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The Global Development Banks’ Architecture

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- Characterization of SDG-compatible investments
- Business Models
- Governance
- Financial regulation
- Global Development Finance Architecture

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All the information about this program, and all working papers published are available at INSE’s website: <https://www.nse.pku.edu.cn/en/research/df/oa/index.htm> and AFD’s website:

www.afd.fr/en/carte-des-projets/realizing-potentialpublic-development-banksachievingustainable-development-goals.

The Global Development Banks' Architecture

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Abstract

This paper looks at the role, evolution and regional coverage of the system of multilateral and national development banks (MDBs and NDBs) and international climate change funds. It analyzes the roles that development banks should play to correct the market failures that characterize financial systems, particularly in emerging and developing countries. It concludes that MDBs should be capitalized to better support the recovery of emerging and developing countries after the COVID-19 crisis. They should also be aligned with the Sustainable Development Goals, and enhance the role they play in promoting innovation and structural transformation, and in supporting climate change mitigation and adaptation. It underscores that the development banks should work as a system, and that better networking between

MDBs and NDBs is essential and should be systematically monitored. Finally, it points out that MDBs should support the development of strong NDBs in the regions where these institutions are underrepresented.

Keywords

Multilateral development banks; national development banks; international climate change funds; market failures; functions of development banks; counter-cyclical role; promoting innovation; climate change mitigation and adaptation; regional coverage; working as a system.

Résumé

Ce document examine le rôle, l'évolution et la couverture régionale du système des banques de développement multilatérales et nationales (BMD et BND) et des fonds internationaux contre le changement climatique. Il analyse le rôle que les banques de développement devraient jouer pour corriger les défaillances du marché qui caractérisent les systèmes financiers, en particulier dans les pays émergents et en développement. Il conclut que les BMD devraient être capitalisées pour mieux soutenir la reprise des pays émergents et en développement après la crise liée au Covid-19. Elles devraient également être alignées sur les Objectifs de développement durable (ODD) et renforcer leur rôle dans la promotion de l'innovation et de la transformation structurelle, ainsi que leur soutien à l'atténuation et à l'adaptation au changement climatique. Il souligne que les banques de

développement devraient fonctionner comme un système, et qu'une meilleure mise en réseau entre les BMD et les BND est essentielle et devrait faire l'objet d'un suivi systématique. Enfin, il souligne que les BMD devraient soutenir le développement de BND fortes dans les régions où ces institutions sont sous-représentées.

Mots-clés

Banques multilatérales de développement; banques nationales de développement; fonds internationaux pour le climat; défaillances de marché; fonctions des banques de développement; rôle contracyclique; promotion de l'innovation; atténuation et adaptation au changement climatique; couverture régionale; travailler en tant que système.

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Introduction

The system of development banks has a history that goes back to the Great Depression of the 1930s, when the collapse of global financial markets and their effects on domestic financial markets worldwide led governments to create public sector financial institutions to support economic activity, even in advanced countries. Their precedent was the public sector banks that some countries had since the nineteenth century. As we will see, some important European financial institutions that can be characterized as National Development Banks (NDBs) have a history that went back to the nineteenth century. In Latin America, Mexico, Colombia and Chile created NDBs between 1934 and 1940, but Argentina, Brazil, Costa Rica, and Uruguay had important public sector banks that went back to the late nineteenth century, and several others were created in the 1930s (Bértola and Ocampo 2012, chs. 3-4). The US Export-Import (Exim) Bank was created in 1934, and aside from its role in financing US trade, it operated partially as a kind of Inter-American Bank, lending to Latin American countries for their own development projects, notably during the Second World War. The Latin American countries pushed the US to create an Inter-American institution in the late 1930s, an initiative that the US government finally accepted as part of its initiatives to align Latin America during the Second World War with the allies. However, Congress rejected the proposal.

The latter project, which had been developed under the leadership of Harry Dexter White, the US leader in the 1944 Bretton Woods negotiations, served as the basis for the US proposal to create a World

Bank in that Conference, the first Multinational Development Bank (Helleiner, 2014). The name of the new institution, the International Bank for Reconstruction and Development (IBRD), made clear that one of its fundamental objectives was to support European reconstruction after the War, but this task was soon replaced by the Marshall Plan, and the IBRD took at its main responsibility supporting developing countries. The post-war European reconstruction also gave birth to several institutions to support the reconstruction of their economies, the most remarkable being KfW (Kreditanstalt für Wiederaufbau), created in 1948 with Marshall Plan support, which became one of the largest NDBs in the world. There were many other NDBs created throughout the world in the post-war period, some of which have been success stories, but others have a mixed history. The list includes the Industrial Finance Corporation of India, created in 1948, and the Industrial Development Bank of India, in 1964; the Brazilian BNDES (Banco Nacional de Desenvolvimento Econômico e Social) in 1952; and the Korea Development Bank, in 1964. There were also several banks aimed at promoting countries' foreign trade, following the US Exim bank model, as well as to support agricultural and rural development.

The system of the Multilateral Development Banks (MDBs) was reinforced with the creation of the International Finance Corporation (IFC) in 1956 and the International Development Agency (IDA) as part of the World Bank Group (WBG), as well as the first regional development banks in the late 1950s. The first was the European Investment Bank

(EIB), which was included in the 1958 Treaty of Rome that created the European Economic Community (now European Union), to support both economic integration and the less developed regions of the Community. The second was the Inter-American Development Bank (IADB), created in 1959, which was a US initiative after the Cuban revolution that had taken place at the beginning of that year. The system of MDBs was expanded with the creation of the African Development Bank (AfDB) in 1964 and the Asian Development Bank (ADB) in 1966, and later by many other institutions. As an inter-regional institution, the Islamic Development Bank, formed in 1973, was also an important innovation. Latin America and the Caribbean were also very good at creating sub-regional institutions as part of its fragmented integration processes: the Central American Bank for Economic Integration, in 1960; the Andean Development Corporation (CAF) in 1968, which expanded to become a truly regional development bank and thus changed its name to Development Bank of Latin America in 2010, although it kept its old acronym; and the Caribbean Development Bank in 1969.

By the early 1970s, a truly Global Development Bank architecture had been created, including global, regional, sub-regional, national, and sub-national institutions. This network has continued to grow and is now constituted by more than 400 institutions, according to the Agence Française de Développement (AFD).

The development banks, and more generally, the role of the state in the

financial sector, came under a fierce attack with the rise of the market reform agenda in the 1980s, with the World Bank playing a strong role in spreading the new agenda. In relation to finance, the basic argument, formulated by McKinnon (1973) and Shaw (1973), was that state intervention generates “financially repressed” systems that are inefficient in the provision of financial services. As a result of the new trend, the support for development banks tended to wane, and their role was reduced sharply. Interestingly, however, although the activities of several NDBs were transformed by the new economic ideology, no MDB was liquidated, and an important new one was created to support the old communist countries in their transition to capitalism: the European Bank for Reconstruction and Development (EBRD) in 1991. A major new NDB was also created in 1994: the China Development Bank.

As a result of the market reform agenda, the potential role of MDBs and NDBs was largely neglected for an extended period in both the academic and the policy literature. Since the crisis of many emerging economies at the turn of the century, led by the collapse of several East Asian economies in 1997 and the Russian moratorium of 1998, but particularly of the 2007–09 North Atlantic financial crisis¹, the interest in, and support for both MDBs and NDBs came back with a strong force. The recognition of the pro-cyclical character of private finance was the major reason for the renewed recognition that these institutions can play useful functions. As we will see in section 3, the MDBs played a crucial role in supporting the recovery of

¹ We prefer this term to the more broadly used of global financial crisis because, although it had global effects, it concentrated in the United States and Western Europe.

the world economy after the North Atlantic crisis, as NDBs also did. On top of this, the role of other market failures affecting the financial sector was also recognized, as well as, more recently, the potential role that state-supported financial institutions at all levels must play in supporting the provision of global public goods, in particular in combating climate change.

The crucial role of development banks at all levels received strong, and in fact, increasing attention in the United Nations Financing for Development conferences, from Monterrey in 2002 to Addis Ababa in 2015 (United Nations, 2002 and 2015a). The first of them focused more on regional banks, but the latter on the whole Global Development Banks architecture. Its strong emphasis on the role of these institutions is worth quoting, as it is a point of reference for this paper:

“We note the role that well-functioning national and regional development banks can play in financing sustainable development, particularly in credit market segments in which commercial banks are not fully engaged and where large financing gaps exist, based on sound lending frameworks and compliance with appropriate social and environmental safeguards. This includes areas such as

sustainable infrastructure, energy, agriculture, industrialization, science, technology and innovation, as well as financial inclusion and financing of micro, small and medium-sized enterprises (MSMEs). We acknowledge that national and regional development banks also play a valuable counter-cyclical role, especially during financial crises, when private sector entities become highly risk-averse” (United Nations, 2015a, paragraph 33).

This paper will underscore one of the dimensions of the Global Development Bank architecture: the role of MDBs, and particularly of the World Bank and the regional development banks that serve emerging and developing countries. It will also take a look at the system of NDBs and the relation of MDBs with these national institutions. It is divided into six sections, the first of which is this introduction. The second will look at the role of development banks. The third will focus on the network of MDBs, and the fourth on that of NDBs and their relation with the multinational institutions. The fifth will analyze the support of MDBs and other international financial institutions to the mitigation and adaptation to climate change. The last presents some conclusions.

I – The role of development banks

Development banks play a crucial role in counteracting market failures, but also to support sustainable development, in the broader United Nations concept that encompasses its economic, social, and environmental dimensions, well captured in the Sustainable Development Goals (SDGs) approved by United Nations in 2015 (United Nations, 2015b). Financial market failures affect developed countries, but they are particularly severe for emerging economies and developing countries. Their effects imply that financial liberalization has major flows, particularly again in emerging and developing countries, an issue that is now broadly recognized and contrasts with the market reform agenda put forward in the 1980s.

The first key market imperfection of financial markets is the tendency to experience “boom–bust” cycles (Keynes [1936](#); Minsky [1982](#); Kindleberger, [1978](#)). This feature, which characterizes even well-developed financial markets, is reflected in the “sudden stops” of external financing that emerging and developing countries experience during crises (Calvo, 1998). This includes the massive flight of portfolio capital from emerging economies that was experienced at the onset of the COVID-19 crisis, which has been characterized as the worst in history (IMF, 2020; IIF, 2020), although it has been followed by a recovery of hard-currency bond financing to emerging economies since mid-April (Ocampo, 2020a).

The second set of market failures identified in the economic literature is associated with the imperfect information and the information asymmetries that characterize financial markets, and which generate adverse selection, moral hazard, and credit rationing (Stiglitz and Weiss [1981](#); Stiglitz [1989](#) and 1994). These problems call for strong public sector regulation and supervision of financial institutions and mechanisms that guarantee access to finance for those nations, regions, and sectors that are excluded because of the high risks perceived by market agents, which are partly generated by information failures.

A third market failure is associated with the high uncertainty and risks faced by innovative activities and sectors that may generate significant externalities if they succeed and play an essential role in the structural transformation of economies (Mazzucato, [2013](#)). This is crucial, as rapid economic growth is always characterized by a transformation of the economic structure and calls, therefore, for policies to support this process to guarantee the “dynamic efficiency” of a given economic system (Ocampo, 2017). This is also related to the concept of “learning society” proposed by Stiglitz and Greenwald ([2014](#)), which implies that governments have an essential role in promoting technological change and learning processes, which is also characterized by massive market imperfections.

