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**Contribution¹
by
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For MDBs to further rise to the challenge of financing large infrastructure demands from developing countries, changes within the institutions will need to go hand-in-hand with changes in the environment in which MDBs operate. Significant changes both within and without the MDBs, in concert and with the active participation of their shareholders, could lay the ground for these institutions to increase their own direct investments and also leverage private sector participation on a much greater scale.

This paper highlights three broad categories of issues that need to be addressed to achieve the objective of greater MDB financing of infrastructure in developing countries :

- A) Reimagining the future of MDBs in the context of major ongoing technological disruptions
- B) Institutional changes within MDBs
- C) Coordinated effort to reshape the external operating environment of MDBs

The paper raises some issues and questions for discussion and deliberation, recognizing that significant further work would be necessary in many areas.

A) Future of MDBs amidst ongoing technological changes

The Fourth Industrial Revolution, caused by the combination of digital and physical systems, is already upon us; and it is unfolding at an exponential rather than a linear pace. Technology is

¹ The NDB's contribution covers issues raised by the organizers in Development Session 1: Achieving Strong, Sustainable, Balanced, and Inclusive Growth: Investment in Infrastructure and in People (Governance imperatives for crowding in private and institutional finance) and Session 2: Achieving Strong, Sustainable, Balanced, and Inclusive Growth: Coherence amongst International Financial Institutions.

increasingly disrupting our landscape, changing the speed of innovation, speed of adoption, and the business environment in which we operate.

Disruptive technologies open the door for new opportunities that call for new thinking, new institutional structures, new products, new services, and new partner ecosystems. In the coming years, artificial intelligence, machine learning and deep learning will become embedded in our everyday lives. This new wave of innovation will also entail profound social and economic transformations, as changing cost structures and rapid technological obsolescence will make many of today's jobs redundant in the near future. Although the scale of this impact on jobs could be relatively higher in advanced countries, governments all over the world will be confronted with the need to retrain segments of the population and develop new sets of skills.

Technology will therefore fundamentally change the way the world evolves and infrastructure needs of the future will change accordingly. The infrastructure that we build today will have to take into consideration the requirements of tomorrow, including the needs to enhance the economic, social, and environmental well-being of our citizens. But it also needs to be green, sustainable, and climate resilient with reduced vulnerability to economic and environmental shocks.

Changes already in motion will substantially alter the nature of future employment. By looking at how traditional sectors (e.g. agriculture, transportation) evolve, it is possible to identify where the opportunities for new jobs arise and direct our actions towards facilitating job creation. Take, for instance, the large online retailers that are rapidly replacing supermarkets and grocery stores. There is a whole ecosystem of physical distribution capabilities that is required for these large retailers to work effectively. Creating jobs for the future is a pressing challenge, but we will not be able to contribute if we continue to operate with a mindset of traditional infrastructure.

To be successful and remain relevant, MDBs need to work effectively and at speed to lead the structural reform agenda and go where others do not. MDBs need to understand how technology will affect the lives of individuals, small businesses and indeed governments and incorporate these changes in their model to maximize their development impact. It is also imperative that MDBs demonstrate greater risk appetite and avoid risk aversion. The requirements are huge and, to meet these, we need all institutions – public and private, multilateral and bilateral, global and national – to work together.

So we must ask ourselves, how do we cope with disruptions and work in a non-linear world with rapid technological obsolescence and evolving cost structures? How ready are we to innovate in everything we do? How do we best structure our organizations internally and redesign traditional business models and operations so that we remain relevant? And while doing this, how do we build a green and sustainable architecture?

B) Institutional changes within MDBs

Areas that could benefit from a review aimed at improving MDB performance include governance mechanisms, technology and human resources, operational processes and financial management. Interplay between these areas of work can determine the outcomes of MDB performance and, ultimately, the scale and scope of infrastructure investment and development impact that is achieved.

1. Governance arrangements

Any public organization, accountable to shareholders, can ultimately be only as successful as its board wants or allows it to be. For MDBs to fundamentally transform themselves, the basic question that should be asked is: What is the role of the Board in MDBs? Whether it be boards of family enterprises, public (listed) firms, or MDBs, the fundamental responsibility of the Board should be that of a fiduciary for the institution. However, given the structure of MDBs' boards and the affiliations of the Directors to the governments that appoint them, at times a question could arise whether they represent the best interest of their country/constituency or that of the MDB. This question is especially relevant if these two interests are in conflict, as they sometimes are.

