

# Managing Risks in Cross Border Energy Projects in Emerging Markets

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## *Abstract*

*Clean and renewable energy projects are increasingly important to meet the growing energy needs in the world. These projects are also critical for environmental reasons and as part of the battle against climate change. A large part of clean energy sources in the world are located in emerging market economies. Investors engaged in cross border investments to emerging markets are often faced with higher risks than those investing in high income OECD countries. Higher risks in turn reduce capital flows to emerging markets. At the same time clean energy projects tend to be large, capital intensive and long-term. An additional complication is that energy projects often require partnership between the public and the private sectors i.e. public private partnerships (PPPs). This article discusses PPPs in the energy sector in emerging market economies. The focus is on cross border investments from small states where Iceland is selected as a case for discussion.*

**Keywords:** *Clean and renewable energy, emerging market economies, risks and risk mitigation instruments, public-private partnerships (PPPs)*

**JEL classification:** F30, G20, G32, O22, Q20, Q40

## **Introduction**

Clean and renewable energy projects are increasingly important to meet the growing energy demand in the world as well as for environmental reasons and as part of the battle against climate change. A large part of clean energy sources in the world are located in emerging market economies. Investors in emerging markets are often faced with higher risks than those investing in high income OECD economies. Higher risks in turn reduce capital flows to emerging markets. This is particularly true during times of global economic and financial crisis. At the same time energy projects tend to be large and capital intensive and long-term. Energy projects also often require partnership between the public and the private sectors i.e. public private partnerships (PPPs). Efficient allocation of risks among the different partners in PPPs is a key to success and generally results in more profitable projects and will benefit each of the parties involved.

This article discusses public-private partnerships in the energy sector in emerging market economies. The focus is on cross border investments for investors from small states where Iceland is selected as a case.<sup>2</sup>

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<sup>2</sup> For discussion about how small states can contribute to policy reforms in emerging market economies see, for example, Hilmarsson, 2011.

The characteristics of emerging market economies are discussed and the risk faced by investors in those markets. Some risk mitigation instruments offered by international financial institutions (IFIs) and national institutions, i.e. export credit agencies (ECAs) are also discussed.<sup>3</sup> The main research question is: How can companies from small countries like Iceland use the risk mitigation instruments of national and international institutions when investing in cross border clean energy projects in emerging market economies?

The article argues that a small country like Iceland can make a contribution to the global transformation to clean energy and to the fight against climate change if IFIs offer flexible and affordable funding and risk mitigation instruments to private investors. Such risk mitigation could lower the risk profile of energy projects sufficiently to attract private sector funding. Guarantees provided by an Icelandic ECA could also be important when Icelandic companies provide services and/or equipment for cross border energy investments in emerging markets.

The article does not attempt to judge how efficient PPPs are operationally in comparison with projects that are solely financed, built and operated by governments. Its focus is on the institutional aspects of PPPs, long-term infrastructure contracts, and risk mitigation in markets where the private sector normally hesitates to engage.

### **1. Iceland's transition to clean energy**

A few decades ago most of Iceland's energy needs came from fossil fuel, coal and oil. Most electricity and space heating is now based on clean energy. Al Gore describes this transformation in his book "Our Choice" as follows: "Iceland responded to the oil shocks of the 1970s by converting to domestic resources, virtually every building in the entire country is heated by the hot water resources close to the surface of the tectonically active land" (Gore, 2009). This transformation also meant that local capacity in geothermal energy utilization was developed. Several Icelandic firms and institutions now possess considerable experience in exploring geothermal sites and in constructing and operating geothermal power plants. There are also service providers and research and education institutions that can support geothermal energy projects in Iceland and potentially also participate in cross border investments in energy projects, see table 1.

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<sup>3</sup> The international institutions focused on are international financial institutions like the World Bank Group and the regional development banks, and the national institutions are export credit agencies (ECAs).

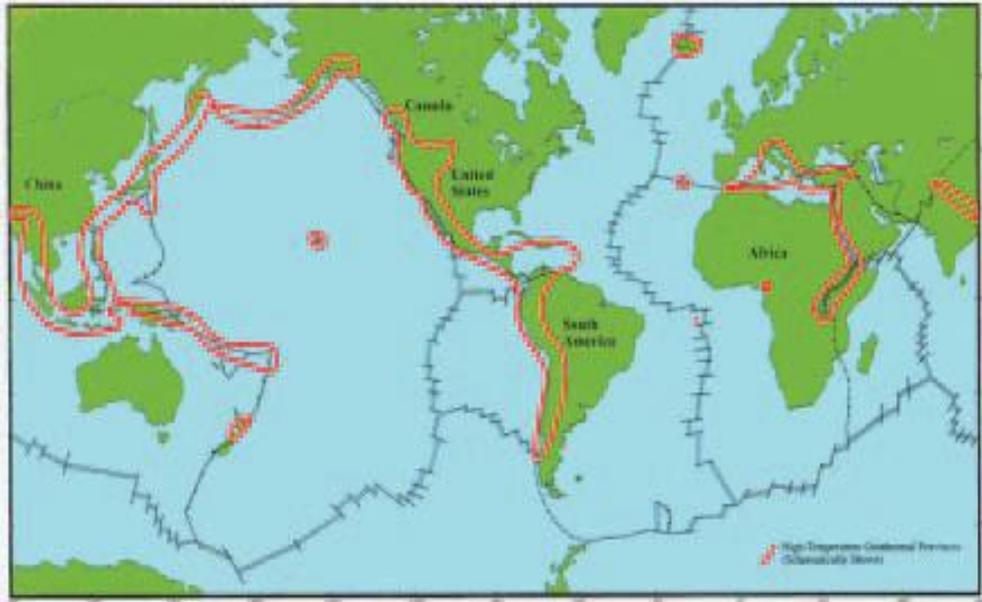
**Table 1. The table lists a few Icelandic companies, service providers, research and education institutions that have capacity in utilizing geothermal energy**

