African Banking Survey
October 2016

Banking in Africa matters

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Additional highlights

Foreword

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We are pleased to launch the 2016 edition of the PwC survey on banking in Africa. Having focused exclusively on South Africa in the previous 13 editions, we have expanded the scope this year to include banks from other African countries as well.

The banking climate keeps changing as the industry faces new opportunities and threats. The emergence of FinTech entrants and the risk of cyberattacks add to pre-existing challenges caused by slow global economic growth, high currency risk and complex regulatory requirements.

Our survey aims to highlight opportunities and challenges facing banks from the perspective of bank CEOs. In this report, we explore strategies that are being implemented to adapt to new trends, and provide insights on how the banking landscape in Africa may evolve over the coming years.

This survey was developed by PwC South Africa in conjunction with the PwC Market Research Centre in Luxembourg. The online survey was conducted over the months of March to June 2016 and enabled us to collect the opinions of top executives, namely CEOs, CFOs and CROs, of banks operating in South Africa, Kenya, and Nigeria. The online questionnaire was supplemented with face-to-face interviews conducted with CEOs of South African banks.

We would like to thank the CEOs and senior executives who participated in the survey and whose support made it possible. We also thank the partners and staff in our Johannesburg, Nairobi and Lagos offices who helped to produce this report.

We trust you'll find its contents valuable, and we would welcome a discussion with you to explore the findings in more detail.

Johannesburg, 26 October 2016

Executive summary

In this edition of the PwC African Banking survey, we have extended the scope to include participants from banks in Nigeria and Kenya, in addition to our focus on South Africa, in order to provide a more comprehensive view on the state of the banking industry in Africa.

In our interviews with bank CEOs, we have been able to identify both their concerns and the steps they are taking to ensure future growth. Overall, despite current challenges, CEOs are committed to developing new strategies and reinventing their organisations in order to meet the demands of an ever-changing banking industry.

The last few years have confirmed that the banking industry continues to operate in an uncertain environment. As reflected in our survey results, the macroenonomic environment is making it difficult for bank CEOs to foresee what's coming next and take consequent decisions. This uncertainty also reflects on the instability of global financial markets, with volatile currency movements and tumbling commodity prices. The surge in regulation globally is impacting banks' strategies and putting pressure on margins, while the increase in interest rates and food inflation will significantly impact the retail sector. Nevertheless, global trends relative to the transformation of the economic, political and social landscapes are emerging from this foggy environment and will have an impact on the African continent.

Driving forces

What comes to mind first when thinking about the changing world is technology breakthroughs and how they change our conception of organisations, work, entertainment and, eventually, human relationships. Indeed, the uses of technology are dramatically transforming the way we run businesses and comply with external constraints. But they also affect populations themselves: 47% of the global population will be digital natives by 2020, and these populations will have access to 20 times more information in 2020 than today. Thus, it becomes evident that the fast-paced progress of technology is reshaping the social landscape into a more mobile and customer-centric world where consumers are redefining their expectations in terms of engagement and price-value ratio.

The political and economic uncertainty, as well as a strengthened regulatory environment, are two major forces influencing the banking industry wordwide. How to deal with the lengthy rebalancing of growth? How to ensure sustainable profitability in a highly regulated world? These are unresolved questions that create uncertainty and weigh on CEOs' decisions globally. Last but not least, emerging economies in South America, Asia, Africa and the Middle East are maturing. We observe the rise of strong domestic financial institutions, yet governments and regulatory bureaucracy, coupled with the immaturity of political institutions, undermine the growth potential of these economies and create risks. In addition to these global driving forces, there are a number of most pressing, immediate issues that CEOs of African banks find themselves addressing.

Most pressing issues

The agendas of the CEOs of African banks take into consideration these driving forces but also contain their own specific issues, often with more immediate implications. When aggregating the answers of all the CEOs interviewed, the most pressing issue is regulatory compliance (prudential and conduct). However, we note that for domestic South African banks, the risk of a sovereign downgrade is a major concern, as it has direct and indirect impacts on their access to liquidity and cost of funding as well as on customer and business confidence. For foreign banks operating in South Africa, regulation and currency risk is at the top of their list of priorities as it may limit their access to liquidity from their home markets. Finally, Kenyan and Nigerian banks are concerned about capital management, since regulators in their domestic markets are looking to adopt more stringent regulations (such as Basel II/III) which could severely impact their balance sheets and profitability.

We also note a rising concern around cybersecurity and, more generally, IT resilience, a theme that appears among both their most pressing issues and risks likely to lead to significant losses. Cyberattacks and the associated theft of consumer data is a major cause for concern given its growing prevalence throughout the banking industry. Following our survey, a large South African bank was victim to a major cyberattack entailing the theft of credit card data, making this concern even more pertinent.

Disruption from technology

Perhaps not the top pressing issue, new technological developments are nevertheless without doubt the real game-changer. FinTech start-ups and large technology-driven entrants such as Apple, Amazon, Alibaba and Google, pushed by shifting customer behaviours, are bringing innovative products and services to a conservative industry. As such, FinTech is gaining significant momentum and causing disruption to the traditional value chain. In fact, global funding of FinTech start-ups more than doubled in 2015 to reach USD 12.2bn, up from USD 5.6bn in 2014[1].

As new entrants bring more innovative and cost-effective solutions, domestic South African banks consider them as a substantial threat to their business. Nonetheless, traditional banks won't be leaving the playing field any time soon. Their trusted brands and existing customer bases are significant advantages that they can leverage on to remain relevant. Furthermore, a large number of CEOs are engaging or considering to engage with start-ups through partnerships, and private equity investments will play a pivotal role in facilitating these investments.

In our report titled *The future shape of banking in Europe*, we have identified three possible outcomes from these partnerships. In the first scenario, banks will gradually adapt and consolidate, but not fast enough to prevent challengers of various forms from taking a sizeable and permanent share of the market. In the second scenario, if the trend accelerates, a tipping point could be reached where challengers become the new incumbents and the present incumbents either fade away or are reduced to playing a utility role. Finally, the third scenario suggests a possible partnership where the terms 'challenger' and 'incumbent' no longer exist. Should this materialise, the banking industry, along with other financial services and technology sectors, will move on from clashing over who gets what share of payments, deposits and the like to becoming a collective, creating a new ecosystem.

Customer-centricity

One of the most important impacts of FinTech is to create new ecosystems, pushing incumbent banks to rethink their business model with this motto in mind: customer-centricity. New technology developments are enabling the operation of all products and services under the same system or platform, creating a seamless experience for customers across all banking channels (mobile, online, branches, etc.).

The challenge for incumbent banks is to embrace new business models, such as the platform model, before new entrants who are free from legacy systems successfully disrupt the market. Our survey shows that African banks, particularly in South Africa, have started to implement organisational changes such as integrating customer data across channels in order to promote cross-selling opportunities. They are also trying to better onboard clients by launching online and mobile apps allowing a new client to initiate a digital banking relationship. Indeed, enlarging their customer base and capturing the full client value will increase banks' revenues.

Searching for growth

Since banks are focusing on being truly customer-centric, it doesn't come as any surprise that there is a lower appetite for international expansion as compared to our 2013 survey. Instead, banks are envisaging growth opportunities in their domestic markets with the goal to better capture client value through enhanced customer analytics and an improved customer experience as well as increased multiple-channel cross-selling. Overall, the domestic expansion strategy of the majority of African banking players is based on diversification across all areas of financial services. However, a number of players retain a specialised approach by concentrating on a specific market segment, for example foreign banks targeting international corporates and HNWIs[2]. Besides, banks are looking for additional profit pools – delivering insurance products directly rather than through the current bancassurance models or offering alternative asset management services.

Cost-effectiveness

Aside from growing revenues, containing costs is a major lever to maintain profitability. But cost-effectiveness remains a challenge as banks operate in an uncertain environment where regulatory costs increase, funding is scarce and revenue streams are disputed. Overall, banks in our sample have a cost-to-income (CI) ratio of 35% to 55%, the upper bracket being in line with ratios observed in developed economies. Banks operating in South Africa do not foresee a significant reduction in CI ratios over the next three to five years, despite banks citing the fact that it would be necessary to bring it below 50% in the near term and potentially closer to 40% to remain competitive in the long term. Banks operating in Nigeria and Kenya are hoping to reduce their CI ratios from approximately 55% to 51% in the next three to five years.

The following pages present the structure of the report and a high-level summary of our survey's main findings; more detailed insights and observations are available in the main body of the report.

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[1] PwC's Global Fintech Report, 2016

[2] High Net Worth Individuals – those with more than USD 1 million in financial assets, excluding their primary residence

The macro picture

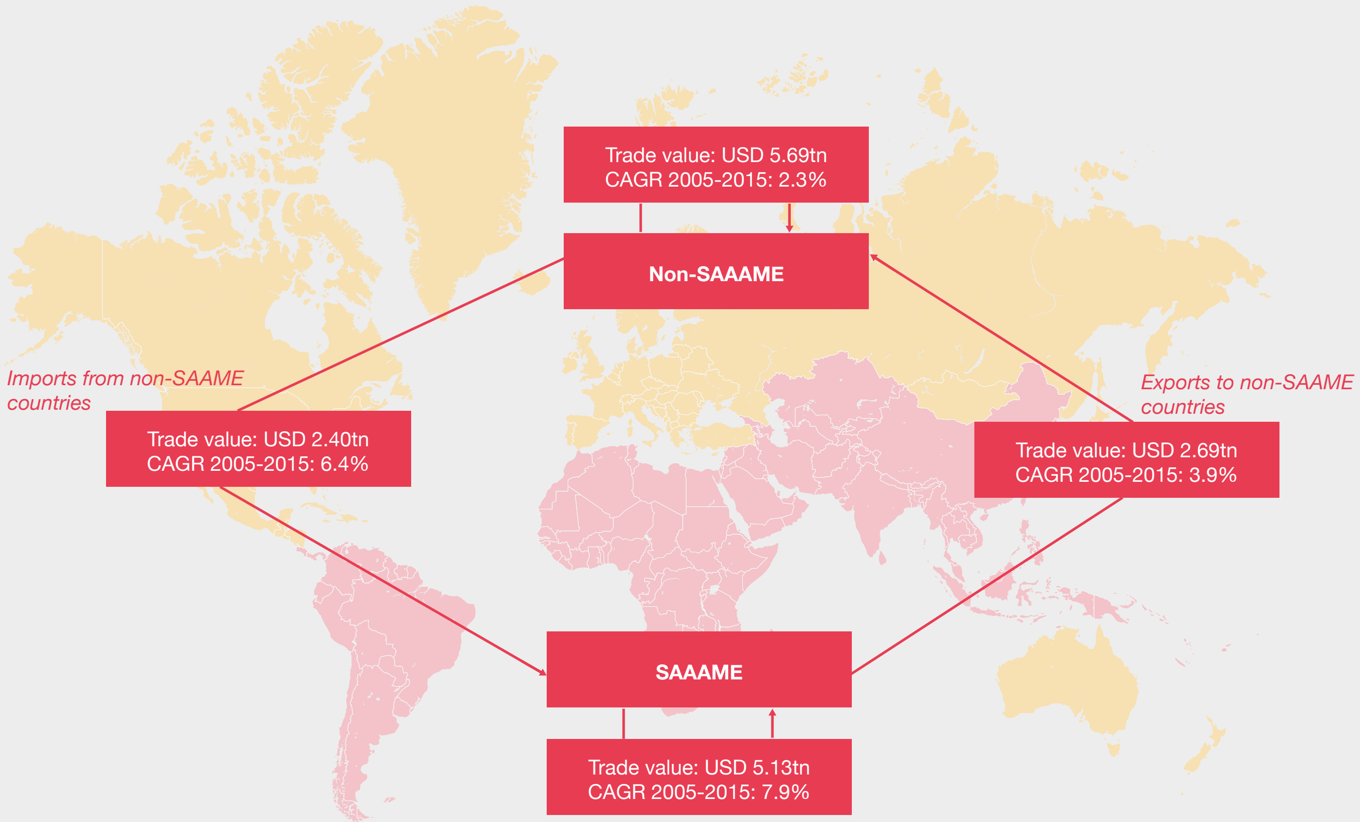
> *"In the long term, technological change will have the most profound impact on financial organisations, followed by demographic change, social and behavioural change, and the rise and interconnectivity of emerging markets."*

In the short term, global economic and political uncertainty is weighing on banks' clients. The slow down of the Chinese economy means low growth prospects for many corporates. In addition, uncertainty increased after Brexit in the UK.

Africa, the most commodity-reliant continent in the world, has been and continues to be impacted by volatility in commodity prices, forcing banks to diversify their corporate lending activities. As a consequence of these factors, the Nigerian economy is now technically in a recession.

Regionalisation of global trade flows

Flows within SAAAME countries – an acronym for South America, Asia, Africa and the Middle-East – are growing faster than traditional routes from developed-to-developed markets.



Demographic change will play an important role in the development of the African continent. The UN predicts that Africa will be the second most populated region by 2050 with two billion inhabitants, after Asia with five billion.

Urbanisation will also be an important factor. By 2050, the urban population on the African continent should reach 55%, bringing 780 million new city dwellers to the African metropolis.

The 'digital natives' will transform the world as we know it. By 2020, they will make up 47% of the world population. Empowered by technology and connected 24/7, this generation will have new expectations and switch service providers faster.

Strategy & business models

> *"Customer centricity is at the center of bank CEOs' strategies; the objective is to move away from product silos, create cross-selling opportunities and enhance client experience."*

On the strategic side, priority is placed on *domestic expansion* vs international expansion; bank CEOs' priority is to secure and increase market share in the domestic regions.

International deployment will be scaled down; however, Kenya, Nigeria and Ghana are still viewed as great opportunities for growth outside the home market.

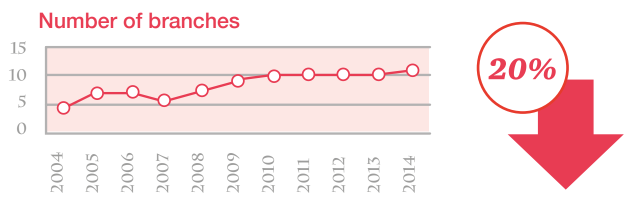
Some banks are trying to develop ***non-banking services***, such as insurance, asset management and advisory for SMEs.

Banks operating in South Africa in wholesale banking will focus over the next three years on transactional banking (which are capital efficient), online offerings and trade and working capital. Banks outside South Africa will concentrate on lending, deposit taking and transactional banking, and FX and rates trading.

Respondents active in ***retail*** all consider electronic banking, transactional banking, insurance and asset management as the most important areas of growth in the next three years.

In South Africa, the ***number of branches*** has remained stable – around ten branches per 100 000 adults – since 2010. But we are seeing changes in the size and function of these branches (moving from transactional and query places to sales outlets and educational centers).

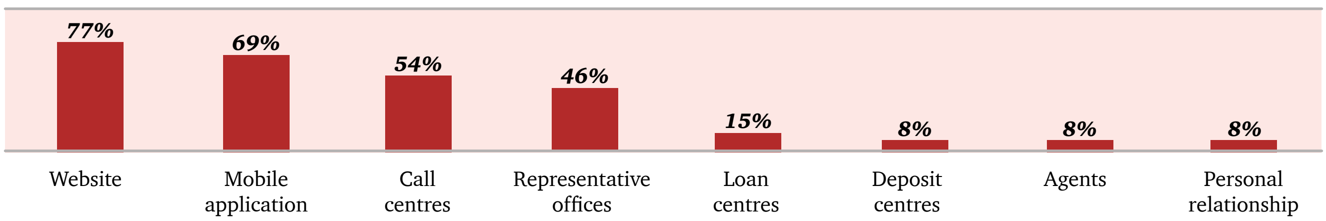
Surveyed CEOs believe that branches will decrease by approximately 20% in the next three years.



Touch points with customers

Apart from branches, ***touch points*** with customers include websites, mobile applications, call centres, and rep offices.

Banks active in CIB are more likely to go through agents or personal relationships to keep in touch with clients.



State of the industry & competitors

> *"The overall environment of the African banking industry has seen significant growth over the past few years, as policy reforms have been made and regulatory oversight has improved."*

Top sub-Saharan banks ranked by Tier 1 capital

1	**Standard Bank**	USD 7.5 bn
2	**FirstRand**	USD 7.2 bn
3	**Barclays Africa**	USD 5.3 bn
4	**Nedbank**	USD 3.9 bn
5	**Ecobank**	USD 3.1 bn

South Africa's banking sector is by far the most mature on the continent. It ranks ***sixth in the world*** on the Global Competitiveness Index for the availability of financial services.

South Africa's retail banking sector is the ***most competitive***, despite industry concentration. Survey participants envisage significant to fundamental changes in strategy and positioning in order to remain or join in the game.

Nigeria's banking sector remains ***loan-driven***; the weakening oil sector has put stress on corporate balance sheets and on the banking system.

Kenya's banking sector is ***growing***, driven by a stable domestic currency, local economic growth and demand for more diversified products by middle-class customers. But three smaller banks recently failed.

The Capital Adequacy Ratio (CAR) of the 25 largest sub-Saharan banks reached an average of ***16.3%*** in 2015 – well above the BIS guidelines minimum of 8%. A South African bank, Capitec, recorded the highest CAR of ***29.9%***.

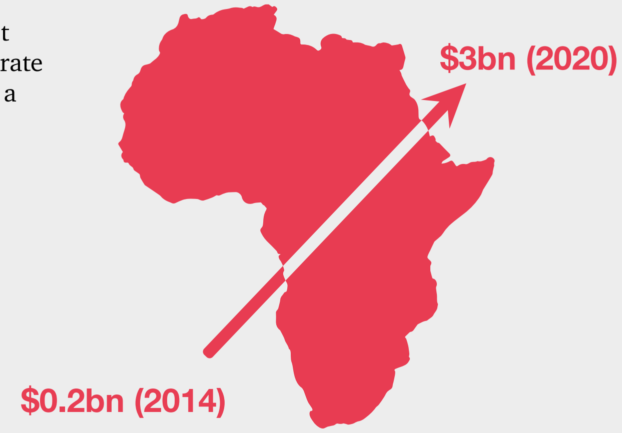
The Non-Performing Loan (NPL) ratio of the 25 largest Sub-Saharan banks reached an average of ***5.4%*** in 2015.

In South Africa, the ***most successful companies*** as recognised by their peers continue to be Standard Bank and FirstRand in the wholesale area, and Standard bank, FirstRand and Capitec in the retail area.

New entrants & innovation

> *“Banks operating in South Africa perceive FinTech to be an important business disrupter. New technology entrants are bringing more innovative, cost-effective solutions to the market.”*

The FinTech markets in Africa are still small but growing rapidly in relation to developed markets, with the higest predicted compound annual growth rate (CAGR) of all regions sustained over a period of 10 years.



46% of global bank CEOs are engaging or considering to engage with start-ups through partnerships.

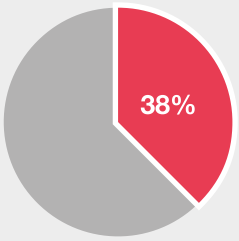
Operational constraints are the main obstacle to innovation within banks – for a large part because of legacy IT infrastructure.

Talent constraints are a major obstacle to the implementation of big data – attracting people with the right IT skillset is not just about rewards but also about corporate culture.

77% of banks surveyed use big data in front-office functions to enhance the client service experience and ***85%*** use big data in back-office functions to enhance data security and data breaches.

The majority (83%) of the surveyed large full-scale South African banks have set up ***innovative labs*** similar to those in other industries (Google, Apple, etc.).

Domestic South African banks plan to dedicate ***4.1%*** of their total costs to innovation within the next three to five years, vs ***2.5%*** for banks operating outside South Africa.

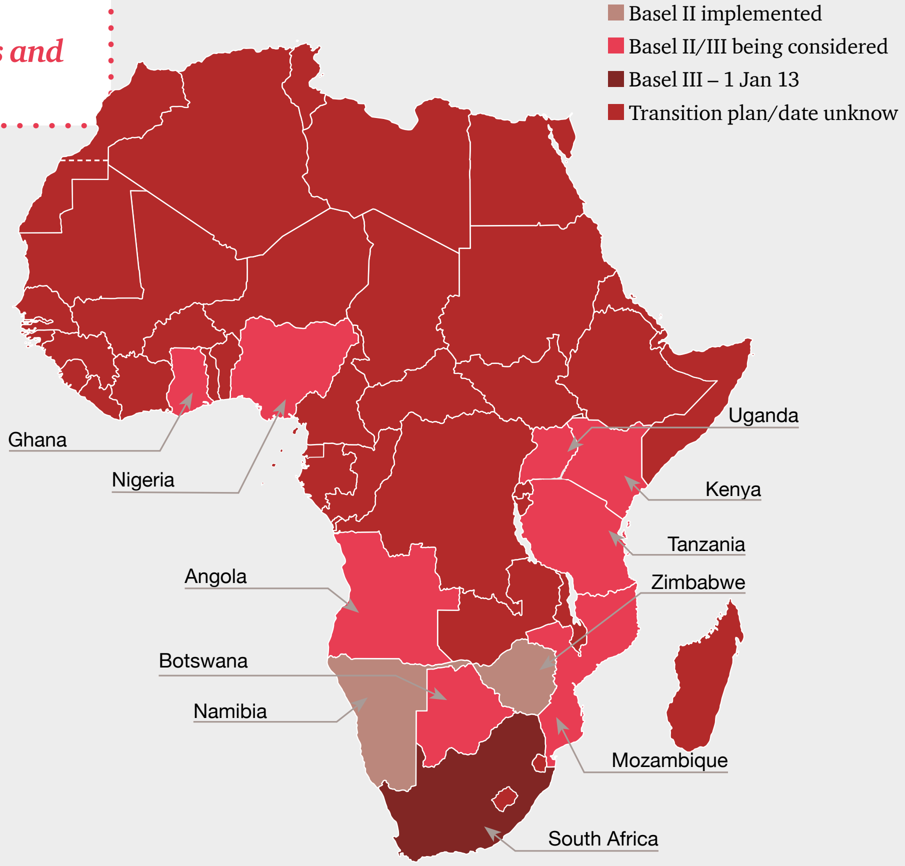


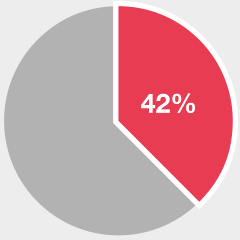
Only 38% of banks surveyed currently use ***big data*** across the institution to significantly reduce operating cost.

Risks & regulation

> *"The impact of the global regulatory agenda remains uncertain; CEOs are worried that their long-term strategic objectives will be derailed by short-term regulatory requirements and timelines."*

The *misaligned speed* of regulatory change across Africa is a concern for most respondents: South Africa is the only country that has implemented Basel III; Zimbabwe and Namibia have implemented Basel II; and other countries are considering Basel II/III.





42% of respondents believe *IFRS9* will pose the biggest regulatory challenge to their organisation – the new accounting standard will have a significant impact on how banks account for credit losses on their loan portfolio.

43% of domestic South African banks do not support the concept of *depositary insurance*. Kenya and Nigeria already have such systems in place while South Africa is still considering it.

While many bankers can see the value of improved regulation, the ***cost of compliance*** is a concern and finding the right skills to maintain compliance is challenging.

Banks intend to hold ***capital buffers*** in addition to those under Basel III. Some banks are willing to hold up to 1.6% of additional capital in an effort to build trust with their stakeholders.

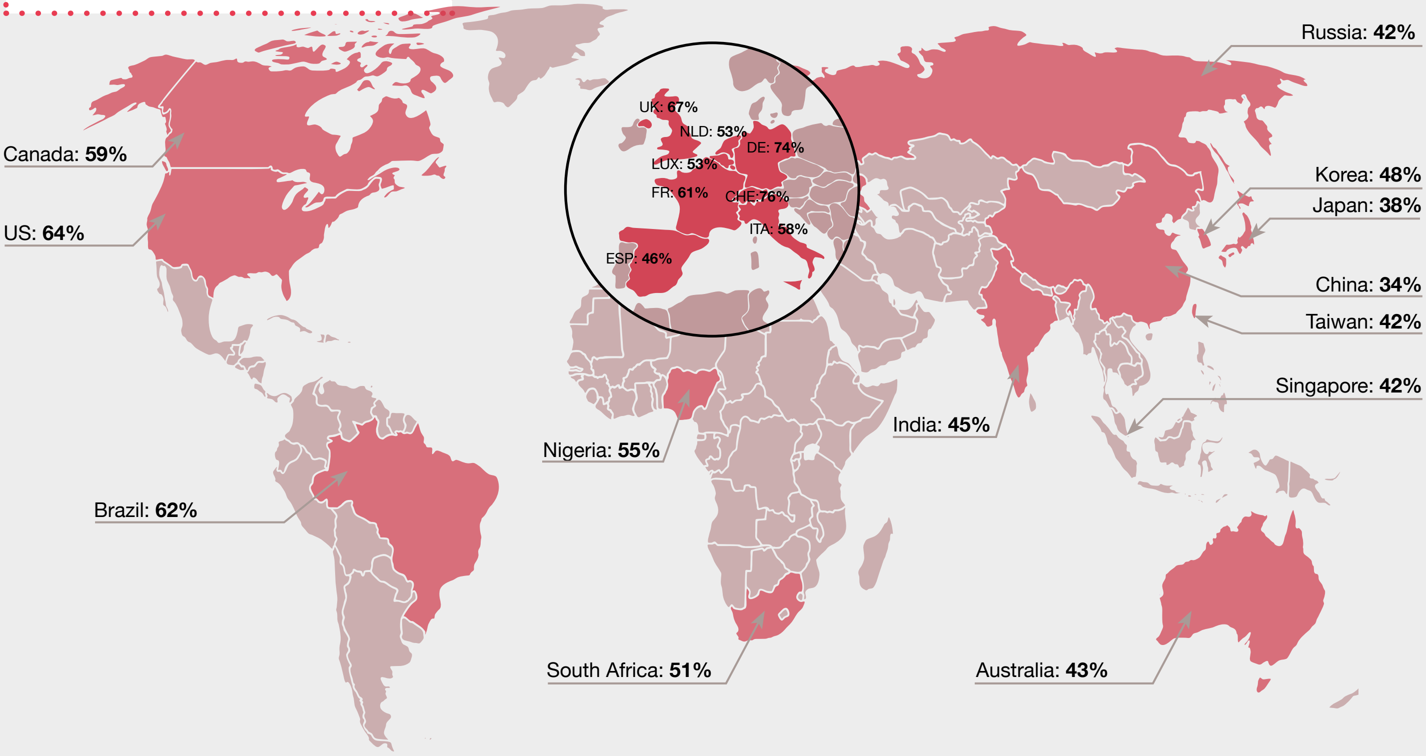
Credit risk is considered the leading cause of losses by our respondents. In Kenya and Nigeria, fraud risk is the second cause of losses and clearly a major concern for our respondents.

