over-indebtedness, balancing influence of countries, or lack of institutional investors in infrastructure. These issues are only raised if simultaneously relevant from a green perspective. Similarly, the paper will only indirectly address how to green MDB's themselves, but rather focus on how MDBs can use their characteristics to green the BRI.

Current literature on environmental issues within the BRI generally suffers from a lack of official data, the abstract nature of the initiative, and its short history. To list a few examples, the academic literature is often focused on the policy and legal aspects such as Ascensao et al. calling for development of assessment methods for investments[16], Liu focusing of environmental

15 China Green Finance Committee (2015). *Green Bond Endorsed Project Catalogue*. Beijing, China: CGFC

16 Ascensao, F., Leonore, F. Clevenger, A.P. Corlett, J. Jaeger, A.G., Laurance, W.F. Pereira, H.M. (2018). Environmental challenges for the Belt and Road Initiative. *Nature Sustainability volume 1, pages206–209 (2018)*

governance within Chinese financial institutions[17], or Hu focusing on the legal requirements for environmental protection under the BRI[18]. Grey literature is extensive, covering think tanks, news organizations, consulting companies, and many more. Yet, they all suffer from similar challenges on data, abstract definitions, and lack of historical evidence. Despite these difficulties, the literature provides a sufficient background to identify the overarching situation and the key challenges to greening the BRI. This paper contributes to the current literature by approaching the topic of greening the BRI specifically from an MDB perspective, which has only been done indirectly and to a very limited extend previously, primarily by MDBs themselves.

Following the introduction as the first chapter, the remainder of the report is structured as follows: In order to form a clear basis for discussing the potential role of MDBs, the current greenness of the BRI's policy environment and financing is analyzed in the second chapter. In the third chapter, the characteristics of MDBs are determined and conceptualized to form a structured approached to the paper's recommendations. The fourth chapter discusses how MDBs can contribute to greening the BRI from three perspectives respectively, namely financing, coordination, and policies. The final and fifth chapter provides a conclusion to the report.

17 Liu, B. (2018). The Role of Chinese Financial Institutions in Promoting Sustainable Investment Under the One Belt One Road Initiative. *APDR Working Paper No. 18-7*

18 Hu, D., Ou, J., & Hu, X. (2017). On the Environmental Responsibility of Chinese Enterprises for Their FDIs in Countries within the One Belt and One Road Initiative. *The Chinese Journal of Comparative Law*, *5*(1), 36-57.

Current Greenness of the BRI

This chapter provides the circumstantial foundation for analyzing how MDBs can contribute to greening the BRI by providing an analysis of the current greenness. The central conclusion is that current development trajectories of BRI countries are misaligned with the environmental and climate targets of the SDGs. This chapter's analyses is carried out by assessing the fundamental financing demand and supply in BRI countries, the greenness of the BRI labelled policy framework, as well as the greenness of Chinese, non-Chinese, and MDB financing.

1. Total Financing Demand

Demand for infrastructure investment in BRI countries far outweigh the current supply. As mentioned above, the ADB estimates total infrastructure investment needs of $22,6tn from 2016 to 2030, which is increased by 13% if adjusted to be climate change compatible.[1] Adjusting this number to cover the BRI scope India has to be subtracted while a number of African, European, and Latin American countries need to added to reach the current 123 countries. While no comparable numbers exist for BRI countries cumulatively, the essential conclusion is that investment needs are substantially greater than investment provided today.

In this context it is important to note that BRI as an abstract initiative rather than a geographic scope, is not an infrastructure financing scheme and does not aim to cover all infrastructure investment needs. Still, it remains an initiative contributing to meeting the current gap through its focus on connectivity. As such, it is only possible to determine the infrastructure need and BRI expected supply, while the difference cannot be defined as a 'gap'. Concretely, the $1-8tn estimated cost of the BRI is a contribution to meeting the need of more than $20tn of total infrastructure financing.

As estimated by Natixis, meeting the BRI financing demand from the Chinese side alone would require another 50% increase in cross border lending over the next 5 years.[2] While the annual 18% growth rate over recent years suggest that is possible, the dilemma lies in where China would source this capital. If solely financing by China, it would increase Chinese external debt from 12% to 50% by 2020 and beyond. As this is not realistic, financing the BRI has to be realized by pooling sources together globally. Furthermore, most statistics on Chinese outbound financing in 2018 suggest a contraction in both loans and equity investment, making it even less realistic to finance the BRI purely from a Chinese side.[3]

1 Asian Development Bank (2017). *Meeting Asia's Infrastructure Needs*. Manila, Philippines: ADB

2 Natixis (2017). *The Belt and Road: Great Project as Long as One Can Finance It!*. Paris, France: Natixis.

3 American Enterprise Institute (2019). *China Global Investment Tracker.*

A source of particular potential is European banks. Cross border bank lending today hovers at $15tn, of which more than half originates from European banks, with only about 10% from Chinese banks. Of the $15tn, 20% are lent to borrowers in BRI countries, again with European banks providing more than half of such loans.[4] Already today, Western banks are mobilizing in preparation to seize opportunities in the BRI. In addition to loans, global capital markets should be tapped for funding the BRI as trillions of dollars in equity and debt could be used for such purposes.[5]

Lastly, MDBs can play an important role in meeting the financing need. At a total scale of about $1tn of subscribed capital, channeling financing into and aligning with the BRI can be an important source of capital. Furthermore, the unique characteristics of MDBs allow them to catalyze private capital more efficiently than most other financial institutions.[6]

2. Overarching Guidance Framework of the BRI

The greenness of the BRI is ultimately set out in its originating and overarching policy and guiding documents. As a Chinese initiative, these documents mostly originate from Chinese official sources, but may cover and be accepted by other BRI countries and global actors.

Issued in 2015 by the Chinese National Development and Reform Commission (NDRC), Ministry of Commerce (MOFCOM) and Ministry of Finance (MOFA), the *Vision and Actions On Jointly Building Silk Road Economic Belt And 21st-Century Maritime Silk Road* is the central document lying out the principles, framework, priorities, and mechanisms of the BRI. In his speech at the launch of the document at the Boao Forum in Hainan China's President Xi Jinping said "The programs of development will be open and inclusive, not exclusive. They will be a real chorus comprising all countries along the routes, not a solo for China itself."[7] This highlights the rhetoric around an inclusive nature of the initiative. Environmental and climate issues are specifically mentioned in the document under 'connectivity' as a priority, phrased as: "At the same time, efforts should be made to promote green and low-carbon infrastructure construction and operation management, taking into full account the impact of climate change on the construction."[8]

Launched at the 2017 Belt and Road Forum, the Guiding Principles on Financing the Development of the Belt and Road, was endorsed by 27 ministers of finance of participating countries.[9] As such it forms a central pillar of how not only China but other participating countries plan on financing the BRI. Within the brief 4 page document, environmental concerns are addressed as the following: "We underscore the need to strengthen social and environmental impact assessment and risk management of projects, improve cooperation on energy conservation and environmental protection…". This shows the inclusion of environmental issues, while slightly unorthodox that the specific world 'climate' is not included.

4 Natixis (2017). *The Belt and Road: Great Project as Long as One Can Finance It!.* Paris, France: Natixis.

5 Columbia University & Renmin University (2017). *Belt and Road Initiative Green Development Conference.* NY, USA: Columbia University

6 Afircan Development Bank et al. (2015*). From Billions to Trillions: MDB Contributions to Financing for Development*

7 Xinhuanet (2015). *China Focus: Belt and Road Initiative facilitates more opening-up China.* Available from: http://www.xinhuanet.com/english/2015-04/22/c_134174847.htm

8 National Development and Reform Commission, Ministry of Finance, and Ministry of Commerce (2015). *Vision And Actions On Jointly Building Silk Road Economic Belt And 21st-Century Maritime Silk Road*

9 Chinese Ministry of Finance (2017). *Guiding Principles on Financing the Development of the Belt and Road.* Beijing, China: MOF

Furthermore, in the same speech Xi Jinping called for "the establishment of an international coalition for green development on the Belt and Road, and we will provide support to related countries in adapting to climate change."[10] This coalition was officially launched towards the end of 2018 and is hosted jointly by the United Nations Environment Program (UNEP) and the Chinese Ministry of Ecology and Environment (MEE). The purpose of the coalition is to bring together numerous partner organizations from around the world to form the largest body of environmental expertise possible in order to ensure that Belt and Road brings long-term, planet-friendly growth.[11]

As a China-UK joint initiative, the Green Investment Principles for the Belt and Road, are a set of voluntary guidelines, led by the Green Finance Committee of the China Society for Finance and Banking and the Green Finance Initiative of the City of London.[12] These principles as launched at the second BRI Forum in May 2019 forms a benchmark approach to BRI financing that can be adopted for any type of investment.

In parallel with Chinese official policy efforts, a number of other initiatives coordinate and promote the greening of the BRI. Amongst the principle ones are the *Global Green Finance Leadership Programme*, hosted by the Centre for Finance and Development of Tsinghua University, bringing together stakeholders from around the world to serve as a platform for knowledge sharing on best practices of, and inspiring innovations for, scaling up green and sustainable finance.[13] Second, IFC's *Sustainable Banking Network* assists developing countries in developing their domestic green financial systems. This network uses many lessons learn from the Chinese experience, such as on scaling up green bonds.[14] Finally, the Council for International Cooperation on Environment and Development (CCICED) is a high-level international advisory board to the Chinese government, including issues related to sustainability in the BRI.[15]

3. Chinese Financing

Policy Documents on Sustainability of Chinese BRI financing

To understand Chinese financing in the BRI it is important to first analyze the policy and guiding documents, and then secondly to look at the financial flows in practice. While the above listed overarching guidance documents encompasses all BRI stakeholders, a large number of policy documents govern and guide Chinese participation in the initiative. These can be separated into policy documents on Chinese overseas investment, on green finance specifically with an overseas component, and document specifically on environmental issues of Chinese

10 Xinhuanet (2017). *Full text of President Xi's speech at opening of Belt and Road forum.* Retrieved from: http://www.xinhuanet.com//english/2017-05/14/c_136282982.htm

11 United Nations Environment Program (2017). *A Green Belt and Road*. Retrieved from: https://www.unenvironment.org/news-and-stories/press-release/green-belt-and-road

12 World Economic Forum (2018). *Three ways China can make the New Silk Road sustainable*. Retrieved from: https://www.weforum.org/agenda/2018/09/three-ways-china-can-make-the-belt-and-road-initiative-sustainable/

13 Green Finance Leadership Programme (2018). *About Us.* Retrieved from: http://www.gflp.org.cn/About%20us.html

14 International Financial Corporation (2018). *Sustainable Banking Network.* Retrieved from: http://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/company-resources/sustainable-finance/sbn

15 China Council for International Cooperation on Environment and Development (2018). *Overview*. Retrieved from: http://www.cciced.net/cciceden/ABOUTUS/Overview/

overseas investment. In analyzing the impact of policy documents, it is critical to make a distinction between hard, mandatory provisions and soft, guiding provisions. This difference can usually be made by the title of documents, where "Guiding Opinions" or "Guidelines" are soft, and "Measures", "Provisions" and "Notice or Circular" are hard.

The first category, namely regarding general policy documents on Chinese overseas investment cover a wide range of material including with a long history and from many ministries and regulators. The key policy documents in this category are listed in table 1 below. Considering this type of policies, it is clear that no formal regulations on environmental protection exists. The issue of environment and climate is usually included in the documents, but only with brief mention in an article or two.

Table 1. Key Policy Documents on Chinese Overseas Investment

Year	Issuing Agency	Policy Title	Primary content
2018	MOFCOM, PBOC, SASAC, CBRC, CSRC, CIRC and SAFE	Interim Measures for the Reporting of Outbound Investments Subject to Record-filing or Approval	Requirements for information sharing on online platform used for approval processes
2017	NDRC	Administrative Measures on Overseas Investments	Determines process and scope of overseas investments
2017	State Council	Further Guiding and Regulating the Outbound Investment Direction	Defines encouraged, restricted, and prohibited Sectors of investment
2017	NDRC, MOFCOM, PBOC, MFA, ACFIC	Regulations on Outbound Investment and Business Activities of Private Enterprises	Investment practice and assessment, including on green variables
2009	MOFCOM, SAFE	Notice on the Joint Annual Inspection of Overseas Investment	Evaluation of compliance with Chinese and host country laws
2008	MOFCOM, MFA, SASAC	Notice on Further Regulating the Foreign Investment Cooperation of Chinese Enterprises	Process of inspection, approvals, and fines for breaches of practice

Source: Author's compilation

Secondly, as the Chinese financial system is internationalizing, including in relation to green finance, most policy documents guiding green finance in China include international provisions. The key documents and their overseas investment provisions are listed in table 2 below. These are usually in regard to compatibility with international standards and compliance with international best practice, as well as in ensuring proper assessment of environmental risks in investment decisions.

Table 2. Key Policy Documents on Green Finance with Overseas Investment Provisions

Year	Issuing Agency	Policy Title	Overseas Investment Provision
2016	PBOC, MOF, NDRC, MEP, MOF CBRC, SCRC, CIRC	Guidelines for Establishing the Green Financial System	Article 31: Enhance the "greenness" of China's outward investment.
2012	CBRC	Green Credit Guidelines	Requires compliance of local environmental rules on banking and adherence to international best practice
2014	CBRC	Key Indicators of Green Credit Performance	System for assessment of performance of banks overseas engagements
2015	Green Finance Committee	Green Bond Endorsed Project Catalogue	Relations and compatibility with ICMA's Green Bond Principles

Source: Author's compilation

Lastly, as of the time of writing there were five key documents relating specifically to green issues in the BRI and overseas investment exists. Issued in 2013 jointly the MEP and MOFCOM the *Guidelines for Environmental Protection in Foreign Investment and Cooperation* aims to reduce negative environmental impacts of Chinese overseas investment.[16] While ready in 2009, the document was not launched until 2013 due to disagreements on strictness and method of enforcement between the MEP and MOFCOM.[17]

Second in April 2017, the MEE, MFA, NDRC, and MOFCOM jointly issued the *Guidance on Promoting Green Belt and Road,* providing increasing clarity of how Chinese enterprises should act environmentally sustainable in the BRI. They are encouraged to use environmentally friendly process and materials, disclose annually on environmental performance, and support host countries in their environmental ambitions.[18] Yet, these are soft, guiding policies with no direct penalties for non-compliance. As an extension to this guidance, the third key document was launched by the MEE in June 2017, called the *BRI Ecological and Environmental Cooperation Plan.* This plan highlights what kind of supporting policies are required, how to integrate environmental issues into broader planning, and which standards should be enforced.[19]

The final two document were issued by the Green Finance Committee. The first document, called the *Environmental risk management initiative for China's overseas investment*, is a voluntary initiative advocating Chinese overseas investors to reduce environmental risks by understanding local regulations and environments, conducting quantitative risk assessments, disclosing their environmental performance, and adopting the highest international environmental performance standards.[20] The second is the *Green Investment Principles for the Belt and Road Initiative* launched jointly with the City of London Corporation's Green Finance Initiative. At the time of launch in 2019 it included 27 firms from across the world, and aims to include sustainability and low-carbon development into BRI projects.[21] Working closely with international financial institutions, the Green Finance Committee plays a key role in internationalizing Chinese green finance, including within the BRI.