GeoScience	ISOR, Mannvit, Vatnaskil
Technical Consulting	Mannvit, Verkís, Efla, Reykjavík Geothermal, Landsvirkjun Power
Business Consulting	KPMG, Capacent Corporate Finance, Íslandsbanki
Drilling	Jarðboranir, Ræktunarsamband Flóa og Skeiða
Construction	ISTAK, ÍAV, Loftorka
Energy Audit & Law Firms	KPMG, Pricewaterhouse Coopers, Deloitte, Lex (law firm), Logos (law firm)
Financing	Arion banki, Íslandsbanki, Landsbankinn
Geothermal Research	ISOR, Mannvit, Vatnaskil, Utilities, Universities
Research Funding	Orkusjóður, Geothermal Research Group, Landsvirkjun's Energy Fund, Orkuveita Reykjavíkur Energy Fund, Rannís
Training and Education	University of Iceland, Reykjavík University, University of Akureyri, Reykjavík Energy Graduate School of Sustainable Systems, Keilir – Atlantic Center of Excellence, United Nations University – Geothermal Training Programme

This know-how has been developed during a few decades and one can say that there is now a proven capacity to construct and operate geothermal power plants in Iceland.

## **2. Clean energy and the potential in emerging market economies**

Utilizing clean energy is not only a concern of Iceland. This is a global issue affecting all countries in the world, rich and poor. Many developing countries and emerging market economies in Africa, Asia and Latin America have large geothermal resources but are only in the early stages of development of using those resources, see figure 1. The future growth in demand for electricity is also likely to be strongest in those emerging regions (see, for example, Tooman, 2004). Transformation to clean energy could be of great benefit to those countries and have global implications in the battle against climate change and thus also benefit developed high income countries. However, it is not sufficient to have the natural resources and potential growth in future demand. Funding is also needed and energy investments tend to be large, capital intensive and long-term. Developing and emerging countries often have risky business and investment environments that limit private sector cross-border investment to those countries. Proper risk mitigation can be a major challenge.



**Figure 1. Geothermal Fracture Zones**  
(Source: Enx, 2008)

### 3. Private sector cross border investments in emerging market economies

Private sector funding and participation in clean energy projects in emerging markets can be a major challenge for many reasons. One reason is that the host government is often the only buyer of the electricity or hot water produced i.e. it is the so called offtake purchaser<sup>4</sup>. Many emerging countries with large clean energy potential have limited creditworthiness. They have low per capita income and are often going through an economic and a political transition. In such cases the sponsors<sup>5</sup> of a project could hesitate to fund the project because of the uncertainty with the income stream from the investment made. Lenders, including commercial investment banks, would also often hesitate to provide loans to such projects because of the uncertainty that the project company, whose income stream is at risk, can service its loans. Being an investor from a small country like Iceland only adds to those risks. Small countries can only be expected to have a limited leverage in the event of dispute with a host government in an emerging country that can be a much larger country. A proper institutional framework with efficient and effective risk allocation and risk mitigation can be critical for success.

<sup>4</sup> Offtake purchaser is the purchaser of the product produced by a project. In the case of a power project the product produced is the electricity generated.

<sup>5</sup> A sponsor of a project is a party wishing to develop or undertake a project. A sponsor would normally provide financial support for the project e.g. early equity capital.

One possible institutional arrangement to address this situation is to form a Public-Private Partnership (PPP) and use the Build-Operate-Transfer (BOT) scheme. The PPP becomes a venue for the public and private sector to cooperate on a project that would traditionally have been in the public domain. The BOT arrangement means that the project is transferred back to the government when the concession<sup>6</sup> agreement ends. In this situation efficient and effective risk allocation is key to success and the international community can play a constructive role, e.g. through international financial institutions that can offer a variety of risk mitigation instruments. Among the remedies that small country investors can apply to manage risks is thus partnership with IFIs and/or participation in a consortium with stronger partners. National institutions such as ECAs can also play a constructive role in reducing the risks in cross border trade taken by private investors.

