RSC 2023/71
Robert Schuman Centre for Advanced Studies
Florence School of Banking and Finance

WORKING PAPER

BANKING IN AFRICA: Opportunities and challenges in volatile times

Thorsten Beck, Robert Cull, Davide Salvatore Mare, Patricio Valenzuela

European University Institute
Robert Schuman Centre for Advanced Studies
Florence School of Banking and Finance

BANKING IN AFRICA: Opportunities and challenges in volatile times

Thorsten Beck, Robert Cull, Davide Salvatore Mare, Patricio Valenzuela

RSC Working Paper 2023/71

ISSN 1028-3625

Published in December 2023 by the European University Institute.
Badia Fiesolana, via dei Roccettini 9
I – 50014 San Domenico di Fiesole (FI)
Italy
www.eui.eu

With the support of the Erasmus+ Programme of the European Union

The European Commission supports the EUI through the European Union budget. This publication reflects the views only of the author(s), and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Robert Schuman Centre for Advanced Studies

The Robert Schuman Centre for Advanced Studies, created in 1992 and currently directed by Professor Erik Jones, aims to develop inter-disciplinary and comparative research on the major issues facing the process of European integration, European societies and Europe's place in 21st century global politics. The Centre is home to a large post-doctoral programme and hosts major research programmes, projects and data sets, in addition to a range of working groups and ad hoc initiatives. The research agenda is organised around a set of core themes and is continuously evolving, reflecting the changing agenda of European integration, the expanding membership of the European Union, developments in Europe's neighbourhood and the wider world. For more information: http://eui.eu/rscas The EUI and the RSC are not responsible for the opinion expressed by the author(s).

The Florence School of Banking & Finance

The Florence School of Banking & Finance is a European platform bringing together practitioners and academics from the Banking and Finance sector to develop a common culture of regulation and supervision in the European Union. It does so through policy debate, training and applied research and in close interaction with its network of leading academic institutions. Complete information on our activities can be found soon at: fbf.eui.eu/

Abstract

This paper surveys existing literature and data to take stock of the current state of banking systems across Sub-Saharan Africa. It documents different dimensions of the development of the banking systems in the region and compares Africa's banking systems to those of comparable low- and lower-middle income countries outside the region. The paper also discusses the progress in policies and institutions underpinning financial deepening and the results of specific innovations to reach traditionally unbanked segments of the population, such as innovative branch expansion programs, mobile banking, and new financial products. In view of the COVID-19 pandemic, the paper discusses government support for financial systems and banking sector performance during crises. Overall, the survey shows a picture of achievements and challenges, with progress along some fronts but other challenges persisting even as new ones arise, including the turning of the global financial cycle in 2022/23 and increasing geopolitical tensions.[1]

Keywords

Africa, Banking, Financial Inclusion, Financial Innovation, Financial Stability

1 The findings, interpretations, and conclusions presented here are entirely those of the authors and do not necessarily represent the views of the World Bank, its Executive Directors, or the countries they represent.

Table of Contents

1. INTRODUCTION

Banking in Africa has undergone dramatic changes over the past three decades. While the continent was dominated by government-owned banks until the 1980s and subject to restrictive regulation—including interest rate ceilings and credit quotas—financial liberalization, institutional and regulatory upgrades, and globalization have changed the face of financial systems across the region. Today, most countries have deeper and more stable financial systems, although challenges of concentration and limited competition, high costs, and limited inclusion persist. And while financial service provision used to be limited to a few larger firms and high-income households, the mobile money revolution has improved access to financial services enormously over the past decade and a half. Originally limited to payment services, other financial services are nowadays delivered through digital channels, increasing the outreach of the formal financial system and allowing better access to and use of such services by a large part of the household and enterprise populations.

This paper surveys existing literature and data to take stock of the current state of banking systems across Sub-Saharan Africa and discusses recent developments including innovations that could help Africa leapfrog more traditional banking models.[1] It uses an array of different data sources to document different dimensions of the development of African banking systems, highlighting variation within the region and changes over time. The paper compares Africa's banking systems to those of comparable low- and lower-middle income countries outside the region, and gauge whether there is an "Africa-specific" element to banking sector development. It also discusses progress in policies and institutions underpinning financial deepening and the results of specific innovations to reach out to previously unbanked population segments, including innovative branch expansion programs, mobile banking, and new financial products. The paper discusses government support for financial systems and banking sector performance during the Covid pandemic. Overall, the survey shows a picture of achievements, including stronger resilience, and challenges, including stubbornly high costs, with progress along some fronts but other challenges persisting even as new ones arise, including the turning of the global financial cycle in 2022/23 and increasing geopolitical tensions.

When talking about financial systems in Africa, one has to take into account the enormous variation within the region. On the one hand, South Africa and Mauritius have relatively developed banking systems and capital markets. On the other hand, smaller and poorer countries, such as South Sudan or Sierra Leone, have shallow banking systems offering only the most rudimentary financial services, with few if any non-bank financial institutions or capital markets. In spite of the variation within the region, however, there are four specific characteristics that make banking in Africa more difficult than in other regions of the developing world, and most of those apply to many, if not all, African economies (see Honohan and Beck, 2007; and Beck et al. 2011).

First, the small size of many economies does not allow financial service providers to reap the benefits of scale economies. The limited demand for savings, insurance, credit, or even simple payment transactions means that large parts of the population of African economies are not commercially viable customers for the traditional brick-and-mortar banking model. The dispersion of population in many African countries means that financial service provision outside urban centers through branches is not cost-effective. Second, large parts of the economy and a large share of all economic agents operate in the informal sector and do not have the necessary formal documentation that traditionally has facilitated financial transactions, such as enterprise registration, land titles, or even formal addresses. This increases the costs and risks for financial institutions and excludes large segments of the population from traditional formal financial services. Third, volatility increases

1 In the following Sub-Saharan Africa and Africa are used interchangeably. However, this analysis focuses almost exclusively on Sub-Saharan Africa thus excluding Northern Africa. While some of the characteristics of Sub-Saharan African financial systems extend to Northern Africa, there is a similar variation across countries in the Northern part of the continent, ranging from a fairly developed system in Morocco to rather shallow financial markets in Tunisia and Egypt, to a state-dominated financial system in Algeria. Beck et al. (2011) offers a discussion of both Sub-Saharan and Northern African financial systems.

costs and undermines risk management. At the individual level, volatility is related to informality and the consequent fluctuations in the income streams of many microenterprises and households. This means these agents are less attractive to traditional financial institutions. At the aggregate level, volatility refers to the dependence of many African economies on commodity exports, which makes them vulnerable to the large price swings characteristic of commodities, as well as to political and social unrest, from which Africa has suffered over the past 50 to 60 years of independence. Finally, governance problems continue to plague many private and government institutions throughout the continent and undermine not only the market-based provision of financial services, but also reform attempts and government interventions aimed at fixing market failures.

These characteristics make banking in Africa more challenging and increase the need for innovative solutions. Technology can potentially reduce transaction costs and risks, thus enabling the processing of smaller transactions, and turning more households and enterprises into commercially viable clients. Innovative products and delivery channels can address the constraints discussed above. Critically, these interventions and policy reforms have to work both on the supply and demand side. In what follows the paper discusses several examples of such innovative approaches to financial inclusion.

The 2008 crisis in the developed world shed doubt on the positive impact that large, complex banks can have on economic development (Allen et al., 2014; Arcand, Berkes and Panizza, 2015), in contrast to an extensive literature illustrating a positive finance-growth relationship (Levine, 2005; Popov, 2018). Consumer credit booms in the US and several European countries, fueled by a combination of the liquidity glut linked to the global macroeconomic imbalances, regulatory neglect and the feeling that “this time is different” ended in the Global Financial Crisis. If there is a lesson to be learnt for Africa’s banking systems from the crisis, it seems that the growth benefits of financial deepening can only be reaped in a stable macroeconomic environment and with the appropriate safeguards framework, both in terms of external regulation and supervision and internal bank governance. Notwithstanding the recent negative experience in countries with the deepest financial sectors, banking systems in Africa can and must play a critical role in the economic development process of the region.

The remainder of this paper is structured as follows. Section 2 documents financial development across different dimensions, in international comparison, but also illustrating variation within the region and over time. Section 3 discusses recent evidence on policies and interventions that can help deepen and broaden financial systems in Africa. Section 4 focuses on challenges of long-term finance in the region and the effect of global financial cycles and geopolitical tensions on banking in Africa. Section 5 concludes and looks forward.

2. STOCK-TAKING: WHERE DOES AFRICA STAND?

Global data collection efforts on the depth, outreach, stability, and efficiency of financial systems have been successful in collecting data on African financial systems for a wide sample of countries,[2] much wider than those used in the earliest studies of African financial development (see, e.g., Honohan and Beck, 2007). Those data are now routinely collected by the World Bank and housed in the Global Financial Development Database (GFDD), which was last updated in 2022.[3] In addition, aggregate data have been complemented with a number of surveys of enterprises, both informal and formally registered with an authority, and surveys for some countries now have a panel dimension (i.e., firms having been surveyed at several points in time).[4] Similarly, household surveys focused on financial services, such as the Finscope and Finaccess surveys in several African countries, have provided important insights into individual and household access to and use of formal and informal financial services, while the Global Findex dataset includes most countries in Sub-Saharan Africa.[5] The following analysis therefore uses an array of databases and other sources to document the development and structure of banking systems across the region.

2.1 Financial Development in Africa in International Comparison

Despite progress by Africa's banking systems over the past twenty years, they remain relatively small, costly, and focused on the short-term end of the yield curve, and thus neither efficient nor inclusive.

2.1.1 Size and Outreach

To compare banking systems in Africa to a proper benchmark, the sample is limited to low- and lower-middle income countries in sub-Saharan Africa. The median for this group is then compared to the median country across low- and lower-middle income countries outside Africa.[6] Several upper-middle income African countries are therefore dropped in the statistical comparisons in this section, although they are included in the discussion on intra-regional variation below.[7]

Figure 1 shows that the median African country has a markedly shallower financial system than the median non-African country. Three standard indicators of financial development are presented: liquid liabilities to GDP, Bank Deposits to GDP, and Private Credit to GDP, using data for 2011 and 2021. While the median non-African developing country had liquid liabilities of 65% of GDP in 2021, the median African country had only 31%. Moreover, the median liquid liabilities to GDP ratio increased by 16 percentage points from 2011 to 2021 for non-African developing countries, compared to a five-percentage point gain for African countries. Similarly, the median deposit to GDP ratio outside Africa was 58% in 2021 (a thirteen-percentage point increase since 2011), compared to 25% in Africa (a five-percentage point gain since 2011); the median Private Credit to GDP ratio was 48% outside Africa (rising from 31% in 2011), but only 15.5% inside Africa (rising from 14% in 2011). Comparing the difference between deposit and credit ratios also indicates that African banks are less effective in intermediating society's savings than banks in non-African developing countries, a topic that is returned to below. Overall, despite gains on these indicators for African countries from 2011

2 Beck, Demirgüç-Kunt, and Levine (2000, 2010), Demirgüç-Kunt and Klapper (2012), Laeven and Valencia (2013).

3 See Cihák, Demirgüç-Kunt, Feyen, and Levine (2012) for description of the GFDD. The GFDD can be accessed at: https://www.worldbank.org/en/publication/gfdr/data/global-financial-development-database

4 For example, the World Bank Enterprise Survey is a firm-level survey covering a broad range of business environment topics. As of March 2023, data has been collected from more than 191,000 firms in 154 countries, including information on 44 sub-Saharan African countries. For a detailed overview of the survey, please consult https://www.enterprisesurveys.org/en/enterprisesurveys

5 See Demirgüç-Kunt, Klapper, Singer, and Ansar (2022) for description of the latest round of the Global Findex Database. Findex data were also collected in 2011, 2014, and 2017.

6 Throughout, the text refers to these two groups of countries as African and non-African developing countries.

7 The countries not included in the statistical comparison are: Botswana, Equatorial Guinea, Gabon, Mauritius, Namibia, Seychelles, and South Africa.

to 2021, they lost ground to non-African developing countries which were improving more swiftly.

It is important to note that the median ratios mask substantial variation across Africa. Figure 2 shows that even excluding the most financially developed African economies, such as Mauritius and South Africa, there is a wide range in Private Credit to GDP across the low- and lower-middle income countries of the region, from 7% in Sudan and Sierra Leone to 71% in Cape Verde. The median country is Benin with a Private Credit to GDP ratio of 15.5%. This compares with 89% in Mauritius. There is similar variation across developing Africa for the Liquid Liabilities to GDP and Bank Deposits to GDP ratios (not shown).

