



# Channelling private investment to infrastructure

## What can multilateral development banks realistically do?

Chris Humphrey

April 2018

### Key messages

- There is a financing gap in developing-country infrastructure investment of roughly US\$1 trillion per year, and \$100 trillion in institutional investor resources seeking a home. Multilateral development banks (MDBs) can play a coordinating role linking demand and supply.
- MDBs can use their reputational and financial strength to attract greater institutional investor resources and facilitate developing infrastructure as an asset class, in particular by mitigating specific risks inhibiting greater institutional investor involvement.
- Success requires building new skills among MDB staff to more effectively engage with investors and increasing collaboration among MDBs and other development finance institutions – all while not losing sight of development goals and the need to not crowd out the private sector.
- To achieve meaningful scale, MDBs need to move beyond individual projects to building country-specific platforms in collaboration with governments that target investor groups with tailored packages of investment opportunities, risk-mitigation instruments and a conducive policy and regulatory environment.
- Expectations that institutional investors can quickly fill the infrastructure gap are not realistic. Only specific revenue-generating types of infrastructure in certain countries are attractive to investors, even with MDB involvement. A substantial role will remain for direct financing by governments, MDBs and other development finance institutions.

**Overseas Development Institute**

203 Blackfriars Road  
London SE1 8NJ

Tel: +44 (0) 20 7922 0300  
Fax: +44 (0) 20 7922 0399  
Email: [info@odi.org.uk](mailto:info@odi.org.uk)

[www.odi.org](http://www.odi.org)  
[www.odi.org/facebook](http://www.odi.org/facebook)  
[www.odi.org/twitter](http://www.odi.org/twitter)

Readers are encouraged to reproduce material from ODI publications for their own outputs, as long as they are not being sold commercially. As copyright holder, ODI requests due acknowledgement and a copy of the publication. For online use, we ask readers to link to the original resource on the ODI website. The views presented in this paper are those of the author(s) and do not necessarily represent the views of ODI.

© Overseas Development Institute 2018.

This work is licensed under a Creative Commons Attribution-NonCommercial Licence (CC BY-NC 4.0).

---

# Acknowledgements

This paper was made possible with funding from the Bill and Melinda Gates Foundation. The author thanks peer reviewers Amar Bhattacharya and Judith Tyson, as well as others who provided insights for the paper, including: Noel Edison, Joël Ferranto, Stefano Gatti, Susan Goeransson, Pankaj Gupta, Lorenz Jorgenson, Rashad Kaldany, Orçun Kaya, Thomas Maier, Dariga Sambayeva, Neil Saravanamuttoo, Janne Sevanto, Molly Whitehouse and the members of the World Economic Forum Global Futures Council on Infrastructure Investment. All opinions, errors and omissions are the responsibility of the author.

---

# Contents

---

<b>Acknowledgements</b>	<b>3</b>
<b>List of boxes and figures</b>	<b>5</b>
<b>Acronyms</b>	<b>6</b>
<b>1 Introduction</b>	<b>7</b>
<b>2 Infrastructure finance and institutional investors</b>	<b>9</b>
2.1 Infrastructure investment needs and trends	9
2.2 Institutional investors and infrastructure	11
<b>3 MDBs, infrastructure and institutional investors</b>	<b>14</b>
3.1 Credit enhancement of project bonds	16
3.2 Securitisation of infrastructure debt	21
3.3 MDB syndication arrangements	24
<b>4 Conclusions and policy options</b>	<b>26</b>
<b>References</b>	<b>30</b>

---

---

# List of boxes and figures

## Boxes

---

<b>Box 1</b>	When is it appropriate to offer subsidies to private investors?	<b>15</b>
<b>Box 2</b>	MDB guarantees: unfulfilled promise	<b>18</b>

---

## Figures

---

<b>Figure 1</b>	Global project finance volumes	<b>10</b>
<b>Figure 2</b>	Private investment in EMDC infrastructure	<b>10</b>
<b>Figure 3</b>	Private infrastructure investment in IDA/blend vs. non-IDA countries	<b>11</b>
<b>Figure 4</b>	Average annual private investment in EMDC infrastructure by sector (2006–16)	<b>12</b>
<b>Figure 5</b>	Infrastructure as % of total MDB investment commitments, 2016	<b>14</b>
<b>Figure 6</b>	Annual global project finance deals, by financing source	<b>16</b>
<b>Figure 7</b>	Regional breakdown of project bond issuance (\$ millions, 2013)	<b>16</b>
<b>Figure 8</b>	Share of project finance from bond issues by region, 2015/16 average	<b>19</b>
<b>Figure 9</b>	Securitisation issuance by year, US/European markets	<b>21</b>
<b>Figure 10</b>	Loan portfolio to private-sector borrowers, regional MDBs (2016)	<b>25</b>

---

---

# Acronyms

<b>ABSs</b>	Asset-backed securities
<b>ADB</b>	Asian Development Bank
<b>AfDB</b>	African Development Bank
<b>CGIF</b>	Credit Guarantee and Investment Facility
<b>DFI</b>	Development finance institution
<b>EBRD</b>	European Bank for Reconstruction and Development
<b>EIB</b>	European Investment Bank
<b>EMDC</b>	Emerging and developing countries
<b>IBRD</b>	International Bank for Reconstruction and Development
<b>ICT</b>	Information and communication technology
<b>IDA</b>	International Development Association
<b>IDB</b>	Inter-American Development Bank
<b>IFC</b>	International Finance Corporation
<b>IMF</b>	International Monetary Fund
<b>MCPP</b>	Managed Co-Lending Portfolio Program
<b>MDB</b>	Multilateral development bank
<b>MIGA</b>	Multilateral Investment Guarantee Agency
<b>OECD</b>	Organisation for Economic Co-operation and Development
<b>PPP</b>	Public-private partnership
<b>PRG</b>	Partial risk guarantee
<b>SPV</b>	Special purpose vehicle
<b>US</b>	United States

---

# 1 Introduction

The international development agenda has in recent years increasingly zeroed in on the importance of ramping up investment in basic infrastructure in emerging and developing countries (EMDCs). Investment is falling well short of the level required to keep pace with economic growth, generate opportunities for a fast-growing global population and shift our planet onto a sustainable path.

In the face of a financing gap in EMDCs of the order of \$1 trillion per year between now and 2030, the public sector is not capable of undertaking the needed investments on its own. Private investors – notably the roughly \$100 trillion in institutional investor resources – would be able to help fill this gap, as infrastructure assets offer the kind of opportunities these investors seek. However, information gaps and risk perceptions have thus far prevented large-scale institutional investment in EMDC infrastructure.

The disconnect between profitable infrastructure investment opportunities with tremendous social benefits and large volumes of available finance seeking a home suggests a useful role for official coordination. The G20, with the support of the Organisation for Economic Co-operation and Development (OECD) and the major multilateral development banks (MDBs), is developing policy actions supportive of channelling institutional investor resources toward EMDC infrastructure. Argentina's G20 presidency in 2018 has targeted infrastructure investment as a key priority.

This paper focuses specifically on the role of MDBs.<sup>1</sup> While MDBs are only one of many public actors involved in the infrastructure finance agenda, they are key players in international development, with numerous strengths that can be brought to bear. As a result, the G20, OECD, United Nations and others have all in recent years explicitly called on MDBs to do more to crowd institutional investors into EMDC infrastructure. Hence it is worth assessing their capacity to do so in detail, to better inform policy decisions by MDB shareholders and management.

Of course, MDBs already do channel substantial private investor resources to development projects, including infrastructure. The vast majority of MDB operations are funded by bonds issued on international capital markets. This is a highly efficient financial model requiring minimal resources from shareholder governments, and attractive to many institutional investors due to the AAA rating of the bonds of major

MDBs. But MDBs can more creatively use their many strengths to crowd private-sector resources into projects with a high developmental impact. Among the attributes that make MDBs especially useful in this effort are:

- **close links to developing-country governments** through membership, lending activity and constant engagement in many policy areas
- **deep understanding of EMDC infrastructure needs and project development**, including sustainability and quality control, through decades of on-the-ground experience
- **flexible tools with which to engage with public and private clients**, including direct investments, risk-mitigation instruments and technical advice
- **strong standing in international capital markets.**

A note of caution is merited. Whatever MDBs or other official actors may do, it is not realistic to expect a sudden, massive increase in investment in EMDCs: the risks are still too high for many private investors like pension funds and insurance companies, and will be for the foreseeable future. The best MDBs can do is use their knowledge, relationships and financial strength to nudge markets in the right direction, while the true step-change in investment patterns will only happen as a result of deeper forces over which MDBs have limited influence. 'Billions to trillions' is a catchy phrase, but when it comes to the ability of MDBs to directly crowd institutional investors into EMDC infrastructure, 'billions to tens of billions' is more realistic.

Further, institutional investors are only interested in infrastructure to the extent that it meets a specific risk/return profile, and this applies only to 'a small subset of the universe of real infrastructure assets', in the words of one observer (Weber et al., 2016: 11). Many types of basic infrastructure are not amenable to private investment, because they do not generate sufficient revenue to pay an investor back. Others may be more socially beneficial when funded by the public sector. In many less developed countries, the conditions may not be adequate for infrastructure projects of any kind to generate the kind of returns institutional investors seek. The reality is that public-sector financing is required to finance the majority of the infrastructure needed in most EMDCs, particularly low-income countries, and will remain so for some years to come.

---

1 The paper focuses on the World Bank's main lending windows – the International Bank for Reconstruction and Development (IBRD), the International Development Association (IDA), the International Finance Corporation (IFC) – as well as the major regional MDBs of the African Development Bank (AfDB), the Asian Development Bank (ADB), the European Bank for Reconstruction and Development (EBRD) and the Inter-American Development Bank (IDB).

---

That said, MDBs can clearly do more to facilitate the flow of institutional investor resources into EMDC infrastructure. Doing so is an efficient use of MDB financial strength in the short term, and also sets the groundwork for further

private investment without official support. This paper focuses in particular on three techniques oriented towards infrastructure debt finance:<sup>2</sup> **project bonds, securitisation of infrastructure loans and syndication arrangements.**

---

2 The paper is oriented towards debt finance, which is the main business line of the major MDBs. Equity is also a critical aspect of infrastructure finance and can be usefully supported by MDBs, although equity investments are limited by statute at many MDBs. For an insightful discussion of how MDBs can support infrastructure equity, see Lin et al. (2018).



---

# 2 Infrastructure finance and institutional investors

Before discussing the activities of MDBs, this section sets the stage by reviewing infrastructure needs and investment trends and considering the characteristics of institutional investors.

## 2.1 Infrastructure investment needs and trends

The scale of investment needed in basic infrastructure facilities – transport, energy, water and telecoms – in EMDCs over the coming years is truly daunting. This is due to several trends now under way across our planet:

- World population will grow from 7.5 billion in 2017 to nearly 10 billion by 2050. The vast majority of this growth will be in EMDCs. In Africa alone, the population will double to 2.5 billion by 2050 (United Nations, 2014).
- Global economic growth is concentrated in EMDCs, and new infrastructure facilities are essential to keep pace with accelerating economic activity and demand for services among a growing global middle class.
- Infrastructure needs are made more complex by rapid urbanisation. An estimated two thirds of the world will live in urban areas by 2050 – an increase of 2.5 billion people (United Nations, 2014).
- To address the threat posed by climate change, more investment is needed in lower-carbon infrastructure technologies and new systems to adapt to the impact of climate change already under way.

Precise estimates of investment needs in the coming years vary considerably,<sup>3</sup> but all credible analyses concur on a substantial gap between needs and current ‘business-as-usual’ investment rhythms. One of the most frequently cited sources is McKinsey (2016), which suggests global investment needs of \$3.3 trillion per year for 2016–30 (of which about \$1 trillion in EMDCs), compared with current investments of \$2.5 trillion. A recent World Bank study focusing just on EMDCs estimates an investment gap of \$450 billion per year until 2020 (Ruiz-Núñez and Wei, 2015).

Other estimates are substantially higher, particularly when including the need to address climate change and achieve agreed-upon global development goals. The New Climate Economy (2016) and Bhattacharya et al. (2016) posit investment needs of \$90 trillion between 2016 and 2030 – an increase of \$2.6 trillion per year over current levels. Roughly 70% of total investment is required in EMDCs, much of it in new ‘greenfield’ investment (unlike in advanced economies, where investments are primarily required to upgrade and rehab existing ‘brownfield’ facilities). The United Nations Conference on Trade and Development (UNCTAD) (2014) estimates an infrastructure investment gap of \$700 billion to \$1.6 trillion beyond current levels to achieve the Sustainable Development Goals.

This infrastructure investment gap in EMDCs of \$0.5–1.5 trillion per year implies at least doubling current investment levels. As the public sector is already shouldering 70% of current investment spending (Ruiz-Núñez and Wei, 2015), it is not realistic – nor necessarily sensible – to expect it to fill this gap on its own, even with much-needed improvements in tax collection and public investment efficiency. Development assistance from bilateral and multilateral sources (now accounting for 10% of infrastructure investment) may be able to increase somewhat, and the role of EMDC national development banks and export agencies is rising notably. But it is evident that private investment will have to play a larger role than currently.

Based on recent trends, it is difficult to envision a step increase in private investment to EMDC infrastructure without some type of policy support. Tightened capitalisation and liquidity requirements as part of the Basel III regulatory framework have put a damper on bank lending worldwide. Infrastructure lending – the main source of project finance – has been hit hard since the global financial crisis, driving up financing costs and making it more difficult to arrange the kind of long maturity transactions that infrastructure projects require (Chen and Worth, 2012). Global private infrastructure financing has not shown a clear pattern of recovery through to 2016 (Figure 1), and certainly does not appear on the kind of upward trend needed to address infrastructure gaps.

