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# Financial Performance and Corporate Governance: Evidence from National Development Banks in Africa

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## **About the research program**

This paper is published in the framework of the International Research Initiative on Public Development Banks (PDBs) and Development Financing Institutions (DFIs) working groups, part of the research program: “Realizing the Potential of Public Development Banks for Achieving Sustainable Development Goals”.

This research program aims to deliver concrete policy recommendations to decision-makers on how to scale up Public Development Banks’ potential at achieving the Sustainable Development Goals (SDGs). The academic research focuses on five major themes:

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

## **Partners and coordinators**

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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](http://www.afd.fr/en/carte-des-projets/realizing-potentialpublic-development-banksachievingustainable-development-goals).

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analysis based on a sample of 33 banks, drawn from a dataset of over 100 identified African NDBs. We explore the governance and financial trends that characterise these diverse banks, then use an econometric analysis to measure the impact of political influence in governance. We find key measures of political influence, particularly political appointments, have a strongly negative impact for financial performance, as well as the risk-appetite for banks. Additionally, we find this effect is stronger in countries where the enabling environment is weaker. We conclude that increasing institutional distance between government ownership and management of banks may have a positive influence for financial performance.

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**Résumé**

Ce papier est un document de travail qui n'a pas été soumis à un processus externe d'examen par les pairs. Un document final sera publié par ODI après la conférence de recherche.

Cette étude vise à examiner dans quelle mesure la gouvernance des banques nationales de développement (BND) en Afrique affecte leurs performances financières. Nous combinons une analyse descriptive approfondie avec une analyse quantitative basée sur un échantillon de 33 banques, tirées d'un ensemble de données de plus de 100 BND africaines identifiées. Nous explorons la gouvernance et les tendances financières qui caractérisent ces différentes banques, puis nous utilisons une analyse économétrique pour mesurer l'impact de l'influence politique sur la gouvernance. Nous constatons que les mesures clés de l'influence politique, en particulier les nominations politiques, ont un impact fortement négatif sur les performances financières, ainsi que sur l'appétit pour le risque des banques. En outre, nous constatons que cet effet est plus fort dans les pays où l'environnement favorable est plus faible. Nous concluons que l'augmentation de la distance institutionnelle entre la propriété publique et la gestion des banques peut avoir une influence positive sur leurs performances financières.

**Mots-clés**

Gouvernance d'entreprise ; institutions de financement du développement ; Afrique ; banques d'État

**Abstract**

This is a draft discussion paper and has not been through an external peer review process. A final ODI working paper will be published after the research conference.

This study aims to examine the extent to which governance of national development banks (NDBs) in Africa affects their financial performance. We combine in-depth descriptive analysis with a quantitative

## Introduction

National development banks (NDBs) have a huge potential to support their country's development strategies and their transition to low-carbon, climate-resilient economies (Griffiths-Jones et al. 2020, Studart and Gallagher 2016, Muñoz Cabré et al. 2020). However, in Africa, there is a continued perception of problematic governance and weak performance, which means they may be overlooked in their potential role, and as developmental partners for development finance institutions (DFIs), international climate funds, donors and private actors. Our study examines the governance and financial performance of African Development Banks with a view to understand if this perception is valid, and seeks to understand how political influence impacts financial performance in this region.

As development actors, NDBs have distinct advantages: they are well-integrated within the public sector and well-connected to the domestic private sector, making them a powerful instrument to support the implementation of governments' development strategies. Indeed, this intimate political embeddedness is one of their comparative edges over multilateral or regional development banks. On the other hand, the economic, institutional, and regulatory context also strongly condition the sectors in which DBs operate, their capacity and availability of resources, day-to-day operations, and ultimately their financial performance. Political influence can serve to align development goals of the state with the bank's financial lending, however, they must also remain *viable banks*, if they are to have greater development impact.

Striking a balance between this integration and independence will be key to creating a virtuous circle where African development banks are effective delivery partners, who are integrated into national and international policy frameworks and who have access to increased resources and support.

Theory provides conflicting views on the role of government in the management and oversight of development banks. Proponents of government intervention often point to the prevalence of agency problems. The cost of monitoring banks generates incentives to perform sub-optimally (Levine et al. 2004). Another issue concerns the existence of soft budget constraints (Kornai, 1986) and moral hazard. Given that national banks are not entirely profit motivated, as they can receive government bailouts, they may engage in relatively more risky lending. Government supervision thus helps in mitigating excessive risk taking. On the other hand, opponents of government intervention often point to political economy concerns. Political involvement can lead to poor bank performance if governments influence the allocation of funds towards patronage or unviable sectors of the economy (Djankov, et. al., 2002; and Quintyn and Taylor, 2002). As such, a strong theme has emerged around the need for 'good governance' in development banks.

Our focus on the financial performance of development banks in Africa is motivated by several considerations. First, unlike commercial banks, if well-managed, they have significant potential to implement national policy objectives, aiding industrial growth and supporting domestic in

dustries, as well as playing a counter-cyclical role in mitigating economic crises and protecting livelihoods (Culpeper 2012). Given the current impact of COVID-19, this role is particularly urgent (see Appendix). Second, these banks must sustain a minimum financial performance, to continue as viable financial institutions, but also to attract financial partners that can help scale investment to support development objectives. This is an aspect that can be measured objectively. Finally, as largely public-owned entities, NDBs are embedded within a structure of accountability through which government actors play an influential role. As such, examining the interaction between corporate governance and channels of political influence can offer important policy insights in identifying key factors that affect financial performance.

The objectives of this paper are threefold: first, we provide an assessment of the landscape of national banks in Africa, focusing on their governance structures and trends in financial performance. Second, we use econometric analysis to assess the relationship between corporate governance structures and financial performance, and draw conclusions around how governance arrangements—*independent of the national-level governance*—influence a bank's performance. Third, we draw policy implications regarding governance in national development banks.

We present three key results. First, we find that, although the majority of the banks in our sample are profitable, they tend to be small, have limited financial leverage, rely on long-term debt and have high non-performing loans. Second, we find that corporate governance arrangements

that increase institutional distance between political actors and bank management leads to better performing banks. Using panel regressions, we find that political influence through appointment practices has a negative effect on financial performance, suggesting this as one of the most influential channels undermining bank's performance. Third, we find that for countries with a *weak enabling environment*, corporate governance arrangements that give greater independence from the government are *more* important to the performance of the bank compared to banks situated in countries with *strong* enabling environments.

Overall, our findings suggest that increasing the institutional distance between ownership and management by depoliticising appointments and strengthening the independence of the board of directors can potentially improve the financial performance of banks. In addition, ensuring sufficient capitalisation of well-governed banks can enhance their capacity to operate at a scale to support transformative investments.

This paper makes three major contributions to the academic and policy discourse around national development banks. First, we contribute to the policy debate on the determinants of financial performance of development banks. We build on existing theory and literature around bank performance with a specific focus on nationally-owned development banks within a single region to highlight particular governance challenges. By showing that political appointment of executive management is a key predictor of poor financial performance, we provide additional evidence on the salient features of

a country's governance that can significantly shape the extent to which national development banks can operate effectively.

Second, our findings provide specific evidence from a region that has received less attention in the literature. Emerging research on NDBs has often focused on larger banks from Germany, Brazil, China, or other Latin-American countries (Dunhaupt 2020; Griffiths-Jones and Ocampo 2018; Ban and Tillekeratne 2016), with less attention to small developing countries. Studies of African NDBs have tended to concentrate on well-known, high-capacity banks such as the Development Bank of South Africa (Bradlow and Humphrey 2016; Scott 2007), which are valuable, but do not represent the challenges of many small and medium-sized banks. We also generate new analysis of a region where data availability is challenging. By compiling a novel database focusing on 33 NDBs in Africa, we can compare across national contexts and sub-regionally, to understand the commonalities and differences in bank performance.

Our third contribution is methodological. Existing studies of national development banks, conducted at the global level using survey or national accounts data, tend to underrepresent African countries, and do not often capture the landscape of governance challenges in these countries (de Luna-Martinez and Vicente, 2012; Luna Martinez et al., 2017). Surveys of African banks such as the Prudential Standards, Guideline and Rating System (PSGRS) also relies on self-reported data and are not accessible. In part due to data challenges, other studies have tended to use qualitative approaches such as case studies, which have limited external validity. Our paper improves on these approaches by relying on a dataset constructed using bank level data. By conducting our analysis using the bank as the unit of analysis, we can provide robust estimates using techniques that mitigate econometric concerns such as omitted variable bias. This paper is divided into five sections. Section 2 offers a review of the literature on the nexus between financial performance of NDBs and corporate governance. Section 3 delves into the data to present a descriptive analysis of the landscape of NDBs in Africa while Section 4 outlines our quantitative methodology and key findings. We highlight takeaways and policy implications in section 5.

# 1. Governance and financial performance in National Development Banks

This section briefly reviews the literature on corporate governance, political influence and the impact on financial performance. We identify salient issues to inform the regression analysis in section 4.

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## 1.1. Political influence and corporate governance

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NDBs occupy a position of “embedded autonomy”, to borrow from Evans (2001). While they have a certain degree of independence in decision-making, they remain embedded within an *enabling environment* of political and economic institutions by virtue of their public ownership (Thorne and Toit 2009). When this tension is well-balanced, a development bank can be a powerful instrument in the service of an active, developmental state in pursuing industrial policy: supporting domestic firms to grow, fostering new industries within a transformational agenda (Mazzucato 2011; Lin 2014). A competent development bank can serve as a ‘second-best’ instrument to industrial policy, even in developing countries where the enabling environment might be weak (Rodrik 2004).

However, there are also risks. A bank that is insufficiently independent could risk politicisation and interference, which could lead to poor bank performance if governments influence the allocation of funds towards patronage or unviable sectors of the economy (Djankov, et. al., 2002; and Quintyn and Taylor, 2002). On the other hand, a bank that is insufficiently ‘embedded’ can risk ‘mission creep’ beyond its mandate, leading to principal-agent problems for the government. Moreover, given that national banks are not entirely profit-motivated and can receive government bailouts, this creates problems of soft budget constraints (Kornai, 1986) and moral hazard, which means that banks may engage in more risky lending. A lack of sufficient embeddedness or cohesion between state agencies can also undermine the bank’s effectiveness within national development frameworks (Luna 2020; Chibber 2002).

“Weaknesses in corporate governance” have been frequently cited as the root of problems afflicting state-owned financial institutions (Scott 2007) and for African NDBs, the problem seems to err towards political interference, as Calice (2013) notes: “most of the poor performance of DFIs is explained by shortcomings in corporate governance structures, which are instrument to political interference and poor managerial skills” (p.4). Likewise, the World Bank survey of development banks globally note the need to reduce undue political interference in many banks, and to give greater autonomy to banks to resist political pressure (World Bank 2017). All of this risks not only the financial stability of the bank, but have repercussions for the wider financial system (Scott 2007, p.3-4).

Politicisation is identified as a salient factor for poor financial performance. Banks with politically connected bank executives exhibit riskier lending behaviour and show higher default rates (Chen et al. 2018). Politicisation can also lead to lending of funds to non-viable sectors of the economy for political purposes, especially during election periods (Cole, 2009). This

trend holds for developed and developing countries: banks where executive appointments that coincide with electoral cycles are associated with worse financial performance compared to non-politicised private sector or government banks (Shen and Lin 2012). Political cycles and state-ownership are also identified with incentives to smooth income in financial reporting (Doan et al. 2020).

In addressing these weaknesses, practices of good corporate governance have emerged almost as a canon, to define a structure of accountability between banks and their shareholders (OECD 2015). One component held as standard is the board of directors, through which shareholders should exercise oversight, but which also ensures that this ownership role does not unduly distort the operations of the institution (ibid.). Many of these corporate governance practices serve to mediate the relationship between the operation of the banks and the political institutions that own them but overwhelmingly, the consensus appears to favour increasing bank independence, through increasing the institutional distance between ownership and control (Fama and Jensen 1983).