#### **4. PPPs and the allocation of risks**

PPPs can be a feasible venue to fund infrastructure development and to increase the efficiency of public sector service delivery. Infrastructure projects in the energy sector are often large, capital intensive and long-term. Repayment periods are also often long. It can take a private investor 10 to 25 years to recover the investment and the project returns.

The private sector is recognized as a significant financing source for meeting developing country investment requirements, but financial markets remain largely untapped for this purpose and have yet to live up to their potential (Asian Development Bank, 2006). PPPs are one venue worth considering for the private sector to engage in infrastructure projects. Private capital, donor support (including IFIs) and public funds can be combined in a PPP project. A well designed policy and institutional framework for PPPs offers the opportunity to leverage and combine all three sources of financing and expertise, without crowding out the private investment. By forming a PPP the public and the private sectors can share the risks and the rewards of infrastructure projects.

There are many different definitions for PPPs. One definition is “any public sector service provided partially or wholly by the private sector” (Delmon, 2009, 601). Another definition is a “co-operative institutional arrangements between public and private sector actors” (Hodge & Greve, 2009). Yet another definition of a PPP is “the transfer to the private sector of investment projects that traditionally have been executed or financed by the public sector” (World Bank, 2008).

To engage in cooperation, the public and the private sector can employ several different schemes<sup>7</sup> including the so called BOT, i.e. Build-Operate-Transfer

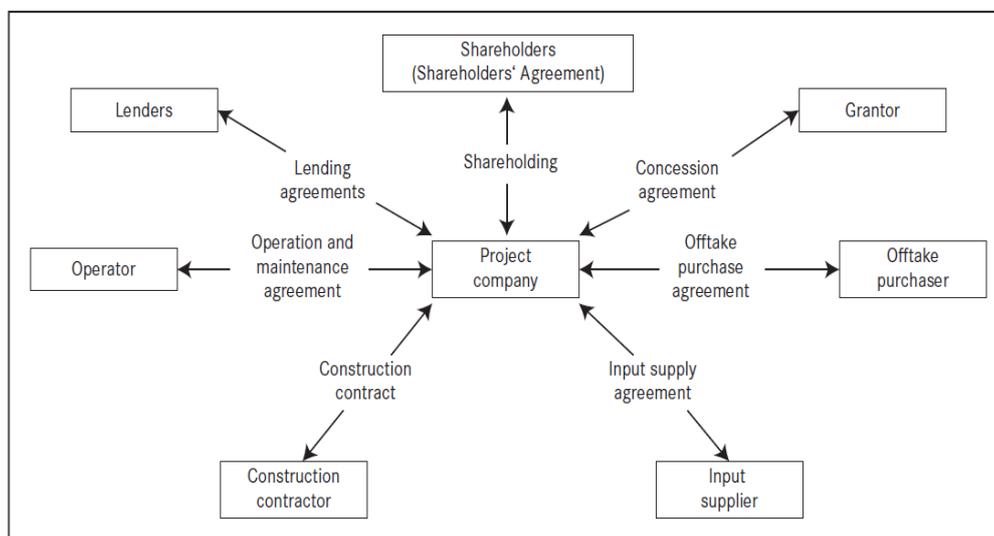
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<sup>6</sup> The concession is the right granted by the host government for a private company to undertake a public sector project and operate it over an agreed period of time.

<sup>7</sup> Among PPP schemes and modalities in addition to Build-Operate-Transfer (BOT) are for example: Build-Own-Operate-Transfer (BOOT), Build-Rent-Own-Transfer (BROT), Build-Lease-Operate-Transfer (BLOT), Build-Transfer-Operate (BTO).

(IMF, 2004). In BOT projects the private sector is responsible for financing, constructing and operating the project. Under this arrangement the host country grants a concession, i.e. the right to a private firm to undertake a public sector project and operate it over an agreed period of time. When the concession expires the ownership of the project is transferred back to the party granting the concession. For a comprehensive discussion on BOTs see Jeffrey Delmon's outstanding book on Private Sector Investment in Infrastructure (Delmon, 2009).

The partners typically involved in a BOT project are: the project company that undertakes the project, the host government (that can also be the offtake/power purchaser), the shareholders, the lenders, the grantor, the construction contractor, the operator, the offtake purchaser/power purchaser and the input supplier. Figure 2 below shows a typical PPP BOT contractual structure.



**Figure 2. A typical PPP BOT contractual structure**  
(Source: Delmon, 2009)

The project company uses the income stream from the project to service its debt from the project and to pay returns to its investors (i.e. the equity contributors to the project company). The lenders to a BOT project could, for example, be commercial investment banks, international financial institutions (IFIs) and bilateral agencies (BLAs). The IFIs and the ECAs could also serve as guarantors e.g. for payment to the lenders, including commercial investment banks. The lenders would be keen to manage their risks (i.e. only take measurable and measured risks) and would receive a fixed margin on their loan whereas the shareholders (i.e. the equity holders in the project company) maximize the profits on their equity investment. In addition to obtaining funding for the project, the project company procures the design and coordinates the construction and operation of the project in accordance with the requirements of the concession

agreement. Project company shareholders often include firms with construction and operation experience, and with off take purchase capabilities (Delmon, 2009).