While Figure 1 shows modest gains from 2011 to 2021 on indicators of financial development for African countries, yearly data makes clear that those gains largely occurred prior to 2016. For example, Figure 3 shows that the Private Credit to GDP ratio for the median African country increased from 9% in 2005 to 17.6% in 2016. Thereafter that ratio declined slightly and then remained at around 16% through 2021. In contrast, despite a brief dip just after the Global Financial Crisis (2009-2011), the Private Credit to GDP ratio for the median non-African country rose from 28% in 2005 to 45% in 2016. That ratio declined slightly in 2020, due to the COVID pandemic, but ended at 48% in 2021. The overall picture is one of modest gains in private credit for African countries through 2016, and stagnation thereafter, and steady increases for non-African developing countries aside from two brief crisis episodes. As indicated in Figure 1, gains for African countries in terms of bank deposits and liquid liabilities were much stronger than for private credit – for example, the median African lower-income country doubled its ratio of bank deposits to GDP during this period from 12.3% in 2005 to 24.8% in 2021 – which again highlights the region's difficulties in intermediating savings for productive investment.

Africa's banking systems are not only shallower than banking systems in non-African developing countries but also less inclusive. Figure 4 presents four indicators of access to and use of financial services. First, there are two aggregate indicators: bank accounts per 100 adults and bank branches per 100,000 adults. Both indicators are substantially lower in the median African country than in the median non-African developing country. Specifically, there are only 21 bank accounts for every 100 adults in the median African country, while there are 69 outside Africa. There are 4 branches per 100,000 adults in Africa, while there are 11 outside Africa. Second, the more limited outreach of Africa's banking systems is also reflected in indicators of the use of formal finance by enterprises and households. While in the median African country only 18% of firms indicated that they have a line of credit or loan from a formal financial institution, this share is 22% outside Africa. Similarly, 24% of adults in the median African country (excluding high-income countries) indicate that they have an account with a formal financial institution, while this share is 40% outside Africa.[8]

2.1.2 Efficiency, Profitability, and Stability

As of 2020, Africa's banks were, on average, less efficient, but more profitable and operated in less competitive environments. Net interest margins in the median African country stood at 6.3% while they stood at 4.1% outside Africa. Similarly, the spread between lending and deposit interest rates was 10% in Africa and 6.5% outside. While there are many reasons why spreads and margins are higher in Africa, one important reason is higher operating costs. Specifically, overhead costs in the median African financial system stood at 4.2% of total assets in 2020, while they were 2.2% outside Africa. Higher interest rate spreads and margins coincide with greater concentration in African banking markets. While the share of the five largest banks was 71% in the median African country in 2020, it was 55% outside Africa.

8 These figures include accounts at formal financial institutions other than banks.

While shallow, concentrated, and costly, Africa's banking systems have also proven stable and resilient over the past years. For example, African banks are more profitable than banks outside Africa. The return on assets (ROA) stood at 1.6% in 2020 in the median African country, while it was 1.0% outside Africa.[9] Beck et al. (2019) argued that the shallowness of Africa's banking systems helped them weather the global financial crisis of 2008 better than some other regions of the world, with the impact of the crisis on Africa mostly working through real sector channels, such as lower demand for export goods, or through lower foreign direct investment. Given the limited integration with global financial markets and exposure to "toxic" assets, financial institutions across the region largely evaded the direct impact of the global financial crisis. Similarly, African banking systems were less adversely affected by the COVID-19 pandemic than those in other regions, a point amplified upon in a subsequent section.

Greater stability is also illustrated in the aggregate balance sheet indicators of African banks. In 2020, the capital to risk-weighted asset ratio was 19.5% in the median African country, compared to 16.5% outside Africa. On the systemic level, Africa has suffered few banking crises since the bout of systemic fragility in the 1980s and 1990s (Laeven and Valencia, 2013). Notwithstanding these positive headline indicators, pockets of (hidden) fragility continue to exist, often related to political crisis, shocks in the commodities markets and/or governance deficiencies. For example, the volatility of commodity prices has recently been shown to be a significant predictor of financial fragility and even banking crises in low-income countries (Eberhardt and Presbitero, 2021). Following the pandemic, the turn of the global financial cycle, and rising geopolitical tensions there is increasing sovereign fragility across the developing world, including in several African countries, as discussed in more detail in section 4.2. Ultimately, this fragility will also affect the banking system, although how exactly this unfolds remains to be seen.

While the aggregate data indicate the shallowness, inefficiency, and limited intermediation in African banking systems, bank-level data provide additional insights. Comparing a sample of 289 banks from low and lower-middle income countries in Africa and 706 banks from non-African developing countries in 2020 shows higher liquidity ratios for African banks. Specifically, the ratio of liquid assets to total assets was 20.7% for the median African bank in 2020, as compared with 15.8% for non-African banks. Similarly, African banks were better capitalized, with an equity-asset ratio of 13.2%, compared with 11.7% for non-African banks. African banks were also substantially smaller. The median bank held $455 million in assets in 2020, compared with $1.2 billion for the median non-African bank. African banks also lent less: non-interest income was 24.9% of total income for the median African bank and only 13.9% of the income of the median non-African bank. These comparisons give a picture of African banks that are well-capitalized, over-liquid, and provide only limited lending to the real economy, as highlighted previously by Honohan and Beck (2007), Beck et al. (2011), and Beck et al. (2019). Moreover, there has been improvement among African banks on some of these indicators – in 2010, the median African bank held only $302 million in assets, non-interest income was 36.5% of total income, and liquid assets were 26.7% of total assets. There was not enough progress, however, to close the gaps with banks in non-African developing economies.

The bank-level data also permit an analysis of the drivers of high operating costs in African banking. More specifically, Table 1 uses regression analysis to relate bank-level variation in overhead costs to bank- and country-level characteristics and compares banks in Africa with banks in non-African developing countries. For a cross-country sample of banks, overhead costs in 2020 are regressed on (1) the share of non-interest income, (2) the equity-asset ratio, (3) the liquidity ratio, (4) loan growth over the previous year, (5) the log of total assets, (vi) the inflation rate and (vii) the Kaufmann, Kraay and Mastruzzi (2011) indicator of Rule of Law. The results in Table 1 indicate the extent to which these different factors contribute to substantially higher overhead costs of banks in Africa (3.44%

9 ROA figures are after taxes.

in the regression sample) than in banks outside Africa (1.87%). Relatively high reliance by African banks on non-interest income and their smaller size can explain 3 and 54 basis points, respectively, of the difference in overhead costs. Higher inflation in African countries and less efficient contractual frameworks can explain only 1 basis point and 26 basis points respectively, reflecting improvements in macroeconomic and institutional framework over the past years in Africa. Even after accounting for these bank and country characteristics, there is still an unexplained Africa residual of 62 basis points and thus a first indication of an Africa-specific element in financial intermediation costs.

2.1.3 Financial Market Structure and Ownership

Prior to 2010, Africa's banking systems were heavily focused on the short end of the yield curve, as illustrated by the maturity structure on both the asset and liability sides of African banks' balance sheets. Using data for the 2005-2009 period, Beck et al. (2011) showed that more than 80% of deposits were sight deposits or deposits with a maturity of less than one year and less than 2% of deposits had a maturity of more than ten years. There was a similar, though not as extreme, bias towards the short end on the lending side. During the 2005-2009 period, almost 60% of loans were for less than one year, and less than 2% of loans were for more than ten years. Over time, however, the maturity structure of bank loans has begun to extend. By 2016, the median proportion of short-term loans to total loans was 31.9% in African countries with available data, compared with 18.6% in the median non-African developing country. And in 2021, the share of short-term loans was only 17% for the median African country, and 21% for non-African developing countries, though the higher figure for non-African countries could be because they were affected more by the COVID-19 pandemic. Still, the evidence indicates that African countries now rely on short-term loans about as much as their non-African peers.

Tilted heavily toward short-term assets and liabilities, this maturity distribution, especially prior to 2015, was consistent with the lack of non-bank long-term financial instruments, including the limited development of contractual savings institutions, such as insurance companies, pension funds, and mutual funds. About half of the countries in the region have stock exchanges and few of them are liquid. Another indication of the short-term nature of African banking is the dearth of mortgage finance. While mortgage depth to GDP in the median African country was below 1%, it was above 2% outside Africa (Badev et al. 2013). These aggregate numbers match with anecdotal evidence that mortgage systems in many smaller African countries comprise just a few hundred mortgages, concentrated among wealthy individuals.

The ownership structure in the financial sector, particularly in banking, has also played a role in Africa's financial performance and outcomes. As discussed in Beck et al. (2019), the ownership structure of Africa's banking systems has undergone notable changes over the past decades, with foreign-owned banks playing an increasingly important role while government-owned banks have become less prominent. In the median African country, the share of assets held by foreign-owned banks rose from 35% in 1995 to over 65% in 2019 (the average has increased from 43% to 61%), while there were no government-owned banks in 1995 or 2019 in the median African country (the average share of government-owned banks has declined from 17% in 1995 to 5% in 2019). For comparison, the asset share of foreign-owned banks in the median non-African developing country was 23% in 2019.[10]

10 These data are based on Panizza (2023), which defines a bank as foreign-(or government-) owned if more than 50% of its ownership shares are held by foreign (government) entities.

Although foreign-owned banks have been present in Africa since the colonial era, their participation increased following the privatization wave in the 1980s and 1990s and the reforms that liberalized the financial sectors in the 1990s and early 2000s. Whereas, traditionally, foreign banks operating in Africa hailed from Europe, more recently banks headquartered in Africa have entered other African countries on a large scale. After the end of Apartheid, several South African banks, most notably Standard Bank and ABSA, started expanding throughout the continent. Later, two West African banks—Ecobank and Bank of Africa—began expanding throughout sub-Saharan Africa. Similarly, Moroccan banks started to expand southwards and, finally, as a consequence of the bank consolidation waves in Nigeria and Kenya (Beck et al., 2014), banks from those economies also started expanding throughout the rest of the continent.

What has been the effect of these changes in ownership structure on the development, efficiency, stability, and outreach of African banking? Evidence from studies in Nigeria, Tanzania, and Uganda generally showed that the privatization of government-owned banks led to improved profitability, efficiency, and portfolio quality, although credit growth was slower in some cases after privatization.[11] Those findings provide one indication that banks' performance has been better under private ownership than government ownership. In addition, the most recent global evidence continues to show that state-owned banks are less profitable and have a higher share of non-performing loans than their private (domestic or foreign) counterparts, though they tend to stabilize credit in the presence of domestic shocks (Panizza, 2023).

Among private banks, foreign banks would seem to have several advantages that are specific to Africa: international banks can help foster governance; they can bring in much-needed technology and experience that should translate into increased efficiency in financial intermediation; and they can help exploit scale economies in small host countries. Nonetheless, especially in Africa, with its many small, risky, and informal enterprises, the dark side of foreign bank entry also can become obvious, even more so in countries in which foreign banks have captured an overwhelming majority share of the banking market. Specifically, the greater reliance by foreign banks on hard information about the creditworthiness of potential borrowers as opposed to soft information can have negative repercussions for riskier and more opaque borrowers if foreign banks crowd out domestic banks. The absence of a sound contractual and informational framework reduces the feasibility of small business lending further and thus the potential positive effects of foreign bank entry (Claessens and van Horen, 2014). Finally, the small size of many financial markets in sub-Saharan Africa may make foreign banks reluctant to incur the fixed costs of introducing new products and technologies.

On a global level, World Bank (2018) shows that post-crisis entry by foreign bank subsidiaries was driven largely by banks headquartered in developing countries, and they tended to enter neighboring countries thus contributing to greater regionalism in international banking. This trend was especially pronounced in the African context. Claessens and van Horen (2014) find that the positive effect of cross-border banking on a host country's aggregate financial development is declining in the distance to the parent banks' headquarters. Further, Beck (2015) offers tentative evidence of a positive relationship between the share of foreign banks from the region or other emerging markets and firms' access to finance and of a negative relationship between the share of foreign banks from Europe or the U.S. and entrepreneurial finance. Those sets of results suggest that the wave of Pan-African foreign bank entry was likely to be healthy for the financial sectors of host countries and for their consumers.

And yet, the best recent evidence does not confirm that foreign banks headquartered in other African countries have performance superior to that of other banks. Pelletier (2018) uses data from financial statements and surveys to compare the performance of three different categories of foreign banks to domestic banks in sub-Saharan Africa: global banks from developed countries, regional African

11 See Beck et al. (2005) on Nigeria, Cull and Spreng (2011) on Tanzania, and Clarke et al. (2009) on Uganda.

banks, and banks from non-African emerging economies. Emerging-market banks and global banks consistently outperform domestic banks in terms of profitability and cost efficiency. Those differences are not, however, significant for regional African banks. Better performance of global banks and emerging-market banks stems from greater operational efficiency and lower costs of funding. To this point, regional African banks have struggled to generate interest income in comparison to other bank types, including domestic banks, and there is no evidence of loan market segmentation – which could indicate that regional African banks are finding their niche in credit provision. These findings are reminiscent of those in Claessens and van Horen (2012) that foreign banks from home countries that are geographically close to a host country do not perform significantly better than other banks. However, they also find that foreign banks from home countries that speak the same language and have similar banking regulation as the host country perform better than others, and these conjectures have not yet been directly tested in the African context. Moreover, 2012 is the last year of financial data used in Pelletier (2018) and, since the influx of foreign banks from other African countries is relatively recent, this may not have provided sufficient time for the full benefits of that African regional bank entry to materialize. But based on the evidence available thus far, it appears that so-called "South-South" foreign bank entry has not yet paid large dividends in Africa.