Such factors that contribute to 'good' corporate governance include the shareholding structure of the bank, where greater diversified or private shareholding can help mitigate the monopoly power of government as owner, and ensure greater financial discipline in the bank; some newer NDBs have been established with this in mind (World Bank 2016). Bank supervision and regulation also matters: Central Bank supervision is associated with greater discipline and financial soundness of banks (Doumpos et al. 2015; Marques and Saito 2015); the AADFI PSGRS survey also encourages separate institutions of ownership and supervision within government-owned development banks.

Boards may serve as a channel for political oversight and accountability of NDBs, but the composition and size of the board also matter for bank performance (Ghosh and Ansari 2018). For NDBs, representation of government officials on the board may also be a channel for political influence. As such, the inclusion of independent directors on the board, and the separation of board and management is held as standard or best practice (OECD 2015; Scott 2007; Aguilera and Cuervo 2004; Calice 2013).

Another key channel is the appointment and dismissal of the board and of the executive management, given the potential for bank appointments to be used as political patronage (Scott 2007; Shen and Lin 2012; Djankov, et. al., 2002). The capability of a development bank to fulfil its mandate also depends on its financial and human resources (Fukuyama 2013), and the "the professionalism, good conscience and seriousness of purpose" that governs its staff (Stilpon 2019). Professional backgrounds of staff, such as having private sector experience, can influence the wider institutional culture (Ban and Tillekeratne 2019); gender of CEOs seem to affect bank performance and risk taking (Vähämaa et al. 2020; Weil and Skala, 2018). Even within adverse enabling environments, it may be possible to have 'pockets of excellence'<sup>1</sup> through the meritocratic selection of professional staff, a process that may be damaged when banks are politicised (Leonard 2010).

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<sup>1</sup> Sometimes interchangeably called 'pockets of productivity' or 'pockets of effectiveness', all referring to public administration agencies that are high functioning within an environment that is hostile to reform.

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## 1.2. Measuring governance and performance in development banks

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Transparency of NDB reporting systems and practices are integral to the bank's ability to evaluate its own performance, and a key component of good corporate governance. The ability to measure the *outputs* of a public institution are important, as it is ultimately its impact on public good that is crucial, irrespective of its internal structure (Rotberg 2014). However, measuring developmental impact is a difficult and imperfect science, while financial reporting, procedures and structures are more standardised. This includes the presence of internal audit structures that report to the board, regularity of external audits, use of internationally recognised standards, and reporting procedures to shareholders, legislatures, and access to information for the general public (Calice 2013; Eurodad 2017). The use of international auditors over government auditors are also associated with better results due to more credibility and less incentive to skew results (Feltenstein and Lagunoff 2004).

The banks' willingness and ability to assess its performance, project outcomes and challenges also contributes to long-term policy decisions and strategy, and ultimately, its developmental impact (Thorne and du Toit 2009). A number of banks are in the process of developing social and environmental management systems, though this has tended to focus more on managing environmental than social impacts (Korth and Richter 2016). Participation from civil society or impacted communities and their integration into consultative processes, and the presence of a framework in managing social and environmental impact have implications for long-term sustainability of projects, and their financial and social returns (Eurodad 2017; Thorne and du Toit 2009). Engaging with international norms around participation, fairness, and transparency can also boost the external legitimacy of an institution (Woods 1999), making NDBs more attractive for international partners (Johnson 2015).

## **2. The Landscape of African NDBs**

This section outlines the landscape of NDBs in Africa, drawing from our mapping exercise and data collection (see Box 1). This section draws from descriptive statistics using both large and small-N datasets, while the econometric analysis in section 4 and 5 uses the small-N data.

We note remarkable heterogeneity in banks, in their history, their size and financial performance. We find that ownership is still commonly centralised in central government bodies, and there is a high degree of political influence in appointment processes. Financially, African NDBs tend to be small, while financial performance varies widely. We explore this in more detail below.

## Box 1. Data collection

**Table 1. Dataset breakdown**

<b>Dataset</b>	<b>Size</b>	<b>Information available</b>
<i>Population</i>	107 NDBs	<i>Basic:</i> Name; Year established; Region; Ownership/Shareholding; Mandate (sector)
<i>Sample</i>	33 NDBs	<i>Basic:</i> Name; Year established; Region; Ownership/Shareholding; Mandate (sector); <i>Governance:</i> Supervision; board composition; appointment of board and management; reporting practices; <i>Financials:</i> financial capacity; loan portfolio; non-performing loans; returns on assets; gearing ratios

We conducted a large-scale mapping study from multiple sources, collating data from the African Association of Development Finance Institutions (AADFI), the World Bank surveys of NDBs, and INSE/AFD dataset on public DBs shared with us. Through this, we scoped the “known universe” of African DBs, gathering data on the name, age, mandates and shareholding structures of 119 development banks in Africa with public ownership, of which we classified 107 as national development banks (NDBs).

Lack of data was a perennial challenge, and publicly available information for NDBs was limited to a minority of banks. Only 48 of 107 national development banks had online documentation of either annual reports or financial statements, though only 16 banks were current up to 2019/2020. From banks with publicly available data, we gathered data for 33 banks drawing from years 2014–2019. This allowed us to look at variation over time as well as between institutions. This sample size was a balance between the availability of data and capacity of the researchers to extract it.

While other survey datasets of African NDBs exist—from the World Bank and AADFI—we were unable to get access these datasets. However, we used the AADFI PSGRS survey template both in our mapping study to generate the catalogue of African NDBs, as well as to inform our choice of governance metrics and classification criteria.

Our data coverage does not match the AADFI surveys, though it has several advantages: first, it is based in objective published data of these banks, rather than self-reported responses; secondly, we use expert assessments of key financial criteria to generate raw measures, instead of an index or categorical measures, which may obscure variation in financial performance.

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## **2.1. Distribution and characteristics**

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### **2.1.1. Geography and history**

NDBs are ubiquitous across the African continent. With the exceptions of Somalia and South Sudan, every African country has at least one development bank, and many have multiple. Nigeria has the highest number of NDBs at 11, followed by South Africa with 7. However, the number of banks is not necessarily correlated to the size of economy: several small countries have high concentrations of NDBs, including Eswatini with 5 banks and Botswana with 4 development banks respectively.

Some of these banks have remarkable longevity. The oldest bank in our dataset dates to 1909 (the Development Bank of Ethiopia), and many banks trace their establishment to the end of the colonial era and early independence: 30 new banks were established between 1950–1970. In the case of former French colonies, many were formerly “social banks”, created under colonial rule to serve basic needs in housing and agriculture, and then subsequently transformed into “development banks”, when states became newly independent. Banks in this period operated through providing a subsidised interest rate in sectors such as housing, agriculture, and so forth. However, banks were often prey to political pressure, lending to projects or entities favoured by political actors, and resulting in bad loans.<sup>2</sup>

The creation of new NDBs slowed down in the 1980s. NDBs were increasingly perceived as ineffective and market distorting, and Structural Adjustment Programs popularised by the World Bank through the 1980–90s led to the liberalisation of financial sectors and interest rates, which meant that NDBs could no longer lend at subsidised interest. Alongside this, broader demographic trends of growing population sizes in many African economies also meant that new emerging commercial banks could become profitable, capturing some of the market niches that NDBs once filled. All these factors weakened the competitive advantage of NDBs and led to the dismantling of many in this period.

This trend has dramatically reversed in the last decade, as we find 23 new banks created after 2010, and many other banks have also emerged out of mergers and restructures of older institutions. Most recently, four banks were established in 2019, all in West Africa: in Burkina Faso, Benin, Cote d’Ivoire and Guinea.

### **2.1.2. Mandate**

The bank’s mandate outlines its stated scope and mission, but also has implications for the bank’s independence, and its financial performance. Banks with a broad economic development mandate may have greater resources available, and greater flexibility and scope to determine their operations. They may have a more diversified portfolio of investments, compared to sector-specific banks that may be more greatly impacted by economic

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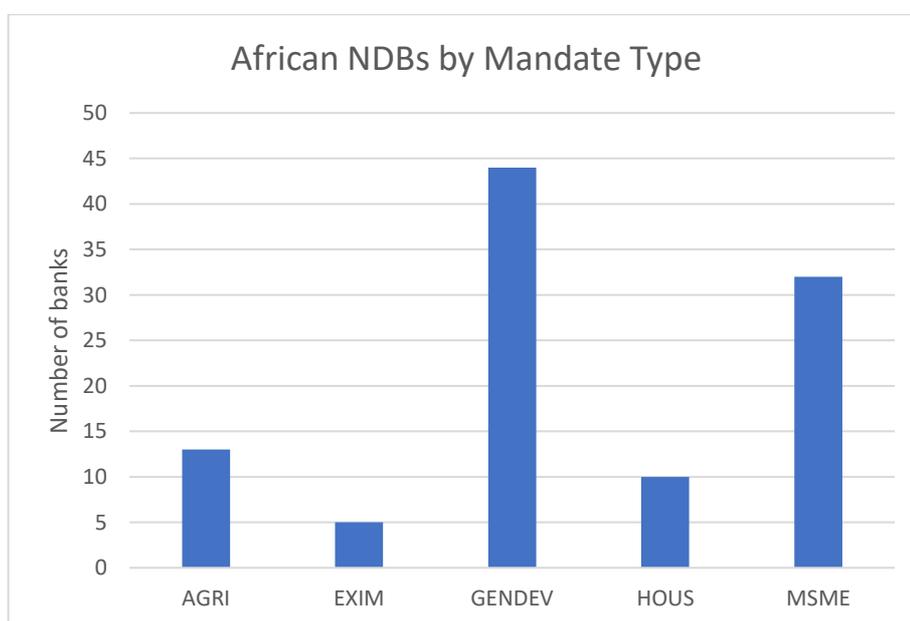
<sup>2</sup> Interview, AFD, 26 May 2020

shocks. However, a narrow mandate can help avoid mission creep, allowing governments to keep a tighter rein on banks and keep them accountable (World Bank 2016)

We use the classification of the INSE/AFD database, which separates mandates based on whether they are general development (broad) or targeted to specific sectors such as agriculture or housing (narrow). The majority of African NDBs have a broad, general development mandate, followed by those that focus on small and medium-sized enterprises (Figure 1). However, some banks with narrow sectoral focuses, such as agricultural development banks in Ghana and Zimbabwe, have been able to expand their operations over time.

**Figure 1. Mandate type of African NDBs.**

Source: ODI population data



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## 2.2. Governance characteristics

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### 2.2.1. Transparency and reporting

The reliance on annual reports and published information meant that our sample reflects a major selection bias in terms of their transparency standards. Only around half of the population of NDBs in Africa we identified had published information, and a smaller subset had up-to-date or relatively recent reporting. As such the sample of 33 banks that we were able to collect data on do not reflect the transparency standards of most of the universe of NDBs. For the vast majority of African DBs transparency is poor.

Of the banks we reviewed, however, transparency and reporting standards were relatively high. All banks used international standards of accounting or financial reporting (ISA or IFRS) in their annual statements, with three exceptions, which stated the use of national accounting standards instead. Accuracy of financial reporting was also, on the whole, high. Only in 2 banks did we see cases of qualified opinions from an external auditor in consecutive annual reports—signifying reporting issues, while 5 banks in total in our time-series sample had received a qualified opinion.

All banks in our sample had an internal audit department, or an internal audit function outsourced to another company. In just under half of our cases, internal audit had a clear functional reporting line to the Board of Directors, sometimes via an audit committee, while other banks had reporting lines to executive management.

While this was not a universal standard, a significant number of 13 banks in our sample (mostly larger banks with broad mandates) had published formal social and environmental impact frameworks, and many more banks addressed corporate social responsibility (CSR) activities in annual reports. These include large South African banks Industrial Development Corporation (IDC) and the Development Bank of South Africa (DBSA), however smaller banks including Uganda development bank (UDB) have also been active in pursuing sustainability and climate-oriented activities (Box 2).