A final set of market failures is related to financing activities with large externalities and the provision of public goods. The first is the case of infrastructure, where long-term financing is essential, both for public sector investments and for relevant private-public partnerships. The second is particularly the case of climate change, which is, as Stern (2015) has stated, is the greatest market failure the world has ever seen – a concept that can also be applied to the collapse of biodiversity, which is strongly linked to climate change.

Several of the market failures that characterize financial markets are particularly strong in emerging and developing countries. Indeed, a fundamental problem that these countries face is that their domestic financial markets are thin. In particular, they are characterized by a strong prevalence of short-term financial assets and liabilities, and limited financial inclusion. The first of these problems implies that firms with access to finance may have to rely on short-term loans to finance their investments or limit their investments to what they can fund with retained profits. New firms and micro, small, and medium-sized enterprises (MSMEs) may lack financial access altogether and thus have to limit their investments to what they can finance with their savings – or, quite frequently in developing countries, to those of their family members. In the case of governments, limited access to long-term financing may limit the levels of infrastructure investment, as well as climate change mitigation and adaptation policies, among other areas of desirable state action.

Access to international financing may overcome the dependence of some economic agents on short-term credits, but this is limited to governments and large domestic and foreign firms. A major implication of this, together with the prevalence of short-term domestic financing, is that financial markets in emerging and developing economies are characterized by variable mixes of maturity and currency mismatches in portfolios. This feature has significant financial stability implications. From the domestic perspective, this means that creditors may not roll over short-term loans during crises, generating a liquidity crunch and substantial effects on investment. Domestic bond markets – if they have developed – will also face during crises a reduction in the availability of financing, shorter maturities and/or higher interest rates. A sudden stop in external financing will not only reduce public and private sector investment but may also lead to exchange rate depreciation (which would be automatic under a flexible exchange rate regime) that will lead to an increase in the debt ratios of governments and large private firms that have been able to borrow abroad. As a result of the associated capital losses, access to external financing may also become scarcer for these agents.

Given the limitations and stability issues that financial sectors face, development banks play an essential role in structural transformation and the stability of emerging and developing countries. Based on these market failures, we can argue that development banks have seven major functions², as argued in a recent project on NDBs (Griffith-Jones and Ocampo, 2018), but the analysis can be extended to MDBs: (i) providing counter-cyclical financing; (ii) supporting countries and regions within countries that lag behind in the development process; (iii) improving social development, benefitting in particular social groups that are

² The original list in that volume is complemented here with the second and third functions mentioned in this paragraph.

excluded; (iv) enhancing financial inclusion; (v) promoting innovation and structural transformation; (vi) financing infrastructure investment; and (vii) supporting the provision of public goods, particularly combatting climate change. As we will see, these functions have several links with each other, which implies that they should be seen as integral tasks of the system of development banks.

The pro-cyclical nature of private international financing implies the need for official funds during crises, not only from the IMF and regional monetary institutions but also for MDBs. The counter-cyclical financing from the MDBs should include emergency programs, long-term funds for public sector investment, and private investments supported by their corporate branches or facilities³. Function (i) makes MDBs an important instrument in response to global crises, thus contributing to smoother business cycles at the international level, mainly by reducing the effects of international crises on emerging and developing countries. The investments and other activities that they finance should also support the recovery of economic activity after crises. In turn, this function implies that NDBs must also play an active counter-cyclical role, complementing that played by fiscal, monetary, and foreign exchange policies at the national level.

Smoothing downturns of economic activity, supporting economy recoveries, and helping maintain investment levels have long-term implications. In particular, the counter-cyclical function is essential to avoid an interruption of the process of structural transformation that development banks should also support (function v). This function implies that development banks should expand financing during crises and moderate it during booms, complementing in this regard the role that macroprudential policies must play to moderate boom-bust financial cycles.

Function (ii) generates a case for MDBs to provide resources to countries with no adequate access to private financial markets. As this problem becomes more acute and affects many more countries during crises, it interacts with the counter-cyclical function mentioned in the previous paragraphs. In low-income countries, it should be reflected in the design of facilities that provide transfers and very low-cost loans to these countries, supporting the role of official development assistance –or becoming agents of such assistance. This function also implies that NDBs must support backward regions within their countries. As indicated in the introduction, the support to the development of backward countries and regions has been an essential objective in the creation of several MDBs and NDBs, including through the launch of special funds or institutions to support low-income countries –starting with the World Bank’s IDA in 1959–, and of specific subnational institutions to support more impoverished regions within countries.

Functions (iii) and (iv) underscore the role that MDBs and NDBs should play to enhance social development. The first is supporting education, health and social protection policies at the national and local levels. The second is to help expand access to credit for MSMEs and low-

³ We will refer to the financing of private sector firms by MDBs as “corporate” activities, following the name of institutions that do so (e.g., the International Financial Corporation), but in several cases those corporate activities are facilities (credit lines) provided through the MDB itself.

income households, particularly in the latter case for housing. It is frequently supported by state-owned first-tier banks or other financial institutions –some of which are included in the broad definition of NDBs, as we will see in section 4 below–, or by guarantee funds or agencies that support lending to MSMEs by private agents. Although these functions are tasks for NDBs, MDBs can provide funding for those activities.

Function (v) is particularly important to enhance the “dynamic efficiency” of an economy, understood as the capacity to generate constant waves of innovation and structural change. Again, it is particularly crucial for NDBs. However, MDBs can also help fund governments’ innovation, science, and technology policies and provide equity and lending to innovative private sector firms through their corporate branches or facilities. Private venture capital funds offer that type of financing in developed countries, but they are not abundant in emerging and developing countries.

NDBs can support the development of these in these countries in partnership with private agents. These public–private partnerships will have positive features: for the private sector, the guarantee of a strong link to government policy, and for the public sector, the assurance that the projects it supports have an economic rationale. They can also offer credit lines with longer grace periods and low-interest rates for innovative activities and/or partly cover the risks of innovative activities through public sector guarantee funds.

As Mazzucato and Penna (2018) argue, there is mounting evidence that NDBs have fostered “patient” long-term finance for innovative activities. MDBs, through their corporate branches, can be also be involved in the creation of venture capital funds in association with NDBs. It is worth adding that promoting innovative MSMEs, as part of the broader objective of financial inclusion (iii), may also have positive effects on structural change.

In turn, function (vi) supports the traditional role of governments, but also of private agents involved in public–private infrastructure partnerships. Finance in this area is, of course, crucial to supporting economic growth, particularly because of large gaps in this area in many emerging and developing countries (Bhattacharya et al., 2015). The type of financing provided in this area can also play an essential role in environmental sustainability

Finally, the activities under (vii) are important in contributing to the environmental dimensions of sustainable development, and may include innovative activities that support function (v). It should be underscored that climate financing must not only incorporate the subsidies that take into account the contribution to the provision of a public good, but also the distributive dimensions associated with the diverse historical contribution of different countries to global warming and the different effects it will have on countries, regions within countries, and social sectors. It should be added that climate change is a particularly long-term phenomenon and requires an adequate mix of long-term financing, subsidies to climate-friendly activities, and taxes on those that generate adverse effects. A growing literature on the financial risks associated with climate change also indicates that support for climate change mitigation may reduce the adverse effects it could have on long-term growth and reduce the financial risks that activities with negative environmental effects may have (Dikau and Volz, 2019; Bernal and Ocampo, 2020).

It is worth mentioning that many NDBs and public-sector banks have been created in several countries to support agriculture and rural development, on the one hand, and export activities, on the other. The rationale for doing so should be subject to scrutiny today, given that private-sector financial institutions can provide financing to these activities. However, to the extent that rural areas concentrate a large proportion of the poor and vulnerable population in several countries, and that rural markets may present specific problems of financial exclusion due to distance from the main financial centers, it may make sense to create state-owned financial institutions to support them, following functions (ii) and (iv)⁴. The problems generated by the instability of agricultural prices has also been an argument to support the sector, in which case, these institutions would be supporting function (i).

In turn, export diversification may be seen as a key factor in the structural transformation, and therefore support function (v). However, the lack of adequate foreign trade financing during crises may be an obstacle, particularly for developing countries. As we would see, foreign trade financing was an important function of MDBs during the North Atlantic financial crisis, thus contributing to function (i). It can be added that the origin of many ExIm banks is associated with the perception that there is no adequate financing and that it was essential to support exports in the face of possible trade restrictions by importing countries.

Beyond the specific functions of development banks, it should be underscored that the broader context in which they operate is vital for their success. Thus, sound macroeconomic policies—in particular, active counter-cyclical policies, relatively low inflation, moderate real interest rates, and competitive and stable real exchange rates—are essential to the success of the several activities promoted by these institutions. They are also more effective if there are clear national development strategies that development banks can support, ideally linked to industrial policies promoting innovative sectors. A well-functioning financial sector is another important precondition and an essential one to guarantee the multiplier effects of financing by NDBs when they are second-tier institutions or co-finance operations with first-tier ones. Furthermore, NDBs can help develop deeper and better capital markets in emerging and developing countries, again with support from MDBs. In several countries, they have been vital in developing the domestic bond market, and more recently, specific markets for green bonds.

4 The call for food security has been another argument, including for subsidizing agriculture, and was particularly important in countries that participated in the World Wars.

II – The evolution and structure of MDBs

The evolution of financing by major MDBs serving emerging and developing countries over the past two decades is summarized in Table 1. The WBG –and IBRD in particular– has been the strongest role in terms of counter-cyclical financing. It was the institution that increased its lending most markedly financing during the North Atlantic financial crisis, and is also the institution that has announced the most extensive program to support emerging and developing countries during the current COVID-19 crisis.

Table 1. Loan Commitments of Multilateral Development Banks (Million USD)

Source: Annual reports of each institution.

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
International Bank for Reconstruction and Development (IBRD)	10,919	10,487	11,452	11,231	11,045	13,611	14,135	12,829	13,468	32,911
International Development Association (IDA)	13,332	6,764	8,068	7,282	9,035	8,696	9,506	11,867	11,235	13,995
International Finance Corporation (IFC)	2,379	2,732	2,957	3,856	4,753	5,373	6,703	8,220	11,399	10,547
Subtotal World Bank Group	26,630	19,983	22,477	22,369	24,833	27,680	30,344	32,915	36,101	57,453
Inter-American Development Bank (IADB)	4,969	7,411	4,143	6,232	5,468	6,738	5,774	8,812	11,085	15,278
African Development Bank (AfDB)	3,368	2,979	2,772	2,625	4,328	3,278	3,907	4,895	5,435	12,643
Asian Development Bank (AsDB)	5,583	5,339	5,658	6,085	5,039	5,761	7,264	9,516	10,124	13,230
European Bank for Reconstruction and Development (EBRD)	2,465	3,312	3,676	4,180	5,093	5,346	6,149	7,664	7,464	10,987
Subtotal Regional Banks	16,385	19,041	16,249	19,121	19,928	21,123	23,094	30,887	34,108	52,137
Development Bank of Latin America (CAF)	2,323	3,196	3,291	3,304	3,504	4,746	5,521	6,607	7,947	9,170
Asian Infrastructure Investment Bank (AIIB)	-	-	-	-	-	-	-	-	-	-
New Development Bank (NewDB)	-	-	-	-	-	-	-	-	-	-
European Investment Bank (EIB)	38,594	36,660	55,402	58,790	62,050	60,379	70,434	83,085	83,370	149,655
TOTAL	83,932	78,880	97,419	103,584	110,315	113,928	129,392	153,494	161,526	268,415

