Analysis 59

DISCUSSION PAPER

Development banks and their key roles

Supporting investment, structural transformation and sustainable development

Member of actalliance

Brot für die Welt

Content

Publisher
Bread for the World – Protestant Development Service
Protestant Agency for Diakonie and Development
Caroline-Michaelis-Straße 1, D-10115 Berlin
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E-Mail: info@brot-fuer-die-welt.de
www.brot-fuer-die-welt.de

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Layout János Theil
Print Spree Druck, Berlin
Art. Nr. 129 502 400

August 2016

Title: Photovoltaic lamps in poor areas of Dalits in Tumkur, India

Foreword

The 2030 Agenda for Sustainable Development, adopted at the United Nations in 2015 requires a massive increase of investment around the world. To reach this goal the world's governments will have to design sustainability strategies and increase public support for them, and the international institutions like the World Bank and other development banks will have to support these efforts through increased technical assistance and financial support.

Private banks and private investors are unwilling to risk their capital in long-term investments in sustainability in a fear that those investments are neither economically nor financially viable.

A global framework is therefore being prepared to better incentivize sustainable private investment and public-private partnerships. At the United Nations International Conference on Financing for Development in Addis Ababa on 13-16 July 2015, a comprehensive policy framework, the Addis Ababa Action Agenda (AAAA), was adopted, which i.a. underscored the potential role that development banks could play in achieving sustainable development. With public guarantees and other mechanisms, an effort is being made to create more favorable conditions for private investors to finance mainly large infrastructure projects.

This however implies on the negative side that the investment risks are shifted from the private sector to the public sector, which means that the tax payer has to pay for possible investment failures. On the positive side, public development banks are typically independently incorporated and raise money through issuing bonds on the financial markets, so that their investments can boost the economy without affecting national budgets.

However, the governance of these banks in some countries has been inadequate in terms of susceptibility to corruption, to misdirected investments, and for supporting powerful companies whose profit-seeking interest often does not respect the public interest. In particular, the emphasis on fossil fuel projects by many development banks has been undermining global emissions reduction and energy efficiency objectives. In addition to protecting the development banks from corruption and political favoritism, governments therefore need to reassess the carbon footprint of each development bank's portfolio in order to strategically change the interventions of the banks in the energy and other infrastructure sectors.

While the AAAA highlights private capital as a major source for investment, it also stresses the need to "share risks and reward fairly, include clear accountability mechanisms and meet social and environmental standards" (paragraph 48, AAAA). The emphasis on the need for fair risk-sharing and accountability is a response to the concerns of governments as well as many civil society organizations (CSOs) and public sector unions regarding the public costs and risks associated with many private investments, as well as regarding the massive human rights violations that numerous big financial investments impose on the poorest and most vulnerable people.

According to a Eurodad survey, many CSOs also expressed concern that the main policies that private banks, but also development banks have supported so far embody an ideological approach that supports a neo-liberal model pushing for deregulation of foreign capital and a weak presence of the state in the economy. CSOs have highlighted that development banks should work in line with the national development plans and not undermine sustainable development in any sense.

This all presumes that governments will have to adopt national sustainable development strategies, guide development banks appropriately, and that they will have to create effective rules and regulation of private investment to ensure communities benefit and do not suffer.

This paper discusses development banks as an instrument for guiding private flows as key to implement the 2030 Agenda for Sustainable Development, as well as the AAAA. We present this discussion paper as a starting point for civil society and governments to engage in thinking on how to remodel public development banks in a way that they can serve society and the environment.

We want to thank very much the author Prof. Stephany Griffith-Jones for undertaking this excellent study for Bread for the World. The views and opinions expressed herein are those of the author and do not necessarily reflect those of Bread for the World.

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Chapter 1

Introduction[1]

After the 2007/8 global financial crisis, the limitations and problems of a purely private financial sector to fund development have become far more evident, even to mainstream economic thinking. It became obvious that the private financial system is not performing well to support the real economy. It has been pro-cyclical, over-lending in boom times, and restricting credit during and after crises, limiting working capital and, especially, long-term finance crucial for investment. In both tranquil, but more in turbulent times, it has not funded sufficiently long-term investment in innovation and skills which businesses need to grow and create jobs; key sectors like infrastructure, renewable energy and energy efficiency have been insufficiently funded. Small and medium enterprises get insufficient credit, which is often costly and short-term, problems accentuated in low-income countries (see Griffith-Jones and Gottschalk, 2016, for recent evidence on high spreads in bank lending in low-income countries).

Furthermore, the private financial sector, particularly if not properly regulated, has been a major factor in causing frequent and developmentally as well as fiscally costly crises, most recently in several Eurozone countries, but previously in many emerging and developing economies, as well as in the United States. The depth of the concerns about the financial sector is illustrated by IMF Managing Director, Mme Lagarde, recently stating: "We need a financial system that serves society" (Lagarde 2016).

These limitations of the private financial sector have increasingly drawn attention to and increased support for the positive role that effective and well-run public banks, especially public development banks, can play for development, at national, regional and multilateral levels. The recent creation of two very large multilateral development banks, the Asia Infrastructure Investment Bank (AIIB), where 57 countries, including all the major European countries have joined as members, and the New Development Bank of the BRICS (BRICS: Brazil, Russia, India, China and South Africa) also reflects the shift in the development finance paradigm towards a more balanced public private mix for provision of long-term funding. In this paper, we refer to public development banks, that tend to lend long-term for development purposes and which usually raise funding by issuing securities on domestic and international capital markets, whilst having their capital contributed by governments.

It is also interesting that the role of development banks has, especially recently, not just been highlighted as important in developing and emerging economies, but also in developed ones. Thus, as private lending fell, the European Investment Bank (EIB) has played a prominent role in the provision of lending during the Eurozone debt crisis. At a national European level, Germany's public development bank, KfW, now the second largest commercial German bank, has played a positive role in increasing lending counter-cyclically – for example to small and medium enterprises (SMEs) – during the crisis, as well as funding on a significant scale key sectors, such as investment in renewables. In Europe these actions are perceived and highlighted as a valuable model for other countries. France has just created a new public development bank, Ireland has created a large special public vehicle for funding SMEs and the main opposition party in the United Kingdom (Labour) is contemplating the creation of a similar institution, as are several other European governments.

Multilateral development banks (MDBs) are public institutions with a mandate to support development over the medium and long term by providing credit mainly to private companies, but also to national development banks, whilst also assuring small commercial returns, which are then reinvested in the development bank to finance increased future lending. (Small commercial returns allow not just full coverage of their cost, including the cost of borrowing, but also a small profit margin, that can be reinvested in the bank, allowing a higher level of future economic activity, that could maximize their development impact.)

