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Sustainability and Infrastructure Investment: National Development Banks in Africa

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Introduction

The need for infrastructure finance in Africa is tremendous. A 2009 report by the World Bank[1] suggests that the continent faces needs of US$93 billion per year. More recent studies, pointing to economic and population growth trends and using more sophisticated methods of assessing needs, indicate that infrastructure needs are actually much higher.[2] As one oft-cited example notes, the entire country of Liberia can produce only a third of the electricity consumed by Cowboys Stadium in Texas on game day.[3] To keep pace with the rapid growth and rising aspirations of Africans, a huge infrastructure push is essential. However, it will be equally necessary to focus on sustainable infrastructure, to establish a long-term foundation for environmentally and socially sustainable growth and prosperity.

Existing financing sources have not been able to keep pace. The World Bank report indicates that overall financing as of 2009 was less than half of estimated needs, with a gap of US$48 billion per year. The situation has somewhat improved since then, but the shortfall remains massive. Public sector budgets are constrained by limited tax collection, multiple pressing needs and capacity constraints. External private financing has been growing, but is overwhelmingly directed toward a small number of countries (especially Nigeria and South Africa) and weighted heavily toward telecommunications (64% of total in 2005-2013).[4] Multilateral and bilateral financing is constrained for most sources, although financing from non-traditional bilaterals such as China and India has been rising. With such low investment, sustainability concerns have not been high. For example, only 0.9% of the world's renewable energy investment has taken place in the continent, and nearly half of that has been in a single country (South Africa).[5]

In this context, the role of national development banks (NDBs) in the continent merits attention. As will be shown below, many African countries have NDBs, although the vast majority are quite small, with limited access to finance and short on capacity. A few, however, are more significant players, particularly in infrastructure (notably in Algeria and South Africa), and others are undergoing reforms under governments that see their potential as an additional source of finance and expertise to promote their country's development (such as Ethiopia, Rwanda and Uganda).

The aim of this paper is to provide an overview of the activities of NDBs in Africa, and present two case studies of South African NDBs—Development Bank of Southern Africa (DBSA) and the Industrial Development Corporation (IDC)—that may provide lessons for other NDBs in Africa and beyond. Where data permit, the paper considers general characteristics of the NDBs as well as

1 Foster and Briceno, 2009.
2 Gutman et. al. 2015.
3 Lefebvre, 2013.
4 Gutman et. al. 2015.
5 Infrastructure Consortium for Africa, 2015.

specific information regarding investment in sustainable infrastructure.

Overview of National Development Banks in Africa

To assess the panorama for NDBs in the African continent, this study undertook a desk review of publicly available information. The majority of information came from the websites of NDBs themselves, including downloaded publications (notably annual reports and financial statements), as well as some press reports. Further information was accessed via the Association of African Development Finance Institutions (AADFI) as well as Luna Martinez and Leonardo Vicente (2012).

Twenty-nine NDBs were reviewed in Africa that fit the following criteria (see Annex 1 for list):

- A substantial ownership stake and control by the host government
- Developmental priorities central to mandate
- Not mainly/entirely export promotion
- Not mainly/entirely commercial banking with for-profit orientation

Of these 29, only 20 have a modicum of financial information available, most from 2013 and 2014, but in some cases the most recent information dated from 2009. Two NDBs listed below are still in the process of creation and have not yet begun operations: Nigerian Development Bank and Agricultural Development Bank of Tanzania.

Nineteen of the 29 banks were created prior to the structural adjustment era of the mid-1980s, and the majority of these during the period after decolonization in the 1960s and 1970s. Some, however, have a longer history. For example the Ethiopian Development Bank dates to 1909, South Africa's IDC was created in 1940 and Kenya's Industrial and Commercial Bank Corporation was set up by the British colonial government in 1954. Most of these older NDBs have gone through major restructurings at one or more points in their history. Following the easing of neo-liberal economic policies and an ideological shift towards looking more favorably on state involvement in the economy since the 2000s, a number of new NDBs have been created in recent years, including in Namibia, Sudan, Angola, Mozambique, Nigeria, Tanzania and Zimbabwe.

In terms of ownership, 25 of the 29 NDBs are majority-owned by their respective governments, of which 17 are 100% owned by governments. The only NDBs not majority-owned by governments are two in Nigeria (the Infrastructure Bank Plc and the in-creation Nigerian Development Bank) and the Liberian Bank for Development and Investment.[6]

For those NDBs with a share of non-governmental ownership, shareholders comprised for the most part international development agencies such as Agence Française de Développement,

6 The Development Bank of Mauritius was at last report expected to be privatized, but current information was unavailable.

European Investment Bank, African Development Bank, KfW, and the World Bank. Domestic shareholders mainly include financial institutions such as private banks and pension funds.

Financial Scale

The financial size of African NDBs varies tremendously. At the upper end of the scale are the two main development banks of South Africa – DBSA and IDC – with assets of US$5.8 and US$10 billion respectively in 2014/15, along with the Algerian Fonds National d'Investissement (US$9.5 billion in assets in 2011), the Nigerian Bank of Industry (US$3.4 billion in 2014) and Angola's Banco de Poupança e Crédito (US$2.3 billion in 2014) (Table 1).[7] The smallest NDB for which information is available is the Development Bank of Seychelles, with US$43 million in assets. Average mean asset size is US$1.8 billion, and the combined total assets for all reporting NDBs amounted to US$35.6 billion.

Table 1. Assets and Development Portfolio, Selected Africa NDBs (US$ millions)

	Assets	Loans	Equity Invest
IDC (South Africa)	10000	1800	6700
Algeria Fonds National d'Investissement	9450	6870	7.7
Development Bank of Southern Africa	5800	4900	41
Angola Banco de Poupança e Crédito	2300	948	0
Bank of Industry (Nigeria)	3400	3000	44
Development Bank of Ethiopia	1500	863	0
Industrial Development and Worker's Bank of Egypt	597.6	415	0
la Banque Gabonaise de Développement	356.6	173.5	0.024
Botswana Development Corporation	326		172
Industrial Development Bank of Sudan	272	215.2	40.5
TIB Development Bank (Tanzania)	246	184	4
Industrial and Commercial Bank Corporation (Kenya)	235.4	12	188
Development Bank of Namibia	253	200	14
Liberian Bank for Development and Investments	210	66	0.28
Development Bank of Rwanda	184.8	131.2	14
Swaziland Development and Savings Bank	156	113	0
Infrastructure Development Bank of Zimbabwe	122.8	51.2	1.6
Banco Nacional de Investimento (Mozambique)	75.9	13.5	
Uganda Development Bank Ltd.	68	43.6	0.1
Development Bank of Seychelles	42.3	30.9	0

Source: Latest annual reports or financial statements of all NDBs (2011-2015).

7 These are the most recent years for which data are available. See Annex 1 for details.

Of 19 banks with data, loan portfolios range from a high of US$6.9 billion for Algeria to US$12 million for Kenya's Industrial and Commercial Bank Corporation. Average loan portfolio is about US$1 billion, and total for all reporting banks is US$20 billion. This compares to total outstanding portfolio of the AfDB of US$32.5 billion (end 2014) (US$19.4 non-concessional; US$13.1 billion concessional) and the World Bank's Africa portfolio of US$57.8 billion (US$12.3 non-concessional and US$44.5 concessional).[8]

Infrastructure Involvement

Inconsistent reporting and data limitations make detailed evaluation of the infrastructure involvement of African NDBs impossible. Even from limited data and general activity descriptions, however, it is clear that the majority of NDBs are focused on other sectors of economic activity, and do not prioritize infrastructure finance. Most regional NDBs instead support agricultural activity (both agro-industry and smaller-scale farming), manufacturing (large-scale and SMEs), general commerce, and housing and business construction. Two-thirds of NDBs considered here do not invest in infrastructure at all, or have only a minimal participation (20% or less of portfolio or annual commitments).

On the other hand, two of the three largest NDBs in the region—DBSA in South Africa and Fonds National d'Investissement in Algeria—focus almost exclusively on infrastructure, with over 90% of their portfolio and/or commitments in this sector. The largest NDB, the IDC, is also substantially involved in infrastructure with 34% of its new project approvals allocated to infrastructure in 2015. Others with substantial involvement in the sector include Mozambique's Banco Nacional de Investimento (85% of portfolio),[9] the Development Bank of Namibia (55% of annual commitments), Infrastructure Bank of Zimbabwe (40% of portfolio), and the Liberian Bank for Development and Investment (36% of portfolio). However, these NDBs have small total portfolios, meaning their total infrastructure activity is quite modest.

In lieu of more solid data, back-of-envelope calculations suggest that roughly US$11 billion of the reported US$20 billion in outstanding loan portfolios (from 20 reporting NDBs) are in the infrastructure sector. Of that, the vast majority comes from just three NDBs: DBSA and IDC in South Africa and Fonds National d'Investissement in Algeria.[10]

8 Includes all loans to continental Africa, which is for the World Bank divided into two separate regional units: "Africa" and "Middle East and North Africa".