CROs expect formalised ***stress testing and asset quality*** reviews to become a more prominent prudential supervisory tool in their home country.

Performance

> *"In the long run, our survey respondents target cost-to-income ratios in the 45 - 50% range. Sustainably low CI ratios are attainable through the digital integration of dynamic cost control tools across the organisation, as shown by the example of Australian banks."*

Cost-to-income ratios across the world



Contribution to profit after tax of *African operations* will likely remain around 12%–14% for banks operating in South Africa and 7%–9% for Nigerian and Kenyan banks.

On average, domestic South African banks achieve CI ratios of approximately 51%, while foreign banks operating in South Africa achieve CI ratios of approximately 54%. They do not expect to reduce those in the medium term (three to five years).

Nigerian and Kenyan banks currently have high CI ratios (approximately 55%). They expect to reduce those to 51% in the medium term (three to five years).

Large full-scale South African banks achieve average ***ROEs in the 18%–20%*** range in their retail and CIB businesses. They expect ROEs to remain in this range over the next three to five years.

Other banks in our survey[3] achieve ROEs around 10% in their retail and CIB businesses. They expect to increase those to 12% in the next year, and 17% in the next three to five years.

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[3] This comment refers to respondents categorised as *non-full-scale South African banks*. Please consult Appendix 1

Immediate challenges for African banks

We asked bank CEOs to rate the most pressing issues on their agendas. The results show striking differences between South African banks and banks operating in Kenya and Nigeria (here labelled 'banks outside SA'). These differences come from the diversity of the banking landscape across the continent as well as the location of the operations of each bank.

Our survey shows that South African banks of domestic origin are most concerned about the risk of a sovereign downgrade in South Africa, as this would impact their ability to finance themselves in international markets. At the time of data collection, it was not known that the possible June 2016 downgrade would be avoided; however, there remains a risk of a potential downgrade through December 2016.

South African banks of domestic origin are also concerned about cybersecurity and, more broadly, IT resilience. Cyberattacks are a growing concern for CEOs and it was a major topic of discussion during our interviews with them. More details are available in *Part 5: Risk and regulation* of this report.

We also found that the biggest concern for foreign banks operating in South Africa in 2016 was regulatory compliance, as was also expressed in the 2013 survey. This is due to the fact that they are already subject to international compliance regulations imposed by their parent company, most often located in a highly regulated environment, all the while having to abide by the local South African rules. With sometimes conflicting deadlines, these added layers of regulatory requirements remain a major concern for them.

Currency risk is also becoming a challenge for foreign banks operating in South Africa. The diminishing value of the rand has an impact on the revenues that these banks receive in rand; they also finance themselves in foreign currencies, often involving costs labelled in the currency of the parent company.

Banks operating outside South Africa consider capital management and liquidity risks to be the most pressing issues at the moment. These particularly affect participants operating in Nigeria and Kenya, two countries where the local regulator is currently looking at implementing Basel II/III. The new regulation would considerably increase the capital ratio requirements weighing on these banks.

Figure 1: Most pressing issues: a comparison by bank types and over time

	SA banks – domestic origin		*SA banks – foreign origin*		*Banks outside SA*
	2016 Survey	*2013 Survey*	*2016 Survey*	*2013 Survey*	*2016 Survey*
1	Risk of sovereign downgrade in SA	Improving revenue growth	Regulatory compliance (including AML/KYC)	Addressing new compliance & regulation	Capital management
2	Cyber security	Introducing new information technology	Currency risk	Availability of key skills	Managing liquidity risk
3	Regulatory compliance (in particular AML/KYC)	Client retention	Capital management	Profit performance	Regulatory compliance (including AML/KYC)
4	GDP growth locally	Service quality	Managing costs	Compliance and regulatory constraints	Managing credit risk
5	Availability of data with new regulations/accounting standards	Availability of key skills	Improving revenue growth	Service quality	Managing investor expectations

See Appendix 2 for the full 2016 ranking. Source: PwC's Africa Banking Survey 2016

Part one

The macro picture

The African continent recently experienced a period of sustained economic growth, mainly driven by China's demand for raw materials and the inflow of capital resulting from liquidity injections into the markets by Western central banks. However, the global picture is more complex and various trends will contribute to shape Africa's banking sector. These include economic uncertainty and volatile commodity prices in the short term, and the rising interconnectivity of emerging markets, demographic change, urbanisation and consumer behaviour dynamics in the long term.

Main findings

- In the long term, technological change will have the most profound impact on financial organisations, followed by demographic and behavioural change, and the rise and interconnectivity of emerging markets.
- Flows from developing-to-developing economies are growing faster than traditional routes from developed-to-developed markets.
- Demographic change will play an important role in the development of the African continent, which will become the second most populated region by 2050 with two billion inhabitants.
- Urbanisation will also be an important factor. By 2050, the urban population on the African continent should reach 55%, bringing 780 million new city dwellers to the African metropolis.
- The 'digital natives' will transform the world as we know it. By 2020, they will make up 47% of the world population.

Global political and economic uncertainty

Outside of Africa, the global political and economic landscape remains uncertain as the world economy continues to endure the aftershocks of the 2008 crisis. Governments are focusing on tax revenues and tax evaders, seeking to balance personal, corporate and indirect tax policies. In some European countries, the pain of austerity has triggered governmental changes, creating further uncertainty. Most recently, the Leave vote in the UK has inspired other European countries, such as the Netherlands and Sweden, to consider their own exit from the EU. The parliamentary impeachment of Dilma Rousseff in Brazil has fuelled feelings of confusion and anxiety. Finally, the pending American Presidential election is proving to be one of the most contentious and controversial in recent memory.

Figure 2: Evolution of international GDPs (% change)

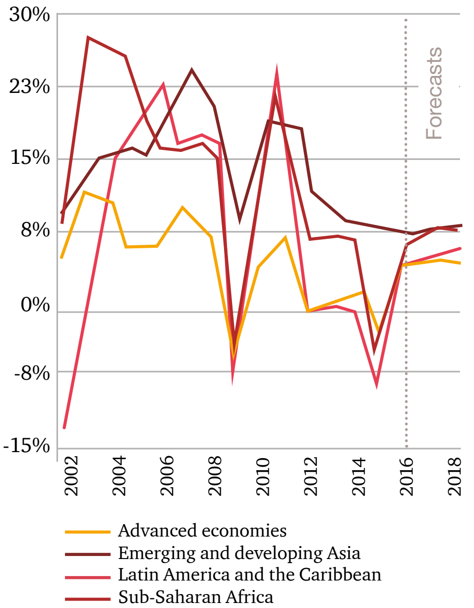
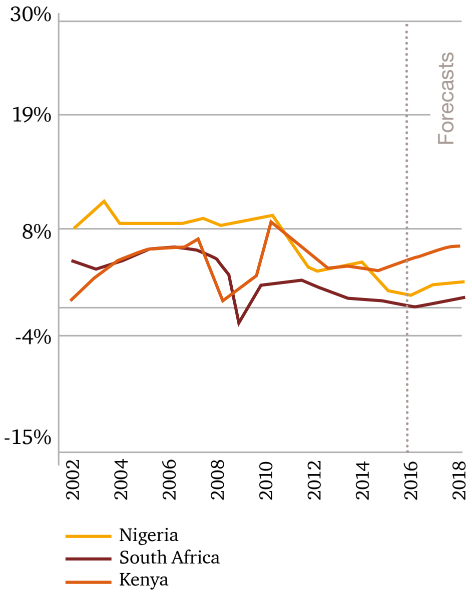


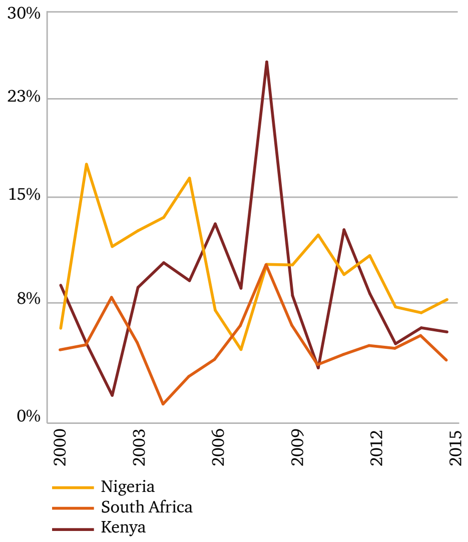
Figure 3: Evolution of GDPs in selected economies (% change)



Source: PwC analysis based on IMF data

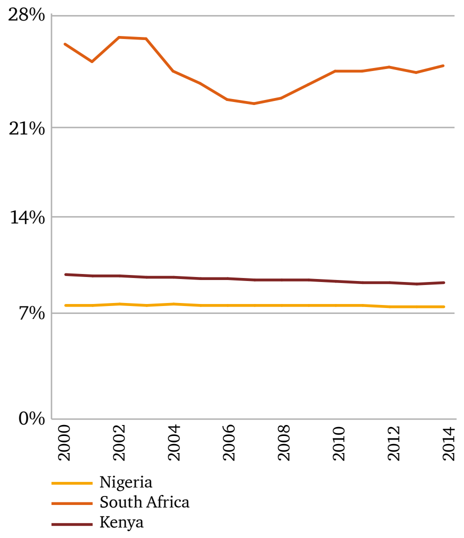
Global economic growth is still weak, having further deteriorated by the slow down of the Chinese economy, and the second half of the decade doesn't look to bring stronger growth for any region. More specifically, South Africa's GDP is forecasted to grow at 1.21% and 2.06% in 2017 and 2018, respectively. Growth prospects in Nigeria aren't any better, with expected growth rates below 5% for the next two years. Kenya is the exception; according to the IMF, the country will maintain GDP growth around 6% in 2017 and 2018. That said, in Kenya, Nigeria and South Africa, economic growth is weakening amid high inflation and escalating unemployment rates. Meanwhile, the South African rand and Nigerian naira have depreciated against the US dollar.

Figure 4: Inflation in selected economies (%)



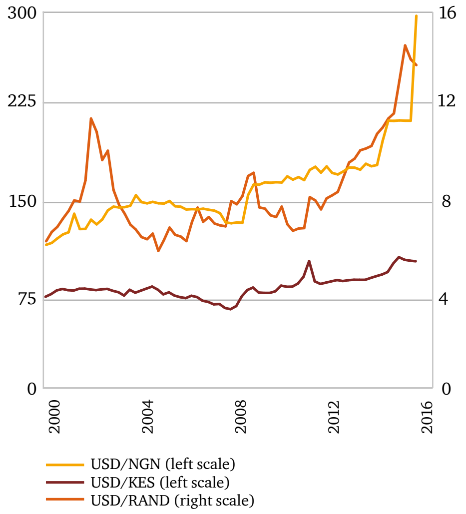
Note: consumer price inflation (annual %)
Source: PwC analysis based on World Bank's World Development Indicators

Figure 5: Unemployment in selected economies (% total population)



Source: PwC analysis based on World Bank's World Development Indicators

Figure 6: Exchange rates in selected countries



Source: PwC analysis based on Bloomberg

Impact of volatile commodity prices

Africa is the most commodity-reliant continent in the world, with manufacturing sectors still accounting for a small share of production. Most goods are exported as raw materials, without being transformed in any way. Africa is, therefore, particularly vulnerable to fluctuations in commodity prices.

Throughout the first half of this decade, China's economy was growing at a prodigious rate (above 8% annually). Chinese state-owned companies invested heavily in Africa's raw materials, keeping commodity prices high despite modest growth for the rest of Africa's trade partners. In the more resource-dependent economies, this resulted in trade surpluses and strong currencies, supporting private consumption and banks' access to capital, all the while making domestic manufacturing stagnate.

The picture changed drastically in 2014-2015 when abrupt deleveraging in China eliminated support for commodity prices, which then slumped. Sub-Saharan countries, which extract and export commodities, were severely impacted in different ways: a decrease in revenues caused tax revenues to drop, driving down government expenditure; domestic currencies weakened; and corporate balance sheets deteriorated.

Overall, Africa's terms of trade have decreased by 16% in 2016, primarily due to a drop in commodity prices[4]. Exporters have seen large terms-of-trade losses. Across sub-Saharan Africa, in 2016 economic activity may decrease by 0.5% from the baseline, while the fiscal balance and current account could decrease by as much as two and four percentage points from the baseline, respectively. The effects on the banking industry vary, depending on the respective commodity reliance of each country.

In general, countries in sub-Saharan Africa have high natural resources rents[5], but they differ greatly. For example, the economies of Angola, Equatorial Guinea, Gabon and the Republic of Congo rely heavily on commodities, with net commodity exports ranging between 45% and 85% of GDP. These countries are oil exporters and, as such, are more affected than metal exporters[6].

Nigeria's economy has been heavily impacted by the collapse in commodity prices and is now in a recession. Despite the non-oil sector accounting for 90% of GDP[7], crude oil represents roughly 80% of total Nigerian exports – which is why the drop in commodity prices sharply reduced the value of exports in the wake of 2015. This led to economic challenges, as the fiscal and external accounts were strongly hit, and government revenues sharply declined. Furthermore, economic challenges have been aggravated by foreign exchange restrictions[8] causing a slowdown in foreign portfolio inflows as well as impacting segments of the private sector that depend on an adequate supply of foreign currencies. Nigeria's banks have been indirectly impacted because the petroleum and power sectors account for a large part of their loan portfolios and more generally because of weakening corporate balance sheets. However, the volatility of commodity prices forces these banks to diversify their corporate lending activities. Urban centre developments represent huge opportunities for banks to diversify their investments.

On the other hand, Kenya and South Africa have low natural resources rents and were spared most of the negative effects of the flailing commodity prices. In fact, the impact of commodity price declines on Kenya and South Africa was mainly evidenced by a similar drop in their oil import bills.

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[4] World Bank, Africa's pulse, April 2016

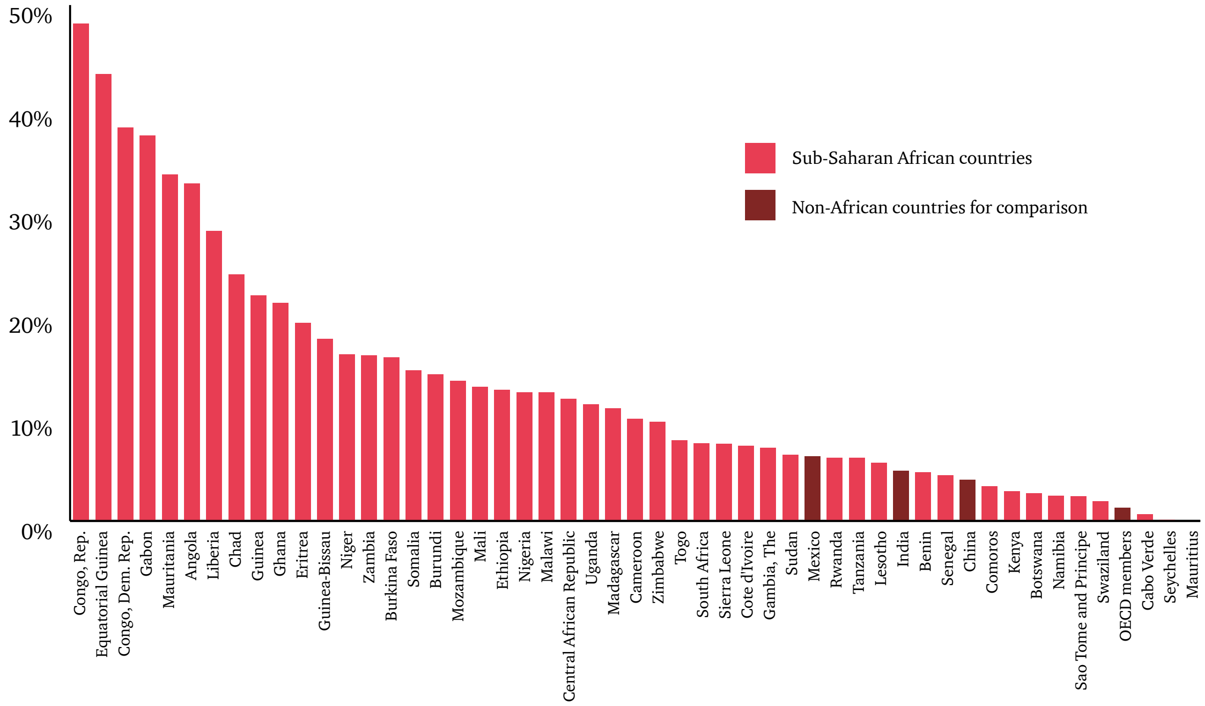
[5] In some countries earnings from natural resources, especially from fossil fuels and minerals, account for a sizable share of GDP, and much of these earnings come in the form of economic rents — revenues above the cost of extracting the resources.

[6] According to the IMF, metal exporters are less affected by commodity price volatility, 'because they are exposed to a wider range of commodity exports and commodities play a less prominent role in their economies. Also, many of them are oil importers so the impact of the commodity price slumps has been partly offset for them by the decline in their energy import bill.' IMF, Regional Economic Outlook : Sub-Saharan Africa Time for a Policy Reset, April 2016.

[7] IMF, Nigeria Article IV consultation, April 2016

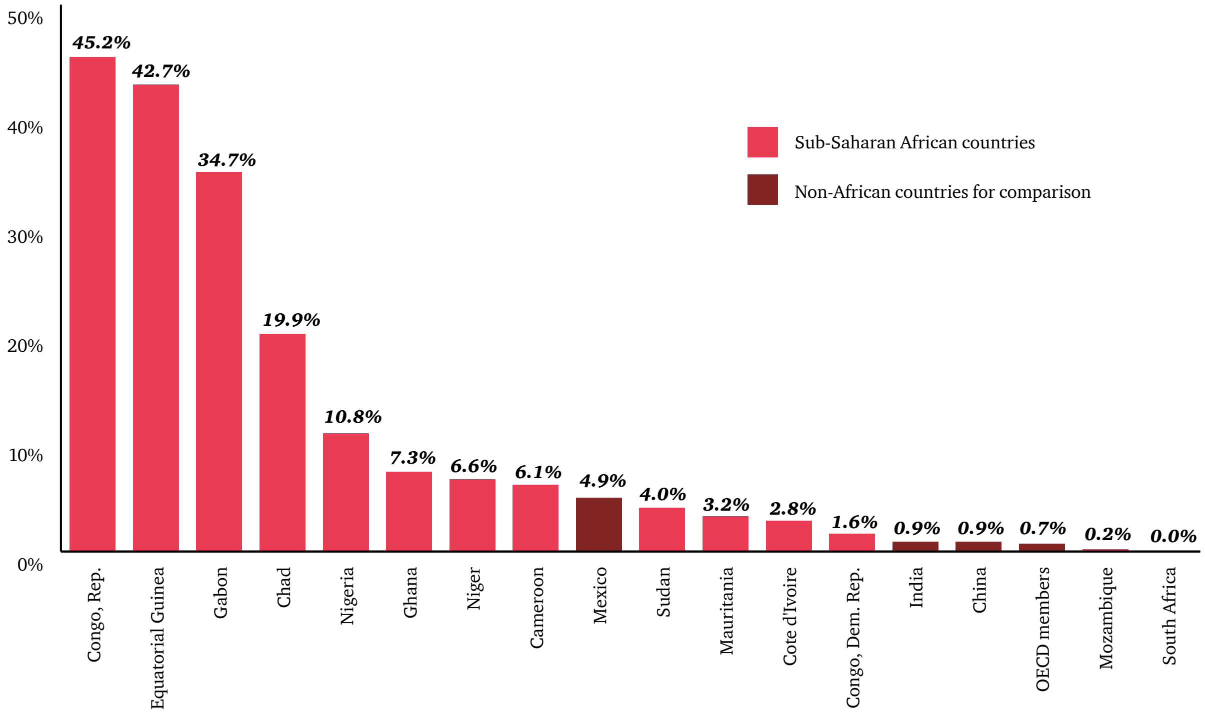
[8] In the spring of 2015, the Central Bank of Nigeria introduced currency controls on the naira.

Figure 7: Total natural resources rents (% of GDP) in 2014



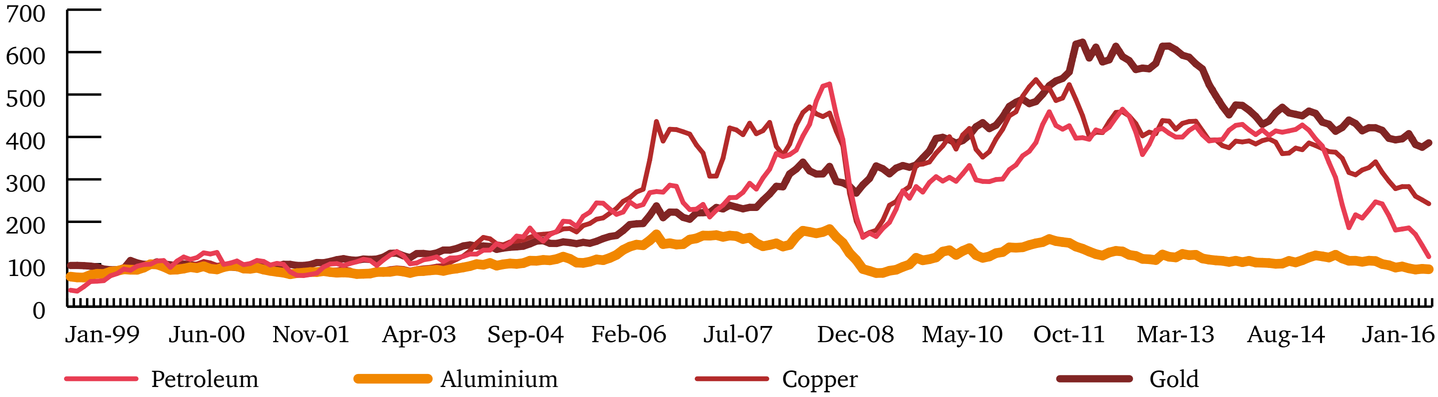
Note: Total natural resources rents are the sum of oil rents, natural gas rents, coal rents (hard and soft), mineral rents, and forest rents.
Source: PwC analysis based on World Bank's World Development Indicators

Figure 8: Oil rents (% of GDP) in 2012



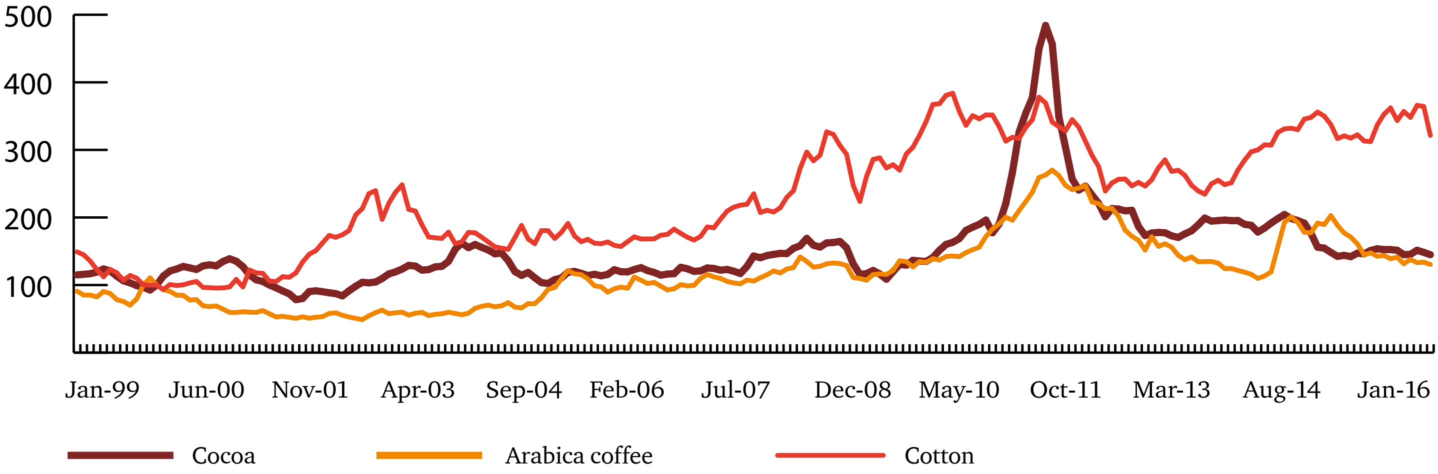
Source: PwC analysis based on World Bank's World Development Indicators

Figure 9: Metals and petroleum prices



Note: January 2000 =100. Source: PwC analysis based on World Bank

Figure 10: Agricultural prices



Note: January 2000 =100. Source: PwC analysis based on World Bank

Maturing and interconnectivity of emerging markets

The increasing interconnectivity of intra-emerging economies' trade and investment flows is as significant as the growth and projected size of the emerging markets themselves. These flows are growing faster than the traditional routes from developed-to-emerging and developed-to-developed markets.

We broadly define emerging markets as SAAAME – an acronym for South America, Asia, Africa and the Middle East. Within SAAAME, there are pockets of particularly high trade growth, notably intra-Africa and intra-Middle East (see Figure 11).