2.2 Economic and Financial Sector Policies and Performance during COVID-19

The characteristics of African financial systems may have had implications for how they were affected by COVID-19 and the financial sector policy choices made by governments. The spread of COVID-19 triggered extraordinary government intervention around the world as policy makers introduced measures to stem the negative effects caused by the spread of the disease. Policies consisted of four broad types, namely fiscal, monetary, prudential, and other measures. Data on policy announcements put together by the International Monetary Fund helps in understanding the sheer size and intensity of such interventions (Kirti et al., 2022). Data is available for just three low- and lower-middle income countries in sub-Saharan Africa and 13 low- and lower-middle income countries outside Africa. A total of 766 policies were announced by developing countries around the world in 2020. Figure 5 shows that developing countries in Africa introduced fewer measures compared to developing countries outside Africa. Countries made use of different types of policies. For example, Rwanda announced 14 fiscal policies (that is grants, tax reliefs, tax deferrals, equity participations, loans, and guarantees) out of a total of 21 policies, while Nigeria announced 15 monetary interventions (that is interest rates and reserve requirements changes, financing operations and asset purchases) out of a total of 25 policies.

The magnitude of the intervention also differs across countries. Figure 6 shows that India announced fiscal policies worth approximately 10% of GDP, while Ghana and Nigeria show the lowest magnitude of intervention at 1.4% of GDP and 0.8% of GDP, respectively. Overall, for the countries for which information is available, the data shows the extraordinary policy reaction to the spread of COVID-19 although for African countries this was on a smaller scale. The data from policy announcements in reaction to COVID-19 suggest three main conclusions. First, the banking sectors in African countries were less affected by international economic turbulence as they are not well-integrated with the rest of the world, as was also seen in the Global Financial Crisis (see section 2.1.2). Second, COVID-19 had mild negative effects on African banking sectors, at least in part because it was a less severe health crisis in Africa.[12] Third, as suggested in Feyen et al. (2021), the lack of policy space (fiscal, monetary, and financial) limited the number of interventions of governments in reaction to COVID-19.

12 Data collected by the World Health Organization on the cumulative number of infections and deaths as per December 2021 indicate that the total cumulative number of infections per 100,000 people in African developing countries was 276, compared to 2,167 for the rest of the developing world. The cumulative number of deaths per 100,000 people was 5 for African countries and around 40 for the rest of the developing world.

To this point, this survey has documented the shallowness, inefficiency, and costliness of African financial markets, none of which are surprising given the region's low levels of economic development and the four characteristics mentioned above—small size, informality, volatility, and institutional governance problems. However, many of the non-African low- and lower-middle income countries suffer from similar problems. Is there an Africa-specific element to financial underdevelopment? This issue is addressed next.

2.3 Benchmarking Africa's Banking Systems

As shown above, despite extensive economic and financial sector reforms over the last few decades, many Sub-Saharan African countries still face financial development gaps relative to other developing countries. In short, the level of financial development and credit penetration in Africa is still low compared to other parts of the developing world, but it is also low relative to what would be predicted based on underlying factors that are associated with financial development.

Cross-country regressions to benchmark African financial development based on its correlates in other low- and middle-income countries reveal a substantial gap between predicted and actual levels of African financial development and inclusion. Figure 7 shows that predicted 2016–20 levels of private credit/GDP tended to be higher for most African countries than their actual levels. While in a few countries the actual levels of financial development exceed predicted levels, most African countries still face underdeveloped credit markets. Specifically, the figure shows that 16 out of 37 countries have levels of private credit to GDP that exceed their predicted levels. However, of these 16 countries, Mauritius (MUS), Cabo Verde (CPV), and South Africa (ZAF) are not particularly representative of the African experience, and Angola (AGO), Chad (TCD), Republic of Congo (COG), Nigeria (NGA), and Zimbabwe (ZWE) are in the lower left-hand corner of the figure where actual and predicted values are very low.

Within the sample of countries with private credit to GDP that exceeds their predicted levels, Kenya is the country with the highest level of private credit to GDP. The result on Kenya is somewhat expected as in recent years the country has witnessed several financial innovations and a strong bank branch expansion that have promoted financial inclusion. The bank branch expansion coincided with the emergence of Equity Bank, a pioneering commercial bank that devised a banking service strategy targeting low-income clients and traditionally under-served territories (Allen et al., 2021).

2.4 Online Alternative Finance in Africa

Online alternative finance is a financing channel to obtain funds from the public for a project or enterprise through a digital marketplace. In recent years, online alternative finance has been rapidly growing globally as well as in Sub-Sahara Africa, driven by progress in technology-based financial innovations. Thus, online alternative finance is becoming an important source of capital for entrepreneurs and firms.

The Cambridge Centre for Alternative Finance classifies the online alternative finance ecosystem into different models: the equity model, the debt model, and the non-investment model (Ziegler et al., 2021). Equity-based models refer to transactions where businesses raise capital by issuing unlisted shares or securities. Debt-based models cover peer-to-peer (P2P) and marketplace lending, secured and unsecured bonds, loans, and debtor notes. Finally, non-investment models include donation-based and reward-based crowdfunding. In this model, firms are not obliged to provide any return to the investors that funded the project.

Since 2017, there has been rapid growth in online alternative finance. As shown in Figure 8, in 2017 and 2020, the total online alternative finance markets in Sub-Sahara Africa raised US$104 million and US$1,106 million, respectively (Ziegler, 2021). Narrowing down the online alternative finance to the four sub-regions in Sub-Sahara Africa (Central Africa, West Africa, Southern Africa, and East Africa), the East Africa sub-region took the lead recording a proportion of 50 percent of all online alternative finance in 2020. It was followed by West Africa with 45 percent, and Southern Africa with 4 percent. In terms of countries, in 2020 the region's largest online alternative finance markets included Ghana ($528 million), Zambia ($297 million), and Uganda ($115 million). They were followed by Tanzania ($103 million), Kenya ($82 million), South Africa ($23 million), and Botswana ($21 million).

By model, P2P/Marketplace Consumer Lending and Balance Sheet Consumer Lending models dominate the online alternative finance landscape in the region. In 2020, they represented 63 percent and 29 percent of the total online alternative finance activity, respectively. As highlighted in the share of the market by model, it is important to emphasize that most alternative finance volumes in the region have been associated with consumer lending rather than business lending. Thus, online alternative finance platforms have played an important role by promoting financial inclusion among households. According to the information from 74 online alternative finance platforms surveyed by the Cambridge Centre for Alternative Finance, 49 percent of the platforms' clients were considered unbanked, 48 percent underbanked, and only 3 percent banked. Figure 9 shows the clients' banking status by sub-region.

3. OVERCOMING BARRIERS TO FINANCIAL INCLUSION: BRANCH EXPANSION, FIELD EXPERIMENTS, AND TECHNOLOGY

Africa has made substantial progress over the past years, not only in financial depth and inclusion, but also in underlying macroeconomic stability, with few countries presenting double-digit inflation rates. Similarly, there has been some underlying institutional progress, including in creditor rights, contract enforcement, and credit information sharing. While macroeconomic management and institutional development have thus shown a certain degree of improvement, the benchmarking exercise discussed in section 2.3 suggests that these are necessary and not sufficient conditions for financial deepening in Sub-Saharan Africa and that other barriers, including geographic disadvantages, hold back the further deepening of African banking systems. Financial innovation, i.e. new delivery channels, new players and new products, can help overcome these barriers, especially geographic barriers. Africa has seen substantial innovation on this front over the past years, as reported by Beck et al. (2011). Much of it comes from different financial institutions, banks, NGOs, and MFIs, both domestic and foreign-owned, often with support from donors. In many countries, regulators have reacted flexibly, opening space for innovation within existing regulatory frameworks or adjusting them where necessary.

This section reports on different forms of financial innovation, summarizing research findings on the recent branch expansion by some banks into more sparsely populated areas and the potential for banks to use agent networks to further extend their reach. Agents are typically owners of small retail businesses who are trained by a formal financial institution (most often a bank or a microfinance institution) to collect deposits and process payments, including payments on small-scale loans (Lyman et al., 2006; Siedek, 2008; Flaming et al., 2011). Results from recent field experiments in Africa that are beginning to shed light on the types of financial services that could benefit underserved market segments and overcome impediments to their uptake are also summarized. Finally, the role that technological innovation could play in bridging some of the geographic and informational divides that currently characterize the African financial landscape is explored.

3.1 Branching and Agents

While the number of bank branches per capita remains low in sub-Saharan Africa compared to non-African developing countries (Figure 4), Kenya provides an example of an African country that underwent a significant bank branch expansion in recent years. According to the World Bank's Global Financial Development Database, the total number of bank branches in Kenya increased from 2.7 per 100,000 adults in 2006 to 5.6 in 2015, while the number of ATMs increased from 2.9 per 100,000 adults to 9.7 over the same period. Those figures had declined slightly, perhaps due to the COVID-19 pandemic, but still stood at 4.7 branches and 7.3 ATMs per 100,000 Kenyan adults in 2020.

While many Kenyan banks, including some state- and foreign-owned ones, expanded their branch footprints from 2000 to 2015, the expansion strategy of one private domestic bank in particular, Equity Bank, stood out for its potential impact on outreach to under-served market segments. This institution has played a key role in fostering financial inclusion in Kenya and in neighboring countries in East Africa while remaining profitable in the process. In the period 2006-16, its client base grew from 1 to 11 million people making Equity Bank the largest bank in Africa in terms of customers. Allen et al. (2021) use the case of Equity Bank to explore the relationship between bank branch expansion, financial inclusion, and bank profitability. They find that the presence of Equity Bank branches significantly increased the likelihood of having a bank account or a loan, especially for Kenyans who were less educated, did not own their own homes, and lived in rural and arid areas.[13] Branch-level data on the profitability, credit quality, and financial structure of Equity Bank branches revealed that it was able to achieve profitability, even in remote areas, through aggressive pricing (including on loan interest rates), reducing its delinquency rates, and securing stable, inexpensive funding from retail deposits in those areas.

In all, Equity Bank's experience in Kenya and those of a handful of banks in other developing countries suggest that it might be possible to generate sustainable profits with a business model focused on the provision of financial services to population segments that are typically under-served by commercial banks.[14] At the same time, the number of studies is small (and most are not from African countries) making it hard to identify the factors that lead to successful adaptation of those strategies.

A government-supported microcredit expansion program can also help provide not only access to basic financial services to previously unbanked population segments, but also provide an entry into the commercial banking system. Specifically, Agarwal et al. (2023) show that a large-scale microcredit expansion program in Rwanda—together with a credit bureau accessible to all both banks and microfinance institutions— can enable unbanked borrowers to build a credit history, facilitating their transition from microcredit to commercial bank loans. A sizable share of first-time borrowers switched to commercial banks, which cream-skim less risky borrowers and grant them larger, cheaper, and longer-maturity loans, based on the information provided through the credit bureau.

Another potential method for promoting financial inclusion in sparsely populated areas is agent banking, which can overcome not only geographic but also socio-cultural barriers that might prevent low-income population segments from entering formal bank offices (Buri et al., 2023). For example, Finca DRC's over 500 agents handle more than 65% of the transactions of one of the largest microfinance institutions in the DRC, agents that have been especially successful in reaching the urban poor (Cull et al., 2018). Not only microfinance institutions but also banks have looked to agent

13 In their regression models, the presence of Equity Bank in a new district increased the probability of having a bank account by five percentage points. The share of Kenyan adults who had a bank account was 14% in 2006 and 23% in 2009.

14 For similar studies, see Bruhn and Love (2014) on the extension of Banco Azteca in Mexico, Burgess and Pande (2005) on an exogenous change in branching restrictions in India to identify the effects of increased branch penetration on poverty reduction, and Brown, Guinn, and Kirschenmann (2016) documenting substantial gains in financial inclusion associated with the expansion of a major microfinance provider (ProCredit) in Albania, Bulgaria, Macedonia, and Serbia.

networks to extend their reach to under-served areas and market segments. Again, in Kenya, Equity Bank moved forcefully into agent banking, expanding its number of agents from under 1,000 in early 2011 to over 6,000 by the end of 2012. By that point, agents accounted for over 30% of Equity Bank's total transactions. In addition, the mobile money agents of non-financial firms expanded forcefully throughout Africa. By 2014, Findex data revealed that 12 percent of African adults had mobile money accounts. In 2021, that figure reached 33 percent of adults, and respondents were as likely to use a mobile money account to save as they were to use an account at a formal financial institution (see further discussion of mobile money and digital financial services below).[15]

Recent evidence indicates that access to agents holds the potential to influence clients' financial behavior. For example, individuals encouraged to open a no-frills account with an agent in randomized controlled trials (RCT) in Senegal subsequently performed more transactions than those encouraged to open the same account at a branch, and their account balances also increased suggesting that access to agents made it easier for them to save (Buri et al., forthcoming). Clients of microfinance institutions in Madagascar also increased their number and volume of financial transactions after agents were introduced (Buri et al, 2019). Repeated interactions with agents may also improve the financial capabilities of clients. An RCT in Malawi shows that individuals who owned a high-fee account with a local bank were more likely to switch to a lower-fee account if they had been induced to make more transactions and interact more with bank staff (Giné and Goldberg, 2023). Finally, agents may also help reduce gender gaps in financial usage between women and men. Women in the DRC were significantly more likely to transact with female agents, a tendency which increased both with the value of transactions and the customer's account balance (Chamboko et al. 2021); similar patterns were found among female clients in Senegal (Buri et al., forthcoming). Authors of those studies speculate that trust and a desire to protect their privacy are factors that could account for women's differential transactional behavior with female agents. In short, there are encouraging signs that agents of African banks and MFIs can reduce transactions costs enabling poorer clients and women to become more financially active, though early results indicate that this is through cash-in/cash-out transactions and, to a lesser extent, savings rather than credit (Buri et al., 2023).