### **Box 2. Sustainability and impact – the case of Uganda Development Bank**

Uganda Development Bank is 100% central government-owned with no mixed or private shareholding. Until 2020, UDB was supervised by a parastatal monitoring body, which was then moved to the Central Bank to follow international practice (The Independent 2020). Appointment of the chief executive is determined by the Board of Directors, however the CEO is strongly integrated into national planning bodies and within the President's Council.

The bank remains well-embedded in national government development priorities, and though it remains strongly focused on the agricultural sector as part of its mandate, the bank has been successful in its attempt to mainstream environmental and social governance into its investment activities, and has been seeking to expand its portfolio of green finance projects, within and beyond the agriculture sector (Griffith-Jones, Attridge, and Gouett, 2020). It is currently in the process of gaining accreditation to the Green Climate Fund (GCF), which would gain access to additional external financing to support green and low-carbon projects. However, accreditation to the GCF is an onerous process, and requires banks to have an international credit rating, making it a barrier for smaller banks that do not have the financial scale or staffing capacity to undertake the process.

### **2.2.2. Ownership, Regulation and Supervision**

A majority of banks are owned by a single central government entity, but there is some variation in ownership structures, and mixed shareholding is not uncommon. There is also not a single dominant model of supervision: just under half of the banks in our sample are supervised by a central bank, but regulation around banking supervision for NDBs varies widely.

Though 80% of banks in the population dataset are wholly publicly owned, the institution of ownership can vary. Around two-thirds (66% of banks) are owned by a single central government institution, often the ministry of finance or another line ministry (in our sample of 33, this is 58%). Others have shareholding divided between public bodies, including local governments, state-owned investment trusts, pension funds or the central bank. Only a minority of banks (21%) have external shareholding, usually in the form of private banks or individuals, or international shareholding from other DFIs, which ranges widely from as low as 0.1% in the case of Nigeria's Bank of Industry (BOI) and as high as 75% in the case of Liberia's Bank for Development and Investment.

Diversifying shareholding structure has been championed as a contributor of good governance in AADFI surveys, as increasing accountability towards multiple shareholders rather than a single government is seen to have a disciplining effect. External shareholding can be a way to increase institutional distance, and reduce potential political influence of the government, but conversely, it can also dilute the ability of political actors to set the developmental agenda of the bank.

A number of banks have diversified their shareholding in the period we study, often in the direction of increasing institutional distance from the government. The government of Rwanda transferred its total shareholding in the Development Bank of Rwanda to its main sovereign wealth fund, the Agaciro Development Fund in 2018; likewise the Agriculture Development Bank (ADB) Ghana, Banca di Poupanca e Credito (BPC) Angola and the Development Bank of Nigeria (DBN) (see box 2) have also seen a decrease in the shareholding of central government agencies in the recent five year period.

Turning to supervision, we find diversity in the supervision institution for our sample of 33 banks. AADFI surveys and much of the corporate governance discourse emphasises Central Bank supervision—having the same institution that regulates private sector banks regulating the state-owned bank, and our sample shows just under half of banks (15 banks) are central bank supervised. However, the majority of banks are still supervised by government ministries, split evenly between the Ministry of Finance (9) or another line ministry (9) in the sector.

This has implications in terms of competence—whether the ministry has sufficient capacity in financial and prudential oversight—but also in potential conflicts of interest. We recorded 14 banks where supervision institutions overlapped or could not be distinguished from ownership, for example, in some cases, institution and supervisory functions are both situated under the Ministry of Finance. We included cases where supervision overlapped with the majority shareholding institution or could not be distinguished, meaning lower institutional distance between oversight and operations.

Similar to trends in ownership, there are a small number of cases where supervision has shifted away from Ministerial supervision towards Central Bank oversight. In 2015, the Infrastructure Development bank of Zimbabwe (IDBZ) was moved from the supervision of the Ministry of Finance, its majority shareholder, to the remit of the Reserve Bank of Zimbabwe, in compliance with amendments to the Banking Act. Most recently, Ugandan Development Bank (UDB) in 2020 was placed under the supervision of the Bank of Uganda in order to strengthen oversight (Box 2).

Curiously, none of the South African banks in our sample—some of the largest in the African continent—are supervised by the central bank: the IDC is placed under the Department of Trade, Industry and Competition, while the DBSA and Land Bank are supervised by the National Treasury (Finance ministry)—in the case of Land Bank, this supervision was switched from Ministry of Agriculture in 2009 (World Bank 2016).

### **Box 3. Ownership and Supervision in Nigerian Development Banks**

Nigeria is a country with notable diversity in corporate governance. Nigeria has the largest number of financial institutions in Africa, with 11 NDBs, some of which are owned by local state governments. Three of the largest banks are included in our study, and they span multiple periods of history, sectors, and governance structures: the Bank of Industry (BOI), created in 1959; the Nigeria Export-Import bank (NEXIM), established in 1991; and the youngest, Development Bank of Nigeria (DBN), created in 2017 as part of an international partnership with the World Bank and AFD. The DBN, notably, was explicitly designed to reflect international best practice in corporate governance.

The banks have differing mandates: the BOI has a broad economic development mandate, while DBN and NEXIM are focused on MSMEs and export-import, respectively. All are majority government owned: NEXIM is split in its shareholding between ministry of finance and the Central Bank of Nigeria; BOI is 95% owned by federal ministries; while DBN as of 2018 has 60% of its shareholding owned by the federal government, while 25% of its shares are internationally held by the African Development Bank (18%) and the European Investment Bank (7%) as of 2019.

The three banks also have three contrasting supervision arrangements: DBN is supervised by the central bank of Nigeria, while BOI is supervised by the Ministry of Industry, Trade and Investment, and Nexim by the Ministry of Finance. DBN is also the only bank where appointment of the board and CEO is the responsibility of the shareholders and Ministry of Finance, respectively, while the two other banks have Chair of board and CEO decided by the President.

Though all banks operate within the same *enabling environment*, they show contrasting outcomes. The younger DBN was created with a public-private ownership structure intended to act as safeguards to political intervention, and with a 'tight' mandate to avoid the 'mission creep' and over-expansion of past DFIs (World Bank 2016). The DBN has recorded strong financial performance with an average return on assets (ROA) of 6% and an average non-performing loans % of 1.0% during the period (2016 to 2019). This is in stark contrast to Nigeria Eximbank (NEXIM) which has experienced high turnover in senior management in recent years and an average return on assets of -2.5% (2014 to 2018), with non-performing loans reaching 92% of the portfolio in 2017.

### 2.2.3. Board Composition

African DBs tend to follow international corporate governance norms around the composition of the Board. Though a significant majority of banks maintain some degree of government representation, on average, government representatives constitute around 28% of board membership in our sample. Banks generally conform to best practice norms regarding the composition and structure of boards of directors, separating oversight from management, and having independent directors.

We find a fairly consistent model of board governance in our sample of banks in conformity with the AADFI best practice governance standards. Boards of directors are, on average, majority non-executive (with the usual exception of a managing director), and the role of board chairman is non-executive and separated from the chief executive. In a majority of banks (around 70% of our sample) we identified some government representation on the board, usually in the capacity of a shareholding ministry, though this can vary widely, from 1-2 board members, to—in the case of the Development Bank of Ethiopia—100% of the 7-person board. In one-third of our sampled banks, the Chairman of the board in the last 5 years had been a current government official or political advisor. We also note in our sample that 15 banks have had in the last 5 years a female chair or CEO, sometimes consistently, demonstrating some diversity in the gender representation of bank governance.

There are a few notable variations in board structures: in the case of the *Caisse des Dépôts* banks, which we see in our sample in Gabon, Morocco and Tunisia. In these banks there is no 'board of directors'. Instead, a supervisory commission oversees the bank and executive management. In the case of Morocco and Tunisia, 50-60% of the board are government representatives (in Morocco's case, the Chair is also the central bank governor by law); in Gabon's CDC, government representation is above 80%.<sup>3</sup>

Some exceptions exist to the general norm separating board and management. The Export Development Bank of Egypt (EBE) and BPC Angola both have executive chairpersons, conflating the board and management roles. In the DBE Ethiopia and BPC Angola, supervisory and executive power are concentrated in a single body. In Ethiopia's case, the government-represented 'board of management' is executive in its function and directed by the Minister of Finance. In Angola, the BPC's previously non-executive 'board' went through a major restructure in 2018, removing non-executive members and reducing from 12 to 5, merging the functions of the Chair and the CEO.

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<sup>3</sup> Information on Gabon CDC's board composition is limited to one year—2015, which is the only year the annual report published detailed information on the profiles of board members.

#### 2.2.4. Appointment and dismissals

Appointment of the board and of executive management is one of the key channels for political influence over development bank's operations. We find that, in around a third of the banks we studied, the head of state plays a decisive role nominating or approving appointments to the board or executive management. In around a third of banks, we have also seen irregular dismissals or restructures of the bank, which shows a significant proportion of NDBs have seen direct political interventions.

Many banks have board charters that explicitly lay out appointment processes. For example, around a fifth of banks in our sample note explicitly that board appointments come via the annual general meeting (AGM) of shareholders. In under half the sample, decisions over the board and chair were taken by the head of the supervisory or ownership ministry. In the case of Morocco's Caisse de Dépôts et de Gestion, the chairman of the board is the head of the supervising ministry—i.e. the Central Bank governor. In around a third of our banks (10 banks), the head of state is involved in appointing the chairman or other board members, giving sitting presidents or prime ministers direct channels of influence in the board of directors.

Less information is available on the appointment of executive management. We find in the case of 11 banks, the head of state is involved in appointing the chief executive officer, while in 10 banks the board of directors appoints the CEO. In the rest, we see appointment determined by shareholding ministries, though in some cases, final decision-making power of a Minister vs. a head of state is unclear.

The appointment of the CEO is the most direct channel of leverage that sitting governments can exercise in influencing the operations of a bank, and also demonstrates the sometime divide between theory and practice. Even within the same country, for example in both Nigeria and Tunisia, we see cases of Presidential appointments in some banks but not in others, showing that governance structure of a bank can affect channels of political influence within the same enabling environment.

The politicisation of appointment processes can lead to high turnover in board and management, which in turn can impact the bank's stability of long-term governance and strategic management. We tracked regular turnover for bank leadership in almost all banks for the years where data was available, finding that the frequency of turnover varied widely. We found 16 cases across 10 banks where we classified turnover in governing structures as *irregular*—either outside of the normal contracted terms (e.g. a dismissal from post) or a restructuring of the board. In four banks, this was the case for two or more consecutive years between 2014–2019. Appointments and irregular dismissals—particularly of bank management—in the banks of our sample have sometimes coincided with cases of fraud or corrupt practices within the bank.

A few represent extreme cases where CEOs have been held to account for fraudulent behaviour and mismanagement. In three cases in three countries in the last 5 years, we found cases of CEOs not only dismissed but criminally prosecuted for allegations of corruption and embezzlement that harmed the bank's interests. Some of these dismissals come directly from the head of state. While they are a case of political intervention, they also illustrate that sanction structures exist and are functioning.