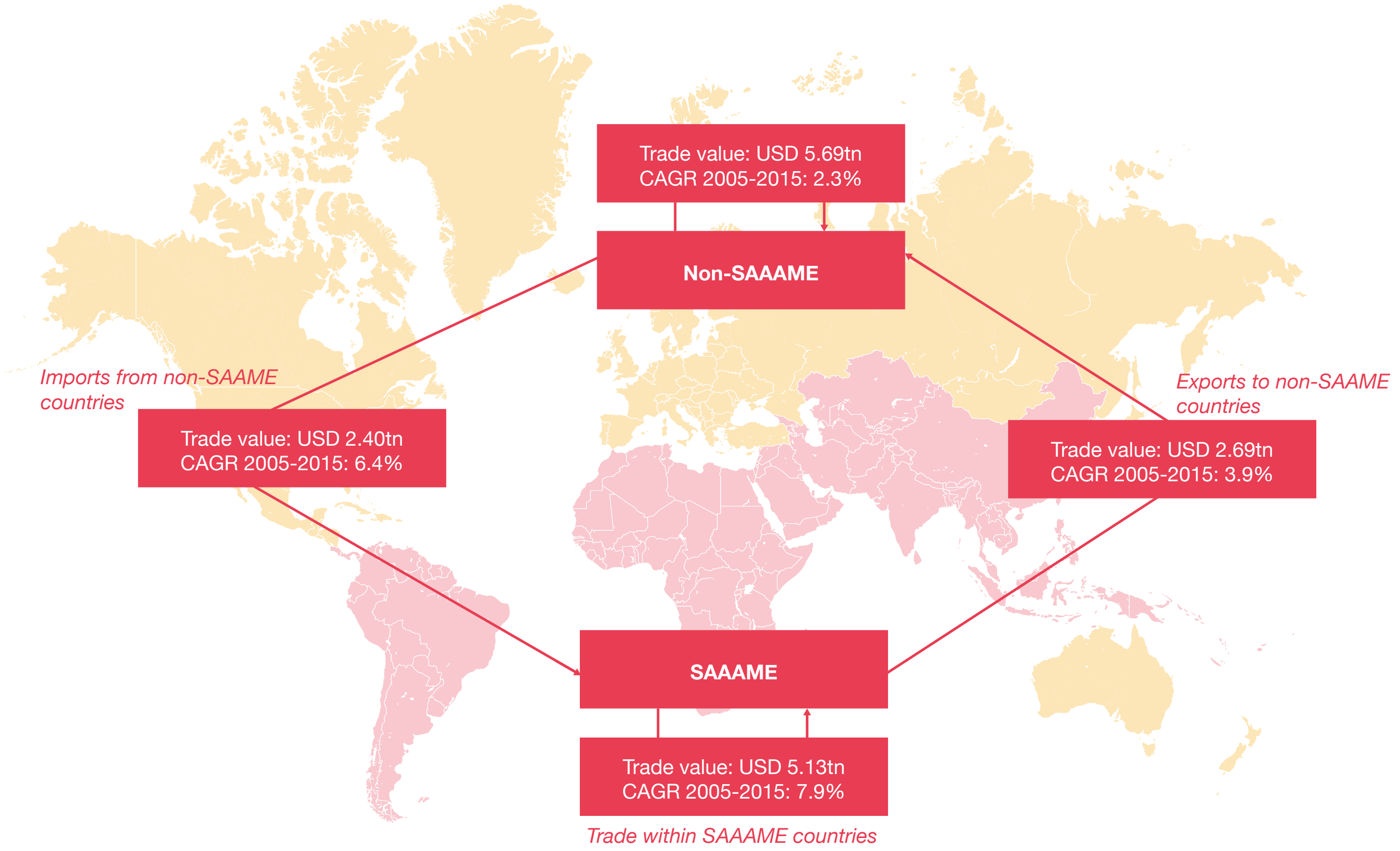
At present, these intra-SAAAME flows are dominated by commodities, but as consumer markets continue to expand on the back of the rising affluence of the middle class, the pattern of trade will be increasingly focused on manufactured goods. Manufactured, high-added-value goods are now increasingly present in trade flows from developed to emerging markets. These goods are driving exports (which grew at 6.4% per annum between 2005 and 2015) from non-SAAAME to SAAAME countries.

However, SAAAME countries are at various stages of a large-scale rotational shift towards the manufacturing and services sectors, driven by improved access to labour, a rising middle class, government policies and technological advancement. SAAAAME countries are also benefiting from a growing talent base, with both the number and quality of university graduates within many emerging markets now beginning to rival those in the West.

The development of financial infrastructure, greater access to long-term funding and the ability to tap into fast-growing sources of liquidity and investment will also play a key role in sustaining this expansion in trade, and provide an important opportunity for FS businesses.

In the banking industry, this rising interconnectivity is exemplified by the increasing cross-border bank ownership emanating from developing countries' financial services organisations (see Figure 12). For instance, South African banks own several banks in sub-Saharan Africa, whereas their exposure to banks in other parts of the world is now limited. Thus, regionalisation is rapidly taking over globalisation, and it will contribute to shaping the future of the African banking industry.

Figure 11: Regionalisation of global trade flows



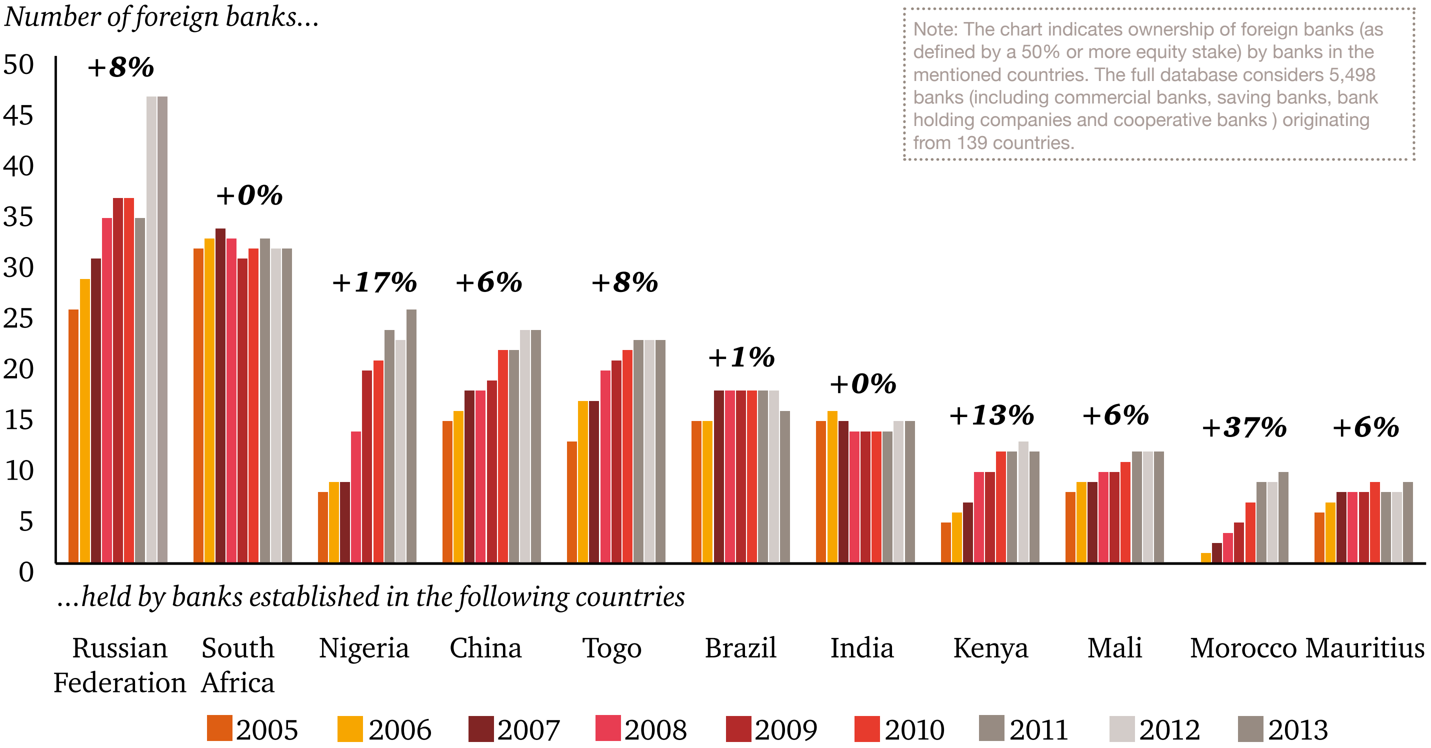
Source: PwC analysis based on IMF Direction of Trade Statistics

Figure 12: Increasing interconnectivity of SAAAME markets

		Destination							
		North America	***Europe***	***South & Central America***	***Africa***	***Asia***	***Middle East***	***SAAAME***	***Non-SAAAME***
Origin	***North America***	1.4% 593.2	4.1% 343.7	7.3% 398.7	6.2% 25.3	5.6% 459.2	8.1% 91.3	6.5% 974.5	2.8% 936.9
	Europe	2.9% 502.2	2.2% 4,253.0	5.9% 145.7	4.6% 159.5	7.4% 771.2	5.1% 349.0	6.3% 1,425.4	2.3% 4,755.2
	South & Central America	3.6% 429.3	3.7% 112.8	3.9% 162.1	4.6% 12.3	11.8% 166.4	9.0% 21.9	7.2% 362.7	3.6% 542.1
	Africa	-8.9% 24.0	0.9% 129.1	2.0% 12.6	11.3% 66.2	10.2% 100.8	4.7% 13.9	9.2% 193.6	-1.6% 153.2
	Asia	5.0% 905.1	4.9% 846.4	11.5% 243.0	12.7% 168.3	7.3% 3,166.5	11.7% 339.1	8.0% 3.916.9	5.0% 1,751.5
	Middle East	-0.6% 64.6	3.2% 181.0	8.5% 10.0	8.7% 38.5	6.0% 432.2	11.7% 180.6	7.4% 661.4	2.0% 245.7
	SAAAME	3.8% 1,423.0	4.1% 1,269.4	7.5% 427.7	11.3% 285.3	7.4% 3,865.9	11.3% 555.5	7.9% 5,134.5	3.9% 2,692.4
	Non-SAAAME	2.1% 1,095.4	2.3% 4,596.8	6.9% 544.4	4.8% 184.8	6.7% 1,230.4	5.6% 440.3	6.4% 1,293.5	2.3% 5.692.1

Note: Each cell includes the 2005-2015 CAGR and the 2015 value of exports from the origin reporter country to the destination partner country in USD billion. Source: PwC analysis based on IMF Direction of Trade statistics

Figure 13: Cross border bank ownership



Note: The chart indicates ownership of foreign banks (as defined by a 50% or more equity stake) by banks in the mentioned countries. The full database considers 5,498 banks (including commercial banks, saving banks, bank holding companies and cooperative banks) originating from 139 countries.

Source: PwC analysis based on Claessens, Stijn and Neeltje van Horen, 2015, "The impact of the Global Financial Crisis on Banking Globalization", IMF Economic Review

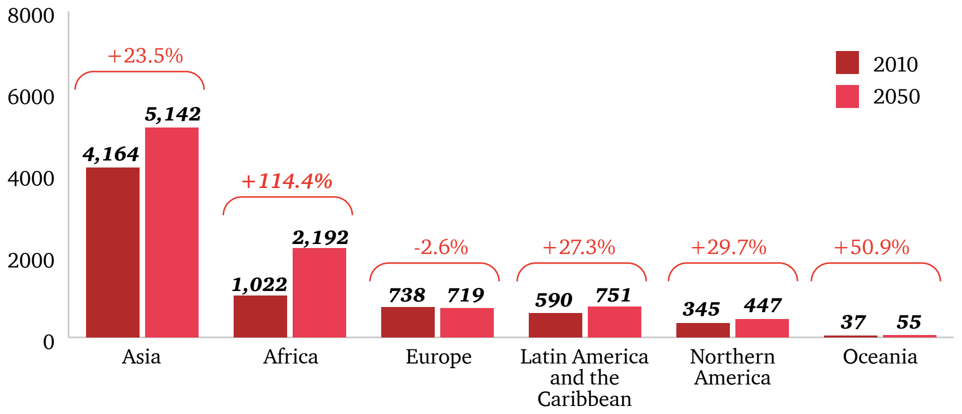
Demographic change

In our 2016 survey, respondents ranked demographic change as one of the most impactful trends, stating that it has a positive affect on their organisations. As of today, Africa has a relatively low population density in comparison with emerging Asia, but it has one the fastest-growing populations in the world. Indeed, long-term projections released by the United Nations' Population Division estimate that the continent's population will grow by 114.4% between 2010 and 2050, the largest growth of all regions of the world. As such, the continent will be the second most populated region by 2050, with around two billion inhabitants, after Asia, which is set to reach around five billion people.

In addition to having the fastest-growing population in the world, Africa's people are also the youngest. In fact, the median age in 2010 was 19.7 years old, due to a low life expectancy and high child mortality rates across the continent. By 2050, the median age will have risen to 26.4 years old, while other emerging regions' populations will have median ages around 40 years old. Thus, Africa has and will continue to have the youngest population.

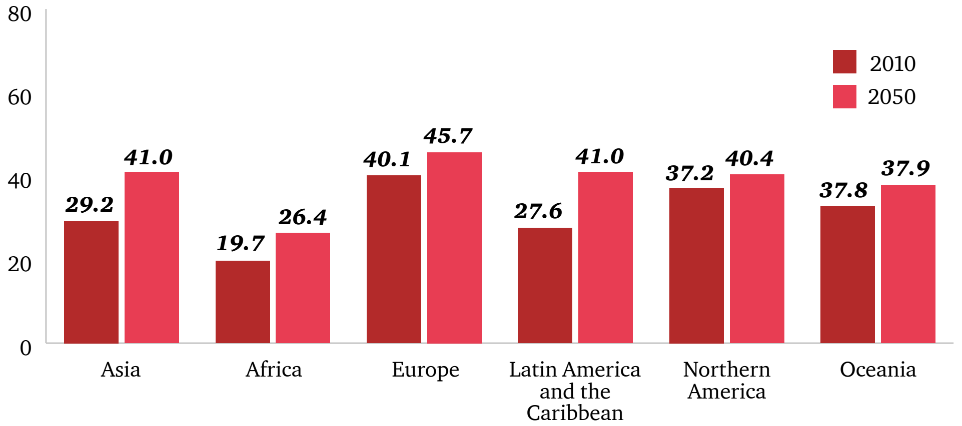
Old-age dependency is a crucial concern in developed economies, as it challenges established retirement systems and pension contributions as well as labour markets. But this issue is, and will remain, less of a concern in Africa, as the old-age dependency ratio of the continent will be by far the lowest in the world. More specifically, in 2050, there will be ten people between the ages of 15 and 65 years for every person aged 65 or over.

Figure 14: Total population by region, millions, 2010 and 2050



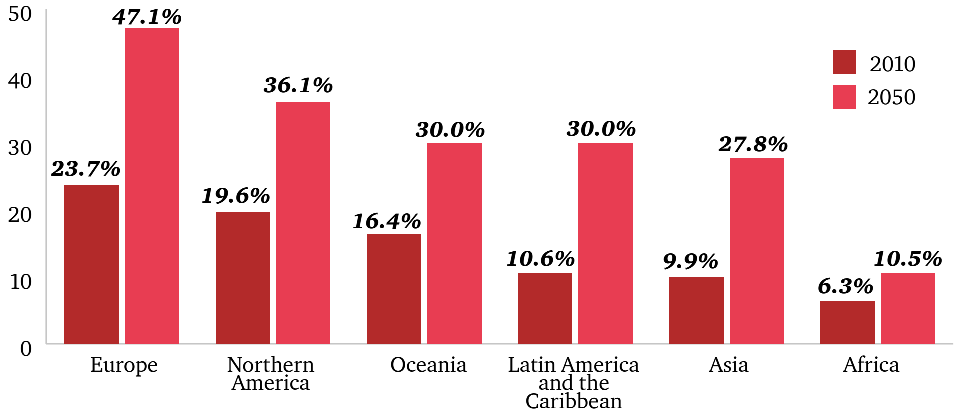
Source: PwC analysis based on United Nations' Population Division statistics

Figure 15: Median age, by region, 2010 and 2050



Source: PwC analysis based on United Nations' Population Division statistics

Figure 16: Old-age dependency ratio

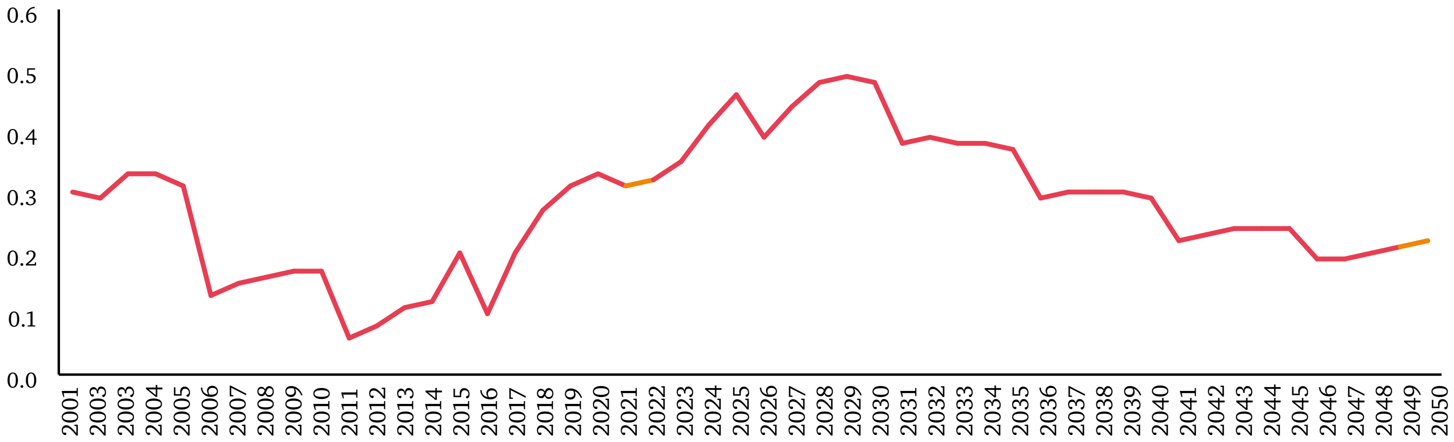


Note: The old-age dependency ratio is defined as the number of people aged 65 and over as a percentage of the number of people aged 15 to 64.

Source: PwC analysis based on United Nations' Population Division statistics

Overall, the continent will enjoy a large population of working-age citizens in the future. Such an increase in labour supply is generally seen as a demographic dividend to GDP growth through increased savings, investments, innovation and labour efficiency. This demographic effect could add nearly 0.5 percentage points to GDP per capita growth over the next 15 years. However, the demographic surge of the continent will also bring new challenges. African policymakers will have to cope with a potential lack of skills or physical capital, whether public or private. Moreover, questions related to food security and environmental sustainability will rise along with the growing population.

Figure 17: Africa's potential demographic dividend



Note: The demographic dividend is the change in GDP per capita (in percentage points) arising from changes in the proportion of the working-age population. The demographic dividend increases during transitions from rural societies to urban industrial societies. During these periods, the labour force temporarily grows more rapidly than the population dependent on it, freeing up resources for investment in economic development and thereby leading to faster growth of GDP per capita.

Source: PwC analysis based on OECD

Going forward, Africa's emerging middle class will shape the continent's future. While very small, this group of people earning between 10 and 20 dollars per day has grown from 4.4% of the total population in 2004 to 6.2% in 2014[9]. During the same period, the upper middle-class, defined as earning between 20 and 50 dollars per day, has also grown to reach 2.3% of the total population. Africa's emerging middle class, coupled with a growing population, is bound to increase the demand for financial services in the coming decades.

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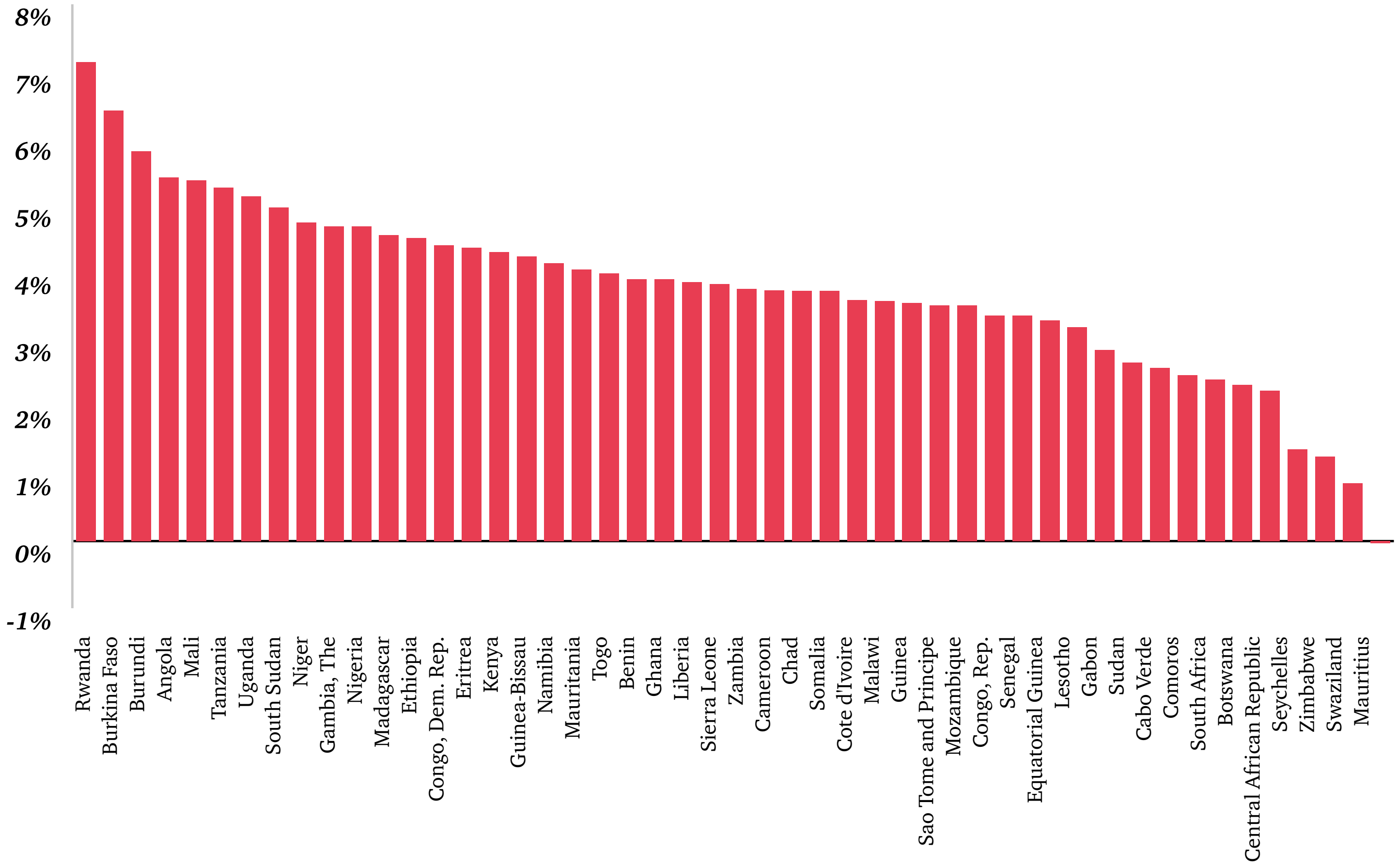
[9] The Economist, Africa's middle class : Few and far between, 2015

Urbanisation

Urbanisation is one of the major forces transforming the world, especially in emerging economies where the urban population remains proportionately lower than in developed economies. By 2050, 67% of the world's population will live in urban areas, and large cities will have become the economic growth engine of many countries. Large cities will shape national economies while non-urban areas will lag behind. In emerging countries, the settling of the rising middle class in these urban areas will lead to a concentration of national wealth. However, not all cities will succeed in integrating these people, as major investments in urban infrastructure must be made in order for them to compete with more mature cities.

Africa has progressively taken this path, perhaps erratically, but unwaiveringly. The continent is undergoing rapid urbanisation, creating both immense opportunities and challenges. With the compounded annual growth rates of urban populations having surpassed 5% in the past 15 years, Rwanda, Burkina Faso, Burundi, Angola, Mali, Tanzania and Uganda have the fastest-growing urban populations on the continent. Within our scope of interest, Kenya and Nigeria's urban populations have been rapidly growing as well, at 4.7% and 4.3% per annum, respectively. In South Africa, the urbanised population has continued to grow rapidly at 2.4% per annum between 2000 and 2015, despite the large population already living in urban areas. Indeed, South Africa is one of the most urbanised countries in sub-Saharan Africa, with 64.8% of its population living in towns and cities in 2015. Comparatively, percentages of the population living in urban areas amount to 80.3% in OECD member states, and 47.8% and 25.6% in Nigeria and Kenya, respectively.

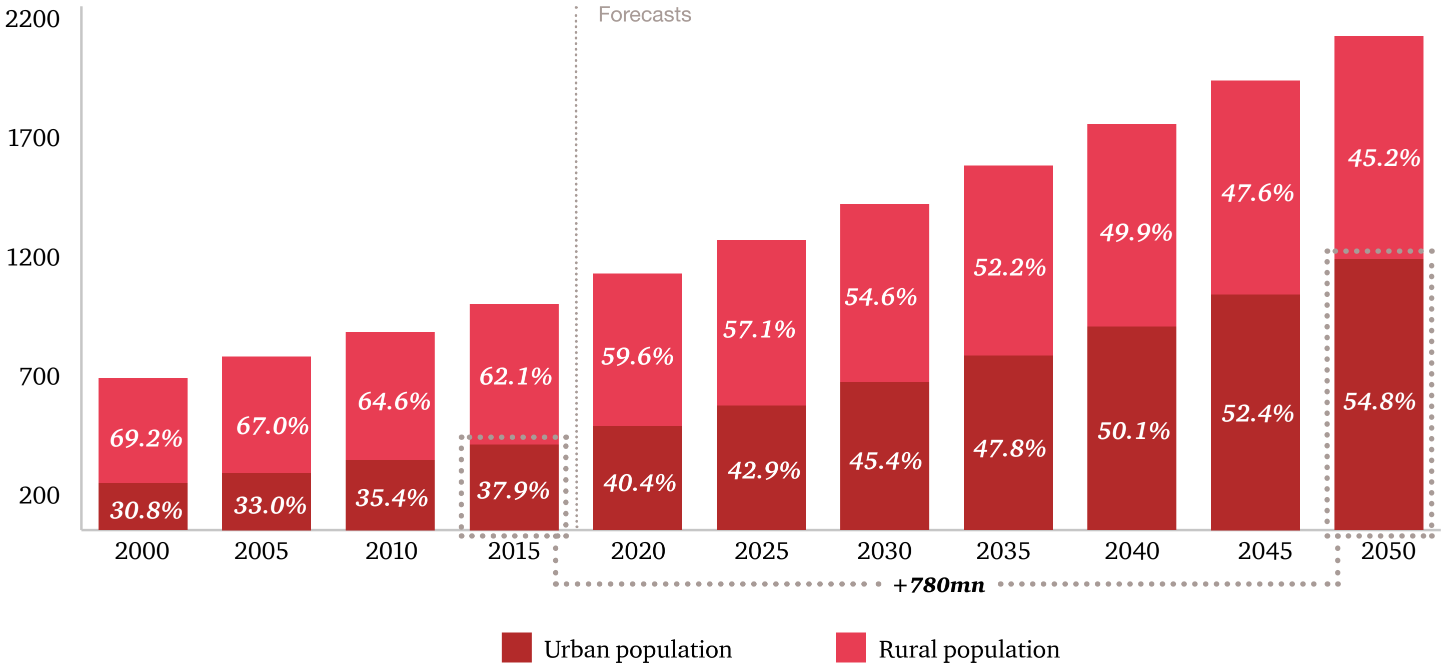
Figure 18: Urban population growth rate 2000-2015 (CAGR in %)



Source: PwC analysis based on World Bank's World Development Indicators

In 2015, sub-Saharan Africa's rural population represented 62.1% of its total population, while its urban population accounted for 37.9%. In the next three-and-a-half decades, these proportions will completely reverse. By 2050, the urban population will have risen to 54.8%, bringing 780 million new city dwellers to the African metropolises. The magnitude of this transformation will bring immense challenges with regard to environmental sustainability and food security.