Good governance would call for the Board to unambiguously be the fiduciary of the best interests of the institution. If this were indeed to be the case, MDBs would probably be able to devote themselves more fully to finding ways to meet the growing demands of their borrowing member countries.

2. Leveraging technology and human resources

Given where technology is headed, it is clear that a whole lot can be done with less staff in the development financial system. Financial markets and the banking sector seem to be going digital with the emergence of new technology, and current structures are being severely tested. How

will these changes impact MDBs? We can either resist or embrace them. If we make the right choice and learn how to apply technology to our operations, it should be possible for MDBs to operate on a significantly leaner structure, which would lead to lower lending costs.

Leveraging human capital will be essential for adapting to these changes in the operating environment. The impacts of advancements in technology call for a different set of skills than the ones required today, and MDBs will have to take measures to reskill their current workforce, hire people with new sets of skills and rescale their staff-base.

3. Operations

Reducing transaction costs of dealing with MDBs and increasing the speed of preparation and execution of projects have been, and continue to be, important concerns for borrowing member countries. While keeping in mind that advancement in these areas would also call for progress on other fronts, in particular on governance, we propose below a few key points for consideration.

Adopting country systems for environmental and social standards and for procurement would contribute significantly towards reducing transaction costs for our borrowers. This has been a long-recognized issue and progress has been made by several MDBs over time. Since the 2005 Paris Declaration on Aid Effectiveness, a range of pilot programs and revised environmental and social frameworks or procurement strategies by MDBs have helped to advance and improve the use of country systems. This year, the ADB took a landmark step in approving the use of a borrower's safeguard system in lieu of its own standard approach for the first time. Other organizations including the World Bank, IDB and AIIB also authorize the use of country systems for procurement and environmental and social standards in certain instances and when these are assessed to be in line with their own practices.

However, it may now be time to ask the question whether we, as a group, can move to a much greater alignment of our own operations with country systems. Many of our largest borrowers have much stronger systems than in the past, and much stronger domestic accountability mechanisms. It may be time to recognize these developments appropriately. Of course, institution strengthening work should continue where necessary and where strong demand exists, but it could be appropriate for MDBs as a group to move more rapidly in the direction of greater use of country systems.

Speeding up project preparation, approval, and implementation cycles could make a big contribution to increasing development impact, especially in today's world of rapid technological

change. While some of the causes of the current long cycles are no doubt external to the institutions and therefore need to be addressed by other stakeholders, we should consider whether more internal change and innovation can be brought about to enhance the agility of the MDBs. Can we deliver a project from concept to approval in 3-6 months? Current timelines are two to three times this length, on average. What would it take to speed up these processes while maintaining the quality and effectiveness of our operations? As a starting point, knowledge-sharing among MDBs may facilitate progress in this area.

4. Financial management

Mobilizing more funds for infrastructure in developing countries calls for innovations in at least three areas: (a) freeing up capital through balance sheet management; (b) greater use of credit enhancement instruments such as guarantees that could catalyze private sector resources; and (c) more focus on local currency lending to member countries to mitigate exchange rate risks that they face.

(a) Freeing up capital through balance sheet management

MDBs currently face different situations when it comes to the extent of capital they have to lend to their member countries. Some MDBs have obtained significant capital increases in the relatively recent past, that give them access to substantial resources to lend. Others face more constrained lending envelopes. Irrespective of their current situation, meeting the huge demands for infrastructure going forward will imply taking a fresh look at how MDBs manage capital and their balance sheets.

The AAA credit rating is probably the single most treasured foundation upon which the MDBs are built. Clearly, this rating comes with a host of advantages, not least of which is the ability to borrow funds from global markets at the lowest possible costs and to be able to pass on those low costs to member countries. However, this rating also comes with a host of constraints, not least of which are the requirements of low leverage and high liquidity.

In the search for ways to expand the lending capacity of MDBs, it would be appropriate to explore how the inherent tension between large investment demands and limited capital of MDBs is compounded by low leverage and high liquidity ratios to preserve a high credit rating. Some questions worth raising may be: **What is the full impact of the AAA rating across a variety of metrics? What would happen if, as a group, the MDBs were to decide to operate at a lower rating?**

What would this “new-normal” look like? Could the substantial increase in the resource base compensate, in development impact terms, for operating at a lower credit rating? Would borrowing countries be willing to accept a somewhat higher cost of borrowing, if the developmental impact of a larger pool of available funds is high?

We fully recognize that this topic would involve substantial debate and analysis from a variety of perspectives. However, at this stage, for the sake of initiating a discussion, the paper presents some suggestions and questions.