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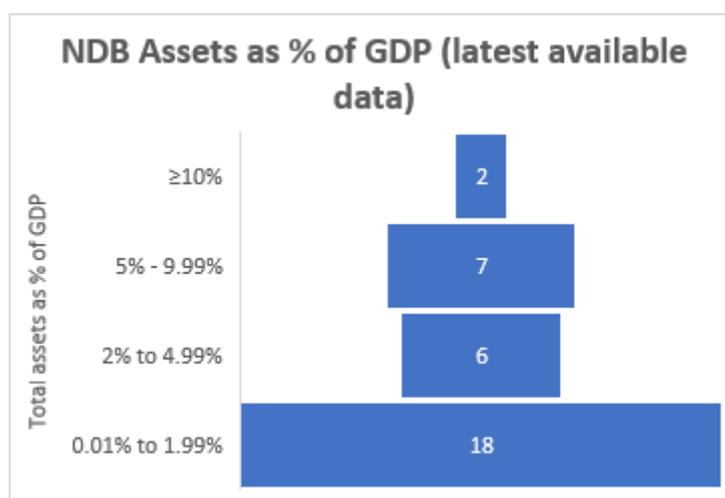
## 2.3. Financial characteristics and performance

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### 2.3.1. Size of African NDBs

Although numerous, most of our sample DBs are strikingly small (Figure 2). The size of African NDBs in our sample (total bank assets/country GDP) ranges from 23% (Caisse de Dépôts et de Gestion in Morocco) to 0.04% (Small enterprise finance agency of South Africa). 9 out of 33 had total assets to GDP greater than 5% and only 2 had total assets over 10%. Just over half (18) had less than 2% and 11 of these had assets less than 1%. We also found very little correlation between size of DB's to country financial depth, suggesting that wider development and political concerns motivate their existence and size.

**Figure 2. NDB Assets as percentage of GDP.<sup>4</sup>**



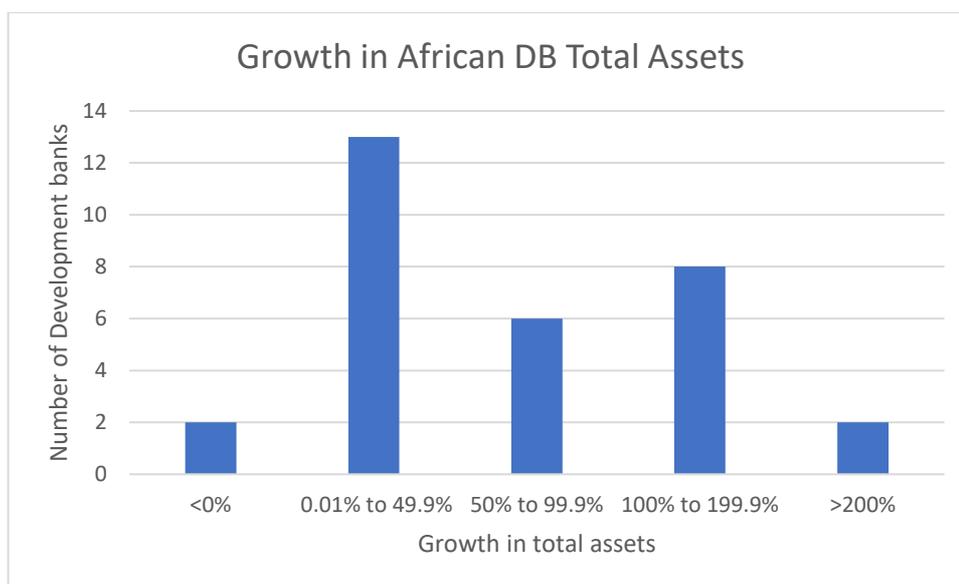

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<sup>4</sup> Source: Authors' calculations based on ODI dataset (for total assets of DB's) and World Bank Development Indicators (for GDP). Notes: Calculated in LCU in current prices, using latest available financial statements of DBs.

### 2.3.2. Balance sheet expansion and gearing

Although small, our sample of NDBs show that nearly all have grown during the period 2014 to 2015. Of our sample of 33,<sup>5</sup> 30 DB's (94%) have seen their balance sheets grow during this period. Total assets of these banks have risen from between 231% (Development Bank of Namibia) at the upper end and 13% (Eswatini Development and Savings Bank) at the lower end. Almost a third have seen their total assets at least double (Figure 3), and only two banks have seen their balance sheets shrink.

**Figure 3. Growth in the total assets of African Development Banks 2014 -2019 <sup>6</sup>**

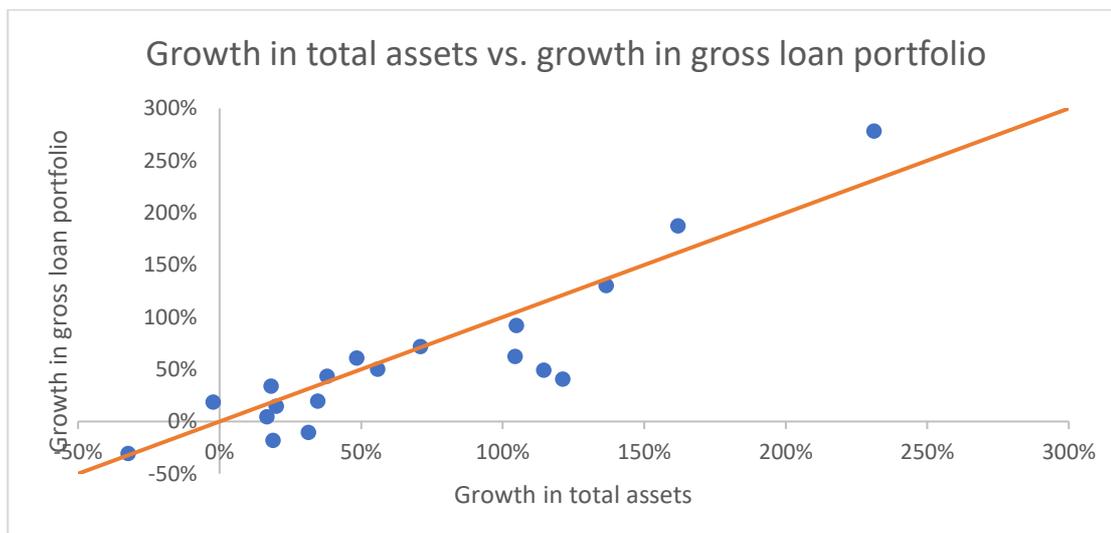


For most banks, this balance sheet expansion has been translated into increased lending activity for all sample banks except three. Figure 4 plots the growth in total assets and gross loan portfolios over the period over the period 2014 to 2019 for our sample banks and shows a strong positive correlation. The 45-degree orange line represents an equal increase in both (i.e. a 100% pass through where a hypothetical increase of NDB's capital by \$100mn translates to an increase in lending by \$100mn). Figure 4 shows that some banks have managed to leverage increases in lending activity over and above the increase in total assets (above orange line). This suggests that these banks have been efficient at absorbing and utilising these increases in funding and have been efficient in pumping money into the economy. The proximity to the 45-degree line also suggests that there is a demand for this capital in the economy.

<sup>5</sup> We exclude two DB's from Zimbabwe due to the introduction of new currencies during the period under review.

<sup>6</sup> Source: Authors' calculations based on ODI dataset for period 2014 to 2019 where data available. Notes: Calculated using simple averages for each DB for periods where data were available and in LCU in current prices. Excludes Zimbabwean DBs due to currency changes during the period under review.

**Figure 4. Growth in total assets compared to growth in loan portfolio 2014–2019<sup>7</sup>**



**Table 2. Changes in funding of African Development Banks**  
Source: ODI dataset

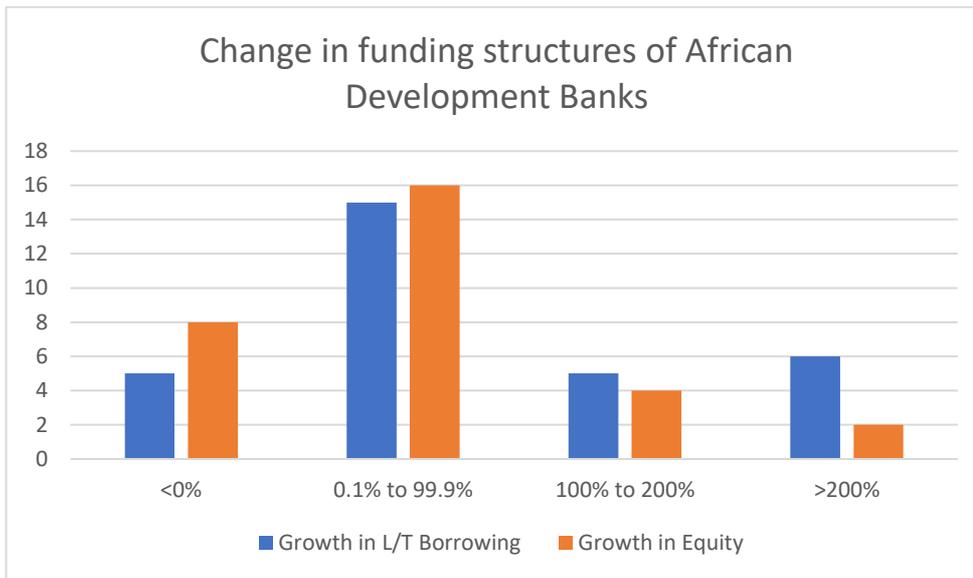
Change in source of funding	Number of banks
NDB Growth	
Growth in both debt and equity funding	20
Growth in equity and reduction in debt funding	3
Growth in debt funding and reduction in equity funding	7
NDB decline	
Decline in both debt and equity funding	1

The source of funding this growth varies. For two thirds of our sample this growth has been funded by a mix of both increases in equity (capital injections and/or increases in retained earnings and other reserves, including revaluation reserves on equity and property portfolios) and long-term borrowing. About two thirds of our sample banks (21) received some form of capital injection but much of the growth has been funded by an increase in long-term borrowing (Figure 5). We see this in the change in gearing ratio for our sample banks.<sup>8</sup> Two thirds of NDBs studied saw increases in their gearing ratio during the period 2014 to 2019. Despite this, gearing ratios overall remain low, reflecting the small capital base of many of our sample banks and their limited ability to leverage their balance sheets

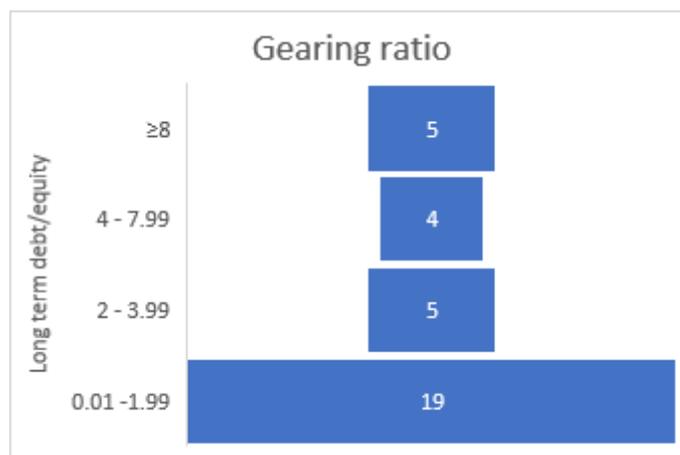
<sup>7</sup> Source: Authors’ calculations based on ODI dataset for period 2014 to 2019 where data available. Notes: Calculated using simple averages for each DB for periods where data were available and in LCU in current prices. Excludes Zimbabwean DBs due to currency changes during the period under review and Development Bank of Nigeria and Botswana Development Corporation as outliers.

<sup>8</sup> Calculated as the ratio of long-term debt (liabilities with an original maturity of over two years) to equity.

**Figure 5. Change in debt and equity financing of African Development Banks 2014 to 2019<sup>9</sup>**



**Figure 6. Gearing ratios of selected African NDBs<sup>10</sup>**



The majority of our sample NDBs (73%) met the AADFI PSGRS gearing standard of less than 4, indicating that their funding structure is relatively sound (Figure 6) Only 5 NDBs were highly geared indicating excessive riskiness in their funding structures. Many of these banks are not highly geared (just under half had ratios less than 1).

<sup>9</sup> Source: Authors' calculations based on ODI dataset. Notes: Calculated in LCU in current prices and using simple averages for each DB using data for the period 2014 to 2019 where available. Excludes Zimbabwean DBs.