Figure 19: Urban vs. rural population in sub-Saharan Africa (million inhabitants) from 2000 to 2050



Source: PwC analysis based on United Nations' Population Division

Urbanisation is challenging established economic models and calls for structural transformation. In theory, urbanisation should bring productivity gains, lower the cost of goods, and increase the number of services offered. 'Agglomeration economies' should allow for the use of fewer resources to support a larger population, providing in turn greater returns and making cities more attractive. But this thinking only works if new urban dwellers are assigned to more productive jobs in manufacturing and services and if adequate amounts of public goods and physical capital are available.

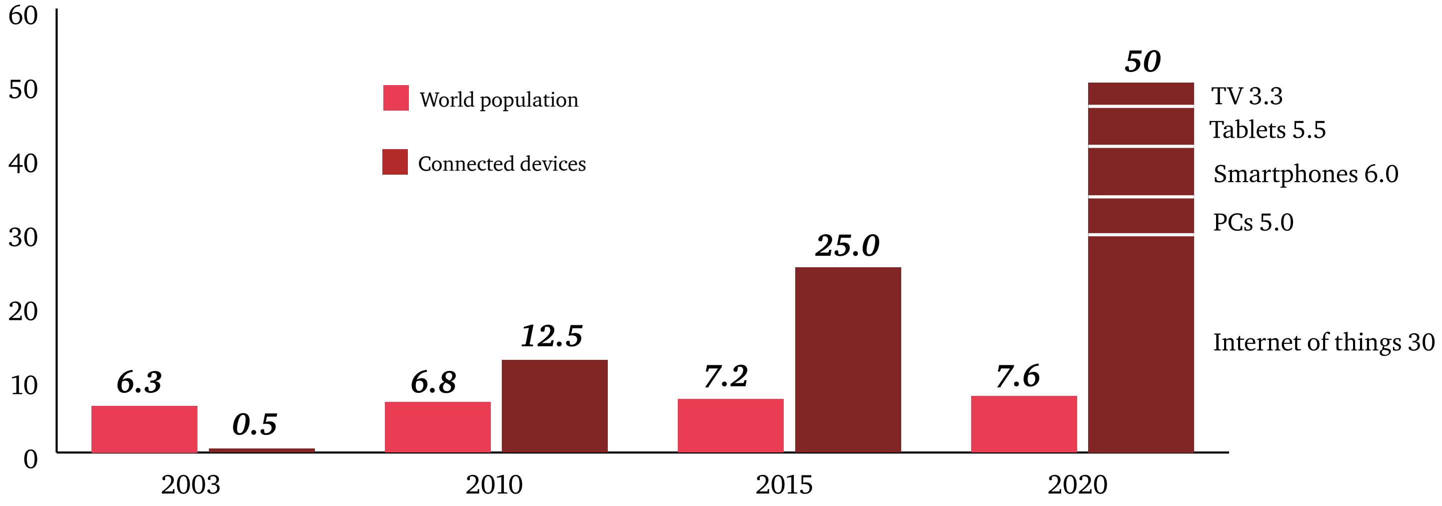
Currently, the urbanisation process in Africa is not bringing this progress, because essential public infrastructure is dysfunctional, leading instead to congestion, water or power supply shortages, pressure on ecosystems and higher costs of living. Moreover, labour productivity grew slower in African countries than in Asian countries with a similar pace of urbanisation, slowing down structural transformation in Africa. In African commodity-exporting countries, natural resource rents disincentivise productivity gains, leading to the prevalence of informal low-productivity jobs in urban areas.

In our 2016 survey, CEOs of banks operating in Kenya, Nigeria and South Africa express serious concerns over the sustainability of current models with regard to the quality of infrastructure. Successful and inclusive urbanisation will only be achieved if policy reforms and public as well as private investments translate into agglomeration economies, rather than diseconomies. Financial services organisations can play a crucial role by channelling funds towards sustainable development, promoting ethical investing, and putting in place internal procedures for responsible lending and environmental credit risk assessment.

Change in consumer behaviour – The digital natives

Over the course of the next ten years, a new generation will emerge. Born after 1990, these 'digital natives', just now beginning to attend university and enter the workforce, will transform the world as we know it. By 2020, they will make up 47% of the global population. Empowered by technology and connected 24/7, this generation will have new expectations and new powers.

Figure 20: World population vs. connected devices, billion, 2003 – 2020

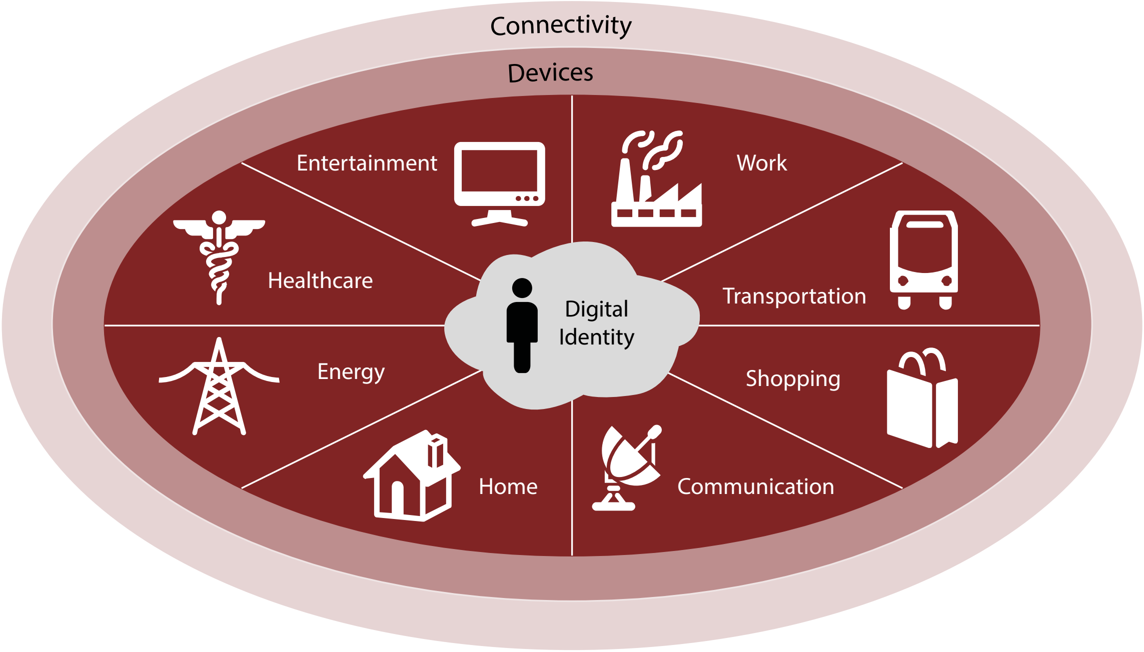


Sources: PwC analysis based on industry forecasts, IDC and Cisco

As the number of connected devices increases, customers will become far more analytically enabled. Financial institutions that cater for individual investors will no longer serve individual clients – they will face affinity groups, social media networks and other communities that connect individuals to one another and shape opinions. For example, in the past, a 'bad' customer experience could be contained to an individual, but today such an experience may go viral, creating a snowball effect that leads to real material damage to the company's brand.

The new customer will hold financial services providers to the same standards as digital commerce platforms (such as Amazon, Alibaba and iTunes) and digital service providers (like Airbnb and Uber). These standards will include mobile access, omni-channel access, speed, paperless transactions, transparency and remote advice. For financial services providers, this will also entail anticipating customers' needs, providing instantaneous responses and managing outcomes.

The individual in an always-connected world



Source: Strategy& analysis

By 2020, digital natives will make up the mainstream, awash with ever more information, analytical tools and buying choices. They will compare price and value instantaneously, and move business to the supplier that offers the best deal for a given transaction. For financial institutions, this will mean no longer being able to count on brand loyalty and customer inertia, while facing intensified competition for every customer transaction.

Emerging markets in the digital universe

In 2013, mature markets represented 60% of the digital universe. But by 2020, emerging markets are expected to take the lead with a 60% share[10]. As the developing world increases in connectivity and sophistication, a huge new audience of people who have not yet been exposed to consumerism will develop outside of already-connected urban centres. As with prior technology adoptions, these audiences will leapfrog years of technological development and quickly emulate the behaviour of the 'digital natives'.

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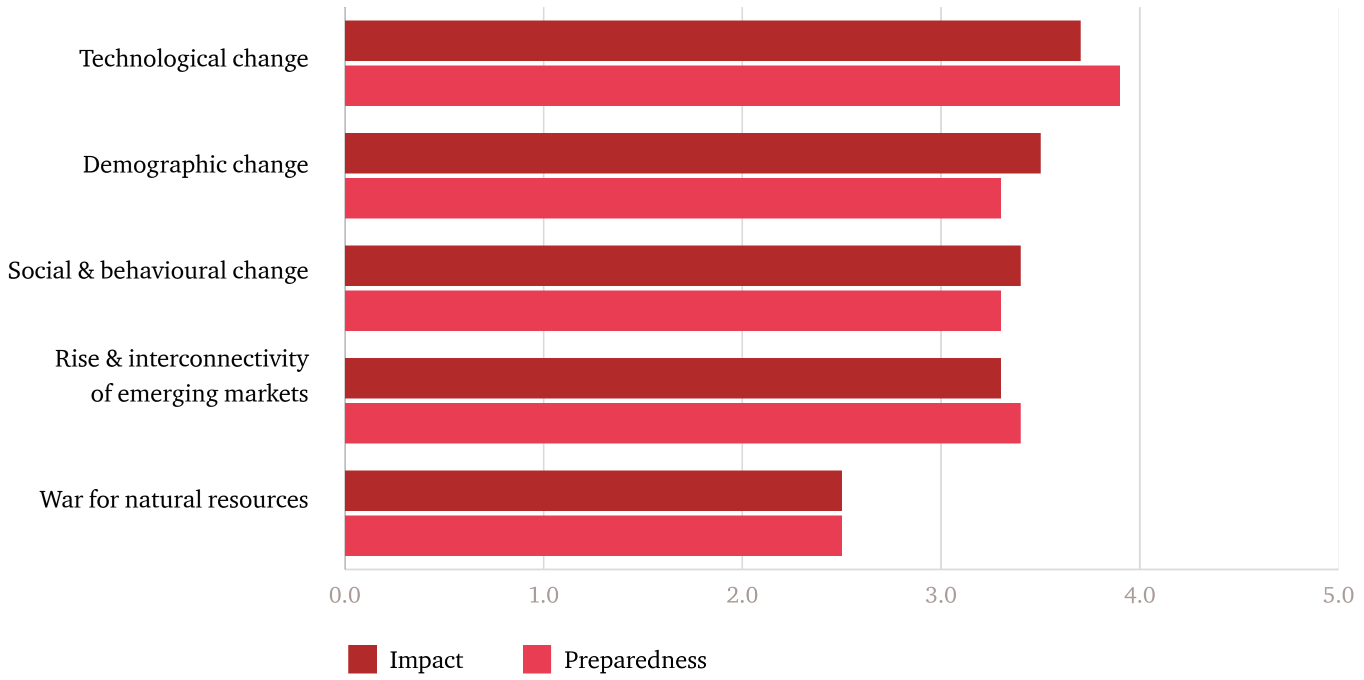
[10] According to IDC, the digital universe, which can be defined as the sum of bits in the memory of all connected devices, is set to explode from 4.4 zettabytes in 2013 to 44 zettabytes in 2020. Emerging markets are expected to represent 60% of these 44 zettabytes.

Driving forces of change

Over the past five years, PwC has been identifying and following megatrends, which have the potential to profoundly transform and disrupt economic sectors globally. As part of our African banking survey, we asked bank CEOs how they perceive these megatrends and how prepared their organisations are to face them.

Figure 21: Impact of the megatrends

How would you rate the impact of the following key drivers of change on your organisation? (From 1 – very negative to 5 – very positive)
How prepared is your organisation to respond to these key drivers of change? (From 1 - very unprepared to 5 – fully prepared)



Based on responses from 15 banks. Source: PwC's Africa Banking Survey 2016

According to respondents, technological change will have the highest impact on their organisations. Technology is rapidly morphing from an expensive challenge into a potential enabler of both customer experience and effective operations. When it comes to mobile banking, Africa has the highest broadband growth rate in the world. With the global value of mobile payments set to increase five-fold from 2013 to 2020, banks can potentially enhance customer relationships by concentrating on this avenue. However, non-traditional players are challenging incumbents, leading with customer-centric innovation. We develop these topics in more detail in *Part 4: New entrants and innovation*.

Aside from technological change, respondents have nearly equally ranked the impact of demographic change, social and behavioural change, and the rise and interconnectivity of emerging markets. Demographic change, in particular the rise of a middle class and rapid urbanisation, will enlarge banks' customer base and increase the demand for financial services. Social and behavioural change, especially the emergence of the 'digital natives', will change the relationship between banks and customers. Finally, with large corporates from South Africa, Kenya and Nigeria expanding their business across sub-Saharan Africa, it should be no surprise that the continent is experiencing an increase in the regional integration of markets. While this integration process is not linear, we expect the trend to continue and consolidate. The rise in regional integration provides new trade incentives for both foreign and domestic financial players to operate in these locations, as brands will have access to a larger audience of consumers.

Part two

Strategy & business models

In the past twenty years, banks based in Africa have largely increased their footprint on the continent and now dominate the banking sector in many countries[11]*. As large European and US banks are focusing their efforts on their domestic operations, there is an opportunity for pan-African banks to consolidate their market share. The question is, how are they going to procede? Increase their continental reach, or reinforce their home-based presence? Remain or become specialists, or expand their range of products and services?*

Main findings

- On the strategic side, priority is placed on domestic expansion vs international expansion.
- International deployment will be scaled down. However Kenya, Nigeria and Ghana are still viewed as great opportunities for growth outside the home market.
- Customer centricity is at the center of bank CEOs' strategies; the objective is to move away from product silos, create cross-selling opportunities and enhance the client experience.
- Some banks are trying to develop non-banking services such as insurance, asset management or advisory for SMEs.
- In South Africa, the number of branches has remained stable – around ten branches per 100 000 adults – since 2010. But we are seeing changes in the size and function of these branches. Surveyed CEOs believe that branches will decrease by approximately 20% in the next three years.

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[11] Alexandra Born and Paul Mathieu, IMF, Finance & Development, June 2015

Customer centricity

The number one discussion topic this year, when conducting face-to-face interviews with CEOs for our survey, was customer centricity. What this entails, however, is a lot more than a buzz word.

Over the past few decades, innovations in banking – especially retail banking – have been typically launched and maintained in silos, each with its own sales and distribution model, technology, and operational structure. In the current competitive and regulatory environment, banks have no choice but to break down these product silos and adopt a helicopter view of their customers.

This requires reshaping IT systems, integrating customer data across channels (online, mobile, branch, call center, etc.) and creating an enterprisewide view of the customer.

How are banks doing this?

Breaking down silos

The move from a disjointed set of data repositories to an integrated system will not happen overnight. However, banks we interviewed have started the process by analysing the barriers to effective cross-channel cooperation and the changes required to adopt new organisational structures.

Some banks are more advanced, as they are already implementing a shared-service model for online and mobile banking activities. The next steps will include the collection of customer analytics such as demographics (income, age, location), customer service patterns (inquiries, complaints, praise, suggestions), online behaviors (frequently visited sites, social media activity, posted links), and transactions (products purchased, payment patterns, etc.). This requires adopting universal client identification numbers and gathering data continuously.

Understanding customers

Once banks have started collecting the right customer data, they must define and implement enterprise-wide rules for calculating customer profitability – at both the individual and the household levels.

Traditional data points analysed

- Current assets
- Potential assets
- Income
- Credit score
- Current products

➡

More insightful data

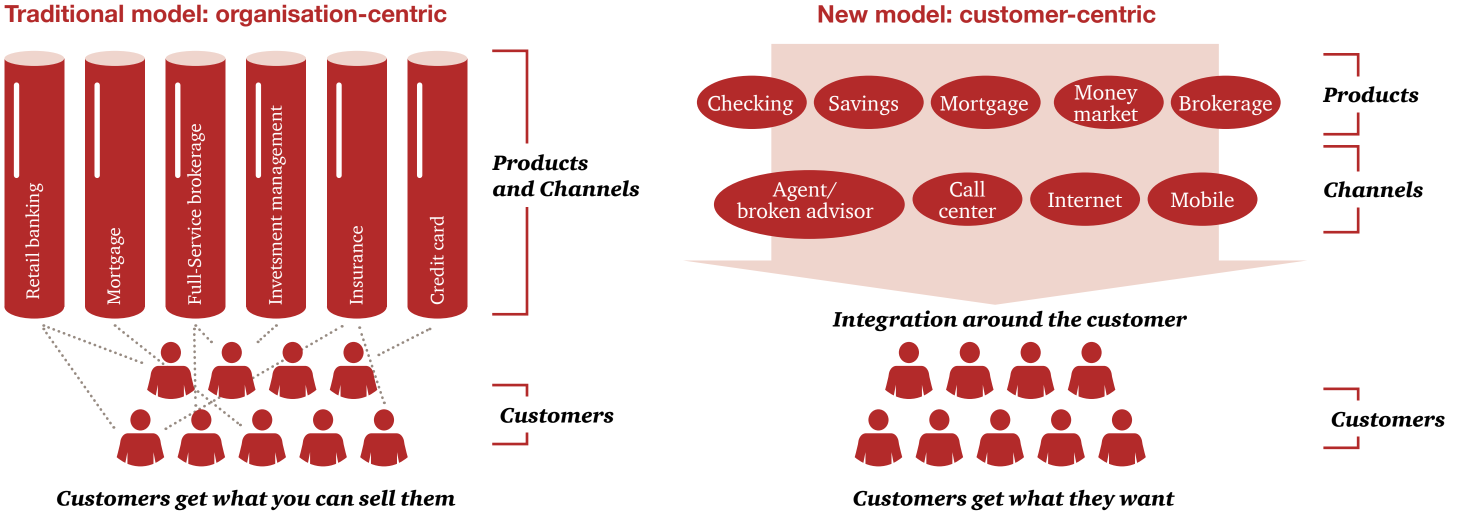
- Marital status
- Birth date
- Address/geography
- Loan-to-value ratio
- Number and age of dependents
- Preferred channel
- Transaction history

The idea is to make targeted offers to customers, when the time is right. This is why banks most commonly adopt a life-cycle approach: it helps them identify triggers (entering college, getting married, having children, preparing for retirement, etc.) and respond appropriately with products that address correlating needs – on an enterprisewide basis.

Enhancing the customer experience

To enhance customer experience, many banks are using voice-of-the-customer programmes to gather feedback from a variety of sources (websites, social media, email, phone, focus groups, etc.) and identify inconsistencies and potential sources of customer dissatisfaction. This allows them to move from traditional metrics for measuring efficiency (average talk time, abandon rate, average speed of answer) to better metrics for measuring it (track call reasons, analyse root causes for customer inquiries, define satisfaction standards, etc.).

Figure 22: Organisation-centric vs customer-centric models



Source: PwC's Financial Services Institute

Our 2016 survey provides insightful information on where African banks stand in this process and on how they intend to achieve the move towards customer centricity:

- Overall, our interviewees stress that cultural changes are driving the rapid adoption of online platforms by customers and that adopting a customer-centric approach is critical, at least as fast as competitors are concerned.
- The surveyed banks unanimously state that significant refinements can be achieved to the client onboarding process over the next three years with the aim to improve the customer experience.
- Two respondents aim to capture their clients throughout the client's entire life cycle.
- One respondent states that their institution should on-board clients rather than products and that they will have digital client onboarding by next year.
- One respondent wants to transform their bank into a universal bank that delivers solutions instead of products.

Beyond some incremental improvements that are being implemented, the move towards customer centricity implies a larger, wider transformation: rethinking banks business models to be built more around customer needs.

Additional highlights

Emerging business models

The recent Strategy& report, *European Banking Outlook 2016*, presents alternative banking business models that aim to restore the profitability of banks and eventually maintain their existence. Indeed, authors raise serious concern over the sustainability of current banking business models. Banks are trying to solve a complex equation: how to maintain or restore profitability while evolving towards customer centricity by leveraging new technology developments.

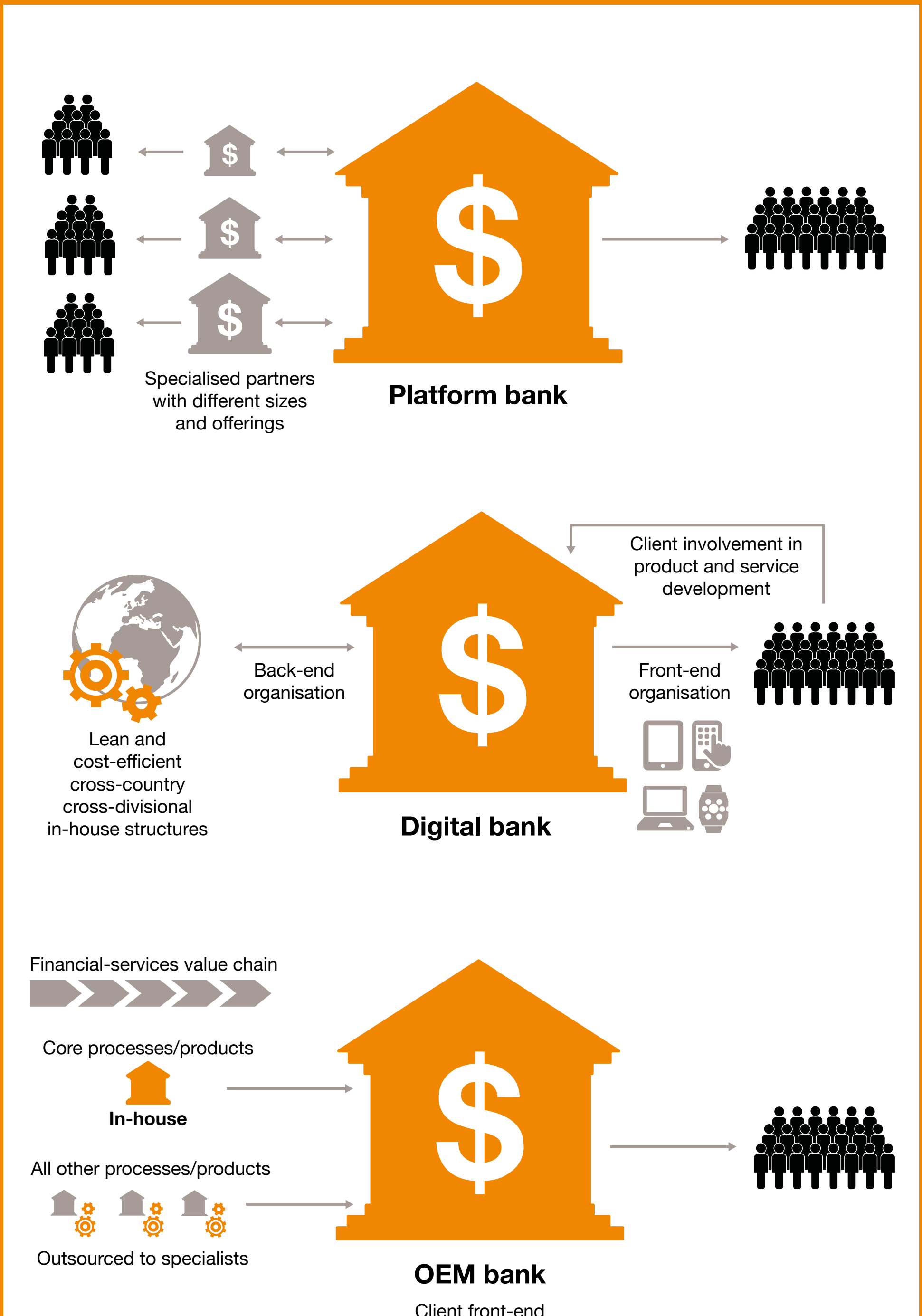
The Strategy& report suggests three alternative and innovative business models that address this question: platform banks, digital banks and OEM banks.

Platform banks would be characterised by open infrastructures, with competitors and FinTech companies seamlessly 'plugging' their products and services into the banks' own offerings. The core competencies of platform banks would include customer relationship management and the anticipation of client needs, along with the maintenance of open product infrastructures.

Digital banks would entail the extensive digitalisation of customer onboarding and service. This model would also entail complete front-to-back integration and the digitalisation of all processes. Inspired by the product development approach of emerging technology companies, digital banks would be in a position to rapidly and efficiently respond to changes in customer or regulatory demands since they will involve customers in the development of new products and services.

Inspired by automakers, OEM banks would be distinguished by a low degree of vertical integration. The traditional value chain would be dissolved and efficiency would be maximised by the integration of external vendors. OEM banks would focus on their core competencies and would outsource all other processes, products and services.

Since non-financial disruptors won't wait for incumbents to evolve, these innovative business models may be the only way forward. However, bank executives should not ignore the fact that these business models will face resistance from conformist corporate culture, as the transition from the current models to these alternative models will entail restructuring the established service offerings, processes and infrastructure, and eventually reshaping the entire bank's organisational structure. In order to remain relevant in the global shifting landscape, traditional banks are required to challenge the status quo and think ahead.