9 Nigeria's Infrastructure Bank Plc presumably has a substantial infrastructure portfolio, but data were not available.

10 Neither IDC nor Fonds National d'Investissement report its outstanding loans by sector (only annual approvals); therefore it is not possible to sum the three NDBs' outstanding infrastructure portfolio. DBSA's portfolio amounted to US$4.3 billion in 2014.

Considering the huge infrastructure gaps in many African countries and the rhetorical priority placed by governments on filling these gaps, it may appear surprising that most regional NDBs are not more focused on infrastructure provision. However, a number of reasons may help explain this situation:

- Infrastructure finance requires a degree of expertise in evaluating and helping prepare projects that many NDBs do not have. In the riskier and less economically developed contexts of many African countries, clients require technical assistance to adequately decide if a project is viable, and if so, to undertake thorough project preparation. Without this capacity, many potentially high-impact and high-return projects cannot get off the ground.
- Major infrastructure investments require considerable up-front capital that smaller NDBs simply cannot afford, particularly combined with the relatively high risk of project failure. This would lead to an excessive and risky portfolio concentration in a small number of projects, with a high potential for ending up on the government budget in case of problems. Larger NDBs operating in more advanced African economies—such as Algeria and South Africa—are better able to manage these risks.
- Smaller NDBs likely find it more effective and less financially risky to invest resources in safer sectors such as commerce, housing construction, small businesses and the like. This allows their portfolio to be more diversified across sectors and geographic regions, and poses less risk in terms of repayment compared to greenfield infrastructure projects.
- In light of the above, many African countries likely find it more practical to seek external financing for infrastructure projects, and direct NDBs to operate in other economic sectors. At the same time, this has some drawbacks:
    - External resources are limited, and guided in many cases by priorities that do not always match those of the local governments.
    - Major development lenders such as the AfDB, World Bank or traditional bilaterals sometimes require complex, costly and time-consuming safeguard and procurement procedures that some governments object to and which can delay project advancement.
    - Other, newer lenders such as Chinese and Indian bilaterals are more likely to use country systems, but have been known to impose other restrictions related to labor and materials that can limit the development impact of the project.

Sustainability Criteria

Publicly available material on NDB websites and (where released) annual reports is inadequate to make a detailed assessment of how African NDBs employ sustainability criteria in the selection

and implementation of projects in general, and specifically in the infrastructure sector. Judging by rhetorical emphasis, however, it is evident that environmental and climate considerations are quite a low priority for most NDBs in the region. Rather, the focus is clearly on job creation, stimulus to non-commodity oriented manufacturing, SMEs, and the agricultural sector. In light of the difficult economic contexts in which most banks operate, and the urgent need to stimulate economic activity to alleviate very high levels of poverty, this is understandable and to a degree unsurprising.

Excluding South Africa's IDC and DBSA (discussed in more detail in the following section), only nine of the remaining 27 NDBs make any mention on their website or in the annual report of environmental considerations in either selecting which projects to support or how projects are implemented. Of these, only three—Botswana Development Corporation, Development Bank of Namibia, and Development Bank of Rwanda—offer any sort of detail on sustainability policies.[11]

In terms of evaluating project environmental impact, the most detail is provided by Development Bank of Rwanda, the annual report of which states that all projects approved in 2014 were required to produce an environmental evaluation, and that 75% of projects did so (while the remaining 25% need to complete it during disbursement). For the 15 out of 238 projects considered to be "high risk", the report states that mitigation measures are being undertaken, with no further details provided. Both Botswana and Namibia's NDBs also require environmental evaluation of projects considered to have a likely impact, while the Uganda Development Bank states that environmental assessments are required, though with no further information.

In no case do the environmental assessments appear to be made available to the public, and no information is publicly available on the criteria or processes used for undertaking them, as is commonly the case in the major multilateral development banks. As a result, the public of each country appears to have little ability to even obtain information on the environmental impact of its NDB activities, much less recourse to ensure adequate mitigation measures.

Regarding project selection, only Botswana's NDB gives explicit detail on how environmental issues are taken into consideration, including refusing to directly support projects deemed be environmentally harmful and giving priority to businesspeople using clean technologies and renewable energy. Other NDBs in Algeria, Ethiopia, Mauritius and Namibia support low-carbon technologies by financing renewable energy projects (notably hydro and solar) as well as in the case of Algeria a major expansion of the rail transportation network.

Sources of Funding

One of the key challenges faced by all NDBs is where to access resources for on-lending. The

11 Development Bank of Zambia states that it is in the process of designing environmental and social safeguard policies and monitoring framework, which are to be completed in 2015.

characteristics of funding are essential to allow NDBs to successfully undertake their development mandate while maintaining financial sustainability. Among the key characteristics are:

- *Price and maturity*. Funding development projects, particularly in less-developed countries, in many cases requires below-market interest rates, as local market rates are often so high as to make projects unviable. Maturity is also an important consideration, as many projects—notably infrastructure facilities—require long-term lending, and NDBs must protect themselves against asset-liability mismatches and thereby avoid excessive short-term borrowings.
- *Stability and scale*. An NDB's ability to undertake a strategy in support of government development plans requires a steady flow of resources on which it can depend, to make medium-range decisions on lending plans. NDBs also need sufficient quantities of financing to have meaningful impact.
- *Non-financial conditions or restrictions*. Official financing sources—either directly from the government or from external sources—are often attractive in financial terms, but come with certain "ties". Sometimes these are explicit rules on where the resources can be dedicated (especially sectoral allocations, depending on the priorities of the source), or implicit political influence. These can hamper the ability of an NDB to effectively achieve development goals.

NDBs have four main sources of financing: i) deposits; ii) government budgets; iii) soft loans from external sources; and iv) hard-term financing (bank loans or capital market bond issues). Each of these has trade-offs related to the above characteristics. The 17 NDBs in Africa for which detailed liability information is available have opted for greatly varying mixes of financing sources, depending on a combination of institutional strategy and domestic economic and political realities.

In terms of share of total funding for all reporting NDBs combined, the largest share comes from hard-term lending. This is driven mainly by the two South African banks, DBSA and IDC, which are two of the three largest NDBs in Africa and which raise the majority of their resources through bank loans or bond issues in the domestic market. This is a realistic option for South Africa, due to the depth of its local banking system and capital market. Outside of South Africa, this is less feasible due to the very high cost and limited volume of financing available in local banking and capital markets. Botswana and Namibia's development banks also rely on market-based funding (including nearby South Africa's capital markets). The Industrial Development and Worker's Bank of Egypt and the very small Development Bank of Seychelles also utilize market-based funding to a substantial degree.

The second-largest source for funding is regular direct contributions from owner governments—a strategy used heavily or even exclusively by several larger NDBs, including Algeria Fonds National

d'Investissement, Angola Banco de Poupança e Crédito, Development Bank of Ethiopia, and Bank of Industry (Nigeria). While this has advantages in terms of low financing costs, it also means that the NDBs are essentially becoming implementing agencies of governments, which begins to undermine the rationale for their existence compared to a line ministry. As well, it opens up these NDBs to much more political influence on lending, which can undermine their development impact, and is vulnerable to changing government priorities and fiscal health. Such an approach can be successful if an NDB is also able to catalyze private sector involvement in a way that line ministries cannot, and/or offers a high degree of project expertise.

Many NDBs have also received considerable government resources either via injections of new shareholder equity, removal of bad loans from NDB balance sheets, or other techniques not listed on the liability side of the balance sheet. Hence, the role of government funding is actually considerably larger. As well, the government guarantee—explicit or implicit—on NDB borrowing is a further financial support, and should be (but in many cases is not) listed as a contingent liability on the government's accounts.

Several NDBs—including TIB Bank in Tanzania, Industrial Development Bank of Sudan, the Swaziland Development and Savings Bank, the Liberian Bank for Development and Investment, and the Industrial Development and Worker's Bank of Egypt—raise 40% or more of their funding via customer deposits.[12] On the one hand, deposits can recycle a stable pool of local savings at relatively low cost (domestic savings accounts frequently pay quite low interest rates) and without the risks and conditions associated with external borrowings. They may also result in the banks playing a role in promoting financial inclusion. On the other hand, amounts can be limited (especially in less developed countries where many citizens have limited savings and are less accustomed to using financial institutions). As well, this strategy requires NDBs to develop a retail account infrastructure, including branch locations, ATMs and the like, which can be a distraction from the NDB's development mission and unfairly compete with the rest of the banking system (due to the implicit or explicit government guarantee).

A final source of external funds for an NDB includes soft loans from external development organizations, frequently bilateral agencies or multilateral development banks. These are often at concessional interest rates, which is attractive, but are of limited size and frequently earmarked to specific sectors, which can limit an NDB's operational scope. Almost all NDBs reviewed here access some soft loans, but some rely on these resources particularly heavily, such as the Uganda Development Bank (68% of liabilities), Development Bank of Seychelles (42%) and Development

12 Infrastructure Development Bank of Zimbabwe has 57% of it liabilities in deposits, but these are not retail customers but rather the deposits of government institutions and official pension funds, meaning these are actually back-door government funding.