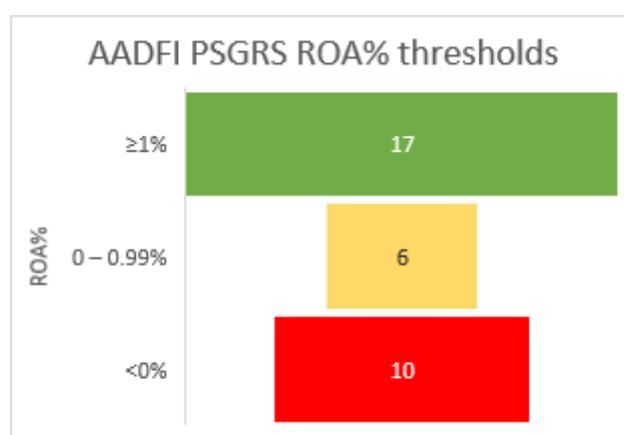
<sup>10</sup> Source: Authors' calculations based on ODI dataset. Notes: Calculated in LCU in current prices and simple averages for each DB using data for the period 2014 to 2019 where available.

### 2.3.3. Return on assets and non-performing loans

NDBs need to be financially sustainable and function as viable banks. This is important to ensure that these banks can attract and mobilise much needed external capital from partners such as international development banks, international climate funds, donors and private actors both domestically and internationally. This issue becomes even more pertinent in the current context of COVID-19 and fiscally constrained governments.

A common criticism of African NDBs is that they suffer from asset quality problems adversely impacting the viability of these banks, often due to perceived or real political interference. Two key financial indicators can be used to shed light on the health of our sample NDBs in this regard: 1) return on assets (ROA) which measures profitability by looking at how well a DB uses its total assets to generate profits;<sup>11</sup> and 2) non-performing loans percentage which measures asset quality.<sup>12</sup> We find mixed results on profitability for our sample NDBs. Just over two-thirds of our sample was profitable on average during the period 2014 to 2019 (Figure 7) Indeed, the ROA the majority of our sample of African DBs compare favourably to European DFIs where the average ROA for the group was -1.32% in 2019, 0.6% in 2018 and 2.2% in 2017<sup>13</sup>; meanwhile even a large institution such as the IFC still reported an ROA of -1.7% in 2020 and 0.1% in 2019<sup>14</sup>.

**Figure 7. Profitability of African NDBs<sup>15</sup>**



<sup>11</sup> Calculated as profit after tax divided by total assets.

<sup>12</sup> Calculated as non-performing loans divided by gross loan portfolio. If data on non-performing loans unavailable this has been proxied by NPL balance sheet provision.

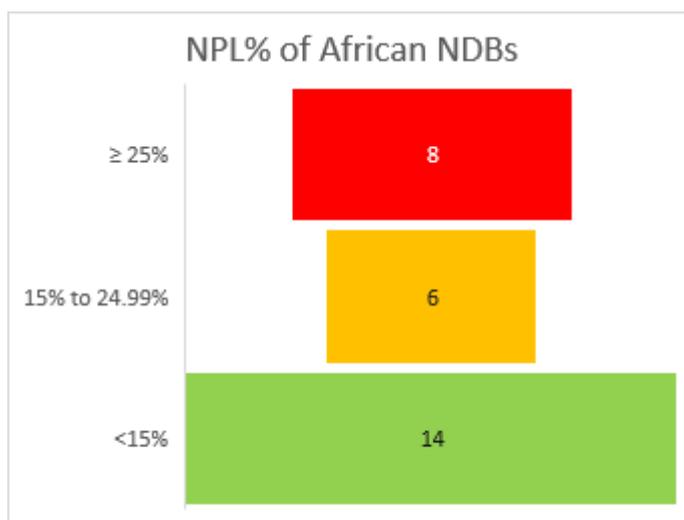
<sup>13</sup> Author calculations based on individual EDFI annual financial reports. A number of EDFI's have significant or sizeable equity portfolios versus debt which will affect the ROA and its variability so we use an average for these. IFC has a majority debt portfolio (85%) more consistent with the majority debt composition of our sample NDBs.

<sup>14</sup> <https://www.ifc.org/wps/wcm/connect/7ad59eaa-739d-43b0-88a1-12e85d38fd7e/IFC-AR20-Year-in-Review.pdf?MOD=AJPERES&CVID=nk0f5rj>

<sup>15</sup> Source: Authors' calculations based on ODI dataset. Notes: Calculated in LCU in current prices and using data where available for the period 2014 to 2019.

Asset quality does appear to be a problem for many banks. However, just under 1/3 of NDBs (10) had a negative return on assets (ROA), of these non-profitable banks 9 had non-performing loan ratios of over 10%. Using the AADFI PSGRS NPL benchmarks, half of our sample had high NPL percentages (greater than 15%).<sup>16</sup> Just under one third (8) had very high NPL percentages over 25%. These high NPL% affect the profitability of the banks' as can be seen by the inverse relationship between ROA and NPL (Figure 9).

**Figure 8. Non-performing loan ratio of African NDBs<sup>17</sup>**



If we compare our African sample with the NPL% thresholds and distribution of the World Bank survey on NDBs in 2017, which covered 64 NDBs from different parts of the world (Luna Martinez et al., 2017), we can see that there does appear to be an issue with the asset quality of African DBs compared to a wider sample of DBs from around the world (Table 3.).

**Table 3. Comparison of African NDB NPL%**

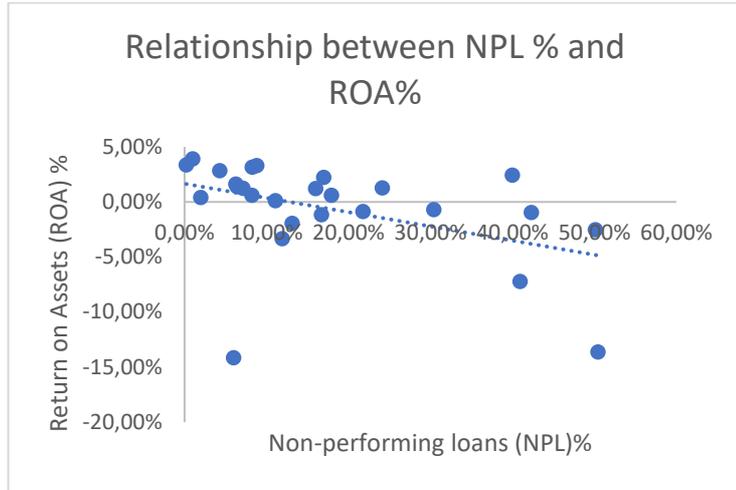
Source: Authors' calculations based on ODI dataset and World Bank 2017 Survey on National Development Banks.

World Bank survey NPL % thresholds	WB 2017 survey - end of 2015	ODI sample average 2014-2019
>30%	7%	29%
5% to 30%	32%	57%
<5%	61%	14%

<sup>16</sup> Our sample reduces from 33 to 28 NDBs as we were unable to calculate NPL % for 5 NDBs.

<sup>17</sup> Source: Authors' calculations based on ODI dataset. Notes: Calculated in LCU in current prices and using data where available for the period 2014 to 2019.

**Figure 9. inverse relationship between NPL and ROA<sup>18</sup>**



<sup>18</sup> Source: Author's calculations based on ODI dataset.

Notes: exclude two outliers ICDC and DBM and NDBs where we NPL% data not available.

### 3. Quantitative Methodology

This section provides details about the data used in the empirical analysis in section 5, definitions of the key variables, and the methodology used to analyse the relationship between corporate governance and financial performance of banks.

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#### 3.1 Data

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The sample comprises of 33 African DBs located in 21 countries, over the period 2014–2019. Our panel is unbalanced as countries have different number of banks. Data that captures bank characteristics is obtained from various sources such as annual reports, financial statements, bank websites and other published documents, and supplemented using news media and press releases. The reliance of publicly available data to construct the data for this study has implications on the extent to which results can be generalized to the entire set of NDBs in Africa. All measures of financial performance (ROA, NPL and gearing) are expressed as ratios to allow for comparability across time and banks with different characteristics. To capture factors related to the enabling environment, we use indicators of macroeconomic environment, obtained from the World Bank development indicators, while country-level governance indicators come from the Worldwide Governance Indicators database. All variables used in the study, as well as their definitions are summarized in Table A1 in the appendix.

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#### 3.2 Econometric analysis

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The baseline specification takes the form:

$$y_{it} = \beta_0 + \beta_1 P_{it} + \beta_2 X_{it} + \beta_3 S_{it} + \beta_4 Z_{jt} + \eta_t + \varepsilon_{it} \quad \text{Eq (1)}$$

Where the Eq (1) is estimated at the bank level and the subscripts  $i$ ,  $t$  and  $j$  represent bank, year and country respectively. The coefficient of interest is denoted by  $\beta_1$  and captures the association between measures of bank governance and its performance, while holding all other factors constant. As such, our results aim to capture correlational effects rather than causation.

$y_{it}$  is the outcome variable that measures the financial performance of a bank. Following industry standards on financial management and reporting, we rely on four variables: 1) return on assets (ROA), which aims to capture the extent to which a bank's assets are used to generate profits; 2) non-performing loans (NPL), which measures the ratio of non-repaid loans for at least 90 days to the total amount of a bank's outstanding loans; 3) gearing ratio, measured by the ratio of a bank's long-term borrowing to equity, and used as an indicator of a bank's financial leverage; and 4) a financial performance index computed using principal component analysis with ROA and NPL.

$P_{it}$  is a vector of variables that aims to capture the channels through which political influence affects the financial performance of banks. Four variables are used. The first captures the degree to which the CEO or the managing director of a bank is appointed by the president as opposed to government ministries, shareholders or board of directors. The second variable captures the degree to which the board of directors is appointed by the president, prime minister or monarch as opposed to government ministries or shareholders. The third variable aims to capture whether the institution that supervises a bank overlaps with the ownership of the bank. A positive value on either of these indicators is expected to undermine the financial performance of bank. The fourth variable captures the degree of representation of independent directors, international or private sector on the board. A positive value would indicate less political influence and increase the scope for better financial performance.

$X_{it}$  represents time varying bank-specific controls. These include a binary indicator capturing whether a bank's financial records are audited by government or international firm, the gender of the CEO, whether a bank adheres to international standards in keeping its accounts, and a variable indicating auditor's opinion on the accuracy of financial statements. The inclusion of these variables follows different studies showing their influence on bank's financial performance and help in mitigate the omitted variable bias. For instance, international auditors have been found to perform better than government auditors due to their credibility and less incentives in the audit results (Feltenstein and Lagunoff 2004). Several studies show that a bank's evaluation of its financial statements affects its performance via its credit standing (Firth, 1980; Boolaky and Quick, 2016). In addition, the gender of the CEO has also been found to affect a bank's performance through risk taking (Palvia et al 2015; Weill and Skala, 2018).

In order to take into account the effects of economic policies which may simultaneously affect political factors and financial performance,  $Z_{jt}$  is a vector of macroeconomic, regulatory and institutional controls (Gupta and Kashiramka, 2020; Ghosh and Ansari 2018). We include: inflation rate, measured by the consumer price index, to proxy a country's macroeconomic stability and credibility of its monetary authorities, depth of credit information index which captures the availability and quality of information on credit sources, population growth to capture the demand for credit, and control for corruption, rule of law and governance effectiveness as proxies for a country's overall enabling environment.

$S_{it}$  is a dummy variable that captures any sector-specific factors that might affect a banks' performance. We control for whether a bank has a broad mandate or is registered in specific sectors such as housing or agriculture.

The year dummies ( $\eta_t$ ) are incorporated to capture aggregate time trends such as financial shocks that are not accounted for by the control variables, but that might affect banks' performance. All regressions are based on robust standard errors clustered at the country level, the highest level of aggregation.