Source: Strategy& analysis

International expansion

The overall appetite for international expansion has been reduced due to increasing concerns over the state of the market. Some of the key concerns mentioned by our respondents include the reliance on highly volatile emerging markets and the lack of capital-raising ability to expand to developed markets. However, there is still a significant number of banks seeking opportunities abroad.

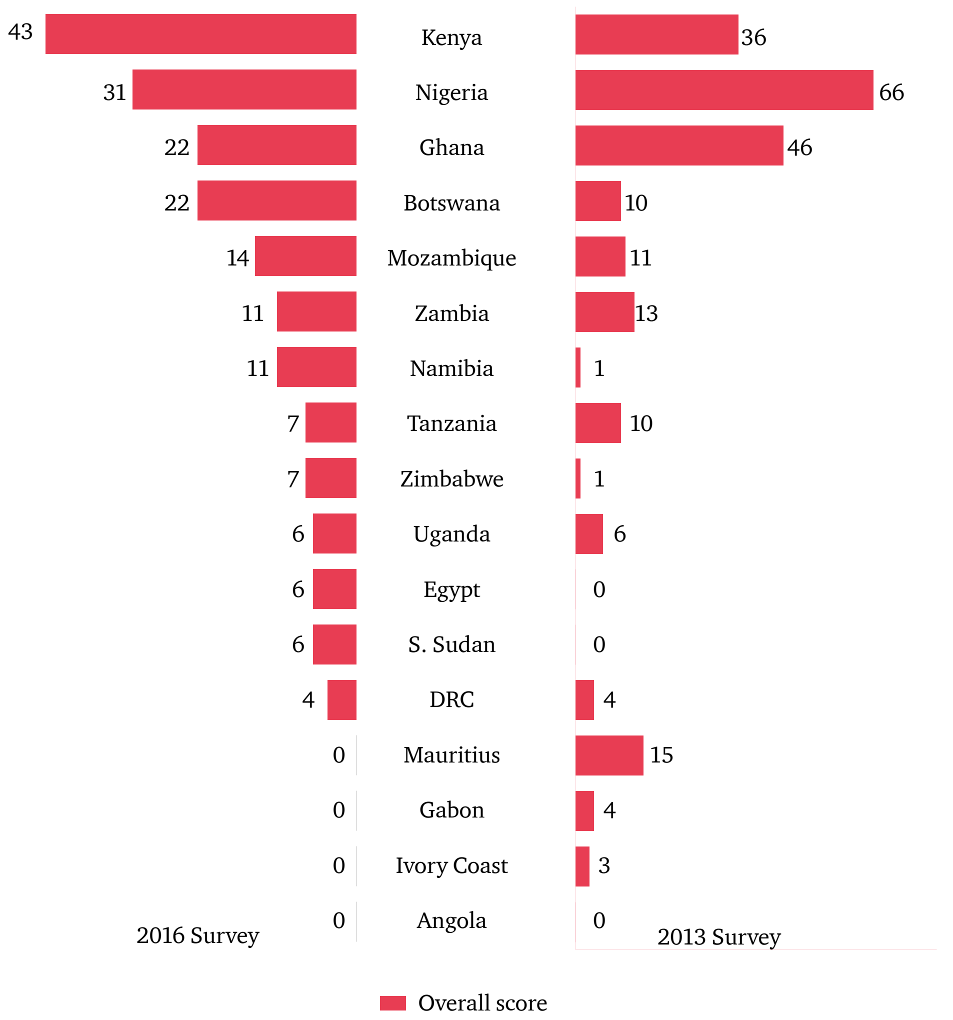
Foreign banks operating in South Africa have offices globally and have established international strategies. These banks act as international hubs, trying to open the African market to international investors, and plan to achieve their expansion strategy in Africa through inorganic growth (M&As).

In comparison, domestic South African banks are willing to expand as well, but with a more continental approach. During our interviews, CEOs of domestic South African banks mentioned that they were considering cross-border opportunities in countries with similar macroeconomic profiles, since trade and investment flows between South Africa and these countries are expected to surge. Even though these business opportunities exist, our 2016 survey shows that CFOs do not expect the contribution to profit after tax of their African operations outside their home markets to rise significantly in the short or medium terms.

In fact, some of our respondents are slowing down their deployment in the rest of Africa while they are still looking to strengthen their current positions in Kenya, Ghana and Nigeria. Some of our respondents cited a lack of customer identification systems, credit bureaus, electricity infrastructure and telecommunication facilities as impediments to expansion in Africa. However, they will not fully disregard investing in the African continent since there are many favourable partnerships that can be made and there remains a significant untapped population:

- Kenya is regarded as the top country in terms of business opportunities for 2016, improving its rank by two positions compared to our 2013 survey. In 2015, Kenya's GDP was USD 61 billion, while the country is forecasted to reach USD 96 billion by 2021 with an average annual growth rate of around 6%. Kenya's economic dynamism might explain the shift of interest there from former favourite, Nigeria.
- Nigeria has been demoted by our respondents since our previous survey and the country is no longer the highest-rated country for business opportunities. Although Nigeria was the largest economy in Africa with a GDP of USD 490 billion in 2015, its forecasted average annual growth rate until 2021 (approximately 3.7%) is lower than that of other African countries.
- Ghana is ranked third, moving down one position in the rankings from the 2013 survey. However, Ghana is expected to grow at an average annual growth rate varying from 4.5% to 6.1% until 2021

Figure 23: Where do you see the greatest opportunity for growth in Africa outside your home country? Please rank the following countries by order of importance.



Based on responses from 13 banks. Due to a different methodology being used in 2013, scores might not be fully comparable. Source: PwC's African Banking Survey 2016

Domestic expansion: new offering and new channels

Our respondents unanimously state that securing and increasing their market share in their domestic market is one of their top priorities. Overall, the domestic expansion strategy of the African banking players is based on diversification across all areas of financial services (e.g. growing corporate banking) and on adopting a customer-centric approach (e.g. onboarding clients digitally and delivering solutions rather than products).

As detailed in the following subsection, respondents expect the number of branches to reduce in the next three years. This means that domestic expansion will not be solely achieved through a greater physical foothold. Rather, online and mobile banking, including in the wholesale area, will drive the domestic expansion of banks.

However, foreign banks operating in South Africa intend to achieve their expansion strategies through inorganic growth, whether in domestic or international markets. An example of this is the recent acquisition of Tyme Capital, a company that builds digital banking solutions, by the Commonwealth Bank of Australia (CBA).

As detailed in *Part 4: New entrants and innovation*, all groups of banks try to refine their digital onboarding processes through marketing and innovation in order to reach, engage and retain customers at lower costs. Indeed, banks will reach, engage and retain customers in the domestic market by developing new channels and new offerings. In terms of channels, our 2016 survey shows that overall:

- Online and mobile banking supported by a strong marketing effort contributes to a greater market penetration in the domestic market. Some of our respondents have shown that they are experiencing success with online and mobile platforms.

- Both consumer and business banking are being targeted by new digital channels. These segments have high expectations when it comes to being reached digitally.

- Some of our respondents indicate that the customer flow in their branches is decreasing and that some of their branches now add little value. These banks plan on reshaping their branch design.

In terms of products and services, our 2016 survey shows that overall:

- Banks mention wealth management, transactional and advisory services as part of their offering where improvements are necessary.

- Expertise in equity, debt, capital and securitisation can be enhanced.

- Some of our respondents are trying to develop non-banking services such as insurance, traditional and alternative asset management, or advisory services. For example, Barclays Africa has created Absa Enterprise Development Centres where SMEs can access non-financial support relating to, for example, creation potential, productivity, sustainability, business skills and mentorship. Standard Bank has also seen good traction on its insurance products. Interestingly, the insurance companies (Discovery is an example) are doing something similar by looking at how they can leverage their brand to offer banking services.

In order to give a more insightful picture of channels in terms of products and services, the following subsections detail:

- The current and future roles of branches, and

- The importance of selected market segments.

Future of branches

South Africa faces a dilemma in how it will proceed to service unbanked customers. Since 31% of the population have no bank account[12], it remains unclear whether banking will occur through traditional branches or be disrupted by technology. Branches have traditionally played a significant role in banking, but given that new technological solutions are entering the industry, we try to understand the future role of branches in developing countries. Until the recent mass adoption of mobile telecommunications, it was evident that branch networks were the preferred medium to reach unbanked areas and to increase a population's

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[12] World Bank

access to financial services. But with the advent of mobile phones, populations living in geographically remote areas are now readily accessible. The number of mobile users in developing economies is rapidly growing and the banking sector is simultaneously reaching a substancial level of maturity in these regions. Therefore, the rise in mobile communication has already had a significant impact on the role of commercial bank branches. South Africa ranks higher than most other countries in terms of number of mobile accounts (see Figure 25), positioned only lower than Botswana, Ivory Coast and Kenya, which is experiencing a phenomenon in mobile banking, mostly due to the M-Pesa solution.

Looking at the recent development of branches (see Figure 24), South Africa has a low number of branches compared to developed economies. The number has grown at a compound annual growth rate of +7.9%, however, which is the highest among the studied countries. Conversely, developed economies are experiencing a decrease in the number of branches, with branches in Switzerland and the UK decreasing at a compound annual growth rate of -2% and -1.4% from 2004 to 2014, respectively.

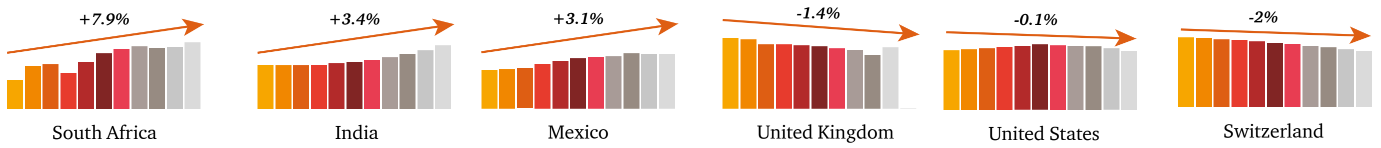
As digitalisation increases, the number of branches will reduce. Traditional branches were designed as transactional and query places. With the rise of self-service tools and web banking apps, the role of branches is shifting. Banks are opening a new breed of branches with a different ‘look and feel’ and a role oriented towards selling products and educating customers on finance or insurance. As compared to 2011 survey results, the South African banking system has changed its prospects. There is a stronger consensus on the reduction of the number of traditional branches as the transformation of banking activities becomes clearer. The 2016 survey shows that:

- 83% of survey participants expect a decrease in the number of traditional branches in the next three years. Consensus lies around a contraction of 20% in the number of branches. Respondents also plan to redesign their branches.
- Only 17% of respondents expect to see an increase in the number of branches. These respondents are non-full-scale South African banks that expect to grow in the next three years.

As the number of branches decreases, banks will develop alternative ways to reach, engage and retain customers. The move towards online and mobile banking has been progressive and is gaining momentum, since it enables banks to scale back their branch footprint, reducing costs. Beyond this, banks are also trying to adapt their branch networks by fitting them with more digital devices. The 2016 survey finds that:

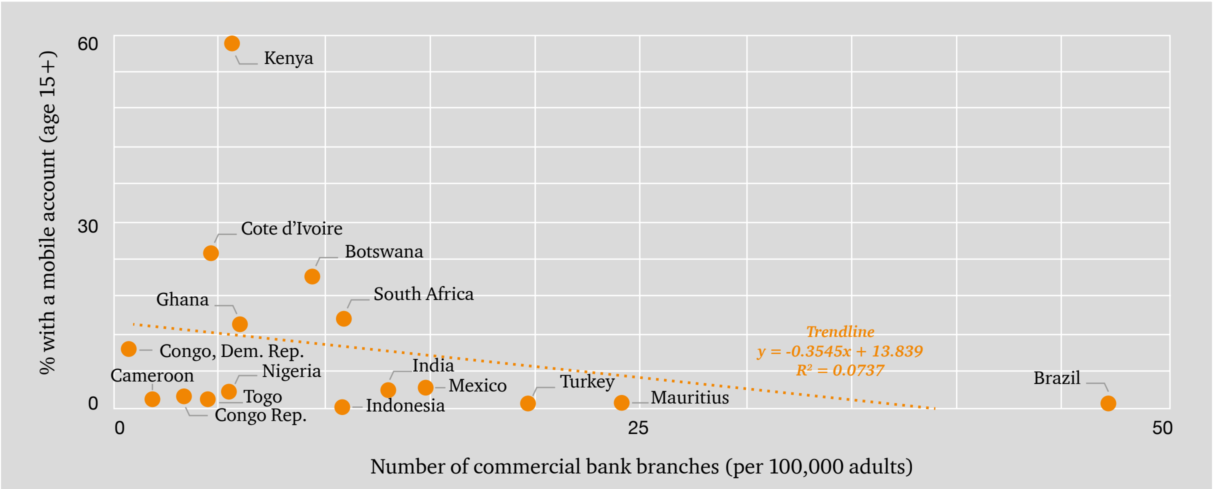
- 77% of respondents rely on their website to stay in touch with their customers. This communication channel ensures a high level of cost efficiency.
- The second most popular type of customer interaction is mobile applications (69% of respondents), followed by call centres (54%) and representative offices (46%); loan centres are only used by 15% of the survey participants.
- Only 8% of respondents continue to use deposit centres, agents and personal relationships to interact with customers. These banks operate in the corporate and investment banking (CIB) space.
- These trends are in line with those observed in 2013.

Figure 24: Number of commercial branches (per 100,000 adults) in selected countries from 2004 to 2014



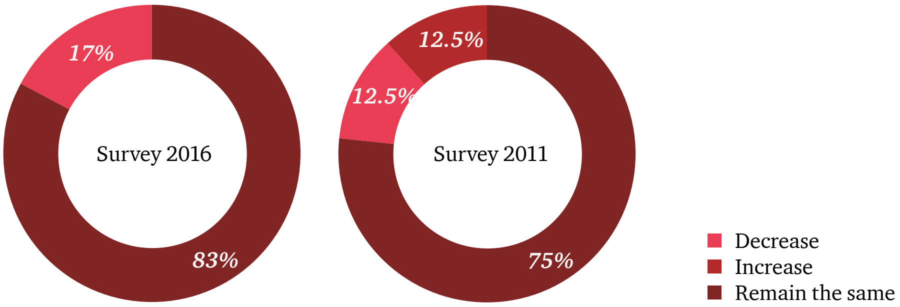
Source: World Bank

Figure 25: Mobile bank accounts vs branches in developing countries in 2014



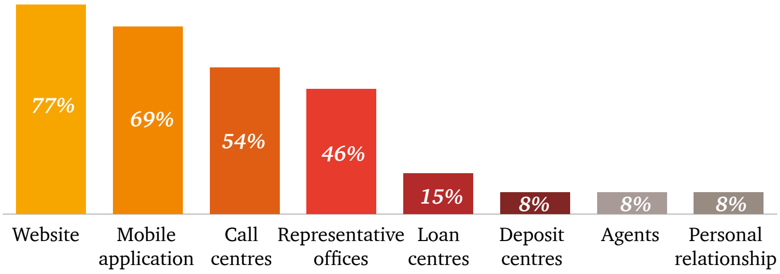
Source: World Bank

Figure 26: Traditional branch networks in Africa
Do you believe the number of traditional branches will decrease/remain the same/increase in the next three years?



Based on responses from 9 banks.
Source: PwC's African Banking Survey 2016

Figure 27: Other touch points
Besides the traditional branch structure, what other touch points do you have with your customer?



Based on responses from 13 banks.
Source: PwC's African Banking Survey 2016

Market segments

Our 2016 survey puts an emphasis on identifying those segments that will be of significant importance to our participants and in which our participants have been both successful and unsuccessful last year with regard to the wholesale market and the retail, insurance and asset management markets.

In wholesale

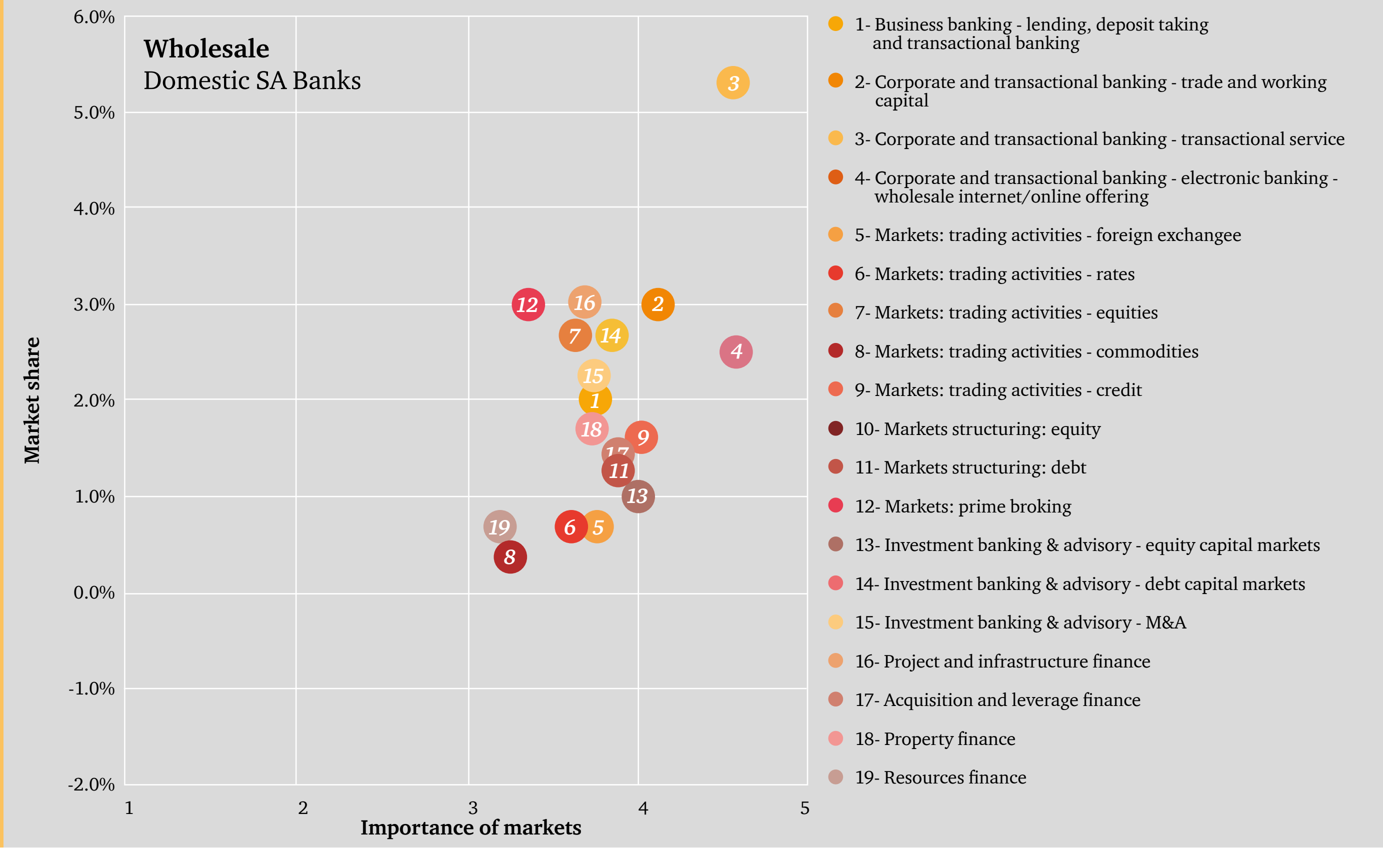
Domestic South African banks recorded a high success last year (around +5% in market share) in transactional services (3) in corporate banking. This market is also regarded as very important for the next three years because it is capital efficient. Electronic banking (4) is also considered to be a market of great importance for the near future, in line with the move toward online banking. Conversely, domestic South African banks regard commodities trading (8) as the least important market to their institutions over the next three years, and their market shares in this market stagnated last year.

Foreign banks operating in South Africa experienced ample market share increases last year, around +5%, in transactional service (3), rates trading (6) and credit trading (9). However, these banks perceive debt capital markets (14) as the most important markets for the future of their institutions, largely because they focus on large corporate clients. Foreign banks operating in South Africa have lost around 11% in market share in resource finance (19), infrastructure finance (16) and debt structuring (11), indicating a potential withdrawal from these segments.

Banks operating in Kenya and Nigeria recorded a high level of success with market share increases ranging from +7% to +10% last year, in trade and working capital (2), electronic banking (4), transactional services (3), credit trading (9) and property finance (18). They regard rates trading (6), forex trading (5) and lending, deposit taking and transactional banking (1) as the most important segments for their organisations in the near future. However, all their activities in investment banking, trading and structured finance stagnated last year.

Figure 28: Wholesale markets

How important do you believe these markets will be for your bank over the next three years? (From 1 – Not important to 5 – Very important)
How successful (measured in terms of markets share) has your bank been in servicing the following markets in the last year from a loss of over -10% to a gain of over 10%?



Based on responses from 15 banks. Source: PwC's African Banking Survey 2016

In retail, insurance and asset management

Domestic South African banks registered moderate successes, with market share increases around +2.5% last year, in their unsecured lending activities: credit cards (23), personal loans (24), and micro lending (25). The most important segments for domestic South African banks are electronic banking (28), in line with the move toward retail online banking, and insurance and asset management (29), in line with the banks' search for additional profit pools. However, domestic South African banks did not achieve further growth in these segments.

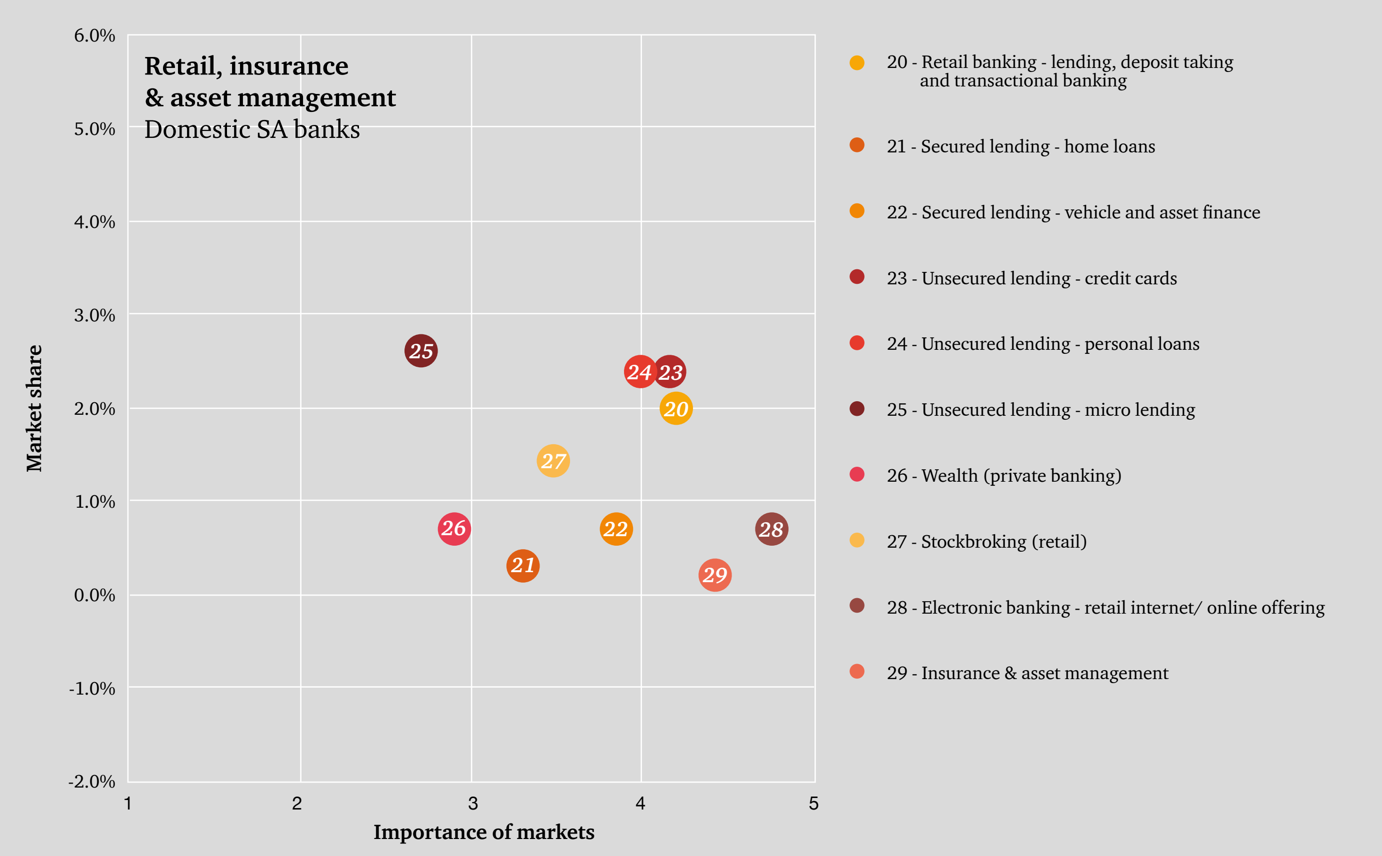
As expected, foreign banks operating in South Africa did not register any increases in market share, largely because the retail segment is not their area of expertise. However, it seems that these banks will put an emphasis on gaining traction in the retail segment through their online offering as they rate electronic banking (28) as being very important to them over the next three years.