As shown in the table and text above, a substantial number of policy documents promote the environmental and climate sustainability of Chinese investments into the BRI. Still, the policy environment and how it is enforced in practice is subject to skepticism from a number of sources. A central point in the critique is the questions of Chinese policy banks' adherence to international standards. According to the Financial Times

16 Ministry of Environmental Protection & Ministry of Commerce (2013). *Guidelines for Environmental Protection in Foreign Investment and Cooperation*

17 Gallagher, K.S. Qi, Q. (2018*). Policies Governing China's Overseas Development Finance: Implications for Climate Change*. Boston, USA: Tufts University

18 Ministry of Ecology and Environment, Ministry of Foreign Affairs, National Development and Reform Commission & Ministry of Commerce (2017). *Guidance on Promoting Green Belt and Road*

19 Ministry of Ecology and Environment (2017). *BRI Ecological and Environmental Cooperation Plan*

20 Green Finance Committee (2017). *Environmental risk management initiative for China's overseas investment*

21 People's Daily (2019). *Green Belt and Road principles receive industry backing.* Retrieved from: http://en.people.cn/n3/2019/0426/c90000-9572684.html

reporting, these banks fail to live up to international standards by selecting contractors only from Chinese state-owned construction and engineering companies. They further argue that the banks do not adequately conduct environmental and social impact studies. Specifically, of Chinese financing 89% goes to Chinese contractors. [22] Addressing Chinese commercial banks, Friends of the Earth argues that they do not adequately require high quality environmental and social impact assessment from their clients, and that public consultations are not sufficiently available.[23] Finally, some scholars argue that despite being frequently requested to adopt international social and environmental safeguards in overseas investments in policy documents, Chinese investors in fact use higher safeguards in domestic than in overseas projects.[24] As the biggest investor in least-developed countries and developing Asia by FDI stock, the Financial Times argues that the policies guiding Chinese outward FDI has to be overhauled to support host countries' sustainable development trajectories.[25]

Estimating Chinese BRI Financing

Chinese BRI financing can take many forms in terms of sources, sectors, and geographies. Much capital is indirectly sourced from Chinese foreign reserves, moving them from US treasury bonds to BRI projects in order to support such policy objectives. At about $3tn such reserves are substantial despite being reduced from a peak of $4tn in 2015. As carrying the entire burden would be financially unsustainable in terms of external debt on the Chinese government, a combination of tools is Beijing used today, gradually shifting away especially from a policy bank driven approach.

In terms of current Chinese BRI investment, the World Wildlife Foundation and HSCB estimates the annual number at $143bn for 2017, growing 18% annually from 2014-17[26], as shown in figure 2 below. Such a rapid increase in BRI financing shows action behind the ambitious words on the BRI, although the increase started much previous to the announcement of the initiative. Compiling statistics from Oxford and Financial Times, White & Case puts total outstanding loans or equity at a total of $298bn as of the end of 2016.[27] The distribution of this outstanding financing is shown in figure 3 below. Another estimate by Caixin puts this number even higher, with $225,4bn from Chinese commercial banks, and more than $200bn in outstanding loans from policy banks.[28]

22 Financial Times (2018). *China development banks expand links with foreign lenders.* Retrieved from: https://www.ft.com/content/e0a2dd52-85b4-11e8-a29d-73e3d454535d

23 Friends of the Earth (2017). *Investing in a Green Belt and Road.* Berkeley, USA: Friends of the Earth

24 Gallagher, K.S. Qi, Q. (2018). *Policies Governing China's Overseas Development Finance: Implications for Climate Change*. Boston, USA: Tufts University

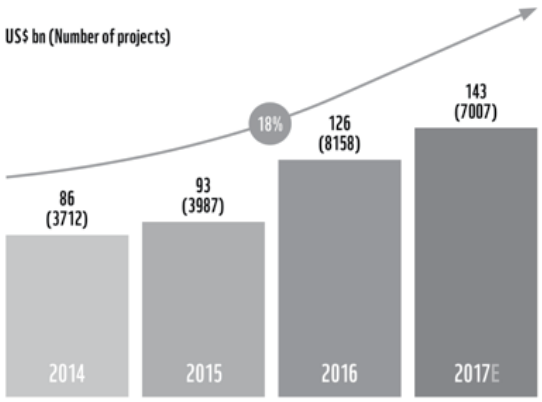
25 Financial Times (2018). *China's Belt and Road is conduit for polluting investments.* Retrieved from: https://www.ft.com/content/f965fa22-9be4-11e8-9702-5946bae86e6d?desktop=true

26 World Wildlife Foundation & HSBC (2018). *Greening the Belt and Road Initiative*. London, UK: WWF

27 White & Case (2018). *Green Belt and Road.* New York, USA: White & Case

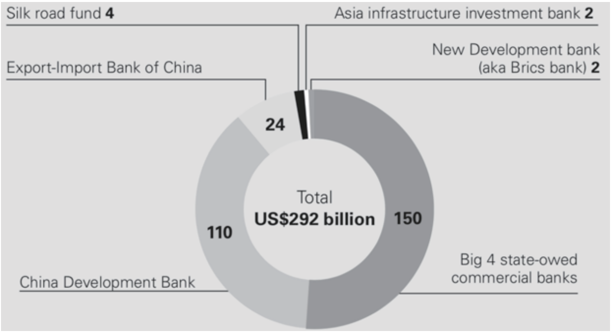
28 Caixin Global (2017). *China State Banks Provide Over $400 Bln of Credits to Belt and Road Projects*. Retrieved from: https://www.caixinglobal.com/2017-05-12/101089361.html

Figure 2. Chinese BRI Investment Trend



Source: WWF & HSBC (2018). Greening the Belt and Road Initiative. London, UK: WWF, based on analysis of the database of China's Ministry of Commerce (2017)

Figure 3. Total Chinese Outstanding Loans or Equity



Source: White & Case (2018). Green Belt and Road. New York, USA: White & Case

While commercial bank's lending is on profit-seeking terms, the terms for policy banks are difficult to estimate due to lack of disclosure. Evidence on specific cases from media and the International Monetary Fund's reports suggest the terms of China Development Bank (CDB) and China Export-Import Bank (EXIM Bank) loans vary substantially, from interest-free loans in the case of some Pakistan projects[29] to other concessional terms and even on fully commercial rate in the case of the of the Ethiopia-Djibouti railway.[30] Supporting BRI ambitions specifically in green finance, ICBC issued a $2bn Green BRI Bond in 2017 and again in 2019.[31] Additionally, in order to be present on the ground, by the end of 2016, 9 Chinese banks had set up 61 tier one institutions in BRI 25 countries.[32] Furthermore, the South China Morning Post claims that the traditionally conservative National Social Security Fund is also investing in BRI assets.[33] Looking forward, from China alone PwC predicts that the BRI will mobilize up to $1tn of outbound state financing in the next 10 years.[34] While 2018 saw substantially lower investment than the trend would predict, it remains to be seen whether this is an exception or a sign of change of the increasing investment trend.[35][36]

To estimate the greenness of Chinese BRI financing, it is possible to further break down investments

29 Mughal, Rashid. (2017) *CPEC-A Economic Revolution for Pakistan.* Retrieved from: http://pakobserver.net/cpec-economic-revolution-pakistan/.

30 Hurley, J. Morris, S. Portelance, G. (2018). *Examining the Debt Implications of the Belt and Road Initiative from a Policy Perspective. CGD Policy Paper 121*

31 Luxembourg Stock Exchange (2017). *ICBC lists its inaugural "Belt and Road" climate bond in Luxembourg.* Retrieved from: https://www.bourse.lu/pr-icbc-lists-belt-and-road-climate-bond

32 Zhihuan, E. (2017). Outlook of financing along the road from the perspective of international cooperation in "One Belt One Road" strategy. *Bank of China Hong Kong, Economic Review May 2017*

33 South China Morning Post (2017). *China's pension fund to join the new Silk Road investment spree*. Retrieved from: https://www.scmp.com/business/global-economy/article/2096245/chinas-pension-fund-join-new-silk-road-investment-spree

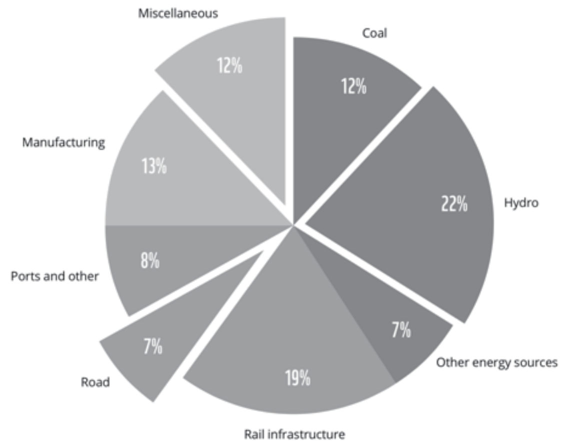
34 PwC (2016*). China's new silk route. The long and winding road.* Beijing, China: PwC

35 American Enterprise Institute (2019). *China Global Investment Tracker.*

36 Boston University Global Development Policy Center (2019). *China's Global Energy Finance.*

by sectors, and subsectors. A rough estimate is provided by WWF and HSBC's calculations, as shown in figure 4. These, again, are based on their total number mentioned before, which is different from other sources. In terms of sectors, the Institute for Energy Economics and Financial Analysis has calculated a rapid increase in Chinese overseas renewable energy investment, being the world's biggest investor, and with the majority going to BRI countries. The amount has doubled over the last years with $20bn in 2015, $32bn in 2016, and $44bn in 2017.[37] However, coal financing also takes up a significant proportion. According to National Resource Defense Council, China has financed $15bn worth of overseas coal plants in the 2013-2016 period.[38] Differences also exist between countries, as suggested by Reuters reporting the 75% of Chinese energy investment in Pakistan will be coal.[39] An issue within coal financing is also the efficiency of the coal plant in question. According to anecdotal evidence from Colombia University, while china is promoting ultra-supercritical coal plants, the majority of Chinese financed coal plants remain in sub-critical categories.[40]

Figure 4. Chinese BRI Investment by Sector



Source: WWF & HSBC (2018). Greening the Belt and Road Initiative. London, UK: WWF, based on analysis of the database of China's Ministry of Commerce (2017)

Another critical aspect of Chinese investment in BRI assets is their success rate. According to a study by RWR Advisory group[41] referenced by the Financial Times[42], 14% of Chinese backed BRI infrastructure projects have hit trouble. According to the study, most problems are due to governance issues that result in public opposition, objections over labor policies, performance delays, and national security concerns. This is echoed by Mikko Huotari, Director of the Berlin-based think tank Mercator, who claims that "There is

37 Institute for Energy Economics and Financial Analysis (2017). *China 2017 Review.* Cleveland, USA: IEEFA

38 Natural Resource Defense Council (2017*). Power Shift: Shifting G20 International Public Finance from Coal to Renewables*. New York, USA: NRDC

39 Reuters (2017). *Pakistan ramps up coal power with Chinese-backed plants*. Retrieved from: http://news.trust.org/item/20170503002235-gz83w/

40 Columbia University & Renmin University (2017). *Belt and Road Initiative Green Develpoment Conference.* NY, USA: Columbia University

41 RWR Advisory Group (2018). *RWR Transaction Data.* Retrieved from: https://www.rwradvisory.com/rwr-transaction-data-featured-financial-times/

42 Financial Times (2018). *China's Belt and Road is conduit for polluting investments.* Retrieved from: https://www.ft.com/content/f965fa22-9be4-11e8-9702-5946bae86e6d?desktop=true

a relative disregard for local conditions, country risks and . . . a general lack of transparency."[43] Such issues should in theory be addressed by the provisions of the policy documents listed above, but are in many cases not strictly implemented in practice.

4. Non-Chinese financing

For non-Chinese financing of BRI projects, it not similarly possible to do an analysis of the policy environment as financing origins from many countries. Comprehensive statistics are not possible to gather either. Still, by combining a number of sources it is possible to draw out the overall picture of non-Chinese financing in the BRI. In terms of potential financing, global and in particular western financial institutions have the capacity to meet the majority of the financing need.

The Paulson institute stresses the importance of catalyzing the more than $100tn of assets under managements by international financial institutions into the BRI, as only a fraction of this capital is currently used for this purpose.[44] Only by such broad participation from financers across the globe can the financing need of the BRI be met. Institutional investors, such as in particular pension funds and insurance companies, remains and untapped but potentially substantial source of capital for the BRI. Such institutions are looking to diversify their portfolios across sectors and geographies, and are in general mandated to limit investment only to low-risk assets. Infrastructure assets in the BRI may be suitable investment possibilities given their long-term, predictable income streams, low sensitivity to business cycles, and low correlation to other asset classes.[45] In particular, Western institutional investors hold 70% of global sustainable assets and have longer-term performance targets than other investors, are increasingly mandated by asset owners to align their portfolios with the Paris Agreement.[46] If these mandates continue to expand, they will lead to the development of a vast source funding for sustainable infrastructure in Asia and the Pacific. The key obstacle to involving this type of institutional investors is the low credit rating and low quality of such ratings for many BRI projects. Still, many projects meet risk requirements and development finance institutions can contribute to lowering risk of those projects that currently don't.[47]

Furthermore, ample liquidity in global capital markets existing since the global financial crisis provides a timely opportunity to source financing internationally. UBS estimated that the world's savers have $10 trillion in low-yielding government bonds, $7 trillion in bonds with negative real returns, and about $9 trillion into cash.[48] This "dead" money could be invested in sustainable infrastructure as an asset class on similar risk and better return terms, thus lowering the cost of capital for sustainable infrastructure projects in countries where

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43 Financial Times (2018). China's Belt and Road is conduit for polluting investments. Retrieved from: https://www.ft.com/content/f965fa22-9be4-11e8-9702-5946bae86e6d?desktop=true

44 Paulson Institute (2017*). Paulson Institute Explores Green Finance Along the Belt and Road.* Retrieved from: http://www.paulsoninstitute.org/events/2017/11/01/paulson-institute-explores-green-finance-along-the-belt-and-road/

45 Inderst, G. 2010. *Infrastructure as an Asset Class*. Luxembourg: European Investment Bank.

46 Global Sustainable Investment Alliance (2017). *Global Sustainable Investment Review 2014-2016*

47 Asian Development Bank (2017). *Meeting Asia's Infrastructure Needs*. Manila, Philippines: ADB

48 Financial Times (2019). *Governments won't fund sustainable development. Will private finance step in?* Available from: https://www.ft.com/content/82ef5e8e-1ea1- 11e9-b126-46fc3ad87c65.