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
International Bank for Reconstruction and Development (IBRD)	44,197	26,737	20,582	15,249	18,604	23,528	29,729	22,611	23,002	23,191
International Development Association (IDA)	14,550	16,269	14,753	16,298	22,239	18,966	16,171	19,513	24,010	21,932
International Finance Corporation (IFC)	12,664	12,186	15,462	18,349	17,261	10,539	11,117	11,854	11,629	8,920
Subtotal World Bank Group	71,411	55,192	50,797	49,896	58,104	53,033	57,017	53,978	58,641	54,043
Inter-American Development Bank (IADB)	12,464	10,671	11,179	13,811	13,629	11,074	11,325	13,350	14,756	13,268
African Development Bank (AfDB)	6,314	8,782	6,538	6,754	7,316	8,778	10,802	8,824	10,123	10,095
Asian Development Bank (ADB)	17,936	20,374	20,925	20,357	22,841	26,540	25,466	31,813	35,464	33,743
European Bank for Reconstruction and Development (EBRD)	11,924	12,659	11,463	11,287	11,772	10,406	10,397	10,928	11,280	15,956
Subtotal Regional Banks	48,638	52,486	50,105	52,209	55,558	56,798	57,990	64,915	71,623	73,062
Development Bank of Latin America (CAF)	10,533	10,066	9,275	11,876	11,622	11,537	12,412	12,259	13,663	13,800
Asian Infrastructure Investment Bank (AIIB)	-	-	-	-	-	-	1,694	2,502	3,304	4,576
New Development Bank (NewDB)	-	-	-	-	-	-	1,568	1,851	8,078	7,192
European Investment Bank (EIB)	111,458	69,299	81,882	109,956	109,025	102,520	78,598	100,542	71,812	65,875
TOTAL	242,040	187,042	192,059	223,938	234,309	223,888	209,279	236,047	227,121	218,548

Notes: For the WBG, the data refer to the fiscal year ended in June. The EBRD and EIB data were originally in euros; the exchange rate used to convert to USD was the end-of-period rate.

The regional development banks supporting emerging and developing countries have also played a counter-cyclical role but, perhaps most importantly, have grown much faster than the WBG over the past two decades. The dynamics are different among the regional banks, with the ADB as the most dynamic, followed by the AfDB. The IADB and the EBRD were very dynamic prior to the North Atlantic financial crisis, and IADB played an important counter-cyclical role at that time. However, these institutions have grown less than their other regional counterparts over the past decade. Latin America also counts with CAF, a former sub-regional institution that is now effectively a regional development bank, which has grown more than the IADB over the past two decades. In turn, two new institutions have been added in recent years, the New Development Bank (NewDB) of the BRICS countries and the

Asian Infrastructure Investment Bank (AIIB), with the first of them being particularly dynamic since its creation.

It is also worth underscoring the role of EIB, which has continued to be the largest MDBs, essentially serving the European countries. It also played an essential role during the North Atlantic financial crisis, as well as the succeeding euro crisis, with significant counter-cyclical support.

These patterns reflect the relevance of the backing of the major developed countries for the WBG to guarantee the capacity to finance its lending program during crises, but also the growing support for the regional development banks by emerging and developing countries. The latter reflects the greater sense of ownership of the regional banks by these countries, which implies that they respond in a stronger way to their demands.

In the area of concessional finance, the WBG, through IDA, plays the strongest role. It granted USD 21,9 billion in financing in 2019. It is followed by the ADB and the AfDB, the first of which provided USD 4,5 billion in 2019 and the latter 1,7 billion through the African Development Fund. In contrast, the IADB and CAF provide very limited concessional financing, and other institutions –EBRD and AIIB–do not provide this type of resources.

The coverage of MDBs in regional and sub-regional terms is very heterogeneous. Table 2, estimated with the database of the Agence Française de Développement, reflects this fact. There are seven world or interregional organizations: the three of the WBG (IBRD, IDA, and IFC), a UN organization (the International Fund for Agricultural Development), and three interregional: the Islamic Development Bank, the NewDB, and an institution created by the Council for Mutual Economic Assistance (Comecon) during the communist era, the International Investment Bank which, after a prolonged crisis, has been recently restructured.

Table 2. The System of Multilateral Development Banks

Source: Database of the Agence Française de Développement.

Area	Bank	Acronym	Established	Assets
World	The World Bank	WB	1944	263.8
World	International Finance Corporation	IFC	1956	94.3
World	International Development Agency - WB group	IDA	1960	184.6
Inter-regional	International Investment Bank	IIB	1970	1.3
Inter-regional	Islamic Development Bank	IsDB	1974	37.6
Inter-regional	International Fund for Agricultural Development	IFAD	1977	9.0
Inter-regional	European Bank for Reconstruction and Development	EBRD	1991	68.0
Inter-regional	New Development Bank	NDB BRICS	2014	10.4
Africa	African Development Bank	AfDB	1964	13.1
Africa	Fonds Africain de Garantie et de Coopération Economique	FAGACE	1977	0.1
Africa	East African Development Bank	EADB	1967	0.4
Africa	Banque de Développement des Etats de l'Afrique de l'Ouest	BOAD	1973	4.6
Africa	Banque de Développement des Etats d'Afrique Centrale	BDEAC	1975	0.7
Africa	Ecowas Bank for Investment and Development	EBID	1975	0.9
Africa	Banque de Développement des Etats des Grands Lacs	BDEGL	1977	0.1
Africa	Shelter Afrique	ShelterA	1985	0.2
Africa	Trade and Development Bank	TDB	1985	5.5
Africa	African Export and Import Bank	Afreximbank	1993	13.4
Middle East and North Africa	Arab Bank for the Economic Development of Africa	BADEA	1973	4.9
Middle East and North Africa	Arab Fund for Social and Economic Development	AFESD	1974	12.2
Middle East and North Africa	OPEC Fund for International Development	OFID	1976	7.4
Middle East and North Africa	Arab Trade Financing Program	ATFP	1989	1.2
Middle East and North Africa	Islamic Corporation for the Development of Private Sector	ICD	1999	3.1
Middle East and North Africa	Banque Maghrébine d'Investissement et de Commerce Extéri	BMICE	2015	0.3
Asia and Pacific	International Bank for Economic Cooperation	IBEC	1963	0.4
Asia and Pacific	Asian Development Bank	AsDB	1966	191.9
Asia and Pacific	Pacific Island Development Bank	PIDB	1989	0.3
Asia and Pacific	Interstate Bank	Interstate	1993	0.2
Asia and Pacific	Economic Cooperation Organization Trade and Development	ECO	2005	0.7
Asia and Pacific	Eurasian Development Bank	EDB	2006	3.7
Asia and Pacific	Asian Infrastructure Investment Bank	AIIB	2016	19.6
Latin America and the Caribbean	Inter American Development Bank	IADB	1959	129.5
Latin America and the Caribbean	Banco Centroamericano de Integración Económica	CABEI	1960	10.9
Latin America and the Caribbean	Banco de Desarrollo de América Latina	CAF	1970	40.5
Latin America and the Caribbean	Caribbean Development Bank	Caribank	1970	1.7
Latin America and the Caribbean	Fondo Financiero para el Desarrollo de la Cuenca del Plata	FONPLATA	1974	0.3
Latin America and the Caribbean	Banco Latinoamericano de Comercio Exterior	BLADEX	1979	7.6
Latin America and the Caribbean	North American Development Bank	NADB	1993	2.0
Europe	Council of Europe Development Bank	CEB	1956	25.7
Europe	European Investment Bank	EIB	1958	555.8
Europe	Nordik Investment Bank	NDB	1975	34.9
Europe	Nordic Development Fund	NIB	1989	0.9
Europe	Black Sea Trade and Development Bank	BSTDB	1999	2.0

Among the regional organizations, Europe's dominance is remarkable, largely because of the EIB, as well as the Council of Europe Development Bank, the EBRD, and the Nordic institutions, among others. It is followed by Asia, which includes the Arab and Islamic institutions, which are very important in regional terms, and the other Asian institutions, including some serving Central Asia. Some of the Islamic institutions can be considered interregional, as they also serve North Africa, and some of the Asian ones serve Central Asia rather than the whole continent. The Americas follow, mainly Latin America and the Caribbean –which created, in particular, MDBs to support the regional integration processes–, as there is only one small North-American institution –the North-American Development Bank. Africa has a myriad of institutions, but most of them are small ones. The two most important for this continent are the AfDB and the African Export-Import Bank, which was created under the auspices of the former. Finally, there is a small Pacific Island Development Bank.

Table 2 also makes clear that most MDBs were created from the mid-1950s until the 1970s. The earlier ones were the two institutions from the WBG (IFC and IDA) and the first three regional development banks: the Council of Europe Development Bank, the EIB, and the IADB. The 1970s were prolific in the creation of Arab and Islamic institutions. In later decades only four major institutions were created: the EBRD and the African Export-Import Bank in the early 1990s and the NewDB and the AIIB in recent years.

Most of the MDBs are wholly owned by the central governments of member countries. However, some foreign trade banks have partial private ownership: the Latin American one has 84% private ownership, and the African one 22%. The only large MDB with some private sector participation is CAF, with 10%.

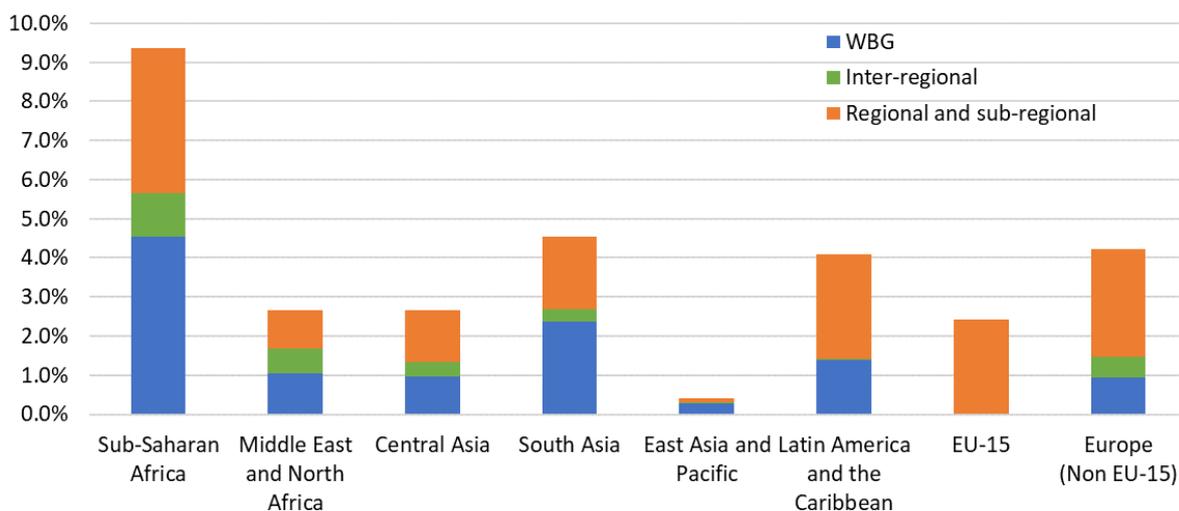
The relative importance of MDBs in different regions is reflected in their size compared to the regions' GDPs. Figure 1 shows the relative importance of the WBG, the interregional institutions, and the regional and the sub-regional ones in different parts of the world. What is remarkable is the very uneven coverage of MDBs in the developing country regions. They are particularly important in Sub-Saharan Africa, where the outstanding loans of MDBs represent more than 9% of the region's GDP. South Asia and Latin America and the Caribbean follow, with more than 4%, and the Middle East and North Africa, and Central Asia with close to 3%. Interestingly, European countries also belong to this intermediate level, with shares of somewhat above 2% for the core European Union members (EU-15)⁵ and around 4% for the non-core countries. The region with the least important of MDBs is East Asia and the Pacific. Hence the importance of the growth of the ADB and new AIIB.