3.2 Assessing Tailored Product Interventions with Randomized Field Experiments

At the simplest level, innovations that have brought under-served market segments into closer physical (and socio-cultural) proximity to financial services providers have spurred deeper financial inclusion and greater usage of financial services. This includes not only the aforementioned studies of branch/agent network expansion in Africa (Allen et al., 2021; Buri et al., forthcoming; Giné and Goldberg, 2023), but studies from African and other countries showing that physical proximity to agents can promote usage of savings accounts (see, e.g., Ashraf et al. 2006; Brune et al. 2016 and Bachas et al. 2021).

In part, the importance of physical proximity to an outlet of a financial services provider stems from clients' needs for cash-in/cash-out transactions. Those transactions, in turn, have fostered financial resilience by enabling households to draw on their social networks for support in trying circumstances. For example, Jack and Suri (2014) have shown that mobile telephony reduces the costs of such within-network transfers in Kenya and find that proximity to 'mobile money' agents has helped households to smooth consumption in the face of economic shocks. Relatedly, Blumenstock et al. (2016) showed that Rwandan households affected by an earthquake received increased amounts of cellular "airtime" (a simple precursor to mobile money) from members of their social network, especially those with whom they had already established reciprocal relationships.

15 See Demirgüç-Kunt, et al. (2022), pp.17, 82.

At the same time, increased within-social network demands for assistance may make it more difficult to save. RCTs have shown that commitment devices that enable users to guard accumulated funds from outside demands (often from relatives and friends) have led to increased investment and more rapid growth of firms. For example, Dupas and Robinson (2013) show that female shopkeepers in Kenya were much more likely to take up non-interest-bearing bank accounts that were subject to high withdrawal fees (and thus less attractive than standard interest-bearing accounts) than male business owners, and investment in those female-owned businesses was nearly double that of female business owners in the control group. Brune et al. (2016) document changes in the production methods of tobacco farmers in Malawi who were offered a "commitment" savings account that allowed the account holders to freeze their funds until a specified date (typically just prior to the planting season, thus preserving funds for purchases of farm inputs). Deposit and withdrawal activity spiked just prior to the planting season, land under cultivation increased by 9.8%, agricultural input use in that planting by 26.2%, crop output in the subsequent harvest by 22%, and household expenditures in the months immediately after harvest by 17.4% (all relative to the mean for the control group). Another study from western Kenya shows how a commitment savings device enabled farmers to increase their use of fertilizer (Duflo, Kremer, and Robinson, 2011).

Regarding specific product features for cash-in/cash-out transactions and savings, multiple studies have subsidized the account opening and/or maintenance fees for ordinary savings accounts and shown significant impacts on take-up and usage (Dupas and Robinson, 2013; Dupas et al., 2016; Schaner, 2017; Prina, 2015; Brune et al., 2016). Only Prina (2015) also waived withdrawal fees, which could play a key role in how accounts are used. In Dupas et al. (2016, 2018), for example, transaction fees, especially those associated with withdrawals, hindered the use of savings accounts.

There is less evidence from experiments involving African credit products than for savings products. But some evidence from micro-credit experiments in Africa suggests that beneficial effects are harder to identify than for savings. For example, Tarozzi, Desai and Johnson (2015) use data from an RCT conducted in rural Ethiopia to study the impact of access to microcredit on income from agriculture, animal husbandry, nonfarm self-employment, labor supply, schooling and indicators of women's empowerment. The study does not find clear evidence of widespread improvement in socioeconomic indicators in treated areas.

Another key impediment to broader extension of credit in Africa is the lack of reliable methods for personal identification. Individuals who lack collateral and credit histories, which characterizes a large share of the African population, struggle to overcome informational asymmetries that make it almost impossible to access credit from formal sources. Establishing collateral and credit registries could help, but these can only function if people can be accurately identified. A field experiment among paprika farmers in Malawi tested whether biometric identification methods can improve the functioning of credit markets in a country where identity theft is common (Giné et al. 2013). Applicants for agricultural input loans from a state-owned bank were randomly assigned to a treatment group in which a fingerprint was collected from each member as part of the loan application, or to a control group in which no fingerprint was taken. Both treatment and control groups attended a training session on the importance of a credit history in ensuring future access to credit. For the sub-group of farmers identified as having high ex-ante default risk, fingerprinting led to a 40% increase in repayment rates.

As in other parts of the developing world, microinsurance products could offer benefits in Africa, especially in agricultural areas. For example, rainfall insurance, which pays a set amount when rainfall falls below (or surpasses) a predetermined threshold could be useful to African farmers. In Ghana, Karlan et al. (2014) find that rainfall insurance counters farmers' risk aversion and improves decision making regarding input mix and land under cultivation. As a result, these agricultural households were less likely to report that they suffered from hunger, though effects were largest when insurance was combined with subsidized capital. However, in that experiment and another one

in Africa (Giné and Yang, 2009), the take-up for agricultural insurance products was puzzlingly low, suggesting a weak match between the insurance products and farmers' needs and/or farmers not fully understanding how these products could benefit them. To date, throughout the developing world there is no example of an agricultural insurance program for small landholders that has achieved scale in the absence of substantial subsidies (Miranda and Nadolnyak, 2023).

In summary, evidence from RCTs in Africa has highlighted how physical proximity to outlets of financial services providers, innovations in financial products, and biometric identification are deepening financial inclusion and spurring greater financial usage among clients that have typically been under-served by providers of financial services. However, these gains have been more pronounced for money management (cash-in/cash-out) and savings than for credit and insurance products.

3.3 Mobile Money

Mobile money transfer ("m-transfer") systems facilitate financial transactions via mobile phones, allowing users to deposit and withdraw cash from an account that is accessible by mobile handset. Users can store value in the account and transfer value between users via text messages, menu commands, and personal identification numbers (Aker and Mbiti, 2010). M-transfer arrangements therefore enable users to make payments and transfer funds at relatively low cost across much wider geographic areas than is possible using localized informal payment solutions. More recently, the use of mobile money systems has been expanded to access other non-payment and deposit financial services, including credit and insurance.[16]

As already discussed above, Africa is the continent where the adoption of mobile money accounts has had its biggest impact in terms of improving financial inclusion. By the end of 2021, there were more than 1.35 billion registered mobile money accounts globally, with nearly half of all accounts registered in Sub-Saharan Africa (GSMA 2022). By now, most countries in Africa have mobile money systems in place, although there is large variation in penetration across countries. For example, Kenya's adoption rate is 67%, while Nigeria's is only 9% (Demirguc-Kunt et al., 2022). Among the success factors, the literature has focused on a trusted mobile telephony business and reliable mobile phone network, a good relationship with regulators and an extensive agent network (see Lal and Sachdev, 2015, among others). Mobile banking spread quickly in Kenya thanks, in part, to the fact that the operator of M-Pesa (M is for mobile, "pesa" is Swahili for "money"), Safaricom, controlled two-thirds of the telecoms market in Kenya. By 2023, there were over 140,000 agents serving both M-PESA and other mobile money providers (Suri et al., 2023).

Recent empirical evidence suggests that this innovation has paid off not only in terms of financial inclusion, but also in terms of increased consumption. M-Pesa use has brought about a substantial decline in the costs of sending transfers and a substantial increase in their volume (especially remittances), a greater likelihood of being formally banked, and decreased use of informal savings mechanisms (Jack and Suri, 2011; Mbiti and Weill, 2016). On the aggregate level, Suri and Jack (2016) provide analysis that M-Pesa increased per capita consumption levels and lifted an astounding 194,000 households, or 2% of Kenyan households, out of poverty.

Jack and Suri (2014) show that, by reducing the costs of transfers within social networks in Kenya households have been able to smooth consumption in the face of economic shocks. Specifically, they find that shocks reduce the consumption of non-M-Pesa users by 7 percent, while shocks have no significant effect on the consumption of households with an M-PESA user. Both the volume and diversity of remittance senders also increase after a shock and the average distance from senders to receivers of remittances increases substantially (Jack and Suri, 2014), suggesting that M-Pesa

16 For a recent literature survey, see Suri et al. (2023).

has enabled households to expand or make fuller use of their social networks at a lower cost.[17] Suri et al. (2012) find that M-PESA users are able to spend more on medical expenses in the event of a health shock while also increasing expenses on food and maintaining their education expenditures. M-Pesa also had positive effects on firms' access to trade credit and thus growth, as shown by Beck et al. (2018). Specifically, by providing a safer payment method, enterprises increase their access to and lower the cost of supplier credit, with positive repercussions for sales growth. Similarly, Dalton et al. (2023) find that using M-Pesa to allow for payments by clients increases firms' access to digital credit by 50%, and while it reduces the volatility in sales (and even more so for smaller firms), it does not change revenues or profits directly.

In partnership with the Commercial Bank of Africa (CBA), Safaricom also began offering a mobile product called M-Shwari to offer an array of financial services including interest-earning savings and credit. New loans can be applied for (and granted) almost instantaneously. Loan amounts start small and M-Shwari uses the prospect of larger future loans to incentivize loan repayment. Early indications are that the take-up rates for M-Shwari loans are substantially higher than for microfinance loans. Like microcredit, M-Shwari loans appear to be used as a tool to smooth consumption and better manage the financial lives of clients. Bharadwaj, Jack and Suri (2021) find that the take-up of M-Shwari, does not substitute for other sources of credit, and that this credit helps consumers deal with health shocks, and increases their propensity to spend on education.

M-transfer systems have also facilitated spatial risk sharing within an economy as illustrated by Blumenstock, Eagle, and Fafchamps (2016) who show that the Lake Kivu earthquake in 2008 in Rwanda caused individuals living outside the affected area to transfer a large and significant volume of airtime to people living close to the earthquake's epicenter. They also show that the transfers were consistent with reciprocal risk sharing rather than charity or altruistic motivations, suggesting that mobile payment services facilitate informal inter-personal insurance mechanisms, although it seems again that wealthier segments of the population benefitted most.

Another example comes from Niger, where an m-transfer system is providing a more cost-effective means of implementing a cash transfer program. While Bold, Porteous, and Rotman (2012) argue that electronic payment methods for social cash transfers work best when piggy-backing upon existing payments infrastructure, the experience in Niger suggests that electronic cash transfer via an m-system could also work where more traditional payments infrastructure is lacking. Specifically, an experiment comparing traditional cash transfers with transfers via an m-system called Zap was undertaken in 96 "food-deficit" villages in Niger, meaning they had produced less than half of their consumption needs during the 2009 harvest (Aker et al. 2016). Zap substantially reduced the cost of distributing and obtaining the cash transfers, and households used their transfers to purchase a more diverse set of goods, increased the diversity of their diets, depleted fewer assets, and grew a wider variety of crops (including marginal crops typically grown by women). The authors speculate that lower costs, in particular the time savings to recipients of electronic transfers, and greater privacy in receiving those transfers (reducing obligations to share money within social networks) are driving the changes in household outcomes associated with Zap usage.

The experimental results for Africa thus far suggest that financial products that can reach the poor at low cost (both to providers and to the poor themselves), and that incorporate elements that enable borrower/savers to protect funds to meet financial goals, hold promise for expanding financial inclusion.

17 Similar evidence for risk sharing through mobile money accounts has been found for Tanzania (Riley, 2018).

4. BEYOND FINANCIAL INCLUSION: NEW CHALLENGES

While the survey has documented achievements in deepening and broadening African financial systems, challenges remain. This section points to two specific areas where future research could support policy formulation.

4.1 The Long-Term Finance Challenge

The first of these challenges refers to the short-term nature of finance across the region, as illustrated not only in the balance sheet structures of banks, but also in the limited development of contractual savings institutions and financial markets. While financial inclusion has dominated the recent policy debate and research agenda, the need for long-term finance by households, enterprises, and government is enormous. The cost of addressing Africa's physical infrastructure needs is estimated at US$93 billion per year, roughly 15% of Africa's gross domestic product (GDP) (Foster and Briceño-Garmendia, 2010). Demand for housing, especially in urban areas, continues to rise across the continent as Africa rapidly urbanizes. And firms continue to lack the necessary resources for long-term investment.