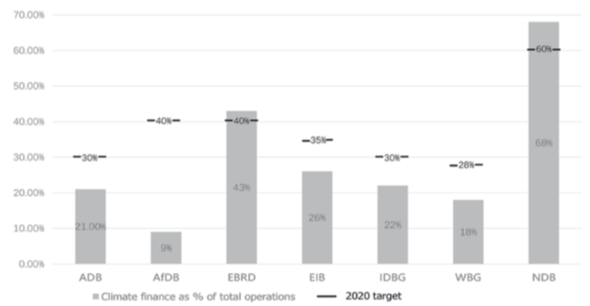
capital can flow in from abroad.

Considering current financing of infrastructure in BRI countries, European financial institutions provide the majority. For example, as mentioned above Natixis estimates that of the $3tn cross-border loans to BRI countries, more than half come from European banks and about 10% come from Chinese banks.[49][50] Simultaneously, the EU has indicated that European public resources will not be allocated at a very large scale to support the BRI. On the contrary, the EU's *EU-Asia Connectivity Strategy* emphasizes that European private capital resources should be mobilized.[51] It remains difficult to estimate what this will mean for the EIB's engagement.

5. MDB Financing

Globally in the 2013-2015 period, MDB climate finance amounted to over one third of developed countries climate financing support to developing countries, working to fulfil the 2020 promise of $100bn under the UNFCCC.[52] While the cumulative numbers are large, it is critical to view these as a proportion of total financing, as shown in figure 5 below. Based on their commitments, MDBs will provide 40% of global developed to developing country climate flows by 2020.[53] This shows that as most MDBs need to make drastic progress within a short period to achieve their targets, they have to carry out rapid change in financing direction compared to business-as-usual. In addition to active targets for climate finance, MDBs are also using negative lists for excluding projects. For example, the World bank Group former President Jim Kim announced at the One Planet Summit in Paris 2017 said that the World Bank Group will no longer finance upstream oil and gas[54], while the bank quit coal fired plants in 2010.

Figure 5. MDBs Climate Finance Proportion and Targets



Source: Author's update (2019), based on African Development Bank et al. (2019). Joint Report on Multilateral Development Banks Climate Finance.no comparable data exists for the AIIB and IsDB) [55]

49 Natixis (2017). *The Belt and Road: Great Project as Long as One Can Finance It!*. Paris, France: Natixis.

50 Bank for International Settlements (2017). *Statistical release: BIS international banking statistics at end-June 2017.* Basel, Switzerland: BIS

51 China Briefing (2018). *The EU Commission's "EU-Asia Connectivity Strategy" Omits China.* Retrieved from: http://www.china-briefing.com/news/eu-commissions-eu-asia-connectivity-strategy-omits-china/

52 Organization for Economic Cooperation and Development & Climate Policy Initiative (2015*). Climate Finance in 2013-14 and the USD 100 billion goal*. Paris, France: OECD

53 Organization for Economic Cooperation and Development (2017*). Investing in Climate. Investing in Growth.* Paris, France: OECD

54 World Bank Group (2017). *World Bank Group Announcements at One Planet Summit*. Retrieved from: http://www.worldbank.org/en/news/press-release/2017/12/12/world-bank-group-announcements-at-one-planet-summit

55 Note for designer: Please update visualization with 2019 numbers: Asian Development Bank (ADB): 18 per cent; African Development Bank (AfDB): 31 per cent; European Bank for Reconstruction and Development (EBRD): 31 per cent; European Investment Bank (EIB): 30 per cent; Inter-American Development Bank Group (IDBG): 25 per cent, World Bank Group (WBG), 32 per cent.

It is further important to consider the overall greenness of MDBs portfolios. The World Resources Institute has analyzed the climate financing by the World Bank Group, International Finance Corporation (IFC), and ADB (accounting for 1/3 of MDB financing), compared with a 2-degree scenario. They conclude that 17% of energy infrastructure financing is aligned with a 2-degree pathway, 57% is conditional, 22% is controversial, and 3% is misaligned.[56] Despite the study's limited coverage, it provides an indication that MDBs need to change business-as-usual practice to be aligned with green policy objectives. Another study measuring alignment of MDBs with the Paris Agreements by E3G, concludes that MDBs are currently not adequately aligned with global climate ambitions scoring between 15 and 23 out of 42 possible points on E3Gs scoreboard.[57] In total, a third of all MDB infrastructure financing in 2013-2015 targeted climate change mitigation or adaptation. Working towards improving the situation, the joint IDFC-MDB statement at the One Planet Summit of 2017 promises to align financing with the Paris Agreement.[58] While these are cumulative global statistics, the trends and proportions are roughly similar for BRI countries.

As most BRI countries are developing countries with large infrastructure needs, MDBs have been historically active in the region. Specifically, MDBs account for an estimated 2.5% of infrastructure investments in developing Asia. Excluding China and India, MDB contributions rise above 10%.[59] Towards the BRI in particular, the MDBs have already showed their support and willingness to coordinate their role with Chinese side. As other China led initiatives the Asian Infrastructure Investment Bank (AIIB) and New Development Bank (NDB) are both well aligned with BRI efforts. MDB involvement was formalized on the opening day of the 2017 Belt and Road Forum, when the Chinese Ministry of Finance signed an MoU on BRI financing with the ADB, AIIB, EBRD, EIB, NDB, and World bank Group.[60] In terms of green financing of MDBs under the BRI, the MDBs do not report specifically on their green financing, but rather on their climate finance. Of the $42bn of total MDB financing in 2018, approximately half went to BRI countries.[61] As with all other MDB financing, BRI financing has to meet the respective MDB's social and environmental safeguards which are generally similar and considered a global benchmark.

56 World Resources Institute (2017). *Financing the Energy Transition: Are World Bank, IFC, And ADB Energy Supply Investments Supporting A Low-Carbon Future?*. Washington DC, USA: WRI

57 E3G (2018). *Banking on Reform: Aligning Development Banks with the Paris Agreement*. London, UK: E3G

58 World Bank Group (2017). *Together Major Development Finance Institutions Align Financial Flows with the Paris Agreement.* Retrieved from: http://www.worldbank.org/en/news/statement/2017/12/12/together-major-development-finance-institutions-align-financial-flows-with-the-paris-agreement

59 Asian Development Bank (2017). *Meeting Asia's Infrastructure Needs*. Manila, Philippines: ADB

60 Chinese Ministry of Finance (2017). *Memorandum of Understanding on Collaboration on Matters of Common Interest Under the Belt and Road Initiative.* Beijing, China: MOF

61 African Development Bank et al. (2019). *Joint Report on Multilateral Development Banks Climate Finance*

Characteristics of MDBs

Following Monterrey, Mexico, 2002, and Doha, Qatar, 2008, the third United Nations International Conference on Financing for Development was held in Addis Ababa, Ethiopia in 2015. This event brought together a wide array of stakeholders to discuss how to finance the SDGs, which were being settled around the same time in a parallel process. Participants at the event included more than 50 heads of state and 200 ministers, UN and other intergovernmental institutions such as the WTO, prominent businesses, civil society organizations and other stakeholders. The outcome of the document was the Addis Ababa Action Agenda. As a product of this process, the Addis Ababa Action Agenda provides the most applicable reference point for understanding financing for development, and this is the reason this paper uses it as baseline for understanding the characteristics of MDBs.

In contributing to sustainable development, the Addis Ababa Action Agenda highlights five primary characteristics of MDBs[1], namely 1) long-term & stable, 2) counter-cyclical, 3) concessional terms, 4) know-how & technical assistance, 5) as well as private capital mobilization. The 5th characteristic differs from the above four as it is a *result* of MDB project involvement, rather than a characteristic of the type of involvement. However, as the Addis Ababa Action Agenda represents the UN members official consensus of the role of MDBs, this paper applies this framework of characteristics as a basis of its analysis. Private capital mobilization is consequently considered as constituting financial policy support and financial mechanisms, while being closely related to the other four characteristics. While the Addis Ababa Action Agenda merely mentions the characteristic with limited details, the below paragraphs provide a clarifying description of each. To ensure that the five categories below provide an exhaustive coverage of MDB characteristics, the content of each category is a combination of literature from a wider range of sources.

1. Long-term & stable

From a development perspective, there is a clear advantage to the MDBs' more stable and long-term approach to financing, compared with other investors. As an illustrative example on equity investment, many investors today are seeking short-term profit, being fearful of unpredictable events and volatility, resulting in an average share holding time of 3-4 months, by

1 Addis Ababa Action Agenda (2015). *Addis Ababa Action Agenda of the Third International Conference on Financing for Development*. Addis Ababa, Ethiopia: United Nations

some estimates.[2] In particular, long-term lending has seen a substantial decrease since the financial crisis.[3] This kind of investor behavior makes many economies increasingly vulnerable to disrupting events as they can have sudden and radical effects on financial markets and the economy as a whole. MDBs are in a unique position to provide long term financing possibilities under circumstances where no other financing available on such tenor.[4] In such a case, long-term and stable MDB financing reduces the vulnerability of projects to market fluctuations. While using a longer time horizon than many other investors, different estimates exist on the average MDB loan maturity and grace periods, usually putting them about 20-30 years.[5,6,7]

2. Counter-cyclical

In addition to being long-term and stable, MDB financing can take an active role in counter-cyclical lending. The reason MDBs are able to provide such counter-cyclical financing is that they are policy driven as intergovernmental institutions, rather than driven by bottom-line profits. Furthermore, their high credit rating allows them to raise funds cheaper on global financial markets than other financial institutions would have to do in local markets under disadvantageous circumstances.[8] In this sense, when other investors are withdrawing from a country, region, or sector, MDBs can counter-balance this trend by increasing their own engagements. Such financing can act as an important stabilizer under circumstances such as an economic downturn, capital flight, a currency crisis, or the like.

3. Concessional terms

Lending at lower interest rate or grace periods, alone or in combination, reduces the cost of debt for projects, and consequently makes more projects bankable than purely on market terms. As shown in figure 6 below, as MDBs concessional lending reduces the cost of debt through a lower interest rate, more projects become bankable, since projects with a lower return on investment are now bankable. Mechanisms include concessional terms on interest rates, grace periods, early stage financing, first-loss clauses. For example, a project with a 10% return on investment would not be bankable with a market-based cost of debt of 12% but is bankable with a concessional loan at 8%. Therefore, reducing the cost of debt from R1 to R2, increases the number of profitable projects from Q1 to Q2. The slope of the curve is a conservative estimate as potential projects are more numerous at lower profitability levels, suggest the shape may be convex.

2 Forbes (2017). *Stock Market Becomes Short Attention Span Theatre of Trading.* Retrieved from: https://www.forbes.com/sites/greatspeculations/2011/01/21/stock-market-becomes-short-attention-span-theater-of-trading/#1878478a703e

3 Chelsky, J., Morel, C., & Kabir, M. (2013). Investment Financing in the Wake of the Crisis: The Role of Multilateral Development Banks. *Poverty Reduction and Economic Management (WB), 121*

4 Development Finance Institutions (2017). *DFI Working Group on Blended Concessional Finance for Private Sector Projects.*

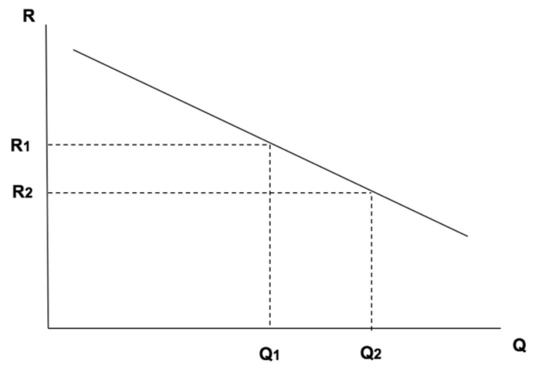
5 Buitier, W. & Fries, S. (2002). What Should the Multilateral Development Banks Do?. *EBRD Working Paper No. 74*

6 Overseas Development Institute (2015). *Multilateral Development Banks: A Short Guide*. London, UK: ODI

7 Carnegie Endowment for International Peace (2001). *The Role of the Multilateral Development Banks in Emerging Market Economies.* Washington DC, USA: Carnegie Endowment for International Peace

8 Commonwealth (2016). *Countercyclical Financial Instruments*. London, UK: Commonwealth

Figure 6. Relation between cost of debt (R) and bankable project quantity (Q)



Source: Author

In addition to lending at lower rates, MDBs can provide concessional terms on risk management instruments which enable private investments in the context of uncertainty. For example, by backing private equity, debt financing in more challenging environments can take place. Concessional terms can be provided through most financial mechanisms of MDBs such as various forms of project loans, syndicated loans, equity, mezzanine financing, lines of credit, and guarantees.

4. Know-how & technical assistance

MDBs possess valuable expertise on development finance, often owing to their size and history, combined with their individual, regional, or sectorial priorities. As such, MDBs, seen as authorities in the field, are often initiating and participating in project research and development on a wide array of topics within development finance. Due to such authority, project owners are often enthusiastic in involving MDBs as this is considered a stamp of approval by stakeholders, as MDB involvement indicates that a project lives up to the requirements of MDB financing. Consequently, with an MDB involved in a project, the risk is perceived as lower, reducing the cost of debt. This is part of the role of MDBs as bridging the gap between project owners and investors.

Technical assistance is offered at both institutional and project level. Institutionally MDBs assist states and institutions in strengthening domestic capital markets. MDBs encourage development by helping governments put in place a number of necessary conditions for stable market economies, including policies that promote macroeconomic stability, laws that protect creditors and borrowers, local banking systems and capital markets, providing credit enhancement, structured finance, as well as tax structures.[9] By offering technical assistance on a macro level, MDBs facilitate a more favorable institutional and economic structure, that ultimately attracts private capital as project costs and risks are reduced. At a project level, technical assistance includes project structuring, risk-mitigation designs, and other advice improving the bankability of a project.

5. Private capital mobilization – policy support & specialized mechanisms

This characteristic differs from the above four as it is a *result* of MDB project involvement, rather than a characteristic of the type of involvement. The underlying ability to mobilize private capital is, according to the MDBs joint assessment[10], by providing financial policy support and using specific financial mechanisms in combination with the above-

9 African Development Bank et al. (2015). *From Billions to Trillions: MDB Contributions to Financing for Development*

10 African Development Bank et al. (2015). *From Billions to Trillions: MDB Contributions to Financing for Development*

mentioned characteristics. For continued coherence with the five MDB characteristics of the Addis Ababa Action Agenda, the paper applies the term private capital mobilization when referring to the two sub-components, despite private capital mobilization also being a product of the previous characteristics. Alternative categorizations of MDB characteristics label all mechanisms within private capital mobilization as an overarching category[11], but ultimately the conclusions of taking either approach will remain similar.