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### 3.3 Estimation technique

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The empirical strategy is based on two econometric techniques. The first is panel data fixed effects and the second is System Generalized Methods of Moments (S-GMM) techniques. The results are quantitatively and qualitatively similar when either approaches are used. We use panel data to perform these analyses. This has two important implications for the estimation of Eq. 1.

First, by combining both the cross section and time series dimension of the data, the increased number of observations for banks across multiple years increases the precision of the estimates. Second, unlike cross-sectional analysis, panel data permits the uncovering of dynamics in how political influence might affect financial performance over time in different countries.

The panel fixed effect approach helps to control for average differences across banks in any observable or non-observable factors, such as differences in bank strategies, which might influence their financial performance. As such, the fixed effect coefficients absorb all the across-bank variation. This leaves the within-bank variation, which reduces the threat of omitted variable bias. Because fixed effects models rely on variation of variables within a bank, this requires repeated observations for each bank as well as a reasonable amount of changes in the regressors (Cameroon and Trivedi (2005).

The second approach is to use the S-GMM techniques developed by Arellano and Bover (1995). The advantage of this approach is twofold. First, it can be used to address endogeneity problems due to omitted variable bias and reverse causality. For instance, worse performing banks might require political influence to keep them afloat, or the banks that experience political influence might have different attributes – such as high profitability – compared to those without. Second, the approach offers consistent estimates when using small sample sizes. The instruments are collapsed to ensure that they do not significantly exceed the number of countries (Roodman, 2009). The crucial assumption is that the first differences are not correlated with the unobserved bank effects. We test for the validity of the S-GMM estimators using the Hansen J test of over-identifying restrictions and the Arellano-Bond AR (2) test for autocorrelation.

## 4. Empirical results

This section presents the main results of our analysis. We provide a descriptive analysis and correlation between the model's main variables, and then proceed to a discussion of the results. The section concludes with robustness checks.

We find significant variation in the dependent variables of financial performance, which illustrates the significant influence of country-level effects on the profitability of our NDBs. However, our regression analysis show, when controlling for country and bank-level characteristics, governance structures play an influential role on financial performance. We find political appointments of senior staff, particularly the CEO, by the president or head of state have a systematic and negative impact on various measures of financial performance. On the other hand, we do find a positive association between financial performance measures and a higher representation of independent board members, and we find that this effect is stronger when the enabling environment of the country is weaker. These results are explored in detail below.

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### 4.1 Descriptive statistics

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Table A2 in the appendix provides the summary statistics. For each variable, we calculate the mean, the number of observations and the between and across countries standard deviation. The results highlight substantial variation in the performance and characteristics of the banks under analysis.

For instance, we find the mean value of the ROA is around 8.9% for the entire sample, with the lowest bank having a ROA of -66% and the highest having 19%. This large variation reflects the inability of some banks to make positive returns from their assets. As reported in Table A2, the standard deviation of ROA in the sample is around 7%. Similarly, the mean ratio of NPL is 22.72% with a standard deviation of 23.61, while the average gearing ratio is 4.14, with a between country-variation of 6.5 standard deviation. Overall, these findings, coupled with the wide variation between the minimum and maximum values suggest that country-level factors play an important role in influencing bank's profitability.

Table A3 in the appendix summarizes the correlation between the variables included in Eq (1). While only reflecting associations, the results provide suggestive evidence in support of some of our key hypotheses. First, there is an inverse relationship between a bank's financial performance and the degree of politicisation in appointment. For instance, the correlation between ROA and having a CEO appointed by the president is -0.067, and -0.016 if the board is appointment by the president, although neither are significant. Second, the results show a positive and statistically significant association between ROA and having an independent board (0.403). Third, the results suggest that a bank's supervision does affect its financial performance and its operational model. Being supervised by an entity that is not separated from the ownership of the bank is associated with a higher gearing ratio of 0.20. This relationship turns out to be statistically significant at the 1 percent level, which suggests that less

rigorous supervision might lower a bank's financial leverage and appetite to borrow. Finally, the correlation among the variables signals potential multicollinearity which we address in the econometric analysis by sequentially adding the control variables across the different specifications.

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## 4.2 Political influence in bank management: econometric results

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Table 4 **Erreur ! Source du renvoi introuvable.** presents the first set of the main results. The specifications in columns (1) – (5) are estimated using panel fixed effects. The control variables in the different columns are included in a stepwise manner, both for robustness, as well as a precautionary approach to avoid the multi-collinearity problem. The specification in column (1) is a simple binary relationship, while column (2) includes bank-specific controls. The specification in column (3) further includes year fixed effects to control for time invariant characteristics while column (4) includes sectoral factors. Column (5) includes country-wide macroeconomic and institutional controls. In column (6), we present the S-GMM results that includes the full set of control variables.

The lower panel presents the diagnostic tests to assess the validity of the estimates. The goodness of fit tests, as indicated by the  $R^2$  suggests that the model performs relatively well in explaining the variation in profitability in our sample. In addition, the p-values corresponding to the Hansen J test confirm the exogeneity of the instruments used while the Arellano test of order two fail to reject the null hypothesis of no autocorrelation in the residuals.

Overall, these results provide evidence of an *inverse relationship* between bank's financial performance and political influence, proxied by political appointment. Across the different specifications, the main coefficient is negative and statistically significant at the conventional levels, suggesting that presidential appointments of the CEO are associated with lower profitability. In terms of magnitude, the coefficients remain fairly consistent, suggesting that presidential appointment of a CEO lowers the ROA by an average of 6 percent, ranging from 2% to 11% in our various model specifications. This effect is not only statistically significant, but financially meaningful, given that only 2/3 of the banks in our sample were profitable during the period under analysis.

**Table 4. Relationship between ROA and presidential appointment of CEOs**

Dependent variable: Return on Assets						
	Panel fixed effects					S-GMM
	(1)	(2)	(3)	(4)	(5)	(6)
Presidential appointment of CEO	-0.0274*** (0.0089)	-0.0544*** (0.0179)	-0.117*** (0.0332)	-0.0909*** (0.0275)	-0.0683*** (0.0231)	-0.0794** (0.0269)
Bank characteristics	No	Yes	Yes	Yes	Yes	Yes
Year fixed effects	No	No	Yes	Yes	Yes	Yes
Sector controls	No	No	No	Yes	Yes	Yes
Country wide controls	No	No	No	No	Yes	Yes
Observations	117	101	101	101	94	96
R-squared	0.153	0.338	0.633	0.678	0.790	-
Number of banks						25
Number of instruments						14
Hansen test (p-value)						0.280
AR (2) test (p-value)						0.170

Bank characteristics include (whether accounts are audited, gender of the CEO, whether international accounting standards are followed, auditors qualified opinion) sector controls include (housing, agriculture, broad mandate), country wide controls include (inflation, population growth, depth of credit information).

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 5 examines the extent to which political intervention of a bank affects its financial leverage. The coefficient of interest is obtained from re-estimating Eq 1 and replacing the outcome variable with a bank's gearing ratio. Columns (1) to (5) present panel fixed effect results while column (6) presents the GMM results. Across most of the specifications, the coefficient of interest is positive and statistically significant, suggest that presidential appointment of the CEO influences a bank's funding structure, in terms of the mix of debt and equity to finance its activities. Banks whose CEO are appointment through political processes tend to borrow more money to finance their operations, and thus commit to repayment obligations, compared to relying on equity where repayment is contingent on making positive returns.

**Table 5. Relationship between presidential appoint of the CEO and gearing ratio**

Dependent variable: Gearing ratio (%)						
VARIABLES	Panel fixed effects					S-GMM
	(1)	(2)	(3)	(4)	(5)	(6)
Presidential appointment of the CEO	6.770*** (1.935)	3.506* (1.978)	0.260 (0.969)	2.000 (1.301)	2.499*** (0.893)	1.815 (3.756)
Bank characteristics	No	Yes	Yes	Yes	Yes	Yes
Country and year fixed effects	No	No	Yes	Yes	Yes	Yes
Sector controls	No	No	No	Yes	Yes	Yes
Country-controls	No	No	No	No	Yes	Yes
Observations	117	101	101	101	76	96
R-squared	0.177	0.255	0.707	0.722	0.972	
Number of banks						25
Number of instruments						22
Hansen test (p-value)						0.163
AR (2) p-value						0.267

Bank characteristics include (whether accounts are audited, gender of the CEO, whether international accounting standards are followed, auditors qualified opinion) sector controls include (housing, agriculture, broad mandate), country wide controls include (inflation, population growth, depth of credit information).

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Given that major bank's decisions, especially those that might affect its returns, might be undertaken by the board and not the CEO per se, Table 6 presents estimates obtained from re-estimating Eq 1 but replacing the main independent variable with presidential influence in the selection of board members. The results in columns (1) to (5) are based on panel fixed effects while those in column (6) are estimated using S-GMM. Across all the specifications, the coefficient is negative and statistically significant at various levels. The results suggest convincingly that political appointments of board members by heads of state are also associated with lower financial performance. The magnitude of the coefficients range widely between 2.5 percent and 11 percent. This result reinforces the finding that political appointments at senior levels of bank management and decision-making plays a role in conditioning the operations and outcomes of bank activities.

**Table 6. Relationship between ROA and presidential appointment of board members**

Dependent variable: Return on assets						
	Panel fixed effects					S-GMM
	(1)	(2)	(3)	(4)	(5)	(6)
Presidential appointment of the board	-0.0242* (0.0129)	-0.0385* (0.0201)	-0.0815*** (0.0210)	-0.102*** (0.0246)	-0.088*** (0.025)	-0.1141* (0.0714)
Bank characteristics	No	Yes	Yes	Yes	Yes	Yes
Year fixed effects	No	No	Yes	Yes	Yes	Yes
Sector controls	No	No	No	Yes	Yes	Yes
Country wide controls	No	No	No	No	Yes	Yes
Observations	129	112	112	112	104	110
R-squared	0.016	0.123	0.525	0.626	0.764	
Number of banks						28
Number of instruments						23
Hansen test (p-value)						0.134
AR (2) p-value						0.972

Bank characteristics include (whether accounts are audited, gender of the CEO, whether international accounting standards are followed, auditors qualified opinion) sector controls include (housing, agriculture, broad mandate), country wide controls include (inflation, population growth, depth of credit information).

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

#### 4.2.1 Does the independence of the board matter?

Given the assumption that political interventions might be targeted to banks with worse performing outcomes, it is important to examine whether granting independence to bank boards is a viable alternative. Table 7 examines the degree to which the independence of board members from political influence affects bank's performance. Columns (1) to (5) present panel fixed effect results while column (6) presents the GMM results. Due to the unbalanced nature of the dataset, the number observations continue to vary in the different columns. Overall, the results suggest that a higher proportion of independent and private sector representatives on the board on national banks has a small, but positive and significant effect on profitability. This result is in line with several studies showing a strong relationship between performance and the composition of the board (Ghosh and Ansari, 2018). This could be suggestive of the fact that their inclusion leads to better skills and knowledge on bank's operations (Shleifer and Vishny, 1998; Ghosh and Ansari, 2018). It is also plausible that independence of board improves profitability through enhanced accountability and systems of monitoring, or greater linkages between the bank and the private sector (Fama and Jensen; 1983). Fundamentally, independence of board members also mitigates potential conflicts of interest of board members who may have financial stakes in bank projects or lending.

**Table 7. Relationship between independence of the board and ROA**

Dependent variable: Return on Assets						
	Panel fixed effects				S-GMM	
	(1)	(2)	(3)	(4)	(5)	(6)
Independent representative (%)	0.0017*** (0.0004)	0.0028*** (0.0006)	0.0043*** (0.0013)	0.0030* (0.0015)	0.0026* (0.0013)	0.005** (0.002)
Bank characteristics	No	Yes	Yes	Yes	Yes	Yes
Year fixed effects	No	No	Yes	Yes	Yes	Yes
Sector controls	No	No	No	Yes	Yes	Yes
Country wide controls	No	No	No	No	Yes	Yes
Observations	68	60	60	60	56	59
R-squared	0.162	0.440	0.728	0.843	0.890	
Number of banks						20
Number of instruments						19
Hansen test (p-value)						0.378
AR (2) p-value						0.496

Bank characteristics include (whether accounts are audited, gender of the CEO, whether international accounting standards are followed, auditors qualified opinion) sector controls include (housing, agriculture, broad mandate), country wide controls include (inflation, population growth, depth of credit information).