Bank of Rwanda (36%). Many of the smaller NDBs for which data is not available are likely to also access substantial soft loans from external development agencies.

At least three NDBs—Kenya's Industrial and Commercial Bank Corporation, Banco Nacional de Investimento in Mozambique and (to a lesser degree) the Development Bank of Namibia—limit their fundraising entirely and rely mainly on equity capital for their operations. This frees the NDBs from problems of cost and external influence, but it greatly restricts their operational scale, as shareholder equity is limited.

The Industrial Development Corporation[13]

This case study of the Industrial Development Corporation is divided into three sections. The first section reviews the governance structure and financial operations of the IDC. The second section discusses the IDC's activities in regard to infrastructure. The third section describes its efforts to make its operations more sustainable.

Governance and Financial Operations[14]

The Industrial Development Corporation (IDC) was created by statute in 1940. Its mandate was to develop industrial capacity, particularly manufacturing, in South Africa. Its focus has always been on funding and developing the private sector in South Africa. However, it interprets this mandate broadly so that it includes funding infrastructure that supports the private sector. In 1990 its mandate was updated, again by statute, to include industrial development in Africa. It should be noted that it is expected that its operations in the rest of Africa will have some link to industrial development in South Africa.

The IDC was established as a state owned enterprise and it is still wholly state owned. Thus, its only shareholder is the South African government, represented by the Department of Economic Development. The Minister of Economic Development appoints the directors of the IDC, who can number between 5 and 15. It currently has a 13-member board of directors, of whom 12 are non-executive directors. The current board includes private business people as well as one trade unionist and one representative of government (a senior official in the Ministry of Trade and Industry). Formally, the Board appoints the chief executive officer of the IDC but, informally, this appointment will need the approval of the Minister of Economic Development.

The IDC publishes an annual report that complies with current South African corporate reporting standards, as set out in the King III Code, a voluntary standard

13 General information on the IDC is available at: http://www.idc.co.za/ (last visited 15 December 2015).
14 The information in this section is drawn primarily from the IDC's annual integrated reports for fiscal years 2014 and 2015.

for good corporate governance used by publicly traded companies in South Africa.[15] Thus its annual report includes audited financial statements, general information on its operations and information on the social, environmental and governance aspects of its operations. Its financial statements are audited by independent private auditing firms.

The IDC defines its mission as:[16]

> "The Industrial Development Corporation is a national development finance institution whose primary objectives are to contribute to the generation of balanced, sustainable economic growth in Africa and to the economic empowerment of the South African population, thereby promoting the economic prosperity of all citizens. The IDC achieves this by promoting entrepreneurship through the building of competitive industries and enterprises based on sound business principles."

It fulfills this mission by providing debt and equity financing to mining, manufacturing, and industrial infrastructure. Its priorities are industrialization and transformation within the context of the government's industrial policy. This means that it gives priority to private sector projects that are job creating, projects that create industrial linkages and projects that promote black industrialists, women and youth entrepreneurs, and community development.

The IDC has been fully self-sustaining for a number of years. It had capital and reserves of R89.8 billion at the end of fiscal year 2015, of which reserves accounted for about R49 billion. This was down from capital and reserves of R106.8 billion in 2014, of which reserves accounted for about R68 billion and from capital and reserves of R96.8 billion in 2013. Its total assets at the end of FY2015 were R122.3 billion, which was down from R138.6 billion in 2014 and R126.9 billion in 2013. Its revenue in 2015 was R19.6 billion, which was a 2% decline from revenues of R20 billion in 2014. This revenue came from its investments in manufacturing and mining, fee income, interest on other investments and dividends from its equity investments. It earned an operating profit of R1 billion in 2015, which was down from R2.5 billion in 2014 and 2013. After adjusting for additional investment income and taxes, the IDC earned a net profit in 2015 of R1.7 billion, R1.6 billion in 2014, and R2 billion in 2013.

The IDC funds itself through its capital, retained earnings and debt. In 2015 its total debt was R24 billion, up from R21.4 billion in 2014. Domestic borrowing[17] accounted for about R16 billion of this total in 2015 and about R14.9 billion in 2014. About R8.5

15 The King Code of Corporate Governance for South Africa 2009 (Institute of Directors, Southern Africa) available at: http://www.ngopulse.org/sites/default/files/king_code_of_governance_for_sa_2009_updated_june_2012.pdf (last visited 15 December 2015). King III requires companies to publish integrated reports that address environmental, social and governance issues as well as financial issues.

16 IDC Corporate Profile 2014, available at: http://www.idc.co.za/ir2014/introducing-the-idc (last visited 15 December 2015).

17 The IDC has been rated as Baa2 by Moody's and AA+ by Fitch.

billion was raised through three, five and ten year bonds, issued on the South African domestic bond market. These included bonds placed to fund green initiatives with the Public Investment Corporation (total about R2 billion) and with the Unemployment Insurance Fund to fund job-creating projects (total about R4 billion) and a public bond valued at R2.5 billion. The remaining funds were borrowed from domestic financial institutions. In addition, the IDC continues to borrow from its "traditional" external sources, which include other development financing institutions, such as Proparco, African Development Bank, KfW, Agence Francaise de Developpement, European Investment Bank, China Development Bank, and commercial banks. Approximately R8 billion was raised from these sources in 2015 and about R6.4 billion in 2014. Overall, its debt/equity ratio deteriorated from 20.1% in 2014 to 26.8% in 2015.

During FY 2015, the IDC, which has 825 employees, approved funding of R11.5 billion (R11.1 billion in 2014), and its disbursements were R10.9 billion (R11.1 billion in 2014), of which 46% were in manufacturing, 34% infrastructure and 20% mining. Total loans and advances were equal to R22.4 billion, net of repayments, in 2015 and total investments, net of equity divestments and preferential share redemptions, were R28.2 billion in 2015 (the respective totals in 2014 were R20.8 billion and R28.1 billion). In FY 2015, the IDC approved 210 transactions (up from 196 in FY 2014).

While the IDC remains financially sound and profitable, it is experiencing some financial challenges. Its level of impairments has increased from R5.4 billion in 2011 to R10.2 billion in 2015. Non-performing loans increased from R4.7 billion in 2014 to R5.4 billion in 2015, an increase of 16%. Despite this increase, non-performing loans have remained at about 22% of the total loan book for the last three years, due to the overall growth of the portfolio. On the other hand the IDC's written off debt increased from R519 million in 2014 to R1.4 billion in 2015, mainly due to problems in the textile and forestry sectors.

During FY2015, the IDC improved its efficiency. In FY 2015, according to its 2015 annual report, its goal was to reduce its administrative costs (including grants and donations and excluding impairments) from 77% of its net interest, fee income and dividends to 67%. In the end it actually managed to reduce the ratio to 50.9%. It also improved the turn-around time for transactions from 17 working days to 14.3 working days.

IDC and Sustainable Infrastructure

The IDC has an expansive definition of infrastructure because it classifies infrastructure and services together.[18] The result is that the R3.9 billion invested in 2015 in infrastructure consists of

18 See Section 5, IDC 2015 Annual Report, for information on the IDC's investment in infrastructure and services, available at: http://www.idc.co.za/ir2015/material-matters/impacting-on-industrial-development (last visited 15 December 2015).

media and motion pictures and recreational activities (R150 million); hospital activities (R209 million); waste recycling (R137 million), wholesale, retail and business services (R115 million); telecom (R86 million); transport and warehousing (R497 million); monetary intermediation (R491 million); tourism facilities (R129 million); construction (R29 million); production and distribution of electricity, gas and water (R2 billion).

The IDC has two dedicated infrastructure policy units which report to both the Presidential Infrastructure Coordinating Committee (PICC) and to the IDC Board and Executive Committee. These units are responsible for fulfilling the IDC's role as the coordinating agency for two strategic infrastructure projects, the Saldanha-Northern Cape Development Corridor, and the development of initiatives aimed at greening the local economy, and for identifying local industrial development opportunities across the 18 projects identified as strategic infrastructure projects by the PICC.

The IDC is active in promoting green industry and green energy. Its total green energy portfolio is valued at over R15 billion. This consists of a R500 million Green Energy Efficient Fund, which is now 39% committed; renewable energy (R12.9 billion/81% of the total) energy efficiency (R0.4 billion/3%) fuel based energy (R1.2 billion/7%), and biofuels (R1.4 billion/9%). It has participated actively in South Africa's Renewable Energy Independent Power Producers Programme (REIPPP), which to date has involved three rounds of project authorizations. This programme is aimed at increasing the use of renewable sources of energy, primarily solar and wind energy, in South Africa's energy mix and at providing a way to incorporate the private sector in the generation of power in South Africa.