Could the current financial management practices of MDBs be hampering their ability to step up their operations within their existing resource envelope? A report² by S&P estimated that the current credit ratings of 19 MDBs could accommodate a 72% increase in their aggregate credit exposure. This implies that, all else equal, these institutions could collectively expand their lending book by about US\$ 1 trillion without any impact in their credit ratings and without capital expansion from shareholders. Such a ramp up would help narrowing the infrastructure investment gap and enhance the developmental impact of MDBs. S&P’s report states that the majority of the expansion would happen in AAA institutions – some would be able to double their leverage, while others are already close to the limit. On aggregate, AAA rated MDBs currently have a leverage³ of 4.0 and therefore, S&P’s analysis means that they would be able to expand their leverage to about 6.9 while still maintaining AAA. It is understood that these numbers are on aggregate and specific institutional circumstances could be different.

But what would be the impact if MDBs chose to operate one-notch lower on the rating scale? From the funding cost standpoint alone, a one-notch lower rating would possibly involve a low incremental cost. Table 1 below shows that the average funding cost of AAA rated MDBs is approximately a 1bp discount to the 6-month LIBOR, while available data suggest that AA+ rated MDBs would have a funding cost of around 14bps over LIBOR. Although these rates should be deemed as indicative values only, as there are many other aspects to be taken into account, they suggest the possibility that the incremental funding cost of moving down one-notch from AAA to AA+ could be small. If this 15bps cost increase were to be transferred to the borrower through a hypothetical US\$ 100 million loan with 12-year repayment period, 5-year grace period and

² S&P (2016), How Much Can Multilateral Lending Institutions Up The Ante?

³ Leverage as used here refers to gross debt divided by adjusted common equity, as reported by S&P in its Supranationals Special Edition Report (October 2017). MDBs included in this average are: AfDB, ADB, EBRD, IADB, IBRD, EIB, IFC, IsDB and NIB.

semiannual equal repayments, the additional nominal cost to the borrower would approximately be US\$ 180,000 per year over the life of the loan.

Table 1: Funding costs of MDBs across different levels of credit rating

	AAA rated	AA+ rated*	AA rated*	AA- rated	A+ rated*	A rated	A- rated*
Funding cost (bonds with 5 years maturity)	2.21%	2.36%	2.51%	2.66%	2.69%	2.72%	2.75%
Spread over 6M Libor (in bps)	-1	14	29	44	47	50	53

Source: Bloomberg Terminal, access on 15/Nov/2017

Note: i) Funding costs are based on available data form a selected list of indicative MDBs. ii) Funding cost retrieved from Bloomberg on 15/Nov/2017, based on the yield of fixed bonds with maturity around Nov/2022, with no embedded options. iii) Starred rating categories did not have MDBs with comparable bonds outstanding, so funding cost and spread were calculated through interpolation. iv) Data should be interpreted as indicative only, as values could vary upwards or downwards depending on several variables.

Operating at one-notch lower credit rating would also not significantly impair the financial health of MDBs. According to S&P⁴, the probabilities of default of AAA rated and AA+ rated entities are relatively similar. Without the pressure to reach and maintain AAA credit ratings, MDBs could more effectively leverage their equity and raise larger amounts of capital, which would ultimately allow them to provide more lending to their members.

Given the above, if the entire MDB world were to choose to operate at a higher level of leverage and at a lower credit rating, would there be a significant change in their cost of funding? Would the definition of “AAA rated MDB” change in that new world? Or would the “new normal” be that MDBs would continue to be “AAA”, but by a different definition, that is probably more reflective of the actual credit quality of MDB balance sheets? If this were so, the funding cost would possibly not vary much from what it is at present.

But why are MDBs not expanding leverage if it could indeed be possible to do so with no impact to their credit ratings and financial health? A possible reason is that financial management practices in MDBs tend to be overly conservative and risk-averse. If leverage were to be increased, some MDBs could fear that their stand-alone credit ratings could decline and this in turn would force them to rely on callable capital to maintain their AAA rating. This would put them in a situation over which they have little control.

⁴ S&P 2016 Annual Sovereign Default Study and Rating Transitions and S&P 2016 Annual Global Corporate Default Study and Rating Transitions.

This conservativeness does not only apply to leverage: liquidity and other financial measures are treated in a similar way. The average static funding gap⁵ at 1 year for a selected group of MDBs⁶ is around 150%, while most MDBs require a prudential minimum around 100% as per internal rules (the Net Stable Funding Ratio of Basel III will require regulated financial institutions to maintain a ratio of stable funding to weighted long-term assets greater than 100%). Although differences in calculation methods preclude direct comparisons, it could be said that MDBs generally maintain a very high level of liquidity. Allocating a portion of this excess liquidity to operations could enhance the developmental impact of the banks and yield a higher return.