In terms of the weight of different types of institutions, the WBG dominates in the world's poorest regions (Sub-Saharan Africa and South Asia). The regional and sub-regional banks play an essential role in all regions. In contrast, interregional banks have an important presence in Sub-Saharan Africa and the Middle East and North Africa, reflecting the importance of the Islamic Development Bank. They are also important in the non EU-15 European countries, reflecting the EBRD's relevance in that region.

⁵ This group includes the UK, which is now in the process of withdrawing from the EU, but we would keep it as part of the EU-15.

Figure 1. MDB's: outstanding loans by region, 2018–2019 (Share of GDP)

Source: Annual reports and financial statements of the WBG and the other MDBs.



Another relevant feature of the MDBs is that they follow two basic models. The first is the traditional division of shareholders between borrowers and non-borrowers that the IBRD established, and which a large number of institutions have followed. In this model, the non-borrowers provide not only paid-in capital but also callable capital, which effectively operates as a kind of insurance provided to the institutions' portfolios. The second can be called the "cooperative" model. In this case, all countries contribute to the capital and can also borrow from the institution. This is the model of the EIB but also, among the regional development banks serving the developing world, of CAF. It should be added that all MDBs enjoy a privilege credit status, which of course, supports their credit ratings.

In terms of the role of MDBs during crises, there is a remarkable difference between the reaction to the North Atlantic financial crisis and the current COVID-19 turbulence. This reflects, in fact, a broader issue about the extent of multilateral cooperation (Ocampo, 2020c). The actions launched by the "Global Plan for Recovery and Reform" adopted by the G20 Heads of State in London on April 2 2009, to address the North Atlantic financial were very ambitious (G20, 2009). They included a call for what became the most important reform of IMF credit lines in history, the largest issue of IMF's Special Drawing Rights (SDR), an ambitious reform of financial regulation, the commitment to avoid protectionism to support economic activity during the crisis, and the decision to increase and redistribute IMF quotas (which came, however, with a lag, due to the slow approval by US Congress)⁶. The MDBs were central to the agenda that was launched at that time and were repeatedly mentioned in that declaration, which endorsed the capitalization and massive increase in the lending of these institutions, as well as their role in supporting trade finance and a green recovery (G20, 2009, paragraphs 5, 7, 22 and 27).

⁶ With a lag, the G20 also adopted a plan to enhance international tax cooperation, a responsibility that was given to OECD to coordinate.

In contrast, although the Heads of State of the G20 committed at the end of March 2020 “to do whatever it takes and to use all available policy tools to minimize the economic and social damage from the pandemic” (G20, 2020a), the specific multilateral actions announced and adopted have been very limited. In relation to development banks, there was only a broad reference to the need to deploy robust and coordinated financial packages. The Ministers of Finance and Central Bank Directors of the G20 said something similar in their declaration during the Spring Meetings of the Bretton Woods institutions, essentially supporting the programs that the MDBs had already announced (G20, 2020b). There was no reference to the capitalization of these institutions or their role in supporting green projects in either this or the declaration during the Annual Meetings (G20, 2020c).

Supported by the views of the G20 and the broader international community, MDBs played a vital counter-cyclical role during the North Atlantic crisis, partially offsetting the contraction of private international financing to emerging and developing countries (Ocampo et al., 2012). Furthermore, the counter-cyclical role that these institutions should play was explicitly recognized for the first time by the MDBs and the economic authorities. This lack of recognition had ignored the lessons of the past, which suggested that, in addition to the provision of liquidity by monetary institutions in times of crisis, it is equally important to offer official long-term financing to support public spending and public and private investment to mitigate the crisis and contribute to the recovery.

As a group, these institutions almost doubled their credit commitments to emerging and developing countries between 2007 and 2010, and more than doubled the levels that were typical until 2006 (see Table 1). They also played an important role in the rapid provision of commercial credit services, which was used by a wide range of private banks⁷. As indicated above, the WBG led this counter-cyclical response. Disbursements lagged, despite the measures adopted to accelerate them (loan advances and fast track facilities). Paradoxically, however, the WBG and the MDBs as a whole responded more strongly to the needs of emerging economies than to those of low-income countries, generating a decrease in credit commitments to the latter group, from 32% in 2007 to 22% in 2009 (Ocampo et al., 2012, Table 12).

The response of the MDBs was conditioned in part by the limits on their capital. For this reason, as already noticed, the G20 agreed to support their capitalization. That of the ADB and the AfDB was rapid and massive: a 200% increase in 2009. That of the IADB, approved in 2010 for around 70%, was less ambitious, gradual, and less than the Latin American and Caribbean countries had proposed. That of the WBG also took place in that year but was even more modest, and formed part of a set of reforms aimed at increasing the participation of emerging and developing countries in the capital of the different institutions that are part of that Group.

⁷ As indicated by the International Chamber of Commerce, 55% were utilizing trade facilitation programs implemented by MDBs by the summer of 2009 (ICC, 2009).

In response to the COVID-19 crisis, MDBs have adopted several support measures: special lines to address the crisis; increases in the scale of credit programs, but within their capital restrictions; streamlining of credit approval processes; and, in some cases, the possibility of reassigning credits already approved to the needs of the emergency. The most extensive program was announced by the WBG at the end of March: a package of USD160 billion for the next 15 months, an amount that is larger than the total credits approved in the biennium 2009-10. Two essential elements of the package are the significant weight of resources destined for low-income countries –thus correcting one of the problems of the program implemented during the North Atlantic crisis–, and the emphasis on actions aimed at the private sector through the IFC. The latter includes loans for international trade, support for working capital, and medium-term financing to private companies struggling with interruptions of supply chains.

The WBG can build during the crisis upon its 2018 capitalization, which increased the paid-up capital of IBRD by USD 7.5 billion and that of IFC by USD 5.5 billion. Besides that, the capital of the IFC has almost doubled since the 2008-09 crisis, based on the reinvestment of profits. AfDB can also build upon the capitalization approved in October 2019, which increased the institution's capital base from USD 93 to 208 billion. Other MDBs do not count on the advantage of a recent capitalization and would not be able to respond as strongly as they did during the North Atlantic crisis. Therefore, the lack of commitments of the G20 to fund the MDBs is a significant omission in the current crisis. In the case of Latin America, for example, the two significant MDBs serving the region, IADB and CAF, which together represented three-fourth of multilateral financing in recent years, would not be able to respond strongly due to capital constraints (Ocampo, 2020b).

In terms of the long-term financing priorities, Table 3 summarizes the major destination of the resources from the WBG and the three major regional development banks (IADB, ADB, and AfDB). The details are presented in annual terms in Annex 1. Using a common classification is, of course, not easy because of the different criteria used by these institutions.

Table 1. Multilateral Development Banks Commitments by Sector (%)

Source: Banks' annual reports, various issues.

	World Bank		IADB		ADB		AfDB	
	2008/12	2013/19	2008/12	2013/19	2008/12	2013/19	2008/12	2013/19
Social	15.6%	19.0%	16.1%	17.3%	3.3%	6.8%	8.2%	6.4%
Agriculture	6.1%	7.5%	4.1%	2.5%	5.9%	7.9%	4.4%	11.3%
Industry and Trade	7.6%	8.8%	12.6%	7.1%	1.2%	2.5%	5.0%	1.1%
Infrastructure	35.4%	33.1%	31.5%	35.9%	56.7%	59.9%	50.9%	50.0%
Finance	18.9%	18.1%	13.0%	12.8%	5.0%	11.1%	11.9%	16.9%
Public Sector Management	16.2%	13.5%	10.6%	14.6%	15.8%	11.5%	-	-
Multisector and others*	0.1%	0.0%	12.2%	9.7%	12.0%	0.4%	19.6%	14.3%

*Multisector, which includes: in the IADB environment and natural disasters, science and technology, and urban development and housing; in ADB multisector and others; and in the AfDB multisector, urban development, and environment

What strikes most clearly is the emphasis on infrastructure financing of AfDB and, even more strongly, of ADB: half or more of total lending. Furthermore, given the rapid growth of these institutions, the increased resources they allocate for infrastructure have multiplied several times over the past decade. Infrastructure is also an essential focus of financing in the WBG and IADB, but less so in the first case when compared to its early decades.

In this area of financing, transport projects have the largest weight. For example, according to each institution's last annual report, the commitments for transport projects represented 35%, 25%, 15%, and 7% of the total commitments of ADB, AfDB, IADB, and WB (only IBRD and IDA), respectively. It is relevant to mention that the weight of transport relative to total commitments has varied within each institution. From 2006 to 2019, ADB devoted, on average, 27% of its commitment to this kind of project, and reached the maximum amount of 39% in 2007. AfDB has devoted around 21% of its commitments to transport projects, reaching 30% in 2010. In turn, IADB devoted, on average, 16% and reached the maximum amount relative to total commitments of 23% in 2007. For the WBG, the weight shows a decreasing trend: transport projects relative to total commitments decreased from 14% to 7%.

In the case of the WBG and IADB, social spending occupies the second place. Commitments considered under this classification include mainly education and health. The WBG's social spending also includes women's empowerment, programs for children, nutrition, poverty reduction, and social assistance. In the case of IADB it was a clear priority when it was created but is now falling as a share of lending. The low priority given to this area by AfDB and ADB is actually striking, though they also support programs in health, education, nutrition, children and gender equality, among others.

The finance category consists of a great diversity of projects with different goals. The collaboration with governments to strengthen regulatory institutions and support for financial inclusion programs stand out. Also, actions include supporting the development of domestic capital markets, taking advantage of private equity funds familiar with countries and regions, and co-financing public-private projects.

Support for the production sectors is somewhat limited in all cases. Agriculture receives limited attention, although it has tended to increase as a priority for AfDB. Industry and trade used to receive significant support from IADB, but it has fallen as a priority. It receives minimal attention from ADB and AfDB.

A constant concern regarding countries' development is devoting resources to innovation, science, and technology to achieve the fifth objective discussed in the previous section. Although the classification by sector does not allow the specific amount committed to this item to be isolated, when analyzing each institution's annual reports, innovation, science, and technology are a relevant cross-cutting issue in some sectors.

IADB is the only bank among those analyzed that includes a specific area of science and technology. Within the period 2006–2019, it provided an average of 1.7% of its commitments to this area, with the highest percentage in 2017 (6.1%). However, some projects in other sectors have a positive impact on the use of new technologies and innovation. For example,

in its *Update to the Institutional Strategy 2010–2020* (IADB, 2015), the IADB underscores the need to boost countries' internal sources of growth to increase productivity and innovation and consolidate adequate knowledge innovation ecosystems. In its view, another clear objective is migrating from technology adoption and adaptation to a creative approach and to adopt technologies in all sectors consistent with the climate change goals.

In turn, ADB recognizes that Asia must base its growth on new engines that raise the quality of growth. It has emphasized that countries must foster technological innovation and new industries based on sustainability principles. Its *Strategy 2030* (ADB, 2019) also includes monitoring digital transformation, knowledge, and innovations as part of a Digital Agenda 2030. As chair of Think20, the Asian Development Bank Institute launched in 2019 ten policy innovation task forces and led those focused on education and work for the digital age, among others. Moreover, although ADB does not explicitly report commitments devoted to science, technology, and innovation, it reports different agriculture, transport, energy, and equity investment projects that incorporate or are oriented to promote new technologies.

