

Global Agenda

Risk Mitigation Instruments in Infrastructure Gap Assessment

July 2016



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Preface



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Building infrastructure is essential to economic expansion. If delivered efficiently and effectively, it can have a positive impact on economies in terms of higher economic growth. Yet, the world is not spending enough on infrastructure to catch up with technological changes, urbanization and shifting demographics.

In emerging and developing economies, the infrastructure financing gap is between \$1 trillion and \$1.5 trillion, way beyond the combined capacity of governments, aid agencies and multilateral development banks. Meeting this challenge and capturing the benefits of infrastructure investment requires the systematic collaboration of the private and public sectors: private and institutional investors, financial institutions, governments, engineering and construction companies, and the multilateral development banks. The immensity of the challenge deserves new approaches, especially in a context of increased political ambiguity, economic volatility and general uncertainty.

International financial institutions (IFIs) have an important role to play in bridging the infrastructure investment gap of developing and emerging countries. They have created an extensive range of instruments focused on mitigating key risks, such as political risk. However, this report finds that those instruments are not being used broadly by investors, especially institutional investors whose investment profile matches the long-term nature of infrastructure.

The report is based on a comprehensive survey and designed to help policy-makers, IFIs and the private sector understand the current state of affairs of risk mitigation instruments and chart a course of action for the future.

For policy-makers, the report provides a guide to the issues that the providers of risk mitigation instruments need to consider in the structuring of instruments and encouragement of more standardization and complementarity. For investors, the report gives an aggregate assessment of the market of risk mitigation in infrastructure in emerging and developing markets, providing a basis for entering into a more productive dialogue on the problems and potential solutions. Some of the recommendations that are included in this report are specific to the IFIs and others extend to the broader stakeholders of infrastructure investment.

We would like to thank the many World Economic Forum partner companies that have contributed their expertise and leadership. In particular, we wish to express appreciation to Thomas Maier, Managing Director, Infrastructure, European Bank for Reconstruction and Development (EBRD), and Rashad R. Kaldany, Executive Vice-President, Growth Markets Caisse de dépôt et placement du Québec (CDPQ), Canada.

Foreword



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Over the past five years, infrastructure financing has seen major changes. The ability of governments to borrow directly for investments has steadily reduced in nature but also in many emerging markets. Retrenchment of banks following the global financial crisis and new regulation increasingly limits the ability of banks to finance infrastructure. As global liquidity has moved to institutional investors, this makes insurance companies, pension funds and sovereign wealth funds an important source of infrastructure finance.

Since 2011, the number of institutional investors in infrastructure has more than doubled. The proportion of sovereign wealth funds – a class of institutional investors with constrained investment mandates – investing in infrastructure has increased steadily in recent years, from 57% in 2014 to 62% in 2016. At the same time, the average allocation to infrastructure for institutional investors has increased from 3.5% of assets under management in 2011 to 4.3% in 2015. Allocations are likely to continue to grow over the coming years, with 44% of investors planning to increase the amount of capital they invest in infrastructure.

Furthermore, a large percentage – 43% – of sovereign wealth funds, which invest in infrastructure, have an appetite for deploying capital in emerging markets due to prospective higher returns and in order to diversify away from mature markets.

Over the past few years, institutional investors have become the dominant source of liquidity globally with assets under management exceeding \$50 trillion in 2015, compared to \$30 trillion in 2007. Given this trend, it is now imperative to find ways in which the international financial institutions (IFIs) can help direct this flow of funds from the institutional investor base to much-needed emerging market infrastructure.

To date, IFIs have developed a wide array of formal risk mitigation instruments to crowd in institutional investors. However, the uptake of those products seems to be limited, with risk mitigation instruments accounting for a mere 4.5% of total financing operations undertaken by the major international financial institutions in 2013. This slow pace of wider market adoption matters because of the great leverage effect IFI risk mitigation could have in attracting much-needed institutional capital. Any improvement in the accessibility, complementarity and successful standardization of those products across all emerging markets could have a major positive impact on infrastructure investment.

Our work at the World Economic Forum, through this report, has focused on why the take-up by the market is minimal and how IFIs could move towards processes that allow a sizeable scale-up of risk mitigation instruments that the market wants to use. This report aspires to initiate a dialogue with a clear focus on future action. It is an effort where the information provided is based on feedback from more than 40 infrastructure investors with total assets under management exceeding \$2 trillion, as well as other key market participants.

It builds on the Forum's previous report, *Mitigation of Political & Regulatory Risk in Infrastructure Projects*.

We would like to acknowledge the important contributions made by members of the Global Agenda Council on Infrastructure for this report.

Executive Summary

International Financial Institutions (IFIs) have been a key driver of economic development in emerging markets since the early 1950s. As of today, around 20 IFIs are active, including the newly created Asian Infrastructure and Investment Bank (AIIB) and the New Development Bank (NDB). According to recent G20 estimates, the operational commitments of major regional IFIs (including the new players) and the World Bank Group total around \$80 billion to \$90 billion annually. Despite this substantial balance sheet potential, IFI operations cover less than 10% of the infrastructure financing gap for emerging markets, which is estimated at around \$1 trillion to \$1.5 trillion a year.

This apparent gap between the ability of IFIs to provide funding directly and the latent and real demand in emerging markets has focused international debate on how IFIs can catalyse more third-party financing, particularly private finance from commercial banks and non-bank financial institutions, to cover more of the financing needs while staying within IFI balance-sheet constraints and their need to maintain adequate rating levels.

The issue has been exacerbated by the fact that high government indebtedness levels in many if not most emerging-market countries no longer allow public-debt-driven delivery as a scalable alternative to build urgently needed infrastructure. In addition, the fundamental shift of liquidity from banks towards institutional investors in the wake of the global financial crisis has added further challenges to the traditional financing model for emerging-market infrastructure. Both governments and IFIs need to seek new ways in which to mobilize private and, in particular, institutional investors' monies for urgently needed infrastructure investments.

However, while the scale of the issue has grown rapidly in recent years, the ability of IFIs to provide credit enhancement is not new. In fact, most regional IFIs and the World Bank Group provide an array of Risk Mitigation instruments, including a significant number of formal arrangements (See appendix). What is striking is that there seems to be little standardization and little complementarity across the formal IFI risk products offered. What is also apparent is that the annual mobilization contribution of these instruments has been extremely limited, making at best a marginal contribution to crowding in private-sector finance (See appendix).

It is vital, therefore, to gain a better understanding of why banks and non-bank financial institutions have made so little use of available instruments to date and to get feedback from the market on what IFIs could do to scale up the use of formal Risk Mitigation instruments, finally allowing available capital to flow towards deserving infrastructure projects in emerging markets.

This report is a first-time overarching assessment of availability and suitability of IFI Risk Mitigation instruments and has been compiled through a detailed questionnaire based feedback from more than 40 infrastructure investors with total assets under management exceeding \$2 trillion*, project developers and construction companies, global banking institutions, insurance and reinsurance companies, multilateral development banks and professional services firms.

This report is not an exhaustive, detailed assessment of all Risk Mitigation instruments and products that are used both in infrastructure investments and other investment classes. Instead, it focuses on those products that are used to mitigate one type of these risks that make infrastructure a distinct investment class, namely, political risks.

- A framework was developed to assess gaps in the provision of Risk Mitigation instruments in the emerging-market geographies of Asia, Africa, emerging Europe and Latin America and the ability of the respective IFIs to provide risk mitigation.
- The survey results confirm that the current array of instruments is too complex, has too little standardization and, as a result, is burdensome and costly for the private sector to use.
- The survey points to deficiencies among IFIs in their technical capacity to execute Risk Mitigation instruments and, importantly, to process issues even for those IFIs that seem to have the required capacity to deliver (See appendix, page 32).
- To allow for a significant scale-up, the survey findings and consultation process point to the following key recommendations:
 1. IFI: Review existing instruments with the goal of arriving at a limited number of common, standardized products that are available globally through the relevant local/regional partner
 2. Create a tradable infrastructure debt asset class by increasing standardization in the underlying debt instruments
 3. Establish a harmonized dispute resolution mechanism
 4. Establish a global/regional risk mitigation facility with(out) direct participation of international financial institutions

* This number is based on estimation and the actual numbers need to be sourced, calculated and referenced from the individual companies websites and other sources of information.

Introduction

Quality infrastructure is positively related to effective global value chains, efficient economies and better living standards. Without good transport networks, stable power grids, access to ICT networks and continuous availability of clean water, the achievement of social, economic and political goals is impossible. Infrastructure is the precondition for so many of the world's ambitions and demands. Accordingly, the Sustainable Development Goals of the United Nations talk about "developing quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all."¹

Yet, the world is not building as much efficient and effective infrastructure as economic needs and long-term trends – such as demographics, technology, natural resources and urbanization – require. Despite the fact that emerging markets account for nearly half of global infrastructure spending,² their infrastructure gaps still amount to billions and trillions of dollars.

Globally, the main source of infrastructure financing has been through direct government borrowing. However, public finances of many governments have increasingly reached a point where long-term borrowing is not a ready option, while the need for infrastructure continues quickly to grow. For governments of low- to high-income countries, infrastructure under-spending represents one of the most significant barriers to sustained economic growth.

As a consequence, private participation is vital to meet the needs of infrastructure financing. The options range from pure public procurement and delivery to full privatization of infrastructure assets, with the middle ground being Public Private Partnerships (PPPs). While not all infrastructure is suitable to follow the PPP route, those policy-makers that choose to shift public infrastructure financing to private partners have to consider the nature and motivations of long-term investors. In recent years, a global effort has begun to explore the possibilities of cooperation with institutional investors in infrastructure financing. This category of investors is increasingly seen as a source of long-term capital, albeit representing a still limited percentage of total assets, equity or debt.³

Despite high liquidity worldwide since 2009, insufficient financing is being channelled towards projects with high potential for growth and local development due to perceived political or other risks. The willingness of investors, institutional in particular, to finance major investment projects in any given country will be heavily influenced by perceptions of the country's investment climate. More specifically, it will be influenced by policy settings and institutions that underpin a country's economy and political processes. Investors' perceptions of the risks associated with a country or market and the ability to effectively mitigate these risks will play a key role in determining financing flows.⁴

This report is based on the premise that there is a fragmented connection between the chronic infrastructure deficits across the developed and developing world and the ready availability of financial capital in the world economy. Two main reasons emerge for the apparent decoupling of infrastructure financing and financial capital: the key disconnect between the risk appetite of investors versus the risk level of infrastructure projects; and scant

⁴ OECD, Mapping channels to mobilise institutional investment in sustainable energy, OECD report to G20 Finance Ministers and Central Bank Governors (2015)



¹ <https://sustainabledevelopment.un.org>

² PWC Oxford Economics, Capital Project and Infrastructure Spending Outlook to 2025

³ OECD, G20/OECD High-Level Principles of Long-Term Investment Financing by Institutional Investors, OECD (2013)

project-development resources in emerging economies and developing countries.⁵ In specific cases, investors' risk appetite and the risk level of infrastructure projects can be bridged through credit and project guarantees, insurance and other credit-enhancement schemes, also known as Risk Mitigation instruments.

This report is designed to help policy-makers, multilateral and bilateral financial institutions and the private sector to navigate and understand the current state of affairs of Risk Mitigation instruments and jointly develop a compass for action in the future. For policy-makers, the report provides a guide to the issues that the providers of Risk Mitigation instruments need to consider in the future structuring of instruments, such as more standardization and complementarity. For investors, the report provides an aggregate assessment of the market of risk mitigation in infrastructure in emerging and developing markets and offers a means to enter into an effective dialogue on the problems and potential solutions in the complex field of infrastructure risk mitigation.

⁵ This topic is outside of the scope of this report and is well covered in a previous report: World Economic Forum, A Principled Approach to Infrastructure Project Preparation Facilities (2015)

To understand the perceptions of the private sector, a questionnaire was developed and distributed to organizations and executives active in the infrastructure market during the periods of August-December 2015 and January-March 2016. The 42 respondents include institutional and private investors, project developers and construction companies, global banking institutions, insurance and reinsurance companies, multilateral development banks, and professional services firms with total assets under management that exceed \$2 trillion.

Additional efforts are required in the Risk Mitigation field of infrastructure. The World Economic Forum's Global Agenda Council on Infrastructure has suggested some recommendations to providers of the Risk Mitigation instruments and wider market participants. The long-term goal is to create a more enabling environment for infrastructure investors in emerging and developing economies and increase much-needed private financing in infrastructure.



Provision of Risk Mitigation Instruments: Expert Survey Results

Public infrastructure has often been associated with poor management and below-par service provision. Projects that go into tender under the traditional public procurement route more-than-often go over budget and over schedule. Furthermore, those projects do not consider the whole life cycle costs of infrastructure, such as operation and maintenance of the facilities.

For certain infrastructure projects, private sector participation in infrastructure can provide more efficient outcomes provided that the risks are well identified and managed. In PPPs the public and private sectors enter into a long-term contractual relationship and share a complex risk allocation matrix.⁶ In principle, the party best able to manage that risk bears the consequences if it materializes.

⁶ Bhattacharya A., Oppenheim J., Stern N., Driving Sustainable Development through Better Infrastructure: Key Elements of a Transformation Program, Brookings Institute, Working Paper 91 (2015)



The decision to invest in infrastructure is based on risk analysis and available Risk Mitigation strategies. Risk mitigation can take several forms. For the purposes of this report, risk mitigation is considered to be the practice of the reduction in the exposure to a risk and/or likelihood of its occurrence. Risks in infrastructure investment include construction risks, completion/commissioning risks, operational risks, transfer/handover risks and macroeconomic, political and regulatory risks.

Whereas Risk Mitigation instruments can vary and, broadly, can include the PPP method itself, the emphasis is on those instruments that are provided against a *specific price under a specific contract* within the broader arrangement of PPPs, such as financial guarantees, insurance and other credit-enhancement schemes.

For infrastructure investors, these products can mitigate project and credit risks, and enable investments in markets that are perceived as high risk. These instruments have the potential to make markets for infrastructure investments more accessible; and the ability to use these instruments can expand investor and lender interest in opportunities in emerging markets. For many investors, countries not covered by these instruments cannot be considered as investment opportunities.

To determine whether the current state of affairs in the area of Risk Mitigation instruments for infrastructure needs improvement, a questionnaire was developed to gather the perception of market participants. The objectives were to gauge the significance of perceived risks and shed light on to the risks that are preventing infrastructure investment in emerging and developing economies; and to assess the products that cover those risks in terms of characteristic factors, such as perceived availability to market participants, complexity (e.g. product structure, conditions), accessibility (e.g. speed of process, transparency) and costs.⁷

The questionnaire findings compiled answers from global construction companies, global commercial and investment banks, investment companies, institutional investors, private investors, insurance companies, multilateral development banks and professional services firms (See Table 1).

⁷ For detailed contents of the questionnaire, please refer to appendix.

Table 1: Questionnaire Respondents (42)

Abertis Infrastructure	Croatian Bank for Reconstruction & Development	Macquarie Capital
Acciona	CVC Capital Partners	Marsh
AECON Concessions	Dogus Construction	Meridiam Infrastructure
AES Brazil	European Bank for Reconstruction & Development (EBRD)	Moody's
Allianz Global Investors	EY	Ontario Teachers' Pension Plan (OTPP)
Andrade Gutierrez	Fraport AG	Pottinger
APM Terminals	GP Investments	Russian Direct Investment Fund (RDIF)
Asian Development Bank (ADB)	Global Infrastructure Basel (GIB)	SNC-Lavalin
BAM International	HSBC	Standard Chartered Bank
Boston Consulting Group	IDFC Alternatives	Swiss Re
Caisse de dépôt et placement du Québec (CDPQ)	ING	Tata Power
Citi	Intesa Sanpaolo	UBS
Camargo Correa	KPMG	Vinci Concessions
Consolidated Contractors Company (CCC)		World Bank
Crescent Petroleum		

Across respondents, the general assessment is that the global provision of Risk Mitigation instruments is *not developed or deficient across the dimensions of provision, adequacy and instruments' size according to needs*. Respondents replied that the *supply of Risk Mitigation instruments on a global scale* is below average, (See blue line, Figure 1⁹).