Through *policy support* MDBs assist in financing projects prioritized by the national or local government. In many contexts, this reduces the risk from political and other uncertainties. Assisting the government in realizing such strategic projects attracts capital toward the projects, to other similar projects, as well as to the economy as a whole.

Furthermore, MDBs use a variety of *specialized mechanisms* to catalyze other investors. These include syndications and other pooled funding structures, risk absorbing financial mechanisms such as senior loans and guarantees incorporating pre-completion and early operational risk, subordinated loans and guarantees ranking ahead of shareholder subordinated debt, mezzanine finance including high-yield debt for SMEs, as well as project-related derivatives.[12] Another type of mechanism includes MDBs absorbing risk by financing an extensive feasibility study. Lastly, MBDs have limits on their maximum share of total project costs, such as the EIB on average financing 30% of a project[13] and the AIIB having a hard ceiling at 35%.[14]

The above methods allow MDBs to decrease the risk, increase the profitability, and improve the overall feasibility and success of a project. This not only encourages the private sector to engage in specific MDB joint projects, but also provides a 'demonstration effect' inciting owners and investors to engage in similar projects on their own afterwards. In total, the ability to catalyze private sector capital is critical since this source of financing has to be catalyzed to meet sustainable development goals.[15] MDBs, according to their own and others' research, have the potential of catalyzing $2-5 of private capital for each $1 of their own spending.[16,17,18] In comparison, global developed to developing country climate financing has only catalyzed $0,34 of private capital per $1 of financing according to the OECD's calculations.[19]

11 Buitier, W. & Fries, S. (2002). What Should the Multilateral Development Banks Do?. *EBRD Working Paper No. 74*

12 European Investment Bank (2017). *Blending: Structured Finance*. Luxembourg, Luxembourg: EIB

13 European Investment Bank (2015). *The European Investment Bank at a glance.* Luxembourg, Luxembourg: EIB

14 Asian Infrastructure Investment Bank (2016). *Operational Policy on Financing*. Beijing, China: AIIB

15 Addis Ababa Action Agenda (2015*). Addis Ababa Action Agenda of the Third International Conference on Financing for Development.* Addis Ababa, Ethiopia: United Nations

16 African Development Bank et al. (2015*). From Billions to Trillions: MDB Contributions to Financing for Development*

17 World Economic Forum (2013). *Green Investment Report.* Geneva, Switzerland: WEF

18 Buiter, W., and S. Fries. (2002). What Should the Multilateral Development Banks Do*?. Working Paper No. 74, European Bank for Reconstruction and Development.*

19 Organization for Economic Cooperation and Development and Climate Policy Initiative (2015). *Climate Finance in 2013-14 and the USD 100 billion goal.* Paris, France: OECD

Table 3. Summary of Characteristics of MDBs and their Advantages

MDB Characteristic	Comparative advantage	Representative examples
1. Long-term and stable	MDBs make long term commitments to projects, providing stable investment at both project, sector, and geographic level.	Average MDB loan maturity of 20-30 years. The WBG and ADB's long term commitment to improving urban air quality in Asia through the Clean Air Initiative.
2. Counter-cyclical	Willingness to invest in strategic areas under circumstances where other investors are pulling back engagements.	MDBs statistically scaling up of climate financing in the wake of the global financial crisis, offsetting national budget cuts in many countries.[20]
3. Concessional terms	Ability to provide concessional terms in a variety forms including blended financing towards strategic areas.	The ADB's Green Finance Catalyzing Facility or the IaDBs green credit lines, aiming to increase the bankability of green projects.
4. Know-how and technical assistance	Large scale and long history of MDBs provide greater overarching expertise than other investors for both the specific project, and the country or region as a whole.	The EIB and WBG played a catalytic role in promoting green bonds, through their legitimacy and ambitious engagements. The new IMF-WBG partnership on tax diagnostics.
5. Private capital mobilization (5.A. financial policy support & 5.B. specialized mechanisms)	Through financial policy support and financial mechanisms MDBs can reduce perceived risks at both institutional and project level	Whereas MDBs catalyze $2-5 of private capital per $1 invested[21], the average for public north-south climate financing is $0.34. [22]

Source: Author

20 Organization for Economic Cooperation and Development (2016). *"CRS: Aid activities", OECD International Development Statistics* (database). Paris, France: OECD

21 African Development Bank et al. (2015). *From Billions to Trillions: MDB Contributions to Financing for Development*

22 Organization for Economic Cooperation and Development and Climate Policy Initiative (2015). *Climate Finance in 2013-14 and the USD 100 billion goal.* Paris, France: OECD

MDBs' Contribution to Greening the BRI

MDBs are increasing their involvement in sustainable infrastructure finance by scaling up climate investments and by integrating social and environmental issues into their general financing requirements as a cross-cutting issue. Based on their characteristics MDBs can play a number of important roles in greening the BRI. This chapter analyzes and provides recommendations across three specific areas, namely financing solutions, coordination activities, and policy support. To limit the scope of discussion, issues discussed are either green in nature or have an important green component. While the paper only addresses the BRI, practice from a global context are included to learn lessons from addressing similar challenges in the past.

1. Financing and Capacity Solutions

De-risking at Project Level

For many green projects, investors and project owners overestimate the risk and underestimate the returns. Vice versa, for polluting projects investors often use historical data to perceive risk to be low and return to be high, which may lead to problems at both project level and macro level as non-performing loans accumulate and investments become stranded assets.[1] In general, risks are higher for green projects due to newer and more expensive technology to meet green requirements as well as new management practices, in combination with many benefits of green projects not being monetized and captured as direct revenue.[2] This phenomenon includes both climate change related and other environmental risks, that depend on the local circumstances. At the project level, MDBs can de-risk projects through a range of financing solutions as listed below:

a) Technical Assistance

As the first key method of capacity building MDBs can use their know-how and technical expertise to improve stakeholders understanding of risks of both green and polluting projects. This expertise is a key characteristic of MDBs, as highlighted by the UN.[3] MDBs should utilize this characteristic at a higher degree and seek more opportunities to provide technical assistance. This can take place at difference levels of project preparation. Technical assistance can be provided to key stakeholders such as government, investors, and project holders at a general level to help them include climate and environmental risks in their risk management methodology and strategies. This is particularly important for BRI countries, for

1 Financial Stability Board – Task Force on Climate Related Financial Disclosures (2017). *Recommendations of the Task Force on Climate-related Financial Disclosures*. Basel, Switzerland: FSB

2 Asian Development Bank (2017b). *Catalyzing Green Finance: A Concept for Leveraging Blended Finance for Green Development.* Manila, Philippines: ADB.

3 Addis Ababa Action Agenda (2015). *Addis Ababa Action Agenda of the Third International Conference on Financing for Development.* Addis Ababa, Ethiopia: United Nations

which most development trajectories are misaligned with both the SDGs and the Paris Agreement. At the next stage, MDBs can help with technical assistance in project pipeline preparation, whether it is through a project developer or designated project development facility. Once projects are identified MDBs can assist in doing feasibility studies and environmental impact assessments. Depending on the MDB and the client, these services could be provided on either market or concessional terms. As an important example of a large-scale technical assistance project, the World Bank Group's Sustainable Finance Network gathers, analyzes and disseminates good practices of sustainable infrastructure finance across developing countries.[4]

b) Risk Assessment Disclosure

A second key method of capacity building is for MDBs to be transparent in their own assessments of climate and environmental risk. In following the FSB-TCFD guidelines, MDBs should disclose key figures and provide an evaluation of such risks in their own portfolios.[5] This will provide a benchmark for other investors to follow, given the normative authority of MDBs in the field. This, again is effective for improving risk perception for both green and polluting projects. In addition to MDBs individually disclosing their climate and environmental risks, they should also do so through their joint reporting as they will consequently be forced to develop a common methodology that can be used as a best practice for others to follow. The lack of data and analysis of such risk is a key obstacle for involving global institutional investors in BRI infrastructure, and consequently MDBs' efforts in this regard can play an indirect role in private capital catalyzation.

c) Public Private Partnerships (PPPs)

In terms of financing instruments to be used for de-risking green projects, MDBs have a broad toolbox. Blended finance in a PPP model allows MDBs to use their own resources to catalyze other resources. Such catalyzation ability of MDBs is highlighted in the UN Addis Ababa Action Agenda, while MDBs estimates that $2-5 of external financing can be catalyzed for each $1 of their own financing.[67] As PPPs work as a continuum of ownership sharing between the public and private entity, MDBs should try to have as low as possible commitment while providing enough financing to incite the private party's engagement. This allows MDBs to maximize their private capital catalyzation ability. As the BRI at the strategic level is a government to government initiative, national and local governments in BRI countries are already involved, providing a direct access point for MDBs to identify which public actor to work with in developing PPPs. An example of an MDB led PPP initiative with a strong climate component that could be replicated for BRI countries is the EIB's Med5P, working with public authorities on preparation, procurement and implementation of PPP infrastructure projects.[8]

4 International Financial Corporation (2018). *Sustainable Banking Network.* Retrieved from: http://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/company-resources/sustainable-finance/sbn

5 Financial Stability Board – Task Force on Climate Related Financial Disclosures (2017). *Recommendations of the Task Force on Climate-related Financial Disclosures.* Basel, Switzerland: FSB

6 Addis Ababa Action Agenda (2015). *Addis Ababa Action Agenda of the Third International Conference on Financing for Development.* Addis Ababa, Ethiopia: United Nations

7 African Development Bank et al. (2015). *From Billions to Trillions: MDB Contributions to Financing for Development*

8 European Investment Bank (2019). *MED 5P*. Available from: https://www.eib.org/en/projects/regions/med/med5p/index.htm

d) Concessional and non-concessional loans

As the primary vehicle for MDBs financial operations, direct loans are a key contribution MDBs can make to greening the BRI. The key advantages of MDB loans are firstly that they are longer term and stable. While the average length of corporate loans in China and many BRI countries is merely 5 years, MDB loans often run for 20-25 years. This lowers the transaction costs and uncertainty associated with refinancing a project several times over its pay-back period. A second advantage is that MDB loans may be concessional. This lowers the cost of capital, making a project bankable irrespective of changing the risk perception. Ultimately, the amount of green loans depends on MDBs strategy for capital allocation, highlighting the importance of MDB members setting hard quantitative proportional targets for climate and green financing. Concessional terms are particularly relevant in sustainable infrastructure development where risk is perceived as higher and consequently used to provide demonstration effects.[9]

e) Guarantees and insurance

To lower the climate and environmental risk carried by investors, MDBs can provide a number of different guarantees and insurances. By covering a government or government entity's potential failure to meet financial obligations to a private or public project, MDBs' guarantees have helped attract direct private sector investment.[10] As risk of often perceived to be higher for green projects, increasing MDBs efforts through guarantees has a particularly important role to play for the green sector. Sector specific risks include unstable political support in terms of reversal of subsidies or power purchase agreements for renewable energy, as often seen in BRI countries. Additionally, as the actual risk is often lower than the perceived risk, MDBs consequently have a smaller potential liability than for non-green projects. Such guarantees could also be privately provided, by banks, specialized institutions, or governments, but for BRI countries with high risks and unsophisticated financial markets, MDBs' mandate is particularly suitable.[11] A successful case of insurance is the Global Index Insurance Facility by the IFC, which facilitates access to finance for farmers, entrepreneurs, and microfinance institutions through the provisions of catastrophic risk transfer solutions and index-based insurance in developing countries.[12]

f) Risk sharing facilities

Such a facility works as a loss-sharing agreement between an MDB and a holder of assets in which the MDB reimburses the asset holder for a portion of the losses incurred on a portfolio of eligible assets. For example, the facility could allow a client to sell a portion of the risk associated with a pool of assets. For greening the BRI, MDBs could use such a facility together with national and local banks to increase these banks' commitments to issuing green loans. Over the last years, risk sharing facilities have become increasingly used by MDBs such as the IFC, EBRD, EIB, and AfDB, replacing other tools for address sub-investment grade risk clients.[13] This is particularly feasible for MDBs

9 Development Finance Institutions (2017). *DFI Working Group on Blended Concessional Finance for Private Sector Projects.*

10 African Development Bank et al. (2017b). *Catalogue of the MDBs and the IMF Financing Solutions*

11 Asian Development Bank (2017). *Meeting Asia's Infrastructure Needs*. Manila, Philippines: ADB

12 International Financial Corporation (2017). *Global Index Insurance Facility.* Available from: http://www.ifc.org/wps/wcm/connect/industry_ext_content/ifc_external_corporate_site/financial+institutions/priorities/access_essential+financial+services/global+index+insurance+facility.

13 African Development Bank et al. (2017b). *Catalogue of the MDBs and the IMF Financing Solutions*

with majority voting power of developing countries, as these are statistically less risk averse.[14] The EIB's Private Finance for Energy Efficiency scheme provides a successful case study of such a risk sharing facility.[15]

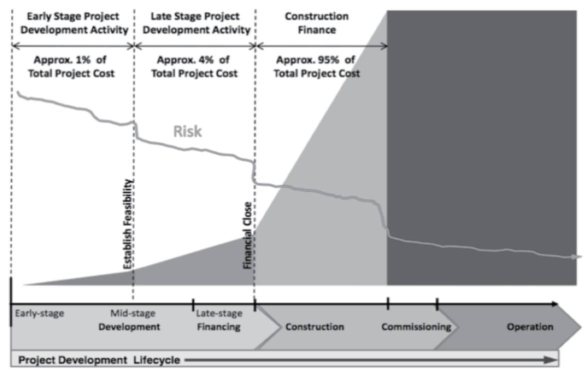
g) Hedging, Derivatives & Swaps

MDBs' stand-alone products for risk management help investors manage their financial risks. Using standard risk management techniques, these products can transform the risk characteristics of a borrower's obligations without changing the terms negotiated in the loan agreements. As an example, the World Bank Group has provided catastrophe swaps in the Caribbean region, exchanging a fixed payment for a part of the difference between insurance premiums and the losses caused by insurance claims.[16] This practice should be increasingly applied by MDBs in the BRI since such products are currently lacking and as financial costs from extreme weather events are increasing. For example, there is substantial risk of crop failure in Central Asian countries which could be addressed with such a tool. In case of such natural disasters the cost trickles down to the central government, resulting in financial stress on public budgets. MDBs can contribute to avoiding such circumstances.

Project Pipeline and Project Development Costs

A key issue for infrastructure projects in general and in particular for green infrastructure is the lack of a pipeline of potential bankable projects as well as high project development costs. As risk is particularly high at the early project stage, MDBs can play an important role in carrying this risk, while leaving the later stage to commercial investors. The project risk profile over time is visualized in figure 7 below.