Regarding AfDB, the boost to technology and innovation focuses on the information and communication technology sector. In this regard, in its 2019 annual report, it identifies as priority issues supporting e-government and innovation projects. In addition, it plans to continue supporting targeted interventions in broadband development and data infrastructure through non-sovereign operations. It has also provided credit for innovation projects.

The WBG also recognizes the importance of boosting productivity and sustainable growth through technological improvements and innovation in the developing world's different regions. In Africa, it seeks to accelerate digital transformation to guarantee that by 2030 governments, businesses, and people will be digitally enabled. This requires building the necessary infrastructure and incentivizing the private sector to also invest in digital technologies. The digital economy and the infrastructure it requires is also a priority for the WBG in the East Asia and the Pacific region. In the Middle East and North Africa, there is again interest in promoting Digital Economy programs and a favorable environment for start-ups focused on digital technologies.

Recognizing the relevance of digital technologies and their positive effect on people and their well-being, the WBG also points out that it has collaborated with countries to develop an economic framework that promotes digital transformation and has worked with governments to identify the obstacles generated by technological barriers. For example, it has worked in various diagnoses with Latin American countries to recommend governments to develop policies and adopt best-practices that improve public spending on science, technology, and innovation.

It should be pointed out that, within a given institution's priorities, there are, however, significant differences by regions and countries. Given its broad reach, this is particularly important for the WBG. For example, in its 2019 report (World Bank, 2019a), it indicated that 18% of its commitments in the Middle East and North Africa were dedicated to the financial sector, closely followed by projects in energy and extractives and public administration, with

16% and 15%, respectively. Meanwhile, in Sub-Saharan Africa, 22% of commitments were in energy and extractives, followed by agriculture, fishing and forestry, with 12%, and public administration with 12%. In turn, 40% of commitments to East Asia and Pacific countries went to the public administration sector, followed by transportation, with 10%. In South Asia, transportation and public administration projects represented 20% and 15% of total commitments. In Europe and Central Asia, the priorities were public administration and education, with 24% and 13%, respectively. Finally, in Latin America and the Caribbean, public administration is prioritized, closely followed by social protection and industry, trade and services, with 20%, 19%, and 17%, respectively.

Finally, it is difficult to draw from this data what priority is given to supporting backward regions within countries and for global public goods. The specific resources for climate change would be a subject of attention in section 5.

III – The system of NDBs and their links to MDBs

The architecture of NDBs is a more complex one. It can be understood as made up of different state-owned financial institutions (most totally owned by the states, but some partially so), with varying objectives, business models, financing arrangements, and sizes. The database of the Agence Française de Développement that we use here considers “Development Financial Institutions” as those with separate legal personality, government sponsorship and a public policy-oriented official mandate that manage financial instruments (loans, equity, guarantee, and insurance) and depend on funding sources that go beyond budgetary transfers. In turn, the most recent World Bank (2018, p. 12) report defines NDBs as “any type of financial institution that a national government fully or partially owns or controls and has been given an explicit legal mandate to reach socioeconomic goals in a region, sector, or market segment”.

Table 4 indicates that there are over 400 institutions that meet the criteria set by the Agence Française. Considering a regional breakdown similar to that of Figure 1, their regional coverage is quite different from those of the MDBs. The most remarkable feature is the significant importance they have in the core European Union countries (EU-15) and East Asia. Their assets are equivalent to around 19% of GDP in both cases. Some NDBs in these regions, notably the China Development Bank, are also crucial in international financing. Latin America and the Caribbean, and the Middle East and North Africa follow: the share of NDBs’ assets in the regions’ GDPs are 9 and close to 7%, respectively. In contrast, it is striking the low weight of NDBs in three regions that are well covered by MDBs: the two most impoverished regions, Sub-Saharan Africa and South Asia, as well as Central Asia. Non-EU 15 and North America also have relatively small NDBs.

Table 2. The Architecture of National Development Banks

Source: Estimated from the database of the Agence Française de Développement and World Bank for GDPs.

Region	Number of Institutions	Assets (Billion USD)	Assets (% of Region GDP)	Commitments (Billion USD)	Commitments (% of Region GDP)
Sub-Saharan Africa	85	48.8	2.8%	9.8	0.6%
Middle East and North Africa	33	287.2	6.6%	57.4	1.3%
Central Asia	5	68.4	3.2%	13.7	0.6%
South Asia	26	129.3	3.6%	25.9	0.7%
East Asia and Pacific	79	4,908.7	18.7%	981.4	3.7%
EU-15	66	3,224.0	19.3%	644.8	3.9%
Europe (Non EU-15)	31	113.0	3.6%	22.6	0.7%
Latin America and the Caribbean	81	486.9	9.2%	97.4	1.8%
North America	19	383.7	1.7%	76.7	0.3%
TOTAL	425	9,650		1,930	

As shown in Figure 2, although the creation of NDBs has been a process that has taken more than a century and speeded during Great Depression and the early post-World War II years, the creation of these institutions accelerated in recent decades. The first two decades of the 21st century have been very active in terms of new institutions created, with 143, followed by the last two decades of the 20th century with 120 national institutions. Although the Sub-Saharan Africa region has the highest number of NDBs, it is in the East Asia and Pacific region where more organisms have been created over the past two decades, followed by Latin America and the Caribbean and Sub-Saharan Africa itself.

Figure 1. Creation of National Development Banks by region

Source: Own estimates based on data from the Agence Française de Développement. Eight NDBs without a precise date of creation were excluded.

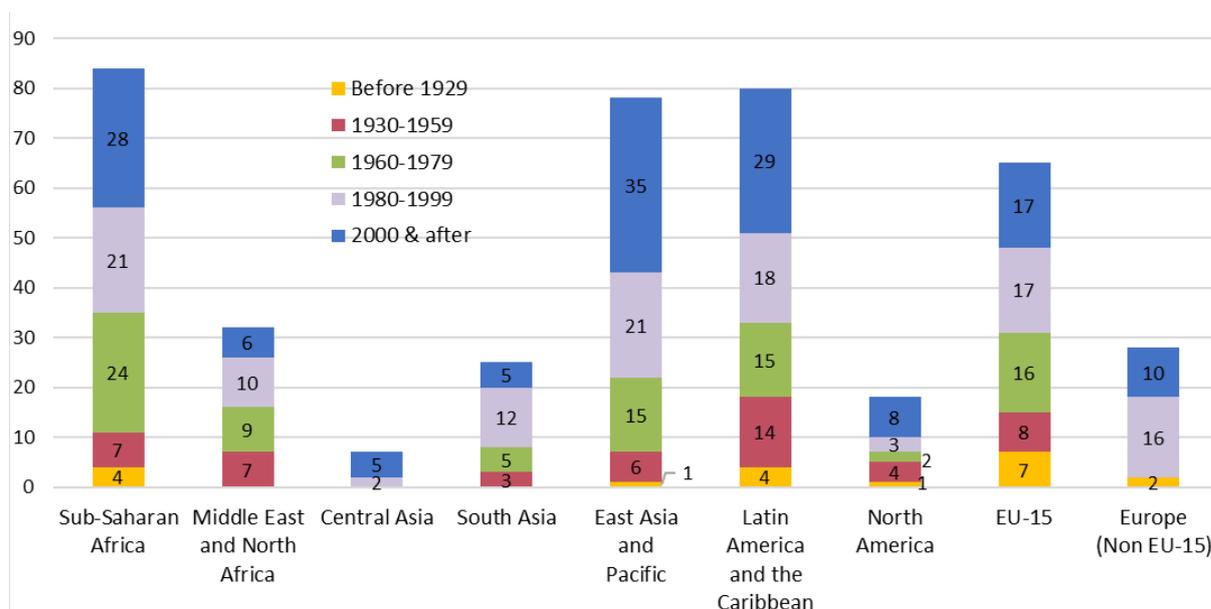


Table 5 shows that the core EU-15 countries and East Asia also have the highest share in the total assets of NDBs at the world level –and by a large margin. It also shows that the banks established in the 1990s have the highest amounts of assets. However, this is particularly so due to the importance of the China Development Bank, which was established in 1994 and concentrates 48% of the East Asia and Pacific region’s assets. The institutions created from the 1930s to the 1950s also have a high share of regional assets, particularly in the EU-15 and Latin America and the Caribbean; in the EU-15, some also go back to the 19th century. In contrast, the banks established during the first two decades of the 21st century, although large in number, as indicated above, concentrate only about 10% of total assets, including a large number of small institutions.

Table 3. National Development Banks: current assets and creation period

Source: Own estimates based on data from the Agence Française de Développement. Eight NDBs without a precise date of creation were excluded.

Region	Current assets of NDB established in the following periods											Assets	
	Before 1900	1900-1929	30's	40's	50's	60's	70's	80's	90's	00's	2010-2020	USD bn	% of total
Sub-Saharan Africa	0.0	5.8	0.0	10.2	4.8	2.5	3.7	9.2	2.4	3.9	6.2	48.6	0.5%
Middle East and North Africa	0.0	0.0	33.3	0.0	34.4	1.0	19.6	43.9	9.8	12.2	132.8	287.0	3.0%
Central Asia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	51.9	5.9	10.8	2.9	71.5	0.7%
South Asia	0.0	0.0	0.0	3.8	0.3	2.8	0.4	97.3	22.7	1.7	0.0	129.0	1.3%
East Asia and Pacific	0.0	80.0	0.0	0.0	446.0	95.2	85.1	57.2	3,853.2	230.6	61.2	4,908.5	50.9%
Latin America and the Caribbean	19.1	0.5	86.8	6.1	298.3	12.7	4.9	0.6	34.3	13.8	9.4	486.6	5.0%
North America	0.0	7.2	21.1	73.8	0.0	257.4	0.0	1.9	0.9	0.1	21.2	383.6	4.0%
EU-15	802.3	181.8	0.0	668.0	256.2	42.0	437.5	97.8	288.9	267.6	181.2	3,223.3	33.4%
Europe (Non EU-15)	0.0	70.3	0.0	0.0	0.0	0.0	0.0	0.0	22.0	5.9	11.4	109.6	1.1%
Total	821.4	345.6	141.2	761.9	1,040.1	413.5	551.2	359.9	4,240.0	546.6	426.3	9,647.8	

The weight of NDBs in different regions heavily depends on some large individual institutions. Table 6 shows the ten institutions with the largest share of assets relative to GDP. Half of them belong to the EU-15 countries, and the rest to the other regions with high shares (China and Korea in East Asia, Brazil, and Saudi Arabia) and only one, interestingly, to Quebec in Canada, that belongs to a region (North America) where neither MDBs nor NDBs play an important role. Furthermore, three of the large European institutions are old (two of them established in the nineteenth century), and the rest of the largest banks are early post-war institutions, with the Saudi Arabian one belonging to the 1970s, at the time most regional MDBs were created in the Middle East, and China Development Bank as the most recent one. This pattern is quite similar to that of the MDBs. As in the multilateral institutions, most major NDBs are owned by the national or local governments, but three of the largest (the Dutch ones and the Italian) have partial private-sector ownership. The dominance of state ownership is confirmed in two World Bank's reports on national development banks: three-fourth in those surveyed in the first report (Luna-Martinez and Vicente, 2012) and 85% in the second one (World Bank, 2018)⁸.

Table 4. Major National Development Banks

Source: Database of the Agence Française de Développement.

