GLOBAL INFRASTRUCTURE FACILITY

SEVENTH ADVISORY COUNCIL MEETING, WASHINGTON D.C., APRIL 18, 2018

Summary of Proceedings

The Seventh Advisory Council (AC) Meeting of the Global Infrastructure Facility (GIF) was held on Wednesday, April 18, 2018 in Washington D.C. It was attended by representatives of 33 Advisory Partners, 9 Technical Partners, 5 Funding Partners and 2 Beneficiary Partners, in addition to several observers and speakers. **Joachim Levy**, **Managing Director and World Bank Group Chief Financial Officer**, co-chaired the meeting with **Macky Tall**, **Executive Vice President, Infrastructure, Caisse de dépôt et placement du Québec (CDPQ) and President and CEO, CDPQ Infra**. The meeting's key theme, climate smart infrastructure projects and investment featured in several sessions, which included updates on various initiatives on financing data of infrastructure investment and business opportunities in the transition to a new climate economy, followed by three breakout sessions – two focused on GIF projects nearing the point of accessing market financing and one on solar energy.

Morning Remarks and Plenaries

Opening Remarks

In his opening remarks, Mr. Levy welcomed participants, noting that the GIF now counted 50 Advisory Partner (AP) members, which demonstrated the interest in the GIF's platform from the private sector. He gave a special warm welcome to the African Development Bank, who joined as the GIF's newest Technical Partner (TP). He underscored to the room the ability for the GIF to provide a platform where private sector, International Finance Institutions (IFIs) and governments could meet to harmonize and develop common standards across the infrastructure project preparation and financing industry. Then he provided a brief overview of the GIF's ongoing portfolio, expecting to provide over $2 billion in investment opportunities over the next few months.

Mr. Tall shared that for himself the AC meetings have become a key event on his calendar, as they provide the opportunity for stimulating discussions on some the key issues facing the infrastructure sector**.** He touched on the day's focus on climate change, mentioning that the more than 50% of the GIF's portfolio is 'climate smart'. He added that CDPQ's own infrastructure portfolio allows for 26 percent of the 16 billion invested, to go to renewable energy. This subclass of the portfolio has achieved highest generating rating return of the portfolio.

A. GIF Updates

Jordan Schwartz, **Director, Infrastructure, PPPs & Guarantees, World Bank** provided a brief overview of the state of private investment in infrastructure in emerging markets developing economies (EMDE), noting that in the last eight to nine years the share of 'climate smart' projects receiving private investment has grown from roughly one third to about half. He followed with a brief discussion of the GIF pipeline and how the GIF platform is a good opportunity for AP members to learn about these projects. The current GIF portfolio is transport heavy and focused in upper middle-income countries, though Mr. Schwartz noted that going forward they expect to see a rebalancing of the portfolio towards more projects in lower middle income and lower income countries as well as more projects in the energy sector. He also mentioned to the room the recent success and financial close of the Philippines Clark Airport, which was done with IFC, and highlighted several other GIF projects expected to reach financial close in the next year. He also talked about the innovation in the GIF's offering to clients, namely the project readiness assessment tools, designed to help Governments with mid-stream, project definition support, before reaching project preparation stage.

B. Governance, Standards and the GIF

Hart Schafer, Vice President of the Global Themes Department of the World Bank provided an overview of the governance gap related to infrastructure investment, highlighting the myriad of tools developed by the GIF and other World Bank partners and MDBs, on offer through the GIF support, to help overcome this gap. He mentioned that descriptions of the tools and 'standards' were all available on the PPP Knowledge Lab site, and took the opportunity to describe the impact of two of the tools in more detail through examples—GIF's Project Readiness Assessment (PRA) tool available for São Paulo State, Brazil for light rail, and WB guarantee available for Liberia road between Ganta and Zwedru to mobilize commercial finance. Importantly, alongside the World Bank guarantee, the teams working on this project deployed the PPP fiscal risk assessment model, or the P-FRAM, a joint World Bank-IMF tool to assess the potential fiscal costs and risks arising from PPP projects.

He also highlighted for the room the importance of SOURCE, an online platform that helps governments standardize project preparation processes, noting that five GIF projects in Africa have been put on the platform. He concluded by mentioning the recently released World Bank Report on "Procuring Infrastructure Public Private Partnerships 2018" which compares 135 countries across their processes, standardization, methodology, disclosure of PPP preparation, of contract management, and of procurement. It also looks at how each of those countries deals with unsolicited proposals.