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 8 examines the relationship between a bank's supervision and its non-performing loans. Panel fixed effect estimations are reported in columns (1) and (2) while S-GMM results are in columns (3) and (4). The results suggest that not having institutional separation of ownership and supervision is associated with worse financial performance. The coefficients in columns (1) and (3) are positive and statistically significant, suggesting higher NPLs for banks without independent supervision. On the other hand, the coefficients in columns (2) and (4) are negative and statistically significant, suggesting that independence in bank supervision is associated with lower NPLs. Banks with a high NPL ratio are likely to be at a greater risk of loss or default on their borrowing if loans are not recovered, and potential investors are less likely to invest in banks where non-performing loans are high, which might reduce the bank's stock price (if listed), value (if not listed), credibility and future profitability. While many factors can contribute to non-performing loans, this result supports the argument for institutional separation and independent supervision.

**Table 8. Supervision of bank and financial performance**

Dependent variable: Non-Performing Loans (%)				
VARIABLES	Panel fixed effects			S-GMM
	(1)	(2)	(3)	(4)
Same entity as ownership	17.50* (10.87)		9.605 (577.18)	
Independent representative (%)		-1.129** (0.592)		-1.809*** (0.5794)
Bank characteristics	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Sector controls	Yes	Yes	Yes	Yes
Country wide controls	Yes	Yes	Yes	Yes
Observations	82	45	95	51
R-squared	0.462	0.855	-	
Number of banks			27	17
Number of instruments			17	16
Hansen test (p-value)				0.044
AR (2) p-value			0.570	0.197

Bank characteristics include (whether accounts are audited, gender of the CEO, whether international accounting standards are followed, auditors qualified opinion) sector controls include (housing, agriculture, broad mandate), country wide controls include (inflation, population growth, depth of credit information).

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

#### 4.2.2 Under what conditions does the independence of the board matter?

Having established the importance of board independence, we examine under what conditions it matters for the financial performance of banks. We re-estimate the baseline equation and include an interaction term that conditions the influence of board independence with variables that proxy a country's enabling environment. We use three indicators: control of corruption, government effectiveness and rule of law. We define a country to have a weak enabling environment if its score is below the mean of the sample.

**Table 9. Supervision of bank, enabling environment and financial performance**

Dependent variable: Return on Assets			
	(1)	(2)	(3)
Independent representative (%)	-0.0011 (0.001)	0.00137* (0.0007)	0.0010 (0.001)
Control of corruption	0.00187 (0.0011)		
Independent representative (%) X weak environment	0.118*** (0.0349)		
Government effectiveness		0.0184 (0.0203)	
Independent representative (%) X weak environment		0.0022** (0.0010)	
Rule of law			0.0299 (0.0267)
Independent representative (%) X weak environment			0.00250** (0.0011)
Year effects	Yes	Yes	Yes
Bank characteristics	Yes	Yes	Yes
Sector controls	Yes	Yes	Yes
Bank characteristics	Yes	Yes	Yes
Country wide controls	Yes	Yes	Yes
Observations	63	56	56
R-squared	0.910	0.443	0.448

Bank characteristics include (whether accounts are audited, gender of the CEO, whether international accounting standards are followed, auditors qualified opinion) sector controls include (housing, agriculture, broad mandate), country wide controls include (inflation, population growth, depth of credit information).

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 9 reports the results. In column (1), we present results where the enabling environment is defined using control of corruption, in column (2) we use government effectiveness in column (3), rule of law. Across the different specifications, the interaction term is positive and statistically significant at the conventional level. This finding suggests that for banks located in countries with poor governance, board independence can help insulate a bank from political influence and enhance its financial performance as measured by ROA. This effect is particularly large and significant at 1% for control of corruption.

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### 4.3 Robustness checks

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This section provides a series of robustness checks to examine the validity of the main results. We adopt three different approaches.

#### 4.3.1 Computation of a financial performance index

First, we compute a financial index that combines ROA and NPL to capture the effect of political influence on the overall financial performance of a bank. This addresses the concern that some metrics such as NPL might not significantly affect a bank's overall financial stability if it can receive bailouts from the government. In addition, while different metrics of a bank might differ, the overall performance of a bank might provide better signal about its potential to deliver on its mandate. The financial performance index is calculated using the principal component analysis procedure. High values of the index denote poor financial performance. Table 10 reports the results. The coefficient of interest across the three specifications is positive and statistically significant, suggesting that the presidential appointment of both CEOs and board members, as well as non-separation of ownership and supervision bodies undermines overall bank's financial performance.

**Table 10. Overall financial performance and political influence**

Dependent variable: Financial Performance Index			
	(1)	(2)	(3)
Presidential appointment of the CEO	1.354** (0.558)		
Presidential appointment of board		0.104*** (0.037)	
Same entity supervising bank			0.929** (0.370)
Bank characteristics	Yes	Yes	Yes
Country controls	Yes	Yes	Yes
Sector controls	Yes	Yes	Yes
Observations	80	87	90
R-squared	0.651	0.507	0.533

Bank characteristics include (whether accounts are audited, gender of the CEO, whether international accounting standards are followed, auditors qualified opinion) sector controls include (housing, agriculture, broad mandate), country wide controls include (inflation, population growth, depth of credit information).

Year fixed effects are included in all specifications.

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

### 4.3.2 Influence of outliers

Second, we examine whether the results are being driven by the inclusion of large banks which may be more well-capitalized, or situated in richer countries. We re-estimate the baseline equation and exclude all national banks located in South Africa, as they tend to be highly-capitalized compared to the rest. The results in Table 11 show that CEO appointments is still negative and statistically significant effect, and effects are consistent with previous analyses. This finding reinforces the evidence that our findings are not driven by outliers.

**Table 11. Re-estimating results using System GMM results: Excluding South African banks**

Dependent variable: Returns on Assets			
VARIABLES	(1)	(2)	(3)
Presidential appointment of CEO	-0.0289** (0.011)		
Presidential appointment of board		-0.0222 (0.091)	
% of independent members on the board			0.0008*** (0.0002)
Bank characteristics	Yes	Yes	Yes
Country and year fixed effects	Yes	Yes	Yes
Country wide controls	Yes	Yes	Yes
Constant	-0.077 (0.119)	0.059 (0.193)	0.0111 (0.038)
Observations	72	85	40
Number of countries	20	23	16
Number of instruments	22	22	17
F stat	23.89	0.75	44.49
Hansen test	0.665	0.062	0.494
AR(2) test	0.248	0.300	0.432

Bank characteristics include (whether accounts are audited, gender of the CEO, whether international accounting standards are followed, auditors qualified opinion) sector controls include (housing, agriculture, broad mandate), country wide controls include (inflation, population growth, depth of credit information).

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

### **4.3.3 Controlling for a country's overall level of governance**

Finally, we re-estimate main results and control for a country's overall quality of institutions using different governance metrics. The results are reported in Table . In columns (1), (4) and (7), we control for a country's level of corruption, rule of law in columns (2), (5) and (8) and government effectiveness in columns (3), (6) and (7). The specifications in column (1) – (3) use ROA as the measure of financial performance, those in columns (4)–(6) use NPL while those in columns (7)–(9) use the financial performance index.

Across the different specifications, the coefficient for presidential appointment of CEOs continues portraying a negative and statistically significant effect. In columns (1) – (4) the results show that it lowers ROA while columns (4)–(6) show that it increases the share of NPL. The results in columns (6)–(9) further suggest that it lowers a bank's overall performance.

**Table . Relationship between ROA, NPL financial index and presidential appointment of CEOs**

Dependent variable	Return on Assets			Non-performing loans (%)			Financial performance index		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Presidential appointment of the CEO	-0.0692*** (0.0227)	-0.0712*** (0.0228)	-0.0701*** (0.0233)	34.40*** (8.395)	37.57*** (7.841)	35.68*** (8.222)	1.517** (0.705)	1.511** (0.602)	1.461** (0.675)
Control of corruption	Yes	No	No	Yes	No	No	Yes	No	No
Rule of Law		Yes			Yes			Yes	
Government effectiveness			Yes			Yes			Yes
Bank characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country wide controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sector controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	94	94	94	77	77	77	80	80	80
R-squared	0.795	0.800	0.795	0.887	0.890	0.886	0.643	0.671	0.643

Bank characteristics include (whether accounts are audited, gender of the CEO, whether international accounting standards are followed, auditors qualified opinion) sector controls include (housing, agriculture, broad mandate), country wide controls include (inflation, population growth, depth of credit information).

Regressions are panel fixed effects and include bank and year fixed effects

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

# Conclusions, Policy implications & further research

## Conclusions

This study presented a novel dataset drawing from 33 African NDBs from an identified 107 to quantitatively assess the relationship between governance of NDBs and their financial performance. We highlight the diverse range of banks across the continent, their characteristics, and their governance structures. We see wide variation in the financial performance of banks, in their gearing ratios, NPLs and ROAs, which suggest that country-level factors—the *enabling environment*—play an important role in influencing the profitability of banks. We highlight, with reference to other regions and regions, the real financial challenges that many African NDBs face.

Beyond the country-level, however, we find strong evidence that governance structures of the bank itself condition performance. We confirm through novel econometric analysis to show that greater political influence in bank governance is *unambiguously negative* for the financial performance and profitability of DB's. Additionally, we find this effect is stronger in countries where the enabling environment is weaker.

We find that the *political appointment of executive management* is one of the most salient predictors for poor financial performance of all the metrics of governance we tested, and this effect is consistent when we test instead for appointment of the board. Even when we condition for the influence of the *enabling environment* on banks, controlling for bank characteristics, country-level and time fixed effects, there is still a systematic, statistically significant, and negative impact on financial performance when political appointment extends to the senior management or board of the bank. This impacts direct measures of financial performance, in terms of returns on assets and non-performing loans. However, it also extends to the risk-appetite of the bank in terms of the gearing ratio, indicating that political appointment also conditions the bank's operational structure and willingness to accept risk in its operational model.

While this study does not explore in depth the mechanisms for why and how this occurs, we highlight some potential overlapping factors. Firstly, high turnover, which we note in several banks: political discretion in appointment of management can entail greater turnover of staffing, which leads to less stability in operations, loss of institutional memory and bank capacity, and may negatively impact long-term strategy. Second, potential pressure: the power of appointment may also imply the power of dismissal, and opens possibilities where executive management may be pressured towards the interests of political actors, to the cost of the financial interests of the bank. Third, though not visible in our dataset, the literature notes that political discretion offers opportunities for patronage, leading to potentially less qualified appointees, or a 'revolving door' between government and bank institutions.

We find that Board composition matters. While not all banks have a uniform ‘Board of Directors’, the independence and supervisory role of the board plays a significant and positive role in strengthening the financial performance of banks. While a large proportion of the banks we study have government representation on the board of directors, our study shows that increasing the number of independent members of the board has a significant impact for financial performance, and makes a case for further strengthening board independence through its membership

Our findings make the case that internal governance of the bank matters more than who or what owns it. While many new banks have been established with greater international or private shareholding to diversify control of the bank away from government via its shareholding, our results do not suggest that banks that are better performing do so by virtue of being *less* public. Many cases of banks with 100% government shareholding have strong financial performance. Diversifying shareholding is often seen as positive for bank governance, but other, internal governance arrangements can also be effective. For example, entrusting CEO appointment to the board, not political actors, may be more salient in improving governance and performance, simply by increasing the institutional distance between ownership and management.