Institution	Country	Year of establishment	Assets (Billion USD)	Assets (% of GDP)
Casa de Depositi y Prestiti	Italy	1850	425.1	21.7%
China Development Bank	China	1994	2,355.0	19.1%
BNG Bank Nederlandse Gemeenten	Netherlands	1914	151.8	18.2%
National Development Fund of Saudia Arabia	Saudia Arabia	2017	130.0	16.4%
Caisse de dépôts et Placement du Québec	Canada	1965	257.4	15.6%
Korea Development Bank	Korea	1954	225.7	13.7%
Kreditanstalt für Wiederaufbau (KfW)	Germany	1948	485.8	13.3%
Caisse des Dépôts et Consignations	France	1816	342.5	13.2%
Nederlandse Waterschapsbank	Netherlands	1954	99.2	11.9%
Banco Nacional de Desenvolvimento Econômico e Social	Brazil	1952	220.0	10.7%

⁸ The first report surveyed 90, and the second one 64 institutions.

The views of the World Bank on NDBs played an important role in the historical period we survey. Until the 1970s, the WBG supported, advised and financed several NDBs – “development finance companies”, as they were called by the institution (Diamond, 1965, and Diamond and Gulhati, 1973). The analyses made by World Bank staff at the time underscored several of strengths of the NDBs: their rapid growth, their contribution to the development of national capital markets, their capacity to promote profitable firms, the introduction of project evaluation and appraisal techniques, the stability of their management and staff, and their capacity to weather economic and political storms in the countries where they operated. At the same time, they expressed disappointment that some firms they supported were often dependent on import substitution policies, that the promotion of small firms was minimal, and that some NDBs were too dependent on official financing.

With the rise of the market reform agenda, the World Bank's views radically changed, and the NDBs were increasingly seen as the wrong type of institutions. This was also a period in which several NDBs lost strong national support, and a few were privatized or closed down. An important case is India, where the development banks had occupied an essential place in the financial system in the early decades of independence (Nayyar, 2015). The same is true of Sub-Saharan Africa. Nonetheless, most NDBs survived the opposition to them in the 1980s and 1990s.

In this context, the renewed interest of the World Bank on NDBs over the past two decades – after the East Asian crisis, but particularly after the North Atlantic financial crisis— has been a very positive step. This is reflected in two reports conducted in collaboration with the World Federation of Development Financial Institutions (WFDFI). The first one, prepared in 2012, concluded that “DBs with clearly defined mandates, high corporate governance standards, strong risk management capability, proper regulation and supervision, and a strong management team have been successful” (Luna-Martinez and Vicente, 2012, p. 24). Some did not meet those criteria, and according to this and the most recent survey (World Bank, 2018), they must, therefore, clarify their mandates and strengthen their governance, monitoring and evaluation frameworks, and risk management strategies to reduce delinquent loans. In some cases, they must also reduce undue political interference in their activities.

The 2012 report also indicated that they played an active counter-cyclical role during the North Atlantic crisis, increasing their lending by 36% between 2007 and 2009 vs. 10% in the case of private banks and that they increased lending to old and new customers who faced difficulties in refinancing their loans or receiving new lines of credit. Both surveys confirmed that there has also been an increased interest in creating NDBs in the twenty-first century, as Figure 1 and Table 5 above indicate.

As both reports indicate, the scope of their activities is diverse. Perhaps the most important role is in financial inclusion: “Because of their strong focus on SMEs and individuals not served by other financial institutions, DBs are an essential part of the financial inclusion agenda” (World Bank, 2018, p. 26). Nevertheless, they also operate in several sectors, including supporting regions that private intermediaries do not serve sufficiently and providing infrastructure finance and financing for environmentally friendly projects.

As several contributions of the volume on NDBs by Griffith-Jones and Ocampo (2018) show, NDBs have played a key role in fostering innovation and entrepreneurship in national economies, which is essential to achieve their structural transformation. In particular, Mazzucato and Penna (2018) argue that there is mounting evidence that NDBs have fostered patient, long-term committed finance for mission-oriented investment in innovative activities. In fact, they are increasingly providing long-term committed venture capital for innovation projects. As emphasized in section 2, because these projects are risky and uncertain, and nobody knows the likelihood of success, private finance shies away from supporting them, thus making the role of NDBs crucial. If successful, these projects generate positive externalities, inducing further innovations. In several cases, private investors join NDBs in venture capital funds.

A large share of lending by NDBs is long term: 54% of loans according to the first World Bank survey (Luna-Martinez and Vicente, 2012, Table 1.1). They mix first and second-tier operations, but only a few of them operate exclusively as second-tier institutions –and those are primarily located in Latin America. Their most important role is to mobilize private sector investment, directly or through discounts in their second-tier windows, and provide counterpart private funds for public sector projects. Very few take deposits from the general public. Thus, their funding comes mainly from issuing bonds in the local markets and borrowing from other financial agents, including the international capital market and financial institutions.

The latter include borrowing from the MDBs. According to the most recent World Bank survey, 77% of the NDBs declare that they can obtain official development funds provided by official agencies or multilateral institutions. It details the nature of that funding: “Funding from official agencies or multilateral institutions is long term (usually more than 20 years) and is granted at concessional terms (below market interest rates with grace period, depending on eligibility). Historically, national DBs have been among the main recipients of loans and grants that multilateral DBs provide. DBs borrow funds of multilateral agencies and disburse them to end-clients, directly or indirectly through other financial institutions” (World Bank, 2018, p. 25). This document also mentions IFC’s participation as a partner of a Colombian development bank that promotes infrastructure investment, the *Financiera de Desarrollo Nacional*.

There is no doubt that the cooperation between MDBs and NDBs can be crucial for both types of institutions. However, this relation has not been systematically analyzed, and there is no regular information about how they work together⁹. Interestingly, even in the decades in which there was a conceptual rejection of NDBs, the WBG continued to work with them in several countries and sectors, including infrastructure, financial inclusion, energy efficiency, and traditional areas as agriculture, housing, and export diversification. As the documents quoted in the last two paragraphs indicate, the view of NDBs has become more pragmatic since the recent financial crises. This includes a clear recognition of the counter-cyclical role that NDBs should play alongside that which is now equally accepted in the case of MDBs.

However, broad implicit principles do apply in the relations between the WBG and the NDBs. The first principle is that NDBs should not substitute private financing. Therefore, market failure and the gaps in domestic financing that they should fill should be explicit. Second-tier lending and guarantees may be preferable instruments, as they complement private financial activities. However, first-tier lending may be possible in sectors subject to high risks but also important social returns. In principle, there should be no interest rate subsidies, but in these sectors, subsidized credit could be provided if financed with fiscal resources. Risk-management standards should be high. This is particularly important in relation to the exchange rate risk that NDBs incur when financed in hard currencies by the MDBs. Those risks should be hedged if there are adequate future markets and can also be covered with bond issues in local currencies by MDBs; a third, and possibly common solution, is for the risks to be covered by the central government. Finally, corporate governance standards must be high, taking the OECD standards as a reference. Technical assistance from the World Bank is available in all of these areas.

An interesting alternative for NDBs is their capacity to organize by themselves to reach their development objectives. In this regard, an essential innovation is the International Development Finance Club (IDFC), created in 2011, which comprises 26 institutions, including national, some sub-regional development banks, and a regional one (CAF). Its principal focus is to promote and leverage sustainable development investment worldwide. In terms of their mandate, they aim at members that “can actively contribute to ‘*mainstreaming*’ or ‘*integrating*’ the sustainable development and climate agendas not only within the financial community but also across all sectors, by scaling up and mobilizing finance and helping shape the policies and regulations needed for low-carbon, climate-resilient development. Together, they can facilitate and accelerate the implementation of the Paris Agreement, continuously raising their ambitions” (IDFC, 2020)¹⁰.

9 The analysis in this and the following paragraphs is based with interviews with current and former World Bank officials working with NDBs: José de Luna Martínez, Eva Gutiérrez and Ana María Avila.

10 <https://www.idfc.org/mission-vision/>

IV – Support of MDBs to the mitigation and adaptation to climate change

Mitigation and adaptation to climate change have become relevant issues for the MDBs and NDBs. In recent years, significant efforts have been made to build an institutional structure capable of promoting and financing projects to achieve these objectives. This section will cover the role of the MDBs in these areas. It will also look at the system of environmental financial institutions that have been created for this purpose. Finally, it makes a brief reference to the role and relevance of NDBs.

In general terms, the financing for climate change projects by MDBs have increased rapidly, though from very low levels a decade ago. From 2011 to 2019, the sector's total commitments supporting climate change policies in emerging and developing countries grew from USD 27 to 41 billion (Table 7). In absolute terms, this increase was strongly driven by the WBG. The resources mobilized by the rest of the regional MDBs are less important but, as a group, they exceed those of the WBG. It should be underscored that EIB is also an important player but essentially supports its high-income members. Its climate change financing to these countries reached USD 18 billion in 2019; however, this role would not be analyzed here.

In terms of the share in their total commitments, Table 7 also shows a significant increase. The WBG and IADB showed the most evident upward trend, and EIB a sharp rise at the end of the period. In turn, since 2016, AfDB registered a recovery after a declining trend between 2012 and 2015. The bank that lags is the ADB. (EIB also apparently does, but if we include the commitments with developed country members, the share reaches 33%).

Table 5. Total reported MDB climate finance commitments with emerging and developing countries, 2011–2019 (US\$ Billion)

Source: Joint Report on Multilateral Development Banks Climate Finance, 2011–2019 annual issues.

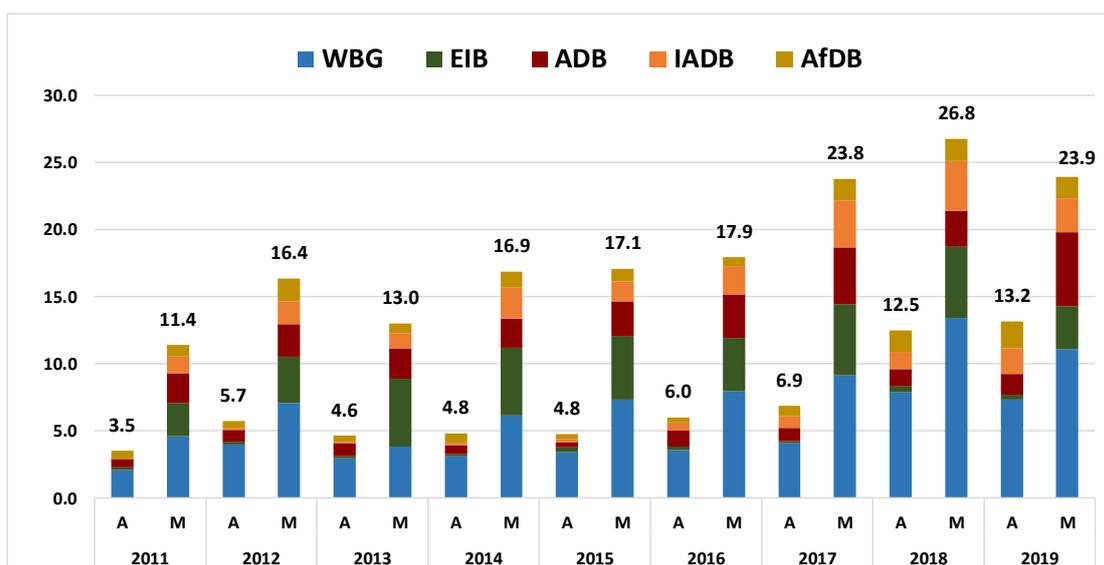
Multilateral Development Banks	2011	2012	2013	2014	2015	2016	2017	2018	2019
PART A: Total reported MDB climate finance commitments (USD billion)									
World Bank (WBG)	10.7	12.7	9.4	11.8	10.7	11.5	13.2	21.3	18.4
Inter-American Development Bank (IADB)	2.2	1.9	1.2	2.5	1.7	2.7	4.3	5.0	4.4
African Development Bank (AfDB)	1.6	2.2	1.2	1.9	1.4	1.1	2.3	3.3	3.6
Asian Development Bank (ADB)	3.2	3.3	3.3	2.9	2.9	4.4	5.2	4.0	7.1
European Bank for Reconstruction and Development (EBRD)	3.7	3.1	3.5	4.1	3.2	3.5	4.6	3.8	3.9
European Investment Bank (EIB)*	5.6	3.7	5.2	5.2	5.1	4.3	5.5	5.7	3.6
PART B: Total report MDB climate finance commitments as fraction of total loan commitments (%)									
World Bank (WB)	19%	25%	19%	20%	20%	20%	24%	36%	30%
Inter-American Development Bank (IADB)	21%	17%	9%	18%	15%	24%	32%	34%	34%
African Development Bank (AfDB)	18%	34%	18%	26%	16%	10%	26%	33%	36%
Asian Development Bank (ADB)	16%	16%	16%	13%	11%	17%	16%	11%	21%
European Bank for Reconstruction and Development (EBRD)	29%	27%	31%	35%	31%	34%	42%	34%	34%
European Investment Bank (EIB)*	8%	5%	5%	5%	5%	5%	5%	8%	5%

*EIB Climate Finance figures are restricted to emerging and developing countries, including economies in transition.