Overall, the IDC has participated in a total of 22 successful projects during REIPPP rounds 1, 2 and 3. These projects, when completed will produce a total of 1,408 MW of power. It should be noted that the IDC's participation in REIPP declined significantly in 2015. Its total investment in REIPPP over five years has been R14 billion, of which only R348 million was invested in 2015 versus R6.6 billion in 2014, R2 billion in 2013 and about R4.5 billion in 2012. The funding for IDC's participation in the REIPPP was supported by the green bond issued to the Public Investment Corporation, which was ring-fenced for this purpose. One reason for the decline in IDC participation in round 3 of REIPPP was that it had less funds available after participating in the first two rounds. However, this decline is also consistent with the IDC strategy of helping start new and innovative activities and then withdrawing from them as the private sector takes over the activity.

Although, the IDC is withdrawing from funding the REIPPP, its participation in renewable energy has not declined. It is also participating in 14 projects that are part of the government's small IPP programme, which involves renewable energy projects with a capacity of 1-5 MW. In addition, the IDC is participating in non-REIPPP energy projects with a combined installed

capacity of 1,265 MW across solar photo-voltaic, wind, hydro power and concentrated solar. This includes two concentrated solar projects under construction in the Northern Cape Province, which will contribute towards local economic upliftment. It is also involved in biogas, waste-to energy and cogeneration projects.

It is important to note that all renewable energy projects include local communities as shareholders through community trusts in which they hold equity. The community trust receives dividends over 20 years and is responsible for investing this for the benefit of community. The IDC also works to educate the community about how to manage this investment and to effectively utilize the dividends for the development of the community (see Box 1).

Another area in which IDC has been active is information and communication technologies, including broadband infrastructure, digital migration, e-waste and demand side management, and electronics. For example, it is supporting a wireless and broadband infrastructure project in Soweto.

The IDC is an active investor in infrastructure projects in the rest of the African continent, with total exposure of R7.5 billion in 60 projects in 20 countries. These projects are chosen on the basis of their economic merit and their developmental impact on the host country and on South Africa. This means that these projects should promote procurement of South African goods and services. Examples of the projects being supported by the IDC are: infrastructure projects in Ghana (power generation, telecoms), Kenya (power generation). Mozambique (power generation), Namibia (power generation), Nigeria (telecom), Senegal (airport and seaport), Sudan (water infrastructure), Uganda (infrastructure), Zambia (coal-fired power plant), and Zimbabwe (telecoms). These projects have experienced significant challenges including slow uptake by South African companies on the procurement opportunities, cost overruns, and implementation problems. The IDC has also had a problem identifying bankable projects across the continent.

Box 1. Community Trusts at IDC and DBSA: Using Finance to Build Community Support

Both IDC and DBSA are incorporating a unique financial mechanism into their REIPPP projects: community trusts. The trusts give communities where projects are being built a stake in their success, by helping finance the purchase of an equity share of the project for the community. The trusts have the potential to engender broader social support for the project among the local population—thus limiting potential social conflict that could undermine project success—as well as to generate financial revenue for the community that can be used to address social needs. Although the community trusts are at an early stage of implementation in South Africa, they could provide a useful model for other NDBs, particularly those operating in sectors or regions that have experienced social tensions around infrastructure projects in the past.

The basic principle is that a local community where a project is planned creates a trust, for which the community itself is the sole beneficiary. When IDC or DBSA provides financing for an REIPPP project, at the same time it makes a loan to the community trust for the purchase of a modest equity stake in the project. The loan has a grace period covering the time needed to get the power facility built and operating, and then most of the revenue the trust receives when the facility is operational is used to pay off the loan. When the loan is repaid, further revenue goes to the trust and can be used as the community chooses.

IDC provided details of a typical community trust arrangement, which is similar to the arrangements used by DBSA. The terms of the IDC community trust loan is 17 years, even though the power purchase agreements (PPA) associated with the REIPPP projects have a life of 20 years. The community trust is required to pay the IDC 80-90% of the revenue stream that the community trust receives from the project. Thus, the community gets 10-20% of the revenue stream from the time the project begins generating a revenue stream. If all goes to plan, IDC will have been fully repaid by year 17 and the community will receive 100% of its share of revenues, corresponding to its equity stake, generated in years 17-20 of the PPA. It should be noted that the expected life of a REIPPP project is 30 years. Thus, assuming the PPA is renewed, the community will also get another 10 years of revenues.

To date, only some of the round 1 REIPPP projects are operational. They have been operating for 1-2 years and so a well-developed record of how the community trusts function is not yet available. Nonetheless, a DBSA senior staffer indicated that DBSA intends to continue using the trust model moving forward, including in projects beyond REIPPP.

One important issue for an NDB is to impose sufficient safeguards to protect its financial commitment, without unduly burdening the beneficiary community. The NDB will need to strike this delicate balance in dealing with the risk of non-payment arising from two situations. The first is if the project fails, and the community's equity in the project becomes worthless. In this situation, the NDB will have limited or no ability to oblige the community to repay the original loan. The second risk is that the project, during its first 17 years of operations, generates less revenue than anticipated so that the community derives no or less benefit from its investment than it expected but the NDB continues to receive most of all of its expected repayment. This will create a sensitive reputational problem for the NDB and, unless addressed in the loan agreement may result in the NDB being forced to restructure the loan. One way to mitigate these risks is a thorough evaluation of the project's viability in the first place.

The IDC's Approach to Sustainability[19]

Sustainability is an important consideration for the IDC because it seeks to act consistently with government policy, which includes promoting the green economy. Thus the IDC will factor sustainability considerations into its decision on which projects to support. The IDC views sustainability as "economic and social development that does not erode social and environmental value."[20] It recognizes that failure to act effectively to address these issues can have negative reputational consequences.

Based on its mandate, the IDC considers a range of factors in its decision making process. In addition to a concern with enhancing economic and financial capital, the IDC is interested in enhancing human capital in its business partners, natural capital by reducing the negative impact of its operations on the environment and by promoting environmental stewardship to its business partners, and social capital through promoting effective governance and ethical conduct, customer satisfaction and community spending in line with the developmental priorities of the country. This means that among the issues it considers in assessing projects are the amount of local content in project inputs, job creation and the extent to which the ownership of the project includes historically disadvantaged individuals and communities. In addition, it seeks to mitigate the social and environmental risks associated with its projects through stakeholder engagement, its environmental health and safety procedures and its monitoring of the social and environmental impacts of the project. Given the range of factors that the IDC considers in making a decision on which projects to support, it is difficult to ascertain exactly how much attention is given to sustainability considerations. It has been suggested that these considerations are more likely to affect the pricing of the IDC's funding for the project rather than the decision of whether to fund or not. However, we have not been able to find evidence to either support or refute this contention.

The IDC has a small environmental and social unit (ESU), consisting of six full time staff members and two interns, tasked with assessing the social and environmental impact of its operations. It uses an environmental and social framework to screen for risks such as human rights, social and community issues, energy and water. The framework is applicable to both pre-investment due diligence and to post-investment monitoring of projects. The framework involves a check list of risks like child labour, HIV, community impact, retrenchment policies, biodiversity, energy, water and air pollution. The IDC utilizes this check list in doing its due diligence assessments of projects. In addition, it uses the list in its annual assessment of its clients' compliance with environmental and social requirements. The ESU uses a four-point scale in which 1 is excellent and 4 is breach of obligations to IDC in applying the framework. In its most recent assessment,

19 The information in this section is based on the IDC's integrated annual reports for FY2014 and 2015 and interviews with IDC staff.

20 2014 Integrated Report, p. 95, available at: http://www.idc.co.za/ir2014/images/pdf/ar2014.pdf (last visited 15 December 2015).

54 of its 60 clients received good ratings and six required remedial action. The work in this area is overseen by the board's Risk and Sustainability committee. It also follows GRI guideline 4 in preparing its integrated report, which also complies with King III rules.

It should be noted that the IDC is working to incorporate sustainability considerations into all aspects of its operations, including the approval process. The approval process begins with a project assessment, which involves an extensive due diligence. Since the IDC provides equity financing to start ups for which debt is not yet an option through to projects that are only looking for debt financing, an important consideration in the due diligence is an assessment of the economic merit of the venture. This involves assessing the technology to be used in the venture, the market for the venture, its management, governance arrangements, the economic and financial case for the venture, its legal risks, as well as the environmental health and safety aspects of the project and the extent to which it meets the IDC's transformation concerns.

Depending on the size of the project, the due diligence may involve consultations with outside stakeholders. In 2014, the IDC developed and began implementing a stakeholder engagement strategy. In this strategy it identified the following as its key stakeholders: the Minister of Economic Development, its sole shareholder; Board of Directors; employees; clients; subsidiaries and associates; national, provincial and local government departments; general public and the media; co-investors and co-funders in its operations, and funders to the IDC; industry bodies, associations and chambers of commerce; other state-owned enterprises; regulatory bodies; communities, NGOs and academic institutions. The strategy requires managers to submit reports every six months on their stakeholder engagements.