To conclude, there appears to be significant scope for balance sheet management and optimization. This could be done by calibrating leverage and liquidity ratios. If MDBs were to optimize balance sheets, there would be scope to increase lending without the need to infuse capital.

(b) Greater use of credit enhancements

MDBs need to revamp their current financing, investment patterns and business models in order to play a more effective role in mobilizing the necessary resources to achieve the Sustainable Development Goals. Although MDBs have been pretty successful in raising private funds for development financing through bond issuances, their performance has been less stellar when it comes to engaging the private sector in co-financing investment projects.

It would be worth exploring how MDBs could reinvent themselves and introduce or scale up the use of innovative financial instruments. Examples of such instruments include guarantee structures⁷, asset securitization, risk-hedging derivatives, and reinsurance. MDBs could, for instance, create assets by pooling together part of their loan portfolios, purchase loans from regional development banks in order to diversify their risk exposure and also partner with Central Banks to create a platform for currency swap arrangements between developing countries' currencies.

MDBs generally have a small guarantee exposure. The outstanding guarantees as a share of shareholders' equity is less than 15% in most major MDBs. Possible reasons are the following: First, our mindset is dictated by a preference for traditional loan instruments. Second, capital

⁵ The static funding gap is maturing assets divided by maturing liabilities. It is cumulative and based on scheduled receipts and payments. Data as reported by S&P Supranationals Special Edition Report (October, 2017).

⁶ The group of MDBs considered for this average is: AfDB, ADB, CAF, EBRD, IADB, IsDB, IBRD, and CABI.

⁷ Outstanding guarantee exposures represent less than 15% of MDBs' shareholders' equity

requirements for loans provided by MDBs are equal to those for guarantees. Third, current incentives and performance evaluation measures induce a focus on loan disbursements instead of guarantees and other innovative financial instruments.

A change in the mindset of MDBs could enhance the use of private sector-type initiatives to fund sovereign operations. Possible examples would include enabling monetization of infrastructure assets and establishing SPVs for the development and implementation of large projects.

(c) Local currency lending

The advantages of local currency financing for infrastructure projects are well known, not least of which is that provision of loans in local currency eliminates exchange rate risk and enables infrastructure projects to be financed more sustainably. Lending in local currency can also reduce the effective cost of borrowings, thus making more projects in developing countries bankable. Despite all these advantages to the client, loans in local currency account for less than 10% of total loans.

Exchange rate variations have resulted in significantly higher effective cost of loans in the largest borrowing countries of MDBs, including in the five member countries of NDB. Tables 2 and 3 below present an estimation of the “effective” cost of borrowing in USD on hypothetical loans approved for each country in two different starting periods. To enable comparison across countries and periods, this exercise assumed the following loan conditions: USD 600 million loan, 4% fixed annual interest rate, 5-year grace period, 12-year repayment period and equal semiannual payments. Except in the case of China, exchange rate variations resulted in significantly higher effective interest rates for all countries in at least one of the periods under analysis. The effective interest rate ranges from 2.3% (China, starting in 2000) to 27.6% (Russia, starting in 1995).

Table 2: Effective interest rates of loans in USD to BRICS countries by loan starting period

	Loan starting period: 1995					Loan starting period: 2000				
	Expected loan repayment (local crncy mm)	Effective loan repayment (local crncy mm)	Additional loan cost	Effective interest rate	Effective rate over agreed rate	Expected loan repayment (local crncy mm)	Effective loan repayment (local crncy mm)	Additional loan cost	Effective interest rate	Effective rate over agreed rate
Brazil	785.2	2,065.0	163.0%	14.4%	360.1%	1,669.6	2,097.2	25.6%	5.9%	148.0%
Russia	3,294.7	26,773.4	712.6%	27.6%	690.9%	25,568.4	33,715.4	31.9%	6.1%	152.0%
India	29,120.6	42,509.6	46.0%	7.7%	192.4%	40,417.6	48,509.9	20.0%	5.5%	136.7%
China	7,838.7	7,088.5	-9.6%	3.1%	78.5%	7,684.0	6,342.4	-17.5%	2.3%	56.6%
South Africa	3,283.5	7,033.3	114.2%	11.8%	295.8%	5,712.1	8,430.1	47.6%	7.2%	180.2%
BRICS Average			205.2%	12.94%	323.5%			21.5%	5.4%	134.7%

Source: Exchange rate data from Bloomberg Terminal

Note: This exercise assumes countries took a hypothetical loan with the following conditions: loan start on January 1st of the indicated year, 4% fixed annual interest rate, 12-year repayment period, semi-annual equal payments, and 5 year grace period. Results are sensitive to start-end dates and thus indicative only. Earlier starting periods would also show effective interest rates in the teens for many countries.