The third International Conference on Financing for Development held in Addis Ababa in July 2015 underscored strongly the role of development banks in the achievement of sustainable development, in the sense of a process that helps fund economic investment, jobs, growth, social inclusion and environmental sustainability. This support for development banks was clearly reflected in the Addis Ababa Declaration on Financing for Development. The Addis Ababa Action Agenda notes: "*National development banks…can play a vital role in providing access to financial services. We encourage both international and do-*

1 — I would like to very especially thank Eva Hanfstaengl from Bread for the World, for commissioning this paper, as well as for very valuable comments to the first draft. Participants at the Frankfurt May 2016 Bread for the World seminar co-organized by Matthias Thiemann also gave very good comments. Edward Griffith-Jones provided excellent research assistance. Responsibility for any mistakes, as always, is my own.

mestic development banks to promote finance for micro, small and medium-sized enterprises" (AAAA, para 43).

A major challenge is to ensure that existing and new development banks are "good" development banks, in the sense they achieve both aims of maximizing the sustainable and inclusive development impact of their transactions, as well as obtaining minimum commercial returns (except in sectors/activities, where an explicit government subsidy is given, e.g. to cover environmental or other externalities). "Good" or "well-run" public development banks especially need to have good governance, to ensure that they are neither captured by private interests, nor by narrow political ones; however, they do need to reflect democratically defined national political priorities.

The positive counter-cyclical role many development banks played during the crisis and its aftermath have been accepted, both in emerging and low-income countries – where development banks have played this key role in countries like Brazil, China, India and Ethiopia – but as pointed out, also increasingly in developed economies. The Addis Ababa Action Agenda (AAAA) states: *"Multilateral development banks can provide counter-cyclical lending, including on concessional terms as appropriate, to complement national resources for financial and economic shocks ..."* (AAAA, para 70).

Griffith-Jones and Gottschalk (2012) provide empirical evidence of the clear counter-cyclical role played by multilateral and regional development banks in the aftermath of the 2007/8 financial crisis (see more details below). There is also a growing body of detailed empirical evidence that national public banks, including national development banks, provide counter-cyclical finance (these national public banks include not only national development banks, but also government-owned national savings or commercial banks, thus are a broader category than public development banks). Brei and Schlarek (2012a) and (2012b) compare the lending responses across national public and private banks to financial crises using balance sheet information for about 560 major banks from 52 countries during the period 1994 to 2009. They find evidence that the growth rate of lending during normal times is higher for the average private bank compared to the average public bank. During financial crises, however, private banks' growth rate of lending decreases while that of public banks increases. These results indicate that public banks have played a counter-cyclical role in their banking systems, while private banks behaved pro-cyclically. They offer two important explanations for this. Firstly, the objective of public banks, in contrast to private banks, is not only to minimize losses in the event of a financial crisis, but also to promote the recovery of the whole economy. Secondly, public banks are more likely recapitalized in times of distress because their owner, the state, tends to have more financial resources than private shareholders.

A biogas energy programme in Mvumi, Tanzania. Development banks can play an important role in funding investments in renewable energy – thus supporting structural transformation to a sustainable development path.

Other papers reach similar conclusions. Micco and Panizza (2006) use bank-level data for 119 countries for the period 1995-2002 and find that lending by government-owned banks is less sensitive to business cycle fluctuations than that of (domestic and foreign-owned) private banks. They find that this differential behavior is due to an explicit objective to stabilize credit. Bertay et al. (2012) find that lending by state banks varies less with the economic cycle, and it even rises during a banking crisis. The empirical analysis is based on an international sample of 1,633 banks from 111 countries for the period 1999 to 2010.

Calderon (2012) use quarterly aggregate data on credit provided to the private sector by deposit money banks for a sample of 79 countries from 1970 to 2011 and finds evidence that financial systems where government-owned banks (GOB) have a larger participation may play a counter-cyclical role while it is pro-cyclical for those with low GOB participation. In addition, the rebound effect (that is, faster, stronger and more intense recoveries) is more noticeable among countries with high GOB participation and especially for the recoveries that follow a crisis episode.

The two latter findings are important in policy terms. It is key to have a fairly large proportion of public development banks, in the total banking sector so they can play a more significant role in generating counter-cyclical finance, and so they can thus contribute more to economic recovery, in times of crisis or slowdown. In this sense the German KfW is an excellent example. A significant scale of development banks is also important for other reasons, which we elaborate below: helping ensure enough long-term finance for key sectors like sustainable infrastructure and innovation, where profitability tends to be long-term, as well as supporting structural transformation to a sustainable and inclusive development path, helping channel sufficient and sufficiently low cost credit to small and medium enterprises and others.

Development banks provide long-term loans and have a long-term development perspective. This is a very valuable feature that has not been stressed enough in the literature, but that developing and emerging countries' governments and people greatly value as the funding private lenders provide on their own is often too short-term. Furthermore, development banks can help catalyze and co-finance with private finance, in ways that prolong maturities. It is important to stress that national development banks, in particular, should make sure that they only lend for specific previously evaluated projects and companies. This is an important difference with private banks that do much of their lending to other financial actors, including for non-productive, and even speculative, activities, even though a relatively small share of their activities goes to fund non-finance private companies, including for "project finance" (Turner 2015).

Development banks, though having paid-in capital provided by Governments, mostly raise their funds on the international and national private capital markets. Typically, their loans are also co-financed by private lending and investing and mobilize broader financial resources by leveraging public resources. To illustrate this, the EU governments agreed in 2012, to double the capital of the European Investment Bank (EIB) by Euro 10 billion. This has allowed the EIB to increase its' own lending by around Euro 80 billion, funding this lending on the long-term international and national capital markets, willing to lend to EIB at low cost, given its AAA rating; as the EIB typically requires co-financing of at least 50 percent, mainly by the private lenders or investors, this leads to additional funding of projects of around Euro 160 billion; the leverage for public resources implied here is sixteen, particularly valuable when fiscal resources are scarce.

Furthermore, techniques are used, so that the resulting loans will be attractive to private lenders and investors, whilst being able to provide finance of sufficient maturity and sufficiently low cost to borrowers. Indeed, where the borrowers are in very poor countries and/or are funding global public goods, like limiting climate change, the finance provided by development banks can be blended with grants, to provide concessional finance. Governments reflected these points clearly in Addis: *"We invite the multilateral development banks and other international development banks to continue providing both concessional and non-concessional stable, long-term development finance by leveraging contributions and capital, and by mobilizing resources from capital markets"* (AAAA, para 70). Catalyzing and channeling additional and new types of private flows will be a specific focus of the development banks going forward.