The off take purchase agreement secures the project payment stream. The off take purchaser will be looking for a guaranteed long-term output from the project. The credit risk associated with the offtake purchaser will be of particular concern to the project company and the lenders. This is where guarantees from the host governments or IFIs, including the World Bank and regional development bank, such as the Asian Development bank, become important.

Critical to the design of PPPs is the way risks are allocated between the partners in the PPP. A general principle is that risk should fall on the party that is more able to do something about it. Risks in PPP tend to be allocated on the basis of commercial and negotiating strength. The stronger party will allocate risk that it does not want to bear to the weaker party. Efficient allocation of risk will generally result in a more successful and profitable project and will benefit each of the parties involved (Delmon, 2009).

In order to minimize the market risk from the project company and the project lenders an offtake purchase agreement, or in the case of a power project, a power purchase agreement may be made. This is to create a secure payment stream which will be an important basis for financing the project. The offtake purchaser may also be the grantor, or a government entity such as a public utility, in which case the offtake purchase agreement and the concession agreement may be one and the same document (Delmon, 2009).

The lenders will want the project risks to be allocated to project participants, i.e. the construction contractor and the operator and not the project company who is their debtor.

The project company will enter into a contract with the construction contractor in order to divest its obligations to the grantor to design, build, test and commission the project. Completion risk for the project should be allocated to the construction contractor. In the case of a turnkey project, completion and performance risk should be on the construction contractor.

If the main risks are associated with poor management of the service, shifting the risk to the operator could provide the right incentives to make sure that the project delivers. If the risks are related to changes in policies, then the government should bear the risk. This is because the project company will not generally be able to manage political risk. The project company will ask the government to bear those risks not necessarily to demand a compensation at a future date, but to pressure the government to avoid such risks and to minimize the probability that such risks will occur.

## **5. IFI's and risk mitigation in emerging markets**

Concerns about investment environments and perceptions of political risk often inhibit foreign investment, with the majority of flows going to a few countries leaving the world's poorest economies mostly ignored. This is especially

true during times of economic and financial crisis. The limited number of investors engaging in risky environments might also be tempted to invest only when quick paybacks periods are possible. International financial institutions can have an important role to play here and responsibility to offer effective venues and viable risk mitigation instruments. This is especially true for long-term investments in energy infrastructure.

For large infrastructure projects investors must pay considerably more attention to political risk management issues. Risk reduction can reduce the cost of funding projects and facilitate longer loan periods. Political risk insurance, especially from multilateral agencies can act as an effective deterrent against host government interference with insured private investments.

Another typical problem in developing countries and emerging market economies is the limited scope for cost recovery. Customers often have a limited ability to pay for the services rendered and the government is in a weak position to force them to do so. This may result in a diminished interest from private investors.

One solution is for the host government to offer a guarantee to the private investor. But what should the government guarantee? Should it guarantee a minimum rate of return for the investment? Here the government needs to be careful as this guarantee represents a contingent liability and a poorly designed PPP can become a source of liability for the government. If the main risks are associated with poor management of infrastructure service, shifting the risk to the investor could provide better incentives to make sure that the project delivers. But this would not be accomplished if the government guarantees the revenue of the private sector.

Even if it makes sense for the government to provide a guarantee this guarantee may not be meaningful for the private sector if the government is not creditworthy. Here again international financial institutions can play an important role by providing insurance or a guarantee to the private investor (and in some cases using a host government guarantee as a counter guarantee).

IFIs offer a number of financial and risk management instruments that can be useful for Public-Private Partnerships.<sup>8</sup> Those include loans, equity investments and guarantees or insurance against political risk (non-commercial risk).

Among the IFIs active in this area are: (i) the World Bank Group <http://www.worldbank.org/>, (ii) the European Bank for Reconstruction and Development <http://www.ebrd.org/>, (iii) the Asian Development Bank <http://www.adb.org/>, (iv) Inter-American Development Bank <http://www.iadb.org/>, (v) the African Development Bank <http://www.afdb.org/>, (vi) the European

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<sup>8</sup> In addition to those services, IFIs often engage in a policy dialogue with the governments of emerging market economies to improve economic policy and management. This includes reforms to improve the business and investment climate for the private sector, to promote business activities, and to encourage foreign direct investment. IFIs also provide loans and credits to various government-led projects in developing countries and emerging markets that are subject to international competitive bidding. This allows private sector firms to participate in the bidding process and potentially to benefit from those public sector projects supported by the IFIs.