The due diligence study, depending on the size and importance of the project will involve a number of different reports that will be developed by a team of IDC officials, including officials from the sustainability division. These reports will be submitted to a series of IDC management and board level committees with the level of the decision making committee depending on the size and significance of the project. Thus, the project reports, which will have been prepared by all divisions involved with the project plus the overall report prepared by the project champion, will be submitted to a Credit Committee, which consists of senior management officials, including from the sustainability division. This committee will review the reports and, if the project falls within their mandate, make a decision on whether to invest or not. If it exceeds their mandate, they will refer the project reports with their recommendation to the Special Credit Committee, which consists of the IDC executive, including the executive responsible for sustainability, and some outside parties. If the project falls within the mandate of the Special Credit Committee, they will make a decision on whether to fund the project or not. Once again sustainability considerations can be raised in the decision-making process. Finally, for the largest and most significant projects, the Special Credit Committee will submit the reports and their recommendation to the Board

Investment Committee, which will make the final decision.

Once the decision is taken to support the project, the IDC will negotiate the necessary contracts with the client. These contracts will contain both pre-conditions and covenants to deal with the various aspects of the project including sustainability considerations.

It should be noted that the IDC is concerned with promoting ethical conduct in all its operations. As a result, the following board committees are all involved in ensuring that its operations comply with high ethical standards: Investment, Human Capital and Nominations; Audit; Risk and Sustainability; Governance and Ethics. It should also be noted that the IDC does not have different approval processes for South African projects and projects in the rest of Africa. However, risk profiles and assessments of projects may lead to different outcomes for similar projects based on the location of the project.

The IDC is not a signatory to any of the existing standards applicable to project financing, such as the Equator Principles. However, it is a member of the UNEP-Finance Initiative (http://www.unepfi.org/), which is a global network of financial institutions seeking to better understand the impact of social and environmental factors on financial performance, and of the Association of African Development Financing Institutions (http://www.adfi-ci.org/). It is required to comply with the AADFI's Prudential Standards and Guidelines for Development Financing Institutions and any other standards that it may develop. It is important to note that that the Prudential Standards do not deal with the issue of sustainability in any significant detail.

Development Bank of Southern Africa

The Development Bank of Southern Africa (DBSA) was established in 1983, and is fully owned by the South African government. It was first created during the apartheid era, and its basic statutes and mission were overhauled in 1997 through new legislation as part of the transition to democratic rule in South Africa. DBSA is unusual among NDBs in its very strong focus on basic infrastructure.

The bank's primary mission is to promote infrastructure development in South Africa and, secondarily, to the countries of the Southern African Development Community (SADC).[21] More specifically, DBSA focuses on providing financial support to expand i) social infrastructure (the delivery of basic services) and ii) economic infrastructure (to eliminate capacity constraints and optimize economic growth potential).[22] Lending is focused primarily on South Africa's 283 municipalities, public utilities, and state-controlled entities in other SADC countries.

21 The SADC currently has 14 members apart from South Africa: Angola, Botswana, Democratic Republic of Congo, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, Swaziland, Tanzania, Zambia and Zimbabwe.

22 Website, http://www.dbsa.org/EN/About-Us/Pages/About-Us.aspx (last visited 18 December 2015).

By assets, DBSA is roughly one-third the size of the country's largest bank, and it is not among the top five banks in South Africa. DBSA's portfolio accounted for less than 5% of South Africa banking system assets in 2013.[23] As a result of a sharp downtown in financial results in 2011-2013, DBSA received its first capital injection from the government since 1994, and has undertaken a major restructuring of its operations.

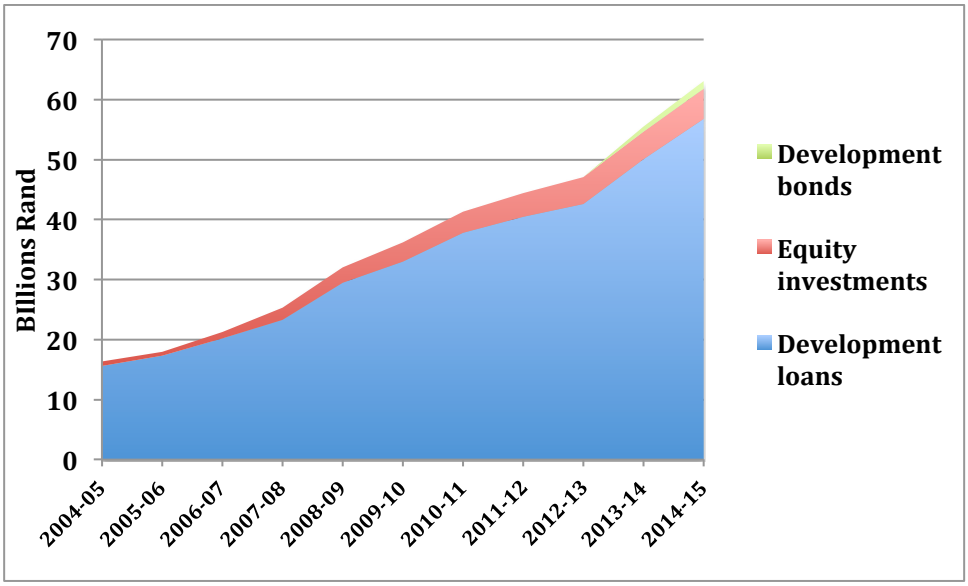
Governance and Financial Operations

The DBSA is fully government-owned, and the sitting Minister of Finance serves as governor of the bank. The bank's board has 13 members, of which five are currently from DBSA itself, five from the private sector, one a union leader, one academic and one the head of an urban non-profit.[24] DBSA's annual borrowing plan must be submitted to the National Treasury for approval, and it has statutory restrictions on capitalization (equity-to-loans minimum of 28.6%) and borrowing (maximum 2.5 times shareholder equity). The bank had 459 permanent contract employees as of March 2015, as well as 88 fixed-term contractors.

DBSA's development financing portfolio has nearly quadrupled in the last ten years, rising from R16.3 billion in 2004/05 to R63.1 billion in 2014/15—an impressive operational expansion, and testament to the South African government's view of DBSA as a key tool in promoting its development agenda.[25] The bulk of development operations—90% in 2014/15—are comprised of development loans, while 8% is in equity investments for developmental purposes and a further 2% in development-oriented bonds. The majority of the recent operational expansion is due to lending, although equity investments have also grown very considerably (over six times in the last ten year), albeit from a very low base (Figure 1). The use of development bonds—to support municipal investments while at the same time promoting domestic capital market deepening and improved municipal access—began just two years ago, and remains small although with considerable growth potential.

23 Standard and Poor's, 2013a, p. 6.
24 DBSA Annual Report 2013.
25 Unless otherwise noted, all data taken from DBSA annual reports, which reports based on a fiscal year ending on March 31. All numbers are in current rand.

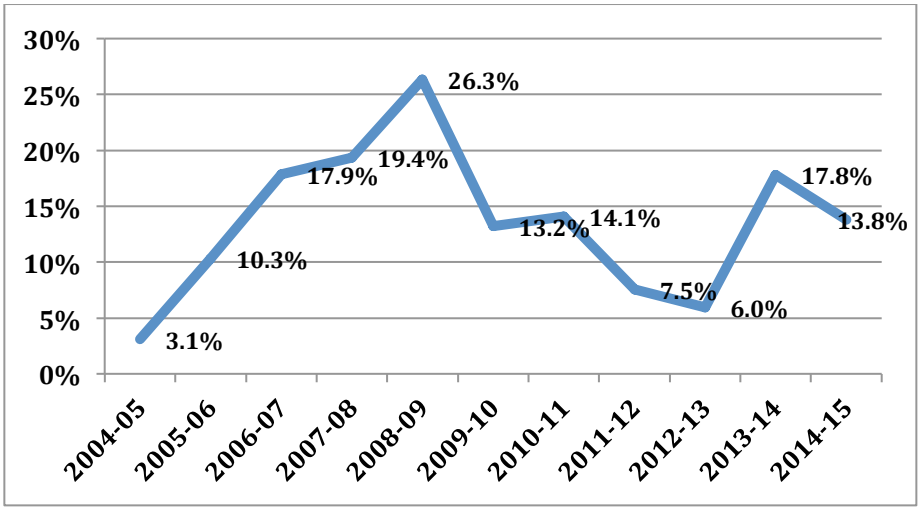
Figure 1. DBSA Development Finance Portfolio, 2004/05-2014/15



Source: 2004/05-2014/15 annual reports.

The portfolio expanded rapidly in the mid-200s through 2008/09, and then growth slowed considerably through 2012/13 (Figure 2). This was in part due a natural tapering back in the aftermath of global crisis, and also because of financial difficulties faced by DBSA due to poor investment choices (both loans and equity investments) during its earlier expansion. Following an operational and financial retrenchment beginning in 2012/13, as well as an injection of fresh government capital (R8.7 billion as of March 2015, with another R3 billion committed in 2015/16), DBSA operations began expanding again at a faster rate in 2013/14 and 2014/15.