C. Credit Data, EM Infra Index and Investment Decisions Plenary Panel

In this panel, moderated by **Ms. Lakshmi Shyam-Sunder, Vice President and World Bank Group Chief Risk Officer**, panelists provided updates on various studies and initiatives on infrastructure investment and financing data, highlighting gaps within this data and implications for investment decisions and financing options for institutional investors and international banks.

Rui Croca, **Senior Risk Officer at the European Investment Bank (EIB) and Operations Manager for the Global Emerging Markets ("GEMs") Risk Database Consortium** offered a very brief overview of GEMS, noting that it began in 2009 as a joint EIB, IFC initiative, and currently has 19 members. It was designed to pool risk data to derive risk parameters for emerging market operations, as banks like EIB, operating in emerging markets did not have enough data to have a good statistical approach to risk parameters. Data is collected on an anonymized basis to ensure that no confidential information is shared about specific projects or countries. While GEMs started as a data pooling exercise it is evolving into a platform for collaboration and cooperation among MDBs.

Todd Kowalski, **Director of Business Development, Indexes, Morningstar** followed with a brief description of the new "Emerging Markets Infrastructure Bond Index" that the company launched in April

2018. He noted that the company has other emerging market indexes and views the index business as an opportunity to provide unique and necessary exposures to the market. Their intent is to define a benchmark that can be used in definition of infrastructure as an asset class, and something that can service a potentially investible solution.

Andreas (Andy) Jobst, Adviser to MDCFO of the World Bank Group presented the findings of his recent research on the credit risk dynamics of infrastructure debt investment that made use of Moody's data and the new Morningstar EM Infrastructure Bond Index. He noted four key findings and observations. First, emerging market infrastructure project loans are very comparable in their credit performance (in terms of Probability of Default) to those in advanced economies and this comparability is stable over time. If this dynamic was reflected in the credit risk under the Solvency II and the Insurance Capital Standard (ICS), there would be sufficient scope to reduce the capital charge for infrastructure investments around 20 to 40 percent. Large insurance companies might have models but small insurance companies, might need standardized approaches. And those standardized approaches, are currently heavily influenced and informed by the corporate credit performance which differs from infrastructure credit performance. Finally, he observed that the data and subsequent analysis suggest that the return on capital using actual credit data and capital reduction would increase by 50 percent in solvency for instance for emerging market infrastructure investment.

After each of the panelists described their initiative, the room broke into four breakout tables.

The first table, led by **Rui Croca** and benefitting from **Emmanuelle Nasse Bridier**, **Group Chief Credit Officer, Group Investment & ALM, AXA Group** as discussant, focused on Global Emerging Markets ("GEMs") Risk Database Consortium. The takeaways from their table included the recognition that GEMs is a very interesting and promising initiative. Participants at table 1 wanted to explore whether GEMs could be used outside the MDB community to include private sector players without the risk of compromising data quality or confidentiality. Other discussions centered around achieving consistency in data collection and how investors could use the data, particularly whether it could be an efficient tool to change the risk perception of this asset class.

At table 2, **Todd Kowalski** provided an update of Morningstar's recently launched EM Infrastructure Bond Index and **Nasser Malik**, **Managing Director, Head of Global Structured Debt, Citigroup** served as discussant. The table agreed that the development of this new index would be useful to help generate interest in infrastructure as an asset class and noted that the index could be used to achieve incremental objectives – like having a sub-index for 'ethical infrastructure investments' that meet certain environmental, social and governance (ESG) goals, and the index could include single asset backed project finance investments or be used to verify the pricing of such investments.

At table 3, **Andy Jobst** provided an overview of the research he undertook using Moody's data and **Thomas Bayerl**, **Head of Infrastructure Debt, Munich Re** served as discussant. Overall the table's participants were surprised to find that infrastructure as an investment has performed better than the commonly held perceptions would have had them believe. The table discussed that the strong performance of infrastructure investments was mainly impacted by global recoveries, the spillover effects of the project finance world from advanced economies to emerging markets and initiatives of MDBs to bring standardization emerging market countries. These new findings could affect regulators, though for some types of projects – i.e. availability payment PPPs – regulators would need more data to be able to make empirically based assessments.

Table 4, led by **Lakshmi Shyam-Sunder** and benefitting from three discussants: i) **Andrew Davison**, **Senior Vice President, Infrastructure Finance Group, Moody's**; ii) **Robert Cessine**, **Senior Product Manager, Fixed Income, Morningstar** and; iii) **Guido Bichisao**, **Director of Institutional Strategy, EIB** discussed the broader implications of these new data initiatives for regulators, institutional investors and international project finance banks. Generally, their table focused on four discussion themes, beginning with data availability and utility of the data. They concluded that data was vital for credit analysis, transparency of pricing, and regulation. They also discussed the impacts MDBs could have in the infrastructure investment space, recognizing that MDBs generally have a positive impact; though should be careful to not have a negative impact on pricing or 'crowd out' private capital. They also explored synergies between banks capabilities and appetites. They felt that in terms of structuring challenging transactions the GIF could play a key role in mitigating refinance risk. Finally, they noted that there is still significant market information untapped and that there are other segmentation avenues for indices to explore.