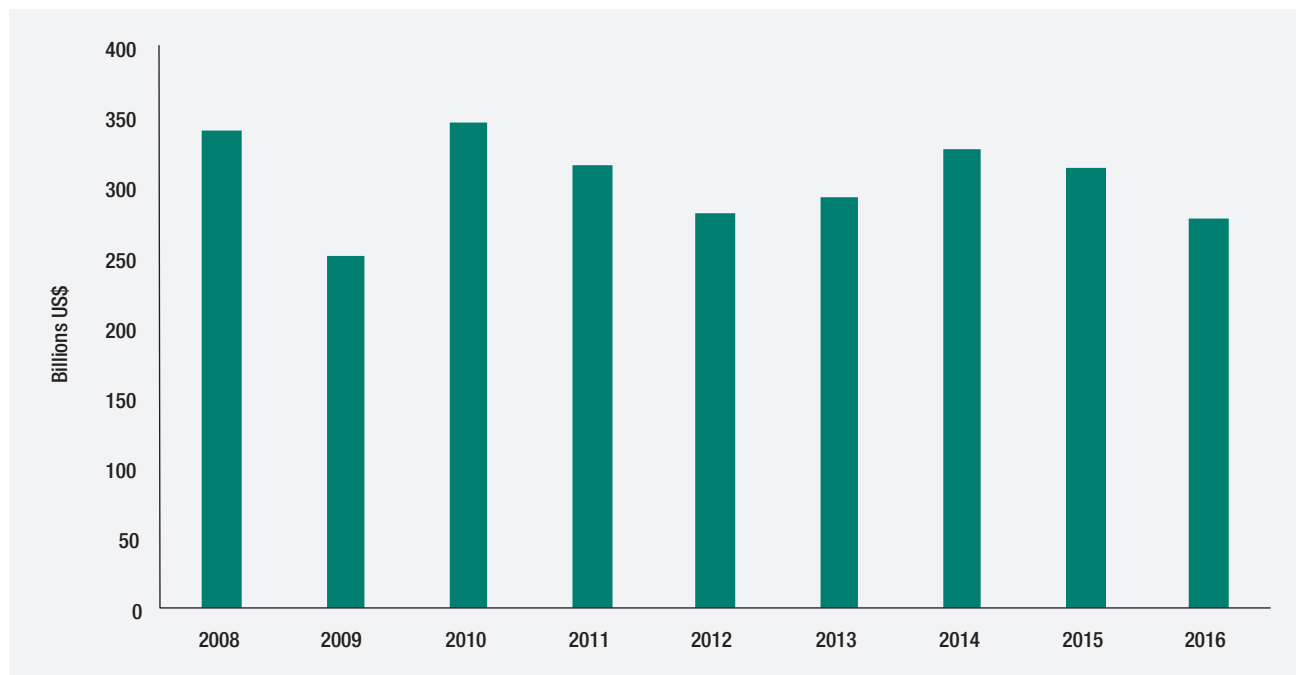
---

3 See Bhattacharya et al. (2016: 24–29) and Ruiz-Núñez and Wei (2015) for thorough discussions of the techniques and assumptions behind different infrastructure needs estimates.

Infrastructure investment in EMDCs has been particularly hard hit. Annual investment peaked in 2012, before dropping off steeply in subsequent years (Figure 2). Greenfield investment has shown less volatility but has also dropped sharply since 2012, returning almost to the level of the late 1990s. As noted

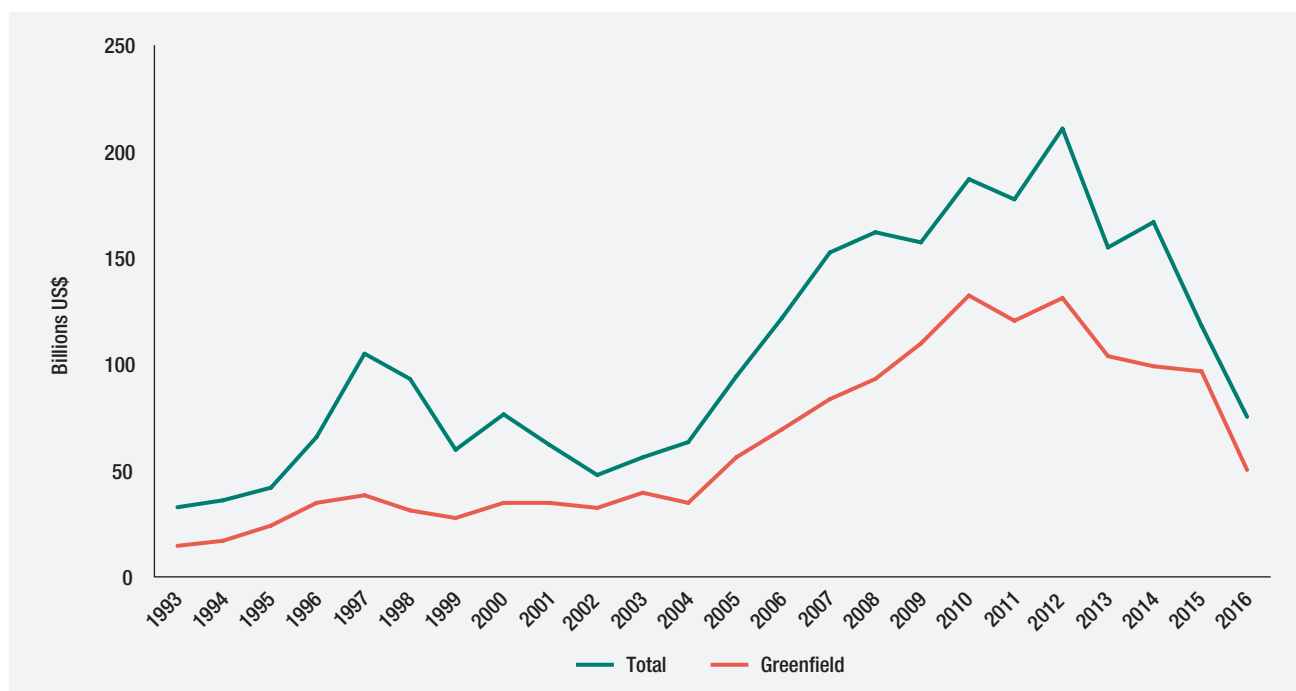
by OECD (2016), the share of project finance supplied by equity (as opposed to debt) dropped to almost zero in 2015. Since equity investment is an essential component of project finance – comprising usually 15–25% of total financing – this decline bodes ill for overall infrastructure investment prospects in EMDCs.

**Figure 1 Global project finance volumes**



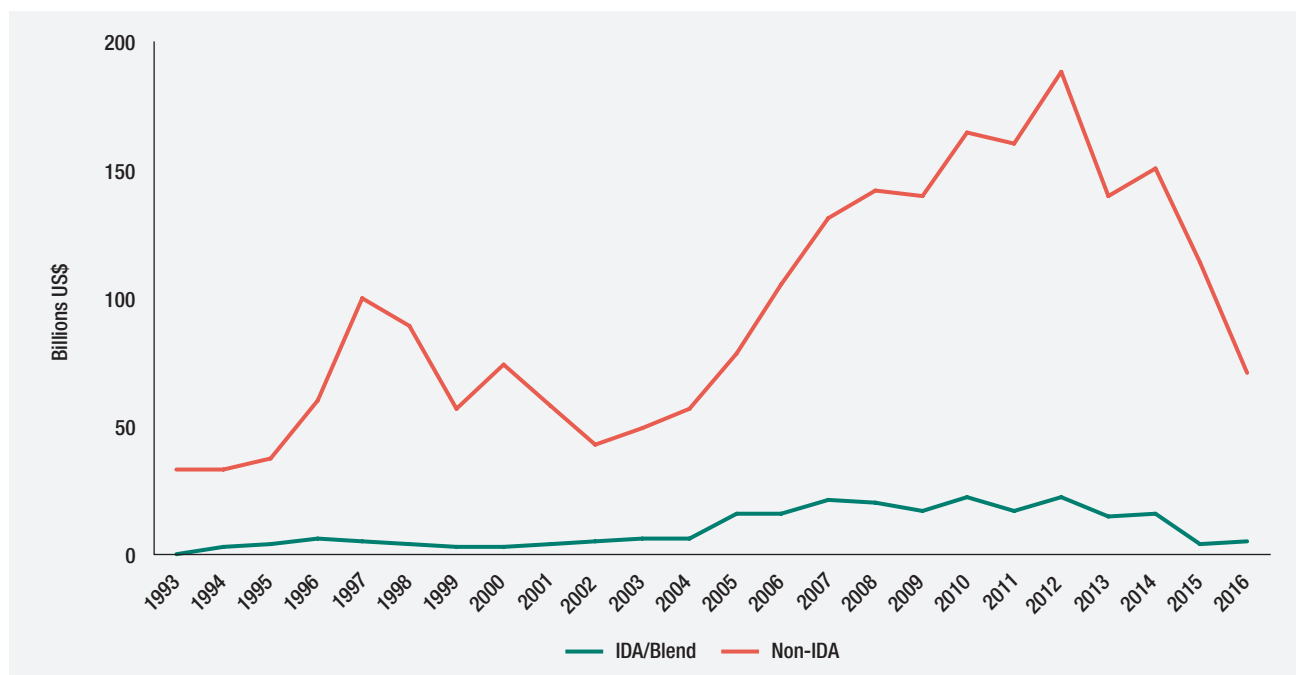
Source: IJGlobal (2017)

**Figure 2 Private investment in EMDC infrastructure**



Source: Private Participation in Infrastructure database (<http://ppi.worldbank.org>)

**Figure 3 Private infrastructure investment in IDA/blend vs. non-IDA countries\***



\* 'IDA/blend' refers to countries eligible to borrow from the World Bank's concessional lending window, which offers zero interest loans or grants to the poorest countries. As of January 2018, 75 countries fit this criteria.

Source: Private Participation in Infrastructure database (<http://ppi.worldbank.org>)

The situation is even bleaker in the world's poorest countries (Figure 3). The vast majority of private infrastructure finance in EMDCs is directed towards a handful of large middle-income countries, leaving the rest – which face the largest infrastructure deficits – with only scraps. According to Ruiz-Nuñez and Wei (2015), only 24 out of the world's poorest 56 countries had a single infrastructure project with private investment in the five years between 2011 and 2015, and one country (Laos) accounted for one third of the total. Private infrastructure investment in these 56 countries amounted to \$27 billion over 2011–15, a mere 3.7% of the \$712 billion invested across all EMDCs, despite the fact that they are home to 16% of all the EMDC population.

## 2.2 Institutional investors and infrastructure

The quantity of investment resources under the control of global institutional investors is eye-popping. Estimates vary from a low of \$70 trillion (WEF, 2014) to a high of \$120 trillion (McKinsey, 2016), with two other credible estimates at around \$100 trillion (Arezki et al., 2016 and G20/OECD, 2016), depending on definitions<sup>4</sup> and data sources. To give some perspective, the 2017 nominal gross domestic product (GDP) of the entire world was \$79 trillion, according to the International Monetary Fund (IMF).

Focusing on 'traditional' institutional investors included in all definitions of the term, pension funds and insurance companies combine to total in the vicinity of \$60 trillion assets under management. Sovereign wealth funds manage around \$6 trillion, central bank foreign currency reserves were in 2017 just under \$10 trillion, and endowments manage around \$1–2 trillion (WEF, 2014; IMF, 2016; Sunner, 2017). Institutional investor resources are not only huge but growing rapidly: in OECD countries alone, pension-fund assets grew by over 8% per year between 2009 and 2013 (G20/OECD, 2016).

While the majority of institutional investor resources are based in industrialised nations, assets in EMDCs are substantial and growing. According to the IMF (2016), EMDC insurance companies manage about \$3.6 trillion in assets, while pension funds manage another \$2.4 trillion. McKinsey (2016) suggests that about one quarter of institutional investor funds are based outside of Europe and North America, but projects that this number will rise to 47% by 2020, and continue rising thereafter. This is due to the economic growth potential of EMDCs, burgeoning pension funds and sovereign wealth funds and the fact that many EMDC financial systems are just beginning to shift away from being predominantly bank-based (G20/OECD, 2016).

4 See Celik and Isaksson (2014) for a discussion of different institutional-investor classes.

Most traditional institutional investors have a strong bias towards fixed-income securities (55–60% of investments), frequently government bonds and other highly rated, low-yield, long-term bonds, with most of the remaining assets allocated to publicly traded equities (OECD, 2015; Celik and Isaksson, 2014). The great majority (87%) is invested in high-income countries, while only 11% is directed towards upper-middle-income countries and very little to other markets (McKinsey, 2016).

Institutional investor allocation to infrastructure is extremely low – for example, only about 1% in major OECD pension funds (OECD, 2015). A few institutional investors have a higher infrastructure allocation, notably several pension funds based in Canada and Australia – countries with well-developed infrastructure finance markets – with allocations of 5–10% of total assets. Almost all infrastructure investment is in industrialised countries, with only limited forays into a few large middle-income countries like Mexico, Brazil and India (G20/OECD, 2016).

Infrastructure could play a more significant role for institutional investors, especially at a time of low interest rates in industrialised economies. Pension funds and insurance companies have long-maturity liabilities and are thus inclined to seek investment assets that have long maturities, relatively modest but stable returns and low risk. Many infrastructure investments fit that profile very well. Basic infrastructure facilities – transport, energy, water and sanitation and telecoms – tend to have the following characteristics:<sup>5</sup>

- regulated public services
- low elasticity of demand
- regular, stable cash flow
- long service life
- natural hedge against inflation
- relatively low correlation with other asset classes and macroeconomic cycles.

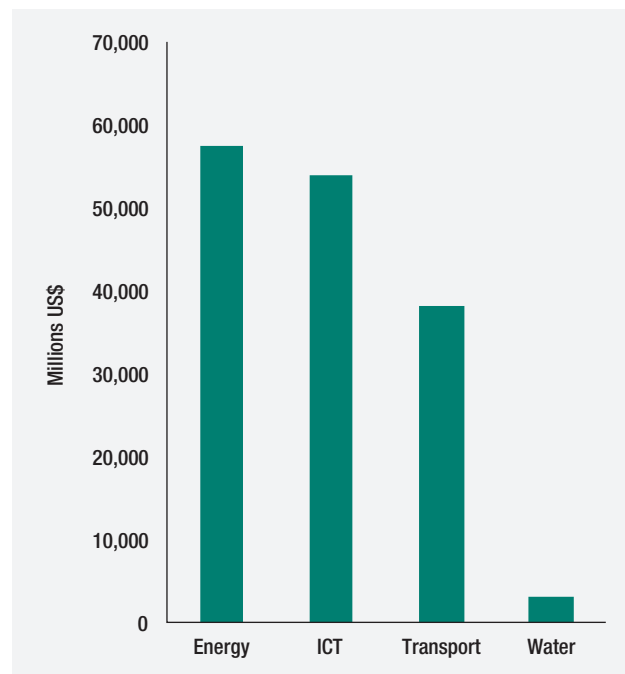
Despite these advantageous characteristics, infrastructure investments are difficult to incorporate into asset-liability management models, particularly for institutional investors without dedicated infrastructure teams. Most infrastructure deals are bespoke arrangements that are not easily compared to one another and contain a complex web of unique contractual arrangements. Their performance record – essential for any institutional investor – is limited. Infrastructure projects also imply risks that are difficult for institutional investors to assess and hedge against, notably construction risk and (in the case of EMDCs) foreign-exchange and political/sovereign risks. Institutional investors are interested in risk-return profile, and little else. If infrastructure can be demonstrated to offer a unique risk-return profile that

complements their portfolio strategy, they will consider investment; otherwise they will not.