Figure 7. Risk and capital costs during the project development lifecycle



Source: UNEP & Aequero (2011). Catalyzing Early Stage Financing. Nairobi, Kenya: UNEP

Transaction costs for preparing greener projects is also higher than conventional projects as green projects often carry higher risks both from using less mature and proven technologies as well as from a less stable and predictable political and economic situation. While the short-termism of many investors makes them less interested in infrastructure projects, long term institutional investors such as sovereign wealth funds, pension funds, and insurance companies are often discouraged by the higher risks from green projects

14 Brookings Institution (2018). *Time to reform the multilateral development bank system.* Retrieved from: https://www.brookings.edu/blog/future-development/2018/02/20/time-to-reform-the-multilateral-development-bank-system/

15 European Investment Bank (2019b). *Private Finance for Energy Efficiency.* Available from: https://www.eib.org/en/products/blending/pf4ee/index.htm

16 World Bank Group (2008). *Caribbean: Participants Renew Catastrophe Risk Insurance Facility for 2008 Hurricane Season*. Retrieved from: https://www.worldbank.org/en/news/press-release/2008/06/09/caribbean-participants-renew-catastrophe-risk-insurance-facility-for-2008-hurricane-season

and from less stable political circumstance in many BRI countries. MDBs' involvement in the early stages of project preparation can help to make projects an investible asset class for short-term investors and lower the risk to attract long-term investors. A systematic approach by MDBs individually and in cooperation is required develop a sufficiently large pipeline. This change is in contrast to today's situation where MDBs still principally deliver tailored projects that are hard to scale up because they are demanding and time-consuming to prepare. However, MDBs are starting to collaborate more to build such systems.[17] MDBs can contribute to project pipeline and development through a number of financing solutions as listed below:

a) Feasibility Studies

A first method for MDBs to contribute to project pipeline development is to use their expertise to do or finance feasibility studies. This can be done either through a grant, concessional, or market based terms, depending on the difficulty of finding alternative actors to carry out feasibility studies. Such studies are in particular needed in many BRI countries with no or limited historical examples of green infrastructure. With sustainability embedded in their mandates and historical experience with mature and new green technologies, MDBs experience with evaluating projects for their own financing can also be used to evaluate projects for other investors to finance. Such a tool can have a particularly strong catalyzing effect as the MDB commits only a small proportion, about 1%, of total project financing. A creative business model for MDBs to finance feasibility studies is to only charge for the studies that successfully reaches financial closure, charging a premium for the successful projects to cover the losses of the unsuccessful projects. A general example of a feasibility study financing scheme is the World Bank Group International Development Association's $18mn feasibility studies fund under the Afghani Ministry of Finance.[18]

b) Early Stage Financing

In addition to providing feasibility studies that allows investors to more accurately estimate the project risk, MDBs can carry some part of early stage financing themselves. With much interest in green BRI projects but a limited number of bankable projects for international investors to finance, MDBs early stage financing can bring such projects to the international market. This can often be done in cooperation with local and national development banks that have similar mandates as MDBs. This will often be in conjunction to having conducted the feasibility study first, while not being able to adequately catalyze alternative sources with the project's current risk profile. By committing financing past financial closure, MDBs can drastically reduce the risk to be carried by other parties. MDBs can subsequently sell off the asset to free up the capital to be used for new projects, maximizing private capital catalyzing rates. Because of the low liquidity that currently characterizes sustainable infrastructure assets, the sale of the assets is not currently common. However, with sustainable infrastructure becoming an international asset class driven by institutional

17 Brookings Institution (2018). *Time to reform the multilateral development bank system.* Retrieved from: https://www.brookings.edu/blog/future-development/2018/02/20/time-to-reform-the-multilateral-development-bank-system/

18 World Bank Group (2018). *ARTF - Feasibility Studies Facility.* Available from: http://projects.worldbank.org/P091259/artf-feasibility-studies-facility?lang=en

investors, this modality is likely to expand in the future.[19]

c) Special Purpose Vehicles (SPVs)

A concrete method for facilitating access to project finance is the creation of SPVs. This structure works as a legal entity created for a specific purpose which for raising capital can be used as a funding structure, by which all investors are pooled together into a single entity. With the higher risk of green infrastructure projects in BRI countries, an SPV setup can work as a risk-sharing mechanism that isolates project risk from the parent company while allowing other investors to take a part of the risk and profits. MDBs can contribute both with technical assistance for national and local governments to establish SPVs and also by carrying a stake in the SPVs themselves. Combined with green standardization of BRI infrastructure as an asset class, SPVs can be used to attract asset managers and infrastructure funds who want to increase their exposure in this field.[20] A large-scale example of successful support of an MDB to a green infrastructure SPV can be seen in AfDB's involvement in the Lake Turkana Wind Project.[21]

d) Project Preparation Facilities (PPFs)

Combining different parts of the above three methods, PPFs increase the speed and reduces the transaction costs for developing infrastructure. In immature infrastructure markets of many BRI countries which have weak links to global financial markets, PPFs can have a particularly critical role to play. MDBs can contribute to PPFs as initiator and facilitator as well as with technical and financial contributions. In practice, PPFs bring together all stakeholders involved in an infrastructure project and uses a more or less standardized method for project development an selection. This is what increases pace and reduces transaction costs. With a very limited number of existing facilities for green BRI projects, this is a gap that MDBs can contribute to filling. With their developmental mandates, MDBs are the logical party to bring together all stakeholders on an objective platform. The current status of PPFs is that in response to the difficulties many countries face in developing bankable infrastructure projects, a large number of PPFs have been established in recent years and investment in existing institutions has also increased.[22] Globally, there are now over 60 such facilities, including the World Bank Group's Global Infrastructure Facility, the EBRD's IPPF, the ADB's Asia-Pacific PPF and Green Finance Catalyzing Facility in Shandong, China, the NEPAD-IPPF of the AfDB, as well as country-specific facilities. Given the immense infrastructure needs of BRI countries, there remains plenty of room to scale up and replicate such facilities. The ADB case simultaneously provides an interesting example of an MDB providing a platform for project development where experts can provide input for improving project structuring.[23]

19 Global Sustainable Investment Alliance (2017). *Global Sustainable Investment Review 2014-2016.*

20 UK-China Green Finance Task Force (2017). *Interim Report: Turning Green Momentum into Action.* Beijing, China: UK-China GFTF

21 African Development Bank (2019). *Lake Turkana Wind Power Project: The largest wind farm project in Africa.* Available from: https://www.afdb.org/en/projects-and-operations/selected-projects/lake-turkana-wind-power-project-the-largest-wind-farm-project-in-africa-143/

22 Hoare, A. Hong, L. Hein, J (2018). The Role of Investors in Promoting Sustainable Infrastructure Under the Belt and Road Initiative. *Chatham House Research Paper May 2018.*

23 Asian Development Bank (2017b). *Catalyzing Green Finance: A Concept for Leveraging Blended Finance for Green Development*. Manila, Philippines: ADB.

2. Coordination Activities

Coordination of the overall layout of the BRI is today at a critical juncture for including and emphasizing environmental sustainability at the core of the initiative. This window of opportunity exists only in the current early stages of the initiative and includes strategizing, planning, and major project approval. Some argue that by 2020, the BRI strategy will be irreversibly finalized and the rules of the game established, with very long-term repercussions for the entire Eurasian continent, and beyond.[24] At the core of such coordination efforts is dialogue with the Chinese government as the BRI is a China led initiative, however broader coordination is also relevant as the initiative touches upon many aspects of international economics, relations, and governance. Additionally, MDBs have to coordinate between themselves as their joint efforts can have a greater impact than their individual parts. Lastly, MDBs can support the development of green standards as a prerequisite issue to be addressed for greening the BRI.

China Side Coordination

As an important part of financing infrastructure in BRI countries, the Chinese government involves MDBs in BRI planning, and vice versa the MDBs are generally active in their relations to the Chinese government. This provides the fundamentals for MDBs to contribute to greening the BRI by assisting and promoting its greening to the Chinese government. As a key testimony to MDBs involvement in BRI planning is the MoU signed by 6 MDBs with the Chinese Ministry of Finance at the 2017 Belt and Road Forum.[25] Such efforts of MDBs can be directed towards a policy, financial, and Chinese enterprise level.

Policy Level

While the MoU shows MDBs involvement, some commentators see its content as a missed opportunity to concretely push for a greener BRI. For example, MDBs environmental and social safeguards already serve as a global best practice, and could be included as guidance reference point in Chinese BRI policy documents[26], such as the ones listed in chapter 2 above. Instead, MDB standards only apply to their own BRI projects. Looking forward, MDBs can push for an agreement to use theirs or other safeguards and standards as basis point for all BRI projects with Chinese involvement.

As China has shown a clear interest in exporting pioneering and maturing work on green finance to BRI countries[27], MDBs can ensure and supports its inclusion in the planning of the BRI. These efforts should be directed specifically at the Green Finance Committee (GFC) as this body not only publishes policy guidance but is a key coordinating actor between other central government branches. In doing this in practice, the MoU provides the top-level approval for MDBs to get involved with Chinese public and private institutions.

Financial Institution Level

Below the policy level, MDBs should work directly

24 Tracy, F. Shvarts, E. Somonov, E. & Babenko, M. (2017). China's new Eurasian ambitions: the environmental risks of the Silk Road Economic Belt. *Eurasian Geography and Economics, 2017 VoL. 58, no. 1, 56–88*

25 Chinese Ministry of Finance (2017). *Memorandum of Understanding on Collaboration on Matters of Common Interest Under the Belt and Road Initiative*. Beijing, China: MOF

26 Hurley, J. Morris, S. Portelance, G. (2018) Examining the Debt Implications of the Belt and Road Initiative from a Policy Perspective. *CGD Policy Paper 121*

27 Columbia University & Renmin University (2017). *Belt and Road Initiative Green Develpoment Conference.* NY, USA: Columbia University

with Chinese financial institutions, and in particular the Chinese policy banks, the CDB and the EXIM Bank. Due to their scale and as they are generally increasing their BRI financing, influencing these two development banks can have tremendous long-term impacts. In terms of numbers, in 2014 these two Chinese policy banks, had outstanding loans to foreign borrowers of nearly $700bn, similar to the combined total of the World Bank Group and the five leading regional Asian development banks combined.[28] When MDBs work with the CDB and EXIM Bank, these two banks must follow MDBs international standards for project management, grievance mechanisms, procurement, as well as social and environmental safeguards. Realizing such cooperation projects consequently holds transformational potential. If the two policy banks become increasingly accustomed to this practice, they will have increasing internal organizational incentive to align their entire portfolio with the practice.

The CDB and EXIM Bank have three primary reasons to work more with MDBs. Firstly, working with MDBs gets them access to projects otherwise unavailable and in some cases better relations with central and local governments. Secondly, including MDBs in a project decreases the perceived risks while facilitating greater access to global capital markets, which decreases the cost of capital of the project – recalling that as policy banks the CDB and EXIM Bank has an interest in seeing a project completed rather than to maximize their profits. And thirdly, with up to 14% of CDB and EXIM bank projects have hit trouble so far[29], working with MDBs can improve project governance which can reduce this proportion.

While we have not seen any concrete cooperation examples yet, indications show that we might do so in the near future. A CDB statement sent to the Financial Times made clear that the CDB was "actively co-operating" with the EBRD with a view to co-lending with the bank, and that an MoU was in the planning.[30] The head of the Islamic Development Bank (IsDB) has also indicated the banks intention to do co-lending together with both the CDB and EXIM Bank.[31] Similar approaches can be used by MDBs in dealing with the more than 15 regional sovereign backed Chinese development funds, such as the Silk Road Fund, the China-Africa Development Fund, or the China-ASEAN Investment Cooperation Fund. Lastly, MDBs also have the role of involving both the Chinese policy banks and sovereign backed development funds in country coordination for a and share details of country specific pipelines.[32]

Chinese Enterprise Level

MDBs can work directly with Chinese enterprises both through the CDB and EXIM Bank as well as directly. Many Chinese enterprises have a clear profit drive interest in accessing BRI projects, while they also have government support through the 'going out' policy.

28 Financial Times (2018). *China development banks expand links with foreign lenders.* Retrieved from: https://www.ft.com/content/e0a2dd52-85b4-11e8-a29d-73e3d454535d

29 Financial Times (2018c). *China's Belt and Road difficulties are proliferating across the world.* Retrieved from: https://www.ft.com/content/fa3ca8ce-835c-11e8-a29d-73e3d454535d

30 Financial Times (2018). *China development banks expand links with foreign lenders.* Retrieved from: https://www.ft.com/content/e0a2dd52-85b4-11e8-a29d-73e3d454535d

31 Ibid.

32 Overseas Development Institute (2017). *Six recommendations for reforming multilateral development banks.* UK, London: ODI

A key challenge in this regard is that working under MDB standards entals more expensive requirements of more environmentally friendly technologies.[33] This may in some cases compromise the profitability of their involvement. Sinosure's unique role in underwriting risks of Chinese banks in their overseas engagements, is an avenue of MDBs to improve the greenness of the BRI. Sinosure underwrote $46,6bn of risk in 2016 against $159,4bn of construction completed.[34] MDBs can coordinate with Sinosure to also cover transitional and physical climate risks, in addition to political risks. MDBs can do this both by dialogue and technical assistance to improve Sinosure's risk assessment models as well as providing financial guarantees for green issues, along similar lines to what MDBs do in many cases already. MDBs can also work towards opening Sinosure to non-Chinese clients by involving them in pipeline development. This may lead to Sinosure considering to lower their current requirement of a minimum 70% involvement of Chinese banks in a project.

Broad Stakeholder Coordination

The activities of all participants in the BRI should be well aligned for the initiative as a whole to be successful. This goes for both the core purpose of connectivity as well as for sustainable development in the region. MDBs, given especially their nature as intergovernmental organizations as well as through their development expertise, can play a leading role in supporting and coordinating stakeholders. Their role is particularly important within environmental standards and safeguards, integration of global capital markets, organizing capacity building activities, as well as in regards to involving the EU in the BRI.

Environmental Standards and Safeguards

A number of environmental standards and safeguards are currently applied in BRI countries. In this regard it is important to distinguish these from green finance standards, which will be discussed separately below. As opposed to green finance standards identifying what qualifies as green, safeguards provide a minimum benchmark practice for avoiding harm. Current problems identified by some commentators are firstly that some countries engage in a race to the bottom of environmental standards in an attempt to facilitate and cut costs of investment, and secondly that communication lacks between planners and implementers of the BRI.[35] MDBs can push for the inclusion of higher environmental standards both directly to governments, and through their involvement directly and indirectly at project level. The AIIB, having both some of the highest safeguards of all MDBs as well as close link and ownership feeling of the Chinese government, can advocate effectively to the Chinese central planners of the BRI.