All market participants perceive that the market for risk mitigation is operating below par. The difference or gap between a *developed Risk Mitigation market*, or a desired state, and the *current situation* is portrayed in Figure 1.

Globally, the IFIs – the main providers of Risk Mitigation instruments in infrastructure – approved a combined total of

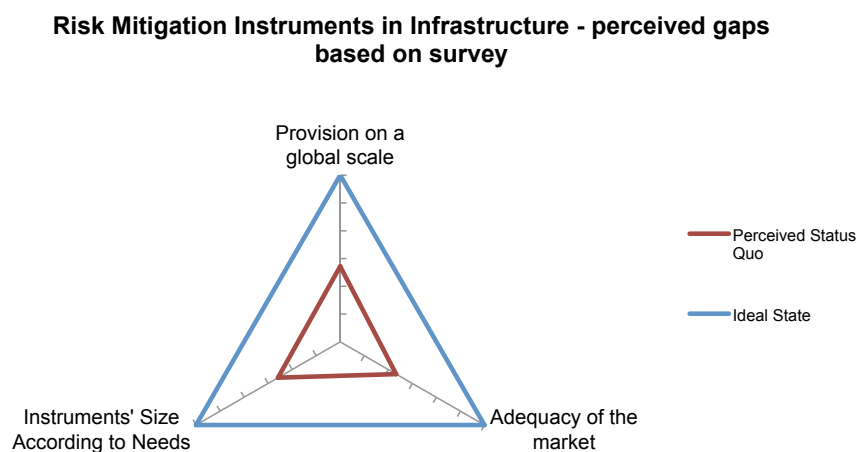
⁹ On a scale defined from 1 (extremely underdeveloped) to 6 (extremely developed market)

\$37 billion in project (non-trade) guarantees for all sectors (including the financial sector) between 2001 and 2013 – approximately 4.5% of total lending approved by the same institutions over that period.⁹

A total of €92.8 billion of brownfield, greenfield and refinancing of existing debt took place in 2015, €10 billion more than in 2014. A total of 446 infrastructure deals, excluding renewables, reached financial close, 178 more than in 2014.¹⁰ Given that the instruments provided are averaging €2-€3 billion per annum globally since 2001, they constitute only a small percentage of global infrastructure investment.

⁹ Humphrey C., Infrastructure Finance in the Developing World, Working Paper Series – Challenges and Opportunities for Multilateral Development Banks in 21st Century Infrastructure Finance, IGG of 24 Global Green Growth Institute (2015)
¹⁰ Infradeals 2015

Figure 1: Risk Mitigation Instruments in Infrastructure – Globally



Emerging and Developing Markets¹¹: Framework to Assess Gaps in the Provision of Risk Mitigation Instruments

The perception of market participants regarding Risk Mitigation instruments' efficiency and effectiveness was assessed through the dimensions of availability, complexity, accessibility and costs.

Availability to market participants: Availability in the questionnaire examines whether Risk Mitigation instruments are available at the time when the project stakeholder demands and receives those instruments. Responses to this dimension assess the degree to which an institution's operational organization, which is responsible for providing those instruments, has the capability to commit to the process of providing those instruments and is able to deliver reliably. Respondents had three options: not available, available but not used, and available and used. The findings demonstrate that Risk Mitigation instruments in all regions are perceived to be *available but are not used* at a satisfactory scale.

Complexity (e.g. product structure, conditions): Complexity in Risk Mitigation products is an important determinant on the efficiency with which these instruments are being provided. The perception of market participants is less clear-cut than one may suspect. The economic environment of emerging economies can be substantially more volatile, much more uncertain and increasingly complex and the perception of the strength and impact of these may differ by the vantage point of respondents. The complexity gap arises when investors anticipate much more complexity than they feel confident in handling.

Complexity may be justified by the product structure, the conditions of provision and the market participants themselves. It is fair to say that complexity is not bad as long as it creates value. However, the factors that drive complexity are not always the same ones that drive additional value. Complexity is a factor that reduces

transparency both within an organization that provides those instruments and externally to market participants, affecting their perception. Product complexity was evaluated on a scale of 1 (low) to 3 (high). Market participants perceive Risk Mitigation instruments in all regions to be *above average complexity*.

Accessibility (speed of process, transparency): Accessibility to Risk Mitigation instruments and, more broadly, to financial products has different dimensions and there is no unanimous definition. Typically, accessibility involves aspects of convenience (i.e. speed of process and ease of access to these instruments), continuity (i.e. repeated access to these specific financial products), flexibility (i.e. tailoring of these financial products to the needs of the users) and transparency (i.e. investors having ready access to required financial information).

Access to these products also takes into account the exclusion of market participants – either voluntary or involuntary. Certain investors may be involuntarily excluded because they do not meet the providers' criteria. Other investors voluntarily exclude themselves from the use of formal Risk Mitigation products. For the functional dimension, the focus is on whether a user has access to a specific type of Risk Mitigation product. A lack of access may arise if there is a mismatch between the provision and use of the instrument when potential investors restrain their demand because the right types of financial instruments are not provided. Further, Risk Mitigation instrument providers may not wish to give all investors access to certain products if they believe that it is not institutionally sustainable, feasible or desirable to do so. Accessibility was evaluated on a scale of 1 (low) to 3 (high). The respondents to the questionnaire perceive that *accessibility is not high*.

Costs: The costs of obtaining Risk Mitigation instruments for investors are the premiums and the contractually agreed fees that the providers charge in guarantees, insurance products and other credit enhancement schemes. It is important to note that the true representation of costs is difficult to assess as it may not be clear whether perceived high costs are truly high. Perceived costs of the different Risk Mitigation instruments have a distinct variation between respondents. The costs of the products were evaluated on the scale of 1 (appropriate) to 3 (excessively high). The costs of the instruments in all regions are *considered either high or appropriate but nowhere seen as excessively high*.

¹¹ Different institutions use different definitions to segregate emerging markets from other more or less developed economies. The main criteria used by IMF's World Economic Outlook to classify the world into advanced economies and emerging market and developing economies are: per capita income level; export diversification; and degree of integration into the global financial system. Note, however, that these are not the only factors considered in deciding the classification of countries. The WEO Statistical Appendix states that "This classification is not based on strict criteria, economic or otherwise, and it has evolved over time. The objective is to facilitate analysis by providing a reasonably meaningful method of organizing data." A questionnaire that would focus on individual countries classified as emerging markets would not have been user-friendly, just as the listing of 20+ countries would not fully capture the perception of the respondents.

Regional Breakdown

The survey findings confirm that, in each region, the Risk Mitigation instruments are believed not to be used and not to be easily accessible. Market participants have minor variations between the regions.

Africa

The infrastructure needs in Africa, according to McKinsey Global Institute, are severe and estimated at approximately \$1 trillion for the period 2016-2030.¹² The gap is exacerbated by the significant economic and population growth, and the fact that 15 million young people enter the labour market every year. Interregional trade is low and only about 10%-12% of African trade takes place among African countries. The Africa Progress Panel pointed out that risk mitigation financing has been developed in a fragmented and haphazard fashion and that there is no systematic analysis of the type of risk instruments needed to unlock private investment.¹³

¹² McKinsey Global Institute, Bridging Global Infrastructure Gaps (2016)

¹³ Africa Progress Panel, Grain Fish Money, Financing Africa's Green and Blue Revolutions, Africa Progress Report (2014)

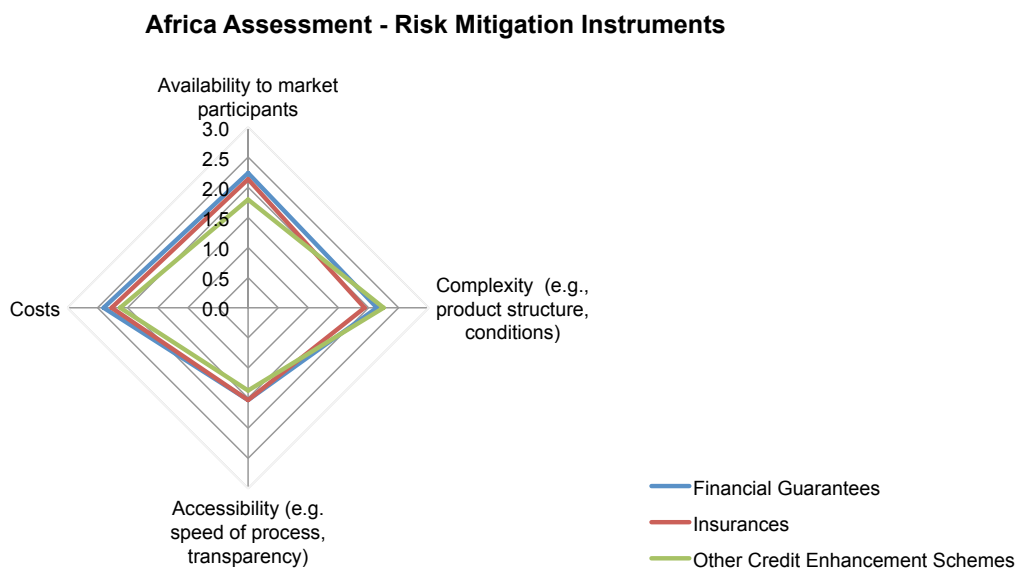
The survey findings confirm this view. In Africa, according to the questionnaire responses according to Figure 2, Risk Mitigation instruments in general are perceived to be available but not used, and appear to be of medium to high complexity. Costs to utilize such instruments seem to be high. Notably, instruments are perceived as not easily accessible. There are no major differences in the assessment between the different instruments.

According to an African Development Bank (AfDB) study,¹⁴ there is a large Risk Mitigation gap and the design of effective Risk Mitigation solutions is a pressing priority. The AfDB seeks to contribute to mitigating risks in infrastructure by developing sound domestic debt markets in Africa through the creation of the African Domestic Bond Fund, which was established in 2015. Project bonds are championed by the AfDB as a future solution to Africa's daunting investment shortfall. However, project bond financing is new to the continent.¹⁵

¹⁴ African Development Bank: Initiative for Risk Mitigation, Needs Assessment for Risk Mitigation in Africa: Demands and Solutions (2013)

¹⁵ White & Case, Africa: The origins of a project bond framework in project bonds: Their growing role in global Infrastructure finance (2015)

Figure 2: Survey Results – Risk Mitigation Instruments in Africa



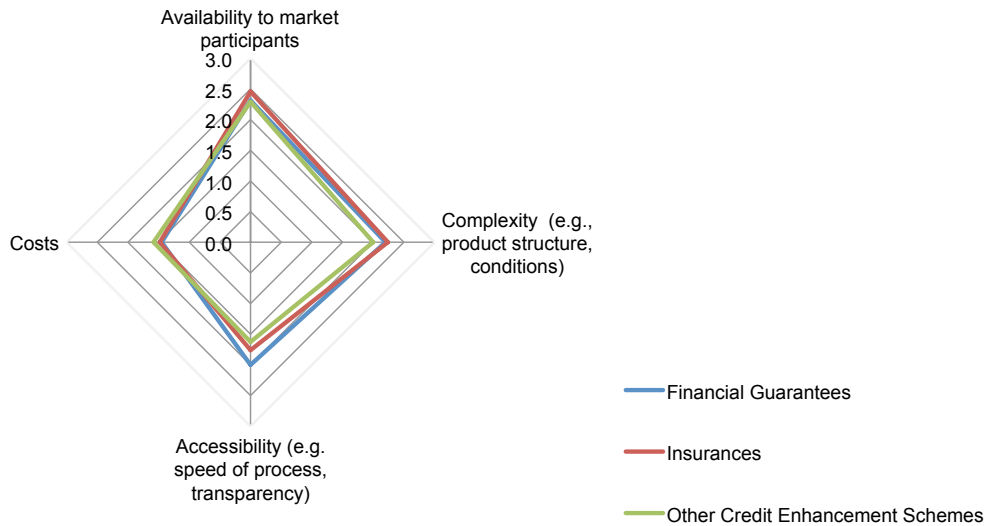
Middle East and North Africa (MENA)

To sustain the growth rates achieved in recent years and boost economic competitiveness, the MENA region needs to invest approximately \$2.45 trillion in infrastructure annually from 2016 to 2030, according to McKinsey Global Institute.

Financial guarantees and insurances in the MENA region are more available and used, whereas credit enhancement mechanisms are available but not used. In terms of complexity, all categories seem to be of average complexity and are of medium accessibility. Instruments do not seem to be excessively costly. Complexity appears to be relatively at the mid to higher level for insurances and financial guarantees than other credit enhancement schemes.

Figure 3: Survey Results – Risk Mitigation Instruments in MENA

MENA Assessment - Risk Mitigation Instruments



Asia

Asia's infrastructure financing needs are significant. According to McKinsey Global Institute, developed Asia needs from 2016-2030 \$3.45 trillion and the other emerging Asian countries need approximately \$3 trillion in infrastructure investment if they are to meet the needs of their growing populations and rising incomes. In addition, India's infrastructure needs are estimated at \$3 trillion.

However, the underlying issue is not a shortage of financial capital: gross national savings totalled \$1.36 trillion in 2011 alone. Traditional project financing structures receive sub-investment grade ratings as the market is not sophisticated and contract performance risks are not appropriately defined. Additionally, the illiquidity of regional bond markets, lack of market making, lack of a reliable yield curve and related benchmarks, and mistrust in financial reporting by corporations keep institutional and retail investors away from corporate bonds that could finance developers' equity in projects.¹⁶

South Asia

In the South Asia region, respondents to the questionnaire seem to perceive that Risk Mitigation instruments are either not readily available to market participants or, if they are available, they are not used. Insurances seem to score lower in terms of usage although insurance products are available. None of the respondents perceives that the instruments are simple or easily accessible with the notable exception of the financial guarantees, which score higher in terms of accessibility. Generally, costs to employ these instruments are believed to be high.

¹⁶ Asian Development Bank & Asian Development Bank Institute, Connecting South Asia & South East Asia (2015)

Risk Mitigation through Strengthening Local Capital Markets

The Credit Guarantee and Investment Facility (CGIF) was established by the ASEAN+3¹⁷ together with the Asian Development Bank in 2010. The facility was part of the Asian Bond Markets Initiative to develop and strengthen local currency and regional bond markets. CGIF aims to promote economic development, promote resilience of the financial markets and prevent disruptions to the international financial order by developing deep and liquid local currency and regional bond markets.

Its objective is to achieve a more-efficient allocation of savings within the Asia-Pacific region to promote the issuance of debt securities with longer-term maturities to match the gestation of investment projects. The authorized capital of CGIF is \$700 million.¹⁸

As of October 2015, the institution had issued eight guarantees in the markets of Singapore, Thailand, Indonesia and Vietnam.¹⁹ The sectors covered are trading, consumer finance, automobiles, telecoms, consumer and financial services. There are no guarantees issued to the infrastructure sector so far.

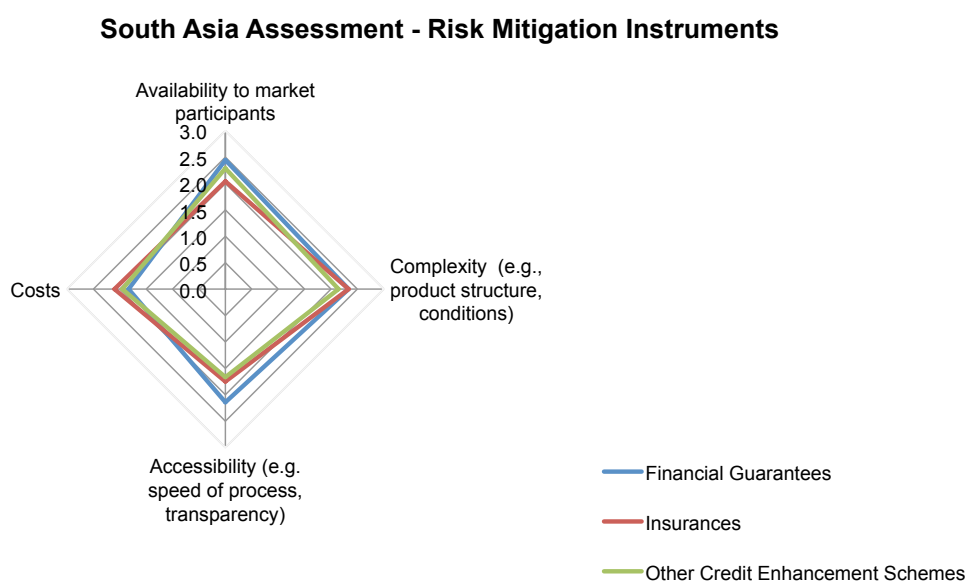
Source: Asian Development Bank

¹⁷ The Association of Southeast Asian Nations (ASEAN) nations comprises Brunei Darussalam, Cambodia, Indonesia, the Lao People's Democratic Republic, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam. The ASEAN+3 comprises the ASEAN nations plus the People's Republic of China, Japan and the Republic of Korea.