D. Invest in Climate Smart Infrastructure Plenary

The objective of this panel discussion, moderated by **John Roome, Senior Director, Climate Change, World Bank** was to explore the existing and emerging trends in the transition to a new climate economy, and the business opportunities and challenges of investing in 'climate smart' infrastructure. The discussion aimed to determine the roles of MDB's and private finance and other institutions can play in the new climate economy, given the new impetus to limiting global warming to, at most, 2°C and adapting infrastructure to more unpredictable climate events.

Panelists included **Alzbeta Klein**, **Director, International Finance Corporation**, **Marcello Estevão**, **Secretary of International Affairs (Deputy Minister), Ministry of Finance, Brazil**, and **co-chair of the G20-Infrastructure Working Group**, and **Tobias Meier**, **Vice President, Swiss Re**, **Thierry Deau**, **Founding Partner and CEO, Meridiam and Chairman of the Long-Term Infrastructure Investors Association (LTIIA)**, and **Vasuki Shastry**, **Global Head of Public Affairs and Sustainability, Standard Chartered Bank.**

Mr. Roome started the panel by laying the challenges – like the fact that the world is getting warmer and the costs of extreme natural disasters are growing - resulting from climate change, noting the adverse effects seen in poorer countries. He also mentioned the progress in tackling these challenges, particularly with the Paris climate. Even still, the progress is not enough to meet the 2°C set in Paris, which meeting will require that emissions peak soon after 2020 and then be halved every ten years after that. Even with such a scenario, resilience to climate impact must be built into all infrastructure; thus, the business opportunity in the space is huge.

Ms. Klein noted that the business opportunity is indeed huge. IFC ran simple calculations that found that in 21 emerging markets, if those countries followed through on their commitments to the Paris Agreement, increasing share of renewables from 5% to 20%, the investment needed is $23 trillion. The majority of the $250 billion invested in the renewables market in 2017 came from the private sector (not the MDBs); thus, determining how to grow this pie of private investments in renewables is critical. She mentioned some sectors with large investment opportunities such as green buildings, climate smart transportation and waste management and mentioned we should figure out how to re-direct financial flows from the banks to finance climate smart infrastructure. She also named four key areas where MDBs can work to increase private investment: i) developing good contracts; ii) increasing long-term investment; iii) developing better aggregation mechanisms for smaller projects; and iv) 'stacking capital' (joining together different types of capital to cover the myriad of project risks).

Mr. Estevão discussed the opportunities in his country. Brazil boasts the Latin America region's largest power market, growing at a rate of 4.2% per year. This growth coupled with Brazil's size and its concrete policy measures have made the country the region's main renewable energy market and one of the top ten worldwide. Currently most power comes from the country's significant hydro resources; though after a drought in 2014, the country has sought to diversify. Public banks have played an important role in the country's renewable energy market; though they would like to entice more private players into the market. On this point, he noted the new innovative FinBRAZEEC project supported by the GIF and implemented by the World Bank, expected to finance, using blended finance, about 30 public street lighting and around 13 portfolios of industrial energy efficiency projects. He also mentioned the importance of mainstreaming the climate conversation within ministries of finance, noting that the world has high growth potential; though there is a lot of environmental and social risk associated with it.

Mr. Meier, highlighted the dual role insurance companies play: one, as long-term investors and one as underwriters of all the climate risks that come with infrastructure. He felt that climate smart as asset is probably not going to drive the investment appetite at this point. Other factors like the work on standardization to get infrastructure into a tradable, standardized asset class is more important for investment appetite. Even still, as underwriters to infrastructure, investing in climate smart infrastructure represents a large business opportunity. The industry has invested tremendous amount of efforts to understand, model, and quantify the impact of climate risks on infrastructure assets. He also noted that going forward, it seemed necessary for MDBs to make more use of guarantee instruments to crowd in more private investment into infrastructure – highlighting that currently the amount deployed through guarantees pales in comparison to loans.