While expanding access to formal financial services continues to be a challenge, there has been less progress in developing long-term finance on the continent, at least as indicated by the limited data that are availabile. Most of bank finance is short-term (both on the deposit and loan side) and non-bank finance, both intermediated and market-based, is not developed. Given the overall development of financial systems, including shallow banking systems, this is not surprising; as shown by Beck et al. (2008) and De la Torre et al. (2013), non-bank segments arise at a much later stage of economic development.

Long-term finance is critical for long-term development of modern societies. Well-functioning intermediaries and capital markets that allow investors and savers easy access to their funding while enabling long-term investment are at the core of financial sector development. Beyond this general statement, one can also consider specific beneficiaries of long-term finance and projects that rely on long-term funding streams. Take the example of infrastructure: Given high resource needs and long-time horizons between the start of construction, its completion and the revenue phase, appropriate funding structures are needed. As private-public partnerships in infrastructure gain in importance, corresponding financing structures are needed that match maturity and risk structures of assets with funding. More generally, for governments better access to long-term funding instruments can reduce the procyclicality of government consumption and its costs, as well as allow for more efficient investment decisions. In the case of households, access to long-term savings instruments allows consumption smoothing over the life cycle and savings and insurance products for retirement. On the funding side, it allows large investment, prominently into housing, but also into human capital, independent of current income but as a function of future expected income streams. Finally, for firms, the availability of long-term finance allows a better maturity matching of assets and liabilities and reduces the dependence of investment decisions on cash flow availability (Love, 2003) as well as greater investment in R&D activities, as shown by Aghion et al (2010).

Public capital markets, especially stock exchanges, have often been seen as quintessential elements of long-term finance provision in an economy. There were, therefore, intensive efforts by donors and local governments to establish such markets across Sub-Saharan Africa in the 1980s, though unfortunately those met with limited success. Albuquerque et al. (2016) show that this can be mainly explained by the small size of financial systems across the region, limited banking sector development (another precondition for capital market development), and limited domestic savings. By 2018, only half of the region's countries had a stock market, but with very low liquidity.[18]

18 This is illistrated by the following statement by a market practitioner, "an entire year's worth of trading in the frontier African stock

Development of bond markets is even more rudimentary, with few if any non-financial companies in most countries being able to issue bonds.

While recent reforms in several countries in Sub-Saharan Africa have created private pension systems that are rapidly accumulating assets under management, the pension fund industry only intermediates a fraction of those assets into productive long-term investments (reverse maturity transformation). Mortgage finance is very limited (Badev et al., 2013) as discussed above., which is again in line with global experience where it is mostly high-income countries where one sees a significant role for mortgage finance.

Addressing the long-term finance gap first requires addressing a data gap. While data availability on access to finance has improved enormously across the globe and especially in Africa, driven partly by global data collection efforts, such as the World Bank's Global Findex and the IMF's Financial Access Survey, and partly by country-specific efforts, such as the FinScope and FinAccess surveys, very limited data is available on the depth, efficiency and accessibility of long-term financial markets, though there are currently attempts at increasing the availability of indicators of long-term finance. Specifically, the donor-funded "Africa Long-Term Finance Initiative" provides data on sources and uses of long-term finance across countries in the region, the depth of different segments of the long-finance segment, including banking, capital markets and institutional investors and the regulatory framework and business environment underpinning the intermediation process.[19]

4.2 A Shifting Global Financial Cycle and Geopolitical Tensions

As discussed above, Africa's banking systems have gained in resilience over the past decades; however, they are not immune against global financial cycles and sovereign debt fragility. The rise in interest rates since late 2021 across major advanced economies has increased debt burdens across the globe. The increase in foreign debt over the past decade, partly underpinned by rising commnodity prices and not all of it made transparent at time of origination, and the economic losses due to the pandemic have brought many developing countries close to unsustainable debt levels and some are already beyond that threshold.

This has also affected countries across the regions, with several countries defaulting on their government debt. And while sovereign debt restructuring has been traditionally limited to foreign currency bonds, recent restructuring events, such as in Ghana have also affected domestic bonds, which are typically treated as safe assets by local banks and subsidiaries. Ultimately, this can have negative repercussions for banks through several channels: losses incurred on their government bond holdings, losses related to exchange rate devaluation, and credit losses related to companies either exposed to governments (through ownership or contract relationships) or affected by recession.

A second major trend is the change in the geopolitical situation. With the Russian invasion of Ukraine and increasing political tensions between the U.S. and China, the building of new blocks, not too different from the 20th Cold War, is underway, with repercussions for the global financial system. Beyond sanctions on Russia (and companies and countries breaking these sanctions), there is an increasing focus on aligning the system of global financial transactions with new geopolitical objectives. This might also affect the geographic footprint of global banks, in a way similar to the repercussions of sanctions against Apartheid South Africa in the 1980s.

markets is done before lunch on the New York Stock Exchange," quoted in Christy (1998). It should be noted that some countries are served by regional stock exchanges.

19 For more information: https://altf.afdb.org/en/home-page

While this last trend has emerged only recently, it will have long-term repercussions in the financial system, as it has had in the real economy, as seen in the rearranging of global supply chains and friend-shoring and the use of trade policy as geopolitical instrument. This new geopolitical reality will thus have implications not only for large global banks, but also for linkages of African banking systems with the global financial system and, ultimately, repercussions for access to financial services on the household and enterprise level.

5. CONCLUSIONS

While Africa's banking systems are shallow, they have made substantial progress over the past decade, a trend that can only be partially captured in aggregate data. Decades of regulatory upgrades have borne fruit in the form of more stable banking systems and substantially less fragility. Financial innovation has helped broaden the share of the population with access to basic formal financial services, and technology has helped African financial systems leapfrog traditional delivery channels. While observers often focus on the mobile money revolution, there are many forms of financial innovation, including new products, new providers, and new delivery channels. However, for innovative approaches to financial service delivery to be adopted, a competitive environment and a flexible regulatory approach are needed.

While there are documented achievements in deepening and broadening financial systems in the region, it is important to note that long-term finance remains a challenge. The dominance of banks and their focus on short-term transactions has prevented the financial system from playing a stronger role in funding the infrastructure Africa needs so urgently, the housing needs that the ongoing urbanization and population growth require, and the long-term investment by firms.

Although Africa's banking systems have gained in resilience over the past decades, they are not immune against global financial cycles and sovereign debt fragility. The turn of the global financial cycle towards tightening has contributed to increasing sovereign distress in many developing countries, including in Sub-Saharan Africa. Ultimately, this distress will have negative repercussions for banks. Similarly, increasing geopolitical tensions will have implications for the geographic footprint of global banks and will induce an additional element of international politics into regulatory decisions.

As discussed in this survey, reseach into banking in Africa has expanded rapidly over the past years, using increasingly micro-level data, including credit registry data, thus following a trend from other regions of the world. Close cooperation between researchers, central banks but also commercial banks and MFIs can help produce critical insights into what practices and policies work to deepen, broaden and lengthen the term structure of banking in Africa. There is an exciting and policy-relevant research agenda going forward.

References

Agarwal, S., Kigabo, T. Minoiu, C., Presbitero, A. F., and Silva, A. F. (2023) "Serving the Underserved: Microcredit as Pathway to Commercial Banks, " *Review of Economics and Statistics*, forthcoming.

Aghion, P., Angeletos, G.-M., Banerjee, A., and Manova, K. (2010). "Volatility and Growth: Credit Constraints and the Composition of Investment," *Journal of Monetary Economics*, 57(3), 246–65.

Aker, J.C., Boumnijel, R., McClelland, A., and Tierney, N. (2016). "Payment Mechanisms and Antipoverty Programs: Evidence from a Mobile Money Cash Transfer Experiment in Niger," *Economic Development and Cultural Change,* 65, 1-37.

Aker, J. C. and Mbiti, I.M. (2010). "Mobile Phones and Economic Development in Africa," *Journal of Economic Perspectives,* 24, 207-32.

Albuquerque de Sousa, J.A., Beck, T., van Bergeijk, P.A.G., and van Dijk, M.A. (2016). "Nascent Markets: Understanding the Success and Failure of New Stock Markets," CEPR Discussion Papers 11604, C.E.P.R Discussion Papers.

Allen, F., Carletti, E., Cull, R., Qian, J., Senbet, L., and Valenzuela, P. (2014). "The African Financial Development and Financial Inclusion Gaps," *Journal of African Economies,* 23, 614–642.

Allen, F., Carletti, E., Qian, J., and Valenzuela, P. (2014). "Does Finance Accelerate or Retard Growth? Theory and Evidence," in F. Allen, J.R. Behrman, N. Birdsall, S.Fardoust, D. Rodrik, A. Steer, and A. Subramanian, *Towards a Better Global Economy: Policy Implications for Citizens Worldwide in the 21st Century* (Oxford University Press).

Allen, F., Carletti, E., Cull, R., Qian, J., Senbet, L., and Valenzuela, P. (2021). "Improving Access to Banking: Evidence from Kenya," *Review of Finance,* 25(2), 403-447.

Arcand, J.L., Berkes, E., and Panizza, U. (2015). "Too Much Finance?" *Journal of Economic Growth*, 20(2), 105–48.

Ashraf, N., Karlan, D., and Yin, W. (2006). "Tying Odysseus to the Mast: Evidence from a Commitment Savings Product in the Philippines," *Quarterly Journal of Economics,* 121(2): 635-672.

Bachas, P., Gertler, P., Higgins, S. and Seira, E. (2018). "Digital Financial Services Go a Long Way: Transaction Costs and Financial Inclusion," *American Economic Review P&P,* 108, 444-448.

Bachas, P., Gertler, P., Higgins, S. and Seira, E. (2021). "How Debit Cards Enable the Poor to Save More," *Journal of Finance,* 76(4), 1913-1957.

Badev, A., Beck, T., Vado, L., and Walley, S. (2013). "Housing Finance across Countries: New Data and Analysis," The World Bank Policy Research Working Paper No. 6756.

Beck, T. (2015)."Cross-Border Banking and Financial Deepening: The African Experience", *Journal of African Economies*, 24, i32–i45.

Beck, T., Feyen, E.H.B., Ize, A., and Moizeszowicz, F. (2008). "Benchmarking Financial Development," Policy Research Working Paper No. 4638, World Bank, Washington, DC.

Beck, T., Cull, R., and Jerome, A. (2005). "Bank Privatization and Performance: Empirical Evidence from Nigeria," *Journal of Banking and Finance*, 29(8–9), 2355–79.

Beck, T., Cull, R., and Valenzuela, P.(2019). "Banking in Africa: An Update," in A.N. Berger, P. Molyneux, and J.O.S. Wilson (eds.), *Oxford Handbook of Banking, 3rd Edition*, (Oxford: Oxford University Press).

Beck, T., Demirgüç-Kunt, A., and Levine, R. (2000). "A New Database on Financial Development and Structure," *World Bank Economic Review*, 14(3), 597–605

Beck, T., Demirgüç-Kunt, A., and Levine, R. (2010). "Financial Institutions and Markets Across Countries and Over Time: The Updated Financial Development and Structure Database," World Bank Economic Review, 24(1), 77–92.

Beck, T., Fuchs, M., Singer, D., and Witte, M. (2014). *Making Cross-Border Banking Work for Africa* (Bonn and Eschborn: GIZ).

Beck, T., Munzele, S., Faye, I., and Triki, T. (2011). *Financing Africa: Through the Crisis and Beyond* (Washington, DC: The World Bank).

Beck, T., Pamuk, H., Ramrattan, R., and Uras, B.R. (2018). "Payment Instruments, Finance and Development," *Journal of Development Economics*, 133(C), 162–86.

Bhatadwaj, P., Jack, W., and Suri, T. (2021). "Fintech and Household Resilience to Shocks: Evidence from Digital Loans in Kenya, " *Journal of Development Economics, 153,* 102697.

Blumenstock, J., Eagle, N., and Fafchamps, M. (2016). "Airtime Transfers and Mobile Communications: Evidence in the Aftermath of Natural Disasters," *Journal of Development Economics,* 120, 57-181.

Bold, C., Porteous, D., and Rotman, S. (2012). "Social Cash Transfers and Financial Inclusion: Evidence from Four Countries," CGAP Focus Note No. 77.

Brown, M., Guinn, B., and Kirschenmann, K. (2016). "Microfinance Banks and Financial Inclusion," *Review of Finance*, 20(3), 907–46.

Bruhn, M. and Love, I. (2014). "The Real Impact of Improved Access to Finance: Evidence from Mexico," *Journal of Finance*, 69(3), 1347–76.

Brune, L., Giné, X., Goldberg, J., and Yang, D. (2016). "Facilitating Savings for Agriculture: Field Experimental Evidence from Malawi." *Economic Development and Cultural Change,* 64(2), 187-220.