¹⁸ Credit Guarantee & Investment Facility (CGIF), Progress Report (2014)

¹⁹ Credit Guarantee and Investment Facility (CGIF), Standard & Poor's Credit Rating Report (July 2015)

Figure 4: Survey Results – Risk Mitigation Instruments in South Asia



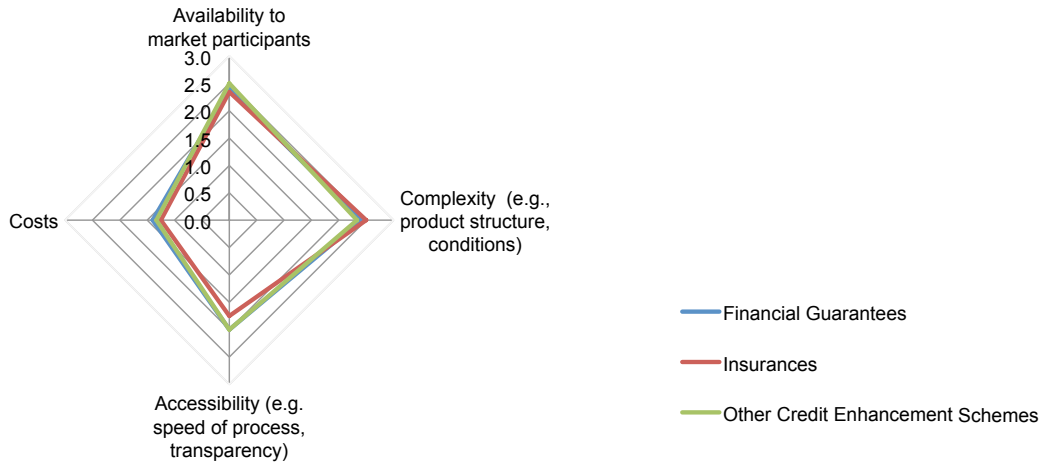
South-East Asia

Respondents to the survey who have had experience investing in South-East Asia suggest that Risk Mitigation instruments are available but not used. The majority of the respondents who have experience utilizing instruments in

South-East Asia said that they believe that instruments have medium to high complexity and are relatively accessible, with the exception of insurance products. A high percentage of respondents seem to believe that the instruments are appropriately to highly priced.

Figure 5: Survey Results – Risk Mitigation Instruments in South-East Asia

South East Asia Assessment - Risk Mitigation Instruments

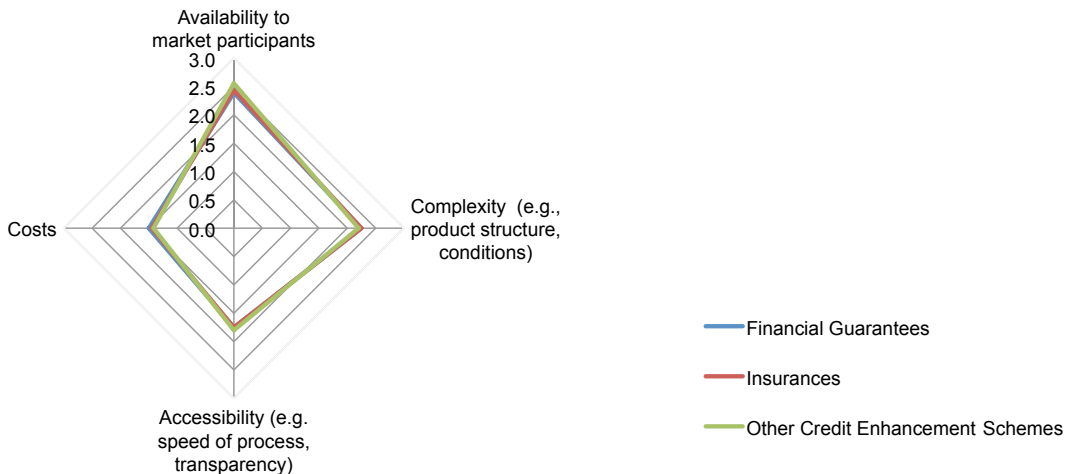


Rest of Asia

Most respondents said that they believe that instruments are available and used. Instruments are considered of medium to high complexity and of low to medium accessibility. The perception of the experts that replied to the survey is that the costs of the instruments are high.

Figure 6: Survey Results – Risk Mitigation Instruments in Rest of Asia

Rest of Asia Assessment - Risk Mitigation Instruments

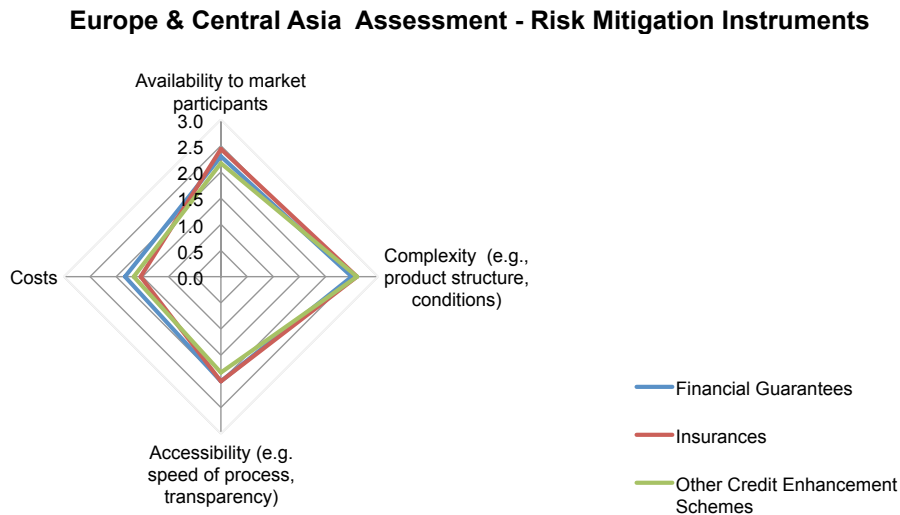


Europe and Central Asia

In Eastern Europe, the investment gaps are estimated to be approximately \$2 trillion for 2016-2030, according to McKinsey Global Institute. Instruments are available; however, usage is not perceived to be extensive. Complexity

is higher than average, especially for insurances and other credit enhancement schemes. Accessibility is perceived to be average. Costs seem to be higher than average for all Risk Mitigation instruments, particularly for financial guarantees.

Figure 7: Survey Results – Risk Mitigation Instruments in Europe and Central Asia

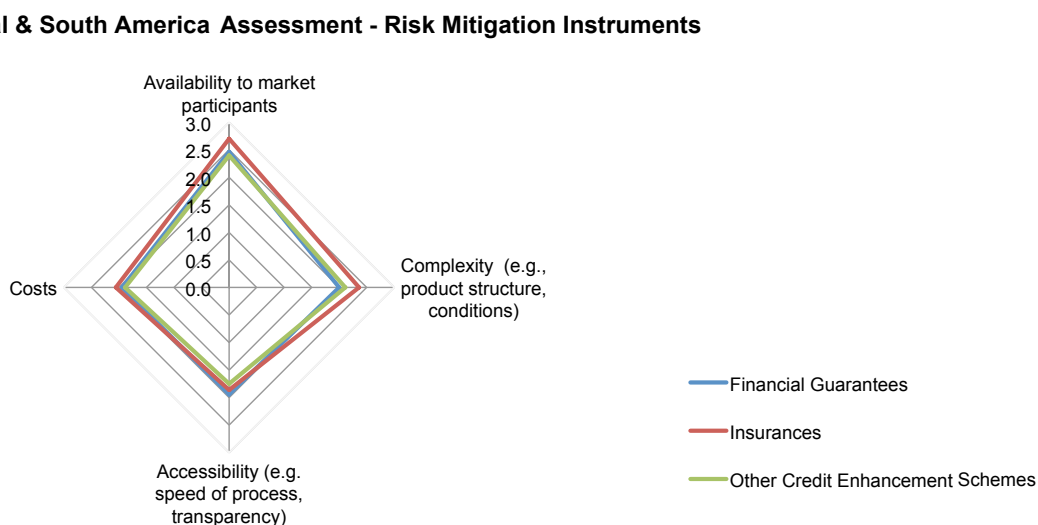


Central and South America

The investment needs in infrastructure investment in Latin America are estimated to be only \$3.43 trillion for the period 2016-2030, according to McKinsey Global Institute. Risk Mitigation instruments in Central and South America were

found to be available but not used, with the exception of insurance products. Respondents suggest that the instruments are of average complexity. Accessibility is not high, but above average. Products are not excessively high priced but are perceived to be towards being high.

Figure 8: Survey Results – Risk Mitigation Instruments in Central & South America



Necessity of Risk Mitigation Instruments

Considering the rise of private participation in infrastructure in emerging and developing countries from the early 1990s to the present, the number of guarantees is just a fraction of the total deal value. For example, the World Bank Group's institutions (MIGA, WB, IFC) have issued 1,118 guarantees for a total of \$22.5 billion for the period 1990-2007.

The respective rise in long-term investment in infrastructure through project finance has risen from \$17.7 billion in 1994 to \$253.3 billion in 2013.²⁰ If equity is incorporated the volume rises from \$41.3 billion to \$415 billion for the same period. The average bank loan of project financed investments averaged from \$126 million in 1996 to \$349 million in 2013.²¹

²⁰ Esty, B., An Overview of Project Finance and Infrastructure Finance—2014 Update

The majority of respondents said they believe that more than 10 transactions would need some form of Risk Mitigation instrument to close financially from 2000-2007.

Market participants replied to the questionnaire on the question "how many potential infrastructure investment opportunities seen that failed to be successfully tendered or financially closed due to inadequate coverage of Risk Mitigation instruments between 2010-2015" replied that at least ten (10) opportunities for additional investments in infrastructure did not happen.

²¹ Esty, B., An Overview of Project Finance and Infrastructure Finance—2014 Update

Figure 9: Number of Infrastructure Investments that Necessitated Risk Mitigation Instruments (2000-2007)

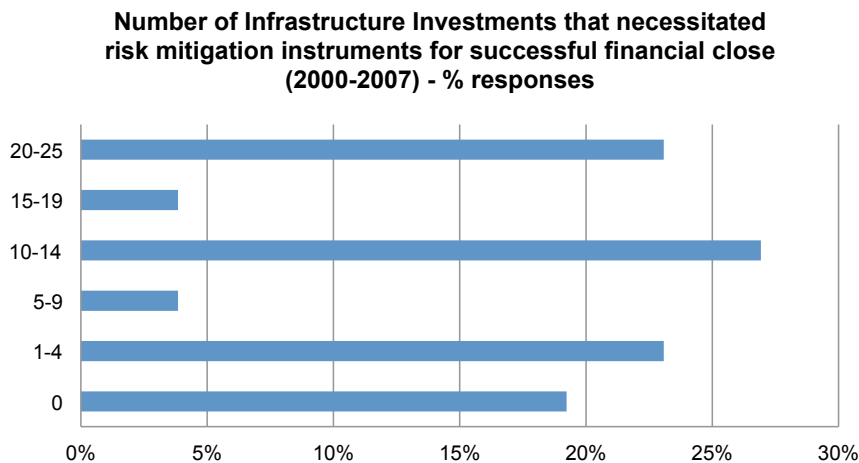
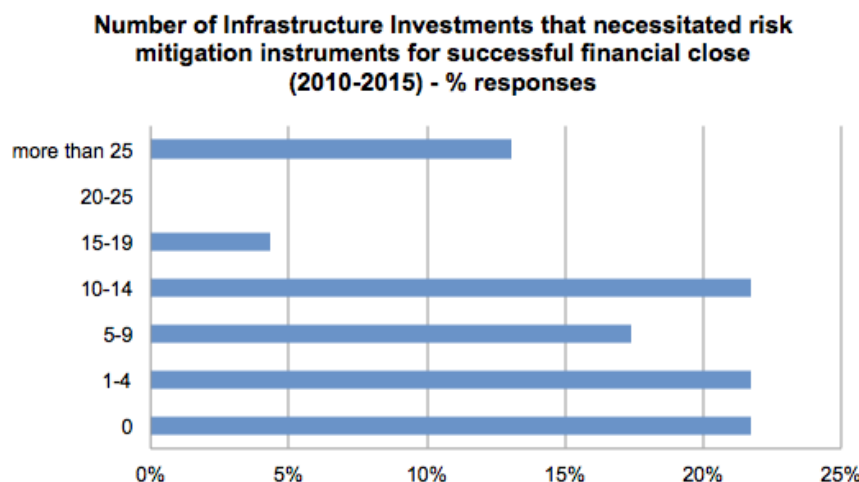


Figure 10: Number of Infrastructure Investments that Failed to be Successfully Tendered or Financially Closed Due to Inadequate Coverage of Risk (2010-2015)





Emerging Recommendations

Political Risk Mitigation instruments are essential and, without them, the ever larger infrastructure investment gap cannot be closed. The questionnaire results of market participants, managing over \$2 trillion in assets under management, demonstrate the need for action.

Risk Mitigation instruments can and do provide a significant benefit for investors and financiers, as well as host countries that do not meet minimum investment criteria. There is clear evidence that such instruments are being deployed. Investor feedback seems to suggest that there is a strong interest in having greater or easier access to such instruments. Also, in most regions, the cost of such instruments is perceived as medium to high, but this is a complex issue because it is difficult to infer whether the perception of high cost is due to the pricing not adequately reflecting the risks or due to an interest in having “subsidized” instruments at below-market prices.

The IFI community at large is not immediately balance-sheet constrained and an adapted Risk Mitigation product range could be offered by IFIs alongside the traditional and widely used product ranges. The key questions are therefore how the existing IFI Risk Mitigation instruments could be adapted and standardized to make them more accessible to the market, how IFI capacities could be deployed in support of commercial risk insurance products, and whether it would make sense to create additional players, such as a new IFI/private-sector-funded financial intermediary for emerging markets.

The working assumption underlying the above is that any of the three approaches or combination of them will support the upscaling of deployment of private capital and expertise into infrastructure beyond the limited extend seen so far, particularly in the institutional investor market.

Based on the questionnaire findings and expert opinions, a number of recommendations seem to emerge.

Recommendation 1: International Financial Institutions (IFIs) and national financial institutions should review their existing instruments with the goal of arriving at a limited number of common standardized products that are available globally through the relevant local/regional partner

This recommendation proposes a limited number of common standard instruments that multilateral development banks can offer unilaterally or in combination with commercial players or the Multilateral Investment Guarantee Agency (MIGA). The selection of these products should be guided by what has worked on a scalable basis so far. An IFI working group should be set up that would come up with recommendations within a limited time period (for

example, 12 months) and these recommendations should be discussed at the International Financial Institutions Infrastructure Forum in Washington DC in April 2017. Given the differing legal, regulatory and policy parameters for the regional multilateral development banks, the realistic time frame for implementation of this recommendation may be considered medium term.

IFIs have agreed that increased harmonization and collaboration should guide the challenge of bridging the gaps in infrastructure in emerging and developing economies and have set common principles for those specific infrastructure financing operations: complementarity, knowledge sharing, capacity building and thought leadership.²²

However, how these translate into the rules of engagement in the actual field of guarantee provision is not clear. For example, collaboration between IFIs has been showcased in the project preparation stage through specific or dedicated project preparation facilities (PPFs). PPFs fund project preparation in different stages (pre-feasibility, feasibility and design) as well as technical cooperation to strengthen regulatory frameworks and build in-country capacity.²³

However, collaboration between IFIs in the use of guarantees has not been scaled up. The few cases that exist relate mainly to the same IFI providing both loans and guarantees to a project.²⁴

Collaboration should not only be limited in the “downstream” provision of a standard set of Risk Mitigation products, but also in identifying ways to jointly solve some common obstacles that are holding back greater usage of these instruments.