Mr. Deau spoke about the opportunities for investment in the emerging market developing economy space (EMDE), noting that the opportunities are many though are hard to capitalize due to lack of instruments to channel the money. He specifically highlighted how energy efficiency, which is a very important driver in meeting climate targets, is often overlooked. Yet, due to the size of energy efficiency projects (relatively small), they are difficult to invest in from the typical project finance standpoint. Thus, with energy efficiency projects and other small-scale projects like distributed solar, the trick will be to determine how to aggregate and standardize processes to get investment at scale. He also noted the importance of getting contracts right in order to drive long term investments towards projects.

Mr. Shastry noted that for Standard Chartered at the moment selling their process and advice is the best thing they can bring to the market to stimulate private investment in climate smart infrastructure; he noted that they do a lot of work to help clients understand why they should look at ESG standards. He also briefly discussed regulatory issues touching climate smart investments – both macro and micro level regulations. At the macro-level, the post financial crisis changes on capital leverage and liquidity do seem to have disincentivized long term financing. And at the country level, there seems to be some confusion on how to best implement the Nationally Determined Contributions (NDCs) made by countries as part of the Paris Agreement. Ultimately, to be successful, a country's climate strategy should be home-grown.

After the panelists' discussion the room broke into four different tables, each discussing one topic in more detail.

Table 1 led by Mr. Roome and benefitting from Mr. Estevao as discussant**,** tackled what finance ministers should do to improve climate smart investments. Discussion noted that the biggest challenges were lack of having an investable pipeline. To counter this, countries could work on building capacity; finance ministries could focus on being strategic in which projects they approve supporting – adhering to climate targets. They should support clear policies and institutions and work to effectively coordinate across government institutions.

Table 2 led by Mr. Meier and benefitting from Mr. Shastry as discussant, discussed what they see as the most exciting investment opportunities in climate smart over the coming years. The found that there was scope with regards to projects to determine who could take the loss. The table also noted that a project's climate credential would not be enough to draw in investment – other dynamics like country risk would play a role; and finally, energy efficiency was promising, though much work was needed to determine how to valorize the energy savings.

Table 3 led by Ms. Klein**,** discussed what MDBs and public finance could do to crowd in private finance. They noted the scope to harmonize guarantee programs of MDBs; encourage more action by local development banks (through credit enhancements); focus on developing aggregation vehicles for smaller projects, and develop local currency lending.

Table 4 led by Mr. Deau**,** discussed how to create a pipeline of bankable climate smart projects. The table concluded that the private sector cares about bankable and well-prepared projects. They do not care if they are climate smart or not. Commercial banks look for return and bankability rather than a specific development impact. Thus, to develop bankable pipelines, governments must support good project preparation, make use of agreed standards and the market should define standards for what is or is not 'green'.

Lunch Remarks

Mr. Levy thanked Mr. Tall for serving as co-chair of the GIF Advisory Panel for the 2017-2018 year and welcomed the new co-chair, **Rajeev Kannan, Head of Investment Banking SMBC in Asia** for the coming year. The African Development signed the Financial Procedures Agreement to formally join the GIF as a Technical Partner and **Mr. Estevão** gave a lunch time speech and noted that the GIF and the G20 share the common aim to promote standardization of infrastructure project preparation processes to help develop infrastructure as an asset class.

Afternoon Breakout Sessions

A. Renewable Energy Programs: India, Egypt and the Common Risk Mitigation Mechanism (CRMM)

This breakout session, moderated by **Rohit Khanna**, **Practice Manager at the World Bank** with presentations from **Manu Srivastava**, **Principal Secretary, New & Renewable Energy Department, Government of Madhya Pradesh, India**; **Dalia Wahba**, **Country Manager for the Levante at the World**

Bank; and **Kanika Chawla**, **Senior Programme Lead, Council on Energy, Environment and Water** discussed country experiences in renewable energy program design and preparation. In addition to these presenters, the panel benefited from three discussants, all representing investor institutions: **Bhanu Mehrotra**, **Senior Investment Officer, International Finance Corporation**; **Edith Quintrell**, **Underwriting Development Director – Global Financial Risks, Liberty Specialty Markets** and **Ru Nyambuya**, **VP**, **Client Coverage, Corporate & Investment Banking, Standard Bank.**

Mr. Srivastava provided background on India's existing Solar market and targets for future solar generation – India's Paris targets have it meeting 40% of its energy needs by renewable sources; currently these sources make up 18% of the energy mix. He discussed the notable results and lessons from the Rewa project, where IFC served as an advisor. Specifically, he noted that supplying power through independent producers and not through the utility gave more confidence to investors and opened up the market to new consumers, who could purchase power directly; tailoring energy contracts to meet consumer demand patterns and distributing project risks equitably all contributed to the REWA project's success. Other success drivers included the guarantee to the project from the Government of Madhya Pradesh and the 'payment security fund,' both giving confidence to investors.