Without going into details with the specific standards, a number of approaches, practices, and benchmarks could be promoted. These include strategic environmental and social assessment, such as in particular the format of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services as well as the International Association for Impact Assessment. A

33 Columbia University & Renmin University (2017). *Belt and Road Initiative Green Development Conference.* NY, USA: Columbia University

34 Green Finance Initiative & China Green Finance Committee (2017). *Greening the Belt and Road.*

35 Tracy, F. Shvarts, E. Somonov, E. & Babenko, M. (2017). China's new Eurasian ambitions: the environmental risks of the Silk Road Economic Belt. *Eurasian Geography and Economics, 2017 VoL. 58, no. 1, 56–88*

number of sectorial standards could also be promoted such as the Hanoi Principles for construction and engineering, the Extractive Industries Transparency Initiative, the Hydropower Sustainability Assessment Tool, and the SuRe standard by Global Infrastructure Basel. As such, MDBs can play a key role in mainstreaming such practices across the BRI.

Catalyzing Global Capital Markets

To meet the financing need of the BRI, global capital markets have to be catalyzed. Current obstacles to do so include both hard regulation as well as perceptions of risks of BRI projects. MDBs can help address these issues, as their involvement works as a blue-stamp of a project itself while also providing a demonstration effect. On capital markets, MDBs can raise funds following the model of the 2017 and 2019 ICBC issuance of a green BRI bond. This provides an opportunity for global investors to buy low risk BRI assets, and can work as a first step towards direct equity stakes at the single asset level. As infrastructure is developing as an asset class for global institutional investors, MDBs can help include BRI infrastructure in this asset class.[36] The high credit rating of MDBs combined with the long term and stable returns from infrastructure makes this a relevant option within the mandates of many pension and wealth funds as well as insurance companies in the West. Another concrete method is for MDBs to facilitate a financial service platform where project holders can identify relevant investors and financial mediators. This could both be an international platform as well as providing input for local project preparation facilities.

Facilitating Capacity Building

In addition to the avenues of technical assisted mentioned above, MDBs can play a role in facilitating and coordinating such efforts to be carried out by other experts. Activities undertaken by MDBs elsewhere can be replicated to the BRI contexts, such as a the Public-Private Infrastructure Advisory Facility (PPIAF) of the World Bank Group and the Public Private Partnership (PPP) Resource Centers of the AfDB.[37] MDBs role as an third party with an intergovernmental mandate makes them an acknowledged and reliable partner for such efforts. Another effort towards guiding financing practice would be the development of financing guidelines. The lack of such guidelines have previously been highlighted in multi stakeholder dialogue sessions.[38] In support of MDBs developing such guidelines for BRI project, the Bank of China Hong Kong's Chief Economist Dr. E. Zhihuan, has voiced his hope that MDBs would do so in the near future.[39]

EU Participation

While originating in China, the involvement of the EU on other side of the historical silk road is critical for the initiative's success. As EU and China are important members of several MDBs, these ambitions can be reflected in the governance of MDBs. Here it is important to know that European countries are members of most MDBs, while membership of the EIB is exclusively for EU member states. However, since

36 Green Finance Initiative & China Green Finance Committee (2017). *Greening the Belt and Road.*

37 African Development Bank et al. (2017*). Catalogue of the MDBs and the IMF Financing Solutions*

38 Paulson Institute (2017*). Paulson Institute Explores Green Finance Along the Belt and Road.* Retrieved from: http://www.paulsoninstitute.org/events/2017/11/01/paulson-institute-explores-green-finance-along-the-belt-and-road/

39 Zhihuan, E. (2017). Outlook of financing along the road from the perspective of international cooperation in "One Belt One Road" strategy. *Bank of China Hong Kong, Economic Review May 2017*

2015 China has been a member of the EBRD, who is an increasingly active partner in the BRI, working closely with the Chinese central government on a number of projects.

The EU and Chinese leadership has already been made clear indications on their ambitions for cooperation such as highlighted in the Joint statement of the 20th EU-China Summit of the July 2018. A key for EU-China cooperation on BRI is the EU infrastructure investment plan, called the Juncker Plan. This could serve as basis for identifying avenues for potential cooperation at an overarching as well as project level.[40] Towards this purpose in particular, the EU-China connectivity platform was launched by the European Commission in late 2015, leading to an initiative such as the Trans-European Transport network and the upcoming China-EU Co-investment Fund (CECIF). The inclusion of the European Investment Fund (under the EIB), and the CDB in this fund is a significant case of high-level cooperation. MDBs, such as especially the EIB, have a key role in carrying out these EU related cooperation opportunities in practice.

Inter-MDB Coordination

Project Oriented Cooperation

MDBs can benefit from economies of scale from greater cooperation. Early research has shown that across the globe, while many of MDBs financing tools and areas overlap, they do not adequately cooperate in this regard.[41] Realizing such opportunities to lower transaction costs is one motivation, while another may be the idea that MDBs in cooperation have a greater impact than the sum of their individual efforts.[42] While MDB competition on policy advice, pricing, and financing modalities can be healthy it can also lead to a suboptimal outcome of crowding out participants in the development finance system.[43] While it is critical for financing solutions to be tailored to local environments, we currently see a number of inefficient overlaps. The fundamental argument for this recommendation is that if enough characteristics of MDBs financing solutions overlap, increased efficiency can be achieved through economies of scale. This is ultimately towards the fulfillment of the partnership principles of the Busan Partnership for Effective Development Cooperation.[44] Yet, such cooperation should not be promoted across the board since it may also increase complexity, leading to decreased efficiency.

Within the BRI, MDBs have already voiced such intentions such as at a seminar arranged by the Chinese Ministry of Finance in Beijing in 2018.[45] Specifically, MDBs agreed to work towards developing innovative co-financing solutions between MDBs, as well as to

40 Natixis (2017). *The Belt and Road: Great Project as Long as One Can Finance It!*. Paris, France: Natixis.

41 International Institute of Green Finance 2018). *The Role of MDBs in Green Finance*. Beijing, China: IIGF

42 Brookings Institution (2018). *Time to reform the multilateral development bank system.* Retrieved from: https://www.brookings.edu/blog/future-development/2018/02/20/time-to-reform-the-multilateral-development-bank-system/

43 Brookings Institution (2018b). *The New Global Agenda and the Future of the Multilateral Development Banking System.* Washington DC, US: Brooking Institution

44 Organization for Economic Cooperation and Development (2011). *The Busan Partnership for Effective Development Co-operation.* Retrieved from: http://www.oecd.org/ development/effectiveness/busanpartnership.htm

45 Chinese State Council (2017). *Multilateral development banks pledge cooperation along Belt and Road.* Retrieved from: http://english.gov.cn/news/video/2017/05/19/content_281475660222999.htm

jointly catalyze private capital by exploring ways to make projects commercially bankable and directly investible by private actors. Essentially, it is possible for MDBs to cooperate across most of the financial, coordination, and policy areas suggested in this paper.

Joint reporting

Transparent and comparable individual and joint reporting by MDBs on green finance would provide the necessary data to understand their cumulative role. Today, MDBs jointly report on their climate financing, but not on green financing.[46] However, the IDFC members report specifically on their green financing efforts.[47] Using a similar methodology to their current joint climate finance reporting, MDBs can apply the same scope as the IDFC, disclosing both climate and green financing separately in the same report. With momentum developing for expanding climate reporting through the FSB-TCFD[48], MDBs can take the effort from being climate focused to include more green factors. In the same sense that 'climate' reporting can be scaled up to 'green', ultimately 'green' forms a component of 'sustainability' reporting, as advocated as the most comprehensive approach by for example the UK Government's Green Finance Taskforce's TCFD workstream.[49] This can be done globally as well as separately within the BRI. Amongst the MDBs the EBRD has shown the strongest commitment to implementing the FSB-TCFD guidelines and can through this ambition be a front-runner in disseminating the practice in the BRI.[50]

The methodology used by the IDFC's green finance mapping report can be used as basis, although the methodology and coverage have to be tailored to the BRI context. To date, just 20 of 23 IDFC members report and all do so with difference in coverage. In addition to climate change mitigation and adaptation, the IDFC report covers the following green aspects: Industrial pollution control, water supply, water waste treatment, sustainable infrastructure, waste management, biodiversity, soil remediation & mine rehabilitation, and 'other environment'. Including those variables, MDBs could develop their joint climate financing report into a green finance report. Such a report would still show climate and other green aspects separately to meet the UNFCCC and the FSB-TCFD goals of coherent climate disclosure. In addition, such reporting should include not only how much financing is allocated within a certain definition, but also the MDBs total climate and environmental footprint. Such reporting is still in its infancy. According to the Economist, though an increasing number of insurance companies and pension funds report on their footprint, amongst the MDBs only the EBRD and Inter-American Development Bank

46 African Development Bank et al. (2019). *Joint Report on Multilateral Development Banks Climate Finance.*

47 International Development Finance Club (2016). *IDFC Green Finance Mapping Report 2016*

48 Financial Stability Board - Task Force on Climate-related Financial Disclosures (2017). *Recommendations of the Task Force on Climate-related Financial Disclosures*. Basel, Switzerland: FSB

49 UK Government's Green Finance Taskforce (2018). *Establishing the World's Best Framework for Climate-Related and Sustainability-Related Financial Disclosures.* London, UK: Green Finance Taskforce

50 European Bank for Reconstruction and Development (2018). *EBRD joins major initiative to promote financial stability in the face of climate change uncertainty*. Retrieved from: https://www.ebrd.com/news/2018/ebrd-joins-major-initiative-to-promote-financial-stability-in-the-face-of-climate-change-uncertainty.html

(IaDB) do so.[51]

As a challenge, these efforts, of course, relate back to setting clear standards for what is green, as discussed below. Green finance reporting, as such, can be a simultaneous or subsequent step to establishing green standards. In this sense, reporting is much more useful if carried out against the same benchmark as it allows for comparability. When such reporting is carried out based on consensus standards, issues of accounting disagreements can be discussed openly based on better information. As a testimony to the problem existing today, E3G reports that EBRD has labelled financing for a Moroccan port that will handle coal and an Azerbaijani offshore gas exploration project as partially climate.[52] Especially given the large differences between BRI countries, MDBs developing both a tailored methodology as well as a benchmark green standard can influence other financial institutions to replicate such practices.

Green Finance Standards

The lack of green standards is a key problem for greening the BRI. This has been highlighted by many commentators over the last years.[53][54][55] Given their authority in development finance, joint MDB action on green standard setting can be influential in setting global standards for all stakeholders. Despite local differences under the BRI and internationally, a green finance should be global since environmental problems ultimately relate to the same policy goals across the globe. In order to be able to compare green finance by different stakeholders, MDBs can take a lead in developing standards. Such standards can be used both at project level as green bonds, green credit, green insurance, as well as in organizations' green finance reporting. As the SDGs include more green factors than climate change alone and as many developing countries' environmental problems stem from non-climate change factors, it is critical that green standards are established and harmonized.

Under the practice of UNFCCC and OECD, climate financing is accounted on with a high level of detail, based on specific standards on what qualifies as climate change mitigation and adaptation. These processes can serve as inspiration for developing a similar practice for green finance. As already existing, the standards from the MDB-IDFC Common Principles for Climate Mitigation Finance Tracking[56] could be expanded with a green finance working group. MDBs are able to lead this effort on standard setting due to their institutional legitimacy based on institutional, delegated, expertise, principled, and capacity-based authority.[57] To allow for local specificities to be included in green standards, it may not be necessary nor possible to develop a single universal

51 Economist (2017). *Multilateral lenders vow openness about their carbon footprints.* Retrieved from: www.economist.com/news/finance-and-economics/21730448-environmentalists-allege-their-lending-has-been-less-green

52 E3G (2017). *Greening Financial Flows: What Progress Has Been Made in The Development Banks?*. London, UK: E3G

53 Paulson Institute (2017*). Paulson Institute Explores Green Finance Along the Belt and Road.* Retrieved from: http://www.paulsoninstitute.org/events/2017/11/01/paulson-institute-explores-green-finance-along-the-belt-and-road/

54 White & Case (2018). *Green Belt and Road.* New York, USA: White & Case

55 Green Finance Initiative & China Green Finance Committee (2017). *Greening the Belt and Road.*

56 Multilateral Development Banks – International Development Finance Club (2015). *Common Principles for Climate Mitigation Finance Tracking*

57 Avant, D.D., Finnemore, M., Sell, S.K. (2010). *Who Governs the Globe.* London: Cambridge University Press

standard. Rather, it is freasible to develop standards that can be coherently compared. This fundamentally depends on a segregation of objectives and activities, such as currently being discussed under the Green Bond Principles' working groups. For example, clean coal, nuclear, and large hydro, is categorized as green in some places and not in others. If the two standards are based on a compatible framework, it is simple to see if clean coal is included under 'pollution prevention and control' by one standard and not by another. Among existing initiatives towards this purpose, the EIB is cooperating with the Chinese government through the China Green Finance Committee to harmonize green bond standards in the EU and China.[58] Furthermore, the IFC has announced an ambition to create a unified standard for green bonds along the lines of the Equator Principles.[59]

The main challenge for setting standards is allowing sufficient leeway for standards to reflect different local green priorities. In many developing countries green includes air, soil, and water pollution, while for many European issuers, green only referrers to climate change mitigation. Such differences are also reflected in investor preferences. Ultimately, for the sake all market stakeholders, MDBs can lead the effort in developing and supporting compatibility between standards by developing a common basic framework, clarifying the concept of green finance as basis for its further expansion.

3. Policy Support

Given their expertise as well as pioneering role in many areas of green finance, MDBs can provide policy support at both the financial and economic level. Specifically, this is due to the expertise accumulated in MDBs given their generally long history and large scale, combined with a development mandate and authority as intergovernmental institutions. This makes them a key institution for such support, which could not be provided by most other institutions perhaps with the exception of a few UN organizations. In the broad sense of the concept 'policy support', MDBs can both assist with the development of policies and regulations, as well as using de-risking and project pipeline related financing solutions to support such policies in changing incentive structures in financial and economic systems.

Green Financial System

MDBs can contribute to greening domestic and regional financial systems by taking a comprehensive approach by including all financial tools, all relevant regulations, and all stakeholders. The current situation is that with few exceptions, financial systems are not used as tools for a green transition. This is particularly true for BRI countries.[60] As an indication of this trend, China was the first country in the world to launch a comprehensive set of guidelines for greening its financial system in 2016.[61] Following the establishment of a Green Finance Study

58 European Investment Bank & China Green Finance Committee (2017). *The need for a common language in Green Finance.* Luxembourg, Luxembourg, EIB

59 World Bank Group (2017). *World Bank Group Announcements at One Planet Summit*. Retrieved from: http://www.worldbank.org/en/news/press-release/2017/12/12/world-bank-group-announcements-at-one-planet-summit

60 Paulson Institute (2017). Paulson Institute Explores Green Finance Along the Belt and Road. Retrieved from: http://www.paulsoninstitute.org/events/2017/11/01/paulson-institute-explores-green-finance-along-the-belt-and-road/

61 People's Bank of China, Ministry of Finance, National Development and Reform Commission, Ministry of Environmental Protectoin, Ministry of Foreign Affairs, China Banking Regulatory Commission, China Securities Regulatory Commission, China insurance Regulatory Commission (2016). Guidelines for Establishing the Green Financial System. Beijing, China: PBOC

Group within the G20 framework in 2016, 13 other G20 countries have launched green finance policies. As a latest effort in this direction, the Central Banks and Supervisors Network for Greening the Financial System was launched in 2018.[62] MDBs can contribute both directly to such initiatives as well as work with governments and regional associations.