Recent evidence suggests that investor perceptions are shifting, and infrastructure is beginning to be perceived as an asset class in its own right (McKinsey, 2016; Weber et al., 2016). In part, this shift is driven by the desire of investors to diversify their portfolios after the chastening experiences of the 2000 tech bubble and the global financial crisis, and by the pursuit of higher yields in an era of low interest rates. Also, statistical evidence on the performance of infrastructure compared to other assets is growing. For example, a recent Moody's report finds that, over a 30-year period, infrastructure was less likely to incur credit losses compared with corporate investments of a similar rating range, and that infrastructure losses declined sharply after three years whereas corporates remained relatively flat (Moody's, 2017).

This shift in sentiment is most notable in certain sectors, such as energy, information and communication technology (ICT) and some types of transportation facilities like ports and rail (Figure 4). These are, unsurprisingly, sectors in which the end-user is accustomed to paying a market rate for the services provided, which makes generating stable returns to investors much more feasible. Within the energy sector, renewables have made strong gains in being perceived as an asset class, with a growing number of project bonds

**Figure 4 Average annual private investment in EMDC infrastructure by sector (2006–16)**



Source: Private participation in infrastructure database (<http://ppi.worldbank.org>)

<sup>5</sup> For a thorough discussion of the attributes of infrastructure vis-à-vis other investment asset classes, see Weber et al. (2016) and Della Croce and Gatti (2014).

---

and listed or unlisted debt or equity funds. As one sign of this, of the 41 infrastructure projects that have attracted direct institutional investment<sup>6</sup> in EMDCs between 2011 and the first half of 2017, 33 were for greenfield energy-generation facilities, and, of those, 26 (78%) were in renewables (World Bank, 2018). By contrast, for other sectors where subsidised tariffs are more common or where end-users may not be accustomed to paying fees at all, such as water, sewage and many types of road infrastructure, private investment is far below requirements.

Official action is supporting the process of converting infrastructure into an asset class in the eyes of institutional

investors. A number of initiatives are under way, particularly efforts to address information gaps and promote standardised data reporting, risk assessment frameworks and contractual arrangements related to infrastructure.<sup>7</sup> Nonetheless, this change is happening too slowly to fill the infrastructure gaps that urgently need to be addressed in EMDCs. A recent survey of major institutional investors reveals minimal interest in EMDC infrastructure investments despite acknowledged high potential returns, due mainly to perceptions of political and foreign-exchange risks (OECD, 2017b). Further support is warranted, and MDBs can play a useful role.

---

6 That is, with a direct loan or equity investment, not via a bond purchase or fund investment.

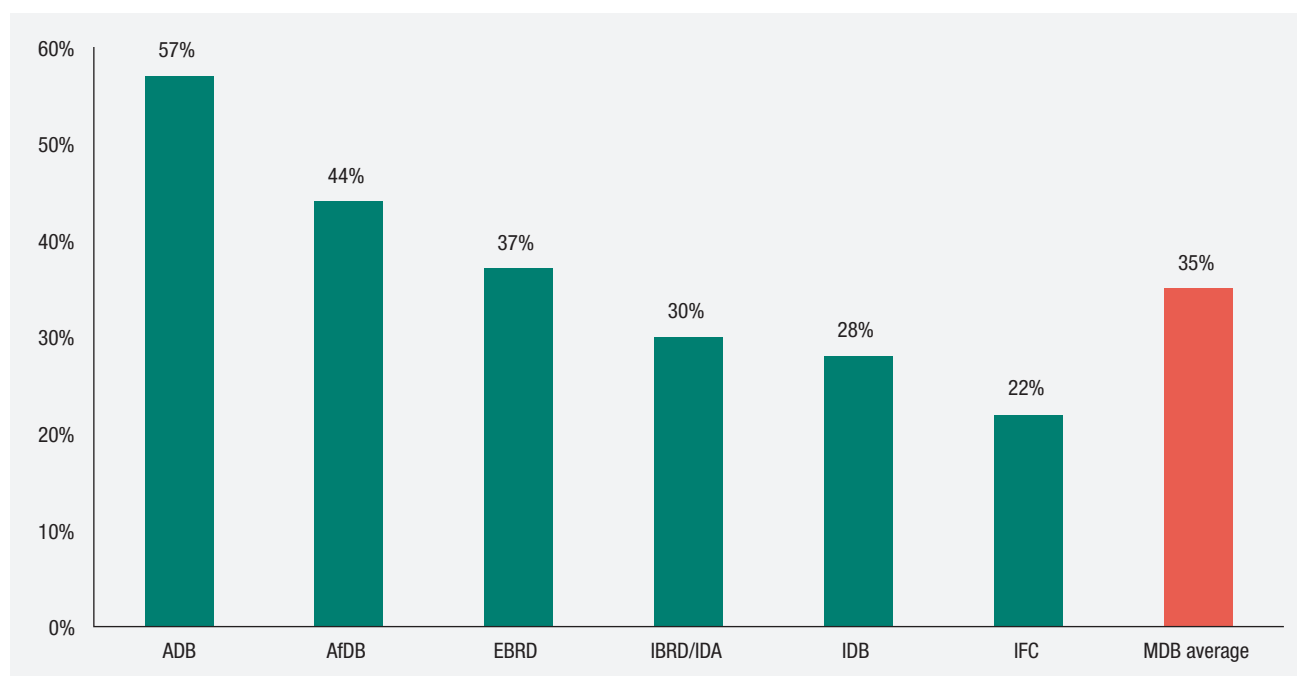
7 Notable initiatives include the G20/OECD Task Force on Institutional Investing and Long-Term Financing (see OECD, 2017a); the G20/OECD Infrastructure Data Initiative; the SOURCE platform developed by ADB and involving several MDBs and national development banks; the Global Emerging Markets Risk Database (GEMS) and the Global Infrastructure Hub's Project Pipeline, among others.

# 3 MDBs, infrastructure and institutional investors

MDBs have long been deeply involved in financing basic infrastructure – this was in fact the primary and almost sole role of the World Bank in its early decades. However, direct infrastructure financing gradually declined at the major MDBs, and although it has rebounded somewhat in recent years, it remains limited by a combination of supply-and-demand factors.<sup>8</sup> In 2016, direct financial commitments to physical infrastructure projects represented a total of \$39 billion, or 34% of total commitments by the World Bank Group and major regional MDBs that year (Figure 5). Even if all the major MDBs were to dedicate 100% of their resources to infrastructure, this would still only represent a fraction of the investment gap outlined earlier in this paper.

Responding to the growing need for infrastructure support, new MDB-related institutional arrangements have appeared in recent years. Most notable are two new MDBs, the Asian Infrastructure Investment Bank and New Development Bank, both launched in 2016 and geared to infrastructure investment. Africa50 (launched in 2015) and the Association of Southeast Asian Nations (ASEAN) Infrastructure Fund (launched in 2012) are two infrastructure investment platforms intended to leverage greater private resources and are managed with support from AfDB and ADB, respectively. The Global Infrastructure Facility, designed by the World Bank, was initially intended to be a similar independent investment platform, although its ambitions have been scaled back

**Figure 5 Infrastructure as % of total MDB investment commitments, 2016**



Notes: Includes only investment (loans and guarantees) in new or rehabilitated physical infrastructure; does not include sectoral reorganisation, policy reform, or privatisation operations. MDB average is the sum of all MDB infrastructure loans (\$39 billion) divided by sum of total loans (\$110.5 billion). The IBRD, IDA and IFC are FY2016; others are calendar 2016.

Source: MDB annual reports

8 For more on this, see Humphrey (2015).

to focus more on project preparation and information-sharing (Arezki et al., 2016).

These activities are all well worth pursuing, but existing MDBs can do more themselves. MDBs have the backing of the world's largest countries, are rated AAA by all three major bond rating agencies and have a well-earned reputation for quality control, transparency and financial probity. MDBs can leverage these strengths to provide greater security to investors for risky projects with developmental benefits. MDBs are well-positioned to shoulder certain risks that are particularly problematic for infrastructure projects, notably construction and political risk.<sup>9</sup> With their non-profit mandates, official relationship with EMDC governments and deep country knowledge, these risks pose less of a challenge to MDBs compared with commercial investors.

The goal should not be to remove all risks facing investors, which would distort the market and give investors an unwarranted subsidy (see Box 1). Rather,

MDBs can target specific risks such that profitable infrastructure projects in EMDCs connect with investors. Mitigating construction risk is an especially useful role. Because of the multiple uncertainties posed by a project's initial phase, banks often provide financing at the start. Banks can monitor a project's progress closely, release funds as needed instead of all at once, and adjust financial terms in response to changing circumstances. Once construction has finished and operations (and revenue generation) have begun, the initial bank debt can be refinanced by institutional investors, and MDBs can support that process.

This section considers three techniques for MDBs to facilitate the flow of institutional investor resources into EMDC infrastructure:

- credit enhancement for project bonds
- support to infrastructure loan securitisation
- syndication and pooled lending.

### **Box 1 When is it appropriate to offer subsidies to private investors?\***

MDBs and other public development institutions have struggled with the question of whether and when it is appropriate to offer a subsidy to private-sector investors. Conceptually, the answer is relatively straightforward, as explained by Carter (2015): a subsidy may be justified if (i) the social returns of a given investment exceed the private returns, (ii) private returns are too low to spur investment and (iii) the combined cost of the subsidy and private investment are still lower than the social benefits. The choice of subsidising the private sector rather than undertaking the investment purely with public resources mainly comes down to limits of available public-sector resources and benefits of private-sector involvement (including greater efficiency or smoothing the path for non-subsidised private-sector investment in the future).

How to operationalise this logic is another matter. MDBs – focused on leveraging private resources as part of the 'billions to trillions' agenda – are increasingly grappling with this issue. One response has been the World Bank's 'cascade' approach (World Bank, 2017), which evaluates the source financing for each project, with the first-best option considered to be commercial financing:

1. Project is amenable for commercial financing.
2. Project could attract commercial financing, but reforms and market failures must be addressed first.
3. Public resources used for risk mitigation (like MDB guarantees) to the degree necessary to bring in commercial resources.
4. Project is financed with public resources.

The cascade approach is being implemented now for infrastructure projects, and the World Bank expects to expand to other sectors in the near future.

While the cascade approach makes sense conceptually, it still does not address the issue of how to evaluate the need and level of a subsidy. Unfortunately, there is no easy answer for that: the devil is in the details of each project. This requires a clear assessment of (i) a project's social value (even if it cannot be easily or realistically quantified in monetary terms) and (ii) how much support private actors need to make an investment.

The latter issue, in particular, is an area where MDBs must take great care. Private investors will always logically request more subsidies than they actually need. It is up to the MDB project staff to recognise that they are in a bargaining situation with an actor that is not concerned with social benefits. This requires a sophisticated understanding of the overall market panorama as well as the specific risk-return profile of each project, incentives that do not push MDB staff to be overly eager to close a deal with a private-sector actor, and a willingness to walk away if an investor insists on what the MDB considers to be excessive subsidies.

\* See Carter (2015) and Lee (2017) for more in-depth analysis of this issue.

<sup>9</sup> Consistently cited in numerous surveys and reports as two of the top risks limiting greater investment in EMDC infrastructure. See, for example, Global Infrastructure Hub (2016), WEF (2016), OECD (2017b), OECD (2017c), and Ketterer and Powell (2018).

### 3.1 Credit enhancement of project bonds

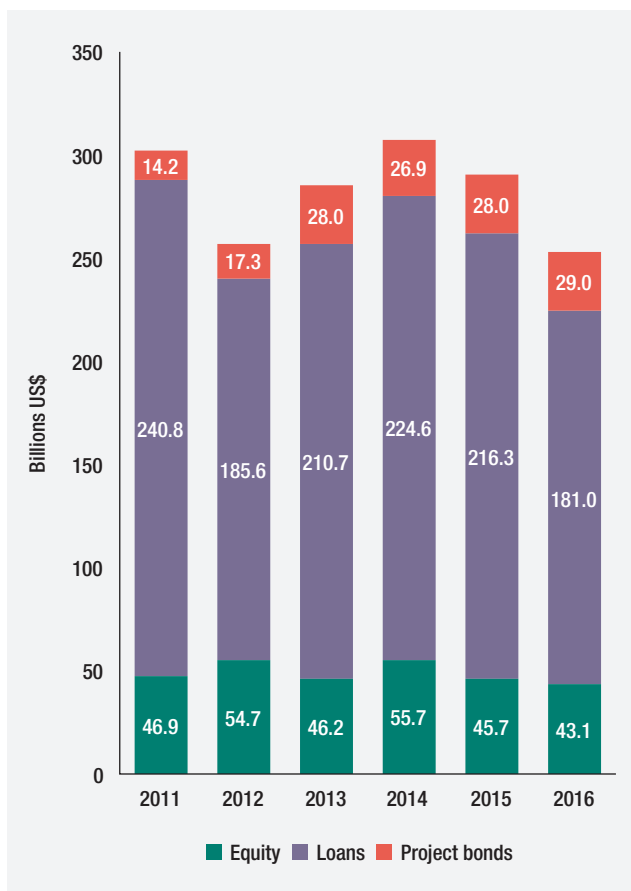
Because most institutional investors are not inclined to invest directly by taking an equity stake or making a loan, project bonds are a useful instrument with which they can finance infrastructure. Project bonds are issued to raise financing for a specific infrastructure project.<sup>10</sup> The attraction of project bonds for developers is the possibility to access a larger pool of investors and hence diversify funding sources and reduce costs, as well as often obtain longer loan repayment periods that match the lifespan of an infrastructure facility. Institutional investors already have a predilection for fixed-income assets, and project bonds generally offer a yield premium over other bond classes, such as government or corporate bonds.

Project bonds are still an incipient market with only a small share of project finance (Figure 6) and a limited track record that institutional investors can use to assess how they should incorporate project bonds into their investment strategies. As a result, syndicated loans are still generally the ‘path of least resistance’ to financing infrastructure projects, especially in EMDCs. Nevertheless, the project bond market is deepening in existing markets

and broadening to new markets as well, and has significant growth potential as a channel for institutional investor resources into EMDC infrastructure.