Investment Bank <http://www.eib.org/>, and the Nordic Investment Bank, <http://www.nib.int/home/>. Iceland is not a member of the Asian Development Bank, the Inter-American Development Bank and the African Development Bank. Icelandic companies do therefore not have access to the services of all the IFIs and have fewer options to form partnerships when investing in emerging markets than for example companies from the other Nordic countries who are members of all the above institutions.

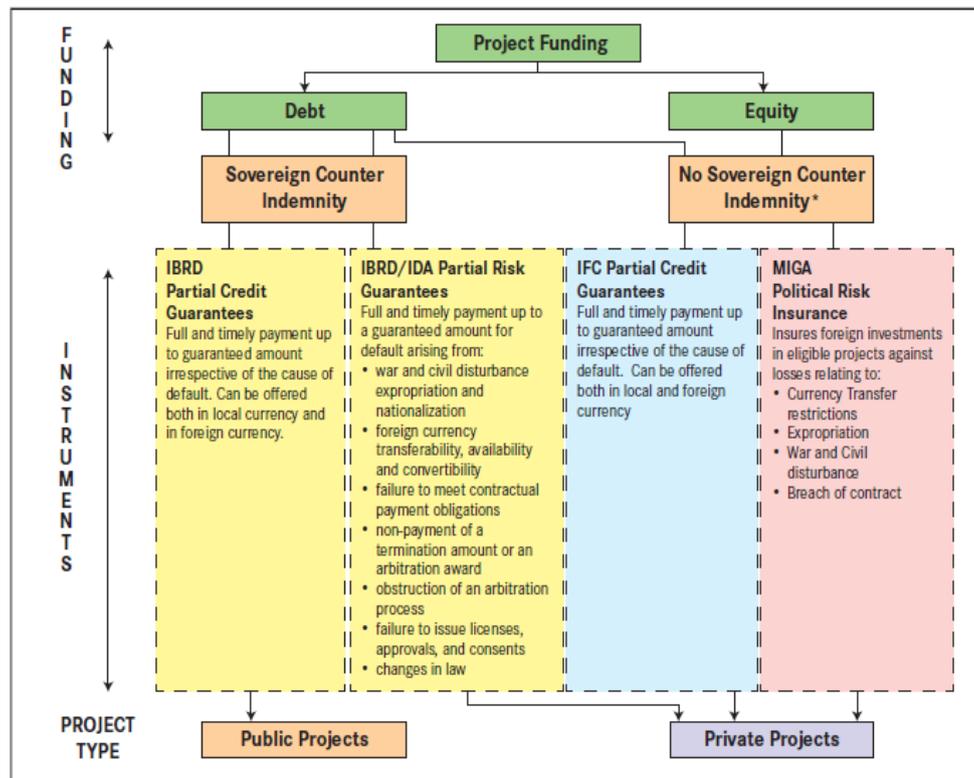
Key risk issues can be categorized as: political, breach of contract by a government entity, market risk and default risk.<sup>9</sup> Risk mitigation products can attract new financing resources, reduce costs of capital, and extend maturities by providing coverage for risks that the market is unable or unwilling to bare (Delmon, 2009). Those products can attract more private capital to invest in infrastructure. Examples of guarantee products provided by the World Bank Group are IBRD/IDA partial risk guarantees (PRGs) and IBRD partial credit guarantees (PCGs), IFC partial credit guarantees (PRGs) and MIGA political risk insurance (PRI) (Delmon, 2009). Those risk mitigation instruments allow investors to be compensated in the case of certain adverse events and thus reduce the risk and thus the project costs. For an overview of risk mitigation products offered by the World Bank Group, see figure 3.

In the case of energy infrastructure projects World Bank guarantee products such as partial risk guarantees (PRGs) and partial risk insurance (PRI) can be key to success. According to the World Bank PRGs “cover commercial lenders for a private sector project against default arising from a government-owned entity failing to perform its obligations. PRGs can cover changes in law, failure to meet contractual obligations, expropriation and nationalization, currency transfer and convertibility, nonpayment of a termination amount, failure to issue licenses in a timely manner, other risk to the extent that they are covered by contractual obligations of a government entity, and noncompliance with an agreed dispute resolution clause. PRGs can be provided in both IBRD and IDA countries and require a government counter-guarantee” (World Bank, 2009, p. 10).

Regarding the IBRD/IDA PRGs the investor receives comfort, improved credit terms, and is not liable for loan repayment. Among the strengths of this instrument is increased government commitment to success of projects, accompanied with the benefits of an ongoing by policy dialogue between the World Bank and the host government. Among the weaknesses are sovereign guarantees required in all cases, cumbersome processing and high transaction costs. The demand for this instrument is mainly limited to PPPs and sectors with heavy government engagement (World Bank, 2009, p. 74).

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<sup>9</sup> For an excellent overview of World Bank risk mitigation products, see Jeffrey Delmon Chapter 7 (Delmon, 2009).