Burgess, R. and Pande, R. (2005). "Can Rural Banks Reduce Poverty? Evidence from the Indian Social Banking Experiment," *American Economic Review*, 95(3), 780–95.

Buri, S., Cull, R., Giné, X., Harten, S., and Heitman, S. Forthcoming. "Banking with Agents: Experimental Evidence from Senegal," *Economic Development and Cultural Change*.

Buri, S, Cull, R., and Giné, X. (2023). "Alternative Delivery Channels and Impacts: Agent Banking." In *Handbook of Microfinance, Financial Inclusion, and Development*. V. Hartarska and R. Cull, Eds. pp. 150-163 (Cheltenham, UK: Edward Elgar Publishing).

Buri, S., Reitzug, F., Heitmann, S., and Marinho, E. (2019). "Do Agent Networks Help to Boost Savings? Effects on Institutional Deposit Mobilization and Customer Savings Behaviour." IFC and Mastercard Foundation's Partnership for Financial Inclusion, mimeo.

Chamboko, R., Cull, R., Giné, X., Heitmann, S., Reitzug, F., and Van der Westhuizen, M. (2021). "The Role of Gender in Agent Banking: Evidence from the Democratic Republic of Congo," *World Development,* 146, 1-14.

Cihák, M., Demirgüç-Kunt, A., Feyen, E. and Levine, R. (2012). "Benchmarking Financial Systems around the World," Policy Research Working Paper 6175, World Bank, Washington, DC.

Claessens, S. and van Horen, N. (2012). "Being a Foreigner among Domestic Banks: Asset or Liability?" *Journal of Banking and Finance,* 36 (5), 1276–1290.

Claessens, S. and van Horen, N. (2014). "Foreign Banks: Trends and Impact," *Journal of Money, Credit and Banking,* 46, 295-326.

Clarke, G., Cull, R., and Fuchs, M. (2009). "Bank Privatization in sub-Saharan Africa: The Case of Uganda Commercial Bank," *World Development,* 37, 1506–1521.

Cull, R., Giné, X., Harten, S., Heitmann, S., and Bogdana, A. (2018). "Agent Banking in a Highly Under-Developed Financial Sector: Evidence from Democratic Republic of Congo." *World Development,* 107, 54-74.

Cull, R. and Spreng, C. (2011). "Pursuing Efficiency While Maintaining Outreach: Bank Privatization in Tanzania," *Journal of Development Economics,* 94, 254–261.

Dalton, P.S., Pamuk, H., Ramrattan, R., Uras, B., and van Soest, D.P. (2023). "E-payment Technology and Business Finance: A Randomized Controlled Trial with Mobile Money," *Management Science,* forthcoming.

De la Torre, A., Feyen, E.H.B., and Ize, A. (2013). "Financial Development: Structure and Dynamics," *World Bank Economic Review*, 27(3), 514–41.

Demirgüç-Kunt, A. and Klapper, L. (2012). "Measuring Financial Inclusion: The Global Financial Inclusion Index," World Bank Policy Research Working Paper No. 6025.

Demirgüç-Kunt, A., Klapper, L., Singer, D., and Ansar, S. (2022). *The Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19* (Washington, DC: World Bank).

Duflo, E., Kremer, M., and Robinson, J. (2011). "Nudging Farmers to Use Fertilizer: Theory and Experimental Evidence from Kenya," *American Economic Review*, 101(6), 2350–90.

Dupas, P., Green, S., Keats, A., and Robinson, J. (2016). "Challenges in Banking the Rural Poor: Evidence from Kenya's Western Province," in S. Edwards, S. Johnson, D. Weil. eds. National Bureau of Economic Research Conference Report. *African Successes, Volume 3: Modernization and Development* (Chicago: University of Chicago Press).

Dupas, P., Karlan, D., Robinson, J. and Ubfal, D. (2018). "Banking the Unbanked? Evidence from three countries." *American Economic Journal: Applied Economics,* 10 (2), 257-297.

Dupas, P. and Robinson, J. (2013). "Savings Constraints and Microenterprise Development: Evidence from a Field Experiment in Kenya." *American Economic Journal: Applied Economics,* 5, 163–192.

Eberhardt, M. and Presbitero, A. (2021). "Commodity Prices and Banking Crises," *Journal of International Economics,* 131, 103474.

Feyen, E., Gispert, T., Kliatskova, T., and Mare, D. (2020). "Taking Stock of the Financial Sector Policy Response to COVID-19 around the World," World Bank Policy Research Paper 9497.

Feyen, E., Gispert, T., Kliatskova, T. and Mare, D. (2021). "Financial Sector Policy Response to COVID-19 in Emerging Markets and Developing Economies," *Journal of Banking and Finance,* 133, 106184.

Flaming, M., McKay, C. and Pickens, M. (2011). "Agent Management Toolkit: Building a Viable Network of Branchless Banking Agents," Technical Guide (Washington, D.C.: CGAP).

Foster, V. and Briceño-Garmendia, C. (2010). *Africa's Infrastructure: A Time for Transformation*. (Washington, DC: World Bank).

Giné, X. and Goldberg, J. (2023). "Experience in Financial Decision-Making: Evidence from Malawi,"

Journal of Development Economics, 61, 1-12.

Giné, X., Goldberg, J., Sankaranarayanan, S., Sheerin, P. and Yang, D. (2013). "Use of Biometric Technology in Developing Countries," in R. Cull, A. Demirgüç-kunt, and J. Morduch (eds.), *Banking the World: Empirical Foundations of Financial Inclusion*, pp.429-446 (Cambridge, MA: MIT Press).

Giné, X. and Yang, D. (2009). "Insurance, Credit, and Technology Adoption: Field Experimental Evidence from Malawi," *Journal of Development Economics,* 89(1), 1-11.

GSMA (Groupe Spec. Mob. Assoc.) (2022). *State of the Industry Report on Mobile Money*, Groupe Spec. Mob. Assoc., London.

Honohan, P. and Beck, T. (2007). *Making Finance Work for Africa* (Washington DC: World Bank).

Jack, W. and Suri, T. (2011). "Mobile Money: The Economics of M-PESA," National Bureau of Economic Research Working Paper 16721.

Jack, W. and Suri, T. (2014). "Risk Sharing and Transactions Costs: Evidence from Kenya's Mobile Money Revolution," *American Economic Review,* 104(1), 183-223.

Karlan, D., Osei, R., Osei-Akoto, I., and Udry, Ch. (2014). "Agricultural Decisions after Relaxing Credit and Risk Constraints," *Quarterly Journal of Economics,* 129, 597-652.

Kaufmnann, D., Kraay, A., and Mastruzzi, M. (2011). "The Worldwide Governance Indicators: Methodology and Analytical Issues," *Hague Journal on the Rule of Law* 3, 220-46.

Kirti, D., Liu, Y., Martinez Peria, S., Mishra, P., and Strasky, J. (2022). "Tracking Economic and Financial Policies during COVID-19: An Announcement-Level Database," International Monetary Fund Working Paper WP/22/114.

Laeven, L. and Valencia, F. (2013). "Systemic Banking Crises Database: An Update," *IMF Economic Review,* 61, 225-270.

Lal, R and Sachdev, I. (2015). "Mobile Money Services: Design and Development for Financial Inclusion," Harvard Business School Working Paper 15-083.

Levine, R. (2005). "Finance and Growth: Theory and Evidence," in P. Aghion and S. N. Durlauf (eds.), *Handbook of Economic Growth*, 865–934 (Amsterdam: Elsevier).

Love, I. (2003). "Financial Development and Financing Constraints: International Evidence from the Structural Investment Model," *Review of Financial Studies*, 16, 765–91.

Lyman, T., Ivatury, G., and Staschen, S. (2006). "Use of Agents in Branchless for the Poor: Rewards, Risks, and Regulation," Consultative Group to Assist the Poor (CGAP), Focus Note No.38. CGAP (Washington, D.C.).

Mbiti, I. and Weil, D. (2016). "Mobile Banking: The Impact of M-Pesa in Kenya," in S. Edwards, S. Johnson, and D. Weil (eds.), *African Successes: Modernization and Development,* Vol. III (Cambridge, MA: NBER and Chicago, IL: University of Chicago Press).

Miranda, M. and Nadolnyak, D. (2023) "Index Insurance for Developing Countries," in V. Hartarska and R. Cull (eds.), *Handbook of Microfinance, Financial Inclusion, and Development* (Cheltenham, UK: Edward Elgar Publishing).

Panizza, U. (2023). "Bank Ownership Around the World," Geneva Graduate Institute, mimeo.

Pelletier, A. (2018). "Performance of Foreign Banks in Developing Countries: Evidence from sub-Saharan African Banking Markets," *Journal of Banking and Finance,* 88, 292-311.

Popov, A. (2018). "Evidence on Finance and Economic Growth," in T. Beck, and R. Levine (eds.), *Handbook of Finance and Development* (Edward Elgar Publishing).

Prina, S. (2015). "Banking the Poor via Savings Accounts: Evidence from a Field Experiment," *Journal of Development Economics*, 115, 16–31.

Riley, E. (2018). "Mobile Money and Risk Sharing Against Village Shocks," *Journal of Development Economics,* 135, 43-58.

Schaner, S. (2017). "The Cost of Convenience? Transaction Costs, Bargaining Power, and Savings Account Use in Kenya," *The Journal of Human Resources,* 52(4), 919-945.

Siedek, H. (2008). "Extending Financial Services with Banking Agents," Consultative Group to Assist the Poor (CGAP) Brief (CGAP: Washington, D.C.).

Suri, T. and Jack, W. (2016). "The Long-Run Poverty and Gender Impacts of Mobile Money," *Science*, 354(6317), 1288–92.

Suri, T, Jack, W., and Stoker, T.M. (2012). "Documenting the Birth of a Financial Economy," *Proceedings of the National Academy of Sciences*, 109, 10257-10262.

Suri, T., Aker, J., Batista, C., Callen, M., Ghani, T., Jack, W., Klapper, L., Riley, E., Schaner, S., and Sukhtankar, S. (2023): Mobile Money: Issue 2. VoxDevLit.

Tarozzi, A., Desai, J., and Johnson, K. (2015). "The Impacts of Microcredit: Evidence from Ethiopia." *American Economic Journal: Applied Economics,* 7(1), 54-89.

World Bank (2018). *Global Financial Development Report 2017/2018: Bankers without Borders* (Washington DC: World Bank).

Yale Program on Financial Stability (YPFS) COVID-19 Financial Response Tracker. https://som.yale.edu/centers/program-on-financial-stability/covid-19-tracker

Ziegler, T., Shneor, R., Wenzlaff, K., Suresh, K., Ferri de Camargo, F., Mammadova, L., Wanga, C., Kekre, N., Mutinda, S., Wanxin, B., López, C., Zhang, B., Forbes, H., Soki, E., Alam, N., and Knaup, C. (2021), T*he 2nd Global Alternative Finance Market Benchmarking Report* (The Cambridge Center for Alternative Finance).

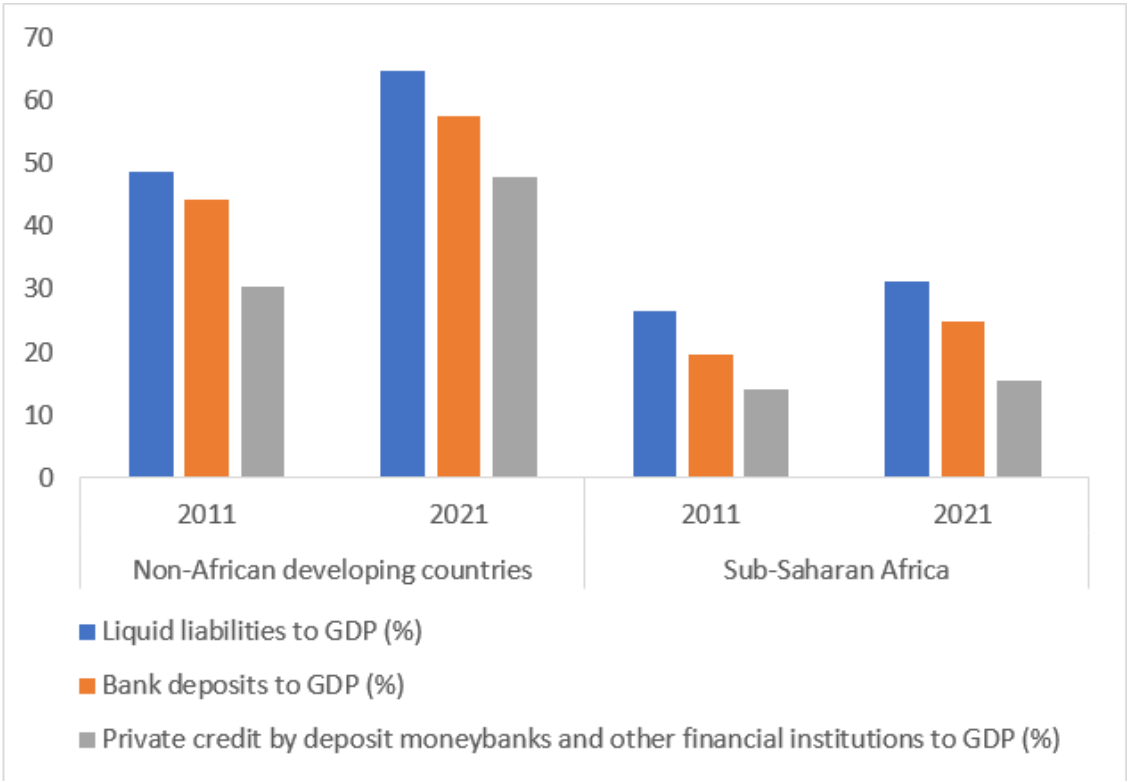

Figure 1 Aggregate financial development in international comparison, 2011 and 2021. Source: Global Financial Development Database (September 2022 Version), World Bank.