Figure 2. Percentage Annual Loan Portfolio Change, 2004/05-2014/15



Source: 2004/05-2014/15 annual reports.

The traditional focus of DBSA lending activity has been to municipalities and public utilities

for the provision of basic infrastructure services. Municipalities and public utilities together accounted for just over two-thirds of the total outstanding portfolio in 2013, with 27.6% dedicated to private sector clients and the remainder to provincial and national governments, development finance institutions in SADC countries, and education institutions (Figure 3). The rationale for the strong focus on municipalities is to overcome the lack of long-term commercial financing options for most of the 283 municipalities in South Africa, as well as local governments in SADC countries. Two-thirds of DBSA loans are for four years or longer, which is appropriate for its emphasis on long-term infrastructure projects (Figure 4).

Figure 3. Client Distribution of DBSA Portfolio, 2014/15

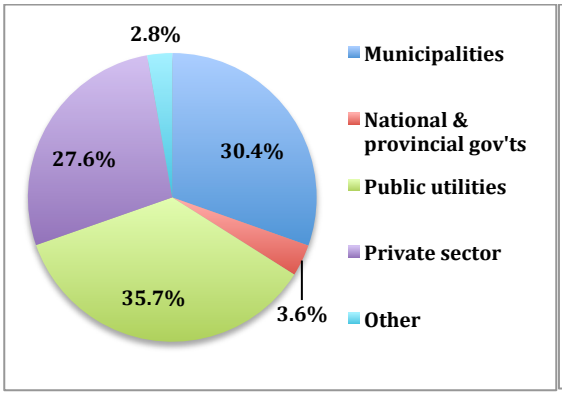
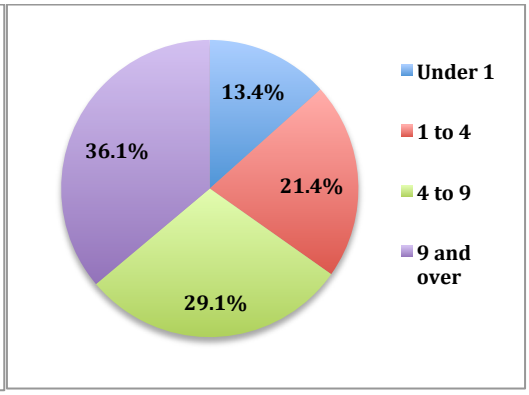


Figure 4. Maturity Structure of DBSA Loan Portfolio, 2014/15



Source: 2014/15 DBSA Annual Report.

Originally designed to operate solely in South Africa and the apartheid-era "homelands" (in South Africa and present-day Namibia), DBSA broadened its scope for operations to the countries of the Southern African Development Community (SADC) in 1997. Despite its formal link to the SADC in DBSA's legislation, the other countries receiving DBSA financing have no say in the bank's governance.[26] By statute, not more than one-third of total lending is allowed outside of South Africa, with the 2014/15 level at 25% divided among 12 countries. Zambia has the largest portfolio of SADC loans (30% of total), followed by Angola and Zimbabwe (20% each). Operations outside of South Africa do not require a guarantee of the host country government, nor does DBSA have preferred creditor status. Unlike operations within South Africa, financing in other SADC countries are intended to support mainly commercially viable projects.

DBSA relies heavily on issuing debt in capital markets to raise funds for lending—70.5% of total liabilities in 2014/15—with the remainder coming from official credit lines (26.6%) and other sources (3.9%). Although DBSA does not release details of its bond placements, the vast majority is within the South African market rather than abroad. It is rated BBB+ for local currency issues by Standard and Poor's, meaning its cost of funding is relatively high compared to NDBs that

26 Qobo and Motsamai (2014) argue that this can undercut the legitimacy of DBSA's international activity and may lead borrowers in other countries to perceive it as an instrument of South Africa's efforts to dominate the region.

either have a better rating or can rely on other sources of financing apart from capital markets. The majority of foreign currency funding (for SADC lending and domestic projects requiring imports) comes from credit lines from external DFIs at below-market rates, and credit lines from commercial banks. Unlike some NDBs in Africa and elsewhere, DBSA does not take deposits.

DBSA has not actively sought out opportunities in the developing market for green bonds, although senior management interviews indicate that the bank is watching developments in this market and may consider an issue going forward if conditions merit. With the green bond market growing quickly—from just over US$10 billion in issues in 2013 to US$36.6 billion in 2014 and a projected US$40 billion in 2015[27]—this could be an attractive means for DBSA to diversify funding sources and bring down costs for sustainable infrastructure projects. However, the currently fragile bond market rating for both DBSA and the South African government (a notch above junk bond status by Standard and Poor's for international issues) means that conditions are unlikely to be appropriate for such a funding strategy in the near term.

Apart from its own resources, DBSA also implements two major funds, the Green Fund and the Infrastructure Investment Programme for South Africa (IIPSA). The Green Fund, founded in 2013, is funded directly from the government budget, with a dedicated total amount of R1.1 billion (US$72 million) to be implemented by 2018.[28] Green Fund resources are disbursed in grants, loans and equity, with financial terms depending on the project. While highly positive for promoting sustainable infrastructure initiatives, the Green Fund is limited by its resources to small projects that may have an important impact at the level of individual communities but not at the national level. IIPSA is a joint initiative by the European Union and the South African government, which blends EU grant resources with funding from South African and international development finance institutions to support infrastructure development in southern Africa. IIPSA was announced in 2014 for a total of €100 million. Of 27 projects accepted into the IIPSA pipeline as of March 2015, eight have been shortlisted for due diligence and appraisals have been completed on six, of which five have been recommended for funding. Due diligence is continuing for the remaining 19 projects.

Going forward, DBSA will channel resources from the Global Environment Facility (GEF) into projects in South Africa as well as other countries where DBSA operates. DBSA was formally accredited as a GEF Project Agency in October 2014—as of this writing, the only national development bank to receive such accreditation.[29] The level of resources that will be channeled by GEF via DBSA will be contingent on the success of DBSA and end clients in developing projects that meet GEF criteria, as well as the GEF's own financing availability and strategic priorities. To

27 Bloomberg, 2015.
28 Republic of South Africa, 2015.
29 See https://www.thegef.org/gef/agencies_accreditation (last visited 12 January 2016).

provide a sense of scale, GEF approved US$1.18 billion in projects in FY2014 around the globe, of which only a small portion (US$44.1 million) was dedicated to South Africa.[30]

DBSA and Sustainable Infrastructure

DBSA places a very high priority on infrastructure, with nearly 90% of the loan portfolio directed to this area (Figure 5). Within the infrastructure category, DBSA places a strong emphasis on energy generation (just over half of the portfolio), followed closely by transport and communications. In 2014/15, over 80% of DBSA's infrastructure loans emphasize energy and transport, with about 16% going to water and social projects (Figure 6). This is a change from 2006, when over half of lending was for water and social projects, indicating a shift in recent years from addressing the social legacy of apartheid toward promoting the underpinnings of economic growth. According to the 2014/15 annual report, DBSA lending will "evolve over the next 20 years towards the transport and water security segments."[31]

Figure 5. Sectoral Distribution of DBSA Loan Portfolio, 2014/15

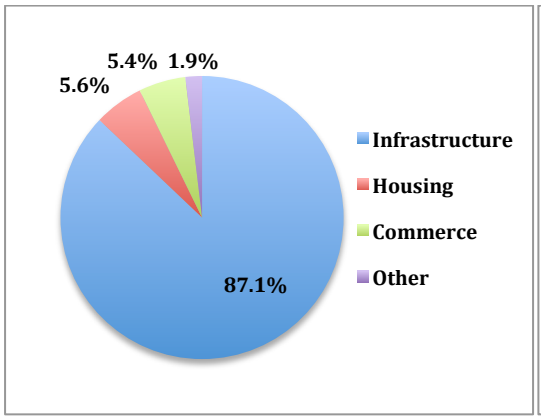
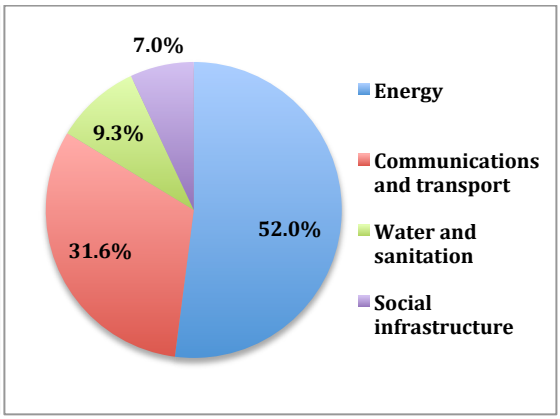


Figure 6. Breakdown of DBSA Infrastructure Portfolio, 2014/15



Source: 2014/15 financial statements.