Proposed measures to coordinate deployment of guarantees to reduce duplication and ensure complementarity may include all institutions in the country assistance strategy preparation process and the clear identification of the guarantees that will be needed.

The application of Risk Mitigation products in emerging markets can best be understood through the analogy of homeopathic treatment, i.e. the application of the Risk Mitigation products at best as minute treatments. This can be explained by the fact that these products provide inadequate cover, and processing and approval timetables

²² Partnering to build a better world: IFIs' common approaches to supporting infrastructure development, Prepared by IFIs for Circulation to G20 Development Working Group and G20 Investment and Infrastructure Working Group (2015)

²³ Ibid.

²⁴ Humphrey C., Prizzon A., Guarantees for development - A review of multilateral development bank operations (2014), ODI

for such bespoke products are generally too long compared with the alternatives of traditional IFI products. Mandate restrictions that might restrict the deployment of guarantee instruments are another explanation.

Limited accessibility of the instruments is an issue that involves the internal conventions and operational regulations of the IFIs that may limit their adaptability to new market trends. IFIs have not been sufficiently forceful in innovating within the flexibility allowed by current policies. Internal constraints to the deployment of IFI guarantees include: the application of standards designed for public-sector operations to private-sector projects; depletion of skills; and lack of both internal and external communication of the instrument.²⁵

Scaling-up guarantee usage and access have to take into consideration the lack of awareness of and knowledge about the instruments on the part of IFI staff as well as borrowers. Among the obstacles identified are limitations in access, policy constraints and gaps that lead to a perceived lack of clarity and added complexity by staff and member countries.

IFIs seem to have grown fundamentally into lending institutions, and their policies, procedures, incentives and internal culture – developed over the decades since their founding – are oriented towards balance-sheet maximization.

A tangible way forward is the formation of an IFI-wide working group to look at practical ways to arrive at common product standards that are easier to use for the private sector and can work in conjunction with instruments offered by MIGA and commercial service providers. The scaling-up of the guarantees provision should be coupled with a review of appropriate incentives to move IFIs from balance sheet maximization to private-sector finance mobilization.

Recommendation 2: Create a tradable infrastructure debt asset class by increasing standardization in the underlying debt instruments

This recommendation originates from the wide consultation process to which the report has been subjected and does not come specifically from the outcomes of the survey and its findings. Creating the conditions for a tradable infrastructure debt asset class is a long-term, multi-factor process that can indirectly accelerate the upscaling of Risk Mitigation instruments that are mentioned in this report and focus mostly on political risk.

This recommendation is broader and alludes to broader issues of investing in infrastructure. As noted previously, given their liability structure, institutional investors – with over \$70 trillion in assets – are well suited to committing long-term capital to the economy and lending to infrastructure projects in particular.

However, current infrastructure finance deals are complex,

often involve a syndicate of banks and imply credit ratings of BBB or lower. Also, loans are non-marketable and therefore illiquid when compared to project bonds. Standardizing financial instruments for infrastructure project investing is therefore crucial to reduce investors' risk.

Accordingly, creating a transparent and tradable infrastructure debt asset class would help with crowding-in private-market financing. Standardization of financial market instruments and related disclosure requirements will be crucial in order to move towards such an asset class. Furthermore, the involvement of multilateral/national development banks with credit enhancements and insurance solutions to enhance their capacity would make the investment even more compelling for long-term investors. Thereby, a joint public-private best practices framework needs to be developed and rigorously applied.

Specifically, project/infrastructure finance debt instruments tend to be complex and, despite the fact that many clauses and terms of the debt documents are “boilerplate” (i.e. those which vary little from one loan agreement to another), they are customized for every project.

The European Financial Services Roundtable has developed a template for standardized infrastructure debt disclosure and reporting requirements. The report, *Facilitating European Infrastructure Investment*,²⁶ also includes recommendations on standardization disclosure on third-party advisers and harmonizing dispute-resolution mechanisms.

A framework for standardized infrastructure debt reporting, documentation and disclosure would need to contain four key elements: disclosure and reporting requirements, debt terms and documentation, administration, and third-party advisers.

Disclosure and Reporting Requirements

An overview of initial disclosure and reporting requirements should be provided on an initial and semi-annual basis; this overview should also be used for industry performance data aggregation and analysis requirements, including:

- Event-based disclosures: Non-payment of interest or principal, breach of contractual obligations related to all involved parties (i.e. bond covenants), illegality, default of a major contract counterparty, insolvency event, but also regulatory/policy changes, construction delays, significant deviation from projected costs and cash flows, sudden increase in costs (e.g. related to inflation) or force majeure that affect the economic value of the project
- Public disclosure of compliance certificates

Debt Terms and Documentation

Having a common governing standard for infrastructure debt (loans and bonds) would go a long way to harmonize contract terms across jurisdictions. A template prospectus/offer document should be developed with the disclosure

²⁵ Ibid.

²⁶ <http://www.efr.be/newsstory.aspx?pv=ByabczhTEoJ69ra6M26kw%3D%3D>.

requirements.

Administration

In the monitoring of project information on administrative responsibilities such as creditor decision-making, cash flow and collateral management can be provided.

Third-Party Advisers

A set of common standards for the engagement, liability and disclosure requirements for third-party advisers, such as technical advisers, consultants and auditors, is another element that can help in the move towards standardized debt instruments.

The Loan Market Association, which has 500+ members (including commercial and investment banks, institutional investors, law firms, service providers and rating agencies), has not produced any standard-form project finance loan documentation.²⁷

For this recommendation to be effective and broadly applicable to new infrastructure transactions, any best practices on standardization of the underlying debt instruments could be applied to new lending executed by the World Bank Group as part of its Global Infrastructure Facility (GIF) activities. This can be put forward by the formation of a working group to advocate for greater standardization of the underlying debt instruments that will, in effect, reinforce Recommendation 1 above.

Recommendation 3: Establish a harmonized dispute resolution mechanism

The exposure of infrastructure investors to unexpected circumstances, legal systems, government interference, complex contractual agreements, a broad range of involved parties and regulatory regimes makes them prone to arising disputes. Initially, aligning the interests of all involved parties provides the best protection against such risks. However, should a dispute still evolve, a sensible resolution mechanism and transparent disclosure thereof is needed.

Disputes also arise from contract renegotiations. A renegotiation happens when the contract fails to address present circumstances. Renegotiation is extremely difficult to avoid in infrastructure projects that involve private-sector participation, especially in PPPs/concessions. Most of the experiences with renegotiation processes have not been ideal. When a renegotiation is required, it is necessary to have in place rules and guidelines to improve the performance of the process and avoid “distorted” results.²⁸

Establishing a mechanism for dispute resolution sits well as an additional buffer to investors on the questions of opportunistic behaviour and information asymmetry on the part of the government or other project stakeholders. This is an additional *exogenous guarantee* that if there is a dispute and the project goes that way – regardless of the instruments covering the investment (guarantees,

²⁷ Yescombe E.R., *Principles of Project Finance*, Academic Press (2014)

²⁸ Cruz C.O., Marques R.C., *Infrastructure Public-Private Partnerships: Decision, Management and Development* (2013)





insurances, etc.) – there will be a standard mechanism and roadmap in place to safeguard “uneventful” transitions for the operation of the project.

Additionally, it may be the case that the provider of the guarantee will be able to weigh-in to protect its exposure of the guarantee. The mechanism can facilitate in mediating the informal interference of parties involved (government, multilateral organization and the private sector).

Recommendation 4: Establish a global/regional risk mitigation facility (with or without direct participation of international financial institutions)

A number of IFIs may face administrative, constitutional or credit-rating obstacles to using guarantees more extensively, associated with their capital structure, financial and operational policies, and staff skills. Therefore, there may be scope for a new global vehicle that would offer a standardized set of products on a stand-alone basis or in conjunction with interested parties. This approach could ensure that each region, including emerging markets, receives the same access to a set of standard Risk Mitigation products immediately after set-up of such a global vehicle.

With a global Risk Mitigation product and all markets having similar access, market access would be facilitated and pricing more transparent. At the same time, participating IFIs can adapt their own product range better to what the markets need, learning from the global facility.

One of the advantages of creating a new risk mitigation global guarantee facility is the potential to strengthen local capital markets in terms of depth and liquidity if the focus is on guaranteeing local currency bond financings instead of loans. Guarantees are more about establishing access over the longer term for bond issuers, as opposed to reducing the cost of financing on the transaction in question.

Essentially such a global facility could replicate a monoline facility that would be able to wrap (insure) bonds. Structured correctly, the vehicle could avoid the pitfalls seen historically with monoline instruments.

The IFI working group, which reviews the recommendations for standard product ranges, should provide a recommendation for the IFI Infrastructure Forum in Washington DC in April 2017.

London EBRD Workshop

To further consult the market participants active in infrastructure investment on the recommendations of the report, the project organized a high-level workshop in London, United Kingdom, in collaboration with the European Bank for Reconstruction and Development (EBRD) to provide a platform for investors, financial institutions, insurers, construction companies and multilateral development banks to work together on the emerging proposals. The workshop was based on an open, interactive discussion and participants were presented with the findings and results of the survey.

The workshop yielded key takeaways, which are outlined below:

- *Timeliness of the report's theme: Risk Mitigation instruments that are focused on the distinct nature of infrastructure investment, which is political risk, compared to other investments*

All participants highlighted the timely intersection of the report's theme with the needs of the market of infrastructure investment.

- *Agreement that the powerful recommendations of the report can create substantial impact*

Participants emphasized the importance of upscaling the risk instruments for infrastructure and the spillover to economic growth. The four recommendations of the report clearly address the heart of the problem and touch on broader themes of the infrastructure investment field.

This creates the need to balance the short-term and long-term nature of some of the recommendations and their prioritization. There was unanimous agreement and endorsement of the strength of the recommendations. Some participants recommended that, given the many initiatives on infrastructure that have been established in the past few years, any new structures and entities should be given additional consideration.

- *Importance and potency of recommendation 1: IFIs and national financial institutions should review their existing instruments with the goal of arriving at a limited number of common standardized products that are available globally through the relevant local/regional partner*

There was a common understanding that, if IFIs revisit the complementarity of their products to make them fewer and more accessible, they can have a tremendously positive impact on much-needed infrastructure in emerging and developing markets.

- This was underscored because of the unique nature of the IFIs and the huge role that they have to play. Throughout the workshop, there was an emphasis on the importance of being able to simplify the instruments between the IFIs. There was agreement on the need for more standardization of products that will make them more transparent, easier to understand and more accessible.
- *Further collaboration of the private sector and the IFIs*
Participants expressed the need for the IFIs and the private sector to further collaborate on the specific issues of the Risk Mitigation instruments. Given the strong commitment of key stakeholders to the joint effort of upscaling the Risk Mitigation instruments in infrastructure, it was proposed that working groups be created to allow the relevant stakeholders to express their opinions and submit proposals for changes and improvements. This was agreed as an effective way of engaging the private sector and the IFIs.



Appendix

General Information on Survey Respondents

The companies that replied to the questionnaire have a global as well as regional scope, and have been active in most infrastructure sectors.

Figure 11: Geographical Scope of Respondents

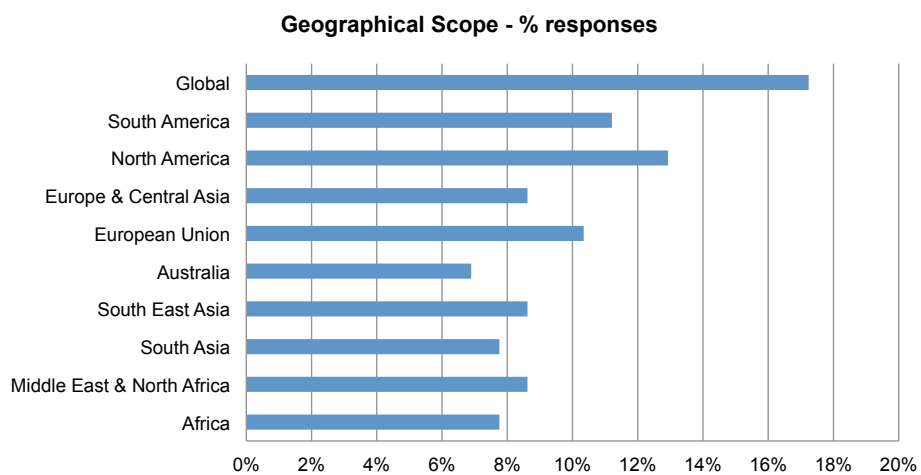
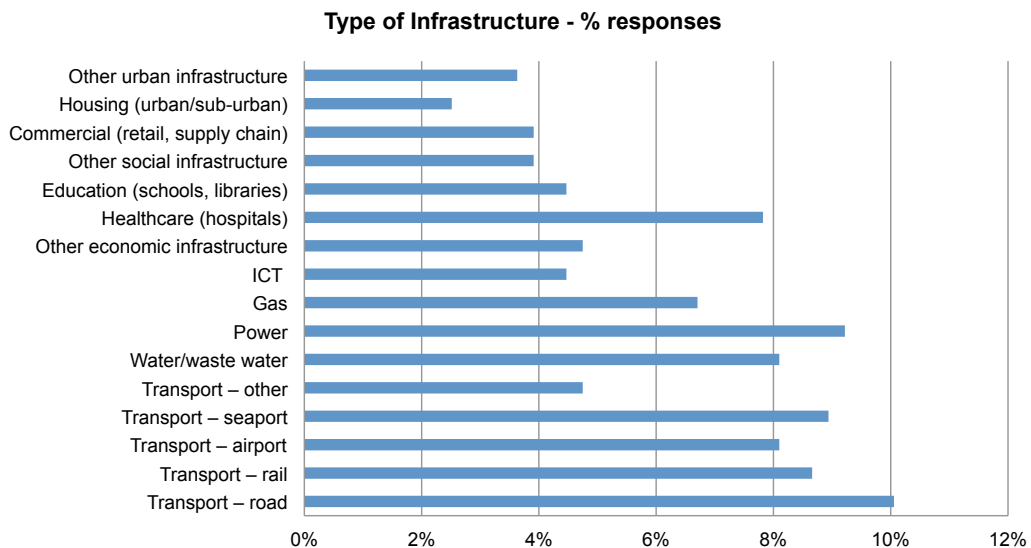


Figure 12 illustrates the concentration on the transport and the power sectors:

Figure 12: Type of Infrastructure – Sector Focus



Types of Perceived Infrastructure Risks

The long-term horizon of infrastructure investments gives rise to several types of risk. From the survey results, the risks that are at the top of investors' decisions to invest in infrastructure are construction risks, completion/commissioning risks, operational risks, transfer/handover risks, and macroeconomic, political and regulatory risks. Whereas these are common in both developed and emerging markets, the ranking can differ.

- *Construction risks:* As most infrastructure projects involve high costs and complex construction engineering, the top deterring factor to invest in infrastructure, according to the questionnaire participants, is delays in project completion, which directly affect the return on investment.
- *Completion/commissioning risks:* Final approvals and permits are considered as highly deterring factors in the

decision to invest in infrastructure in emerging markets. Large projects depend on the obtaining governmental approvals, permits or licences to construct or operate the facilities, and their continued availability. These include environmental permits and, in the case of a foreign investor, permits to own property.