The ability to combine private and public resources in a constructive way that channels funds to activities to support key activities for development is essential for a financial system that serves sustainable development for all. Well-run development banks can play an important role in helping achieve this aim.

For a development bank to be "well-run", it must keep narrow private and political vested interests outside of its decision-making process, thus avoiding corruption. Furthermore, its hiring of staff should be transparent, and based on merit. Last, but certainly not least, development banks should consult with people, who could be potentially negatively affected (e.g. displaced) by projects they will be funding. In cases, where private banks do "project finance" similar consultations should take place.

In many ways, the paradigm of development finance has shifted towards a more balanced approach, where public and private finance are combined creating a more diversified and balanced financial system. Again this was reflected in the Addis Declaration *"Development banks can play a particularly important role in alleviating constraints on financing development, including quality infrastructure investment, including for sub-sovereign loans"* (AAAA, para 75).

One of the key features of good development banks, especially at a national, but also at a regional and multilateral level is promoting and helping fund structural transformation, key to dynamic, inclusive and sustainable economic growth. Indeed, national development banks are increasingly seen as a valuable instrument to help implement national development strategies, for achieving such growth, not just in developing and emerging economies, but also in the developed economies. This was reflected in the Addis Declaration, where governments agreed: *"We stress that development banks should update and develop their policies in support of the post-2015 development agenda, including the sustainable development goals. We encourage the multilateral development finance institutions to establish a process to examine their own role, scale and functioning to enable them to adapt and be fully responsive to the sustainable development agenda"* (AAAA, para 70).

In fact, one of the key new functions of good development banks is to help finance structural transformation towards a greener economy by supporting environmental sustainability and sustainable development, including providing necessary and urgent financing for the Sustainable Development Goals (SDGs). One key element in this is the financing of renewable energy. Again here, the experience of KfW is very valuable, as KfW funded initially, on its' own, the introduction of solar energy in Germany, though in later years, the majority of funding is coming from the private sector; this catalytic function was very valuable, jointly with an appropriate policy-framework, in jump-starting the solar energy sector in Germany (see Griffith-Jones 2016). It is also encouraging that the first five loans that the New BRICS Bank, recently established in Shanghai by the BRICS governments will all be for renewable energy!

The key points that will be developed in the rest of the study are:

- a brief theoretical and historical framework;
- key roles which national development banks do and should play in order to strengthen inclusive and environmentally sustainable development, both from an empirical and theoretical perspective. We will illustrate – where relevant, with examples – where development banks have successfully or not, managed to fulfill these roles well;
- conclusions, including brief policy suggestions, both for existing development banks, as well as providing lessons for creating new ones, that should be good development banks. This would refer to emerging and developing countries, but especially to low-income countries.

Before starting the next section, it is important to stress again that it is key to have as "good" development banks as possible, that is those, that are well-run, and well-governed, so they can fulfill their functions well. A key challenge is how best to achieve this, in different categories of countries. An important aspect to mention is that we should always be aware that the correct comparator for a public development bank is not some "ideal " non-existent financial institution, but the equivalent private financial institution, and that the main aim is to maximize development impact, whilst assuring minimal commercial returns. Furthermore, it is important to stress that "good" national development banks need to collaborate effectively, both with private financial institutions and investors, as well as with regional and multilateral development banks and vice versa.

The need for "good" development banks needs to be placed also in a broader context, considering also that in the past some development banks have had problems in their functioning, that undermined, at least partly their valuable potential contribution to sustainable and inclusive development. Clearly further research is required on this topic, both on in-depth and comprehensive evaluations of their past performance, as well as an attempt to define meaningfully what a "good" development bank is. In a preliminary way, it would seem that important features would need to include:

a) clear targets for the development bank, including for so-called mission-oriented finance, in the context of a clear national development framework;
b) good governance, to avoid influence of special interests, avoid corruption and promote alignment with national development strategies;
c) correct incentives for bank staff and for borrowers, to ensure loans are made in ways that both maximize development impact, and ensure a minimum commercial return. The latter requires careful assessment of borrowers and projects' creditworthiness;
d) transparency of operations of the development bank; independent evaluation of their performance; accountability to national Parliaments and civil society;
e) provision of technical assistance to borrowers, when required. This may be particularly relevant for small entrepreneurs, new sectors, as well as for project preparation, e.g. for green infrastructure.

Chapter 2

Brief theoretical and historical framework

Till very recently, surprisingly little academic research has been conducted on the role of, and the rationale for, development banks. The analysis needs to be placed in the context of the debate on the desirable nature and structure of the financial sector. In the three decades after World War II, national and multilateral development banks were created and performed, and were broadly seen to perform, valuable roles, especially in Asia and Latin America, where they played an important role in funding structural transformation and financing SMEs. Private domestic financial sectors were relatively small and fairly tightly regulated, as by capping interest rates at low levels. Such "financially repressed" private systems, as they were then called, were deemed inefficient. From a theoretical perspective, the idea that unregulated "financial markets were efficient" encouraged financial liberalization, with light or no regulation (Gurley and Shaw 1955, McKinnon 1973). This process was followed by frequent and costly crises.

Within the efficient financial market school, the existence of public financial institutions, such as development banks, was – almost by definition – seen as negative. As a consequence, development banks were criticized – fairly and unfairly, the latter often without proper evaluation – and their role was reduced sharply in many countries. One of the largest paradoxes was that, during this phase of dominance of the more "neo-liberal" approach, the World Bank, itself a very large and influential public development bank, played an important role via its conditionality in encouraging developing countries to wind down their national development banks! It is encouraging that the World Bank has significantly changed its' position, and now (for example in the Financing for Development Conference in Addis Ababa) supports the role for national development banks.

An alternative theoretical approach emphasized credit rationing, which describes a situation in which banks themselves cap interest rates in an unregulated market, even when agents are willing to pay a higher interest rate to get the funds to finance their investments. Banks may refuse financing, in the belief that some of the projects (without knowing which ones) are more risky, and therefore may lead to future losses. Credit rationing occurs due to a malfunction of the financial markets, caused by imperfect information or information asymmetry, which prevents financial markets to function efficiently. If borrowers have more information on the expected return of their projects than the lenders, there is a greater demand for credit than supply, but the adjustment would not occur by increasing interest rates. This leaves many worthwhile projects unfunded. From a development perspective, there is thus a fundamental market failure in banking as it engages in "adverse selection" of projects to be financed (Stiglitz and Weiss 1981; Stiglitz 1990). Furthermore, moral hazard accentuates these market imperfections.