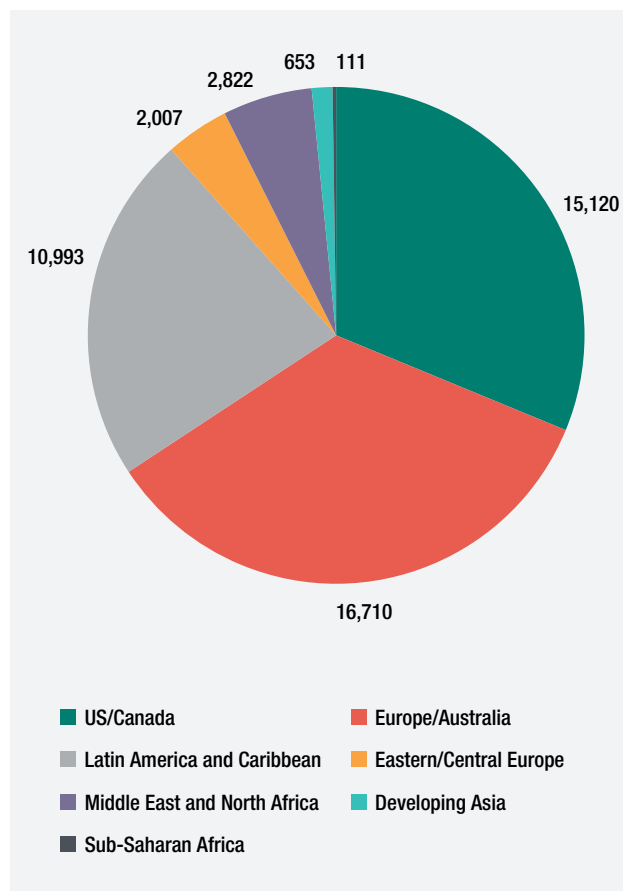
About two thirds of project bonds issued in 2013 were in industrialised countries, and most of the bonds issued in EMDCs were in major middle-income markets such as Brazil, Mexico, Indonesia, Thailand and Malaysia (see Figure 7 for a regional breakdown). However, this data does not include the Chinese market, which has a very high level of project bond issuances. In fact, China is the only county in the world with a higher share of project finance supported by bonds compared with syndicated loans, although most bonds are issued by state-owned enterprises and may be better considered government bonds (Ehlers, 2014). Project bond finance is low in India, and in sub-Saharan Africa long-dated project bonds are, according to one recent assessment, a generation away (White & Case, 2015). Most project bonds currently issued in African capital markets (for example, in Kenya and Nigeria) are government bonds earmarked for infrastructure spending, with only a few examples of private infrastructure projects issuing local currency in South Africa.

**Figure 6 Annual global project finance deals, by financing source**



Source: IJGlobal (2017)

**Figure 7 Regional breakdown of project bond issuance (millions US\$, 2013)**



Source: Della Croce and Gatti (2014) based on Project Finance International ([www.pfie.com](http://www.pfie.com))

10 See Boudris and Kotin (2012) and White & Case (2015) for a fuller discussion of project bond characteristics.



---

A project can issue bonds either at launch or after the completion of construction and start of operations, when a bond can pay off the project construction lenders (usually a bank syndicate) and allow their exit from the project. This second use of project bonds may be most appropriate for bringing institutional investors into project finance. Bank lenders are better suited to take on construction risk, for several reasons:

- Construction delays and refinancing is relatively common, which is more complicated and less attractive for bondholders compared with banks.
- Projects generate no revenue during construction, making it complex to make bond payments initially or requiring special bond contracts with a lengthy repayment grace period.
- Bonds normally release a large amount of resources right away, while infrastructure project construction uses resources only slowly, often over multiple years.

MDBs can target both uses of project bonds: those launched at project outset (by offering enhancements to mitigate construction risk), or bonds intended to refinance initial project loans to allow the exit of bank lenders and entrance of institutional investors (through enhancements to mitigate regulatory, political or breach-of-contract risks).

The overarching goal of MDB involvement is to strengthen the credit rating of the bonds to attract a wider pool of potential investors. Most institutional investors have specific requirements on the credit rating of their investments, from internal rules relating to their investment goals, domestic regulations (notably on pension funds) and international regulations (the Basel framework on capital adequacy for financial institutions and Solvency II for insurance companies). Hence, achieving at least an investment grade rating<sup>11</sup> is a sine qua non for a project bond to be of interest to institutional investors. The role of official support is all the more important as the main commercial providers of bond coverage – the monoline insurers – collapsed in the wake of the global financial crisis, and are unlikely to return any time soon.<sup>12</sup>

MDBs can enhance the credit of a project bond through either unfunded or funded instruments. Unfunded instruments include guarantees as well as contingent lines of credit to cover payments to bondholders in case of problems with project cash flow. Funded instruments involve the MDB providing up-front resources directly to the project special purpose vehicle

(SPV), often in the form of a junior tranche of debt that would take any initial financial losses, giving private bondholders greater security that they will be paid. In principle, either approach can be equally useful to raise the rating of a project bond issued by the SPV; the use of one or the other depends on the specifics of each project and the risk appetite of other investors.

MDB project bond credit enhancement has been quite limited. In part, this is due to the factors limiting guarantee products in general (see Box 2). An MDB credit enhancement will bring down bond funding costs, but often it remains less expensive and less complicated for the project to simply borrow directly from the MDB itself. MDB credit enhancements tend to be most useful for a specific class of projects. For those targeting European or North American investors, projects that are just below or right at the minimum level of investment grade (BB to BBB-) are most appropriate. With one or two additional notches, these projects can then access institutional investors interested in long-dated bond issues. For many emerging-market bond issues, a similar situation prevails but with a slightly higher base: moving a project from a solid investment grade level (BBB to A-) to A or AA-, as local institutional investors tend to require a higher rating to compete with the sovereign and meet often stricter regulatory requirements on their investments.

A 2016 bond issued for the construction of a public-private partnership (PPP) hospital in Turkey is frequently mentioned as a model for how MDBs can credit-enhance project bonds, but is in many ways more illustrative of its difficulties. The project involved a risk guarantee provided by the Multilateral Investment Guarantee Agency (MIGA) for €208 million (out of a total €288 million bond) in the event of expropriation, transfer restriction or breach of contract. This was supplemented with a liquidity facility by the EBRD for €89 million to mitigate project construction risk and potential payment delays from MIGA's guarantee caused by required arbitration procedures. Even with this credit enhancement package, investor interest was insufficient to float the bond publicly. It was in the end a private deal, and a substantial portion was purchased by other development finance institutions (DFIs): IFC for €80 million, France's Agence Française de Développement-Proparco for €40 million and Holland's Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden (FMO) for €20 million.<sup>13</sup>

---

11 BBB- for Standard and Poor's and Fitch, and Baa3 for Moody's – nine notches below the top rating level of AAA/Aaa.

12 Monolines were successful because they required relatively little capital to back their insurance provision, due to sanguine assumptions on the safety of the insured securities. The global financial crisis put an end to those assumptions. Any company wishing to provide monoline insurance would require much higher levels of capital backing, making the business not commercially viable in current circumstances.

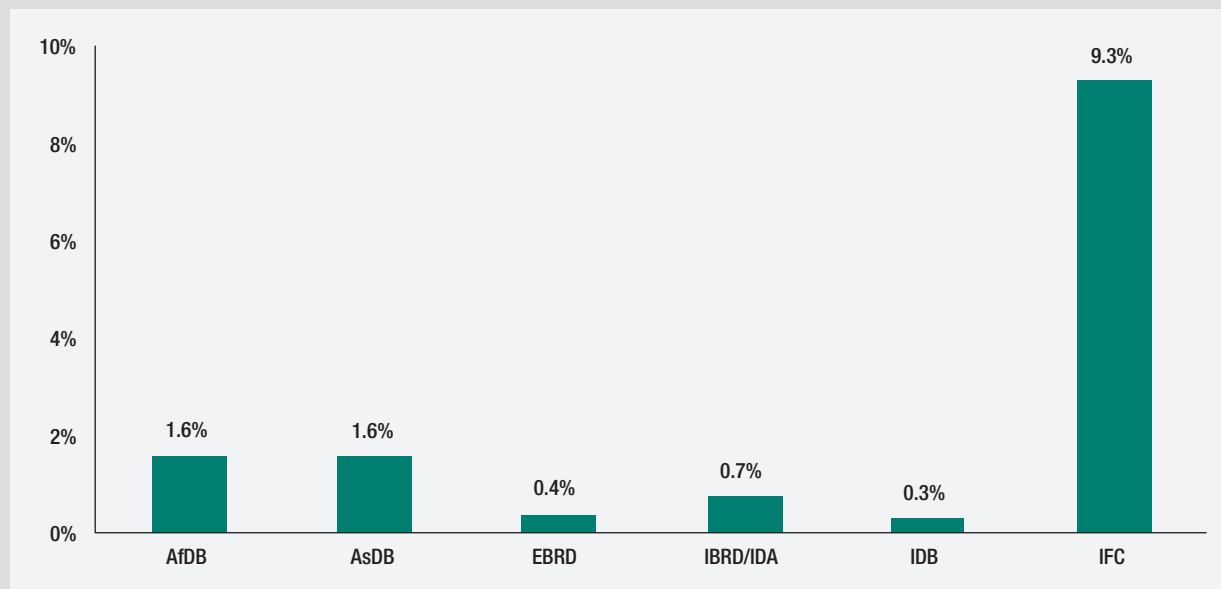
13 Other investors were the Industrial Commercial Bank of China, Siemens Financial Services, Intesa Sanpaolo and Mitsubishi UFJ Financial Group (Bonds & Loans, 2017).

## Box 2 MDB guarantees: unfulfilled promise

MDBs can offer guarantees to mitigate various types of risks, thus facilitating the flow of private financing via loans or bonds to projects that have potential developmental benefits and financial returns, but which investors are hesitant to back. Most MDBs offer partial credit guarantees (for a portion of the financial obligation) or a partial risk guarantee (for non-payment triggered by specific pre-defined risk factors).

Guarantee usage has been quite low since MDBs began using the instruments in the late 1980s. IFC has by far the largest project guarantee portfolio of the major MDBs (Figure B1), at nearly 10% of its outstanding portfolio, while the other MDBs are much lower.

**Figure B1 Project guarantee portfolio as % of total portfolio (2016)**



*Note: Does not include guarantees for trade finance. IBRD, IDA and IFC are FY2016, others are calendar 2016.*

*Source: MDB annual financial statements*

A major structural obstacle to MDB guarantees is that they use up the same amount of an MDB's risk-capital headroom as normal loans, despite the fact that they are unfunded instruments unless they are called and even though MDBs do not necessarily face the same financial risks as with loans. As a result, MDBs price guarantees exactly the same as loans. Considering that MDBs offer extremely low loan rates, most borrowers prefer to simply take an MDB loan rather than a guarantee, since this will save them from the hassle of dealing with a private lender and the resulting financing costs will anyway be the same or better in most cases. The World Bank's IBRD recently reduced capital usage for some partial risk guarantees, but it has limited demand for that product.

Further, the uplift that MDB guarantees are awarded by rating agencies (critical for institutional investors) is constrained due to the fact that MDB guarantees are only partial and procedures for collecting in case of a default can be time-consuming. As a result, guarantees are useful for borrowers only in specific situations. Other obstacles include limited knowledge of guarantee instruments and structuring complex financial deals on the part of most MDB staff, and bureaucratic approval procedures that do not match the needs of the private investors.

The World Bank's MIGA is dedicated entirely to risk mitigation, including political insurance for equity investments as well as (since 2009) guarantees for loans and bonds. As a dedicated institution with specialised staff and no lending, many of the problems holding back guarantee usage at the other MDBs are less problematic for MIGA. MIGA assesses risk-capital usage based on an actuarial approach like an insurance company, rather than a credit-risk approach like banks and MDBs. Nonetheless, MIGA has come in for criticism from some investors due to the cumbersome nature of its arbitration procedures to collect resources when guarantees are triggered due to breach of contract. As well, MIGA has a number of restrictions on what type of investments are eligible for its coverage, limiting its use. At end-2016, MIGA had a gross guarantee portfolio of about \$14 billion, compared with \$3.5 billion for IFC.

*For a more detailed discussion of MDB guarantees, see Humphrey and Prizzon (2014) and Pereira and Kearney (2018).*

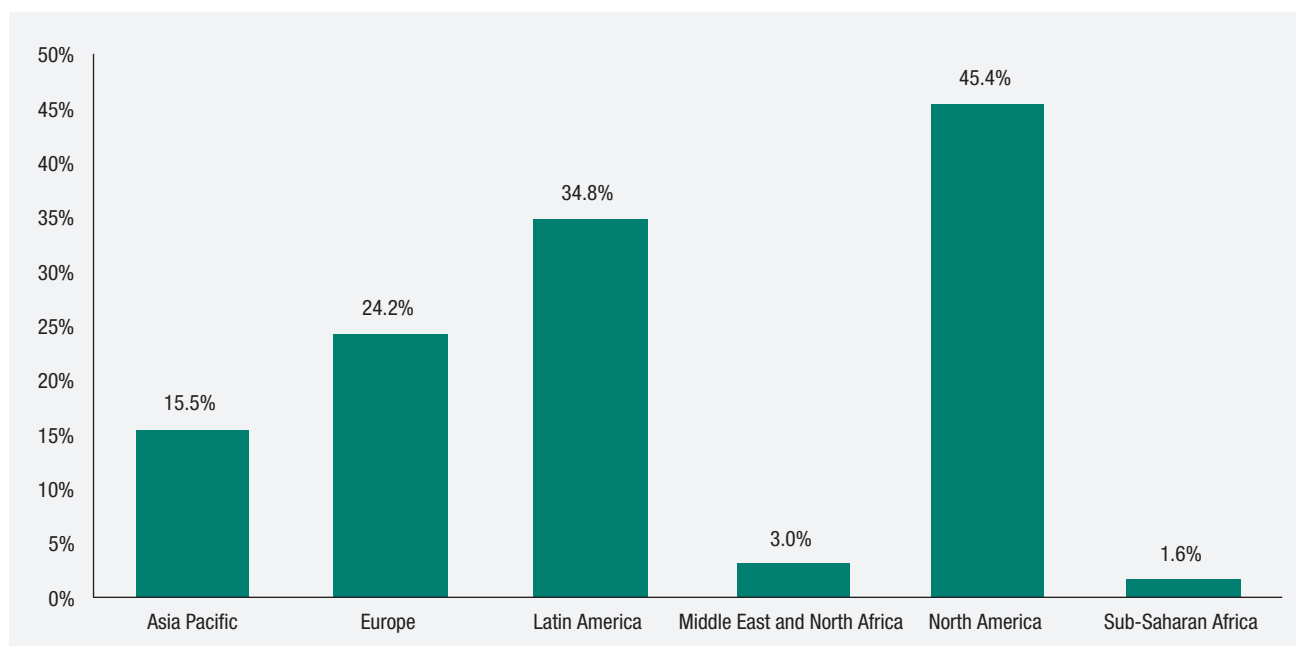
This is not a criticism of the project itself: the fact that the bond deal went ahead at all was an impressive success in light of the context, shortly after a coup attempt in Turkey and at a time when investors were highly skittish about the country's prospects. Some aspects of the project provide valuable lessons that can be replicated, notably EBRD's coverage of construction risk and the conceptual approach of two MDBs offering complementary risk coverage.<sup>14</sup> But this type of complex arrangement involving five DFIs responded to the particular needs of a single country in a specific circumstance, and does not offer a model for other projects to follow in its details. Instead, it highlights the fact that MDBs need to tailor their engagement to the realities of each country, sector and set of target investors, rather than coming up with uniform instruments or deal arrangements applied across countries. This can be very time- and expertise-intensive for MDBs.