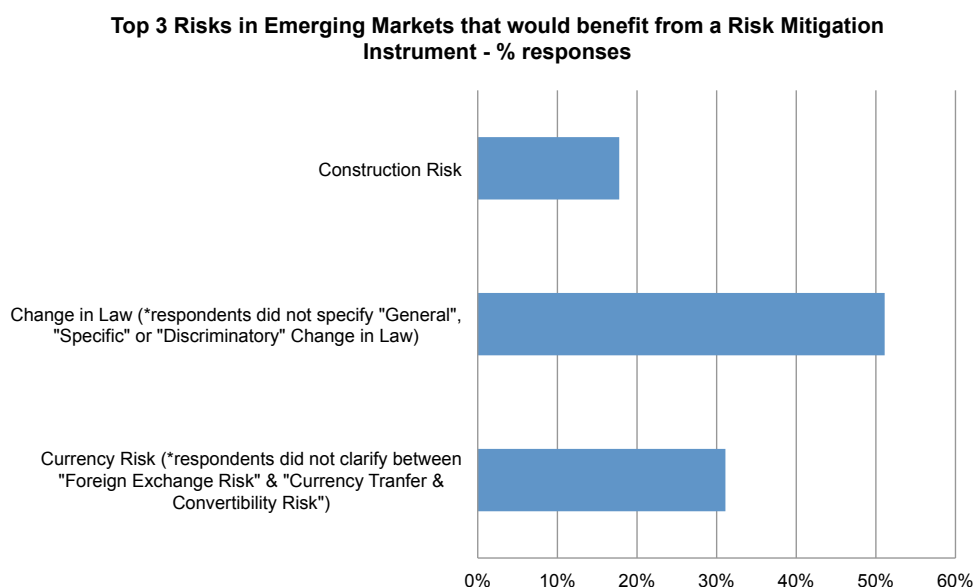
- *Transfer/handover of the project:* Although, in infrastructure contracts, stakeholders strive to build an exhaustive contractual arrangement that foresees contingencies and to design adequate mechanisms to address these contingencies, contracts remain imperfect. Contractual robustness and enforceability is the top perceived factor that deters investment in infrastructure in emerging markets.
- *Macroeconomic, political and regulatory risks:* Foreign exchange risks are the aspect that is hindering the capital provision in large projects when considering wider risks originating from macroeconomic, political and regulatory decisions.

Table 2: Top Perceived Risks in Infrastructure Investment

Category	Top Deterring Factor	Second Deterring Factor	Third Deterring Factor
Construction risks	Delay in project completion	Change of law	Cost overruns
Completion/commissioning risks	Final approvals/permits	Completion certification/ inadequate performance on project completion	Change of control of transition risk
Operational risks	Demand/user risk	Public authority risk	Local experience of service provider
Transfer/handover risks	Contractual robustness/ enforceability	Terms/conditions	Costs
Macroeconomic, political and regulatory risks	Foreign exchange risks	Discriminatory change in law	General change in law

Additionally, market participants signified that the top three risks from the above categories that would benefit from a Risk Mitigation instrument are: change in law, currency risk and construction risk, as Figure 13 shows.

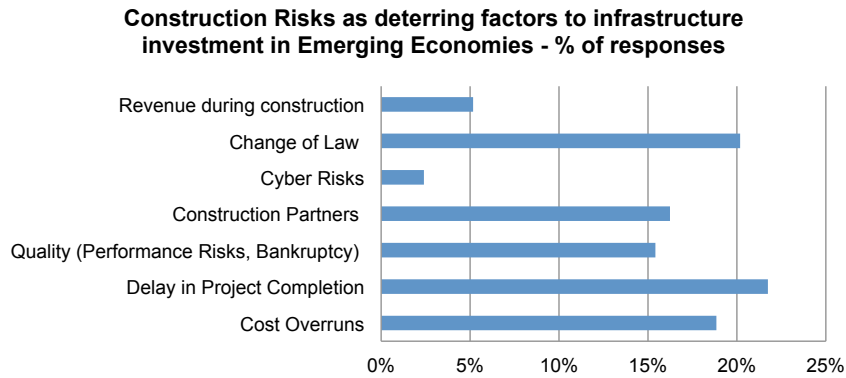
Figure 13: Top Three Risks in Emerging Markets that Would Benefit from a Risk Mitigation Instrument



Construction Risks

Respondents to the questionnaire have indicated that, from the following subcategories of construction risk, *the delay in project completion* is the most deterring factor to infrastructure investment in emerging economies. Secondly, the risk of a *change in law* is perceived to be a serious deterring factor when considering investments in infrastructure in emerging economies.

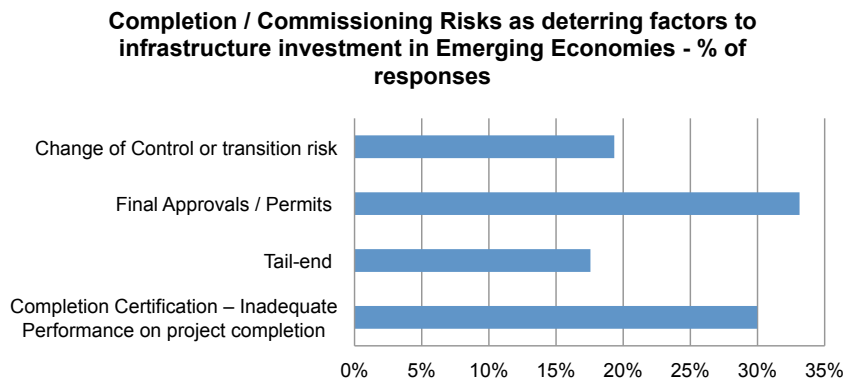
Figure 14: Construction Risks as Deterring Factors to Infrastructure Investment in Emerging Economies



Completion/Commissioning Risks

Within the completion/commissioning risks, gaining the *final approvals/permits* is the subcategory that most respondents perceive as being the highest deterrent to investing in infrastructure in emerging economies.

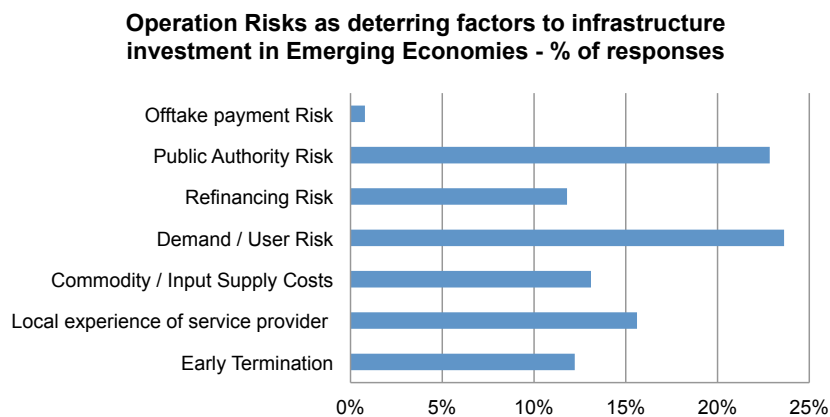
Figure 15: Completion/Commissioning Risks as Deterring Factors to Infrastructure Investment in Emerging Economies



Operational Risks

During the operational phase of the project, questionnaire respondents rated *demand/user risk* and the *public authority risk* in the highest percentage of preventing factors for infrastructure investment in emerging economies.

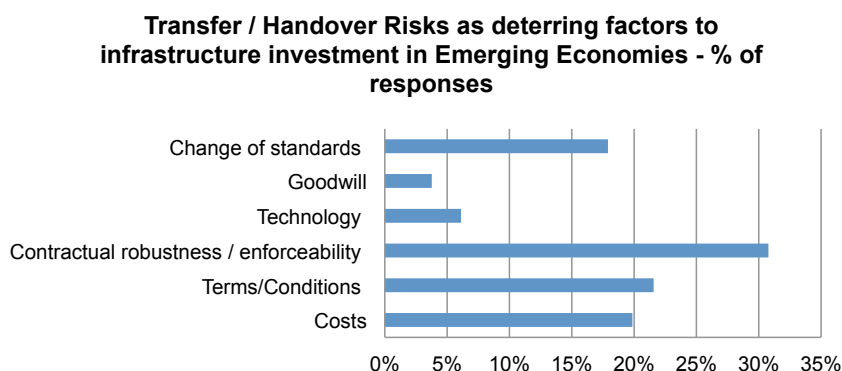
Figure 16: Operation Risks as Deterring Factors to Infrastructure Investment in Emerging Economies



Transfer/Handover Risks

The sub-category of the Transfer/Handover Risks category that gathered the most responses for its deterring influence on infrastructure investment in emerging markets is *contractual robustness/enforceability*.

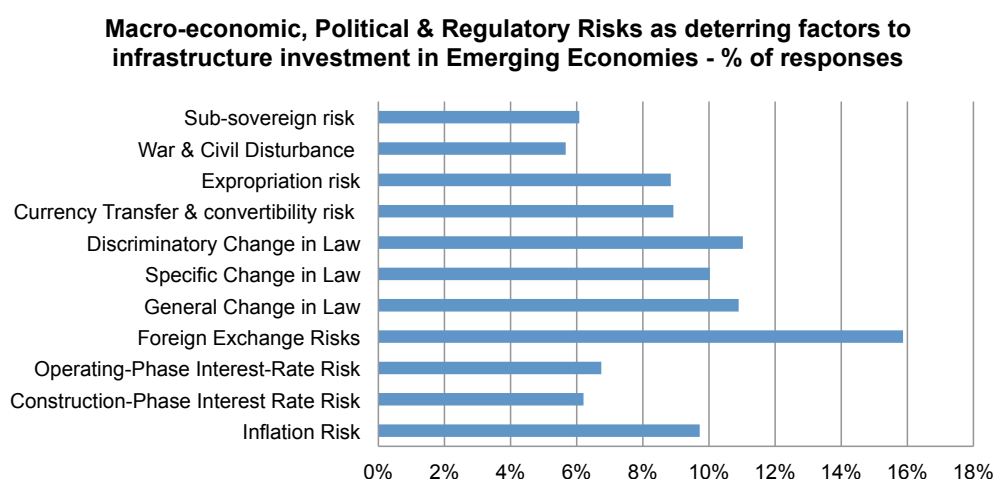
Figure 17: Transfer/Handover Risks as Deterring Factors to Infrastructure Investment in Emerging Economies



Macroeconomic, Political and Regulatory Risks

The risks that are most pertinent to investment decisions in infrastructure in emerging markets are tied to foreign currency exchange.

Figure 18: Macroeconomic, Political and Regulatory Risks as Deterring Factors to Infrastructure Investment in Emerging Economies



Risk Mitigation Choices

Respondents were asked about their choice of Risk Mitigation strategy. A common Risk Mitigation practice in infrastructure investment is the transfer of risk by allocating it to one of the key contractual counterparts (risk pass-through), and it can be argued that it's one of its advantages. The web of contracts between the government, project sponsors, construction contractors and facilities managers has the ultimate goal of allocating the risk to the party best able to manage it.²⁹ The majority of the respondents (over 50%) prefer this option (See Figure 20).

²⁹ A further characteristic of the strategy is that the rating of project finance debt can be improved by support provided in respect of the obligations of counterparties to the project. For example, constructors and operators may provide corporate instruments or guarantees from creditworthy entities, bank letters of credit, adjudication bonds or performance bonds to support their obligations under the project documents.

The second option is to use Risk Mitigation instruments that are provided by the multilateral development banks. The involvement of IFIs may be needed in some circumstances, where the rate of return may be insufficient to compensate private-sector investors for the perceived level and/or character of risk or to address key market failures that significantly impede the supply of funds.³⁰

In addition to their lending activities in infrastructure, IFIs offer Risk Mitigation instruments such as financial guarantees, insurance and credit enhancement schemes. This role acts as a lever to invite other external financing to major infrastructure facilities. From the investor's or sponsor's perspective,

³⁰ Vives A., Paris M.A., Benavides J., Inter-American Development Bank, Financial Structuring of Infrastructure Projects in Public-Private Partnerships: An Application to Water Projects (2006)

the project is commercially viable but below private profit expectations, which can be very high in the emerging-economy context because of high perceived (and not always real) risk.³¹

Even the minimum involvement of the IFIs acts to take up some of the perceived risk. IFIs, as transnational actors, have a pan-regional perspective and can assemble a variety of market players and stakeholders. The mandate of IFIs to mobilize financial resources from the private sector and channel them into investments is vital to promote development and sustainable poverty reduction in developing countries.

The challenge is to convert the demand for investment into viable opportunities that are accessible to investors and creditors, and to unlock the potential of capital markets to finance them. Market preference for Risk Mitigation instruments provided by IFIs is low since fewer than 20% of respondents perceive this option as successful for both the public and private sectors.

Third, sponsors may invite export credit agencies (ECAs) to participate in an infrastructure investment. Traditionally, the focus of ECAs was to boost export activities through tied lending or other support where there has been a liquidity shortage. More recently and after the global financial crisis, the need for risk transfer increased. As a result, ECAs stepped up with risk insurance or credit enhancement schemes, helping investors to take country risk in emerging or politically transient markets.

ECAs have built significant global project finance portfolios, adding to profound change in the project finance market in the past five years. Export credit agencies' support has increased in the last five years from less than \$10 billion in 2009 to more than \$30 billion projected in 2013. Still not a large percentage of market participants consider this strategy viable.

A fourth route is the transfer of risks to professional insurers. Insuring an infrastructure project is standard practice in both developed and developing countries regardless of the sector. Adequate insurance coverage for a wide range of events is important for an infrastructure project with private participation.³²

Political risk insurance instruments cover losses caused by specified events³³ that relate to the political environment. Political risk insurance may be used by sponsors to indemnify loss for their equity participation in an infrastructure project, or it may be used by lenders to the project.

Taking the equity part first, political risk insurance in the private insurance market typically indemnifies 100% of the insured loss up to the policy limit because political risk is, by its nature, catastrophic and the insured's retention of a part of that risk is not going to make a difference to whether the risk occurs or not. Typically, for capital controls and cash flow protection, the indemnity would be 90%. For this reason, private market insurance would indemnify at a higher indemnity than public agencies.

On the debt side, protection is typically on an indemnity basis so that the insured lender retains part of the risk. This is to ensure that underwriters are reassured that the insured lender is fundamentally comfortable with the risk but is using insurance to mitigate either loss arising from political risk causes of loss (refer to those cross-referenced in Figure 19 page 26) or due to loss for either commercial or political risk reasons.

It is in this latter space that there is increased demand for private insurers to work with public agencies as co-insurer or reinsurer to protect lenders for loss for any reason given the high capital costs for lenders on infrastructure investments, often stretching to 15 years or more.

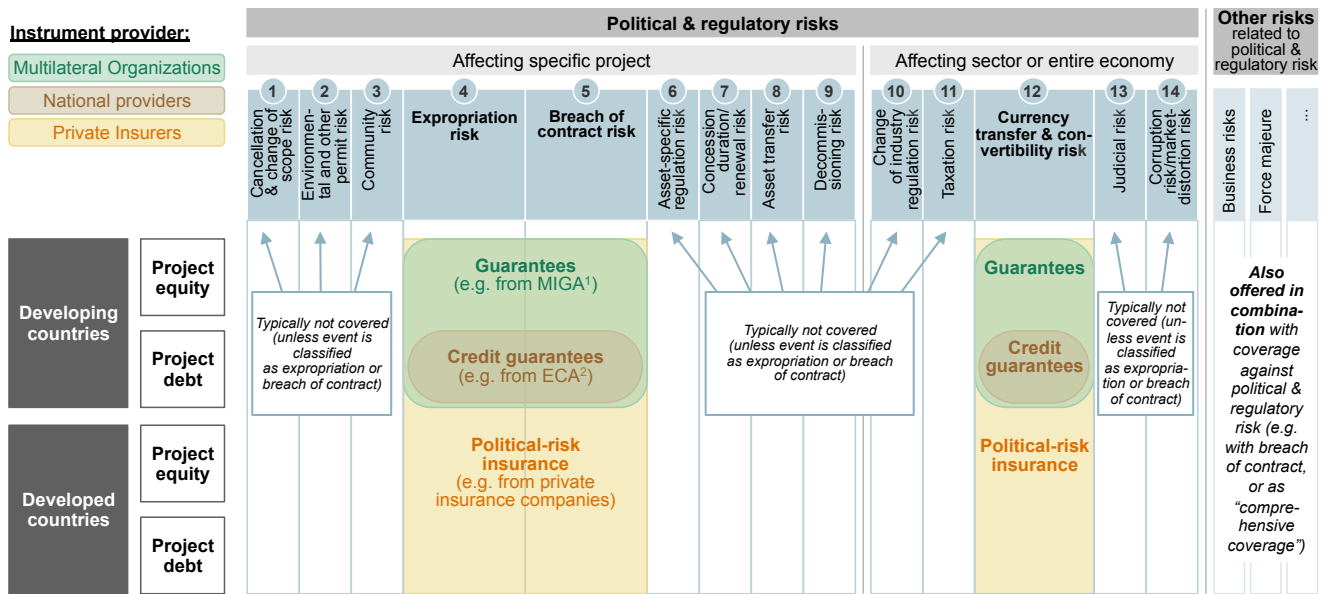
This market as a whole has grown at an average rate of 12% per year for the previous seven years. The bulk of activity in the private-sector market is in countries rated investment grade BBB- or better. The World Bank Group's guarantee agency MIGA has been most active in the higher risk countries rated BB, B, CCC and below CC. Figure 19 illustrates the political risk insurance mitigants.