In this perspective, credit rationing by banks justifies the existence of development banks, which would supply the necessary credit to higher risk, long-term investment, unavailable in the private financing system. Among the reasons why public development banks are able to do this is that governments appreciate the public benefit of the proposed loans and thus provide the development banks with the resources to better assess project risks by having more staff dedicated to such appraisals.

Stiglitz (1994) argues that market failures in financial markets are likely to be endemic as those markets are particularly information intensive, thus making information imperfections and asymmetries as well as incomplete contracts more important and disruptive than in other economic sectors. Therefore in important parts of financial markets, market failures tend to be greater than government failures (Stiglitz, op cit.). In such cases government interventions are more desirable than in other sectors if their benefits outweigh their costs. This provides a first robust case for a "visible hand of government," both through effective public development banks and through robust regulation of private financial markets.

Stiglitz and Greenwald (2014) further argue that knowledge and information markets also have huge market imperfections, and that they are basically public goods. As a consequence, governments have a clear role in promoting learning, to help achieve increases in productivity. One of the institutional vehicles for helping achieve such a learning society, perhaps more in developing and emerging economies, are good development banks. Besides providing long-term finance, they can provide specific incentives, through their lending, for innovation. Furthermore, because of their long-term perspective, they can help fund, accumulate and coordinate expertise in specific areas of innovation and in "learning how to learn". Naturally in this task they need to, and do, collaborate with other actors, both public and private.

This role in accumulating and promoting knowledge and learning, again not sufficiently explored in the literature, cannot be well accomplished by most private finan-

Well-run development banks can ensure long-term finance for key development sectors and sustainable infrastructure like building roads to connect small and remote villages and enable their market access. Here the construction of a road between villages near Mombasa in Kenya.

cial institutions, as they focus mainly or exclusively on short-term profits, and tend not to be interested either in past experience or in future externalities. Development banks therefore need to help fill the gap.

From a complementary theoretical perspective, several commentators (e.g. Ferraz et al.) argue there is a preference for liquidity amongst investors, as well as banks, which is responsible for the limitations of the supply of credit in the economy. There may be lack of credit for long-term investment even when there are well-developed national and international financial systems. Therefore, the importance of development banks goes beyond the question of "market failure", though it builds on it. Given the uncertainty about the future, depending on the characteristics of the new sectors/projects that require resources, private banks often offer no or insufficient credit (especially long-term credit) even if the financial system is fully developed.

Therefore, the existence of development banks is justified by the existence of sectors and investment projects that require funding for the future development of the economy, but have high uncertainty as to their future success (Mazzucato, 2013). Because of that, they may not be funded by the private financial system, which prefers sectors or investment projects whose expected returns are less uncertain. These are often highly complex and expensive sectors/projects, requiring sophisticated expertise in their evaluation that takes account of positive impacts across the economy (positive externalities, for example in terms of helping mitigate climate change via lower carbon emissions, as renewable energy does) and/or those in which social returns exceed private returns.

Chapter 3

Roles of development banks

As regards the roles of development banks, the following will be analyzed:

- Financing long-term investment, to support structural transformation in the context of national development strategies; the challenges of providing such finance, given uncertainty, will be particularly emphasized.
- Helping provide systemic stability, especially by providing counter-cyclical financing, to maintain investment, so crucial for development and by diversifying risk within the financial system.
- Helping develop and deepen financial markets, for example by pioneering new instruments, like local currency and GDP-linked bonds, that can then be adopted by private financial institutions; develop instruments that help development banks capture the upside, when the projects funded are very profitable to the private investors. Such upside can help increase profits for development banks, which can be then used to increase their lending for relevant projects.
- Supporting greater inclusion; this can be done through credit lines to commercial or other banks (such as co-operative banks), as well as through direct lending, for example to SMEs.
- Financing public goods, such as climate change mitigation and adaptation.

A. Funding long-term investment, to support structural transformation in the context of national development strategies

The greater need for instruments to implement more long-term national development strategies for structural transformation has been increasingly recognized. This coincides with a renewed and growing recognition of the value of a modern "industrial policy" and the importance of an "entrepreneurial and development State", that encourages and leads, providing the vision and the dynamic push for private innovation and structural transformation (Chang 2002, Wade 2003). This builds on the success stories of the past, for example in East Asia, as well as more recently in China and India; Mazzucato (op cit) also shows that much key innovation in the USA, the most free-market of economies, was spear-headed by public funding for innovation, though implemented by the private sector.

However, there is an important new element. There is an urgent need for a major structural transformation in the development model, to make inclusive growth compatible with the needs of the planet. This implies the urgency of major investment in green development, for example renewable energy, with public development banks as a key instrument for this.

In a complementary perspective, successful and sustained growth requires the creation of a learning society and a knowledge economy to increase productivity (s. Stiglitz and Greenwald 2014). Public development banks can be an important institutional vehicle for supporting this. Indeed, development banks can help overcome market failures in both financial and knowledge markets simultaneously.

We will illustrate the key role played by development banks, in structural transformation and development strategies with a few key examples, starting with the EIB (the large regional EU bank) and then discussing several national development banks.

1) The EIB

'Sustainable' growth makes environment issues central to the EIB's role in recent years. For the EIB this has included financing in the area of clean energy in particular. For example, the EIB supports the development of pan-European energy grids that facilitate transmission of renewable energy, (so-called "green grids"), large- and small-scale wind and solar power projects and multiple energy efficiency projects such as thermal rehabilitation projects for buildings or solar panels integral to buildings. This builds on the traditional role of a development bank in providing long-term, large-scale financing for infrastructure projects that would otherwise struggle in private markets to find the scale and term of financing needed. The aim is a strategic one, to transform the EU economy into a greener model of growth, to contribute to provide the global public good of mitigating climate change.

This is particularly true of new technologies in two areas:

First, technologies need significant financing for research and development (R&D), where investment is high risk due to factors such as failure of some projects as part of the search for successful solutions and lengthy project timeframes with limited interim financial returns, according to interviews with EIB staff. These factors constrain private investment in these areas.

Second, as new technologies become increasingly operational and implementation of them gathers speed and scale, financing is needed for large-scale and long-term investment. In this area the EIB is involved in financing the required large-scale infrastructure that has important positive externalities for the European Community as they will enable full-scale execution of these types of clean energy projects which are less attractive to the private sector due to their scale or time length, and because social benefits may outweigh private benefits.