Note: Data as per end of year 2011 and 2021. Income classification as per 2021 World Bank classification. The median is computed over a balanced sample of 25 African countries and 27 non-African developing countries, for which data were available on all indicators between 2011 and 2021.

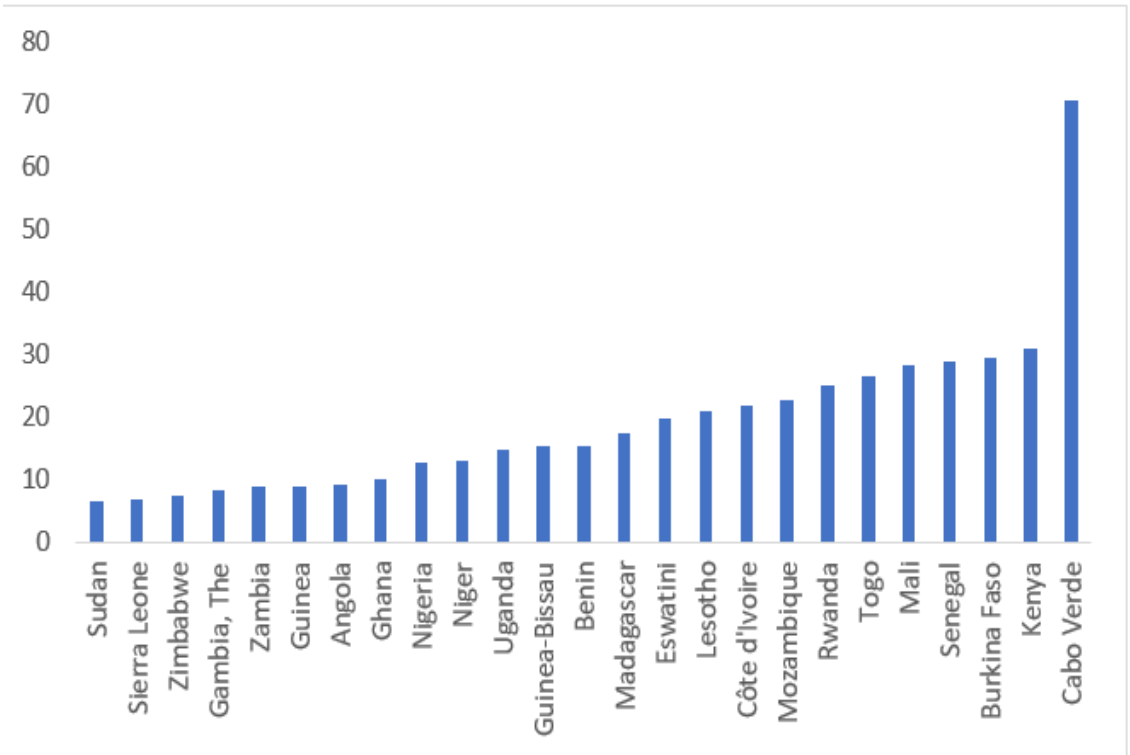

Figure 2 Private credit by deposit money banks and other financial institutions to GDP (%, 2021). Source: Global Financial Development Database (September 2022 Version), World Bank.

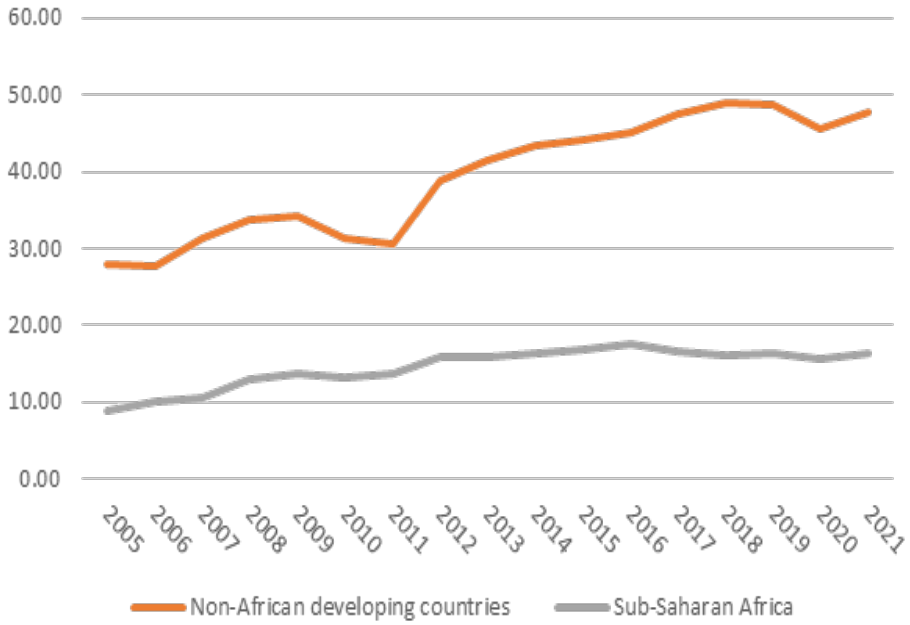

Figure 3 Private credit to GDP (%). Source: Global Financial Development Database (September 2022 Version), World Bank.

Note: Income classification as per 2021 World Bank classification. The yearly median is computed over a balanced sample of 24 African countries and 27 non-African developing countries, for which data were available for all years.

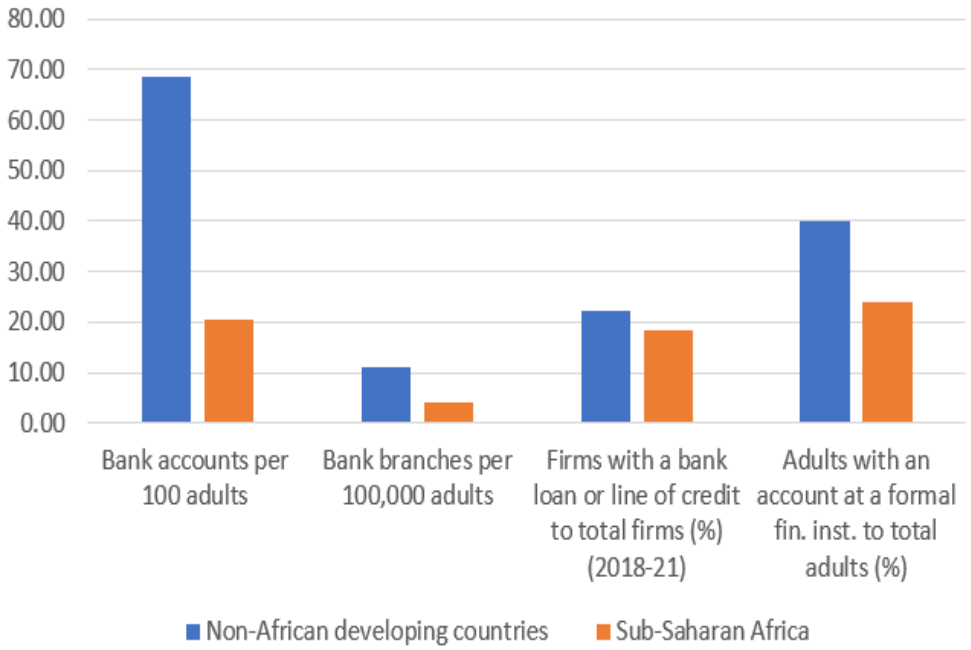

Figure 4 Access to and use of financial services in international comparison, 2018-2021. Source: Global Financial Development Database (September 2022 Version), World Bank

Note: Data are as per end of year 2020 except for adults with an account at a formal financial institution. Median for low- and lower-middle-income countries in SSA and non-SSA countries.

[Bank accounts per 1,000 adults (former issue of the handbook) adjusted for exposition.]

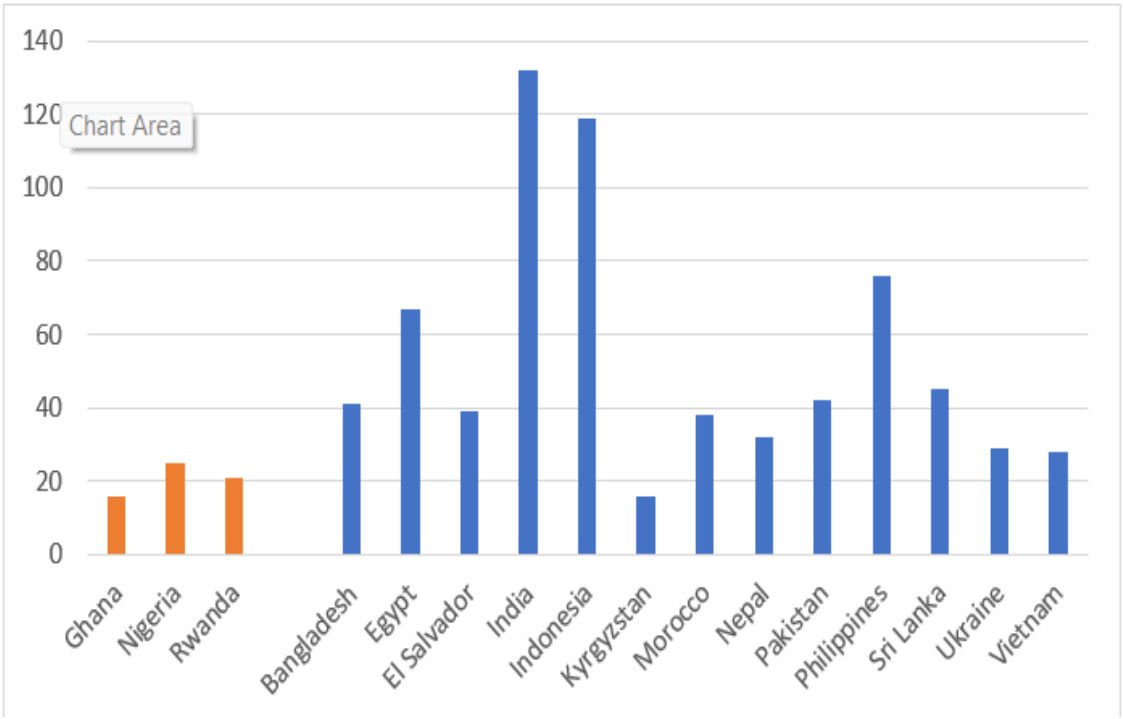

Figure 5 Number of policies announced in 2020 in reaction to COVID-19. Source: Kirti et al., 2022 (May 2022 Version), International Monetary Fund.

Note: Data refers to the year 2020 only. Income classification as per 2021 World Bank classification. The data is available for 3 African countries (in orange) and 13 non-African developing countries (in blue).

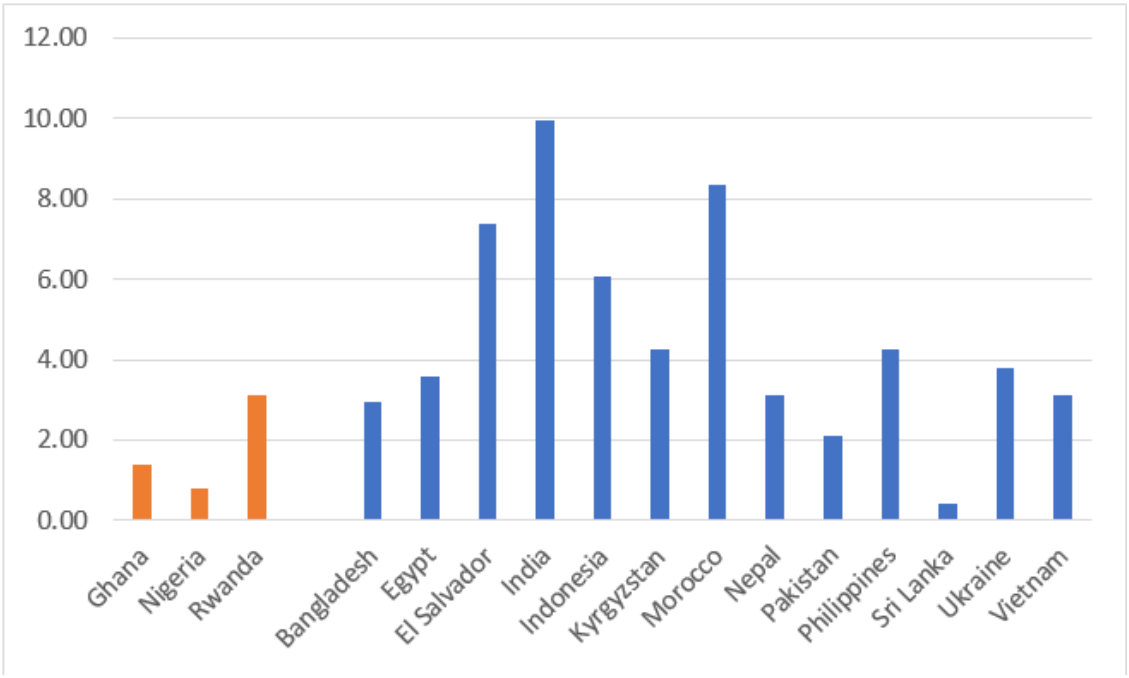

Figure 6 Magnitude of policies announced in 2020 in reaction to COVID-19. Source: Kirti et al., 2022 (May 2022 Version), International Monetary Fund.