³¹ Griffith-Jones S., & Kollatz M., Working Paper Series, Infrastructure Finance in the Developing World – Multilateral Lending Instruments for Infrastructure Financing (2015), Global Green Growth Institute, Intergovernmental Group of 24.

³² Because the single-purpose and thinly capitalised nature of the special purpose entity make it hard to self-insure to any meaningful extent. Most special purpose vehicles have at least 60%-70% debt in their capital structure.

³³ Events can be caused by the "obsolescing bargain" of infrastructure investment, which refers to countries that initially welcome foreign companies to provide capital and know-how, who willingly comply by making illiquid long-term investments (compared with portfolio investments in tradable shares or in bonds) in needed projects. The idea is based on the simple principle that most countries strongly prefer local to foreign ownership, regardless of the industry, but especially in socially important, highly visible and politically charged sectors such as power, transportation, telecommunications and energy (in short, infrastructure). Foreign investment is therefore deemed acceptable only so long as the perceived benefits outweigh the economic and political costs. In the early days of a project, there is no issue, but once the project is completed, the "costs" of foreign ownership (such as monopolistic pricing by concessionaires and non-local decision-making on matters broadly impacting the local population) can become increasingly obvious. The politics, moreover, are stacked, as electricity rates, highway tolls and telephone charges are often strikingly "visible" to a wide spectrum of users.

Figure 19: Political Risk Insurance Risk Mitigants

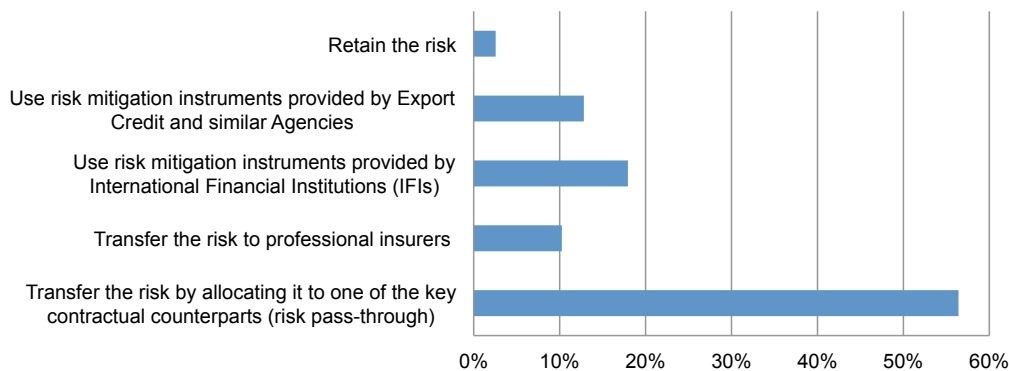


Source: World Economic Forum

The fifth path of risk allocation depends on the risk profile of the sponsor and measures the degree to which sponsors wish to retain risks. This option concentrates the least number of responses.

Figure 20: Risk Mitigation Strategies for a Long-Term Successful Project for the Public and Private Sectors

Risk Mitigation Strategies for a long-term successful project for both the public & private sector - % responses



Focus on Political Risk Mitigation Instruments

Forecasting political and commercial risks, whether catastrophic or incremental, is littered with problems. Macro events, which dominate long-term economic and political developments, make precise prediction difficult, especially over such long periods as are required by infrastructure investments. Political risk analysis, in particular, is by no means an exact science; but looking to the past may source clues to the future. Robust predictability is elusive, and analysis often needs to consider non-consensus scenarios to truly capture the full spectrum of future possibilities.

Although risks typically associated with the political, legal, contractual and social environment of a country are not easy to predict, risk mitigation can be addressed by instruments as a second-best solution. In focusing on the political and

regulatory risks, the art is in balancing the need for investment with identifying risk areas and considering how best to mitigate them, either within a project's structure or through external Risk Mitigation instruments.³⁴

Those instruments can transform possible opportunities into solid infrastructure investments. First, they can mitigate risks of the private investors and financiers that lie outside of the risk allocation analysis and no contractual participant to the transaction has the ability to control. Second, they can enhance the creditworthiness of the borrower to extend debt maturities and lower the cost of debt.

The risk mitigation practise of credit enhancement, for example, involves targeted interventions aimed at reducing, re-assigning or re-apportioning perceived investment risks to

³⁴ Macey-Dare J. M., Kay S., Infrastructure asset management: Assessing regulatory and political risk, Marsh LLC (2015)

make such investments more attractive to investors, including the institutional investor.³⁵ Credit-enhancement designs are dependent on the status of domestic financial markets and the degree of sophistication of local banks and institutional investors. Unlike direct lending, credit-enhancement schemes can improve the credit rating and associated financial costs of the transaction as well as raise its creditworthiness.

Financial guarantees transfer certain defined risks from project financiers (lenders and equity investors) to creditworthy third parties (guarantors and insurers) that have a better capacity to accept such risks. They are unfunded transactions and thereby distinct from some funded transactions such as direct loans or loan syndications that may also serve to transfer risk. Financial guarantees cover losses in the event of a debt service default with no differentiation of the risks that caused the default. Their product characteristics may differ according to the source of provision and can be applied to many different types of infrastructure projects, but their design is generally tailored to meet the requirements of specific projects.

Guarantees are designed to protect against potential non-payment by a borrower irrespective of the cause of default – political, commercial or otherwise. Some guarantees carry the description “partial” because they do not protect the entire amount borrowed, but only the amount necessary to ensure that the right motives are in place. The explanation behind this is that the market failure of moral hazard may be in play. By not covering the full amount, the guarantee has a lower probability to generate negative incentives caused by information asymmetries on the true incentives and ensures that the lender is still motivated to induce the continuing of the project operations.

On the other hand, catastrophic event risks, such as impairment of a project due to civil war, war and terrorism, are hard to prepare for. Not only are they unpredictable, but they can cause damage to shareholder value – to the project equity at risk, as well as to earnings and debt service due. However, these risks can be transferred to insurers.

This is also the case with confiscatory-type risks, including the cancellation of a project licence or concession. In the latter event, where a government has no right to do so, an insurance solution may be fashioned to respond to the event itself if clearly captured, including the event of the government failing to honour an arbitral award post-default. Political risk insurance, however, whether sourced by public agencies or the private market, is not necessarily a solution for every risk and/or the investors or lenders involved in a project or investment.

A variety of partial risk guarantee – sometimes called political risk guarantee (PRG) – is offered by many of the IFIs³⁶ and ECAs. MIGA offers political risk insurance, which is conceptually the same as a PRG, but with the key difference that MIGA's activities are mainly directed at equity investments rather than debt obligations.³⁷

³⁵ Credit enhancement can be instrumented through financial guarantee products but the separate emphasis in this report is to highlight the non-standardized manner in which they are designed and operate.

³⁶ With the exception of the International Finance Corporation, which is not permitted to make sovereign loans or accept sovereign guarantees.

³⁷ Humphrey C., Prizzon A., Guarantees for development - A review of multilateral development bank operations (2014), ODI

MIGA offers PRI coverage to foreign direct investors for any combination of the following political risks: transfer restriction, expropriation, war and civil disturbance, and breach of contract. MIGA can insure direct equity, quasi-equity, non-equity direct and other investments. To insure debt, however, it must have an equity link. MIGA guarantees cover new foreign currency-denominated investments, including “new” investments to existing investments, investments by private for-profit and non-profit organizations, and publicly owned investors and organizations that operate on a commercial basis. MIGA can cover any freely usable currency, which may include local currency investments/loans. Under certain circumstances, MIGA can cover investments by local investors.

The World Bank offers guarantees that cover commercial lenders for a private-sector project against default arising from a government-owned entity failing to perform its obligations. These guarantees can cover changes in law, failure to meet contractual payment obligations, expropriation and nationalization, currency transfer and convertibility, non-payment of a termination amount, failure to issue licences in a timely manner, other risks to the extent they are covered by a contractual obligation of a government entity, and noncompliance with an agreed dispute resolution clause. Guarantees can be provided in both IBRD and IDA countries and require a government counter-guarantee.³⁸

According to internal assessments made by two IFIs, these institutions have not made the most of their potential and certain modes of delivery of guarantee instruments can be improved and the volumes can be increased.^{39,40}

A key problem limiting guarantee usage is that, even though guarantees are not funded (unless they are called, which is very rare), they must still be backed by the same amount of IFI equity capital as a regular loan according to the IFI treasury policy, which makes them expensive and unattractive to clients. The pricing issue is particularly problematic as the financial uplift offered by IFI guarantees is limited due to the nature of borrowers receiving the guarantee and the perceptions and incentives of private lenders. Moreover, neither IFI staff nor clients are generally sufficiently aware of how guarantees function, and frequently prefer to proceed with regular loans.⁴¹

Besides insurance-related solutions to mitigate political risks, having a tradable infrastructure debt asset class would also help long-term investors to better cope with this uncertainty and adjust their asset allocation if needed.

³⁸ The World Bank Group Guarantee Instruments 1990-2007 An Independent Evaluation (2009)

³⁹ Asian Development Bank, Policy Paper – Review of ADB's Credit Enhancement Operations (2006)

⁴⁰ ADB, as of October 2015, has proposed an internal evaluation of its credit enhancement operations with the objective on determining how the triple-A rated institution can increase its use of credit enhancement operations. Independent Evaluation, ADB, Proposed Evaluation Approach Paper (2015)

⁴¹ Humphrey C., Infrastructure Finance in the Developing World Working Paper Series – Challenges and Opportunities for Multilateral Development Banks in 21st Century Infrastructure Finance (2015)

Table 3: Key Characteristics of Partial Credit Guarantees by IFIs

Type of Risk Guaranteed	IBRD	IFC	AfDB	ADB	IADB
<i>Commercial and non-commercial risk</i>	Yes	Yes	Yes	Yes	Yes
Eligible Guaranteed Party					
<i>Private</i>	No	Yes	Yes	Yes	Yes
<i>Country Eligibility</i>	Members eligible for loans		Members eligible for loans	Members eligible for loans	Members eligible for loans
Coverage Amount					
<i>Outstanding Principal</i>	<100%	Up to 100%	Up to 100%	Up to 100%	Up to 100%
<i>Accrued Interest</i>	<100%	Up to 100%	Up to 100%	Up to 100%	Up to 100%
<i>% of Total Project Costs Limit</i>	<100%	25%-50% (2)	N/A	25% (6) (7)	25% (9)
<i>Monetary Limit</i>	N/A	\$100 million	N/A	\$250 million (6) (7)	\$200 million
Pricing and Fees	With counter-guarantee				
<i>Front-end Fee (one-off)</i>	0.25%	N/A	N/A	N/A	N/A
<i>Guarantee Fee (annual)</i>	0.5%-0.7% (1)	N/A	LELS (3) + premium (4)	LELS (3) (8)	LELS
Pricing and Fees	Without counter-guarantee				
<i>Front-end fee (one-off)</i>	N/A	Market rates	1.00%	Market rates	Market rates
<i>Guarantee Fee (annual)</i>	N/A	Market rates	LELS + premium	Market rates	Market rates
<i>Standby/Commitment Fee (Annual)</i>	N/A	Market rates	0-1.00% (5)	Market rates	Market rates

Key:

- 0.05% for guarantees with average maturity up to 12 years; 0.06% for maturities of 12-5 years, and 0.07% for maturities greater than 15 years
- 25% for greenfield projects, up to 50% for expansion projects provided investments do not exceed 25% of the total capitalization of the project company
- LELS = Loan Equivalent Lending Spread, i.e. the lending spread that would have been charged if the bank made a direct loan
- The premium reflects the cost of any risks associated with the guarantee structure
- 0-1.00% for MICs; 0.50%-1.00% for all other countries
- these upper limits only apply in the absence of a counter-guarantee
- Can rise to 50% if the total project cost is less than \$50 million
- Forty basis points on LIBOR from July 2011 to December 2013; 50 basis points since January 2014
- Can rise to up to 40% in small economies

Source: Adopted from Humphrey & Prizzon (2014)

An Insurer's Perspective

When political risk is assessed by specialist insurers, it is often surmised that the primary focus is on the host country risk – the geography in which the project will be located. While country risk is obviously a key consideration, it may be surprising that insurers' foremost focus is on the equity sponsors.

This fundamental starting point is key, as insurers scrutinize the equity investors' past experience, current financial resources and know-how in managing its way through projects that inevitably do not play out according to plan. The stakeholders will first look to the investors for support; the investors, in turn, may look for public support or partnerships. Lenders will consider the amount of debt to equity as well as the nature of any guarantees supporting the project. The strength of that support may be vulnerable to unpredictable future change, which may be politically driven or founded on regulation.

The planning of long-term infrastructure projects can often founder on faulty economic or basic business assumptions made over a project's useful life. These instances attract political risk and government intervention to a project when the error of such early assumptions becomes strikingly evident through difficulties the project may face (especially so if the infrastructure in question provides a public service, such as water treatment, power or telecommunications services).

The geopolitical risk assessment component of any decision to invest in an infrastructure project in an emerging market always contains an element of fortuity. Investors will not commit time and money to a project they believe will be prejudiced, but the problem is that the maintenance of government policies that reflect the current political agenda is inherently unpredictable. Most infrastructure projects are vulnerable to changes where an incoming government's

new agenda and popular mandate for change can spoil the underlying logic of long-term investments.

Political and regulatory risks can be of great importance to infrastructure projects, and effectively managing such risks is one of the key challenges of infrastructure risk managers.

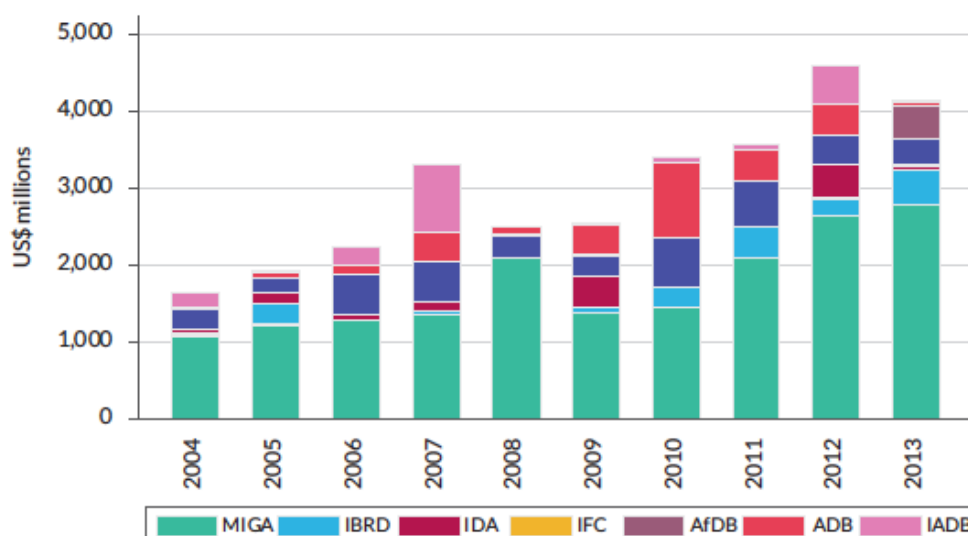
Unfortunately, political and regulatory risks are often ignored until it is too late, in defiance of the historical record on the varied perils posed to the asset class. Project lenders often seek insurance or mitigation against country risks because they need to manage country appetite from a regulatory point of view – that is, they like the risk, but cannot take more in-country. For equity investors, however, a lack of tools to assess the predictability of political risks sometimes means that they are ignored, perhaps on the assumption that they are too complex to assess, or the risky bet that the investor in an illiquid asset class can exit before the risks are manifested.