According to DBSA's most recent annual report, the "The Bank is legally obliged to promote sustainable development through its operations and this is integrated into the Bank's strategy…" (2014/15, p. 99). To fulfill this mandate in its lending operations, DBSA works together with the South African Department of Environmental Affairs (DEA) and the National Treasury in designing its operational plans in line with the national development strategy. At the same time, sustainability concerns are clearly only one of several goals of the South African government and—by extension—DBSA, which also prioritizes economic growth, job creation, expanded access to basic social services and reducing inequality, among others.[32] DBSA has no specific targets on

30 GEF Project Database.
31 Annual report 2014/15, p. 106.
32 For more details see National Development Plan 2030: Our future - make it work, 15 August 2012.

sustainable versus non-sustainable infrastructure in its project selection criteria.[33]

Although detailed, project-by-project data are not available, DBSA did provide data[34] on the share of its 2014/15 activities that can be classified as "green," according to the definition used by the International Development Finance Club (IDFC).[35] Out of a total of US$1.6 billion in commitments of all types in 2014/15, US$434 million (27%) met IDFC's definition of green financing. Of that, the vast majority was for lending within South Africa (US$396 million), with only a small share (US$38 million) in other SADC countries. Almost the entirety of the green financing was for renewable energy generation projects (US$425 million), while a small amount (US$8 million) was for climate change adaptation projects.

Energy generation is a top priority for DBSA, as described in the previous section, and lending out of its own resources in this sector is directed to two sets of clients: municipal and non-municipal. Municipal lending is focused is entirely on improving connectivity to the grid and upgrading transmission facilities. Non-municipal lending, on the other hand, is mainly directed toward grid and non-grid electricity generation, and thus has a very high sustainability component. Although DBSA did support a substantial degree of renewable energy generation in 2014/15 (projects capable of generating 975 MW), the vast majority was directed toward coal-fired power plants (9000 MW) and a smaller amount to gas-fired plants (340 MW), both within South Africa and in SADC countries.

While the above numbers clearly highlight the priority DBSA places on generation over sustainability concerns—arguably understandable in light of the country's pressing needs—the bank has made considerable effort to increase its participation in renewables. DBSA (as well as IDC) has been active in supporting the government's Renewable Energy Independent Power Producers Procurement (REIPPP) program in support of private sector investment in biomass, solar, wind and small-scale hydro energy generation facilities. DBSA has helped design project proposals for 3,625 MW of renewable energy, and has committed debt and equity to some projects. For example, DBSA provided nearly 25% of the financing for a major new greenfield solar project, !Ka XU Solar One, with 100 MW net power generating capacity.

REIPPP has been considered a significant success as a program to support the expansion of renewable energy generation in South Africa,[36] but the role of DBSA has come up for some criticism. According to the director of a renewable energy investment company in South Africa, DBSA and IDC both participated as debt and equity financers in the first two bidding rounds, but since that time investors have preferred to seek financing from other sources, as DBSA in particular was

33 Interviews, DBSA staff.
34 Personal communication with authors.
35 See IDFC 2015, Annex C.
36 See for example Eberhard et al., 2014.

viewed as a difficult transaction partner in terms of bureaucratic requirements, lack of business approach and limited technical know-how in the field, combined with relatively high financing costs. As a result, DBSA has been less active in more recent bidding rounds, despite pressing need for support by smaller local investors facing difficulties competing with large international investors able to finance projects externally or from their own balance sheets. IDC has somewhat refocused on supporting local renewable energy component manufacturing facilities as opposed to generation itself (see IDC and Sustainable Infrastructure sub-section above for details), while DBSA had yet to find a meaningful role and was still putting itself forward mainly as a direct financer, with limited success.

Lastly, DBSA implements the R1.1 billion government-funded Green Fund, established in 2013 to support South Africa's transition to a green economy. By end-2014, R738 million had been approved for 48 separate projects, including investment, training and research projects. As of August 2015, 19 were investment projects had been approved, of which about R250 million was in the area of renewable energy and energy efficiency, and the remainder in sustainable natural resource use, waste management and environmentally-friendly manufacturing.

The bulk of DBSA's investment in transport infrastructure in 2014/15 appears from available information to be conventional, with little explicit sustainability content beyond the requirements of the bank's safeguard procedures (see below). One exception is a substantial investment (R786 million) in a major urban transit project, supporting the purchase of 40 natural gas and 131 diesel buses for the Tshwane Rapid Transit project. The project is part of the government's broader Public Transport Strategy, calling for a major expansion of public transport networks by 2020. Also in this area, DBSA has supported the completion of three municipal master plans in 2014/15, which have major sustainability components, particularly in transportation. DBSA further supported sustainable infrastructure through the government-funded Green Fund in the areas of water and sanitation (R100 million), green buildings (R70 million), rural and land use projects (R75 million) and biodiversity (R70 million) since its inception in 2013.

One key issue facing DBSA in its efforts to support sustainable infrastructure is the relatively high price of loans it can offer. Based on its financing model—accessing resources mainly in a highly competitive local capital market—DBSA has a fairly high cost of funding, which it must pass on to borrowers to remain financially viable. This is particularly problematic in the case of shorter-term financing (where DBSA competes with private banks that take deposits) and in lending to countries outside of South Africa, where DBSA must fund itself in dollars. Within South Africa, DBSA is reasonably price-competitive on longer-term financing with private sources, but it is also slower and comes with more requirements on its loans, which dampens demand for its services.

As one example, DBSA had sought to finance a rapid transit project not only in Tshwane (as noted above) but also in Johannesburg, but the latter city elected to go with a different financing source mainly due to pricing and bureaucracy issues. DBSA attempts to ease this constraint via accessing lower-cost international cooperation resources in its funding mix. Despite these efforts, DBSA remains more of a "taker" as opposed to a market maker, in need of finding financially viable projects that meet its development mandate and with demand for DBSA financing. This restricts its ability to pro-actively promote sustainable infrastructure.

A second critical limitation for DBSA—as with many other national and multilateral development banks—is the lack of finance-ready projects to support, owing to lack of capacity in project design on the part of potential borrowers (mainly municipal governments in South Africa and regional countries). To address this bottleneck, the European Union in 2014 provided 100 million euros to create the Infrastructure Investment Programme for South Africa (IIPSA), managed by DBSA. IIPSA provides grant funding for infrastructure project preparation in South Africa as well as the SADC region. Although not specifically earmarked for sustainable infrastructure, the fund has already proved useful in supporting sustainable projects move from concept to implementation, for example the Buffalo City solar project.

DBSA's Approach to Sustainability

DBSA has had policies and procedures in place to appraise the environmental impact of projects for at least 20 years,[37] but these have been revised substantially in the last two years, in large measure as part of DBSA's application to become an accredited project agency with the Global Environmental Facility. As stated in the most recent update of its Environmental and Social Safeguard Standards (ESSS), "As a GEF project agent, the DBSA is required to meet minimum fiduciary and environmental and social safeguard standards. This document, the Environmental and Social Safeguard Standards, sets out how the DBSA intends to comply with these standards and what it requires of its clients." (DBSA 2015, p. 9).

The new ESSS is explicitly modeled on the approach utilized by many of the major multilateral development banks, notably the World Bank, International Finance Corporation, and African Development Bank, and contains a suite of seven safeguards as well as labor standards. The first "umbrella" safeguard is the Environmental and Social Impact Assessment (ESIA), to be undertaken for all projects deemed to potentially have environmental or social impacts. Other safeguards (natural habitats, involuntary resettlement, community stakeholders and vulnerable groups, pest management, physical and cultural resources, safety of dams and labor standards) are applied as determined by the results of the initial assessment. The aim of the ESIA is to ensure that "issues of climate change mitigation and adaptation, social equity and ecosystem enhancement are

37 According to the "SADC Environmental Legislation Handbook 2012", p. 31.

more thoroughly and appropriately addressed," (DBSA 2015, p. 17), and it does so with specific procedures designed to avoid or mitigate impacts, manage risks, and permit stakeholders adequate project information and opportunity to engage.

The ESIA begins with a two-part initial screening required for all projects funded directly by DBSA as well as those supported via financial intermediaries. The first component assesses the likely greenhouse gas and carbon footprint of a project, while the second (more binding) component categorizes the project according to environmental and social risk. Similar to the World Bank, DBSA uses four categories: high, medium and low risks, and projects undertaken by financial intermediaries (4). The subsequent steps taken during project appraisal and preparation depend on the category assigned during the screening process, as follows:

- *Category 1 (high risk)*: Full environmental scoping, a full Environmental and Social Impact Analysis (ESIA) and detailed Environmental and Social Management Plan (ESMP) in all cases. These must be reviewed and approved by DBSA and also by the relevant government departments prior to project approval and disbursement. Projects must also disclose their carbon footprint, and climate change must be mainstreamed into the ESIA and ESMP, including mitigation and adaptation measures.
- *Category 2 (medium risk)*: Can have full or basic (simplified) ESIA, depending on DBSA judgment. ESMP is reviewed by DBSA, and (at DBSA's discretion) the relevant government department.
- *Category 3 (low risk)*: ESIA and full ESMP not required, but may at judgment of DBSA require a basic ESMP to be reviewed by DBSA (but not the government).
- *Category 4 (financial intermediary)*: Subprojects face same requirements for Category 1 and 2. If high-risk investment is known at time of approval, than the overall loan is Category 1. DBSA must carry out due diligence on financial intermediary to assess capacity prior to approval in all cases.