Commitments on mitigation projects –i.e., aiming at reducing greenhouse gas emissions– represented, on average, represented about three-fourths of the total climate finance commitments of the main MDBs. According to the *2019 Joint Report on Multilateral Development Banks, Climate Finance*, the sectors that most benefited by mitigation commitments were transportation, renewable energy, and energy efficiency, with about one-fourth of commitments in each area. Although the WBG has had greater relative weight, the participation of the other MDBs has increased.

Figure 3. MDBs climate finance on Adaptation (A) and Mitigation (M)(USD billion)

Source: Joint reports on Multilateral Development Banks Climate Finance, 2011-2019 annual issues.



In the period analyzed, commitments for adaptation finance different strategies to face the challenges the climate change imposes—specially flooding, extreme climate events, and more intense and frequent natural disasters. The WBG is again the leader in this area, but IADB has gradually increased its share. The main sectors to which financing has been allocated are energy, transport, and infrastructure, which jointly represented 26% of total commitments, followed by water and water-waste systems, and institutional capacity support, with 20% and 14%, respectively.

Given the centrality of the WBG in this area, it is worth looking carefully at its strategy concerning developing countries. It addresses climate change, both directly and indirectly, including in the latter case projects related to agriculture, environmental, and natural resource management. Its adaptation strategy supports projects related to warning systems, disaster response, civic awareness, building strengthening, and post-disaster recovery, among others. The primary rationale is that only when a country has a good adaptation strategy, it can reach good development outcomes. The WBG estimates a \$4 benefit for each dollar invested in resilience over the lifetime of a new infrastructure project (World Bank, 2019b and 2020).

In the Action Plan on Climate Change Adaptation and Resilience, the WBG has set three main objectives: (i) boost adaptation financing, approximately doubling the amount resources into this area in FY 2021–25 in relation to the previous quinquennium; (ii) promote whole-of-government approach, thus including climate risk and opportunities at every phase of policy planning, investment design, implementation, and evaluation; and (iii) develop a new rating system to improve the tracking of global progress on adaptation and resilience.

Disaster management and resilience-building are clear priorities on this agenda. Disasters usually hurt the poor and vulnerable societies in a much higher proportion. Due to the importance of disaster risk management in building more equitable societies, it prioritizes disaster risk management as other vital guidelines in their actions and investments. Specifically, it provides technical and financial assistance for risk reduction, awareness, financial protection, recovery strategies, resilience, and reconstruction. The strategy includes promoting resilient infrastructure, scaling up cities' resilience, strengthening early warning systems, deepening financial protection, building and supporting social resilience, ensuring sufficient response capacity to meet existing and emerging risks, and enabling a resilient recovery.

Regarding the mitigation program, Climate Finance, a significant benefit from the World Bank's point of view is that the shift to a low-carbon resilient economy is that it generates large investment opportunities that will create a significant amount of new jobs –over 65 million globally by 2030 (World Bank, 2019b).

This program gives central importance to the development of climate-smart practices. One of the most relevant goals is helping countries adopt these practices in the agriculture sector, in close cooperation with the research institutes that are part of the Consultative Group on International Agricultural Research (CGIAR). This area includes the design of Climate-Smart Agriculture Country Profiles that help identify the particular characteristics each country has to build more sustainable agriculture and the Sustainable Management of Natural Resources and Climate Change (DACCC). This project is based on having accurate agricultural information and a decision support system.

The energy sector receives special attention. One of the most critical announcements occurred in 2017 when the WBG said they would no longer finance upstream oil and gas after 2019. Since 2010 the institution stopped supporting coal projects. Some figures that exemplify the work that they are doing in clean energy are: "Between FY2014-18, the WB committed \$5 billion to energy access programs, provided more than \$11.5 billion in financing for renewable energy and energy efficiency, and has had an active lending portfolio of over \$350 million in clean cooking and heating projects across 21 countries" (World Bank, 2020). In 2018 it announced \$1 billion to accelerate investments in battery storage in middle-income countries. Their goal is that this investment can be accompanied by another USD 4 billion in public and private financing.

Other areas where the WBG is working to tackle the climate change challenges are: managing natural resources with pollution management projects; food systems with projects to promote fair rewards to the farmers, and healthy and affordable food to consumers; sustainable land management, strengthening resilience and productivity while reducing emissions; improving water resource management, facilitating universal access to water and sanitation, among others; and sustainable and resilient cities.

The WBG is working with other multilateral development banks to have the same approach to monitoring and tracking climate finance flows, and helping countries meet their climate commitments. Furthermore, together with the UN, they are working in the platform Invest4Climate that has the primary goal of articulating national governments, financial institutions, investors, multilateral banks, among others, to back up climate investments in developing countries (World Bank, 2019).

The major regional development banks serving emerging and developing countries have common elements on the agenda and strategies to combat climate change, although they focus on the specific problems and needs of the regions they support. The three banks include objectives such as reducing vulnerabilities, promoting climate resilience, capacity building and knowledge generation to face climate change, risk-sensitive land use management, climate- and disaster-resilient infrastructure design, and disaster response.

These three institutions have documents that set guidelines or strategies to face climate change risks. In the case of AfDB, the Climate Risk Management and Adaptation Strategy (CRMA) aims to ensure African countries maintain progress towards eradicating absolute poverty and steady improvement of people's living conditions despite climate change (AfDB, 2009). Similarly, through the Climate Change Sector Framework Document (CCSFD), IADB sets the most significant guidelines of how the institution is working and dealing with climate change concerns, underscoring that the long-term economic growth and the reduction of poverty and inequality in Latin America and the Caribbean depend on development that is sustainable in economic, social, environmental and institutional terms. In turn, ADB, through Strategy 2030, sets its guidelines to achieve a prosperous, inclusive, resilient, and sustainable development across Asia and the Pacific.

One essential goal is strengthening the institutional framework in terms of policy design, execution, and appropriate legal systems. AfDB, for example, uses some of its resources to help countries develop their climate risk and adaptation strategies, including national sectoral development policies, laws, and regulations related to pollution, extractive industries, and social and environmental development. In a complementary way, AfDB has taken steps towards strengthening the capacity to develop and use the best climate information practices, including on adaptation, to improve climate risk management. In this regard, one of the main initiatives is the ClimDev-Africa Programme, in which AfDB works together with the African Union and the United Nations Economic Commission for Africa.

A common problem is also how to increase resources for climate finance. NCE (2016), for example, states that in the period 2015–2030, around USD 90 trillion in new infrastructure investments will be needed only in Latin America and the Caribbean. Those numbers represent a challenge. According to the CCSFD, to fill the financial gaps, it will be necessary to mobilize new sources of capital, mainly from private sources (IADB, 2018).

To face this problem, banks have adopted different strategies with standard features. They have explored blended finance solutions, such as first loss guarantees, local currency debt (senior, subordinated or contingent loans and bonds), equity (funds, direct equity), and innovative forms of pricing and technical cooperation (performance-based incentives, investment grants, contingent grants). They have partly financed their increasing loans with the issuance of green bonds. As we have seen, all banks have allocated increasing resources for climate change, which have been reflected in the expansion of loan commitments. They also have helped member countries access international climate funds.

Besides the direct role of the MDBs, the support of different environmental funds is also important. Their main objective is attracting resources in the best possible financial conditions, aligning them with the efforts to address climate change, to support developing countries. In this regard, it is worth highlighting the relevance of three institutional mechanisms that have been created: The Global Environmental Facility (GEF), the Green Climate Fund (GCF), and the Clean Technology Fund (CTF).¹¹

The GEF was established in 1992 and has awarded more than USD 20 billion in grants and mobilized more than USD 107 billion in co-financing for more than 4,700 projects in 170 countries. It has different programs and funds: (i) the Small Grants Program (SGP) that provides financial and technical support to civil organizations and communities; (ii) the Special Climate Change Fund, established in 2001, which focuses on adaptation and technology transfer for vulnerable countries; (iii) the Least Developed Countries Fund, established in 2001, which helps countries in this situation to prepare and implement National Adaptation Programs; and (iv) The Nagoya Protocol Fund to promote the economic potential of genetic resources and facilitate the transfer of appropriate technologies; and the Adaptation Fund.

One relevant issue is how the GEF interacts with the MDBs. In this sense, the GEF has 18 partner agencies and decides which agency would be better for developing, implementing, and executing a specific project. In this process, they help governments and the agents involved in the specific projects. The partner agencies include the WBG and the major regional MDBs. In terms of funding, the World Bank plays an essential role as the GEF Trustee. The funding received by donor countries constitutes the GEF Trust Fund, which the World Bank administers. It helps to mobilize resources, disburses funds to other GEF agencies, and monitors the application of budgets and project funds. It is also worth to underscore that to be an eligible country for receiving GEF funding, a country should either ratify the conventions the GEF serves or be considered as eligible to receive WBG financing (IBRD or IDA).

¹¹ See the websites of the three institutions: <https://www.thegef.org/>, <https://www.greenclimate.fund/> and <https://www.climateinvestmentfunds.org/>.

The GCF was established by The United Nations Framework Convention on Climate Change (UNFCCC) in 2010. It focuses on mitigation and adaptation activities in the Least Developed Countries and Africa, where most LDCs are located. It has three relevant features. First, it has a balanced portfolio of mitigation and adaptation investments. Second, it also engages directly with the private sector through its Private Sector Facility, promoting private investment through concessional instruments that include low-interest loans, line of credit to banks, equity investments, and risk mitigators as guarantees, grants, and first-loss protection. Third, developing country partners exercise ownership of climate change funding and integrate it into their national action plans.

The GCF projects are implemented by partner organizations known as Accredited Entities. These entities include MDBs and some NDBs. These institutions' role is to work together with countries to develop ideas and submit funding proposals. As of 2020, the GCF funding reached USD 2.2 billion, and the co-financing efforts have reached USD 7.2 billion. The fund allocated in Africa more than USD 1.3 billion of funding and USD 4.1 billion of co-financing commitments.

The CFT invests in projects and programs focused on transferring low-carbon technologies that help reduce GHG emissions. The beneficiary sectors are power, transport, and energy efficiency. The CFT uses a diverse range of instruments, including grants, concessional loans, and guarantees. Its resources come from nine donor countries (Australia, Canada, France, Germany, Japan, Spain, Sweden, UK, and the US). The allocated resources reach USD 5.7 billion and include more than 150 projects.