**Figure 3. Risk mitigation instruments offered by the World Bank Group (Source: Delmon, 2009)**

Among the five institutions of the World Bank Group is also the Multilateral Investment Guarantee Agency (MIGA). MIGA provides guarantees against political risks, i.e. non-commercial risks for investments in emerging markets. It also provides technical assistance and dispute mediation service. Developing countries would hesitate to take measures that would negatively affect projects that MIGA is involved with because of the concern that it could adversely affect their relationship with IDA and/or IBRD and possible credit or a loan (see for example West, 1999).

According to the World Bank, 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, nonequity 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 nonprofit organizations, and public owned investors and organizations that operate on 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” (World Bank, 2009, p. 10).

Regarding the MIGA PRI the investor receives comfort, improved credit terms, mediation services and compensation in the event of loss. Among the strengths are flexible coverage of all PRI risks; main product for equity investments; dispute resolution; minimal time and processing. Among weaknesses are no comprehensive coverage (commercial risk and political risk cover) and lengthy process to change Convention limitations (World Bank, 2009, p. 74).

Given the global needs for energy investments these instruments have not been used frequently and the amounts are still modest. IBRD/IDA PRG has been deployed for 13 projects with the commitment amount US\$ 1.2 billion and 92 percent for infrastructure projects. MIGA PRI has been deployed 566 projects with a commitment amount US\$ 16.6 billion and 24 percent for infrastructure projects (World Bank, 2009, p 68).

The Asian Development Bank (AsDB) and the other regional development banks also offer risk mitigation instruments that are important for private investors in emerging markets although they are not discussed in detail here. AsDB risk mitigation instruments can, for example, cover breach of contract. For a power project such breach may result from failure by the government-owned entity to make payments in accordance with the power purchase agreement between the independent power producer and the user or distributor (Asian Development Bank, 2000, p. 2). Such insurance can be critical for the success of an energy infrastructure project. According to the AsDB the majority of the PRGs that AsDB has provided have been private sector-oriented, including PRGs for public-private partnerships (PPPs) (Asian Development Bank, 2006, p. 5).

## **6. IFIs and the effectiveness of their risk mitigation instruments**

The effectiveness of the risk mitigation instruments offered by IFIs and the performance of those institutions must be under constant review and scrutiny. In 2009 the World Bank Group (WBG) issued a report titled: *The World Bank Group Guarantee Instruments 1990-2007. An Independent Evaluation* (World Bank, 2009). As part of the evaluation the Independent Evaluation Group (IEG) at the Bank conducted a survey in 2008 to solicit views among its staff about the use and effectiveness of guarantee instruments (World Bank, 2009). A survey questionnaire was sent to 363 staff and 206 responded.

Among the things that the survey revealed is that WBG staff are familiar with their own products but not with the guarantee products of other WBG institutions.<sup>10</sup> For example only one-fifth of IFC<sup>11</sup> staff were familiar with

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<sup>10</sup> The World Bank Group represents five institutions. Those are: (i) the International Bank for Reconstruction and Development, IBRD, established in 1944, (ii) the International Development Association, IDA, established in 1960, (iii) the International Finance Corporation, IFC, established in 1956, (iv) the Multilateral Investment Guarantee Agency, MIGA, established in 1988, (v)

IBRD/IDA<sup>12</sup> products. In fact, IFC staff was not familiar with the products of IBRD, IDA or MIGA.

According to the survey more than 85 percent of WBG staff felt that the most critical benefits of the WBGs guarantee instruments were enhanced image of financial soundness and improved rates and tenors. Among other benefits include WBG's role as an honest broker and securing other investors (World Bank, 2009).

It is also notable how few guarantees and insurances have been issued from an institution as large as the World Bank Group. A high proportion of staff felt that changes are needed to improve the WBG's guarantee instruments (World Bank, 2009). Interestingly enough most WBG staff felt that reducing time and cost of processing guarantees and improving marketing were important for improving WBG guarantee instruments. Furthermore staff reported that clients proceeding with the project without a guarantee and long processing time were the main reason for dropped guarantee projects. 80 percent of IFC staff reported the droppages occurred because the cost of the guarantee was too high for the client (World Bank, 2009).

IBRD, IDA and MIGA staff reported that project sponsors/investors most frequently originated the request of guarantees. IFC staff reported that, host governments and staff of another WBG institution are least likely to originate its guarantees.

On May 7, 2008 the Committee on Development Effectiveness (CODE) at the World Bank considered the IEG independent evaluation. Several speakers called for greater collaboration among WBG institutions based on their comparative advantages, and strengthening the coherence of the products offered, including their pricing. They also called for more coordinated WBG efforts for marketing, increased staff knowledge of the guarantee products, and appropriate staff incentives (World Bank, 2009, p. xxviii). Comments were also made about the need of the WBG to think about a "single Window" for guarantee products (World Bank, 2009, p. xxvi).