The European Investment Bank (EIB) launched a project bond scheme in 2012, which enhanced a series of bonds for infrastructure projects (EIB, 2012). While an interesting initiative, this experience also highlights the difficulty in using MDB backing to attract institutional investors to project bonds. Even in the favourable context of relatively wealthy industrialised countries, an external evaluation found that the facility provided only minimal reduction in financing costs (50 basis points in most cases) and that most projects would have proceeded even without the guarantee scheme (European Commission, 2016). Further, the facility was subsidised by donor resources (from the European Union) that may not be available to other MDBs, limiting its replicability.

Most of the major MDBs have attempted to support local currency project bond issues (as opposed to euro or dollar bond markets) through credit enhancements to target EMDC-based institutional investors, and more work can be done in this area. Credit-enhancing local currency project bond issues has multiple benefits, most importantly eliminating foreign exchange-rate risk from the calculations of issuers and domestic investors. Local currency issues also stimulate the growth of domestic capital markets, with positive spin-off effects on economic activity, and encourage local institutional investors to channel their resources into their own country's development rather than investing in assets abroad. MDB guarantees may be more useful in domestic capital markets, as MDBs often have a high cost of long-term funding (via the swap market, since they are hard-currency-based institutions), making the option of taking an MDB local currency loan less attractive.

The main downside is that local capital markets in EMDCs remain relatively small, often with limited liquidity, higher interest rates and shorter maturities. Nonetheless, domestic capital market issues for project bonds are growing (Figure 8), and a few examples point to the potential. Malaysia has a well-developed project bond market dating from the 1990s, in particular for power and toll-road projects. Key factors in this success was the design of a template for project bonds as part of an initial round of PPPs in the power sector, which was subsequently followed for other projects, as well as the strong participation of Malaysia's main public pension fund (ADB, 2015). Several markets in Latin America – Chile,

**Figure 8 Share of project finance from bond issues by region, 2015/16 average**



Source: IJGlobal (2017)

14 Although the need for EBRD to provide secondary coverage to MIGA's risk mitigation suggests that MIGA's instruments might benefit from reform to address rating agency and investor requirements.

Peru, Mexico, Brazil and Colombia – have seen growth in project bonds since the 1990s, especially by local pension funds. Peru and Mexico have developed arrangements to channel institutional investor resources into infrastructure via pooling expertise and due diligence among a group of asset managers (Peru) and a certificate listed on the local stock exchange (Mexico), which could be useful models for other markets (ADB, 2015).

While the \$6 trillion or so in EMDC institutional investors would be the main target for local currency bond issues, there is growing interest among cross-border institutional investors with some ability to manage currency risks. The IMF (2016) notes that improved regulatory frameworks have encouraged rising foreign holdings of local currency bonds, including by institutional investors. In some larger EMDCs like Indonesia, Poland, Mexico, Peru, South Africa and Malaysia, foreign ownership of local currency bonds reaches 30–40%. This suggests potential to market local currency bonds for high-quality infrastructure projects to foreign investors willing to take currency risk.

Several MDBs have been active in helping develop local bond markets in general, and project bonds in particular. The EBRD's Local Currency and Capital Markets Development Initiative, launched in 2010, includes technical assistance on regulatory issues, a programme of EBRD investing in local currency bonds (€1.6 billion in 2016) to support corporate governance-strengthening and issuing EBRD's own bonds (over €500 million in eight currencies in 2016) to provide benchmarks and build yield curves. The ADB along with China, Japan and ASEAN created the Asian Bond Market Initiative in 2002, focusing on the development of clearing arrangements, cooperation agreements and other measures to boost investor confidence. The World Bank piloted the Deep Dive in Colombia in 2015, in which several World Bank units worked together to design a package of measures to support the growth of the infrastructure project bond market, including a \$70 million investment by the IFC in Colombia's new infrastructure fund that issues bond guarantees.<sup>15</sup>

MDBs might also consider supporting local currency bond guarantee funds. One example is the Credit Guarantee and Investment Facility (CGIF), a \$700 million guarantee fund created in 2010 with the support of the ADB along with China, Japan, Korea and ASEAN as part of the Asian Bond Market Initiative. To date, CGIF has provided insurance to 19 bonds for an issue value of about \$1.2 billion in five Asian markets (Thailand, Singapore,

Philippines, Indonesia and Vietnam) – quite a small value in relation to the facility's own capital, but nonetheless a positive start. The facility has a AA rating from Standard and Poor's and a AAA rating from several local bond-rating agencies, giving its guarantees strong uplift to the insured bonds.<sup>16</sup> GuarantCo, with backing of several bilateral agencies, is another guarantee arrangement on a global scale focused on infrastructure finance, including support to bank loans as well as project bonds.<sup>17</sup> MDBs could build similar arrangements in combination with bilateral funding, focused on infrastructure project bonds. This could benefit from the participation of not only the main regional MDBs, but also sub-regional MDBs<sup>18</sup> and national DFIs.

One aspect of the project bond market where MDBs have already played a supporting role, and can continue to do so, is the green bond market. The World Bank in partnership with a Swedish bank issued the first green bond in 2008, and several DFIs (notably the World Bank, EIB and Germany's Kreditanstalt für Wiederaufbau (KfW)) have been active in issuing green bonds. While still modest compared with the \$100 trillion global bond market, green bonds are growing very quickly, rising from \$2 billion issued in 2012 to \$156.7 billion in 2017 and a projected \$250 billion in 2018 (Climate Bond Initiative, 2018). Not only is the green bond market growing rapidly in the United States and Europe, but in some EMDCs too, particularly China, which has designed policies to encourage green bond growth and is predicted by some observers to become the largest green bond market in the near future (Cheng, 2017).

MDBs could play a stronger role in helping infrastructure project bonds qualify for the green bond designation and access the growing institutional investor segment with a mandate to invest a portion of their resources according to environmentally and socially sustainable criteria. With their experience in designing and implementing infrastructure projects that meet their own stringent safeguard policies, MDBs are well-placed to support projects seeking to issue green bonds. One recent example of this is the above-mentioned Turkey hospital project, where support from EBRD and MIGA helped the bond be certified as 'green and social' by the bond certification organisation Vigeo EIRIS. Another is IDB's \$400 million Regional Green Bond Facility, supporting project bond issues for energy efficiency projects in local capital markets, with the support of Chinese co-financing and the Green Climate Fund (G20, 2017).

15 For more details, see IMF (2016).

16 CGIF fully guarantees the majority of bonds that it covers, unlike the partial coverage offered by most MDBs, which substantially improves rating uplift.

17 GuarantCo's financial performance – \$41.5 million in accumulated losses as of end-2016, compared with \$35 million retained earnings and accumulated reserves by CGIF – suggests problems to be resolved with GuarantCo's business strategy and management (CGIF, 2017 and GuarantCo, 2017).

18 In particular, the Andean Development Corporation and Central American Bank for Economic Integration in Latin America, and the Trade and Development Bank and West African Development Bank in Africa.

## 3.2 Securitisation of infrastructure debt

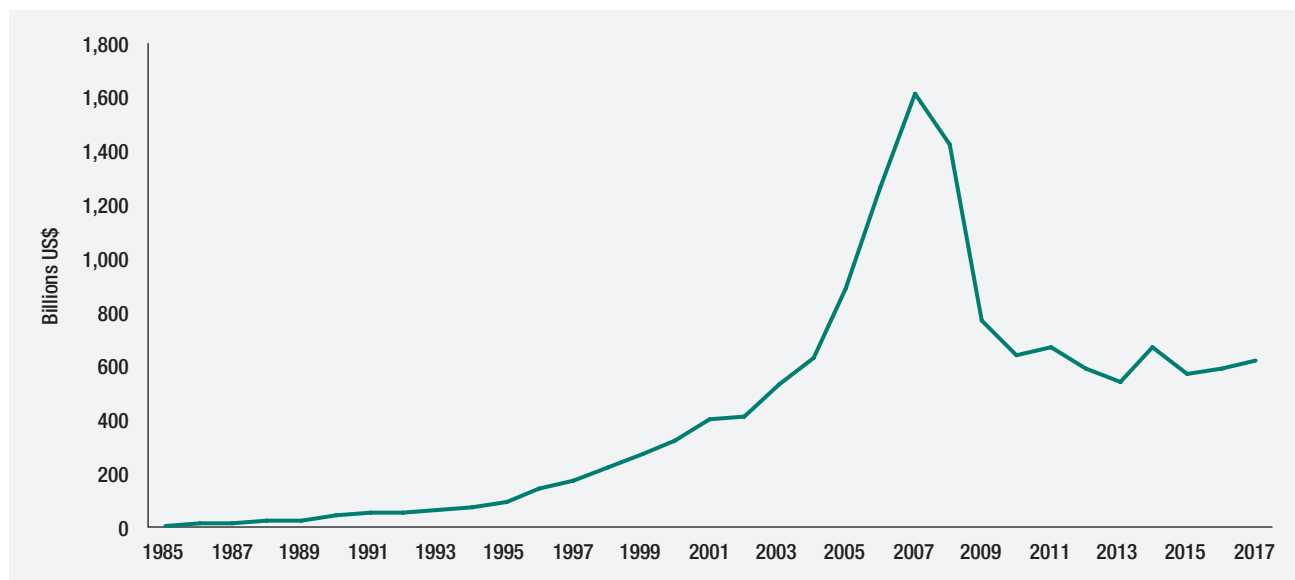
Bank loans are and will remain an important source of financing for major EMDC infrastructure projects. However, banks are restricted in how much they can lend based on their capitalisation, and capitalisation limits have tightened substantially in the wake of the global financial crisis. Because of the way international and national financial regulation classifies the riskiness of infrastructure loans, as well as their large size and long maturity, these use substantial bank capital. Securitisation can ease this capital constraint and allow banks to expand infrastructure lending, while at the same time engaging institutional investors, which are major buyers of securitised products. Securitisation provides an ideal vehicle for allowing initial bank investors to exit after a project's construction is completed and have their place taken by institutional investors not inclined to take on construction risk.

Securitisation is the process by which financial institutions use a group of loans on their books as backing for issuing a bond (security) sold to external investors, freeing headroom for the bank to make more loans. The more common 'true sale' securitisation involves legally removing loans from a bank's balance sheet and transferring ownership to an external SPV that issues bonds. The coupon paid to bond investors comes from the repayment of the underlying loans by the original borrowers. Another approach, which is only a fraction of the total securitisation market but is growing quickly,

is synthetic securitisation. In a synthetic deal, the loans remain on the originating bank's books. External investors provide a guarantee that reduces the level of risk of the loans, which in turn reduces the amount of bank capital needed to back them up, allowing the bank more space to make further lending within their capital adequacy limits. Investors are paid for their guarantee via a fee from the originating bank, which is in turn paid by the repayment of the underlying loans by the original borrowers.<sup>19</sup>

Securitisation – notably asset-backed securities in the US – played a substantial role in the global financial crisis, and understandably has a dubious reputation. However, in the wake of the crisis, regulatory authorities instituted new rules that reduced the risks posed by securitisation. Banks that originate loans are now required to keep a portion (5%) on their books in all cases, thus giving them an incentive to originate quality loans that they did not have when they could sell off loans entirely. Further, the procedure by which rating agencies evaluate securitisation deals has tightened considerably.<sup>20</sup> While these measures have not eliminated risks posed by securitisation, it remains an inherently useful financial technique. Even after declining sharply in the wake of the global financial crisis, securitisation issuances total in the vicinity of \$600 billion per year in the US and Europe (Figure 9). Securitisation represents a good opportunity to channel substantial institutional investor resources in infrastructure finance.

**Figure 9** Securitisation issuance by year, US/European markets



Source: Securities Industry and Financial Markets Association (2018)

19 For a succinct explanation of the difference between true sale and synthetic securitisation, see Kaya (2017). Post-crisis synthetic securitisation, which has been driven mainly by banks seeking capital headroom relief in the face of stricter capital requirements, can be less complex to structure since it does not change the ownership of the underlying assets.

20 For a detailed discussion, see Segoviano et al. (2013). Many other factors also contributed to the crisis that were not directly the result of securitisation. Among others, this included the huge expansion of credit default swaps, a type of insurance contract that can be used to cover risks on securitisation products as well as other financial products.

---

Even at the height of the securitisation boom, infrastructure loans played only a small role, with most securitisation based on mortgages, auto loans, credit cards and student loans. Infrastructure loans tend to have bespoke contractual arrangements and lack of detailed performance record needed to evaluate risks. Due to their large size, it can also be difficult to assemble a granular enough portfolio of infrastructure loans to achieve the level of diversification needed to achieve a highly rated security. These characteristics make infrastructure loans particularly difficult to securitise.

Despite these obstacles, activity has been on the rise in the last few years, and especially since 2017, according to market participants interviewed for this study.<sup>21</sup> In 2017, at least four major synthetic deals with infrastructure closed,<sup>22</sup> including a \$3 billion deal from Credit Agricole with infrastructure loans from 35 countries (SCI, 2018). Interest in infrastructure securitisation is also appearing in EMDC markets, with two securitisations for infrastructure assets in Indonesia in 2017 and preparations under way to begin infrastructure securitisation in China (Kumar, 2017).