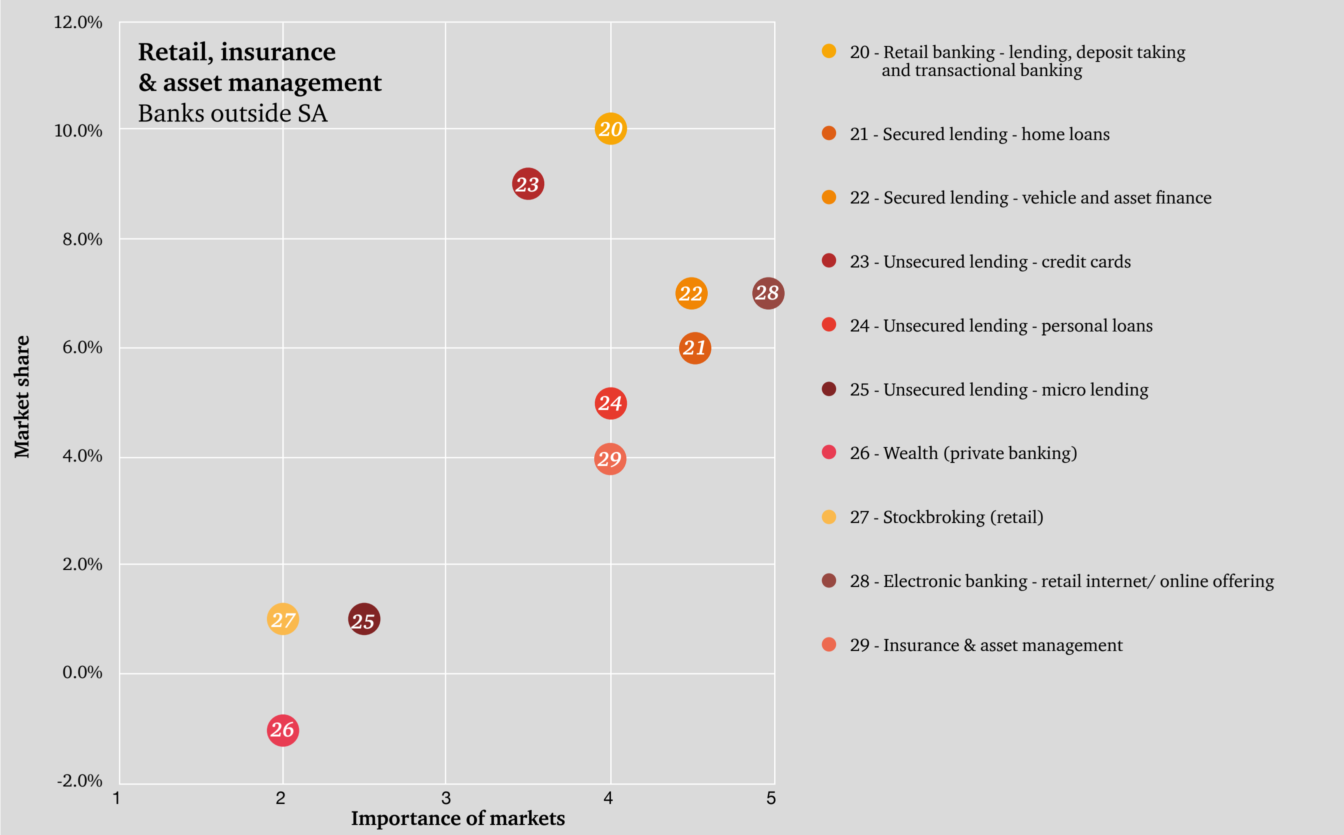
Banks operating in Kenya and Nigeria achieved large market share increases, ranging from +6% to +10% last year, in the following markets: lending, deposit taking and transactional banking (20), electronic banking (28), credit cards (23), vehicle and asset finance (22) and home loans (21). As part of their retail activities, electronic banking (28) is regarded as the most important segment by these banks over the next three years. These banks registered a loss in market share in private banking (26) last year.

Figure 29: Retail, insurance & asset management markets

How important do you believe these markets will be for your bank over the next three years? (from 1 – Not important to 5 – Very important)

How successful (measured in terms of markets share) has your bank been in servicing the following markets in the last year from a loss of over -10% to a gain of over 10%?





Based on responses from 15 banks. Source: PwC's African Banking Survey 2016

Additional highlight

Islamic banking in Africa

The Islamic finance industry has grown exponentially on the international front, with assets expected to triple over the next few years (USD 2.1 trillion to USD 6.5 trillion by 2020). In an effort to build on the success of globally established financial instruments such as Sukuk, Islamic finance is positioning itself as a more secure alternative for investing in the emerging African market.

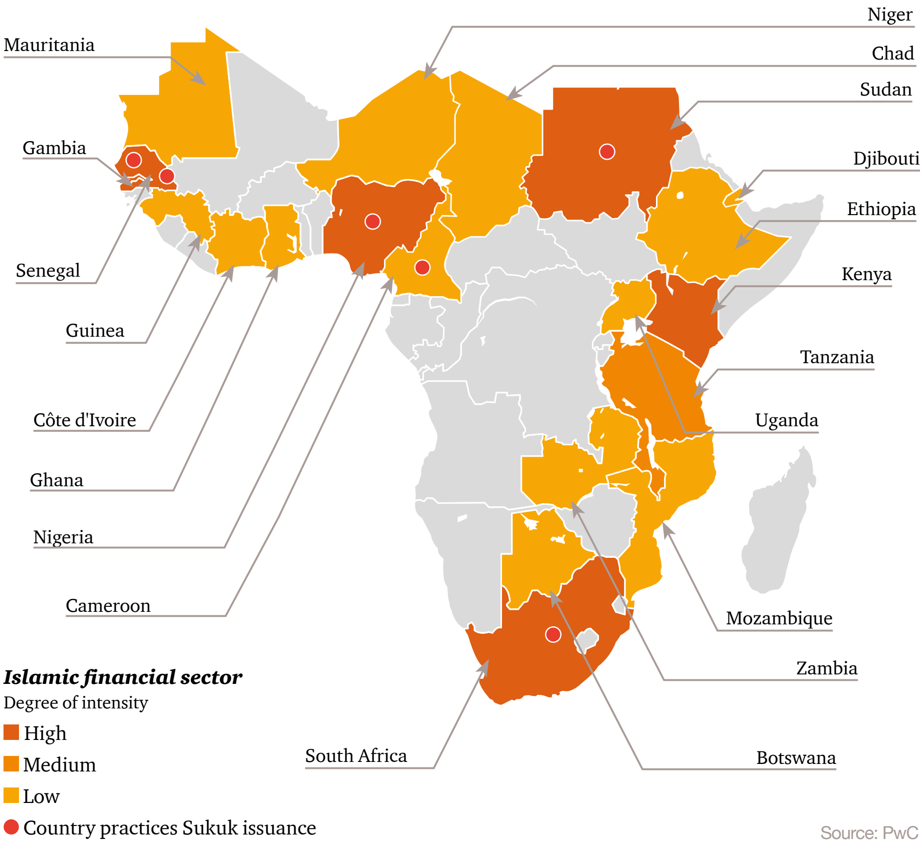
Africa is home to over a quarter of the global Muslim population, yet presently has around 2% of global Islamic banking assets and as little as 0.5% of Sukuk outstanding, which is why a rapid growth in Islamic banking and finance is anticipated. Evidence of this can be seen in the emergence of Islamic financial services coinciding with Africa's growth in retail banking, with several international Islamic banks already investing within the continent. Recognising the potential for growth, African financial leaders have taken initiatives by facilitating regular summits such as *The International Islamic Banking Summit Africa*, intended to encourage stronger African-OIC business ties through Islamic finance. In 2016, the Summit was organised under the patronage of the President of the Republic of Djibouti.

Islamic finance brings several key value propositions, most notably in the areas of enabling infrastructure finance, boosting international trade and investment flows, and deepening financial inclusion. Although Islamic financial institutions currently have a stronger presence in North Africa (21 are operated in North Africa, Mauritania and Sudan, and 17 in sub-Saharan Africa), the demographic structure and financial climate of sub-Saharan Africa present favourable conditions for Islamic finance to expand there.

One area that is expected to grow is that of Sukuk issuances for various infrastructure developments, including transportation and electricity, across the African continent. Sukuk can be issued in a range of structures to provide access to growing compliant funds, thus attracting foreign investments through sovereign Sukuk to sustain African developmental needs. Senegal and South Africa were the first African countries to enter the Sukuk market in 2014, each issuing a Sukuk valued at USD 208 million and USD 500 million respectively. Sukuk issuances can be expected to surge throughout Africa as supporting legal frameworks develop, offering diverse opportunities to invest in infrastructure development across the continent.

Islamic finance is currently present in 21 African countries at varying levels, with Sudan being strongly involved in Islamic finance since the 1970s. Other countries such as South Africa, Nigeria and Kenya have recently implemented new measures to facilitate Islamic finance, while countries such as Ethiopia, Uganda and Zambia are at the initial stages of integration.

Figure 30: Islamic finance in sub-Saharan Africa



Source: PwC

Part three

State of the industry and competitors

While banking sectors across Africa are diverse in nature, the industry as a whole exhibited substantial growth in recent years. Sustained economic activity and improved regulatory oversight have been important contributing factors to this. The rising presence of global banks and pan-African groups has also contributed to improving the availability and quality of financial services on the continent. Overall, the industry stands to benefit from financial sector contagion as banking leaders drive innovation and competitiveness across borders.

Main findings

- African banks had a record year in 2015, increasing their total net interest income by more than 20% compared with 2014.
- South Africa's banking sector is by far the most mature on the continent. Retail banking in South Africa is characterised by intense competition despite industry concentration.
- Nigeria's banking sector remains loan-driven; the weakening oil sector has put stress on corporate balance sheets and the banking system.
- Kenya's banking sector is growing, driven by a stable domestic currency, local economic growth and demand for more diversified products by middle-class customers.
- The five largest banks on the continent by Tier 1 capital come from South Africa and Togo.

Top sub-Saharan banks ranked by Tier 1 capital

1	***Standard Bank***	USD 7.5 bn
2	***FirstRand***	USD 7.2 bn
3	***Barclays Africa***	USD 5.3 bn
4	***Nedbank***	USD 3.9 bn
5	***Ecobank***	USD 3.1 bn

African banking sector – vast, diverse and growing

The overall environment of the African banking industry has seen significant growth in a number of African countries, as policy reforms have been made and regulatory oversight has improved. African banks had a record year in 2015, when the continent's banking industry increased its total net interest income by more than 20% over 2014[13]. Although South African banks still accounted for a large part of that, other large banks like Nigeria's Guaranty Trust Bank and Access Bank or Kenya's Commercial Bank and Equity Bank are growing fast. Several African banks managed to find new opportunities and reduce the gap between the big leading banks and themselves, as seen for Kenyan and Nigerian players.

The demand for banking services is growing rapidly as the middle class expands; however, the past years were also accompanied by challenging times. External circumstances brought tumbling commodity prices and volatile currency movements. Inside the sector, industry standards are rising fast, forcing banks to keep up and adapt accordingly. There are a wide range of differing prospects for banking markets on the continent. The varying states of economic development, political outlooks and policy stances continue to shape differences at a regional or country level.

South Africa has by far the most developed and important financial services sector in Africa, with its banking industry offering world-class services and technology. The industry achieved improvements in regulation, becoming increasingly liberalised over the past years. The sector is now one of the largest and most open among the emerging markets, with sophisticated banking, bond and insurance markets[14]. However, the country's banking sector also encountered hurdles to continued growth over the past two years. 2014 and 2015 were characterised by economic difficulties, which challenged the top banks' performances. While the country's leading banks have remained resilient in the face of difficult conditions, some pressures have arisen – banks' funding costs have increased, lending standards have become stricter, and overall financial conditions have tightened[15].

Nevertheless, overall growth among South African banks is expected to accelerate in the medium term as the sector reaps the benefits of ongoing investment in technology and compliance with world-class regulatory standards. Over the long run, the industry should benefit from increased regional expansion, though it is also likely to shift risk profiles[16].

Nigeria's banking sector remains loan-driven, with loans and advances accounting for half of the balance sheets on average. That said, the sector faced several difficulties in the last year. As the continent's second-biggest oil producer, the country was hard hit by low oil prices[17]. According to the IMF, 'the weakening oil sector is stressing corporate balance sheets and putting pressure on the banking system.' With the corporate sector accounting for 80% of bank loans, further financial deterioration of the corporate sector could impair banks' resilience and provision of credit to the economy[18].

Uncertainty in the political environment, changing banking regulations and limited foreign exchange from the Central Bank of Nigeria further hindered the growth of the country's banking sector. Banks with large exposure to oilfield operators were left with no choice but to restructure some of their accounts.

However, banks still managed to grow. For example, Zenith Bank, Nigeria's largest bank, has had success by anticipating and defining trends in the banking industry, such as introducing electronic payment systems and electronic banking throughout Nigeria[19]. Despite the macroeconomic headwinds hitting the country in the past two years, United Bank of Nigeria (UBA) increased its shareholders' equity by an annual growth rate of 22% between 2011 and 2015[20]. First Bank of Nigeria recently announced that it was expecting to grow its customer base from 10 million to over 20 million by 2019.

The regional expansion of banks in East Africa exhibits the characteristics of an economic bloc with Kenya at the forefront and a bank-led financial system[21]. Kenya's banks showed positive results for the past few years. According to figures released by the Central Bank of Kenya (CBK), the banking sector is growing and is profitable[22].

The strength of this performance can be attributed in part to the performance of the Kenyan shilling, which declined only modestly against the US dollar relative to many other African currencies[23]. Moreover, Kenya's banks continue to expand and build networks, both domestically and internationally. This has also brought about increasing competition and new entrants into the banking sector.

Kenya's growing middle class boosts retail banking and products such as mortgages and personal loans and is likely to continue to drive the adoption of credit cards, which have high penetration among high-net-worth customers[24]. Unfortunately, three banks (Dubai Bank, Imperial Bank and Chase Bank) were placed under receivership by the Central Bank of Kenya in less than nine months – this served as an alert for regulators and bank customers[25].

When interviewing the CEOs during our research, they agreed that the future was fraught with uncertainty and unexpected events, making it challenging for banks to grow and develop. Given this outlook, it is worthwhile to look more specifically at the state of the competition, performance and markets.

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[13] The Africa Report, A record year for African banks
[14] The Economist, Industry Report South Africa, 2016
[15] IMF, South Africa – Country Report, 2016
[16] Oxford Business Group, The Report: South Africa, 2016
[17] The Banker, Top 1000 World Banks, 2016
[18] IMF, Nigeria – Country Report, 2016
[19] World Finance, Zenith Bank lease the way for Nigeria
[20] Financial Derivatives Company, 2016
[21] European Investment Bank, Recent Trends in Banking in Sub-Saharan Africa, 2015
[22] Oxford Business Group, Growth opportunities for Kenya's banking sector
[23] The Banker, Top 1000 World Banks, 2016
[24] Oxford Business Group, Growth opportunities for Kenya's banking sector
[25] Think Business, The real problem with Kenya's banking sector, 2016

Additional highlight

Competitiveness of the African banking sector

The Global Competitiveness Index is a comparative report produced by the World Economic Forum based on the competitiveness of 140 global economies. The authors have defined competitiveness as 'the set of institutions, policies and factors' that determine a country's level of productivity and eventual economic prosperity. Each country's level of competitiveness is based on twelve categories, the eighth being financial market development, which focuses on key indicators that reflect a country's capacity to facilitate financial activity.

South Africa represents the first African country to rank in the top 50 (49th out of 140 countries) of the overall Global Competitiveness Index for 2015–2016 This high ranking is largely the result of a highly developed financial market, positioning South Africa as the most efficient country for finance on the continent.

With regard to the financial market development indicators that focus on Africa's banking sector, South Africa is listed among the top ten countries in the world for its availability of financial services and soundness of banks, with further positive rankings for affordability of financial services and ease of access to loans.

Figure 31: Top 20 countries by availability of financial services

Country	Availability of financial services	Soundness of banks	Affordability of financial services	Ease of access to loans
Switzerland	1	20	1	28
Luxembourg	2	12	2	6
Hong Kong SAR	3	7	4	5
United States	4	39	10	14
Canada	5	1	8	18
South Africa	6	8	21	32
United Kingdom	7	63	19	82
Singapore	8	5	7	4
Norway	9	6	5	7
Finland	10	2	3	12
Netherlands	11	60	17	49
Belgium	12	65	13	36
Qatar	13	10	6	1
New Zealand	14	4	9	11
Bahrain	15	29	15	8
Panama	16	11	18	13
Malaysia	17	43	12	2
Germany	18	46	14	35
Australia	19	3	24	39
Sweden	20	16	16	10

The number indicates the rank of the country.

Source: PwC analysis based on World Economic Forum's Global Competitiveness Index

South Africa's banking sector has been steadily evolving over the past five years on three dimensions (availability of financial services, affordability of financial services, and ease of access to loans), providing a benchmark for the rest of the continent's emerging economies seeking to position themselves on the international map. There has already been some notable progress, such as the ease of access to loans in Kenya, while Nigeria has shown considerable improvements in terms of its soundness of banks. At a general level, Africa's larger domestic markets will look to show more signs of consistency in order to reach the potential of the African market.

Figure 32: Top African countries by availability of financial services

Country	*Availability of financial services*		*Soundness of banks*		*Affordability of financial services*		*Ease of access to loans*	
	2015	*Evolution since 2010*	*2015*	*Evolution since 2010*	*2015*	*Evolution since 2010*	*2015*	*Evolution since 2010*
South Africa	6	⬆	8	⬇	21	⬆	32	⬆
Mauritius	33	⬆	41	⬇	39	⬆	31	⬆
Namibia	52	⬇	33	⬇	47	⬆	69	⬇
Kenya	54	⬇	61	⬆	62	⬆	34	⬇
Morocco	57	⬆	54	⬆	61	⬇	47	⬇
Swaziland	64	⬆	59	⬇	58	⬆	81	⬇
Rwanda	67	⬆	75	⬆	54	⬆	42	⬆
Botswana	70	⬆	56	⬇	65	⬆	55	⬇
Zambia	72	⬇	88	⬇	93	⬇	99	⬆
Uganda	85	⬇	71	⬇	121	⬇	94	⬆
Nigeria	86	⬆	77	⬆	122	⬇	135	⬇
Gambia	95	⬇	72	⬆	86	⬇	95	⬇
Ghana	98	⬇	106	⬇	96	⬇	59	⬇
Seychelles	102	⬆	90	⬆	94	-	51	-
Cameroon	105	⬆	102	⬇	110	⬆	93	⬆
Zimbabwe	107	⬆	135	⬌	131	⬇	133	⬇
Liberia	112	⬆	117	⬆	108	-	92	-
Malawi	113	⬇	76	⬇	133	⬇	112	⬆
Côte d'Ivoire	114	⬇	64	⬆	92	⬆	45	⬆
Senegal	115	⬇	81	⬇	101	⬇	62	⬆

⬆ Higher ⬇ Lower - Unavailable ⬌ Same

The number indicates the rank of the country.

Source: PwC analysis based on World Economic Forum's Global Competitiveness Index

Intensity of competition and response from banks

Africa's banking system is not very different from the competitive environment existing in high-income OECD countries[26]. The banking sector has benefited from the growing expansion of foreign banks, including pan-African banks such as Ecobank, Standard Bank, Bank of Africa and Barclays Africa, which now operate in 36, 20, 16 and 11 countries, respectively[27]. The presence of foreign banks has helped to create competitive pressure in the market.

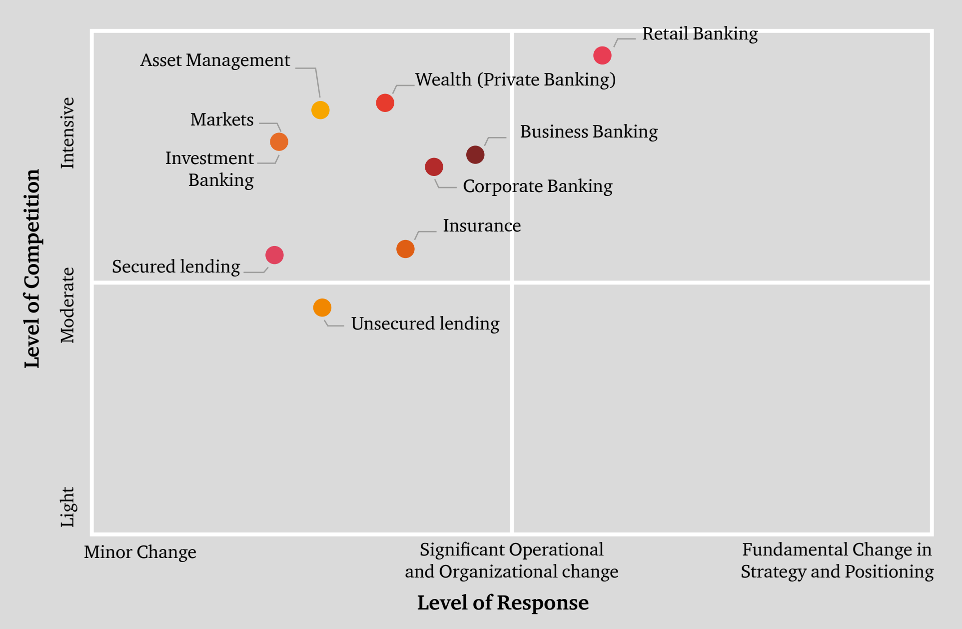
Regarding the intensity of competition and the response of banks in South Africa, we have compared the answers of our surveyed respondents on a scale from 'light' to 'intensive' (level of competition) and 'minor change' to 'fundamental change' (level of response).

The results from our survey confirm the intensive competition in the country's banking sector, as respondents reported that the great majority of markets range between moderate and intensive levels of competition. Nevertheless, respondents considered most markets to be in a stable position with no need for a significant operational and organisational change on their part.

The retail banking market, however, stands out. It is considered as having the highest level of competition as well as the highest level of response necessary. The sector remains highly concentrated, with six large banks – Barclays Africa, Capitec, FirstRand, Investec, Nedbank and Standard Bank – accounting for more than 90% of retail deposits. Since the establishment of Barclays Africa 25 years ago, the sector has experienced few successful entrants, and only Capitec and Investec have managed to penetrate the industry successfully[28].

However, non-traditional players pose a threat to the traditional retail banking industry, while also presenting innovative partnership opportunities. Discovery, the health and life insurer, as one example, has intensified its efforts to enter the banking industry by applying for a banking licence to set up its new digital bank of the future. The company has a potential advantage over the traditional banks because it does not have to maintain a country-wide network of branches and ATMs, instead capturing new clients through its Vitality reward programme.

Figure 5: Competition in the South African banking sector
What is the level of intensity of the competition in the following markets, and how do you expect this to affect your competitive response?



Based on responses from 12 banks. Source: PwC's African Banking Survey 2016

Given the intensive competition in the retail banking sector, banks need to get ahead and adapt their business models. Customer expectations, technological capabilities, regulatory requirements, demographics and economics are together creating an imperative to change[29].

Attracting new customers is seen as one of the top challenges for South African banks over the next few years. Technology plays a major role in this respect. Foreign banks showed the path – in 2015, Commonwealth Bank of Australia (CBA) acquired Tyme, a South African-based technology company that designs, builds and operates digital banking ecosystems. The acquisition will give CBA new capabilities to enhance innovation. When its banking license application has been approved, CBA will be able to acquire customers from remote locations. Customers will be able to open a simple bank account over their mobile phones.

In PwC's Retail Banking 2020 report, South African banks mentioned the focus on the customer as being of paramount importance. Enhancing customer service was the top priority for banks over the next few years and attracting new customers was their top challenge. South African banks who successfully employ a customer-centric business model will gain a competitive advantage.

Unsecured lending, on the other hand, represents the lowest level of competition. Respondents envisage only minor operational and organisational change in this area. At the beginning of 2016, the government issued interest rate caps to charges on loans. Recent developments in this market showed a pullback from credit providers, who were cutting down the number of loans they offered while expanding into other products and services.

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[26] African Development Bank Group, Africa Economic Brief, 2015
[27] Banks' websites as of September 2016
[28] Centre for Competition, Regulation and Economic Development (CCRED), An overview of the prominent barriers to entry in South Africa's retail banking industry, 2016
[29] PwC Retail Banking 2020, 2014

Most successful companies – analysis by performance

The table below shows the top 25 sub-Saharan banks ranked by Tier 1 capital from The Banker's Top 1000 World Banks report. These banks come from Nigeria (8 banks), South Africa (6), Angola (3), Kenya (3), Mauritius (2), Gabon (1), Ethiopia (1), and Togo (1).

On average, sub-Saharan banks' Tier 1 capital increased by 8.4% from 2014 to 2015. The top four players – all South African banks – managed to maintain their positions, with FirstRand, Barclays Africa and Nedbank's Tier 1 capital increasing by 4.3%, 15.4%, and 7.7%, respectively, from 2014 to 2015, whereas Standard Bank's decreased by 2.6%. The other two South African players performed well above the average, as their Tier 1 capital increased by 10.5% (Investec) and 22.8% (Capitec).

Banks in Nigeria had diverse performances. In consolidated terms, the country had a deterioration in Tier 1 capital, decreasing, on average, by 3% compared to 2014 Individually, figures show variations ranging from -16.6% (Diamond) to +20.2% (Access) between 2014 and 2015.

Kenyan banks grew faster than their African peers. With an average increase of 33% in Tier 1 capital, Kenya's banks are well above the sub-Saharan African average. Equity Bank, with a Tier 1 capital change of +46.8%, had the highest growth, while Kenya Commercial Bank and Cooperative Bank of Kenya rank among the Top 5.

When looking at the Tier 1 capital adequacy ratio (CAR) and the percentage of non-performing loans (NPL), the picture changes a bit. Capitec shows the highest CAR among the African banks, at 29.9% in 2015. All other South African banks have figures below the 16.3% African average, but well above the BIS minimum of 8%. With NPL figures of 2.3% and 2.5%, FirstRand and Nedbank rank among the best compared to the other banks.

Nigeria's largest bank, Zenith Bank, realised very efficient figures for both CAR (21%) and NPL (2.2%), confirming its success in the past two years. In comparison, First Bank of Nigeria reached an 18.1% NPL ratio in 2015 – the highest ratio of the analysed banks. These results came as no surprise given the increasing impact of the oil price crash on the banking sector in Nigeria. First Bank is heavily exposed to oil operators, with almost half of its loan book consisting of oil and gas debt. Although First Bank and other financial institutions have restructured their loans since the oil price crash began, the problem is not likely to ease quickly[30].

Again, Kenyan banks rank relatively high for CAR despite their size – all banks in our ranking achieved a CAR of 14.5% or higher. Furthermore, Equity Bank ranked among the five highest for CAR on the continent in 2015 (18.7%).