The ongoing debate about the role of international financial institutions increasingly recognizes the importance of making greater use of the risk mitigation potential inherent in their unique multilateral structure (Asian Development Bank, 2006). The World Economic Forum (WEF)<sup>13</sup> has for example argued strongly for IFIs to better use guarantee and risk mitigation instruments and capabilities to attract increased commercial investment in development projects. In 2006 WEF issued a report titled *Building on the Monterrey Consensus: The Untapped*

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International Centre for Settlement of Investment Disputes, ICSID, established in 1966. Four of those institutions issue insurances or guarantees, i.e.: IBRD, IDA, IFC and MIGA.

<sup>11</sup> The International Finance Corporation, IFC, is the private sector arm of the World Bank Group, WBG.

<sup>12</sup> The IBRD and the IDA are the public sector arms of the WBG.

<sup>13</sup> The World Economic Forum's Financing for Development Initiative comprises more than 200 global experts from financial institutions, corporations, governments, international organizations, universities, and nongovernmental organizations, who offer their views on improving the effectiveness of efforts to stimulate private sector investment in developing countries.

Potential of Development Finance Institutions to Catalyze Private Investment. In this report the Forum specifically asserted that: "...the weight of DFI (development finance institutions) activities should shift over time from direct lending to facilitating the mobilization of resources from the world's large private savings pools – international and domestic – for development – oriented investment through:

- wider use of risk mitigation instruments to alleviate part of the risk faced by investors; and
- stronger direct support for capacity building to strengthen the enabling environment for investment." (World Economic Forum, 2006, p. 9).

Furthermore the WEF argued that DFIs should "...adapt their services, culture and capital allocation to the imperative of "crowding in" domestic and foreign private investment by placing much more emphasis on such risk mitigation instruments as partial guarantees as transitional strategy and on capacity building" (World Economic Forum, 2006, p. 10) and that "an international consensus has emerged, embodied by the Monterrey Consensus, that a deeper partnership between the public and private sector is needed if we are to achieve common development objectives" (World Economic Forum, 2006, p. 10). In its final recommendations the WEF says: "The overwhelming majority of expert participants in the project recommended a major expansion of risk mitigation activity by DFIs..." (World Economic Forum, 2006, p. 15).

The WEF is thus sending a very clear signal to the international financial institutions and the IFIs are listening. In its report *Review of ADB's Credit Enhancement Operations* the Asian Development Bank takes a clear note of WEF's views and refers to their 2006 report several times (Asian Development Bank, 2006).

While there is a clear need for risk mitigation in emerging markets for sectors like the energy sector, it looks like the IFIs, including the WBG, have some way to go to make those instruments widely used. IFIs need to do a better job in coordinating risk mitigation activities within the institutions and spend more efforts to market those products and to make them more efficient and more cost effective for the private sector and shorten their processing time.

## **7. ECAs and their role in supporting cross border trade to emerging markets**

In many developed countries there are export credit agencies (ECAs) that have been established to facilitate private sector export of their national goods and services as to emerging market economies. These agencies can provide guarantees in connection with projects where there are deliveries of equipment and/or services to the project from the home country. This applies generally speaking to all ECAs supporting the export industry of their home country. For detailed discussion about ECAs and their instruments see, for example, Dinh and Hilmarsson (Dinh and Hilmarsson, 2012).

In Iceland such an agency exists and is called Tryggingardeild útlutnings (TRÚ). ECAs can provide guarantees both against commercial and non-commercial risks in emerging markets and these instruments can be quite suitable to support overseas energy investments in developing countries and emerging markets, including for energy investments. TRÚ works in partnership with the Swedish export credit agency EKN which would assist the Icelandic agency to assess risks in host countries. According to Icelandic law TRÚ can provide guarantees and insurances up to 130 million SDR. This is a sizable amount of money in a small country like Iceland. To make the story short TRÚ services have never been used by Icelandic exporters.

Emerging market countries are increasingly important to Swedish exporters and EKN is needed for the expansion in these markets. For 2011 the value of guarantees issued by EKN amounted to SEK 63 billion. This was EKN's highest ever figure for guarantees, apart from the temporary solutions offered in 2009 and the first half of 2010. 274 companies carried out 1,458 transactions guaranteed by EKN. EKN guaranteed transactions in 126 countries in 2011 (EKN, 2012). In contrast Icelandic exporters and investors are not using the risk mitigation instruments that are available at TRÚ at all.

### **Conclusions**

Iceland can play a constructive role by sharing its experience in transforming its economy from fossil fuel to clean energy and could be an example for other countries to follow. Icelandic energy companies have a proven record in building and operating geothermal power plants. There are also several service providers, research and education institutions in geothermal energy that could contribute to the transition to geothermal energy in emerging market economies.

Most of the future increase in demand for electricity is likely to come from emerging market economies. This is also where most of the clean energy resources are located. This offers a tremendous opportunity for emerging market countries, but also is a challenge, especially with funding. Sufficient private funds will not flow into those countries unless the risk profile energy projects can be reduced. This is especially true during times of financial and economic crisis.