### 3.2.1 Securitising commercial bank infrastructure loans, with MDB support

EBRD and IFC both have teams supporting EMDC banks seeking to securitise their loan portfolios. EBRD and IFC generally purchase a funded tranche of a security – either junior, mezzanine or even senior, depending on the risk appetite of other potential investors – to enhance its attractiveness, while unfunded guarantees are rarely used. These operations have focused on standardised loans such as mortgages, auto loans and consumer loans, with which large numbers of relatively homogenous loans can be assembled to structure a security. Such a process is difficult for infrastructure, as these loans tend to be large and EMDC banks do not have enough on their books to build a sufficiently diversified security. The regulatory code and taxation requirements in most local capital markets are also not geared to securitisation, making it a useful option only in a few major middle-income countries with well-developed capital markets and a critical mass of local institutional investors. Hence, MDB activity in this area has been relatively minimal.

Another option is for MDBs to assist large banks from industrialised countries to securitise portfolios of their loans for projects in EMDCs. This overcomes the granularity issue facing EMDC banks, as a number of global banks have substantial infrastructure portfolios

in EMDCs. One (non-infrastructure) example is IFC's \$90 million guarantee in 2014 to a \$2 billion portfolio of Credit Agricole's EMDC loans in a synthetic securitisation. In return, Credit Agricole committed to using the freed capital headroom to extend further loans to EMDCs. However, the idea of MDBs becoming involved in helping large international banks manage their loan portfolios, even if it does benefit EMDCs, is a questionable use of development resources. Further, some MDBs (EBRD, for example) are prohibited from offering financial support in this way, and must use their resources directly in EMDC countries.

Due to the difficulties of the above two approaches, another option (proposed by Ketterer and Powell, 2018) would be for MDBs to work together with EMDC governments to create a national infrastructure fund. A tranche of this fund would be supplied directly by the governments (potentially also with funded or guarantee support from an MDB), and a larger portion of resources coming from commercial investors. The fund would purchase loans taken out by individual project SPVs within the country and bundle them together as backing for issuing bonds. MDBs could work with the governments and infrastructure funds to design an approach for targeting infrastructure projects that meet certain pre-established criteria and fit the government's overall infrastructure investment strategy. Such an arrangement would be most viable in larger middle-income EMDCs that have relatively well-developed capital markets and sufficient local institutional investor scale.

Lastly, MDBs can assist securitisation by providing credit enhancement to the underlying infrastructure loans used to structure the security, as they already do. This strengthens the quality of the underlying loans, making it easier for a security to achieve an investment grade rating. Here MDBs face all the challenges limiting their usage of guarantees discussed above. However, the fact that MDBs only partially guarantee debt is less of a problem in the securitisation process compared with a single project loan or bond. Because securities bundle multiple loans to achieve diversification, even the partial guarantee can be more readily taken into account and strengthen the security, whereas some rating agencies must rate the weakest unenhanced tranche when evaluating a single project loan or bond. MDBs can increase the value of their credit enhancements (to securitisations as well as for individual projects) by standardising their guarantee products, particularly with a view to facilitating the ability of rating agencies to grant rating uplift – a critical factor to attract greater institutional investor interest.

---

21 These include two analysts for major rating agencies that rate structured financial products, a director at an investment firm specialising in structuring securitisation deals, an academic expert on infrastructure financing and a securitisation specialist in the research department of one of the largest banks in Europe. According to rating agency analysts, rating inquiries about infrastructure securitisation has taken off since the summer of 2017, and several transactions have moved ahead.

22 These numbers are only those for which information is available – because synthetic securitisations are arranged privately, many deals are not reported.

### 3.2.2 Securitising MDB infrastructure loans

MDBs can also consider securitising their own portfolios of infrastructure loans. The goal of such an operation would be twofold. First, MDBs could help stimulate the market for securities and promote infrastructure as an asset class, particularly as their issue would have relatively high visibility and is likely to receive a strong rating, thus potentially attracting big-name institutional investors. Second, as with many commercial banks, MDBs face capital headroom constraints of their own, and securitisation can open up space for increased infrastructure lending – in a sense, recycling their portfolios. Conceptually, this could be done on a rolling basis, with MDBs making infrastructure loans, securitising them to private investors, and making further lending. Such a model could generate increased lending headroom at the major MDBs without requiring capital contributions from shareholder governments.

While the idea of securitising MDB loans is appealing, at least two obstacles must be overcome. First, and perhaps the most important from a technical point of view is related to loan pricing. Public-sector loans from all the major MDBs are priced on a uniform basis (i.e., the same for all countries) and are at subsidised rates compared to what the market would offer the same borrowers. This is because MDBs have extremely low cost of funding due to their AAA bond ratings, do not price sovereign risk for political reasons and are non-profit institutions. Structuring these loans into securities is thus not commercially viable, and would imply a loss for MDBs equalling the value of the subsidy element of their loans to make them attractive for private investors. Private-sector loans by MDBs, on the other hand, are priced much closer to commercial terms, and are more easily securitised.

Second, MDBs have an official relationship with their borrowers that goes beyond that of a commercial bank. MDBs are cooperative international organisations with non-profit development goals, and as a result benefit from preferred creditor status, especially for their public-sector loans. Further, MDBs are mandated by their shareholders to oversee the implementation of their loans to ensure quality control, development impact and environmental, social and procurement safeguards. Should MDBs start originating loans that they subsequently sell off their balance sheets to external investors, this model could start to break down. As a result, the most promising approach for MDBs is synthetic securitisation, wherein the loans remain on the balance sheets of the MDBs for their entire maturity and external investors provide a type of coverage for those loans (resulting in capital relief for the MDB) in return for regular fee payments.

In light of the scale of infrastructure lending by the MDBs, it would be feasible to structure a facility focused specifically on infrastructure. The IFC, EBRD and ADB have outstanding loans to private-sector infrastructure projects of roughly \$14 billion, \$7 billion and \$3 billion, respectively, according to their most recent financial statements.<sup>23</sup> MDBs do not report sectoral breakdowns for public-sector loan portfolios, but even assuming a very conservative 25% of the total outstanding portfolio, this would amount to \$5.4 billion for AfDB, \$15 billion for ADB, \$42 billion for IBRD, and \$19 billion for IDB. These are substantial resources with which to build infrastructure securitisation deals on the scale sought by institutional investors. At least two proposals to securitise MDB loans are currently under consideration.

The World Bank floated a proposal in late 2017 to create an infrastructure loan refinancing facility for public-sector infrastructure portfolios of IBRD, funded by a combination of private investors and donors. The proposal does not use a traditional securitisation model, but the results are similar. The facility would make new loans to qualifying IBRD borrowers (state-owned enterprises with IBRD infrastructure loans) at the same terms of their original loan, with which the borrowers would pay off their IBRD loans. With the original loan paid off, the IBRD can then make further loans, while the original borrower now has a loan obligation to the facility, and not to the IBRD. Donor support is needed to cover the difference between the subsidised public-sector loan rate and the return demanded by commercial investors, and as a result the size of the facility and prospects for scaling it up are limited. The ramifications of transferring a sovereign obligation to an external facility backed by private investors for the IBRD's official status and preferred creditor treatment would also need to be carefully considered.

Another proposal being discussed among MDB shareholders also involves a risk-transfer facility for a group of MDBs, but with a mechanism closer to a normal synthetic securitisation than the World Bank proposal. It would create a loan recycling facility with a mix of private investors taking senior and mezzanine tranches through tradable debt securities, and public investors taking a junior tranche. Loans would remain on MDB books, and a portion of each loan's risk would be transferred to the facility. The amount of capital headroom relief (and hence freed capacity for new lending) would depend on the details of the facility and the underlying loans, but would likely be well under 75% of the amount of loans involved.<sup>24</sup> The proposal envisions a mix of private- and public-sector loans and includes multiple MDBs, thus generating diversification to partially offset the problem of

23 These numbers are estimates based on the sectoral categories reported by the MDBs. A precise breakdown is not possible with publicly available data.

24 As a comparison, Credit Agricole's 2017 synthetic securitisation of \$3 billion resulted in capital relief sufficient for the bank to generate \$2 billion more loans – a 66% capital relief. It seems unlikely that MDBs would be able to do better than that, in light of Credit Agricole's substantial experience in synthetic deals and highly sophisticated loan risk-assessment framework as well as the fact that the proposed MDB facility would include public-sector loans with subsidised pricing.

public-sector loan pricing. The fact that this arrangement (i) does not require donor funding and (ii) leaves the loans on the balance sheets of the MDBs may make it a more viable option than the World Bank's proposal, both financially and politically.

It is also feasible for an individual MDB to go ahead with a securitisation transaction for infrastructure loans on its own. Only one MDB – the IFC – has reportedly ever done a securitisation, back in the late 1990s, and none have tried since.<sup>25</sup> However, several MDBs and shareholders have begun seriously considering the technique in the last couple of years to address capital constraints. One of the regional MDBs is well advanced in discussions on a synthetic securitisation transaction with private investors related to its private-sector loan portfolio, although details of the proposal are not publicly available. Apart from the capital-relief benefits, issuing a security based on infrastructure loans from a respected, high-profile bank like an MDB could encourage greater interest in the commercial market for infrastructure securitisation among institutional investors, thus helping promote infrastructure as an asset class.

Whether MDBs take an individual or collective route, it would be useful to market their securitisation arrangements as certified 'green' and/or socially sustainable, targeting rising interest among institutional investors in these types of assets and helping develop this market. Weber et al. (2016) report that green asset-backed securities (ABSs) first emerged in 2013, and municipal green ABSs (backed by mortgage loans to environmentally certified buildings) were first issued in the US in 2014 (Weber et al., 2016: 337). This ABS segment has grown quickly, topping \$30 billion in 2017, in good part due to the active participation of the US housing agency Fannie Mae (Climate Bond Initiative, 2018). In light of their own stringent environmental and social safeguard policies for projects, infrastructure ABSs built out of MDB portfolios are well-positioned to qualify as green and socially sustainable.

### 3.3 MDB syndication arrangements

A third approach MDBs can take to attract institutional investors is to offer participations directly in MDB lending operations via loan syndication. This is a technique wherein the MDB originates a loan project in an EMDC (the 'A' loan), and an external private investor commits additional funding of their own to the same project (the 'B' loan). The MDB remains in charge of overseeing the project throughout the loan's life, and the external investor has no interaction with the end-borrower. The portion of the loan committed by the

MDB remains on the MDB's own balance sheet, while the portion committed by the external investor stays with them. As a result, the borrower can access more financing for the same project without using up additional MDB resources. Syndication is a useful way for MDBs to bring institutional investors who would ordinarily avoid taking on construction risk into greenfield infrastructure projects, but might be willing to do so with the additional comfort of MDB involvement.

Because the external financier receives exactly the same loan terms (interest rate and maturity) as the MDB, syndication is only of interest to investors for MDB loans to the private sector, which are market-priced. Consequently, the two MDBs with the largest private-sector loan portfolios – IFC (\$24 billion portfolio at end-FY2016) and EBRD (\$20 billion at end-2016) – have been the most active in setting up syndication arrangements. IFC has raised \$2–3 billion per year in the last decade through syndication, while EBRD has raised \$1–1.5 billion annually. Most syndications are sold to banks, but institutional investors have also been involved, particularly for larger loan projects. The private-sector windows of all the major MDBs have targeted increasing syndication activity, but success has been modest and further efforts are merited, particularly at the regional MDBs (AfDB, ADB and IDB).

Pooled-type syndication arrangements are also possible.<sup>26</sup> IFC first created an arrangement of this type with the People's Bank of China in 2013, raising \$3 billion to support IFC projects. It has since created the Managed Co-Lending Portfolio Program (MCP), which is a template to tailor individual pooled arrangements for different investors, depending on their needs. Institutional investors commit a set amount of resources to be co-invested in a pool of IFC loans. The investor earns a return in line with what IFC itself earns on its loans, but plays a purely passive role. IFC originates, structures and oversees individual projects, and remains the lender of record and sole interface with the borrower. This is the same approach as for regular syndication, but more attractive to institutional investors as it provides diversification and requires less work on their part to evaluate individual projects. IFC has signed three MCP deals for \$1 billion each in 2016 and 2017, one specifically for infrastructure loans (MCP-Infra), and aims to raise several billion more in coming years.

While the MCP is a very creative use of MDB strengths to leverage institutional investor resources, details of MCP-Infra point to potential difficulties in ramping up the arrangement for infrastructure investment or replicating it at other MDBs. Unlike the other MCPs, the infrastructure deal (with Allianz and Eastspring,

<sup>25</sup> Details of this transaction were not immediately available.

<sup>26</sup> This is not unlike equity funds listed on many international stock exchanges (including a growing number for infrastructure), but for debt rather than equity. At least one major commercial debt fund specialises in infrastructure finance, set up in 2012 by the French infrastructure firm Natixis. That fund has \$5.4 billion in assets, with participation of major institutional investors such as Ageas, CNP Assurance, SwissLife and Samsung Asset Management (Natixis, 2018).