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[30] Financial Times, Nigeria's First Bank reports 82% drop in profits, 2016

Figure 34: Top sub-Saharan banks ranked by Tier 1 capital

Bank		***Country***	***Tier 1 Capital***		***Tier 1 Capital Adequacy Ratio (CAR)***		***Non-Performing Loan (NPL) ratio***	
			2015 - USD mn	***% change 2014[31]***	***2015 - %***	***2014 - %***	***2015 - %***	***2014 - %***
1	***Standard Bank***	South Africa	7,475	-2.6	13.3	12.9	3.2	3.2
2	***FirstRand***	South Africa	7,177	+4.3	14.6	14.1	2.3	2.3
3	***Barclays Africa***	South Africa	5,277	+15.4	12.6	12.7	n.a.	n.a.
4	***Nedbank Group***	South Africa	3,864	+7.7	12.0	12.5	2.5	2.5
5	***Ecobank Transnational***	Togo	3,100	+13.8	20.5	18.3	8.2	4.4
6	***Zenith Bank***	Nigeria	2,837	-2.2	21.0	20.0	2.2	1.8
7	***Investec South Africa***	South Africa	2,236	+10.5	11.4	10.8	n.a	n.a
8	***First Bank of Nigeria***	Nigeria	2,036	-4.6	13.3	12.3	18.1	2.9
9	***Guaranty Trust Bank***	Nigeria	1,673	+2.3	18.0	17.5	3.2	3.2
10	***Access Bank***	Nigeria	1,536	+20.2	15.0	14.0	1.7	2.2
11	***MCB Group***	Mauritius	1,018	+9.3	13.3	14.5	6.2	7.3
12	***United Bank for Africa***	Nigeria	1,004	-3.8	16.0	13.0	1.7	1.6
13	***Banco de Poupanca e Credito***	Angola	940	+36.2	n.a.	n.a.	n.a	7.3
14	***Diamond Bank***	Nigeria	912	-16.6	16.3	17.5	6.9	5.1
15	***Capitec Bank Holdings***	South Africa	822	+22.8	29.9	31.1	5.6	5.4
16	***Banco Angolano de Investimentos***	Angola	750	+32.9	n.a.	n.a.	9.8	10.5
17	***Fidelity Bank***	Nigeria	729	-10.8	14.0	18.0	4.4	4.4
18	***Kenya Commercial Bank***	Kenya	717	+26.8	15.7	15.6	6.6	6.3
19	***Equity Bank***	Kenya	655	+46.8	18.7	18.9	n.a	n.a
20	***First City Monument Bank***	Nigeria	606	-11.2	14.0	16.0	4.2	3.6
21	***BGFIBank***	Gabon	595	+1.9	n.a.	n.a.	n.a	n.a
22	***Banco BIC***	Angola	551	+5.3	n.a.	n.a.	7.2	n.a
23	***CBE***	Ethiopia	518	0.0	n.a.	n.a.	n.a	n.a
24	***State Bank of Mauritius***	Mauritius	509	-19.5	21.7	25.7	5.1	2.0
25	***Cooperative Bank of Kenya***	Kenya	459	+25.5	14.5	14.6	3.4	4.1
	Average		***1,920***	***+8.4***	***16.3***	***16.5***	***5.4***	***4.2***

Source: PwC analysis based on The Banker and companies' annual statements

Tier 1 Capital – As defined by the latest BIS guidelines, includes loss-absorbing capital that is common stock, disclosed reserves, retained earnings and minority interests in the equity of subsidiaries. It excludes cumulative preference shares, hidden reserves, subordinated debt and long-term debt.

Tier 1 Capital Adequacy Ratio – As defined by the latest BIS guidelines, the minimum is set at 8%.

NPL ratio – Refers to total non-performing loans as a percentage of gross total loans. The Banker's definition of non-performing loans is based on loans with outstanding payments of more than 90 days, plus all non-accrual loans. These are calculated on a year-on-year basis only.

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[31] Note: % change based on local currency

Most successful companies – Peer review

Similar to our 2013 survey, we asked participants for their opinions on who they thought were the top three financial institutions in terms of performance, momentum, presence and other factors for the wholesale and retail markets. Since performance might not always mirror perceptions in the market, we value how peers view each other in the South African financial sector. The table below shows a comparison of the top performers in each category, capturing peer perceptions collected between 2007 and 2016 Please note that in this survey, we have introduced a few new categories, including 'Markets: Credit trading, equity structuring, debt structuring, prime broking', 'Acquisition and leverage finance' and 'Resources finance' in wholesale markets; and 'Lending, deposit taking and transactional banking', 'Electronic banking – Retail internet/online offering', 'Insurance', and 'Asset management' in retail markets. These new categories also follow 'Business banking: Lending, deposit taking and transactional banking' (wholesale), 'Credit cards' and 'Personal loans' (retail), which were first introduced in our 2013 survey.

Figure 35: Peer review

Can you rank the top financial services companies in terms of success (performance, presence, momentum, etc.) in the following markets?

Wholesale	*2016*	*2013*	*2011*	*2009*	*2007*
Business banking - Lending, deposit taking, and transactional banking	Standard Bank	Standard Bank			
Corporate banking - Trade and working capital	Standard Bank	Standard Bank	Standard Bank	Standard Bank	Standard Bank
Corporate banking - Transactional services	Standard Bank	Standard Bank	Standard Bank	Standard Bank	Standard Bank
Corporate banking - Electronic banking, wholesale internet/online offering	Standard Bank	Standard Bank			
Markets - Foreign Exchange trading	Standard Bank	Standard Bank	Standard Bank	Standard Bank	Standard Bank
Markets – Rates trading	Standard Bank	FirstRand (RMB)	Standard Bank	Standard Bank	
Markets – Equities trading	Standard Bank	FirstRand (RMB Morgan Stanley)	FirstRand (RMB Morgan Stanley)	Standard Bank	
Markets – Commodities trading	Standard Bank	Standard Bank	Standard Bank	Standard Bank	
Markets – Credit trading	Standard Bank	*			
Markets - Equity Structuring	FirstRand (RMB)	*			
Markets - Debt Structuring	FirstRand (RMB)	*			
Investment Banking - Equity Capital Markets	FirstRand (RMB)	*			
Investment Banking - Debt Capital Markets	Standard Bank	*			
Investment Banking - Mergers & Acquisitions	FirstRand (RMB)	FirstRand (RMB)	Deutsche Bank	FirstRand (RMB)	FirstRand (RMB)
Investment Banking - Project & Infrastructure Finance	Standard Bank	Standard Bank			
Investment Banking - Acquisition & Leverage Finance	Standard Bank	*			
Investment Banking - Resources Finance	Standard Bank	*			

* New category in the current year.

Source: PwC's African Banking Survey 2016

Figure 36: Peer review
Can you rank the top financial services companies in terms of success (performance, presence, momentum, etc.) in the following markets?

Retail	2016	2013	2011	2009	2007
Lending, deposit taking and transactional banking	FirstRand (FNB)	*			
Home Loans	Standard Bank	Standard Bank	Barclays Africa	Barclays Africa	Barclays Africa
Vehicle & Asset Finance	FirstRand (WesBank)	FirstRand (WesBank)	FirstRand (WesBank)	FirstRand (WesBank)	FirstRand (WesBank)
Credit Cards	Standard Bank	Standard Bank			
Personal Loans	Capitec & FirstRand (FNB)	Standard Bank			
Micro Lending	Capitec	Capitec	Capitec	African Bank	African Bank
Wealth (Private Banking)	Investec	Investec	Investec	Investec	Investec
Stockbroking - Retail	Standard Bank	Standard Bank	Standard Bank	Standard Bank	Investec
Electronic banking – Retail internet/online offering	FirstRand (FNB)	FirstRand (FNB)	FirstRand (FNB)	Standard Bank	Barclays Africa/ Standard Bank
Insurance	Barclays Africa	*			
Asset Management	Coronation & Allan Gray	*			

* New category in the current year.

Source: PwC's African Banking Survey 2016

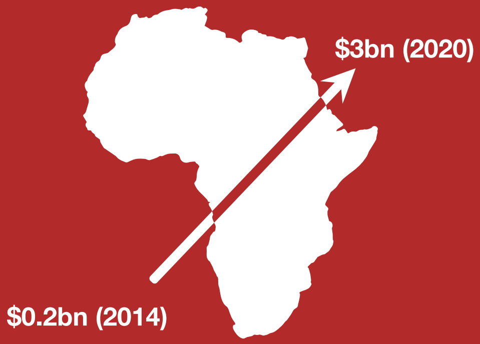
Part four

New entrants & innovation

In a growing industry with new entrants and innovations emerging, there are several opportunities to redefine the sector. Ultimately, financial technology companies, or FinTechs, can be seen as either a threat or an opportunity for the traditional banking system. Already, we see incumbent banks trying to implement new solutions in their service offering and internal processes. However, some obstacles are impeding institutions from implementing new developments.

Main findings

- Domestic South African banks believe that FinTech is posing a substantial threat to their business.
- Even though FinTech remains a small market in Africa, investments are expected to rise significantly by 2020.



- Nearly half of global bank CEOs are engaging or considering to engage with start-ups through partnerships.
- Operational constraints are the main obstacle to innovation within banks– largely because of legacy IT infrastructure.
- Talent constraints are a major obstacle to the implementation of big data – attracting people with the right IT skillset is not just about rewards but also about corporate culture.

Threats from technology companies

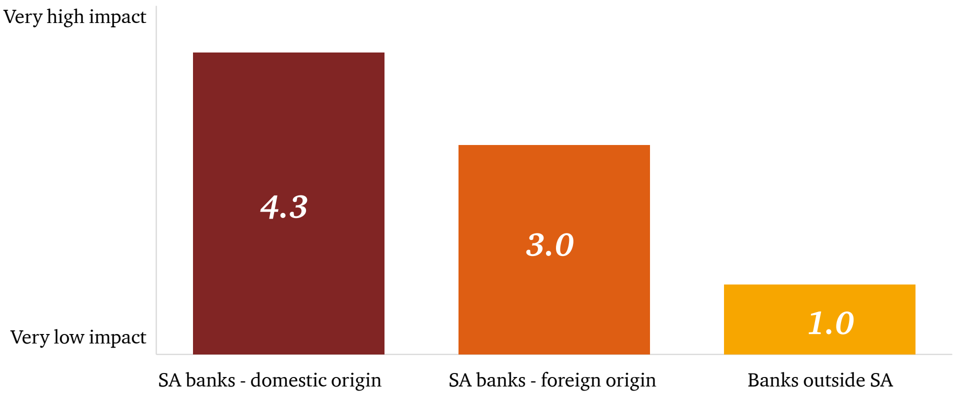
The banking industry has enjoyed an extended period without threats from outside competitors. However, this period looks to be coming to an end. Large technology companies are gaining traction in financial services, as illustrated by the launch of payment services and digital wallets from the likes of Apple and Amazon. Established tech companies such as Amazon, Alibaba and Google have high-end IT infrastructures, platform business models and large customer bases that they can use to compete with traditional financial institutions. With technology companies and start-ups leading the way in presenting new innovative ideas to the market, the banking industry is also evolving towards more cost-efficient and customer-centric operations.

Our survey suggests that in Africa the following perceptions are held:

- Domestic South African banks believe that FinTech is posing a substantial threat to their business, as new entrants bring more innovative, efficient and cost-effective solutions.
- Foreign banks operating in South Africa believe that FinTech is an important business disrupter, but to a lesser extent than the South African banks of domestic origin. These banks mainly operate a CIB division in South Africa. A study released by PwC[32] shows that corporate and investment banking is less likely to be disrupted by FinTechs than other banking segments in the near future, hence these banks are less worried about new entrants.
- Banks operating in Kenya and Nigeria do not see FinTech as a significant threat to their business. This is largely because they operate in a banking sector that is already used to the likes of M-Pesa, the Safaricom payment platform.

Figure 32: Threats from technology companies

Do you consider the threat from technology companies entering the financial services arena (such as Google wallet, Apple Pay, Paypal, Amazon Payment) to be a significant threat to your business activities? (From 1 – very low impact to 5, very significant impact)



Based on responses from 14 banks. Source: PwC's African Banking Survey 2016

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[32] PwC's Global FinTech Survey 2016 collected the views of CEOs, COOs and CIOs of top financial institutions and companies participating in technology and digital transformation of the FS sector in 46 countries.

Impact of FinTech on the African banking industry

In our effort to understand the technology-driven transformation of the financial services industry, we take a closer look at the impact of FinTech developments on the African continent.

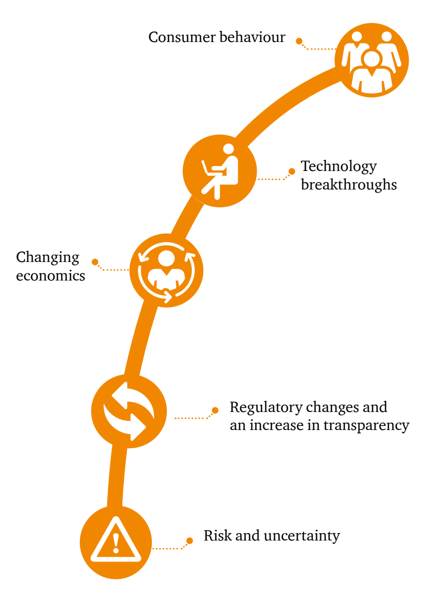
Research shows that, even though FinTech in Africa remains a small market, investments will rise from USD 200mn in 2014 to USD 3bn by 2020[33]. This sustained growth explains why 83% of the African banking incumbents we surveyed believe that part of their business is at risk of being lost to standalone FinTech companies[34].

The African continent is regarded as particularly fertile for technology-driven innovation because of its characteristics. First of all, three-quarters of the African population remain unbanked, which creates opportunities to serve this population in a different way from banking incumbents. The rise of an 'African middle class' from this unbanked population results in 30 to 50 million new banking relationships per year. Moreover, the geographical setting of the continent makes it difficult for incumbent banks to serve unbanked customers with traditional products and channels. The rapid adoption of mobile phones also fosters the rise of FinTech solutions, as exemplified by the exceptional success of Kenya's M-Pesa.

But why would FinTech firms take over traditional banks with centuries of experience and expertise? Our interviewees believe that the advantages FinTech companies have derive from their genuine customer-centric approach; their agility, whether in terms of culture or in terms of IT systems; and their technology expertise. This makes disruptors readily able to impact the banking industry in several areas. CEOs in our global FinTech survey identified six areas in which they expect the most important impacts on their institutions from FinTech:

- Meeting changing customer needs with new offerings
- Leveraging existing data and analytics
- Enhancing interactions and building trusted relationships
- Enhancing the business with sophisticated operational capabilities
- Efficiently leveraging ecosystem and market resources
- Adopting new approaches to underwrite risk and predict losses.

Five converging factors are contributing to accelerated FinTech growth:



Nonetheless, traditional banks are not out of the game yet. Their risk and regulatory expertise, complemented by their scale and trusted brands, gives them a significant advantage that incumbent banks can leverage on to remain ahead of new entrants. Rather than seeing FinTech companies and banking incumbents as irreconcilable enemies, they can be seen as being complementary. The strengths of FinTech firms are the weaknesses of traditional banks and vice versa. The emergence of start-up incubators and accelerators, set up by banks to investigate the spectrum of FinTech possibilities, confirms their compatibility.

Consequently, 46% of global bank CEOs are engaging or considering to engage with start-ups[35]. These partnerships may lead to a modular banking model in which consumers would access financial services through platforms incorporating products and services from different organisations. It remains highly uncertain which banks or FinTech companies will play which role, though.

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[33] Five Banking Innovations from Five Continents, MarketResearch.com

[34] PwC South Africa's Survey of start-ups and banking incumbents in Africa, 2016

[35] PwC's 19th Annual Global CEO Survey

Three possible scenarios of change

As banks take up the transformation challenge posed by FinTech, different scenarios may emerge. In our report titled The future shape of banking in Europe, we take a 2025 horizon to describe how the European financial industry may transform in response to advances in technology, changes in stakeholder attitudes and expectations, and the global regulatory reform agenda.

These scenarios are relevant for Africa, too, albeit perhaps with a different timeframe:

1. The pace of technology transformation remains as it currently is. Banks gradually adapt and consolidate, but not fast enough to prevent challengers from taking a sizeable (e.g. 20%) and permanent share of the market.

2. The pace of technology transformation quickens, and a tipping point is reached beyond which the challengers become the new incumbents. The present incumbents either fade away or are reduced to playing a utility role. In this situation, they would continue to lend money out to individuals on one side and business borrowers on the other side. A substantial proportion of saving and investment flows, and a host of auxiliary products and services, would by-pass the regulated sector to be handled instead by a new breed of incumbents who have seized their opportunities.

3. In a third scenario, incumbents and challengers are not locked in seemingly permanent combat. Rather, they form a more accommodating and symbiotic relationship within a new banking ecosystem, under which the terms incumbents and challengers cease to have meaning. Under this more optimistic scenario, the banking industry – together with other financial services and technology sectors – moves on from scrapping over who gets what share of the payments, deposits, loans and securities markets. Instead, it addresses itself collectively to customer service innovation and solving contemporary challenges such as financial exclusion, under-funding of lifetime financial security, and under-investment in new infrastructure and productive capacity.

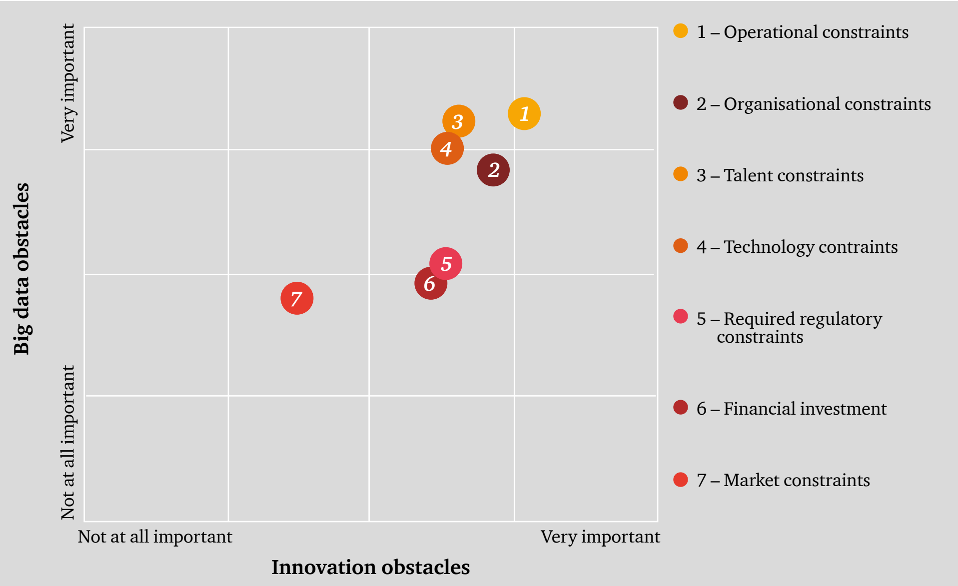
Obstacles to innovation

Our survey reveals that operational constraints weigh heavily on innovation. This is unsurprising, since innovation requires a high level of flexibility whereas banks have strict and standardised procedures. Technology constraints are also viewed as a major obstacle to innovation, since the legacy systems of banks hinder the implementation of big data within these organisations. Legacy systems are IT infrastructures inherited from a bank's past activities, regardless of whether they merged with other institutions or simply piled up different IT systems. As a result, legacy systems are complex, and most of the time they do not leave much room for innovation. The cost to implement an embedded IT infrastructure or any embedded system at all hinders innovation in banks, while this is something that technology companies have implemented since the beginning.

Organisational constraints also impede innovation. This is due to the fact that the highly hierarchical banking environment is a far cry from a typical innovative company with its flat organisational structure to foster collaboration among employees.

Talent constraints are an important obstacle to the implementation of big data, in large part due to the difficulty in hiring and retaining highly skilled IT employees with experience in big data. This result came as a surprise, since CEOs believe that overall key skills and management incentives are not pressing issues (cf. Appendix 2). Nonetheless, our interviewees mentioned the fact that hiring people with the relevant skillset was not just about technology or rewards but mainly about culture. In fact, these banks have seen employees leaving them for higher salaries and coming back because they did not like the culture of their new employer. Our interviewees have also seen talent leaving South Africa, especially young people, to go to the UK, Canada or Australia.

Figure 38: Obstacles to innovation
What are the obstacles to: Fostering innovation? Obtaining an information advantage from big data? (From 1 - Not at all important to 5 - Very important)



Based on responses from 13 banks. Source: PwC's African Banking Survey 2016

Implementing innovations

Innovation costs

Domestic South African banks plan to dedicate 4.1% of their total costs to innovation within the next three to five years, the highest percentage among the analysed groups. Foreign banks operating in South Africa will spend 3.5% of their total costs on initiatives related to innovation. The banks outside South Africa lag behind the other two groups, with an intention to dedicate only 2.5% within the next three to five years.

Client-focused innovation

The most consensual strategy to build client-focused innovation capabilities relies on hiring new talent, since 100% of surveyed banks plan to do so. 75% of the survey participants plan to encourage a culture that will lead to organic innovation within the organisation, and 58% of the surveyed banks plan to change their incentive structure in order to drive innovation across all of the organisation's levels. Thus, our respondents intend to be better prepared for client-focused innovation by focusing on the human capital dimension, bringing in new talent with an appropriate incentive structure and moving towards a more innovative culture.

Only 17% of our survey participants plan to adopt a venture capital model. This strategy represents a more structural way to be better prepared for client-focused innovation. Although possibly more costly and risky, this strategy saves time, as the acquired companies may already have the right people, culture and incentive scheme, as well as the advantage of already being innovative.

Innovation labs

In further addressing how to be more innovative, more and more banks may choose to set up their own innovation labs as is common practice in other industries, especially in the ICT industry.

The majority (67%) of the surveyed domestic South African banks have already set up their own innovation labs. These institutions have a greater incentive to establish such initiatives and will benefit to a greater extent from innovating, since innovation is expected to have the largest impact on the consumer banking segment.

Half of the foreign banks operating in South Africa have also established their own innovation labs, with another 25% planning to establish such labs in the short to medium terms.

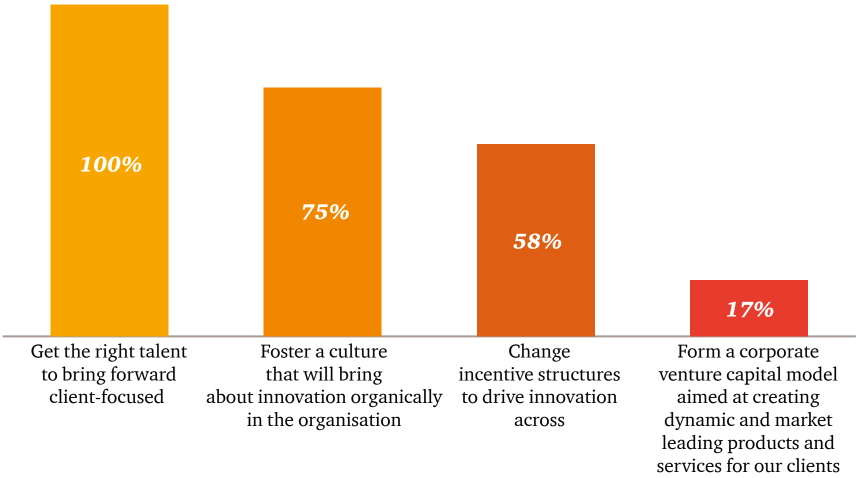
Although banks operating in Kenya and Nigeria have considered implementing innovation labs, they have decided not to go through with it. These banks may feel they have not yet reached the critical size to make it worthwhile to set up an innovation lab. In the meantime, they rely on external innovation.

Figures 39, 40 and 41: Implementing innovation

As a percentage of your total costs, what are you planning to spend on your initiatives related to innovation in the next 3 to 5 years?

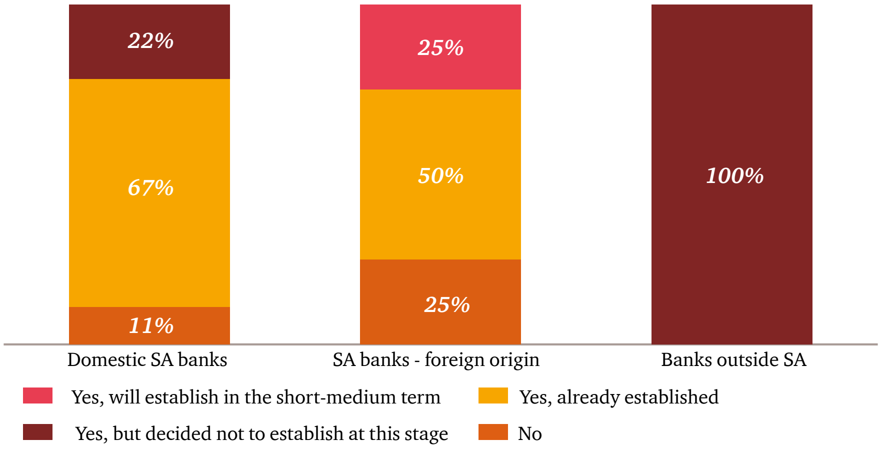
Innovation cost as a % of total costs. Based on responses from 14 banks.
Source: PwC's African Banking Survey 2016

What do you plan to do to be better prepared for client-focused innovations?



Multiple choice, % of respondents. Based on responses from 14 banks.
Source: PwC's African Banking Survey 2016

Has your organisation thought about setting up an innovation lab, similar to other industries (Google, Apple, etc.)?



% of respondents. Based on responses from 14 banks.
Source: PwC's African Banking Survey 2016

Use of big data across the organisation

The financial institutions we surveyed are well aware of the advantages that technology and big data can bring to their organisations. Indeed, most of the banks currently use or plan to use big data and technology in front-, middle- and back-office functions as well as across the organisation for various purposes. Banks who rapidly adopt new technologies will gain the first-mover advantage, whereas those who have the most conservative positions regarding technology will begin to lag behind.