Complementary to the development of clean energy, another critical area for innovation by the EIB has been the development of 'sustainable cities'. This issue is particularly relevant to developing countries with their rapidly urbanizing populations and their need to develop infrastructure that will both enable further economic growth and provide a healthy and sustainable environment. In many cities today within developing countries, the urban environment suffers from significant problems such as pollution, poor transport systems and lack of sanitation and standards in water, sewage and housing. In Europe, with its more established urban population and advanced infrastructure this issue is also important because current infrastructure is often carbon-dependent, especially in transport and energy, and overall the aging and crowded urban environments are strained and inefficient. The EIB is lending significant amounts to build sustainable cities including in transport and urban renewals (for more details, see Griffith-Jones and Tyson, 2013, as well as Annual Reports EIB).

2) CDB and BNDES

The China Development Bank (CDB) is the largest example of a national public development bank, playing the role of funding national development strategies, as it is the key financier of China's five-year strategic plans. In the last two decades, CDB has 'provided the capital and investment for China's economy to catch up from a starting point without a modern banking system, small stock and bond markets' (Sanderson and Forsythe, 2013, p. 177). Since 1994, CDB financed infrastructure and urbanisation projects to the tune of more than US$2 trillion. Brazil is another country whose national development bank (BNDES) has played a key role in providing 'patient' finance for long-term capital development projects that are not financed by private initiatives.

3) DBE

It is interesting that some low-income countries, such as Ethiopia have largely successful development banks. Indeed, the Development Bank of Ethiopia (DBE) exists to stream the limited financial resources of Ethiopia towards priority areas. To align the DBE's role with the government development plans, the bank produces its own five-year strategic plans, then used to develop detailed annual plans. To increase its' effectiveness, the government has limited the bank's role to supporting priority sectors, to which it provides medium- to long-term credit. After some initial problems, DBE has played an important role in Ethiopia. Secondly, the bank worked with overseas development banks (e.g. India, Netherlands and Korea), and local stakeholders to strengthen its own expertise.

4) KfW, its important role broadly and in renewable energy

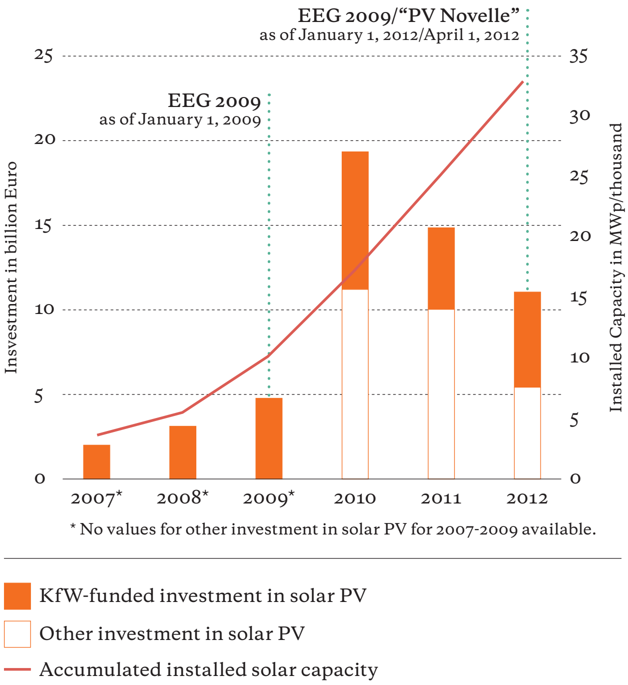
KfW was founded in 1948 to finance the reconstruction of war-torn Germany. The initial capital of KfW was financed by Marshall Plan resources, provided by US government. Additional expansions of capital have been basically funded from profits of KfW itself.

Domestically KfW activities comprise the financing of small and medium enterprises and startups (primarily investments including innovation, as well as climate and environmental protection within companies, i.e. renewables, energy efficiency, etc.) and private customers (among others energy-efficient construction and refurbishment of residential buildings, renewable energy), as well as municipalities, where it funds communal infrastructure and environmental protection.

KfW is also playing a major international role, together with other development banks, in funding green investment in the rest of Europe, and in emerging and developing countries.

KfW refinances its lending activities mainly in the international capital markets. It benefits from a statutory guarantee of the German Government and associated top long-term ratings of AAA, which allow it to issue bonds at the most favorable terms, therefore it is able to lend in very favorable terms. Funds from the financial markets are supplemented by budget funds from the German Government for activities requiring an additional subsidy, i.e. a higher degree of concessionality, such as innovation and startup finance, development assistance, etc. (Povel, 2015 and interview material).

The KfW Group holds assets worth EUR 489 billion (in 2014). This makes it one of the largest development banks in the world. In 2014 the Group committed a total of EUR 74.1 billion. To put this figure into perspective, this is about 40 pecent more than total commitments of the World Bank Group.



Development of investments in solar PV and the accumulated installed solar PV capacity in Germany

Source: KfW (2013)

Total green finance by KfW in Germany in 2014 was EUR 19.2 billion. This represented 40.3 percent of total lending by KfW Germany that year. Of this green finance in 2014, EUR 8.3 billion was lending to business, of which EUR 3.3 billion for renewable energy. EUR 10.9 billion was for communal and private clients, of which energy efficiency in housing was EUR 5.6 billion.

It is important to note the key role that KfW played in the initial phase of introduction of Solar photovoltaic (Solar PV) to Germany. In fact, KfW funded significant investments in Solar PV before 2009 in Germany, when solar PV began to be introduced on a major scale (as can be seen in Graph 1). Therefore, KfW played a crucial role in introducing Solar PV investment in Germany, with its' role then diminishing, as other, basically private, funding sources stepped in.

Such a catalytic role is precisely what a development bank should do, to kick-start a major structural transformation, by funding and show-caseing new technologies and sectors. Thus KfW Germany successfully crowded-in private financing, as from 2010, as at least half of the new investment in Solar PV came from private or other non-KfW sources (see again Graph 1).

Unfortunately not all business and funding activities of the KFW Group can be seen as a contribution to an ecological carbon free energy transition. KfW IPEX for example got criticized for having "clean coal" energy projects in its portfolio (See for example: www.die-klima-allianz.de/wp-content/uploads/2013/09/kfW-coal-briefing_April2013_EU.pdf).

B. Counter-cyclical lending, especially for supporting investment and sustained growth

A second valuable function is development banks' counter-cyclical role when private lending falls sharply or collapses, especially during financial crises. This is particularly crucial to help maintain long-term investment, including in infrastructure, such as renewable infrastructure, thus ensuring continuity of existing projects and helping new ones start.