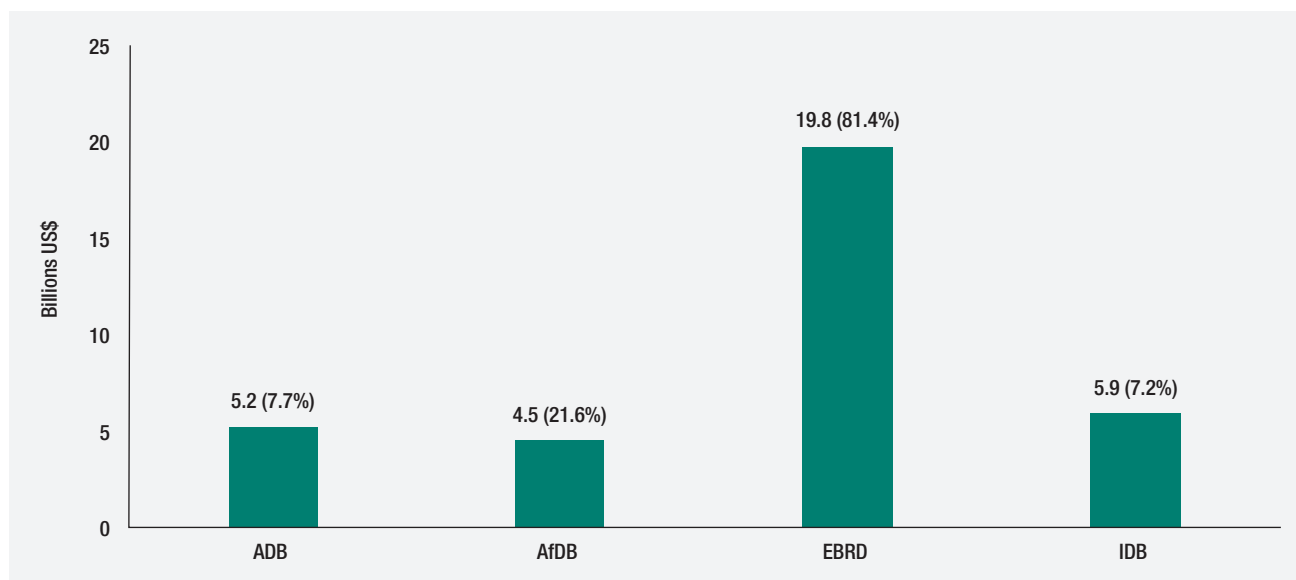
for \$500 million each) is a ‘non-discretionary’ set-up: investors cannot refuse any project that IFC supports that meets the MCPP’s pre-defined criteria. At the same time, IFC has itself taken a 10% first-loss tranche in the MCPP, to give investors greater comfort. To defray IFC’s cost to take this tranche, Sweden’s government is offering a guarantee to back it up. This complex arrangement suggests that investors perceive infrastructure in EMDCs – even projects supported by a respected institution like IFC – as posing more risk than they are willing to take on purely commercial terms. Whatever the reason, it would appear that the investors have negotiated a particularly attractive arrangement for themselves, with stable returns and very low risk. Without official support such as Sweden is providing to the IFC, it may be difficult for other MDBs to create such a facility, as it would require the MDB to commit additional resources (to fund the junior tranche), making it uneconomical.

Other MDBs have considered arrangements like MCPP, but IFC has an advantage due to its global scope of operations and hence ability to build a diversified portfolio of private-sector loans. Of the regional MDBs, EBRD has by far the largest private-sector portfolio – about \$20 billion at end-2016, or 81.4% of the total outstanding portfolio – but most of that is concentrated in only a few countries, making diversification difficult. The other regional MDBs have substantially smaller private-sector portfolios, although they are growing and, in the case of the IDB, may grow rapidly with

the recent ‘merge out’ of all private-sector operations to a separate IFC-like institution, the Inter-American Investment Corporation<sup>27</sup> (Figure 10). Project-by-project syndication may be a more appropriate strategy to bring in institutional investor resources for these MDBs at the moment, with pooled approaches like the MCPP to be developed in the coming years as the private-sector loan portfolios grow.

Pooled syndication arrangements are also conceptually possible with MDB public-sector lending, although no MDB has attempted to create one as of yet. The World Bank’s IBRD public-sector window for middle-income countries is now in the process of designing a new facility conceptually akin to the MCPP, with a focus on infrastructure.<sup>28</sup> The idea would be a fund that would pay a market-based return to institutional investors, and these resources would be mixed with IBRD loans at its normal below-market public-sector lending rates. The result would be a much larger pool of resources than the IBRD could supply on its own – which would be an important attraction for countries seeking to implement a large-scale programme of infrastructure projects. The financial terms of the total package would be more expensive than regular IBRD lending rates, but less than private lending rates and still at the long maturities sought by infrastructure projects. Because of the World Bank’s global scale, it may have an advantage in building a fund profile attractive to investors, but other major regional MDBs could also consider this approach.

**Figure 10 Loan portfolio to private-sector borrowers, regional MDBs (2016)**



Note: Numbers in parenthesis denote the share of private-sector financing in the overall development portfolio (loans, guarantees and equity investments).

Source: MDB financial statements, 2016

27 See pp. 6–7 of IDB 2016 financial statement for information on the merger (<https://publications.iadb.org/bitstream/handle/11319/8221/Inter-American-Development-Bank-Annual-Report-2016-Financial-Statements.pdf>). As of end-2017, the Inter-American Investment Corporation (IIC) had a development portfolio of just under \$1 billion (IIC, 2017), but this is expected to grow sharply in the coming years.

28 Based on discussions with World Bank staff, March 2018.

---

# 4 Conclusions and policy options

Emerging and development countries face huge gaps in basic infrastructure that, unless filled, will make it impossible to achieve global economic and human development targets. The existing rhythm of public and private investment is insufficient to fill these gaps. Institutional investors have a tremendous quantity of investable resources but currently engage only minimally in infrastructure investment, despite the fact that it could match up well with the financial profile they seek. Governments and international organisations – including MDBs – can play a coordinating role in helping bring together this supply and demand to generate substantial developmental benefits.

This paper focuses on the role of MDBs, which are only one group of actors in the broader infrastructure finance agenda. MDBs play a critical role in international development, and are being called upon by the G20 and others to bring their strengths to bear on leveraging institutional investor resources into EMDC infrastructure. Therefore it is worth assessing their capacity to do so in detail to better inform policy decisions by MDB shareholders and management. The three financial techniques discussed in the paper – project bonds, securitisation of infrastructure loans and syndication arrangements – are all viable tools that MDBs can deploy to crowd in greater institutional investor funds to EMDC infrastructure, especially when targeted to precisely the risks holding back greater investment currently. Most of these techniques are already in use to some degree by the major MDBs, and can be scaled up with appropriate policy reforms.

Before moving on to discuss policy options, two caveats are in order. First, MDB interventions like the ones discussed in this paper are likely capable of moving the needle in the coming years from ‘billions to tens of billions,’ rather than ‘billions to trillions’. A true step increase in institutional investor flows to EMDC infrastructure will occur as a result of infrastructure deal standardisation, regulatory changes, improved project preparation and a more stable macroeconomic and business environment, among many other factors. Even if these obstacles are addressed, private investment is only realistic for infrastructure facilities that generate sufficient revenues to repay these investments, with

an acceptable risk profile. Only a portion of the basic infrastructure needed in EMDCs fits these criteria. The remainder will continue to be funded by public investment from EMDC governments and DFIs.

Second, regular MDB operations are already highly effective in crowding institutional investor resources into development projects. MDBs fund the vast majority of their regular operations by issuing bonds in international capital markets, most of which are purchased by institutional investors. This is even more the case now, as the concessional lending windows of the major MDBs are either closing down (at ADB and IDB) or themselves starting to issue bonds (World Bank’s IDA, and possibly AfDB’s African Development Fund in the near future). In low- or lower-middle income countries, and for sectors with higher risk and less revenue-generation potential, regular MDB lending based on bond issues might be the most economically efficient solution to crowd in institutional investors, at least in the near term. While it is unquestionably worth pursuing innovative instruments and policies to promote infrastructure as an asset class with investors, MDBs might be better placed to move from ‘billions to trillions’ by increasing their own lending capacity.<sup>29</sup>

## General issues for MDB engagement with institutional investors

1. **MDBs need to strengthen their understanding of and engagement with the private sector.** This is an obvious and frequently mentioned point, but bears repeating. Most MDB staff have little familiarity with bond markets, capital requirements, risk evaluation and the like, and internal MDB approval and oversight processes are not geared towards investor needs and timeframes. Unless this is rectified, little progress will be made in the agenda outlined in this paper. Improvement requires hiring more staff with practical private-sector experience and designing special bureaucratic processes that meet the needs of investors. The AfDB and ADB may also consider merging out their private-sector operations to a separate institution, as the IDB has recently done. This permits the growth of a different

---

<sup>29</sup> This can be done by either building shareholder equity (through capital increases or net income measures) and/or taking a less conservative approach to capital adequacy. For more on MDB capital adequacy, see Humphrey (2017; 2018).

---

kind of institutional culture, skills, staff performance incentives and project procedures specialised to the needs of the private sector. Further, having a separate balance sheet can be advantageous to manage the requirements of an investment portfolio geared to non-sovereign operations.

2. At the same time, the **major MDBs cannot lose sight of their role as cooperative banks owned by and serving the public sector.** With the exception of IFC and EBRD, which have always focused on private-sector operations, the other MDBs have amassed an unparalleled wealth of knowledge and experience on working with EMDC governments to promote development. That is an essential role, and should remain their principle focus – MDBs should not seek to convert themselves into investment banks or fund managers. MDBs must also not become so obsessed with trying to bring in private investors that they offer too much public-sector subsidy where it is not warranted. Investors are quite happy to have MDBs shoulder risks and leave them with the returns, and will naturally try to negotiate the best deal for themselves. A deep knowledge of the market and a willingness to walk away from a proposed deal is critical for MDBs to strike the right balance.
3. **Scaling up institutional investment requires moving from individual projects to infrastructure investment platforms, with a focus on country specificities and in cooperation with other DFIs.** MDBs need to work more closely with governments to assess long-term investment programmes; target classes of investors; undertake necessary regulatory, policy and legal reforms; and provide appropriate risk-mitigation instruments and direct investments. The World Bank Group's Deep Dive in Colombia is an excellent example of such an effort. This requires a substantial investment of time and resources on the part of MDBs – something shareholders need to keep in mind when considering operational budgets. In support of such an approach, MDBs can accelerate standardising their guarantee instruments and contractual arrangements, promoting joint information-sharing platforms and working together to engage institutional investors. While such joint work is most feasible initially among the major MDBs, it would make sense to involve sub-regional MDBs in EMDCs, some of which are growing very rapidly, as well as national development institutions.
4. **MDB support to the pipeline of bankable projects and the broader business environment remains critical.** Many investors might be interested in dedicating resources to EMDC infrastructure, but are unable to find bankable projects. This is a constant theme in all discussions on infrastructure finance, and legitimately so. While the project pipeline is not a topic of research in this paper, three points are worth noting. First, the

ongoing work of MDBs in improving government investment planning, PPP arrangements, regulatory frameworks and the overall business operating environment remains as essential as ever. Second, project preparation facilities are critical and remain under-funded by MDBs. Efforts by the World Bank's Global Infrastructure Facility, the SOURCE facility backed by a group of MDBs, and the multi-donor-supported Infrastructure Consortium for Africa are all highly positive, but more financial resources are urgently needed. Third, investor appetite and the project pipeline are mutually reinforcing. Strengthening MDB activities to bring in institutional investors will give greater confidence to EMDC private and public actors to move ahead with project preparation.

## Project bonds and commercial bank securitisation

1. **The long-term focus should be on local currency capital markets and EMDC institutional investors, while dollar and euro markets are a useful alternative in the near term.** Using local capital markets eliminates currency risk, channels domestic savings into development and has knock-on effects for development through the diversification of domestic financing options. MDBs can support local capital markets by promoting regulatory reforms and helping design standardised contract templates that have proven successful in promoting project bond markets (as in Malaysia, for example). IFC and EBRD are already active on this agenda, and the World Bank Group's Deep Dive in Colombia is a good example of what can be done. Dollar and euro capital markets will remain important options for EMDC project financing in the near term, due to their vast resources and the sophistication of investors, particularly for projects that can manage currency risk. For lower-income countries, MDBs might better serve development goals by using their own balance sheet through lending and loan guarantees, rather than prematurely encouraging project bonds or securitisation.
1. **Reform MDB guarantee instruments and usage.** Although MDB guarantees have substantial potential, they are under-used. To scale them up, MDBs can:<sup>30</sup>
  - a. **Strengthen staffing skills and incentives.** The only way to meaningfully increase guarantee usage is to have staff able to market them effectively. Due to the complexity of guarantee transactions, specialised knowledge and skills are required. MDBs should augment their staff with specialists experienced in this type of transaction and conversant in the needs of private investors, and consider adding specific incentives to operations staff key performance indicators to encourage the use of guarantees.

---

30 See Humphrey and Prizzon (2014) and Pereira and Kearney (2018) for a more detailed discussion of options to increase MDB guarantee usage.

- b. **Work intensively with credit-rating agencies and investors to address weaknesses in guarantee instruments.** Some aspects of MDB guarantees limit their attractiveness to investors and ability to get rating uplift. One example is MIGA's breach-of-contract insurance, which requires lengthy arbitration procedures that are a disincentive to investors. Unless MDBs tailor guarantees to the precise needs of investors and rating agencies, they will not serve their purpose.
- c. **Offer full guarantees in some instances, or permit 'stripping'.** MDBs mainly offer only partial guarantees (due to moral hazard issues and the desire not to 'contaminate' an MDB's own bonds),<sup>31</sup> which receive weak uplift from rating agencies. Permitting full guarantees – in specific instances when justified by project needs and development impact – could greatly increase the impact of guarantees and client demand. Another option would be to allow MDBs to 'strip' bonds into their guaranteed and non-guaranteed components and market them separately to find their natural investor base, as MIGA piloted in Hungary.
- d. **Reconsider the 1:1 allocation of risk capital for guarantees compared to loans.** This undermines the attractiveness of the instrument in the eyes of many borrowers, who prefer to take MDB loans instead. Partial risk guarantees (PRGs) – which are triggered only for specific reasons related to government action, and where MDBs are well-positioned to assess and manage risk – may be a good candidate for risk capital allocation reduction. The World Bank recently permitted a 50% risk capital reduction for PRGs in some cases, and other MDBs should consider doing the same.
- e. **Increase the use of reinsurance,** which can shift a large portion of guarantee risk off MDB books to insurance companies, freeing risk capital for future operations. MIGA reinsured 53% of their guarantee portfolio at end-2016. Other MDBs are beginning this as well, but can do more. A greater use of reinsurance can also have benefits for risk capital usage and pricing.
- f. **Improve MIGA's operations, and improve coordination with other MDBs.** Unlike the other MDBs, MIGA is a specialised guarantee provider. However, MIGA's product offering is available only to specific investments, limiting its usefulness for many types of infrastructure project. These limitations should be addressed. MIGA can also work more closely with other divisions within the World Bank and other MDBs to design risk-mitigation packages based on project and investor needs, as the case of EBRD and MIGA's support to the Elazig Hospital bond in Turkey illustrates.

2. **Explore the use of securitisation vehicles designed in concert with national governments,** as suggested by Ketterer and Powell (2018). MDB technical assistance and credit enhancement could help such a facility securitise project finance loans, channelling them to local institutional investors (or external investors willing to take the currency risk). Such a facility would work best in larger middle-income countries with developed capital markets, particularly in Asia and Latin America. New facilities are not necessarily required: it may also be possible to adapt existing ones to perform this function, for example the recently created *Financiera de Desarrollo Nacional*, Colombia's dedicated infrastructure institution, in which IFC already has a financial stake.