Considered as a whole, the key issues to be addressed in the financial system include the following: 1) lack of green asset classes, 2) shortage of specialized funds and tools, 3) mismatch in risk profiles, 4), non-monetized positive environmental externalities, 5) lack of data, 6) incoherent application of green standards, 7) low ability to accurately assess green project risks.[63] It is clear that the above issued can only be systematically addressed through a number of various tools and processes in parallel. MDBs can contribute to greening the financial system through both regulatory and non-regulatory measures.

Policy and Regulatory Measures

In terms of regulatory measures, MDBs can provide technical assistance and facilitate dialogue with central banks and other regulators of the financial system. The details of this depends on the regulatory layout of individual countries which may differ in terms of mandates of central banks, supervisors, and financial sector regulators. A number of current efforts exists, such as the IFC organized Sustainable Banking Network (SBN). At the current initial stages of this network, the work is focused on capacity building on green bonds for regulators and potential issuers, with the purpose of developing domestic green bond markets. Such efforts can be scaled up and provided individually and jointly by MDBs.

Financing Solutions

Using tools other than regulatory, MDBs can use a number of the de-risking and project preparation financing solutions described in detail above. While some of these tools' impact has a narrower scope, some of them have potential to influence the greening of the financial system as a whole. An interesting example of a financial tool focused on greening financial systems is the IFC-Amundi Green Cornerstone Bond Fund. The fund will only buy bond in developing countries, hoping that the fund's demand for green bonds will translate into more issuance in countries with few green bond issuances, in order to kickstart the local green bond market.[64] Such a tool would be particularly impactful in many BRI countries where green bond issuances remain limited. Other MDBs have ambitions of using similar tactics within their mandates, such as the AIIB's Asia ESG Enhanced Credit Managed Portfolio aiming to develop sustainable infrastructure as an asset class.

Another way MDBs can green financial systems is by providing concessional credit lines to certain industries. In doing this, however, MDBs should be careful not to make long term, broad commitments, but rather make targeted, short-term commitments. Once a demonstration

62 Banque de France (2018). First Meeting of the Central Banks and Supervisors Network for Greening the Financial System. Retrieved from: https://www.banque-france.fr/en/communique-de-presse/first-meeting-central-banks-and-supervisors-network-greening-financial-system-ngfs-january-24th

63 International Institute of Green Finance (2018). The Role of MDBs in Green Finance. Beijing, China: IIGF

64 International Finance Corporation (2017). Green Bond Fund offers Green Path for Emerging Markets. Retrieved from: http://www.ifc.org/wps/wcm/ connect/news_ext_content/ifc_external_corporate_site/news+and+events/news/impact-stories/green-bond-fund-offers-green- path-for-emerging-markets

effect has been proven, the financial system should not need concessional support if it has successfully been 'greened' in this certain area. Existing practices in this regard include the green credit lines of the IaDB.[65]

Green Economic Policy

Above the level of the financial system, MDBs can help regional and local governmental institutions in providing a more beneficial environment for green investments. Again, as with the financial system level, this can be done both through technical support for policy and regulation, as well as by using MDB financing solutions to address the challenges at the economic and institutional level. Essentially, at the economic policy level MDBs can assist countries in developing institutional surroundings advantageous for the development of green finance.

The key challenges at the economic and institutional levels include: 1) Political, economic, & environmental instability, 2) policy reversals & regulatory uncertainties, 3) distorting subsidies & feed-in tariffs, 4) uneven playing field towards SOEs, and 5) regulatory barriers to entry.[66] A particularly relevant issue for BRI countries is the lack of an efficiently functioning legal system. This was concluded by the 2018 China Development bank, United Nations Development Program, & Peking University joint report on Belt and Road Economic Development.[67] This report provided a ranking of the BRI countries' legal systems showing a critical need for improvement. This study and its conclusions were also highlighted by the PBOC Research Bureau's China Green Finance Report 2017.[68]

Policy and Regulatory Measures

Technical assistance for national and local governments with economic planning is a part of many MDBs work. As highlighted by the CDB et al. report, such support is particularly needed in many BRI countries. This includes long term economic national level economic planning, industrial policy, and urban planning. Additionally, it is critical that climate and environmental concerns are included in such policies, both with the above listed areas as well as independently. For example, MDBs can assist BRI countries in developing their Nationally Determined Contributions to the Paris agreement as well as other types of low-carbon and green scenario planning. Additionally, a particularly difficult aspect is translating such long-term policies and scenarios into concrete economic plans. A failure to do so provides a stranded asset risk at the micro level, which ultimately can trickle up to macro, and national treasury level, if both transitional and climate risks materialize at a later stage. A challenge to this, as highlighted by the Paulson Institute, is the lack of political will.[69] This is primarily due to both the difficulty of compensating

65 Inter-American Development Bank (2017). Green Lines. Retrieved from: http://www.IaDB.org/en/resources-for-businesses/beyondbanking/green- lines,2297.html

66 International Institute of Green Finance(2018). The Role of MDBs in Green Finance. Beijing, China: IIGF

67 China Development bank, United Nations Development Program, & Peking University (2018). Belt and Road Economic Development Report. Beijing, China: CDB, UNDP, & PKU

68 People's Bank of China Research Bureau (2018). China Green Finance Progress Report. Beijing, China: PBOC

69 Paulson Institute (2017). Paulson Institute Explores Green Finance Along the Belt and Road. Retrieved from: http://www.paulsoninstitute.org/events/2017/11/01/paulson-institute-explores-green-finance-along-the-belt-and-road/

for the creative destruction and transitional costs, as well as a miscalculation of the materiality of climate and environmental risks. As a critical next step, MDBs can help turning NDCs into a concrete project pipeline through of financial and capacity solutions. Primarily the larger MDBs with the longer history are able to support at such a comprehensive level, such as the World Bank Group, ADB, and AfDB.

Financing solutions

A key financing solution in addressing the instability at the economic and institutional level is guarantees and insurance by MDBs. To lower the risk carried by investors, MDBs can provide a number of different guarantees and insurances. By covering a government or government entity's potential failure to meet financial obligations to a private or public project, MDBs' guarantees have historically helped attract direct private sector investment[70], including under the BRI. Sector specific risks include risk from an unstable political support in terms of reversal of subsidies or power purchase agreements for renewable energy. For many BRI countries with high risks and unsophisticated financial markets as indicated by the challenges listed above, MDBs' mandate is particularly suitable.[71]

70 African Development Bank et al. (2017b). Catalogue of the MDBs and the IMF Financing Solutions

71 Asian Development Bank (2017). Meeting Asia's Infrastructure Needs. Manila, Philippines: ADB

Conclusion

Simply put, global climate and environmental goals can only be met if they are an integral part of the development paths of BRI countries. This is true alone because the BRI collectively accounts for over 30% of global GDP, 62% of population, and 75% of known energy reserves. The central challenge is that today most BRI countries' environments are deteriorating and their greenhouse-gas emission pathways are misaligned with a 2-degree scenario. By varying estimates, the $1-8tn estimated cost of the BRI is a contribution to meeting the need of more than $20tn of total infrastructure financing in BRI countries. MDBs can contribute to addressing the challenge of greening the BRI through a number of unique characteristics that differ substantially from profit-driven financial institutions, noting that some characteristics may overlap with national development banks. Key characteristics include:

a) Long-term and stable: MDB financial commitments have substantially longer tenure than commercial banks and are less vulnerable to economic fluctuations.

b) Counter-cyclical: MDBs can counter-balance other investors withdrawing from a country, region, or sector, by increasing their own engagements.

c) Concessional terms: MDBs lending at lower interest rate or grace periods reduces the cost of debt for projects, and consequently makes more projects bankable than purely on market terms.

d) Know-how & technical assistance: MDBs possess valuable expertise on development finance, often owing to their size and history, combined with their geographic and sectorial priorities.

e) Private capital mobilization: MDBs can catalyze private capital at higher leverage rates than other financiers, such as through policy support and specialized financial mechanisms.

Based on their characteristics, MDBs can contribute to greening the BRI in terms of financing, coordination, and policies. These three ways all require prioritization of greening the BRI from MDBs themselves, as well as active participation of BRI countries:

1. Financing and capacity solutions

At the early-stage of project development, MDBs can effectively de-risk sustainable infrastructure projects in practice and perception by using a number of schemes including:

a) Technical assistance, such as the IFC's Sustainable Finance Network.

b) Risk assessment disclosure, such as by following the FSB - TCFD

c) Public private partnerships, such as the EIB's Med5P program.

d) Concessional and non-concessional loans, depending on the mandate of the MDB.

e) Guarantees and insurance, such as the Global Index Insurance Facility of the IFC.

f) Risk sharing facilities, such as the EIB's Private Finance for Energy Efficiency scheme.

The lack of a pipeline of potential bankable projects and high project development costs are crucial challenges for sustainable infrastructure projects that MDBs can address in a number of ways including:

a) Feasibility studies, such as the World Bank Group program under the Afghan Ministry of Finance.

b) Early stage financing, which is commonly used but often depending on whether an MDB has country presence or not.

c) Special purpose vehicles, such as the AfDB's involvement in establishing the Lake Turkana Wind Project

d) Project preparation facilities, such as the ADB's Green Finance Catalyzing Facility being implemented in China and ASEAN.

2. Coordination activities

With their intergovernmental backing, development-oriented mandate, and authority in financial markets, MDBs can play a key role in coordinating efforts between stakeholders in the BRI. Directly towards the Chinese side of orchestrating the BRI, MDBs can influence and support the development of BRI strategy policies, Chinese financial institutions sustainability practice, and Chinese enterprises involvement in BRI projects on the ground. Highlighting the potential of this role, at the 2017 BRI Forum 6 MDBs signed an MoU with the Chinese Ministry of Finance. Amongst themselves, inter-MDB coordination has great potential through economies of scale as well as on standard setting. With many MDB instruments and projects overlapping, greater coordination of efforts can avoid competition that crowds out private capital or turf-wars that duplicate coordination efforts. Furthermore, MDBs can work as standard setters when speaking with a coordinated common voice. This ability can be used by MDBs in expanding their joint reporting on climate financing, to also jointly report on their green financing such as done by the IDFC, as well as to report on their climate risks such as the EBRD is already well in the process of doing.

3. Policy support

At the financial system level, MDBs can contribute to comprehensively greening domestic and regional financial systems covering all financial tools, all relevant regulations, and all stakeholders. Such a comprehensive approach is relevant given the current situation in which with few exceptions, financial systems are not actively used as tools for a green transition. In terms of policy and regulatory measures, MDBs can provide technical assistance and facilitate dialogue with central banks and other regulators of the financial system. Together with central and local governments MDBs can turn green policy into bankable projects through a number of the de-risking and project preparation financing solutions described in detail above. At the economic system level, MDBs can help regional and local government institutions in providing a more beneficial environment for green investments. For example, through technical assistance MDBs can assist BRI countries in developing their Nationally Determined Contributions to the Paris agreement as well as other types of low-carbon and green scenario planning. This simultaneously limits stranded asset risks at both organizational and country levels.

This report has shown how MDB characteristics can contribute to greening the BRI, aiming to provide insights relevant to all stakeholders from government, financial institutions, NGOs, academics, as well as MDBs themselves. In addressing a small piece in the puzzle of realizing sustainable development, it is hoped that the report will spark both further research and action.

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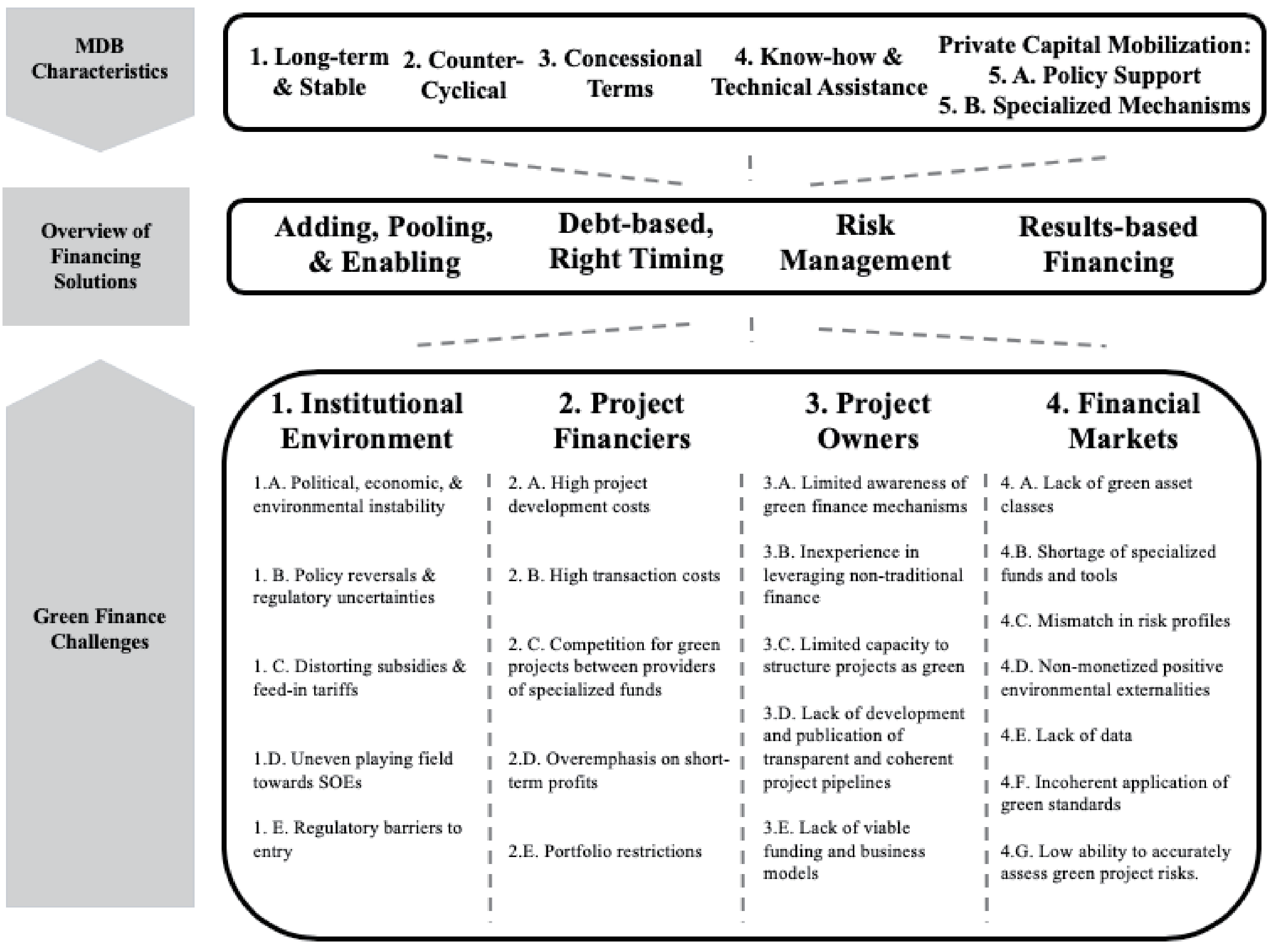
Appendix 1 – Comparison of MDBs in Green Finance