To fill the tremendous energy infrastructure gap in emerging markets the public and private sector need to work in partnership, including via PPPs. Such partnerships can be supported by international financial institutions. For large energy projects partnerships, pooling public, private and donor funds should not crowd out the private sector, instead, they offer the potential to crowd in private funds into risky markets that would not get private investment without proper risk mitigation.

The international financial institutions can be an important partner not only with direct funding, i.e. loans and equity investments, but also increasingly through risk mitigation instruments. IFIs need to provide instruments that are more flexible and more cost effective for the private sector and with shorter processing time.

Better coordination between the World Bank Group institutions providing guarantees/insurances are needed and better marketing of the instruments.

Export credit agencies can also play a constructive role in supporting exporters of equipment and services to emerging markets by providing guarantees and insurances against commercial and non-commercial risk to facilitate longer-term lending and at more affordable costs.

If Icelandic companies participate in energy projects as sponsors/investors in emerging market economies they should make serious efforts to develop a comprehensive risk identification and mitigation strategy before they engage. This could be done by forming an international consortium with participation of IFIs that Iceland is a member of and with support of the Icelandic ECA.

The government of Iceland should carry out feasibility studies that could help in the decision making process of applying for membership in the regional development banks. This could help strengthen the bargaining position of Icelandic companies vis-à-vis IFIs and enable them to select from a larger menu of financial and risk mitigation instruments in emerging markets than they presently can. Access to IFIs is also even more important for Icelandic companies than for companies from larger countries, as Iceland does not have wide representation in emerging markets through embassies and business representatives. The government should also investigate why Icelandic companies are not using the services of the Icelandic export credit agency, TRÚ. The services of TRÚ can be an important export promotion tool for Icelandic exporters especially during times of crisis.

## References

1. Delmon, J., (2009). Private Sector Investment in Infrastructure. Project Finance, PPP Projects and Risk. 2<sup>nd</sup> Edition, Kluwer Law International, the Netherlands.
2. Dinh, T.Q., & Hilmarsson, Þ., (2012). Private Sector Export to Emerging Market Economies During Times of Crisis: How Can Export Credit Agencies Help? *Review of International Comparative Management*, 13(1), 167-180.
3. Gore, A., (2009). Our Choice – A Plan to Solve the Climate Crisis. Melcher Media, New York.
4. Hilmarsson, H. Þ., (2011). Managing Reform: How Can the Baltic States as Aid Donors Best Share their Transition Experience with Less Advanced Economies and what Lessons Can they Learn from the International Development Programs of the Nordic Countries? *Review of International Comparative Management*, 12(4), 683-696.
5. Hodge, G.A., & Greve, C., (2009). PPPs: The Passage of Time Permits a Sober Reflection. Institute of Economic Affairs, Blackwell Publishing, Oxford, 29(1), 33-39.
6. Tooman, C., (2004). Measuring Opportunity and Risk in Global Energy Investments: Practices and Techniques for Assessing International Investment

- Risk and Enhancing Capital Allocation. *Journal of Structured and Project Finance*, 10, 62-73.
7. West, G.T., (1999)., Political Risk Investment Insurance: A Renaissance. *Journal of Project Finance*, 5(2), 27-36.
  8. \*\*\* - Asian Development Bank (AsDB). (2000). Review of the Partial Risk Guarantee of the Asian Development Bank. Available at: <http://www.adb.org/sites/default/files/pub/2000/prg.pdf> (Accessed on July 21, 2012)
  9. \*\*\* - EKN. (2012). EKN in figures. Available at: <http://www.ekn.se/en/Om-EKN/About-EKN/> (Accessed on April 10, 2012)
  10. \*\*\* - International Monetary Fund. (2004). Public Private Partnerships. IMF, Washington, DC. Available at: <http://www.imf.org/external/np/fad/2004/pifp/eng/031204.pdf> (Accessed on August 15, 2011)
  11. \*\*\* - World Bank. (2009). The World Bank Group Guarantee Instruments 1990-2007. An Independent Evaluation. The World Bank Washington, D.C.
  12. \*\*\* - World Bank. (2008). Capital Matters, Vietnam Consultative Group Meeting Hanoi, 2008. Available at: [http://www.presscenter.org.vn/en/images/WP\\_Capital\\_Matters.pdf](http://www.presscenter.org.vn/en/images/WP_Capital_Matters.pdf) (Accessed on June 27, 2012)
  13. \*\*\* - World Economic Forum. (2006). Building on the Monterrey Consensus: The Untapped Potential of Development Finance Institutions to Catalyze Private Investment. Available at: <http://www.weforum.org/pdf/Financing/Monterrey.pdf> (Accessed on July 6, 2012)
  14. \*\*\* - Asian Development Bank (AsDB). (2006). Review of ADB's Credit Enhancement Operations. Available at: <http://www.adb.org/sites/default/files/credit-enhancement-operations-2006.pdf> (Accessed on July 9, 2012)