## MDB portfolio securitisation

1. **Synthetic securitisation for private-sector portfolios is the most appropriate option for MDBs.** With the synthetic approach, MDBs remain the lender of record, thus reducing any potential problems related to preferred creditor status or the official relationship between MDBs and borrowers. This can be further strengthened by securitising only a portion (not more than 50%) of each individual loan. Securitising MDB loans to private-sector clients is more feasible, as these loans are priced at market rates and require little or no enhancement to make the deal attractive to investors.
2. **A collective effort with multiple MDBs would have the greatest impact.** Individual MDBs can move ahead with securitisations on their own to address capital constraints, but bringing together several MDBs to create a securitisation facility would be much more effective. This would permit the structuring of securities with broader geographic and sectoral diversification to provide the greatest capital relief (and thus lending headroom) to MDBs. Such a collective arrangement could also permit mixing private- and public-sector MDB loans, due to reduced risk through diversification. This may entail some legal and technical obstacles, but these can be overcome with the support of shareholders. The inclusion of sub-regional MDBs and even national development banks could be contemplated in a future phase of such a facility.
3. **An individual transaction of infrastructure loans could be useful to spur the commercial market for infrastructure-backed securitisations and the perception of infrastructure as an asset class.** The market for infrastructure-backed securities is incipient, but interest is clearly growing on the part of institutional investors. A well-publicised transaction by a respected institution like an MDB

31 This concern has been raised since the very start of World Bank operations in the 1940s. However, a recent survey of the investors in one MDB's bonds suggested that these concerns are exaggerated: MDB bonds and bonds guaranteed by MDBs would likely attract different types of investors (personal communication, MDB staff, December 2017). This issue should be investigated in more detail rather than accepted as an article of faith.

---

could encourage the growth of the market. IFC would be an appropriate MDB to launch such a pilot transaction, due to its large and diversified portfolio of infrastructure loans to private borrowers. Such a deal should target a minimum size of \$1 billion in underlying loan value.

- 4. Appropriate staffing, risk management and incentives are essential for MDBs to move ahead with securitisation.** While the major MDBs already have strong risk-management frameworks and teams, a programme of securitisations may require hiring specialised staff to manage interactions with investors and evaluate potential risks adequately. It will also be important to ensure that project staff incentives prioritise development goals and do not become skewed towards backing projects that can easily be securitised. This could lead an MDB towards crowding out the private sector and reducing development impact.

## Syndication

- 1. As with guarantees, MDB staff knowledge and skills are paramount.** There is no substitute for the hard work of getting to know investors to better understand their needs and find the right balance between development purpose and investor appetite. For the AfDB, ADB and IDB in particular, increasing syndications will require hiring more specialised staff experienced in this work. Reorienting MDB
- 2. A pooled approach to syndication, like the IFC's MCPP, is a model worth scaling up, possibly with more than one MDB.** A pool of syndicated loans is more attractive to institutional investors as it diversifies risk and reduces the need to evaluate individual projects in detail. However, the limited size of MDB private-sector infrastructure portfolios can make this difficult. Creating a joint facility among several MDBs can overcome this obstacle, possibly including sub-regional MDBs – some of which have substantial non-sovereign portfolios – in a future phase. A public-sector pooled syndication approach to provide a mix of MDB and private investor financial terms for publicly funded infrastructure projects, as the World Bank is currently contemplating, may also be useful for the regional MDBs.
- 3. MDBs must prioritise development goals rather than investor needs.** As with securitisation, syndication can lead MDB staff to focus excessively on projects that investors would consider attractive, to the detriment of development impact. MDBs are not in the business of finding deals for investors. It is essential that MDB management design staff incentives and approval processes to ensure that development impact remains the top priority.

---

# References

- Arezki, R., P. Bolton, S. Peters, F. Samama, and J. Stiglitz (2016) *From Global Savings Glut to Financing Infrastructure: the Advent of Investment Platforms*. IMF Working Paper WP/16/18. Washington DC: IMF
- ADB – Asian Development Bank (2015) *Local Currency Bonds and Infrastructure Finance in ASEAN +3*. Manila: ADB
- Bhattacharya, A., J. Meltzer, J. Oppenheim, Z. Qureshi and N. Stern (2016) *Delivering on Sustainable Infrastructure for Better Development and a Better Climate*. Brookings Institution, the Global Commission on the Economy and Climate and the Grantham Research Institute on Climate Change and the Environment. Washington DC: Brookings
- Bonds & Loans (2017) ‘Case Study: The First Greenfield Green Infrastructure Project Bond in Turkey.’ 2 February ([www.bondsloans.com/news/article/1210/case-study-the-first-greenfield-green-infrast](http://www.bondsloans.com/news/article/1210/case-study-the-first-greenfield-green-infrast))
- Boudrias, J. and R. Kotin (2012) ‘Project Bonds in Project Finance’ in Morrison, R. (ed.) *The Principles of Project Finance*: 111–122. Farnham: Gower
- Buscaino, V., F. Corielli, S. Gatti and S. Caselli (2012) ‘Project Finance Collateralised Debt Obligations: an Empirical Analysis of Spread Determinants.’ *European Financial Management* 18 (5): 950–969
- Carter, P. (2015) *Why Subsidise the Private Sector? What Donors are Trying to Achieve, and What Success Looks Like*. London: Overseas Development Institute
- Celik, S. and M. Isaksson (2014) ‘Institutional Investor: Ownership and Engagement’ *OECD Journal: Financial Market Trends*, 2013 (2): 93–114
- Chan, E. and M. Worth (2012) “Basel III and its Implications for Project Finance.” In Morrison, R., ed., *The Principles of Project Finance*, pp. 95-102. Farnham: Gower.
- Cheng, A. (2017) ‘Green Bond Market Heats Up.’ *Institutional Investor* 5 December ([www.institutionalinvestor.com/article/b15xjq2wfdmzp/green-bond-market-heats-up](http://www.institutionalinvestor.com/article/b15xjq2wfdmzp/green-bond-market-heats-up))
- Climate Bond Initiative (2018) ‘Green Bond Highlights 2017.’ January. London: CBI
- Credit Guarantee Investment Facility (2017) Annual Financial Statement. Manila: CGIF.
- Della Croce, R. and S. Gatti (2014) ‘Financing Infrastructure: International Trends.’ *Financial Market Trends*, 2014/1: 123–138
- Ehlers, T. (2014) *Understanding the Challenges for Infrastructure Finance*. BIS Working Paper 454, August 2014. Basel: Bank for International Settlements
- EIB – European Investment Bank (2012) *An Outline Guide to Project Bonds Credit Enhancement and the Project Bonds Initiative*. 21 December. Luxembourg: EIB
- European Commission (2016) Commission Staff Document on the Ad-hoc Audit of the Pilot Phase of the Europe 2020 Project Bond Initiative. Brussels: EU.
- G20 (2017) ‘Principles of MDBs’ strategy for crowding-in Private Sector Finance for growth and sustainable development.’ IFA Working Group, April 2017
- G20/OECD (2016) ‘G20/OECD Supporting Note to the Guidance Note on Diversified Financial Instruments, Infrastructure.’ July. Paris: OECD
- Global Infrastructure Hub (2016) ‘Report to G20 Deputy Finance Ministers and Deputy Central Bank Governors on MDB Internal Incentives for Crowding In Private Investment in Infrastructure.’ 1 December. Sydney: GI Hub
- GuarantCo (2017) Annual Financial Statement. London: GuarantCo.
- Humphrey, C. (2018) ‘The Role of Credit Rating Agencies in Shaping Multilateral Finance: Recent Developments and Policy Options.’ Discussion draft, Inter-Governmental Group of 24. Washington DC: G24
- Humphrey, C. (2017) ‘Maximizing the Financial Potential of Multilateral Development Banks – Without a Capital Increase’ in A. Prizzon, C. Humphrey, I. Kaul, K. Kodera, A. McKechnie and A. Rogerson, *Six Recommendations for Reforming Multilateral Development Banks*: 17–20. London: Overseas Development Institute
- Humphrey, C. (2015) *Challenges and Opportunities for Multilateral Development Banks in 21<sup>st</sup> Century Infrastructure Finance*. G24 and Global Green Growth Institute Working Paper Series on Infrastructure Finance in the Developing World. Washington DC: G24
- Humphrey, C. and A. Prizzon (2014) *Guarantees for Development: A Review of Multilateral Development Bank Operations*. December. London: Overseas Development Institute
- IJGlobal (2017) ‘2016 Global Project Finance League Tables.’ London: IJGlobal
- IMF – International Monetary Fund (2016) ‘Development of Local Currency Bond Markets.’ Staff note for G20, 20 June. Washington DC: IMF
- Inter-American investment Corporation (2017) Annual Financial Statement. Washington DC: IDB.
- Kaya, O. (2017) ‘Synthetic Securitization: Making a Silent Comeback.’ Deutsche Bank Research, 21 February. Frankfurt: Deutsche

- Ketterer, J. and A. Powell (2018) *Infrastructure as an Asset Class: Toward a Tradable Standardized Security*. Inter-American Development Bank Discussion Paper. Washington DC: IADB
- Kumar, R. (2017) 'Indonesia, China Take Securitization Route to Infrastructure Finance.' 13 October, *Global Capital* ([www.globalcapital.com/article/b154v2bdkj2svw/indonesia-china-take-securitization-route-to-infrastructure-finance](http://www.globalcapital.com/article/b154v2bdkj2svw/indonesia-china-take-securitization-route-to-infrastructure-finance))
- Lee, N. (2017) 'Billions to Trillions? Issues on the Role of Multilateral Development Banks in Mobilizing Private Finance.' 17 November. Washington DC: Center for Global Development
- Lin, J.Y., Halland, H., and Wang, Y. (2018) 'A New Approach to Infrastructure Finance.' 13 March, Project Syndicate ([www.project-syndicate.org/commentary/attracting-private-infrastructure-investment-by-justin-yifu-lin-et-al-2018-03](http://www.project-syndicate.org/commentary/attracting-private-infrastructure-investment-by-justin-yifu-lin-et-al-2018-03))
- McKinsey (2016) 'Bridging Global Infrastructure Gaps.' June. Brussels: McKinsey Global Institute
- Moody's (2017) 'Default Research: Infrastructure Default and Recovery Rates, 1983-2016.' New York: Moody's Investor Service
- Natixis (2018) 'Natixis Partnership Investors' (<http://cib.natixis.com/infrastructure/partnership.aspx>)
- New Climate Economy (2016) 'The Sustainable Infrastructure Imperative: Financing for Better Growth and Development.' London: New Climate Economy.
- OECD. 2017a. 'Breaking Silos: Actions to Develop Infrastructure as an Asset Class and Address the Information Gap: An Agenda for G20.' December 2017. Paris: OECD.
- OECD. 2017b. 'Selected Good Practices for Risk Allocation and Mitigation in Infrastructure in APEC Economies.' OECD report in cooperation with the Global Infrastructure Hub and Asian Development Bank, October 2017. Paris: OECD.
- OECD. 2017c. 'Summary: Policy Dialogue to Develop Infrastructure as an Asset Class.' 18 October 2017. Paris: OECD.
- OECD. 2016. *Development Cooperation Report 2016: The Sustainable Development Goals as Business Opportunities*. 18 July 2016. Paris: OECD.
- OECD. 2015. Annual Survey of Large Pension Funds and Public Pension Reserve Funds. Paris: OECD.
- Pereira, P. and M. Kearney (2018) 'MDB Risk Mitigation Instruments for Infrastructure Investment.' Inter-American Development Bank Technical Note IDB-TN-1358, January. Washington DC: IDB
- Ruiz-Nuñez, F. and Z. Wei (2015) *Infrastructure Investment Demands in Emerging Markets and Developing Economies*. World Bank Policy Research Working Paper 7414. Washington DC: World Bank
- Securities Industry and Financial Markets Association (2018) 'ABS Issuance and Outstanding, US and Europe.' New York: SIFMA
- Segoviano, M., B. Jones, P. Lindner and J. Blankenheim (2013) *Securitization: Lessons Learned and the Road Ahead*. IMF Working Paper WP/13/255. Washington DC: IMF
- SCI – Structure Credit Investor (2018) Capital Relief Trades Database. London: SCI
- Sunner, D. (2017) Trends in Global Foreign Currency Reserves. Reserve Bank of Australia. Sydney: RBA
- UNCTAD (2014) *World Investment Report. Investing in the SDGs: An Action Plan*. New York and Geneva: UNCTAD
- United Nations (2014) 'UN World Urbanization Prospects, 2014 Revision'. New York: UN.
- Weber, B., M. Staub-Bisang and H.W. Alfen (2016) *Infrastructure as an Asset Class*. Chichester: John Wiley and Sons
- White & Case (2015) 'Project Bonds: Their Growing Role in Global Infrastructure Finance.' 1 May 2015. New York: White & Case
- World Bank (2018) 'Contribution of Institutional Investors: Private Investment in Infrastructure, 2011-H1 2017.' Washington DC: World Bank
- World Bank (2017) 'Forward Look: A Vision for the World Bank Group in 2030.' Development Committee, 24 March 2017. Washington DC: World Bank
- World Economic Forum (2014) 'Direct Investing by Institutional Investors: Implications for Investors and Policy-Makers.' November 2014. Geneva: WEF.
- World Economic Forum (2016) 'Risk Mitigation Instruments in Infrastructure: Gap Assessment.' July 2016. Geneva: WEF.



---

ODI is the UK's leading independent think tank on international development and humanitarian issues.

---

Readers are encouraged to reproduce material for their own publications, as long as they are not being sold commercially. As copyright holder, ODI requests due acknowledgement and a copy of the publication. For online use, we ask readers to link to the original resource on the ODI website. The views presented in this paper are those of the author(s) and do not necessarily represent the views of ODI or our partners.

© Overseas Development Institute 2018.  
This work is licensed under a Creative Commons Attribution-NonCommercial Licence (CC BY-NC 4.0).

All ODI publications are available from [www.odi.org](http://www.odi.org)

**Overseas Development Institute**  
203 Blackfriars Road  
London SE1 8NJ

Tel: +44 (0) 20 7922 0300  
Fax: +44 (0) 20 7922 0399  
Email: [info@odi.org.uk](mailto:info@odi.org.uk)