Ms. Wahba spoke about Egypt's shift from a feed-in-tariff (FIT) scheme to an auction based one in the renewable energy sector. After deciding to stimulate more sustainable energy back in 2014, Egypt decided to proceed with a FIT scheme; however, found that it was difficult to get the incentive pricing right to encourage the most investment, given the government budgets. As a result, the government switched to an auction scheme which will help drive prices even lower. She also noted by investing in projects all co-located in one solar park the country could take advantage of standardization and cost optimization.

Mr. Chawla, provided an overview of the Common Risk Mitigation Mechanism, which aims to provide solar project insurance for 121 International Solar Alliance countries. As one of the biggest barriers to the further deployment of solar projects is the cost of capital, this CRMM aims to help de-risk solar investments and create a solar asset class. It will try to do this by aggregating various solar projects from around the world and removing the non-project specific risks. A credit enhancement could be applied t the aggregated investments to then enable them to access finance on more favorable terms.

The discussants weighed in on these presentations, underscoring that for further private investment in renewable energy, especially in EMDEs, it is important to standardize processes and contract (e.g. standard PPAs); focus on addressing the risk and perception of risk across the project cycle, and improving local financing conditions (e.g. longer tenors and guarantee mechanisms).

B. Deep Dive into the GIF Portfolio: Climate Smart projects under preparation

During this panel, moderated by **Matthew Jordan-Tank**, **Head of Infrastructure Policy at EBRD**, and benefitting from three discussants **Duncan Caird**, **Managing Director, Head of Infrastructure & Real Estate Group - The Americas, Global Banking & Markets, HSBC; Fuat Savas, Executive Director, Infrastructure Finance and Advisory, JP Morgan and Luis Fernando Perdigon, Managing Director & Group Head, Project Finance, Latin America, SMBC**, the GIF Management Unit discussed their project pipeline and highlighted key features of three 'climate smart' projects in the energy sector.

The goal of the session was to provide an interface with the GIF's Advisory Partners, garnering feedback from them on how to better structure the projects under discussion to make them more bankable.

The room first discussed the Tunisia Undersea Electrical Connection, or "El-Med" a project which aims to connect the electrical grids of Tunisia to Italy, enabling Italy to export its current oversupply of power to Tunisia, and to eventually allow Tunisia to export renewable energy supply back to Europe. AP participants noted that the project made sense from a macro level; however, zoomed in on whether the project was bankable from a project financier perspective. They also a discussed possible technology risks inherent in undersea cables, offering ideas – e.g. insurance coverage up to a certain depth of sea – to help manage this risk.

The room then discussed the Colombia: Clean Energy Development Project, which is helping the Government of Colombia and Financiera de Desarrollo Nacional (FDN) to mobilize private sector investments in renewable energy and energy efficiency projects. The discussion centered on how to aggregate small scale renewable energy and energy efficiency projects —one of the roles that FDN will play in stimulating this sector.

The room closed with a discussion on Vietnam Electricity (EVN), a project aiming to provide strategic advice to EVN (a State-Owned Enterprise) to define an overall strategy for international bond issuance, prepare information readiness for rating execution, and conduct rating simulation. Discussion centered on whether EVN, when it raises funds in the capital markets, could benefit from a credit enhancement scheme. Discussants were mixed though leaned towards saying that credit enhancement was not necessary. They also discussed whether it was important for EVN to have a solid 'commercialization' strategy in place to stimulate investments. Discussants noted that it was important for EVN to adhere to certain reporting standards; though most agreed that in these markets they understand that utilities may require government support.

C. Transaction Spotlight: Brazil Highways

The day ended with a market-sounding session, where IFC team headed by Bernardo Tavares de Almeida, Senior Investment Officer presented four GIF supported upcoming highway transactions (total investment of approx. US$8bn). Transactions were presented in the context of the recent, first true 'project finance' successful bid for the US$300m Sao Paulo Rodovias Centro-Oeste Paulista concession. The discussion provided clarity on the scope of work supported by the GIF, providing feedback on the quality of engineering studies and availability of information to bidders. The IFC team provided clarity on CAPEX estimations and noted that they are really trying to understand how to transition the roads system – which currently has some existing toll plazas – to a system with a free-flow roads design. They noted that minimum revenue guarantee did not seem to be an optimal way to manage this transition. Questions from the room also centered on the contract – e.g. the dispute resolution mechanisms, the termination provisions and the government obligations. The IFC team noted that the contract follows international best practice.