Note: Data refers to the year 2020 only. Income classification as per 2021 World Bank classification. The data is available for 3 African countries (in orange) and 13 non-African developing countries (in blue). Magnitude expressed as the monetary value of the intervention divided by the country gross domestic product.

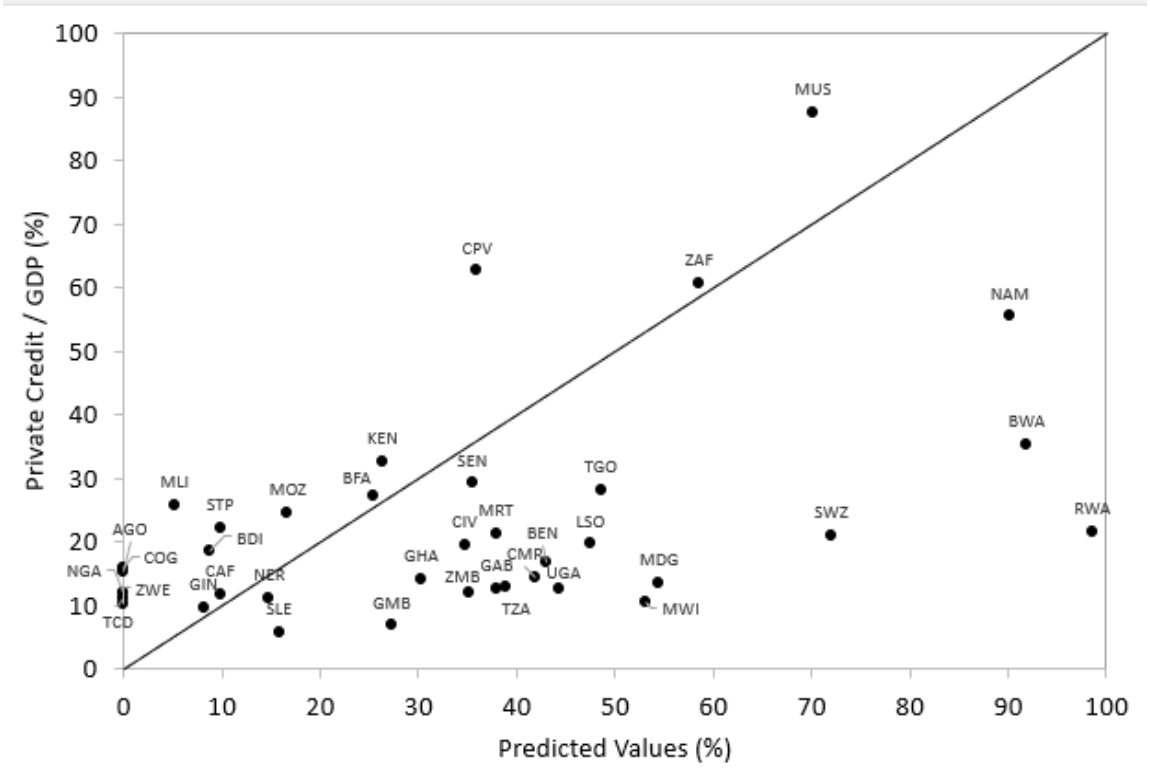

Figure 7: Private Credit/GDP (%) in African Countries 2016–20, Actual vs. Predicted Values.

Note: Predicted values of banking sector development, measured by credit to the private sector extended by deposit money banks/GDP, come from OLS regressions that control for a set of country-level variables including total population, population density, natural resources rents/GDP, GDP per capita, economic growth, consumer price inflation, manufacturing value added/GDP, primary school enrollment, and six different dimensions of governance (Voice and Accountability, Political Stability and Absence of Violence, Government Effectiveness, Regulatory Quality, Rule of Law and Control of Corruption). Note that negative predicted values are replaced by zero.

Source: Authors' calculations.

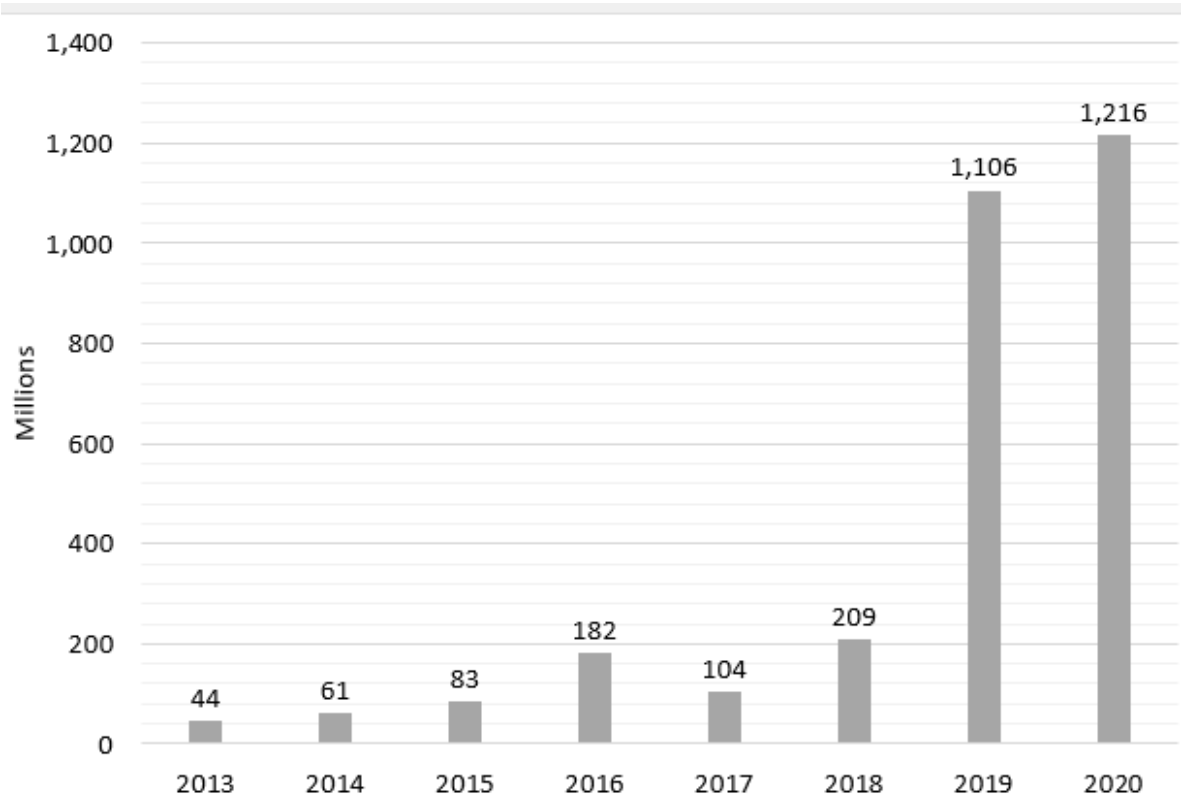

Figure 8: Online Alternative Finance Volume in USD.

Note: Online alternative finance includes digital finance activities that have emerged outside of the incumbent banking systems and traditional capital markets and occur online. The online alternative finance ecosystem is comprised of various lending, investment, and non-investment models that enable individuals, businesses, and other entities to raise funds via an online digital marketplace. The primary data come from the Alternative Finance Industry Benchmarking Survey, which is distributed annually by the Cambridge Centre for Alternative Finance.

Source: Cambridge Centre for Alternative Finance, 2021

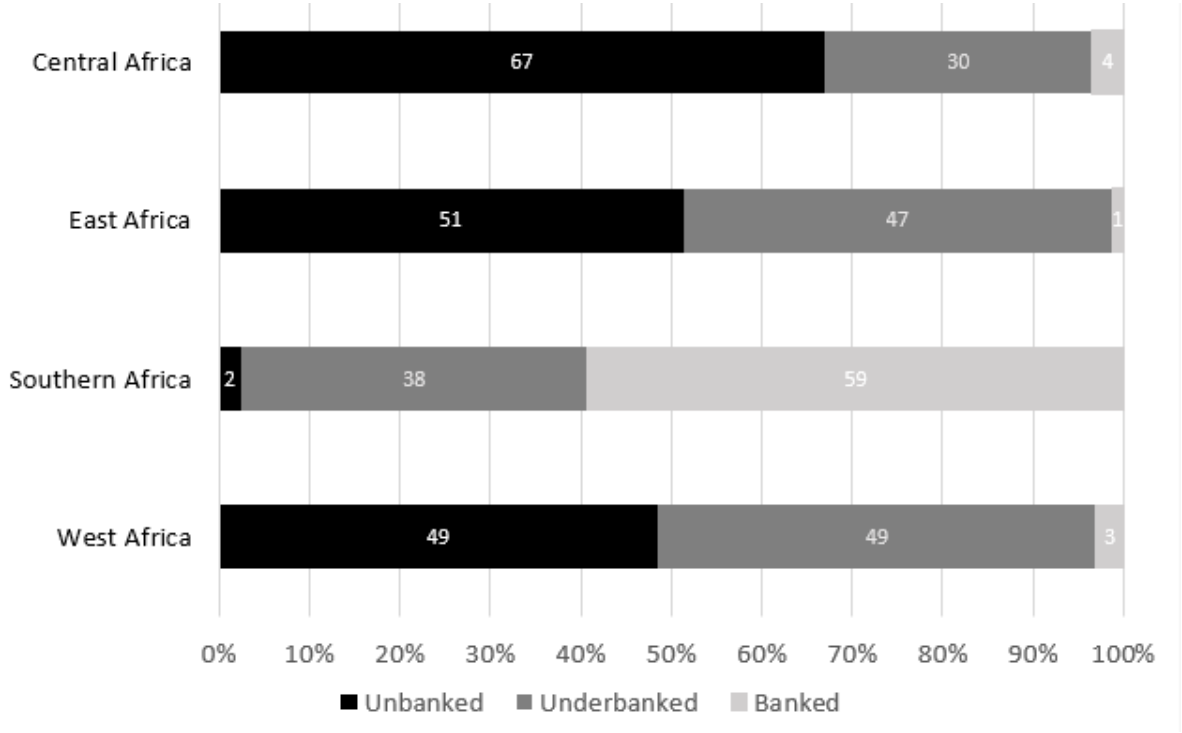

Figure 9: Banking Status by Sub-region.

Note: Online Alternative Finance platforms in Sub-Sahara Africa were asked to indicate the proportion of their customer base which was unbanked (not served by or without access to any traditional financial service), underbanked (with access to some basic financial services, but not a complete suite), and banked (users which have access to a full suite of financial services). In total, 74 platforms responded to this question.

Source: Cambridge Centre for Alternative Finance, 2021

Variables	Coefficients	Robust Standard Errors
African banks	61.963	19.396
Share of Non-Interest Income	3.143	0.931
log (Total Assets)	-54.332	7.017
Equity-Asset Ratio	0.327	0.123
Liquidity Ratio (% Total Assets)	-1.694	0.575
Loan growth over the previous year	-0.431	0.145
Inflation Rate	0.824	0.335
Rule of Law	-25.907	23.688
Constantr	538.309	62.037

Table 1: Explaining overhead costs in Africa.

Note: Data refers to the year 2020 only. Income classification as per 2021 World Bank classification. Dependent variable is overhead costs over total assets. In sample average of overhead costs over total assets for banks in Africa is 344 basis points, while for banks outside Africa is 188 basis points.

Source: Authors' calculations using data from Fitch.

Authors

Thorsten Beck

Florence School of Banking and Finance, EUI

thorsten.beck@eui.eu

Robert Cull

World Bank

rcull@worldbank.org

Davide Salvatore Mare

World Bank

dmare@worldbank.org

Patricio Valenzuela

Universidad de los Andes (CL)

pvalenzuela2@miuandes.cl