The 2007/2008 crisis showed that multilateral, regional and national development banks of the developed and developing world significantly increased their total lending to developing countries in the years when these were most affected by the North Atlantic crisis (through the rapid expansion of existing mechanisms, as well as via specially created ones, like the World Bank's Credit Response Window).

It is encouraging, that the multilateral development banks collectively increased their lending commitments to emerging and developing economies by 72 percent between 2008 and 2009, the year when private capital flows to these countries fell most sharply as a result of the global financial crisis (Griffith-Jones and Gottschalk, op cit). Their disbursements also grew significantly in the same year by 40 percent, though the increase was slower than commitments. This represented a major counter-cyclical response, which helped sustain investment in those countries, above levels they would have otherwise had.

This counter-cyclical lending by multilateral and regional development banks was complemented by that of national development banks in emerging and developing countries; in the Introduction above, we provided detailed empirical evidence on the counter-cyclical role of national banks, including development banks. Furthermore a group of national development banks (like the Brazilian development bank BNDES and several national development banks in Asia) also contributed to give continuity to trade finance in cases where private trade lines fell.

However, the counter-cyclical response of multilateral development banks could be further improved, as it was proportionally far smaller for low-income countries than for middle-income countries, and it was also often slower for disbursements than for commitments (for more details see Griffith-Jones and Gottschalk 2012, op cit). Thus, disbursements by World Bank-IDA to Sub-Saharan Africa hardly expanded in the initial years of the transatlantic crisis. Slowness in disbursements was partly due in some cases to the fact that much lending by MDBs is project-related. In order to enhance their counter-cyclical response, MDBs also need to address some of the constraints they face including the lack of flexibility of their investment portfolios. Disbursements to large, lumpy projects (e.g. infrastructure) may be difficult to arrange in a counter-cyclical manner, depending on the time-phasing of project execution. Large disbursements may not be possible in the cyclical downswing if such projects do not require them at that time. However, it may be much easier to disburse lending to smaller projects or companies (e.g. SMEs) in a counter-cyclical manner. In addition, the World Bank introduced the Immediate Response Mechanism at the end of 2011 that now allows rapid disbursement of up to 5 percent of unspent IDA project funds in crisis cases.

C. Help develop and deepen financial markets in ways that increase counter-cyclical and development impact, as well as lead to financial sector diversification

In order to enhance development banks' (especially multilateral and regional) counter-cyclical capacity, these should expand and make greater use of instruments for this purpose. Such initiatives have and will enhance both their counter-cyclical and developmental impact, as well as help develop and deepen private financial markets in financial instruments that are more developmentally desirable. Some of the current available instruments that can be used counter-cyclically include local currency loans or GDP linked loans, as well as less-discussed instruments like counter-cyclical guarantees or loans, which allow debt servicing holidays in the face of external shocks.

These instruments can include not just loans but also guarantees. For example, an MDB could issue contingent guarantees to private lenders that would take effect when lenders reduced their claims on a borrower if, in the assessment of the MDB, the borrower's long-term fundamentals remain sound. When lenders resume their lending, such guarantees would lapse. A contingent guarantee facility of this nature would require MDBs to utilize risk assessment models that have a longer-term horizon than those employed by private lenders, and would need to be designed so as to avoid problems of moral hazard and adverse selection. A related idea would be to create regional guarantee agencies or funds to enable risk-sharing among neighboring countries with common interests, for example in infrastructure development. Such a mechanism, which could be supported by regional or sub-regional development banks, would be of interest to countries both with higher risk ratings (as beneficiaries of the infrastructure development) and lower ratings (which might otherwise be deemed not creditworthy, see Griffith-Jones and Ocampo 2008).

Local currency loans are valuable as they avoid currency mismatches, which can be very damaging in the face of volatile capital flows or other external shocks; they also help countries develop their own domestic (local currency) bond markets, which provide a more stable source of local funding. Deepening local currency bond markets also provides opportunities for institutional investors to fund their own liabilities with long-term, fixed-income assets. The issuance by developing countries of local currency bonds has rapidly escalated since the East Asian financial crisis. East Asian countries in particular have sought alternatives to currency mismatches and volatile cross-border capital flows by developing their own domestic (local currency) bond markets, which also provide a more stable source of local funding for the public and private sectors. In addition to reducing vulnerability to currency mismatches and sudden stops associated with foreign borrowing, deepening local currency bond markets also provide opportunities for national institutional investors such as insurance companies and pension funds to fund their own liabilities with long-term, fixed-income assets. Local currency bond markets face similar general constraints to those discussed below for GDP-linked bonds, notably pricing and liquidity. Some institutional and policy challenges arise, especially in poorer countries. It will take time and considerable effort by developing countries to meet these institutional and policy challenges. The MDBs can make an important contribution in this regard. They could expand their own borrowing in local currencies, and then lend in the same currency. There are also interesting proposals that MDBs could securitize a package of such

Development banks can help channel sufficiently low cost credit to small and medium enterprises. For a development bank to be "well-run", it must keep narrow private and political vested interests outside of its decision-making process, thus avoiding corruption. Its hiring of staff should be transparent, and based on merit, and it must consult with people, who could be potentially negatively affected. Here a credit committee in Niamey, Niger in Africa.

bonds from different developing and emerging economies, and sell them in the capital markets, where they would benefit from benefits of diversification.

Another counter-cyclical instrument that could be used by MDBs are GDP-linked bonds. These would serve to stabilize fiscal policy by curbing expenditures in times of rapid growth and providing "policy space" for higher spending or lower taxes during crises. Investors would find opportunities to take positions on countries' future growth prospects, and could diversify their positions across a number of countries with uncorrelated growth rates. GDP-linked bonds would help avoid the disruptions and uncertainties entailed in situations of debt distress and default for both borrowers and investors.

Once the viability of a market for growth-linked debt for countries in good times is established, it is quite likely that it would take off. This is why the MDBs can play a valuable role as "market-makers." They could do so directly, by developing a portfolio of their own loans indexed to the GDP of their borrowing members and selling the loans individually or securitizing the loans and selling these packages to investors seeking a diversified portfolio (Griffith-Jones and Ocampo 2008; Griffith-Jones and Hertova 2013). Alternatively they could play a more catalytic role by coordinating the simultaneous issue of a critical mass of GDP-indexed bonds in international markets. Whilst initially, GDP-indexed bonds were thought of more for developing and emerging countries, the North Atlantic crisis that started in 2007/8 showed their potential value also for developed economies. There has been for example, a great deal of discussion of using GDP-linked bonds for Greece.