It should be noted that the IFIs' involvement is also seen to carry an indirect political risk mitigation dimension because, if the loan is not serviced due to a political risk event, they may play a role in solving the political stumbling block or engage political actors and stakeholders that are reluctant to act.

The IFIs approved a combined total of \$37 billion in project (non-trade) guarantees for all sectors (including the financial sector) between 2001 and 2013 – 4.5% of total lending approved by the same institutions over that period. Project guarantees constitute 4.5% of total financing operations undertaken by the World Bank Group, IADB, AfDB, and AsDB in 2013. This includes the World Bank's Multilateral Investment Guarantee Agency (MIGA), which is dedicated entirely to guarantees.⁴²

⁴² Humphrey C., Infrastructure Finance in the Developing World, Working Paper Series – Challenges and Opportunities for Multilateral Development Banks in 21st Century Infrastructure Finance, IGG of 24 Global Green Growth Institute (2015)

Figure 21: Total Volume of Non-Trade Guarantee Commitments (All Sectors), Selected IFIs (\$millions)



Source: Humphrey & Prizzon (2014)

Table 4: Total Volume of Non-Trade Guarantee Commitments (All Sectors), Selected IFIs

	WBG - IBRD/IDA	MIGA	ADB	IADB	AfDB
Period	1994-2013	1990-2013	1998-2012	1997-2013	2002-2012
Non-Trade Related Issuances	43	1,144	46	43	13
Value	\$5.5 billion	\$10.8 billion	\$5.6 billion	Approx. \$2.5-\$3 billion	\$314 million
Geographic Coverage					
<i>Strong Focus</i>	Europe And Central Asia	Early 2000s Latin America & Caribbean since then Europe, Central Asia, sub-Saharan Africa	Thailand, the Philippines and South Asian Countries, such as Pakistan and India (2010-2013)	Mexico and Brazil	N/A
<i>Medium Focus</i>	Sub-Saharan Africa	Asia and Middle East & North Africa	South-East Asian Countries	Panama	N/A
<i>Low Focus</i>	Latin America/ South-East Asia	More-Developed Middle-Income Countries	N/A	Less-Developed Regional Member Countries	N/A
Sectors Focus	Mainly Electric Power Generation & Distribution Projects (Over 50% Of Issuance Quantity)	Mainly Financial Sectors	Mainly Infrastructure Projects (Electric Power Generation)	Financial Sector	N/A

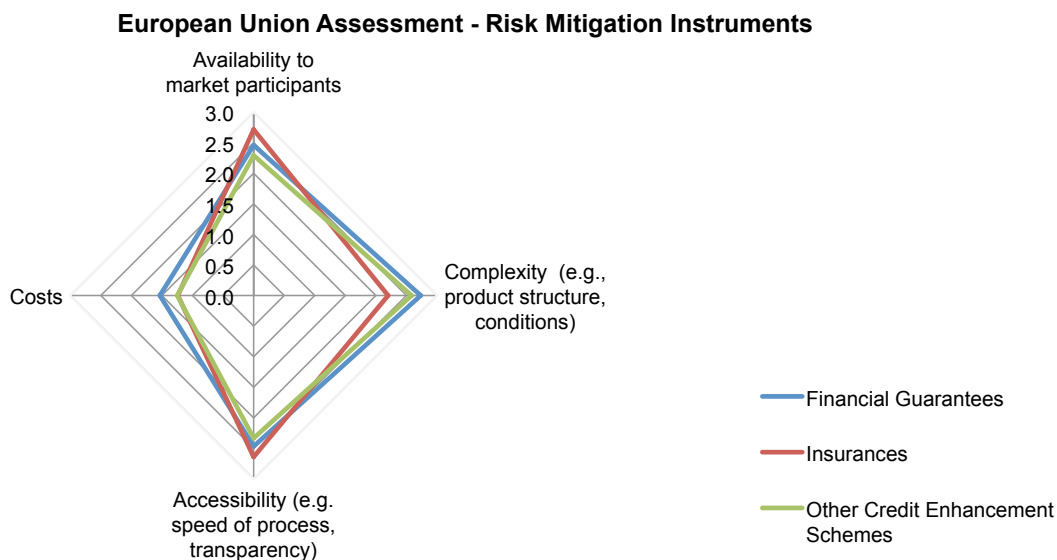
Source: Adjusted from Humphrey & Prizzon (2015)

European Union

The assessment of European Union instruments is used for comparison. Questionnaire respondents replied that Risk Mitigation instruments are available and are used especially for insurances and financial guarantees, but less so for other

credit-enhancement schemes. Complexity is higher than average. Insurances seem to be easier to access compared with the financial guarantees and credit enhancement instruments following. Costs are by no means “excessively high” for all instruments, but financial guarantees are priced more than appropriately.

Figure 22: Risk Mitigation Instruments in Infrastructure – European Union Assessment

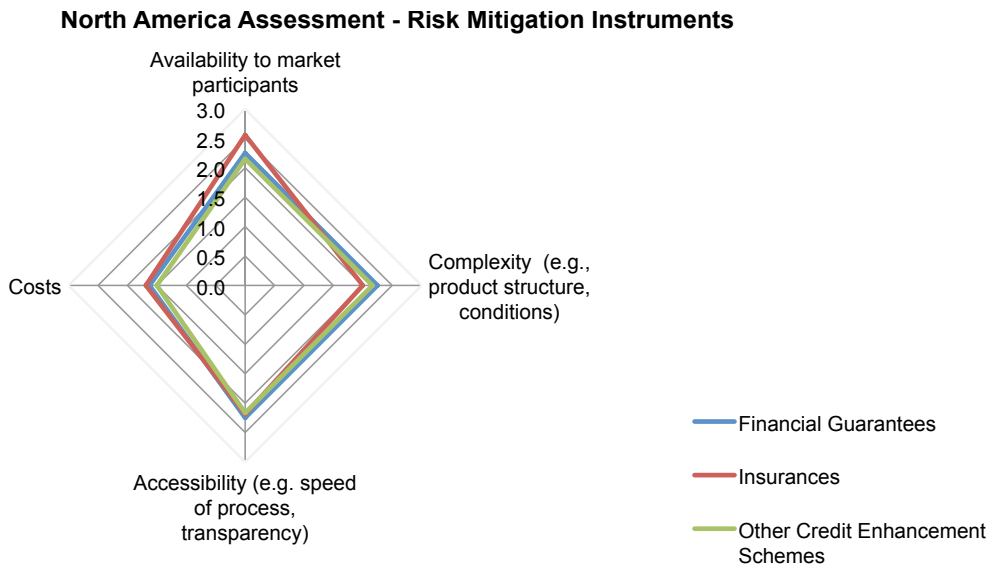


North America

North America is placed for comparison purposes and contains the infrastructure markets of Canada and the United States. Financial guarantees seem to be available but not as high to conclude that they are being used even if available. Credit enhancement mechanisms are available

but not used. Complexity is just above average for all products in terms of product structure and conditions of usage. Instruments are accessible more than average in terms of speed of process and transparency. Costs for insurances seem to be slightly higher than appropriate and the prices for financial guarantees and credit enhancement mechanisms are high.

Figure 23: Risk Mitigation Instruments in Infrastructure – North America Assessment

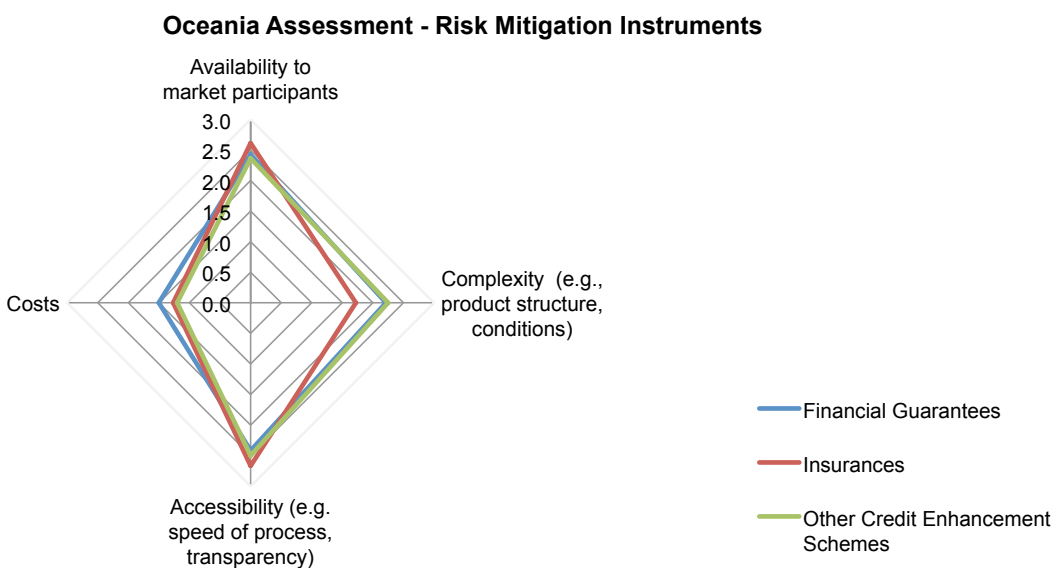


Oceania

The Oceania region, which includes the developed infrastructure market of Australia, is placed for comparison purposes. Responses of executives with experience of this region reveal that it has some of the characteristics of a developed-enough infrastructure investment market.

Insurance products for infrastructure seem to be available and used followed by financial guarantees and other credit enhancement schemes. Complexity is perceived at a medium level. Accessibility seems to score slightly higher, especially for insurances. Costs are appropriate with a small deviation of the financial guarantees that seem to be slightly higher priced than appropriate.

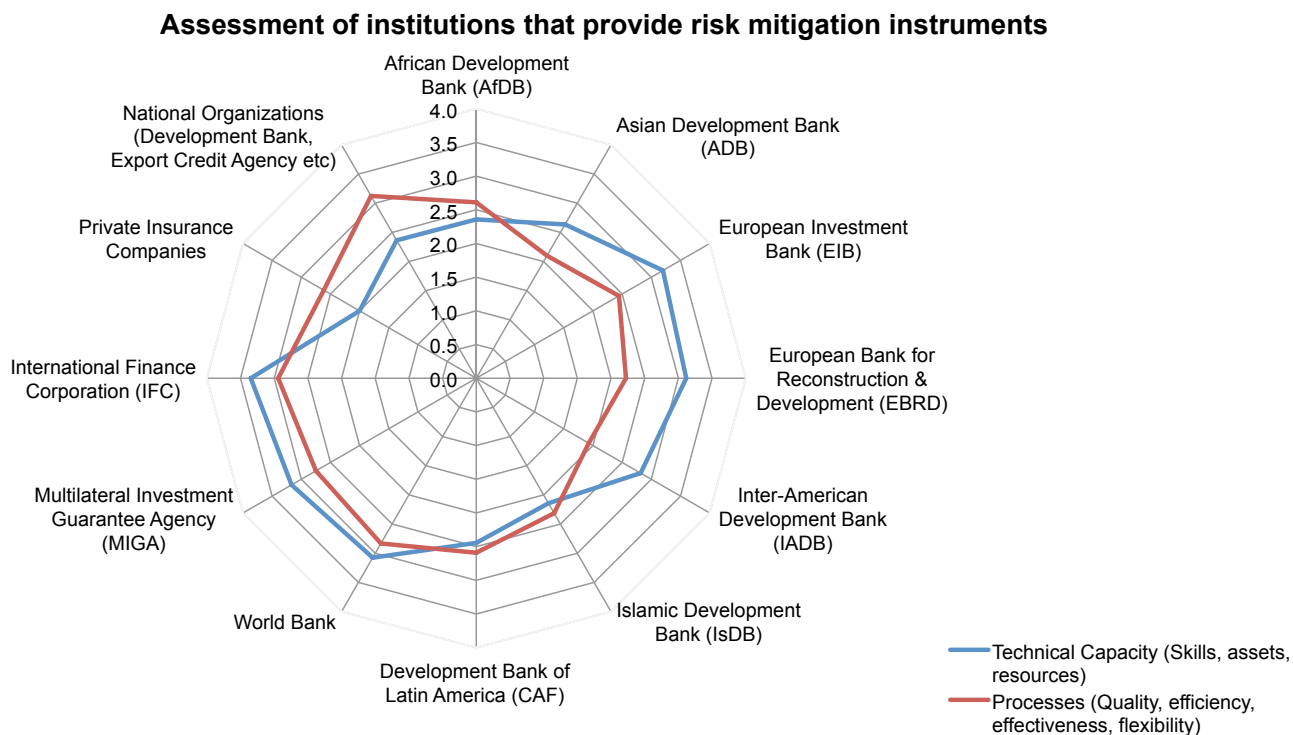
Figure 24: Risk Mitigation Instruments in Infrastructure – Oceania Assessment



Assessment of Providers of Risk Mitigation instruments

The following figure shows the assessment of the institutions that provide Risk Mitigation instruments as survey respondents perceive them.

Figure 25: Assessment of institutions of Risk Mitigation Instruments



Expert Opinion Questionnaire Infrastructure Risk Mitigation Instruments

Contents

1. General Information	33
2. Overall Market	34
3. Risk Identification	34
4. Emerging Markets Instruments	37
5. Transaction Specific	43

1. General Information

01. In which type of infrastructure do you have activities?

(Multiple answers possible)

Economic infrastructure

- Transport – road
- Transport – rail
- Transport – airport
- Transport – seaport
- Transport – other
- Water/waste water
- Power
- Gas
- ICT (Information and communications technology)
- Other economic infrastructure

Social infrastructure

- Healthcare (hospitals)
- Education (schools, libraries)
- Other social infrastructure

Urban infrastructure

- Commercial (retail, supply chain)
- Housing (urban/sub-urban)
- Other urban infrastructure

02. Which geographical scope does your company/organization have?

- | | | | | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Africa | MENA | S. Asia | South-East Asia | Australia | European Union | Europe & Central Asia | N. America | S. America | Global |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

2. Overall Market

03. How do you assess the provision of risk mitigation financial instruments on a global scale?

Extremely underdeveloped

1	2	3	4	5	6
---	---	---	---	---	---

Extremely developed

04. How adequate is the market of risk mitigation instruments on a global scale?

Extremely inadequate

1	2	3	4	5	6
---	---	---	---	---	---

Extremely adequate

05. How adequate is the size of existing risk mitigation instruments for the various needs of your projects?

Extremely inadequate

1	2	3	4	5	6
---	---	---	---	---	---

Extremely adequate

3. Risk Identification

In terms of the following categories of risks in infrastructure transactions in emerging economies, which ones do you feel carry the most deterring factors in your decision to participate in infrastructure investments? Please assume that you have 100 points to allocate according to significance. Scores of zero or 100 are allowed to each category.