Again, it is worth mentioning how the CFT interacts with the MDBs. On the management side, it is governed by the CFT Trust Fund Committee, the MDB Committee, the Partnership Forum, the Administrative Unit, and a Trustee. In this sense, the WBG serves as the Trustee and Administrative unit of the CFT Trust Fund. Regarding CFT investments, the MDBs are in charge of their implementations. The CFT Trust Fund Committee oversees the operations and activities and is formed by 19 representatives, including one from the WBG and another representative from a MDB, decided by the MDB committee. The other representatives come from donor countries (8), eligible recipient countries (8), and one representative from a recipient country under consideration for a project or investment plan for that period of deliberation.

Another critical issue is the role that NDBs can play when it is about tackling climate change. As suggested by Griffith-Jones et al. (2020), the NDBs are in a suitable position to support the reordering of financial flows to meet climate change goals. Their relevance is associated with the fact that they are located in the countries and regions that have to implement the projects, and therefore know their needs and characteristics better. Simultaneously, they can address the challenges that involve long-term investments, with long payback periods or some risk that prevents private investment from flowing naturally. Besides, as we have seen in the previous sections, the resources available to these institutions can more than complement the efforts of the MDBs. They can also turn to climate funds for support. However, to meet successfully with their climate change objectives, the NDBs must meet specific characteristics that would allow them to increase their potential, as discussed in section 4.

This analysis shows that the world has developed a network of financial institutions to support climate change mitigation and adaptation. This network has started to yield important results. However, and needless to say, the scale is still limited, as more broadly, current commitments are still very insufficient to reach the goals set by the Paris Agreement on climate change.

Conclusions

This paper has analyzed the functions that development banks should play and the evolution and regional coverage of the system of MDBs and NDBs. It emphasizes the role of the WBG and the regional development banks that service emerging and developing countries. It also takes a look at the relations between MDBs and NDBs.

The paper starts by identifying the major market failures that development finance institutions must correct: (i) the pro-cyclical bias of private finance; (ii) the information imperfections that characterize financial markets, and the rationing of countries, regions, and economic agents that they generate; (iii) the reluctance to finance high-risk activities, which may hinder the development of innovative activities that are crucial for the structural transformation of economies; and (iv) the underfinancing of activities with high externalities (social services and infrastructure) and public goods (the fight against climate change).

Based on this analysis, the paper proposes seven major functions that the development bank architecture must fulfill: (i) providing counter-cyclical financing; (ii) supporting countries and regions within countries that lag behind in the development process; (iii) supporting social development, particularly of social groups and regions that equally lag behind; (iv) enhancing financial inclusion; (v) promoting innovation and structural transformation; (vi) financing infrastructure investment; and (vii) supporting the provision of public goods, particularly combatting climate change. These functions are interrelated, and involve both international and national objectives. It is, therefore, important to visualize them as integral tasks of the system of development banks.

Most MDBs were created from the mid-1950s until the 1970s, but there have been new institutions, particularly the NewDB and AIIB in recent years. The regional development banks supporting emerging and developing countries have grown faster than the WBG over the past two decades, reflecting the greater sense of “ownership” of the regional institutions by these countries. In turn, EIB continues to be largest MDB.

The coverage of MDBs in regional and sub-regional terms is very heterogeneous. They are particularly important in Sub-Saharan Africa, followed by South Asia and Latin America and the Caribbean. The next regions in terms of coverage are the Middle East and North Africa, Central Asia, and Europe. The region where MDBs are least importance is East Asia and the Pacific. The WBG is crucial for the support of the world’s poorest regions (Sub-Saharan Africa and South Asia). The regional and sub-regional banks play an important role in all regions and the interregional banks in a few of them.

Although all MDBs have played a counter-cyclical function, the WBG –and IBRD in particular– is the most important institution in this area. However, there is a significant contrast between the role given to MDBs during the current COVID-19 turbulence vs. the North Atlantic financial crisis, as there has been no call by the G20 to capitalize these institutions similar to the one they made in 2009. So, although all MDBs have adopted relevant decisions to support their

borrowing members during the current crisis, their response will depend on their capital constraints. The WBG and AfDB have a stronger capacity to respond because they were capitalized in 2018 and 2019, respectively.

In terms of other functions, ADB and AfDB have placed infrastructure financing on top of their agenda, but resources in this area are still limited relative to emerging and developing countries' needs. Social spending plays an important role for the WBG and IADB. Enhancing financial inclusion is relevant to several of them. Support for the production sectors is limited in all cases, but science and technology play a role in several cases. Although, as indicated, the WBG is particularly important in supporting the world's poorest regions, there is no reliable information about the extent to which MDBs support the development of backward regions in the countries they finance.

There is also growing support by MDBs for action on climate change mitigation and adaptation, led again by the WBG, together with EIB in developed countries. Several international environmental funds also contribute to these objectives. This network has started to yield important results. However, the financing scale is still limited and clearly insufficient to reach the goals set by the Paris Agreement on climate change.

The creation of NDBs goes back to the nineteenth century but speeded up during Great Depression and the early post-World War II decades. The World Bank actively supported them until the 1970s but then started to consider them as suboptimal institutions when it embraced the market reform agenda in the 1980s. Despite that, the creation of NDBs accelerated in the late twentieth century –including the creation of the China Development Bank in 1994—and continued in recent decades, although largely of small institutions. After the East Asian and North Atlantic financial crises, the support for NDBs has grown worldwide. This includes the renewed support from the WBG, but if the NDBs complement rather than substitute private financing, use interest rates subsidies in a limited way, and if they have adequate risk management strategies and high corporate governance standards.

The regional coverage of NDBs is quite different from those of the MDBs. The most remarkable feature is the significant importance they have in the core European Union countries (EU-15) and East Asia, followed by Latin America and the Caribbean, and the Middle East and North Africa. In contrast, it is striking the low weight of NDBs in the two most impoverished regions of the world, Sub-Saharan Africa and South Asia, as well as Central Asia, non-EU 15 countries and North America.

The cooperation between MDBs and NDBs can be crucial for both types of institutions, but there has been no systematic analysis of this cooperation, and there is not even regular information about how they work together. In the area of climate change, there is also growing support by the MDBs and global environmental funds to NDBs. However, the scale of financing is still limited.

This analysis leads to four major recommendations. The first one is that the counter-cyclical role of MDBs should be a priority under current conditions, both to mitigate the COVID-19 crisis and to support the recovery of emerging and developing countries. This requires a capitalization of all MDBs, similar to the one that took place in 2009-10. The new MDBs (the NewDB and AIIB) can also play an important role in that process.

Secondly, the policies to support the recovery should be aligned with the SDGs and fulfill the other functions of MDBs indicated above. Their role in promoting innovation and structural transformation and supporting climate change mitigation and adaptation should be enhanced. Their support in all the areas we have underscored should be better monitored, including how they contribute to the development of lagging regions in the countries they finance.

Thirdly, the development banks should operate as a system. Cooperation between MDBs in all these areas is crucial, as well as networking better with the NDBs. The complementarity of the activities of MDBs is important, given the diversity of regional priorities. However, competition among them can help improve the programs they support. An additional priority is better cooperation between the MDBs and the international funds that finance climate change programs.

Finally, cooperation should be reflected in the support by MDBs to advance strong NDBs in the regions which lag behind in developing such national institutions, particularly sub-Saharan Africa and South Asia.

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Appendix 1

Development Bank Commitments by sector (Million US dollars)

World Bank (2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Social	4,123	4,971	3,877	9,961	12,169	8,886	8,524	8,730	7,738	12,075	10,505	8,668	13,731	11,708
Agriculture	2,242	2,340	2,159	4,138	3,154	2,640	4,155	3,390	4,110	4,743	3,471	3,927	4,959	4,321
Industry and T	3,974	3,534	4,052	5,759	3,680	3,226	2,864	3,135	3,233	3,250	5,973	6,095	6,804	5,661
Infrastructure	9,749	11,278	14,163	19,437	25,215	21,661	14,905	13,583	21,263	17,748	22,348	19,211	18,379	15,231
Finance	5,383	5,222	6,443	8,455	16,199	9,073	11,623	13,069	12,925	9,299	8,109	9,324	7,566	8,693
Public Sector †	5,858	5,468	5,296	9,492	10,828	9,673	8,729	7,991	8,838	5,922	6,611	6,708	7,203	8,436
Multisector**	614	82	46	105	166	35	0	0	0	0	0	0	0	0
TOTAL	31,941	32,896	36,033	57,348	71,411	55,157	50,798	49,897	58,105	53,033	57,015	53,927	58,640	54,043

IDB	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Social	1,195	1,228	1,353	2,843	2,580	943	2,241	3,004	2,149	2,445	2,251	958	2,739	943
Agriculture	62	75	567	839	407	465	211	227	150	173	353	288	264	565
Industry and T	261	275	204	82	718	4,666	602	1,875	1,280	1,173	231	957	90	544
Infrastructure	2,465	5,414	4,987	6,443	3,601	183	4,691	4,113	4,603	3,435	2,777	4,272	4,977	5,677
Finance	444	365	2,199	2,352	1,033	1,226	1,024	1,614	2,547	1,479	1,650	1,146	1,540	707
Public Sector †	1,464	407	707	1,719	2,738	94	1,473	2,319	2,227	907	1,470	1,880	2,307	1,226
Multisector**	491	1,206	1,209	1,230	1,629	1,788	1,182	747	588	1,652	532	1,884	1,285	1,251
TOTAL	6,381	8,971	11,226	15,507	12,705	9,365	11,424	13,899	13,544	11,264	9,264	11,385	13,202	10,913

ADB	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Social	370	287	384	387	315	680	372	580	786	1,235	845	921	2,144	1,763
Agriculture	941	169	528	618	739	891	1,075	695	982	916	976	1,525	2,344	2,271
Industry and T	11	112	178	103	3	3	499	19	458	412	552	357	607	576
Infrastructure	3,577	6,090	6,087	5,843	7,599	9,595	7,802	8,733	8,034	9,147	7,519	12,873	12,231	11,929
Finance	1,859	1,160	119	514	1,289	209	1,143	1,246	1,060	2,392	1,607	2,761	1,992	2,160
Public Sector †	228	1,196	2,067	5,363	932	622	1,508	1,520	1,559	2,084	1,755	1,250	2,258	2,945
Multisector**	950	1,764	1,943	1,516	1,638	2,021	624	372	0	0	0	0	0	0
TOTAL	7,935	10,778	11,306	14,344	12,515	14,022	13,023	13,165	12,879	16,186	13,254	19,687	21,576	21,644

AfDB	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Social	368	189	345	358	298	693	807	516	532	826	720	397	245	436
Agriculture	362	282	252	342	105	224	474	660	708	713	1,002	1,159	1,057	1,524
Industry and T	84	257	423	175	289	451	150	0	57	4	0	211	352	122
Infrastructure	1,290	3,052	2,174	6,126	4,010	2,414	2,710	3,158	3,620	4,269	4,721	3,745	5,032	5,287
Finance	745	139	459	1,267	493	1,232	619	444	1,169	1,873	2,516	1,573	1,756	1,262
Public Sector †	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Multisector**	623	161	1,230	3,498	464	1,325	777	707	435	1,093	1,843	1,738	1,681	1,463
TOTAL	3,472	4,081	4,883	11,767	5,659	6,338	5,537	5,484	6,520	8,778	10,802	8,824	10,123	10,095

*Source:

**Multisector:

NOTE 1: Totals may not add because of rounding