MDB	**Respective definition of "green" or "green finance"**	All current green / climate financing & 2020 target	Green bond issuance: First year Nr. of times Total volume	Green Bond Use of Proceeds categories
African Development Bank Group (AfDB)	Green growth priorities: Resilience to climate shocks, sustainable infrastructure, ecosystem services, and efficient and sustainable use of natural resources	Climate: Today: $3.3bn 31% 2020: 40%	2013 Seven rounds $3.5bn	Low- carbon development or climate- resilient development
Asian Development Bank (ADB)	Green within sustainable infrastructure, natural capital investment, environmental governance and management, as well as climate change as a stand-alone and crosscutting issue	Climate: Today: $4bn, 18% 2020: 30%	2015 Three rounds $3.05bn	Climate change mitigation and adaptation
Asian Infrastructure Investment Bank (AIIB)	Financing infrastructure that is environmentally friendly and socially sustainable, and it will support members in their transition towards a low-carbon energy mix	No accumulative official numbers. Numerous projects within green definition.	N / A	N / A
European Bank for Reconstruction and Development (EBRD)	Climate change mitigation and adaptation, sustainable use of resources, protection of natural assets, and rehabilitation of environmental damage	Green: Today $3.8bn, 31% 2020: 40%	2010 62 individual bonds $2.9bn	Climate and sustainable resource usage
European Investment Bank (EIB)	Climate change mitigation and adaptation, transport, environment protection, biodiversity, de-pollution, water, circular economy and waste management, disaster risk, energy production and use.	Climate: Today, $5.7bn, 30% 2020: 35%	2007 30 rounds $22,3bn	Renewable energy and energy efficiency
Inter-American Development Bank (IaDB)	Climate change mitigation and adaptation, sustainable infrastructure, sustainable urbanization, as well as natural capital	Climate Today: $5bn, 25% 2020: 30%	N/A	N/A
Islamic Development Bank (IDB)	N/A	N/A	N/A	N/A
New Development Bank (NDB)	Infrastructure and non-infrastructure aligned with the Green Bond Principles	Green: Today: $2,3bn, 68% Future: 60% renewable energy	2016 One round $441mn	Green Bond Principles & PBOC Catalogue
World Bank Group (WB)	Climate change mitigation, climate change adaptation, sustainable natural resource management (including oceans, lands, and forests), and clean development (soil, water, air)	Climate: Today: $21.3bn, 32% 2020: 28%	2008 135 transactions $10.2bn	Climate change mitigation and adaptation

Source: Author

Appendix 2 – MDBs' Green Finance Financing Solutions

Taxonomy of MDB characteristics, types of financing solutions, and green finance challenges



Source: International Institute of Green Finance (2018). The role of MDBs in Green Finance. Beijing, China: IIGF

Overview of MDBs' Financing Solutions

	Financial solution	Actor(s)	Challenges addressed	Applied MDB characteristics	Level of green
	Common Principles for Climate Mitigation Finance Tracking	Joint MDB initiative	4.A. Lack of green asset classes 4.C. Mismatch in risk profiles 4.F. Incoherent application of green standards	4. Know-how and technical assistance	Exclusively
	China-EU harmonization of Green Bond Standards	EIB & China Green Finance Committee	4.A. Lack of green asset classes 4.F. incoherent application of green standards	4. Know-how & technical assistance	Exclusively
	Green Cornerstone Bond Fund	IFC (WBG) & Amundi Asset Management	4.B. Shortage of funds and tools	5.B Specialized mechanisms	Exclusively
	Green Finance Catalyzing Facility	ADB	2.A. Project and development costs 3.D. Pipeline and 3.E. funding models of project owners 4.B. Specialized tools of financial markets	3.Concessional terms 4. Know-how & technical assistance 5.B. Specialized mechanisms	Exclusively
	Sustainable Banking Network	Banking regulators led by the IFC	2.B. High transaction costs 4.B. Coherence on green standards	4. Know-how & technical assistance	Exclusively
	African Climate Change Fund	AfDB	3.A. Limited awareness of green finance mechanisms 4.B. Shortage of specialized funds and tools	4. Know-how & technical assistance 5.B Specialized mechanisms	Exclusively
Adding, pooling, & enabling	African Water Facility	AfDB	3 E. lack of viable funding and business models	3. Concessional terms 4. Know-how & technical assistance 5.B Specialized mechanisms	Green amongst other priorities
	Agricultural Fast Track Fund	AfDB	3.D. Lack of project pipelines 3.E. Lack of viable funding and business models 4.A. Lack of green asset classes	5.A. Policy support 5.B. Specialized mechanisms.	Green amongst other priorities
	Climate Investment Funds	AfDB, ADB, EBRD, IaDB, WBG	2.A. High project development costs 3.E. Lack of viable funding and business models 4.B. Shortage of specialized funds	5.A. Policy support 5.B. Specialized mechanism	Exclusively
	Congo Basin Forest Fund	AfDB	3.D. Lack of publication of project pipelines 3.E. Lack of viable funding and business models	3. Concessional terms 4. Know-how & technical assistance 5.B. Specialized mechanisms	Green amongst other priorities
	Sustainable Energy Fund for Africa	AfDB	2.A. High project development costs 3.E. Lack of viable funding and business models	4. Know-how & technical assistance 5.A. Policy support	Exclusively
	Global Environment Facility (GEF)	AfDB, ADB, EBRD, IaDB, WBG	3.B. Inexperience in leveraging non-traditional finance 3.C. Limited capacity for structuring projects as green, 3.E. Lack of viable funding and business models	5.A. Policy support 5.B. Specialized mechanisms.	Exclusively

Adding, pooling, & enabling	Green Climate Fund	AfDB, ADB, EBRD, EIB, IaDB, WBG	3.A. Limited awareness of green finance mechanism 3.B. Inexperience in leveraging non-traditional financing 4.B. Shortage of specialized fund and tools	4. Know-how & technical assistance 5.B. Specialized mechanisms.	Exclusively
	Sustainable Energy and Climate Change Initiative	IaDB	3.C. Limited capacity to structure projects as green 3.D. Lack of project pipeline 4.F. Lack of coherent application of green standards	4. Know-how & technical assistance	Exclusively
	The Adaptation Fund	WBG	4.B. Shortage of specialized funds	1. Long-term and stable 4. Know-how & technical assistance 5.B. Specialized mechanisms	Exclusively
	EDGE Buildings	WBG (IFC)	3.A. Limited awareness of green finance mechanisms 3.C. Limited capacity for structuring projects as green 4.A. Lack of green asset classes 4.F. Incoherent application of green standards	4. Know-how & technical assistance 5.B. Specialized mechanisms	Exclusively
	Invest4Climate Platform	WBG	3.D. Lack of project pipeline 4.C. Mismatch in risk profiles 4.E. Lack of data 4.G. Low ability to accurately assess green project risks	4. Know-how & technical assistance 5.A. Policy support	Exclusively
	Future Carbon Fund	ADB	2.A. High project development cost 3.C. Limited awareness of green finance mechanisms 3.E. Lack of viable funding and business models	3. Concessional terms 5.B. Specialized mechanisms	Exclusively
	Asia Pacific Disaster Response Fund	ADB	1.A. Political, economic and environmental Instability	1. Long-term and stable 2. Counter-cyclical 5. Know-how & technical assistance	Exclusively
Debt-based, right-timing	Concessional and non-concessional loans	All MDBs	2.A. High project development costs 3.E. Lack of viable funding models 4.C. Mismatch in risk profiles	1. Long-term and stable 2. Counter-cyclical 3. Concessional terms 5.A. Policy support	Partially
	Green Lines	IaDB	2.B. High transaction costs of project financiers 3.E. Lack of viable funding models of project owners	5.B. Specialized mechanisms	Exclusively
	Green Bonds	AfDB, ADB, EBRD, EIB, NDB & WBG	3.E. Lack of viable funding models 4.A. Green asset classes 4.B. Lack of specialized tools	4. know-how & technical assistance 5.B Specialized mechanisms	Exclusively, depending on definitions
	Venture Capital and Seed Fund Support	MIF (IaDB)	3.E. Funding models 4.C. Mismatch in risk profiles 4.G. Ability to accurately assess project risk	3. Concessional terms 4. Know-how and technical assistance	Partially

Debt-based, right-timing	Direct Equity Investment	EBRD	1.D. An uneven playing field toward SOEs 3.E. Lack of viable funding models	5.A Policy support 5.B Specialized mechanisms	Partially
	Enhanced Private Sector Assistance	AfDB	1.D. Uneven playing field towards SOEs 3.B. Inexperience in leveraging non-traditional finance 3.E. Lack of viable funding models 4.B. Shortage of specialized funds and tools	1. Long-term & stable, 3. Concessional 5.B. Specialized mechanisms	Partially
	Global Energy Efficiency and Renewable Energy Fund	Advised by the EIB	3.E. Lack of viable funding and business models	4. Know-how and technical assistance	Exclusively
	Natural Capital Financing Facility	EIB	4.B. Shortage of specialized funds and tools	5.A. Policy support 5.B. Specialized mechanisms	Exclusively
Risk management	Guarantees of various forms	Most MDBs	1.A. Political, economics, and environmental instability 1.B. Policy reversals and regulatory uncertainties 3.E. Lack of viable funding models 4.C. Mismatch in risk profiles	2. Counter-cyclical 3. Concessional 5.A. Policy support.	Partially
	Crisis Response Window	IDA (WBG)	1.A. Institutional instability 1.B. Policy uncertainty	2. Counter cyclical 3. Concessional 5.A Policy support 5.B Specialized mechanisms	Green amongst other priorities
	Global Index Insurance Facility	IFC (WBG)	1.A. Institutional instability 4.B. Lack of specialized tools	4. Know-how & technical assistance 5.B Specialized mechanisms	Green amongst other priorities
	Partial Risk Guarantees	ADF (AfDBG)	1.B. Policy uncertainty	1. Long-term & stable	Partially
	Infrastructure Project Preparation Facility	EBRD	3.C. Green project structuring 3.D. project pipelines 3.E. lack of viable business models	4. know-how & technical assistance	Partially
	Global Map of Environmental & Social Risk in Agro-commodity Production	IFC (WBG)	1.A. Environmental instability 3.A. Lack of awareness of green financing possibilities, 3.B. Lack of experience in leveraging non-traditional financial tools 4.E. lack of data	4. know-how and technical assistance	Green amongst other priorities
	ClimDev-Africa Special Fund	AfDB	1.A. Political, economic, and environmental instability 4.E. Lack of data 4.G. Low ability to accurately assess environmental risks	3. Concessional terms 4. Know-how & technical assistance.	Exclusively
	Forest Carbon Partnership Facility	IaDB	3.A. Limited awareness of green finance mechanisms 3.B. Inexperience in leveraging non-traditional finance 3.C. Limited capacity to structure projects as green	3 Concessional terms 4. Know-how and technical assistance 5.B. Specialized mechanisms	Exclusively

Risk management	InfraFund	IaDB	2.A. High project development costs 3.D. Lack of comprehensive project pipelines 3.E. Lack of viable funding and business models	3. Concessional terms 4. Know-how & technical assistance	Green amongst other priorities
	Climate and Clean Energy Facility	IaDB	3.B. Inexperience in leveraging non-traditional finance 4.C. Mismatch in risk profiles 4.G. Lack of ability to assess green project risks	3. Concessional terms 4. Know-how & technical assistance 5.B. Specialized mechanisms	Exclusively
	Energy Efficiency Guarantee Mechanism	IaDB	1.C. Distorting subsidies and tariffs 3.E. Lack of viable funding and business models 4.C. Mismatch in risk profiles 4.G. Low ability to assess green project risks	1. Long-term and stable 3. Concessional 4. Know-how & technical assistance	Exclusively
	Green Cities Climate Finance Accelerator	EBRD	2.A. High project development costs 2.B. High transaction costs 4.C. Mismatch in risk profiles	2. Concessional support 5.B. Specialized mechanisms	Exclusively
	Green for Growth Fund	EIB (IFC, EBRD)	3.A. Limited awareness of green financing mechanisms 3.B. Inexperience in leveraging non-traditional financing 3.C. Limited capacity to structure projects as green 4.G. Low ability to accurately assess green project risks	3. Concessional support 4. Know-how & technical assistance.	Exclusively
	Private Finance for Energy Efficiency	EIB	2.B. High transaction costs 3.E. Lack of viable funding and business models 4.B. Shortage of specialized funds	1. Long-term and stable 3. Concessional terms 5.B. Specialized mechanisms	Exclusively
	European Energy Efficiency Fund	EIB participation	3.A. Limited awareness of green finance mechanisms 3.E. Lack of viable funding and business models 4.C. Mismatch in risk profiles	4. Know-how and technical assistance 5.B. Specialized mechanisms	Exclusively
	AIIB Project Preparation Fund	AIIB	3.C. Limited capacity to structure projects as green 3.D. Lack of comprehensive project pipelines 3.E. Lack of viable funding and business models	3. Concessional support 5.B. Specialized mechanisms	Partially

Result-based financing	Community Development Carbon Fund	WBG	4.B. Specialized tools 4.D. Non-monetized positive environmental externalities.	4. know-how and technical assistance 5.B. Specialized mechanisms	Exclusively
	Ideas for Action	WBG & Wharton Business School	4.B. Specialized tools	4. know-how and technical assistance	Partially
	Program-for-results	WBG	4.B. Specialized tools 4.D. Non-monetized positive environmental externalities.	4. know-how and technical assistance 5.B. Specialized mechanisms	Partially
	The Development Marketplace	WBG	2.C. Competition between providers of specialized funds 3.A Limited awareness of funding models 4.B. Lack of specialized mechanisms	4. know-how and technical assistance	Partially

Source: International Institute of Green Finance (2018). The role of MDBs in Green Finance. Beijing, China: IIGF

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