Construction Risks	
Category	Points
<i>Cost Overruns</i>	
<i>Delay in Project Completion</i>	
<i>Quality (Performance Risks, Bankruptcy)</i>	
<i>Construction Partners</i>	
<i>Cyber Risks</i>	
<i>Change of Law</i>	
<i>Revenue during Construction</i>	
	Sum: 100
<p>Please insert additional comments if: you would like to add an additional category that is not listed above and/or you have alternative suggestions about the above weighting method:</p>	

Completion/Commissioning Risks	Points
Category	
<i>Completion Certification – Inadequate Performance on Project Completion</i>	
<i>Tail-end</i>	
<i>Final Approvals/Permits</i>	
<i>Change of Control or Transition Risk</i>	
	Sum: 100
<p>Please insert additional comments if: you would like to add an additional category that is not listed above and/or you have alternative suggestions about the above weighting method:</p>	

Operation Phase Risks	
Category	Points
<i>Early Termination</i>	
<i>Local Experience of Service Provider</i>	
<i>Commodity/Input Supply Costs</i>	
<i>Demand/User Risk</i>	
<i>Refinancing Risk</i>	
<i>Public Authority Risk</i>	
	Sum: 100
<p>Please insert additional comments if: you would like to add an additional category that is not listed above and/or you have alternative suggestions about the above weighting method:</p>	

Transfer/Handover	
Category	Points
<i>Costs</i>	
<i>Terms/Conditions</i>	
<i>Contractual Robustness/Enforceability</i>	
<i>Technology</i>	
<i>Goodwill</i>	
<i>Change of Standards</i>	
	Sum: 100
<p>Please insert additional comments if: you would like to add an additional category that is not listed above and/or you have alternative suggestions about the above weighting method:</p>	

Macroeconomic, Political and Regulatory Risks	
Category	
<i>Inflation Risk</i>	
<i>Construction-Phase Interest Rate Risk</i>	
<i>Operating-Phase Interest Rate Risk</i>	
<i>Foreign Exchange Risks</i>	
<i>General Change in Law</i>	
<i>Specific Change in Law</i>	
<i>Discriminatory Change in Law</i>	
<i>Currency Transfer and Convertibility Risk</i>	
<i>Expropriation Risk</i>	
<i>War and Civil Disturbance</i>	
<i>Sub-Sovereign Risk</i>	
	Sum: 100
<p>Please insert additional comments if: you would like to add an additional category that is not listed above and/or you have alternative suggestions about the above weighting method:</p>	

06. What are the top three risks from the above list that, in your experience, cause the most problems in a transaction and which would benefit from a risk mitigation instrument? Ranking is not necessary.

Type of Risk:
 Type of Risk:
 Type of Risk:

07. Which of the following risk mitigation strategies do you find the most effective in terms of a long-term successful project for both the public and private sectors?

Transfer the risk by allocating it to one of the key contractual counterparts (risk pass-through)

Transfer the risk to professional insurers

Use risk-mitigation instruments provided by international financial institutions (IFIs)

Use risk-mitigation instruments provided by export credit and similar agencies

Retain the risk

08. Have you participated in infrastructure investment transactions in emerging economies?

Yes: (if yes please proceed to the next section)

(tick box)

No: (if no, respondents will be directed to Section 6 – Transaction-Specific)

(tick box)

4. Emerging-Market Instruments

10. How do you assess the following risk mitigation instruments for infrastructure projects for the following regions presently? Please fill in only those parts that you feel knowledgeable to answer:

Africa						N/A	
	Availability to market participants	Complexity (e.g., product structure, conditions)	Accessibility (e.g. speed of process, transparency)	Costs			
Financial Guarantees	Not available <input type="radio"/>	Available but not used <input type="radio"/>	Available and used <input type="radio"/>	Low <input type="radio"/> Mid <input type="radio"/> High <input type="radio"/>	Low <input type="radio"/> Mid <input type="radio"/> High <input type="radio"/>	Appropriate <input type="radio"/> High <input type="radio"/> Excessively high <input type="radio"/>	○
Insurances	Not available <input type="radio"/>	Available, but not used <input type="radio"/>	Available and used <input type="radio"/>	Low <input type="radio"/> Mid <input type="radio"/> High <input type="radio"/>	Low <input type="radio"/> Mid <input type="radio"/> High <input type="radio"/>	Appropriate <input type="radio"/> High <input type="radio"/> Excessively high <input type="radio"/>	
Other Credit Enhancement Instruments	Not available <input type="radio"/>	Available, but not used <input type="radio"/>	Available and used <input type="radio"/>	Low <input type="radio"/> Mid <input type="radio"/> High <input type="radio"/>	Low <input type="radio"/> Mid <input type="radio"/> High <input type="radio"/>	Appropriate <input type="radio"/> High <input type="radio"/> Excessively high <input type="radio"/>	

MENA													N/A
	Availability to market participants			Complexity (e.g., product structure, conditions)			Accessibility (e.g. speed of process, transparency)			Costs			○
Financial Guarantees	Not available ○	Available but not used ○	Available and used ○	Low ○	Mid ○	High ○	Low ○	Mid ○	High ○	Appropriate ○	High ○	Excessively high ○	
Insurances	Not available ○	Available, but not used ○	Available and used ○	Low ○	Mid ○	High ○	Low ○	Mid ○	High ○	Appropriate ○	High ○	Excessively high ○	
Other Credit Enhancement Instruments	Not available ○	Available, but not used ○	Available and used ○	Low ○	Mid ○	High ○	Low ○	Mid ○	High ○	Appropriate ○	High ○	Excessively high ○	

South Asia													N/A
	Availability to market participants			Complexity (e.g., product structure, conditions)			Accessibility (e.g. speed of process, transparency)			Costs			○
Financial Guarantees	Not available ○	Available but not used ○	Available and used ○	Low ○	Mid ○	High ○	Low ○	Mid ○	High ○	Appropriate ○	High ○	Excessively high ○	
Insurances	Not available ○	Available, but not used ○	Available and used ○	Low ○	Mid ○	High ○	Low ○	Mid ○	High ○	Appropriate ○	High ○	Excessively high ○	
Other Credit Enhancement Instruments	Not available ○	Available, but not used ○	Available and used ○	Low ○	Mid ○	High ○	Low ○	Mid ○	High ○	Appropriate ○	High ○	Excessively high ○	

South East													N/A
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Asia													
	Availability to market participants			Complexity (e.g., product structure, conditions)			Accessibility (e.g. speed of process, transparency)			Costs			
Financial Guarantees	Not available <input type="radio"/>	Available but not used <input type="radio"/>	Available and used <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Appropriate <input type="radio"/>	High <input type="radio"/>	Excessively high <input type="radio"/>	<input type="radio"/>
Insurances	Not available <input type="radio"/>	Available, but not used <input type="radio"/>	Available and used <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Appropriate <input type="radio"/>	High <input type="radio"/>	Excessively high <input type="radio"/>	
Other Credit Enhancement Instruments	Not available <input type="radio"/>	Available, but not used <input type="radio"/>	Available and used <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Appropriate <input type="radio"/>	High <input type="radio"/>	Excessively high <input type="radio"/>	

Oceania (Australia etc)													N/A
	Availability to market participants			Complexity (e.g., product structure, conditions)			Accessibility (e.g. speed of process, transparency)			Costs			
Financial Guarantees	Not available <input type="radio"/>	Available but not used <input type="radio"/>	Available and used <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Appropriate <input type="radio"/>	High <input type="radio"/>	Excessively high <input type="radio"/>	<input type="radio"/>
Insurances	Not available <input type="radio"/>	Available, but not used <input type="radio"/>	Available and used <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Appropriate <input type="radio"/>	High <input type="radio"/>	Excessively high <input type="radio"/>	
Other Credit Enhancement Instruments	Not available <input type="radio"/>	Available, but not used <input type="radio"/>	Available and used <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Appropriate <input type="radio"/>	High <input type="radio"/>	Excessively high <input type="radio"/>	

Europe & Central Asia													N/A
	Availability to market participants			Complexity (e.g., product structure, conditions)			Accessibility (e.g. speed of process, transparency)			Costs			
Financial Guarantees	Not available <input type="radio"/>	Available but not used <input type="radio"/>	Available and used <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Appropriate <input type="radio"/>	High <input type="radio"/>	Excessively high <input type="radio"/>	<input type="radio"/>
Insurances	Not available <input type="radio"/>	Available, but not used <input type="radio"/>	Available and used <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Appropriate <input type="radio"/>	High <input type="radio"/>	Excessively high <input type="radio"/>	
Other Credit Enhancement Instruments	Not available <input type="radio"/>	Available, but not used <input type="radio"/>	Available and used <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Appropriate <input type="radio"/>	High <input type="radio"/>	Excessively high <input type="radio"/>	

European Union													N/A
-----------------------	--	--	--	--	--	--	--	--	--	--	--	--	------------

	Availability to market participants			Complexity (e.g., product structure, conditions)			Accessibility (e.g. speed of process, transparency)			Costs			
Financial Guarantees	Not available <input type="radio"/>	Available but not used <input type="radio"/>	Available and used <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Appropriate <input type="radio"/>	High <input type="radio"/>	Excessively high <input type="radio"/>	<input type="radio"/>
Insurances	Not available <input type="radio"/>	Available, but not used <input type="radio"/>	Available and used <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Appropriate <input type="radio"/>	High <input type="radio"/>	Excessively high <input type="radio"/>	
Other Credit Enhancement Instruments	Not available <input type="radio"/>	Available, but not used <input type="radio"/>	Available and used <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Appropriate <input type="radio"/>	High <input type="radio"/>	Excessively high <input type="radio"/>	

S. America	Availability to market participants			Complexity (e.g., product structure, conditions)			Accessibility (e.g. speed of process, transparency)			Costs			N/A
Financial Guarantees	Not available <input type="radio"/>	Available but not used <input type="radio"/>	Available and used <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Appropriate <input type="radio"/>	High <input type="radio"/>	Excessively high <input type="radio"/>	<input type="radio"/>
Insurances	Not available <input type="radio"/>	Available, but not used <input type="radio"/>	Available and used <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Appropriate <input type="radio"/>	High <input type="radio"/>	Excessively high <input type="radio"/>	
Other Credit Enhancement Instruments	Not available <input type="radio"/>	Available, but not used <input type="radio"/>	Available and used <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Appropriate <input type="radio"/>	High <input type="radio"/>	Excessively high <input type="radio"/>	

N. America	Availability to market participants			Complexity (e.g., product structure, conditions)			Accessibility (e.g. speed of process, transparency)			Costs			N/A
Financial Guarantees	Not available <input type="radio"/>	Available but not used <input type="radio"/>	Available and used <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Appropriate <input type="radio"/>	High <input type="radio"/>	Excessively high <input type="radio"/>	<input type="radio"/>
Insurances	Not available <input type="radio"/>	Available, but not used <input type="radio"/>	Available and used <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Appropriate <input type="radio"/>	High <input type="radio"/>	Excessively high <input type="radio"/>	
Other Credit Enhancement Instruments	Not available <input type="radio"/>	Available, but not used <input type="radio"/>	Available and used <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Low <input type="radio"/>	Mid <input type="radio"/>	High <input type="radio"/>	Appropriate <input type="radio"/>	High <input type="radio"/>	Excessively high <input type="radio"/>	

10. What is your perception of the following institutions as they take part throughout the provision of risk mitigation financial instruments and credit-enhancement in infrastructure?

	Technical Capacity (Skills, assets, resources)	Processes (Quality, efficiency, effectiveness, flexibility)								
National Financial Institutions	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table>	1	2	3	4	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table>	1	2	3	4
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(Please Name): _____										
International Financial Institutions, (Please Name): _____	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table>	1	2	3	4	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table>	1	2	3	4
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African Development Bank (AfDB)	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table>	1	2	3	4	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table>	1	2	3	4
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Asian Development Bank (ADB)	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table>	1	2	3	4	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table>	1	2	3	4
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European Investment Bank (EIB)	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table>	1	2	3	4	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table>	1	2	3	4
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European Bank for Reconstruction & Development (EBRD)	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table>	1	2	3	4	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table>	1	2	3	4
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Inter-American Development Bank (IADB)	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table>	1	2	3	4	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table>	1	2	3	4
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1	2	3	4							
Development of Latin America (CAF)	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table>	1	2	3	4	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table>	1	2	3	4
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Multilateral Investment Guarantee Agency (MIGA)	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table>	1	2	3	4	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table>	1	2	3	4
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Islamic Development Bank (IsDB)	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table>	1	2	3	4	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table>	1	2	3	4
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International Finance Corporation (IFC)	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table>	1	2	3	4	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table>	1	2	3	4
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Private Insurance Companies (Please specify): _____	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table>	1	2	3	4	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table>	1	2	3	4
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Other institution (Please specify): _____	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table>	1	2	3	4	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table>	1	2	3	4
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5. Transaction-Specific

11. In how many infrastructure investment transactions has your company been involved from 2000 to 2007 that necessitated some form of risk mitigation instrument for a successful financial close?

0 1-4 5-9 10-14 15-19 20-25

12. In how many infrastructure investment transactions has your company been involved from 2007 to the present that necessitated some form of risk mitigation instrument for its successful financial close?

0 1-4 5-9 10-14 15-19 20-25

13. How many infrastructure investment opportunities has your company seen that failed to be successfully tendered or financially closed due to inadequate coverage of risk mitigation instruments in the past 5 years?

0 1-4 5-9 10-14 15-19 20-25

14. Would you like to provide more information about this transaction in the form of a case study?

Yes:

(tick box)	More information (upload file):
------------	---------------------------------

No:

(tick box)

References

- American Society of Civil Engineers, <http://www.infrastructurereportcard.org/grades/>, October 2015
- Aravamathan M., Ruete M., Dominguez C., Credit Enhancement for Green Projects – Promoting credit-enhanced financing from multilateral development banks for green infrastructure financing, International Institute for Sustainable Development, (2015)
- Association for Financial Markets in Europe & International Capital Market Association, Guide to Infrastructure Financing – Bank Loans, debt private placements and public bonds – smoothing the pathway for effective funding (2015)
- Asian Development Bank & Asian Development Bank Institute, Connecting South Asia & South East Asia (2015)
- Asian Development Bank, Review of ADB's Credit Enhancement Operations (2006)
- Baker & McKenzie – Infrastructure Journal, Power Shift – The rise of Export Credit and Development Finance in Major Projects (2013)
- Bhattacharya A., Oppenheim J., Stern N., Driving Sustainable Development through better infrastructure: key elements of a transformation program, Brookings Institute, Working Paper 91 (2015)
- Blanc-Brude, F., Makovsek D., (2013), Construction Risk in Infrastructure Project Finance, EDHEC-Risk Institute
- Credit Guarantee & Investment Facility (CGIF), Progress Report (2014)
- Esty, B., An Overview of Project Finance and Infrastructure Finance – 2014 Update
- European Commission, Ex-post Evaluation of the Loan Guarantee Instrument for the Trans-European Transport Network (TEN-T) Projects (2014)
- Griffith-Jones S., & Kollatz M., Working Paper Series, Infrastructure Finance in the Developing World – Multilateral Lending Instruments for Infrastructure Financing (2015), Global Green Growth Institute, Intergovernmental Group of 24
- Humphrey C., Infrastructure Finance in the Developing World, Working Paper Series - Challenges and Opportunities for Multilateral Development Banks in 21st Century Infrastructure Finance, IGG of 24 Global Green Growth Institute (2015)
- Humphrey C., Prizzon A., Guarantees for development - A review of multilateral development bank operations (2014), ODI
- Kehew, R. Matsukawa, T. & Petersen, J. (2005), Local Financing For Sub-Sovereign Infrastructure In Developing Countries: Case Studies of Innovative Domestic Credit Enhancement Entities and Techniques
- McKinsey Global Institute, Bridging Global Infrastructure Gaps (2016)
- Mbeng Mezui C.A., Hundal B., Structured Finance – Conditions for Infrastructure Project Bonds in African Markets (2013)
- McNichols, Monoline Insurance & Financial Guaranty Reserving (2011)
- Moody's Investors Service, Pilot Phase of the Project Bond Initiative demonstrates early proof of concept (2014)
- World Bank Group, Guarantee Instruments 1990-2007 An Independent Evaluation (2009)
- World Economic Forum, Infrastructure Investment Policy Blueprint, New York (2014)
- OECD, Mapping of Instruments and Incentives for Infrastructure Financing: A Taxonomy, OECD Report to G20 Finance Ministers and Central Bank Governors (2015)
- OECD, G20/OECD High-Level Principles of Long-Term Investment Financing by Institutional Investors, OECD (2013)
- OECD, Mapping channels to mobilize institutional investment in sustainable energy, OECD report to G20 finance Ministers and Central Bank Governors (2015)
- OECD, Miyamoto, K. and Biousse K., Official Support for Private Sector Participation in Developing Country Infrastructure (2014)
- OECD, Private Financing and Government Support to Promote Long-Term investments in Infrastructure, OECD (2014)
- Swiss Re, Infrastructure Investing. It Matters (2014)
- EFR, Facilitating European Infrastructure Investment (2015)
- Vives A., Paris M.A., Benavides J., Inter-American Development Bank, Financial Structuring of Infrastructure Projects in Public-Private Partnerships: An application to Water Projects (2006)
- White & Case, Africa: The origins of a project bond framework in Project bonds: Their growing role in global Infrastructure finance (2015)

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