Finally, though DBs in Africa are numerous and growing in number, they remain small. Their low level of capitalisation restricts their ability to fulfil their role in support of national development objectives, or in scaling transformative investment. However, we find that nearly all our sample DBs have grown their balance sheets and lending portfolios, indicating that their unique role is being recognised by national governments, and that there is an appetite from governments to support and expand their NDBs’ operations.

This growth has in large part been funded by an increase in long-term debt funding, reflected in increased gearing ratios. However, these gearing ratios are still relatively low, which reflects low levels of capitalisation and limited ability to leverage their balance sheets. This limited leverage may in part be down to poor financial performance. As we find, financial performance varies significantly between banks: around two-thirds our of sample banks are profitable and compare favourably to European DFIs and the IFC, though one-third are not. About half our sample banks have issues with asset quality with high non-performing loan ratios and this problem seems to be more pronounced in the Africa region compared to a wider samples of development banks from different parts of the world. These weaknesses in financial performance undermine the ability of DBs to deliver on their mandate, their ability to fund their operations, and their attractiveness to international and private partners.

## **Policy implications**

Together these findings point to some broad policy implications for national governments:

- (1) First, while sole and centralised government ownership is a reality for the majority of banks, increasing institutional distance from ownership by depoliticising appointments of executive management, and increasing the representation of independent board members can lower the risks of poor financial performance.
- (2) Second, efforts should be made to ensure that well-governed and strong financially performing DBs are sufficiently capitalised, in order to be able to operate at a scale that enables them to fulfil their mandates, and support transformative investment.
- (3) Third, efforts should be made to strengthen the transparency of African NDB's. For the vast majority of African DBs, very little information is publicly available. At a minimum, banks should be supported to public audited financial statements and annual reports on a timely basis. This is an essential component of accountability and a prerequisite for most external partners to lend and partner with these banks.

## **Further research**

This study contributes to an emerging body of research focused on NDBs in Africa, as a region that has a high—and growing—number of banks, but which is still under-studied. The study is limited by data availability, and the limits of what data can measure. Our mapping tracked over 100 banks across Africa, far more than is captured in this analysis. There is a need for further data research, to understand the size, operations and governance structures of lesser-known banks. Further in-depth qualitative study is also needed, through case-study analysis of banks, to: (1) understand the relationship between governance and performance not only in narrow financial terms, but also in terms of their economic and developmental impact; and (2) understand the internal developments and reforms within banks that situate them in their wider political economy context, further illuminating some of the mechanisms behind the relationships this study has highlighted.

## Appendix – 1

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### Note on confronting COVID-19

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In the wake of the COVID-19 epidemic, we note that African NDBs have played a dual role in addressing the impacts of the pandemic, firstly in the health impacts, but also playing a counter-cyclical role in buffering the economic shock of the pandemic in the first few months of the crisis.

Several banks have contributed donations towards health measures, such as the Development Bank of Ethiopia (DBE), who donated 5 million birr (around 135k USD), ADB Ghana, who donated 1 million cedi (173k USD), and 1.4 million Namibian dollars (83k USD) from the Development Bank of Namibia (DBN) towards disaster relief funds. Other banks, including IDC South Africa and CDC Tunisia, have also mobilised funds specifically for COVID-19 essential supplies, to import essential medical products, personal protective equipment and hospital equipment. The IDC also started a targeted lending facility for MSMEs to produce essential equipment.

We also see several banks who stepped up in mobilising economic support for their clients and sectors. These include CEDA Botswana, Development Bank of Mauritius (DBM), Development Bank of Seychelles, SEFA South Africa, Namibia's Agricbank and DBN, who issued relief schemes or emergency funds to support clients in affected sectors. These typically include measures such as the rescheduling of loans, temporary moratoriums or 'payment holidays' for 3-6 months, potential reductions of interest rates, and emergency relief to cover working capital for affected firms. Namibia's DBN also introduced for corporate borrowers the possibility of equity conversions in order to reduce the debt burden.

There is an urgent role for African NDBs to play in providing counter-cyclical measures to address the national economic impacts of the global pandemic, however the economic slowdown will also impact the future capacity and financing of many NDBs, many of whom have already moved to reduce budgets and re-prioritise project portfolios. A slowdown or diversion of government resources and international funders to fighting the pandemic could squeeze smaller NDBs. The economic slowdown will be an ongoing challenge for financial sustainability in African NDBs, but also a means to "prove their relevance" through new innovative approaches (AADFI 2020).

## Quantitative tables

Table A1. Description of Variables

Variables	Type	Description
<b>Mandate</b>	<b>Dummy</b>	Based on classification of bank's mandate as broad (GENDEV), or sector-specific, such as small & medium-sized enterprises (MSME), agriculture (AGRI), housing (HOUS) or export-import (EXIM)
<b>Ownership</b>	<b>Continuous</b>	Percentage by ownership structure of bank by shareholding, classified by percentage central/federal government, local government, other public institutions (central bank or state-owned financial institution) or private/international shareholding.
<b>Same entity as ownership/</b>	<b>Binary</b>	if supervisory institution overlaps with entity of majority shareholding
<b>Supervising Entity</b>	<b>Dummy</b>	for entity of supervision, whether: Central Bank; Ministry of Finance; or other Line Ministry
<b>Board of Directors: % composition</b>	<b>Continuous</b>	Percentage for composition of the board of directors: <ul style="list-style-type: none"> <li>• Proportion of non-executive,</li> <li>• Proportion representing of government or ministry officials</li> <li>• Proportion representing private/international shareholders.</li> </ul>
<b>Appointment of Board of Directors</b>	<b>Categorical variable</b>	degree of direct political appointment of board of directors, whether appointments are determined by: head of state (prime minister, president or monarch); ministry of ownership (or ministry of finance if ownership unclear); ministry of supervision (or central bank); diverse shareholders appoint (such as through annual general meeting).
<b>Appointment of CEO</b>	<b>Categorical</b>	Degree of direct political appointment of managing director or CEO, whether appointments are determined by: head of state (prime minister, president or monarch); ministry of finance or other line ministry; diverse shareholders; or by Board of Directors.

<b>International Accounting Standards</b>	<b>Binary</b>	if accounts are kept in accord with international accounting standards allowed by national or central bank account requirements and in compliance with those requirements?
<b>Unqualified opinion</b>	<b>Binary</b>	if the opinion unqualified (auditor has NOT issued the opinion with reservations regarding the accuracy or truth of the financial statements, i.e. statements reflect a true and fair picture)
<b>Internal Audit</b>	<b>Categorical</b>	Is there an internal audit dept or qualified external auditor that provides internal audit which reports directly to Board?
<b>Audited accounts</b>	<b>Categorical</b>	if accounts are audited by an international accounting firm or private domestic firm; accounted by government auditor; both
<b>Government effectiveness</b>	<b>Continuous</b>	Government effectiveness captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.
<b>Rule of law</b>	<b>Continuous</b>	Rule of law captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.
<b>Control of Corruption</b>	<b>Continuous</b>	Control of corruption captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests.

**Table A2. Summary Statistics**

Variable		Mean	Std. Dev.	Min	Max		Observations
Index	overall	4.15E-10	1	-1.59727	1.660252		N = 114
	between		0.82399	-1.56403	1.527292		n = 29
	within		0.690879	-1.68195	1.961162	T	bar = 3.93103
Gearing ratio	overall	4.137462	7.72777	0	66.708		N = 151
	between		6.508554	0.015947	31.57976		n = 34
	within		3.756163	-10.8491	39.2657	T	bar = 4.44118
ROA	overall	0.0008942	0.07015	-0.66368	0.19315		N = 146
	between		0.042808	-0.14141	0.088654		n = 33
	within		0.055065	-0.52137	0.145623	T	bar = 4.42424
NPL	overall	22.72183	23.61008	0.2	94		N = 115
	between		22.43649	0.2	91.5		n = 30
	within		8.494605	-6.09817	64.50183	T	bar = 3.83333
Presidential Appointment	overall	1.706349	1.23332	0	3		N = 126
	between		1.212806	0	3		n = 28
	within		0.413118	-0.29365	3.373016	T	bar = 4.5
Supervisory entity	overall	1.148649	0.811188	0	2		N = 148
	between		0.814685	0	2		n = 33
	within		0.073771	0.348649	1.348649	T	bar = 4.48485
Independent of board	overall	20.21918	12.59987	1	41		N = 73
	between		12.50742	2	40.5		n = 22
	within		4.248475	6.885845	44.88584	T	bar = 3.31818
Appoint of board	overall	1.852113	1.031058	0	3		N = 142
	between		1.015619	0	3		n = 31
	within		0.331556	-0.14789	3.185446	T	bar = 4.58065
Auditor accounts	overall	0.979021	0.51002	0	2		N = 143
	between		0.43211	0	2		n = 33
	within		0.302959	-0.52098	1.979021	T	bar = 4.33333
Gender of chair	overall	0.3287671	0.471382	0	1		N = 146
	between		0.439072	0	1		n = 33
	within		0.195642	-0.47123	1.128767	T	bar = 4.42424
Int standards	overall	0.9078014	0.290338	0	1		N = 141
	between		0.293353	0	1		n = 33

	within		0.10351	0.157801	1.157801	T	bar = 4.27273
Auditors opinion	overall	0.9111111	0.285643	0	1		N = 135
	between		0.249066	0	1		n = 32
	within		0.132429	0.111111	1.161111	T	bar = 4.21875
Mandate	overall	1.629371	0.552565	1	3		N = 143
	between		0.564401	1	3		n = 32
	within		0	1.629371	1.629371	T	bar = 4.46875
Inflation	overall	6.140765	6.252902	-21.5317	32.3777		N = 153
	between		4.656578	-1.02206	15.63248		n = 33
	within		4.285646	-29.9166	23.99283	T	bar = 4.63636
Depth of credit	overall	5.624002	2.61072	0	8		N = 158
	between		2.252586	0	8		n = 33
	within		1.35646	0.124002	10.95734	T	bar = 4.78788

**Table A3. Pairwise correlation matrix**

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(1) Index	1.000														
(2) Gearing	0.030	1.000													
(3) ROA	0.043	-0.016	1.000												
(4) NPL	0.372***	-0.206**	0.028	1.000											
(5) Pres. appoint	-0.008	0.309***	-0.067	0.152	1.000										
(6) Supervising entity	-0.056	0.202**	-0.042	-0.189*	-0.026	1.000									
(7) <del>Index</del> of board	-0.144	-0.082	0.403***	0.173	-0.187	0.065	1.000								
(8) Appoint of board	0.016	0.141*	-0.016	0.087	0.511***	-0.330***	0.040	1.000							
(9) Audited accounts	-0.206**	-0.007	0.004	0.126	-0.246***	0.108	0.216*	-0.006	1.000						
(10) Gender of CEO	-0.044	-0.090	0.052	-0.110	-0.282***	-0.160*	0.200*	0.048	0.293***	1.000					
(11) Int standards	0.130	-0.102	-0.050	0.181*	-0.129	-0.037	-0.237**	0.224***	0.040	-0.046	1.000				
(12) Auditor opinion	-0.154	-0.014	0.270***	-0.287***	-0.063	-0.044	-0.034	-0.199**	-0.056	0.160*	0.010	1.000			
(13) Mandate	-0.118	0.347***	0.017	-0.405***	0.134	-0.058	-0.183	0.279***	0.072	0.140*	0.042	0.040	1.000		
(14) Inflation	0.043	-0.013	-0.079	0.012	0.167*	0.085	-0.080	0.028	-0.046	-0.098	-0.159*	-0.370***	-0.180**	1.000	
(15) Depth of credit	0.090	-0.216***	-0.014	0.126	-0.220**	-0.095	0.328***	-0.334***	0.178**	0.257***	0.162*	0.248***	-0.238***	-0.067	1.000

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

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