The discussion on GDP-linked bonds has acquired broader interest due to recent important initiatives by the Bank of England, leading not just to their detailed research on the subject, but also to a high level workshop organized late 2015 (see www.bankofengland.co.uk/research/Documents/conferences/gdplinkedbonds.pdf), and culminating in a G20 "non-paper" on GDP-linked bonds (G20 IFA Working Group Non-paper produced by the Bank of England, with contributions from Bank of Canada). This "non-paper" was discussed at 2016 spring meetings of IMF/World Bank. Such initiatives and official support may lead hopefully to their issuance by governments, as well as their use by development banks. It would be interesting if the new MDBs, the AIIB and the BRICS NDB would, for example consider pioneering such instruments, though such a role could also be played by the older MDBs.

GDP-linked bonds are an instrument that can be put into the broader category of helping public development banks “capture the upside”. It is well known that the private sector always wishes development banks to maximize its’ guarantees against all types of risks, so if losses arise due to foreseen or unforeseen circumstances it is the development bank, and therefore ultimately the taxpayers who pick up any losses. This may be appropriate for some types of risks (e.g. regulatory), but not for others, e.g. commercial. However, the private sector is silent about the fact that it always wishes to keep all the profits. However, if public development banks share the risks with commercial lenders and investors, they should also share the profits, especially if these are larger than expected. This can be achieved by development banks taking equity positions in the projects they fund (sharing more of the risk, but also benefiting from profits), but also by designing specific quasi-equity instruments, such as GDP-linked bonds, but also other instruments, more specifically tailored for this purpose, to share both the risks and potential losses, as well as potential profits, especially higher than expected ones. GDP-linked instruments distribute debt servicing through time, linked to capacity to pay related to economic growth. Capturing the upside instruments could do that, but could also go further by adjust the total servicing of the loan in part to the project outcome.

More broadly, having a more diversified financial structure for developing and emerging economies, than one just focused mainly in private (often large) banks may have several advantages, including for competition and financial stability. Firstly, it may encourage competition between different types of financial institutions, which could lead to them being more efficient, for example in the spreads they charge. Secondly, a more diversified financial system, especially if not having inter-connected risks, could lead to less systemic risk and therefore contribute to financial stability. Though this seems logical, it may be useful to do careful empirical analysis, including of case studies, to see to what extent this is true. Thirdly, if different varieties of financial institutions have different strengths, having a more diverse system could make it more likely that the financial sector functions needed to help achieve inclusive growth are achieved, than if the structure of the financial sector are determined spontaneously, or dominated by one type of financial institutions, be they small or large, private or public, national or foreign.

Indeed, given that financial sectors (particularly liberalized, very lightly regulated ones, on one extreme, but also very repressed ones, on the other extreme) can be very problematic for inclusive and sustainable growth, the need to pursue pragmatic policies in financial sector development, and not be driven by ideology or conditioned too much by the interest of agents in the financial sector is especially important. It is important not to adopt an “either/or” attitude, but look at the best ways of building synergies amongst institutions of different type (e.g. private and public) as well as encourage best practice within them. Indeed, public development banks co-finance, and increasingly lend, via private banks. Furthermore, much of their lending is done to private firms. The ability to combine private and public creatively, ideally working constructively together, is an essential feature of a financial system if it is to serve the needs of inclusive and environmentally sustainable growth. In this sense, though by no means perfect, the way the German financial sector has developed and operated, for example to successfully help fund renewable energy via public and private banks (as well as cooperative banks); and private investors acting together, provides a very good example.

An interesting issue, beyond the scope of this paper, is how path-dependent is the evolution of financial systems. For example, a question increasingly asked in the UK is: can the UK effectively emulate Germany in certain aspects, for example by establishing a successful public bank such as KfW, and what difficulties could it initially face given the history and structure of the UK financial system? Perhaps more relevant for developing economies, especially low-income countries, is the question to what extent can countries with perhaps weaker institutions and governance, create or expand good (or well-functioning) development banks that can work well with the private sector (both with private banks as well as with enterprises) to support inclusive growth and sustainable development. Can and should they successfully follow the path of developed and emerging economies, that have done so fairly effectively, and what are the detailed lessons to learn from successes and failures?

To include some stylized facts, development banks are good at counter-cyclical lending and at providing long-term finance for private investment in infrastructure; private banks are good at providing international trade credit as well as financing the needs of foreign companies; low-end institutions are good at giving credit to micro small and medium enterprises, especially in specific localities.

D. Supporting greater inclusion, both socially and geographically

A particular way in which multilateral development banks can assist implementation of national development strategies is helping to improve financial inclusion in those sectors traditionally excluded from the formal financial sector. Financial inclusion for households, and particularly for small and medium enterprises, is a pre-requisite for productive development, innovation, and higher productivity. In non-inclusive financial systems it is normally small firms and poor individuals that do not have access to finance. This in turn is a mechanism that reinforces inequalities, since the latter will need to rely only on their own wealth and resources in order to get educated, open up a business, invest, or take advantage of promising business opportunities.

On the contrary, financial inclusion means that households and businesses have access to finance and can effectively use appropriate financial services. Such services must be provided responsibly, sustainably, and in a well-regulated environment. Financial regulation must be rigorous, but proportionate to the scale of lending institutions and borrowers. As Reddy (2010) put it, financial inclusion should not be equated with aggressive lending of the sort that led to the sub-prime crisis in the United States, giving greater access to financial services a bad name, and causing damage to poorer people, as well as undermining financial stability.

In most developing countries (and especially low-income ones), access to finance both by individuals and small firms is still an issue that needs policy action. In general, financial systems in developing countries exhibit problems of segmentation and exclude broad segments of the productive sector such as small and medium-sized firms, as well as individuals in the lower end of the income scale, with obvious adverse consequences on poverty and inequality.

It is important that a broad view of financial inclusion is taken, going beyond microfinance institutions to embrace the mainstream financial sector (both private and public) as well as community-based financial institutions. Furthermore, the focus should not be just micro-finance, but also credit to small and medium enterprises, what Justin Lin, the former Chief Economist of the World Bank has called “the missing middle”. Access to finance by SMEs constitutes a key policy concern among economies across the world since these enterprises are critical for sustainable growth and development at the worldwide level. SMEs play a crucial role in most market-based economies as providers of employment and income opportunities and as vehicles of innovation. On average, SMEs account for 67 percent and 45 percent of total formal employment in the manufacturing sector of high-income countries and developing countries respectively as well as contributing to sizable shares of GDP (Financial Inclusion Experts Group 2010).