Table 3: Effective interest rates of loans in USD to selected large EMDC borrowing countries by loan starting period

	Loan starting period: 1995					Loan starting period: 2000				
	Expected loan repayment (local crncy mm)	Effective loan repayment (local crncy mm)	Additional loan cost	Effective interest rate	Effective rate over agreed rate	Expected loan repayment (local crncy mm)	Effective loan repayment (local crncy mm)	Additional loan cost	Effective interest rate	Effective rate over agreed rate
Mexico	4,710.0	10,391.2	120.6%	11.6%	288.9%	8,821.3	12,308.0	39.5%	6.9%	171.9%
Indonesia	2,040,834.4	8,709,586.3	326.8%	19.5%	486.9%	6,589,324.3	9,713,607.6	47.4%	7.5%	187.5%
Colombia	771,415.0	2,094,273.3	171.5%	14.6%	364.7%	1,737,818.3	2,036,078.0	17.2%	5.4%	135.7%
South Korea	729,930.1	1,046,021.6	43.3%	7.6%	189.7%	1,058,004.2	1,015,692.5	-4.0%	3.6%	89.1%
Philippines	22,765.7	45,843.2	101.4%	11.2%	279.0%	37,350.3	42,965.6	15.0%	5.4%	135.3%
Average			152.7%	12.87%	321.8%			23.0%	5.8%	143.9%

Source: Exchange rate data from Bloomberg Terminal

Note: This exercise assumes countries took a hypothetical loan with the following conditions: loan start on January 1st of the indicated year, 4% fixed annual interest rate, 12-year repayment period, semi-annual equal payments, and 5 year grace period. Results are sensitive to start-end dates and thus indicative only. Earlier starting periods would also show effective interest rates in the teens for many countries.

The significantly higher effective costs of loans denominated in USD could easily jeopardize the projects' financial sustainability, their positive impacts and even exert pressure on the fiscal balance of the borrowing country. Given the magnitude of these potential costs, it may now be a good time for MDBs to consider ramping up their local currency lending operations. The challenges of calibrating the balance sheet of an MDB with exposure to multiple currencies are possibly less significant than usually assumed, as raising funds in local currency is now a possibility in many countries. The positive outcomes of expanding local currency operations are significant compared to inaction.

C) Reshaping the external environment

The way credit ratings are assigned to MDBs is another issue that deserves serious consideration. The current methodologies adopted by the three largest credit rating agencies to assess the creditworthiness of a MDB do not fully take into account some unique features of these institutions, such as their close political and economic links to borrowers and shareholders, their preferential creditor status and their access to callable capital. **Would it be more logical for credit rating agencies to also consider the commitments to callable capital from countries with lower credit ratings than the stand-alone credit rating of the institution?** These limitations of credit rating methodologies significantly curtail MDBs' potential for financing development, leading to very conservative lending behaviors.

D) Conclusion

The paper has presented some issues and questions intended to contribute to the discussion convened by the G20 Eminent Persons Group (EPG) on Global Financial Governance. While some

of the topics presented in this paper will require further discussions and consultation among several players, we recognize that MDBs could maximize their developmental impact by:

- Anticipating the changes in infrastructure needs as a result of technological innovation and adapting their practices. Advancements in technology are changing the way the world evolves and infrastructure needs of the future will change accordingly.
- Increasing the use of country systems. Many borrowing countries today have much stronger systems than in the past, and a higher capacity to implement them. It may be time to recognize these developments appropriately.
- Adopting balance sheet management and optimization measures so as to increase lending without the need to infuse capital. This could be done by calibrating leverage and liquidity ratios.
- Enhancing their capability to provide local currency lending so as to offer a potential alternative to high effective costs of loans in hard currency. More widely, it would also be worth exploring how MDBs could reinvent themselves and introduce or scale up the use of innovative financial instruments.
- Engaging in a broad discussion on the criteria used by credit rating agencies to assess MDBs. The current methodologies adopted by the three big agencies do not fully reflect some unique features of these institutions, significantly curtailing their potential for financing development.