While the new DBSA safeguards are quite rigorous on paper, their implementation is still in its infancy, as the policy was only recently overhauled. The current organizational framework at DBSA indicates that although the policy is a clear improvement, the safeguards specialists themselves do not have authority to halt projects. Rather, specialists join onto appraisal teams led by finance units (either South Africa Finance or International Finance, depending on the location of the project), and contribute their assessments to i) the early review report and subsequently ii) the detailed appraisal report, both of which are under the authority of the finance teams. These reports, in turn, are submitted to DBSA's Investment Committee, which decides whether to proceed with the project and (depending on project amount) submit to board for final approval. DBSA currently has a permanent staff of five environmental safeguard specialists and three social safeguard specialists—a small staff for the number of projects DBSA processes and tracks each year.

Conclusions

This survey of African NDBs and the detailed case studies of the DBSA and the IDC lead to four conclusions about the role of NDBs in financing sustainable infrastructure.

First, African NDBs, including IDC and DBSA, do not have clear operational priorities and policies promoting sustainable infrastructure. While both the South African NDBs as well as several others in the continent state that sustainability is a top priority, that has not translated into concrete policies guiding their investment decisions, such as specific targets for certain sectors or mechanisms incentivizing staff to promote sustainable projects. In the case of both these institutions, and in African NDBs more generally, the decision on whether to fund particular infrastructure projects appear to be driven by a range of factors, of which sustainability is only one. In most cases, the NDBs are clearly more concerned with supporting projects that will lead to job creation and economic growth than with sustainability.

The lack of a sharp focus on sustainability is further evidence by the fact that neither case study NDBs have a clear definition to distinguish between sustainable and non-sustainable infrastructure, nor do they report their level of sustainable vs. non-sustainable projects in their annual reports. In fact, DBSA and IDC do not even have a clear common definition of what constitutes infrastructure more generally, with IDC including some services while DBSA uses a more standard definition of physical infrastructure. This has implications for both external observers seeking to quantify the role of these NDBs in sustainable infrastructure provision, as well as the ability of NDBs themselves to benchmark their own activity and ramp up lending for sustainable projects.

Second, both the IDC and DBSA have environmental and social sustainability frameworks that have been influenced by the policies of the World Bank and IFC as well as the Equator Principles, but the level of actual implementation is less clear. The environmental and social safeguard policies of the two NDBs are highly commendable, and have clearly strengthened in recent years (notably at DBSA with their involvement with the GEF). However, both banks have small staffs that are responsible for ensuring that project assessment and monitoring is done in compliance with these frameworks. This staff will participate in the decision-making process in their banks, but their authority is by all accounts secondary to project staff. Given the relatively broad range of priorities at the banks, it is unlikely that environmental and social considerations will be the deciding factor in the decision to fund any particular project. If these and other NDBs are serious about sustainability, they need to scale up the staff size of their sustainability units. At the moment, both IDC and DBSA have units that are too small to effectively manage the environmental and social assessments and monitoring of all the projects in which the institutions are involved. It may also be necessary for the profile of these units to be raised so that they have more seniority in the organizations.

One financial instrument developed by IDC and DBSA—the community trusts used with the REIPPP renewable power programme—does appear quite innovative in addressing social issues, and may be worth scaling up and replicating at other NDBs. By financing communities' ability to take an equity stake in new energy projects, this approach can reduce the risk of social conflict that sometimes hampers projects, and also provide communities with a revenue stream that can be used to tackle other social needs.

Third, the sources of funding for NDBs is critical to their ability to provide financing at attractive terms to borrowers, and hence act as a major catalyst to sustainable infrastructure. DBSA and IDC raise most of their resources in capital markets, unlike most other NDBs in Africa that do not have access to liquid domestic capital markets. While this allows DBSA and IDC to raise funds on their own and not depend on the government budget or subsidies—an important advantage—it also makes their cost of funding relatively high. Private banks in South Africa can also offer funding at competitive prices, and require less bureaucratic hassles than in particular DBSA. In the case of the IDC, this is not a problem, since its primary function is to promote private sector industrial development and the infrastructure that supports it. However, in the case of the DBSA, this means that it is likely to fund the least creditworthy municipalities and the least bankable infrastructure projects, with obvious negative consequences for its own financial sustainability.

NDBs face difficulties in bringing down their cost of funding, assuming they do not have major transfers from the government budget or other earmarked sub-market financing sources (as, for example, is the case of BNDES in Brazil). One possibility—used with some success by DBSA—is to borrow at concessional rates from international public lenders like the World Bank, African Development Bank or major bilaterals, which brings its overall cost of funding down. Co-financing with these institutions is another option. The downside is that such resources are limited and cannot be relied upon for long-term strategic direction, such as promoting sustainable infrastructure. Another option going forward is to tap the growing market for green bonds, which could allow NDBs to access funds at better rates than they would otherwise, with the proviso that the funds are directed specifically toward green projects. This approach requires building an NDB that gives confidence to international investors, both in terms of project success as well as an NDB's own financial results.

Fourth, this study suggests that the value proposition that NDBs can offer is not always clear, and needs to be considered strategically if an NDB is expected to have a transformative impact. Given the funding issues noted above, the two South African NDBs will have difficulties funding major infrastructure at attractive financial terms, especially considering their bureaucracy vis a vis private sources. This could be offset with first-rate technical advice and project preparation to overcome the problem of developing "bankable projects", but neither IDC nor DBSA are seen as providing this type of service. The new DBSA fund set up with the European Union to support

project preparation can help in this regard, but a more sustainable approach is to develop the kind of in-house practical expertise that project developers need to sustainable infrastructure projects going. This is less of an issue with IDC, as it has a more niche market supporting new private sector business, but it would also benefit from having a tighter operational focus than its current broad range of priorities.

Annex 1. Basic Data on African National Development Banks

All data US$ millions, from latest year		Assets			Financial Performance		Lending	Ownership	
	Latest Data	Assets	Loans	Equity	Profit	NPLs	Commitments	% Gov't	Founded
IDC (South Africa)	2015	10000	1800	6700	132	24%	943	100%	1940
Algeria Fonds National d'Investissement	2011	9450	6870	7.7	5		1420	100%	1963
Development Bank of Southern Africa	2015	5800	4900	41	98	5%	2500	100%	1983
Angola Banco de Poupança e Crédito	2014	2300	948	0	29	10%	210	75%	2006
Bank of Industry (Nigeria)	2014	3400	3000	44	28.6			100%	1964
Development Bank of Ethiopia	2013	1500	863	0	25.6		414.5	100%	1909
Industrial Development and Worker's Bank of Egypt	2011	597.6	415	0	-78			88%	1947
la Banque Gabonaise de Développement	2012	356.6	173.5	0.024	22.4			51%	1960
Botswana Development Corporation	2014	326		172				100%	1970
Industrial Development Bank of Sudan	2013	272	215.2	40.5	0.5			100%	2005
TIB Development Bank (Tanzania)	2013	246	184	4	6	26%		100%	1970
Industrial and Commercial Bank Corporation (Kenya)	2014	235.4	12	188	6.6			100%	1954
Development Bank of Namibia	2014	253	200	14	12.8		125	100%	2004
Liberian Bank for Development and Investments	2014	210	66	0.28	2.4	12%		48%	1961
Development Bank of Rwanda	2014	184.8	131.2	14	5.6	5%	89.3	Majority	1967
Swaziland Development and Savings Bank	2014	156	113	0	2.5	11%		100%	1965
Infrastructure Development Bank of Zimbabwe	2014	122.8	51.2	1.6	0.5	33%		99%	2005
Banco Nacional de Investimento (Mozambique)	2013	75.9	13.5		1.6			100%	2011
Uganda Development Bank Ltd.	2014	68	43.6	0.1	1.9	25%	60	100%	1972
Development Bank of Seychelles	2014	42.3	30.9	0	1.4	20%		Majority	1977
Banque de Développement des Comores	None							67%	1981
DRC Le Fonds de Promotion de l'Industrie	None							100%	1989
Eritrean Investment and Development Bank	None							100%	1998
IDB Capital (Kenya)	None							Majority	1973
Development Bank of Mauritius	None								1964
Infrastructure Bank Plc (Nigeria)	None				5			Minority	1992
Development Bank of Nigeria	None							Minority	2016
Agricultural Development Bank of Tanzania	None							100%	2012
Development Bank of Zambia	None							Majority	1972

Source: Data all from either most recent annual report or website of all NDBs.
Note: Where blank, data are not available.

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