SMEs consistently report having severe obstacles in their access to finance in comparison to larger firms, which limit their ability to grow. In turn, the higher financing obstacles are reflected in their financing patterns as they tend to use significantly less external funding than larger firms for both working capital and fixed asset investment.

Cross-country evidence shows that the gap in access to financial credit between SMEs and large firms is much smaller in higher-income countries than in developing ones, that it is smaller in middle-income countries, than in low-income ones. Nevertheless, the Eurozone debt crisis has reduced access to private credit for SMEs, especially in the crisis countries, showing that even developed economies are not immune to cyclical downturns of such credit, requiring compensating actions by public banks.

When access to external funding is limited, the production capacity of firms and their ability to grow and prosper is constrained as they have to rely on their own resources to operate. This creates a vicious cycle that maintains smaller production units at a permanent state of vulnerability and low growth with large social consequences in terms of poverty and inequality.

A common rationale for development banks and similar institutions in industrial and developing countries alike is to provide financing for SMEs, which tend to be too small (implying high transactions costs) and risky to be of interest to most commercial lenders. Many SME start-ups do not survive very long, yet generate benefits going beyond their lifespan. Private markets will thus tend to under-invest in SMEs. Public development banks, or special mechanisms that focus on lending to SMEs are designed to overcome this market failure by designing their lending and other facilities to meet the particular needs of their small business clients, for example through providing technical support.

Although lending to SMEs is risky, experience has shown that it can be done on a commercially viable basis. For example, the Business Development Bank of Canada (BDC) is required under federal law to return a profit to its only shareholder, the Federal Government, a requirement it has met annually for the past decade. It has been able to do so because it operates independently, at arm's length and without interference from government (Culpeper et al.). Notable intermediaries focused on lending to SMEs in emerging market countries include the Small and Medium Enterprise Credit Guarantee Fund of Taiwan (Taiwan SMEG) and Small Industries Development Bank of India (SIDBI).

Multilateral development banks currently facilitate lending to SMEs in developing countries. Their activities could be expanded through new and existing mechanisms. First, they could fund intermediaries such as national development banks that have a good track record in lending to SMEs. Lending to SMEs would typically be in local currencies and provided on a medium-to long-term basis.

Not all national development banks are necessarily well-positioned to meet the financial needs of small businesses. Some, like their private sector counterparts, are not adept at meeting the needs of an SME clientele. For others, the cost of servicing SMEs may undercut their target rate of return. In this context, other kinds of intermediaries such as state savings banks, cooperative banks, credit unions and community-based banks may offer valuable insights and channels on how to meet the financial needs of SMEs.

For example, in Germany, the Sparkassen-Finanzgruppe (Savings Banks Finance Group) has existed for 250 years with a mandate to serve lower-income residents. The savings banks are rooted in the municipalities and rural districts of Germany, providing loans and financial services to local SMEs, thus reducing information asymmetries. Particularly striking is the fact that, while their services (e.g. loans) are market-based and their operations commercially sustainable, they are not profit-maximizers. Their mission is both social and economic: surpluses are used to support social and cultural objectives of their communities (Culpeper et al., forthcoming).

International bodies like the United Nations, MDBs, and non-governmental organizations (NGOs) could use their convening power to bring together national development banks, credit unions, community-based banks, and other practitioners from industrial and developing countries alike to share lessons and best practices from providing financial services to SMEs.

E. Finance public goods, such as climate change mitigation and adaptation

A final and extremely important area for development banks in the coming decades relates to combating climate change, perhaps the most crucial "global public good". The international community has defined preventing and adapting to climate change as a major new priority, for example in the Sustainable Development Goals, given the great urgency of the subject. Indeed, the aim of "sustainable" growth puts environmental issues central to development strategies, so as to balance climate and environmental needs with economic growth.

Priority needs to be given, for example, to funding renewable energy and energy efficiency, as energy production is a large part of carbon emissions. A major sustainable development challenge, where multilateral, regional and national development banks need to play a key role is to provide energy to so many poor people who have no access to electricity, provide it ideally in a high proportion through renewable energy, and do so at reasonable cost, especially to poor people.

As discussed in section A above, development banks can play a major role in providing own funding and catalyzing private finance for renewable energy in developed economies (see especially key role played by KfW in kick-starting development of solar PV energy in Germany). Particularly, in the case of low-income countries, development bank loans may need to be combined in some cases with grants, for example given by developed country governments, when provision of renewable energy at the cost that private investors wish to charge to poor people is too expensive to be affordable for them (for a detailed discussion of the trade-offs involved, see Spratt et al. 2013). The alternative may be public provision of renewable energy.

Chapter 4
Conclusions

In this paper we have outlined and discussed the key roles that public development banks can and do play, for helping fund as well as support sustainable and inclusive development, thus contributing to meet the SDGs; we illustrated these roles with successful examples. We have particularly referred to the following roles:

- financing long-term investment, to support structural transformation in the context of national development strategies;
- contribute to systemic stability, especially by providing counter-cyclical financing, also to help maintain investment, so crucial for development and by diversifying risk within the financial system;
- help develop and deepen financial markets, for example by pioneering new instruments, like local currency and GDP-linked bonds, that can then be adopted by private financial institutions; develop instruments that help development banks capture the upside, when the projects funded are very profitable to the private investors. Such upside can help increase profits for development banks, which can be then used to increase their lending for relevant projects;
- support greater inclusion and
- finance public goods, especially climate change mitigation and adaptation.

Given the important roles that public development banks can and have played, it seems clearly desirable that their roles are expanded, multilaterally, regionally and in countries where they already exist. Indeed, one of the key lessons that can be drawn from development banks' experience is that their scale is important. If a development bank has sufficient scale and represents a significant proportion of the financial sector in a country, its impact in fulfilling their roles, can be more meaningful, especially in helping support structural transformation, providing counter-cyclical financing in crises and downturns, supporting greater inclusion and financing public goods, such as mitigating climate change.

Furthermore, in countries where such development banks do not exist at present, and very much including low-income countries, it seems desirable to set them up. Collaboration by existing development banks, whether multilateral, regional or national, can be very valuable, so that good experiences can be transferred, as well as errors not repeated.

Last but not least, a final, but very important point needs to be stressed again here. This is the need for "good" development banks. Further research is required on this topic, both in terms of evaluating rigorously past experiences of existing development banks, as well as defining "best practice" for good development banks.

House building program after the Tsunami wave in a small village in Vilundamavadi, India. During crisis and its aftermath, development banks can play a positive counter-cyclical role and help to promote recovery of the whole economy.

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