Across institution

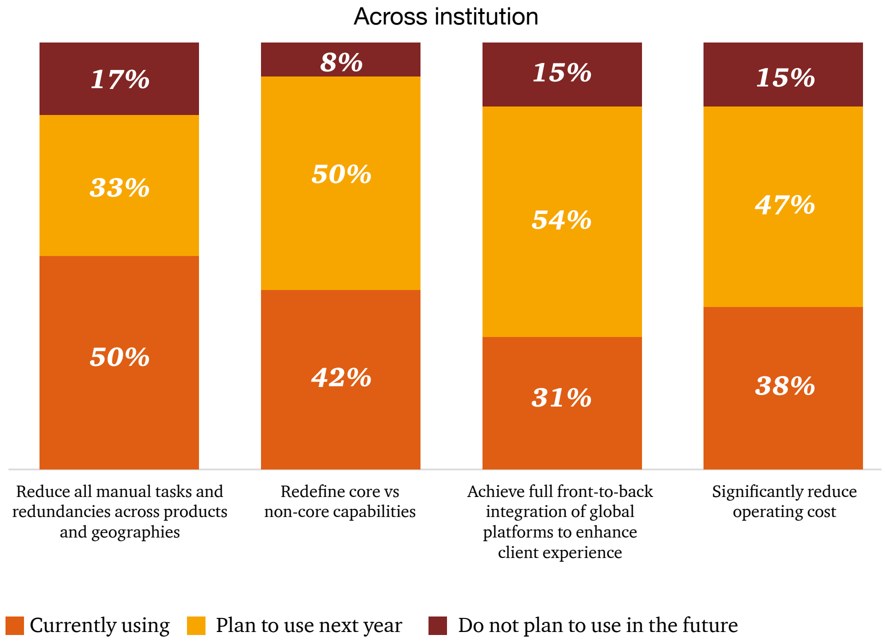
50% of the survey participants have already adopted technology and big data to reduce all manual tasks and redundancies. Futhermore, 31% of respondents have achieved full front-to-back integration of global platforms.

On the operational side, 42% of respondents have redefined core vs non-core capabilities. And 38% have significantly reduced their operational costs through the use of technology and big data.

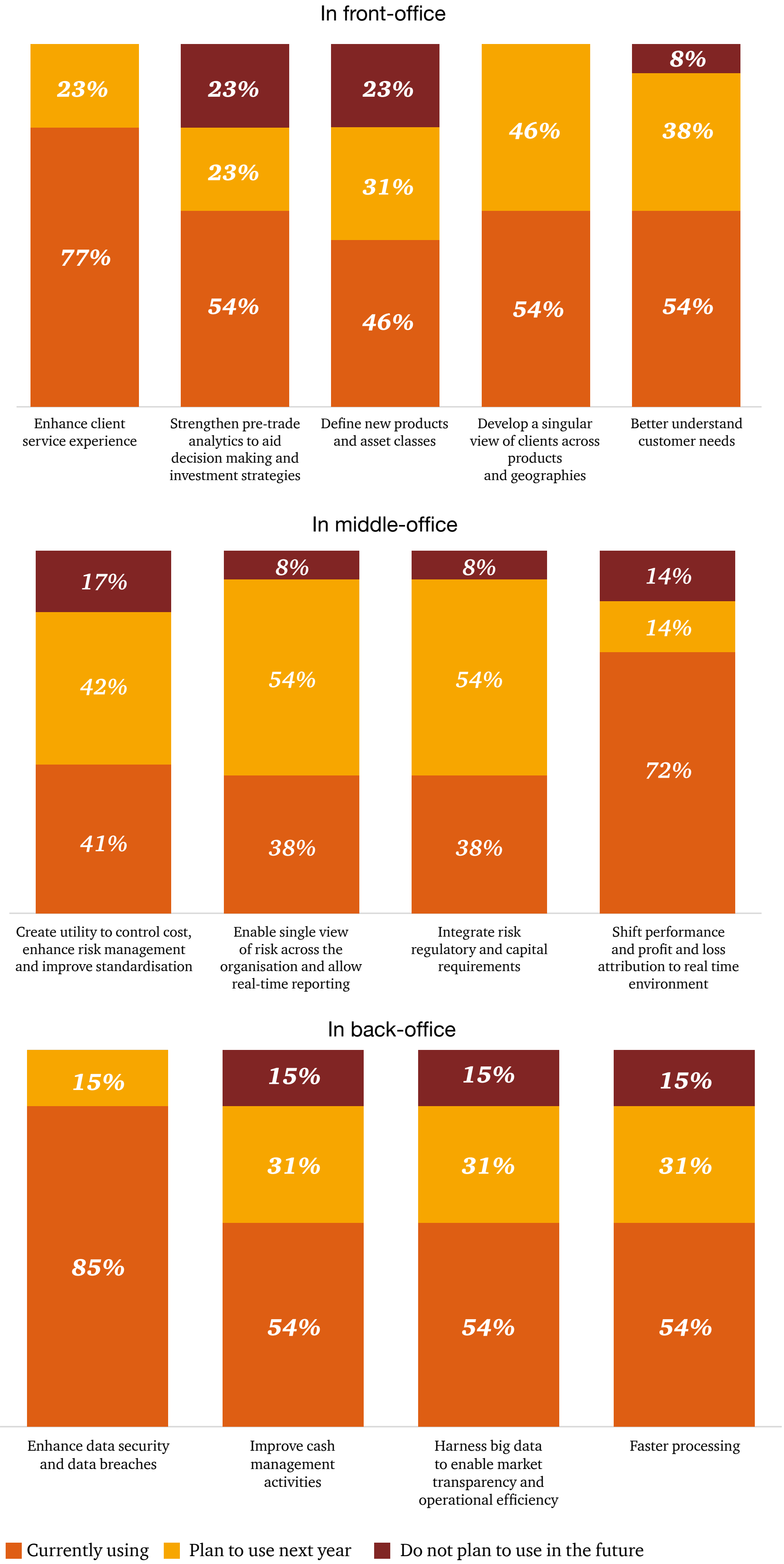
Unsurprisingly, banks are less advanced in their current implementation of technology and big data across the organisation as it represents a greater challenge than in one function or another.

Figure 42: Use of technology and big data across institution, in front-, middle- and back-office functions

How are you currently using/planning to use technology and big data in front-, middle- and back-office functions as well as across the institution?



Based on responses from 13 banks. Source: PwC's African Banking Survey 2016



Based on responses from 13 banks. Source: PwC's African Banking Survey 2016

In front-office functions

Regarding front-office use, survey participants largely agree that technology is crucial to enhancing client service experience and currently use or plan to use technology and big data to do so. Customers expect financial institutions to remain up to speed with the technological innovations offered by non-financial service providers. Therefore new banking offerings, especially in the field of payments, need to be quick, intuitive and secure. However, banks from Kenya and Nigeria have no plan to use big data to define new products or asset classes, or to better understand customer needs.

In middle-office functions

41% of our respondents already use big data to enhance risk management, control costs and improve standardisation, and another 42% of the participants plan to use big data and technology next year for these applications. On the opposite side, 17% of participants do not plan to use big data for cost-controlling, risk-management and standardisation purposes. These are banks operating in Kenya and Nigeria or banks of foreign origin operating in South Africa.

The shift of performance and profit and loss attribution to a real-time environment is also an important trend as 72% of the surveyed participants currently use big data and technology to that effect.

In back-office functions

All surveyed banks use or plan to use technology to enhance data security and prevent data breaches. This is unsurprising since South Africa has the third-highest number of cybercrime victims worldwide[36].

85% of the participants either use or plan to use technology and big data next year for cash management activities, faster processes, enhancing market transparency and operational efficiency. Back-office functions account for a large part of staff expenses, and, as such, are targeted by cost-cutting plans through the implementation of new automation solutions. In fact, back-offices are crowded by thousands of people and the high level of manual processes makes the entire organisation slower. Automating as much as possible will reduce costs and errors.

Leveraging on big data

Big data has become one of the hottest topics in innovation as it enables organisations to leverage huge amounts of data and to turn it into actionable insights. The African banking industry is addressing this area of innovation with different levels of intensity, depending on the application.

Different ways to gain an information advantage

In order to gain an information advantage, 92% of our respondents plan to invest in big data analytics across all products and regions. This information advantage will be particularly important in effecting the move towards a more customer-centric approach.

Big data solutions will also be implemented to better target risk by 83% of our respondents. As detailed earlier on, technology and big data are or will be used to enhance risk management and create a single view of risks across the organisation.

83% of our participants also plan to use big data to reconcile structured with unstructured data sources. In their endeavour to gain an information advantage, 73% of our respondents intend to fill the gaps in data sources by purchasing data, or to contract with third parties to manage big data analytics.

Big data will also be used by 67% of the surveyed institutions to harness non-traditional data sources such as social media or blogs in order to gain market and customer insights.

Promoting cross-selling with big data

Domestic South African banks and foreign banks operating in South Africa do not believe they are using available data to promote cross-selling opportunities as optimally as possible. Some of our interviewees indicated that they were taking the step forward, implementing new analytical systems and investing in resources and technology to improve the accessibility of data, especially client data. Other interviewees have adopted a more conservative wait-and-see approach.

Investments in big data

Domestic South African banks and foreign banks operating in South Africa invest 6.6% and 6% of their total technology investments in big data developments, respectively, whereas banks operating in Kenya and Nigeria allocate only 4% of their technology budget to big data investments.

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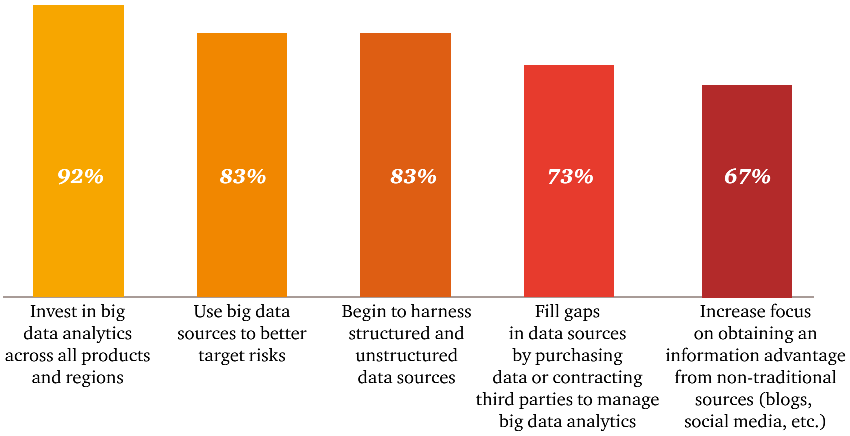
[36] The Banking Association South Africa, Banker SA, 2016.

In the future, banks using big data effectively will be able to differentiate themselves and capture new clients while laggards will rapidly loose market shares. As noted in our report Retail Banking 2020, we are in the middle of a technology revolution that will drive huge shifts in industry value. This multiwave revolution started with 'digital' transformations where banks focused on optimising current products and services. The second wave will be focused on 'big data' where enhanced data capture and analysis will drive targeted offerings and improved services. Advances in security and verification will enable all aspects of sales, service and delivery to be conducted online. Customers will ask for intelligent proactive advice from their bank using data collected cross-channels. This will lead banks and their partners to develop sophisticated profiles on each of their customers, effectively leveraging on big data.

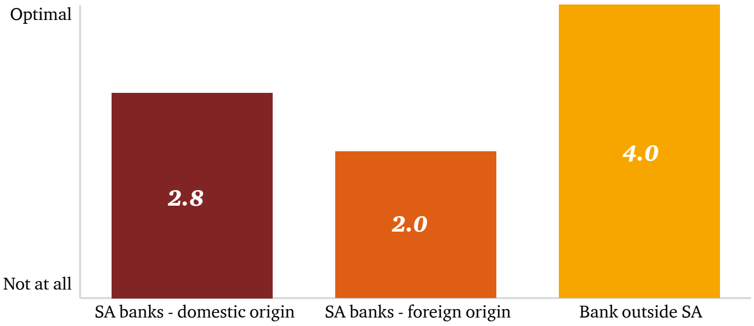
Figures 43, 44, 45: Big data uses and investments

Which of the following do you plan to pursue to gain an information advantage using big data?



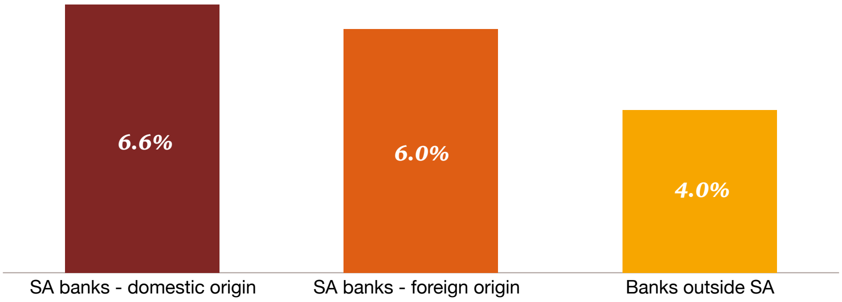
Multiple choice, % of respondents. Based on responses from 12 banks.
Source: PwC's African Banking Survey 2016

Do you believe that your organisation is currently using available data in the optimal way to promote cross-selling opportunities? (From 1 – Not at all to 5 – Optimal)



Based on responses from 12 banks.
Source: PwC's African Banking Survey 2016

How much are you investing in big data capability relative to total investment in technology?



Big data investments as a % of total investments in technology. Based on responses from 11 banks.
Source: PwC's African Banking Survey 2016

Part five

Risks and regulation

Regulators have not deviated from the agenda they have been on since the crisis: ending too-big-to-fail. The resulting global regulatory agenda is ambitious while complex, and its application in emerging markets leads to a series of challenges for those entities being regulated. While respondents agree that risks need to be better addressed and ethical standards need to be raised, the increasing cost of regulation is a pervasive concern.

Main findings

- Credit risk is considered the leading cause for losses by our respondents. In Kenya and Nigeria, fraud risk is the second cause of losses and clearly a major concern for our respondents.
- The impact of the global regulatory agenda remains uncertain; CEOs are worried that their long-term strategic objectives will be derailed by short-term regulatory requirements and timelines.
- The misaligned speed of regulatory change across Africa is a concern for the majority of respondents.
- IFRS9 will pose the biggest regulatory challenge to financial organisations; CROs also expect formalised stress testing and asset quality reviews to become a more prominent prudential supervisory tool in their home countries.
- Banks intend to hold capital buffers in addition to those under Basel III; some banks are willing to hold up to 1.6% of additional capital in an effort to build trust with their stakeholders.

Operating in a risky environment

With growth come risks, spanning *credit risk*, such as defaulting loans; *operational risks*, such as inadequate or failed internal processes, people or systems; and *external risks*, such as deteriorating market conditions or currencies. We asked respondents to indicate which ones led to the most significant losses.

Despite there being different risk perceptions among banks depending on their origin, **credit risk** is considered the number one area that can potentially give rise to the most significant losses. This is due to a number of reasons, including global and local macroenonomic concerns, low commodity prices and the fact that interest rates in developing economies usually follow the broad trajectory of US interest rates – these being likely to increase in the future. This will in turn translate into higher bank lending rates and costlier credit, which may create difficulties for creditors to repay in time or in full and thus lead to credit default on banks' balance sheets.

Compliance is perceived as a significant risk area by banks operating in South Africa. As our report demonstrates, South Africa is advanced in its implementation of global regulatory standards. Therefore, compliance weighs as heavily on banks operating in South Africa as on banks operating in Western countries and constitutes a significant cost area.

Fraud risk is a major concern in Kenya and Nigeria, but also in South Africa. The number of attempted fraud cases in Nigeria jumped astronomically from 1,461 in 2014 to 10,743 in 2015. However, the Central Bank of Nigeria has helped curb the incidence of fraud in banking transactions, in particular identity theft, by deploying new payment systems such as biometric verification numbers (BVN) for bank customers and the treasury single account (TSA). As a result, the actual losses due to fraud in bank transactions dropped from N6.2 billion in 2014 to about N2.3 billion in 2015[37].

Access to liquidity is a problem for foreign banks operating in South Africa. This is due to a mismatch between the funding that they often obtain from the parent company in foreign currency, and their revenues generated in local currency. As the rand is depreciating, revenues are shrinking in dollar terms and mother companies are more reluctant to inject liquidity to fund operations in South Africa.

Cybersecurity, or the risk attached to information and data security, is an important issue for bankers. When conducting face-to-face interviews with CEOs, we found this to be a major cause for concern due to its growing prevalence throughout the banking industry. Subsequent to our survey, Standard Bank was the victim of a major cyberattack involving the theft of credit card data for use in an elaborate scheme carried out in Japan, making this risk even more prominent.

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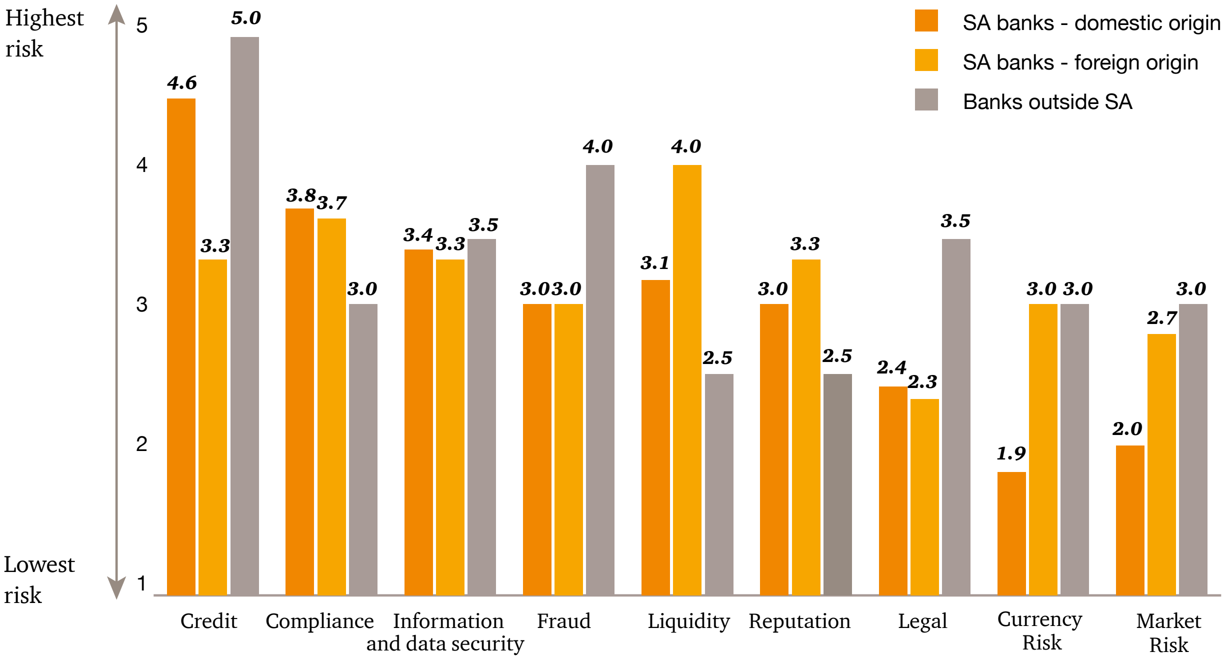
[37] Dipo Fatokun, Director of the Banking and Payments System Department, Central Bank of Nigeria

Figure 46: Risks areas

In the context of risks impacting the banking industry, can you estimate the areas giving rise to the most significant losses? (From 1 – Lowest risk to 5 – Highest risk)



Average rating. Based on responses from 13 banks. Source: PwC's African Banking Survey 2016

In responding to the survey, the vast majority of banks confirmed that they have detailed cybersecurity frameworks in place which focus on prevention as much as on recovery or 'cyber-resilience'. Bankers also believe that there is an opportunity for the industry to collaborate on cybersecurity, with some wanting to see the sharing of best practices while others would be willing to share information on attacks. However, there would have to be an independent third party to coordinate efforts and collect and report on issues on an industry-wide basis in order to ensure that accuracy and privacy standards are maintained.

On a domestic level, South Africa's operationalisation of the National Cyber Security Hub will contribute to enhanced coordination and industry unification, while in Nigeria, the industry is currently leveraging on the NIBSS[38] platform to address fraud risks. This also raises the possibility of sharing information between the banking industry and the government in order to ensure there are judiciary consequences for the cybercriminals.

The global regulatory reform agenda

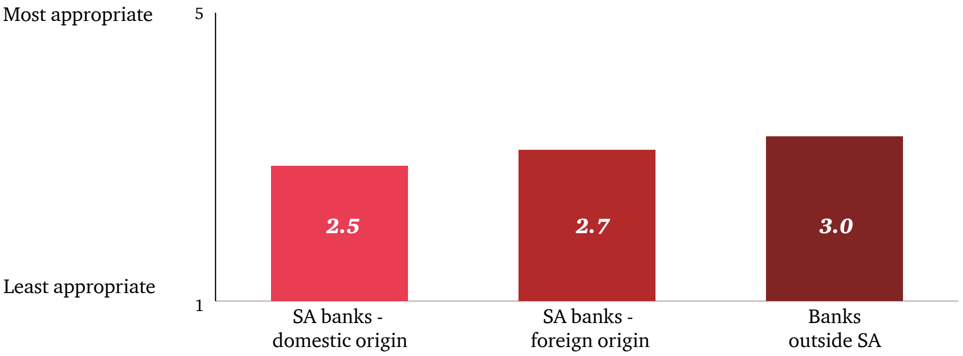
The objectives of global regulatory reform are, firstly, to make the financial system and infrastructure more robust; and, secondly, to make institutions more resilient and responsible. These objectives create added cost and uncertainty for banks. Global regulatory reform will have both financial and operational consequences. Financially, stricter capital requirements will have a direct impact on capital, liquidity and funding; operationally, new compliance requirements (AML, KYC, TCF[39]) will force banks to hire more people and develop new processes.

There is uncertainty as to whether the reform will take into account the differences between players from emerging and advanced economies, notably when it comes to risk experiences and financial stability. Our survey participants also expressed concern on this point in their responses. The most worried banks are the domestic South African banks, due to the fact that they are more exposed to international markets and subject to international comparisons with their peers from developed economies.

Another major concern for banks operating in Africa is the absence of a level regulatory playing field. The large majority of respondents are concerned about the misaligned speed of regulatory change in Africa, whereas the banks that are not worried about this are mainly specialised players with a clear focus on South Africa.

Figure 47 : The regulatory reform agenda

Do you believe that the global regulatory reform agenda is appropriately calibrated towards distinguishing between the risk experiences and financial stability of emerging and advanced economies? (From 1 – Least appropriate to 5 – Most appropriate)



Average rating. Based on responses from 13 banks. Source: PwC's African Banking Survey 2016.

Bankers' main concern is that the regulatory agenda will have adverse consequences, with their banks' long-term strategic agendas being derailed by short-term compliance requirements. They also believe that large global banks are becoming less profitable due to the added layers of capital requirements in every jurisdiction where they operate, although these issues apply to all banks around the world. However, for banks in emerging economies, one other major worry of the past five years has been the calibration of the global regulatory reform.

As the map below illustrates, South Africa already started implementing Basel III from 1 January 2013 with a gradual roll-out until 2019. Other countries have implemented Basel II while the large majority are still in a transition state. For those banks operating in different countries, the misalignment is likely to create operational issues.

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[38] Nigeria Inter-Bank Settlement System

[39] Anti-Money Laundering, Know Your Customers, Treating Customers Fairly

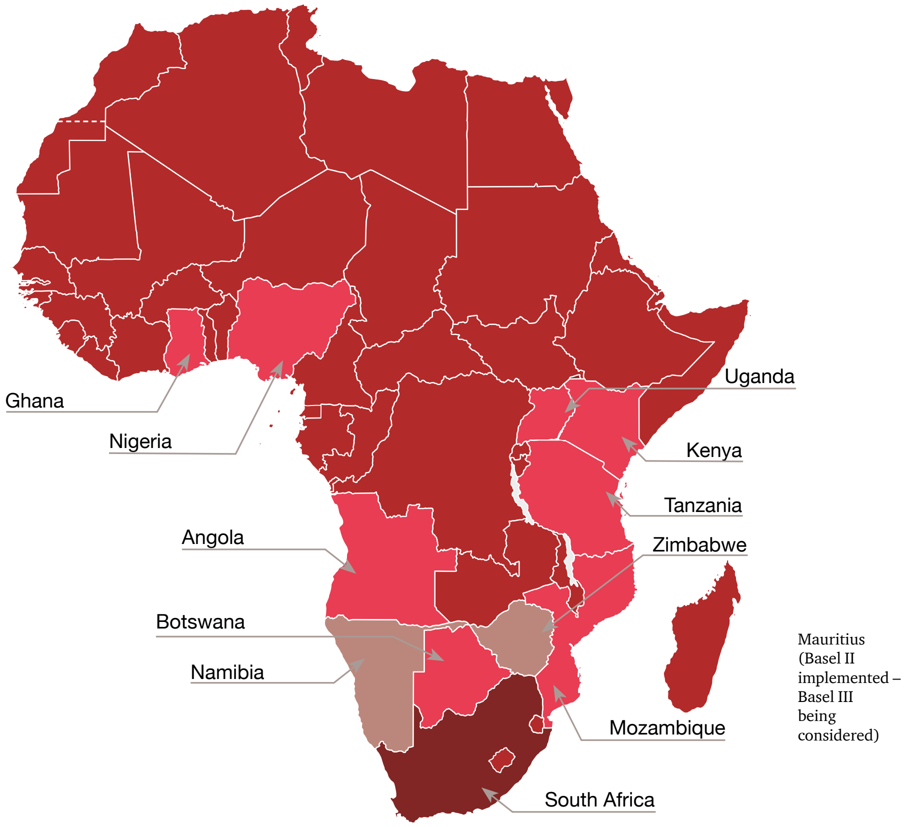
Over recent years, the banking and financial landscape in sub-Saharan Africa has dramatically changed. Financial liberalisation, institutional and regulatory reforms and, more recently, the expansion of cross-border banking activities with the rapid development of pan-African banking group networks have all contributed to this change.

Both the IMF and the World Bank have recently issued reports[40] on the regulatory challenges associated with the rise of cross-border banking in Africa, as well as the expected benefits of closer financial integration in terms of financial deepening and increased outreach to previously unbanked parts of the population. African countries with the largest foothold in foreign banking sectors are, in decreasing order, South Africa, Nigeria, Togo and Kenya[41].

Figure 48: Speed of regulatory changes across Africa
Is the misaligned speed of regulatory change across Africa a significant concern?

% of respondents. Based on responses from 12 banks. Source: PwC's African Banking Survey 2016.

Figure 49: Status of banking regulatory regimes across Africa



Source: PwC

- Basel II implemented
- Basel II/III being considered
- Basel III – 1 Jan 13
- Transition plan/date unknow

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[40] IMF, Evolving Banking Trends in Sub-Saharan Africa, September 2015 ; The World Bank, Making Cross-Border Banking Work for Africa, 2014

[41] IMF, Bank Ownership Database

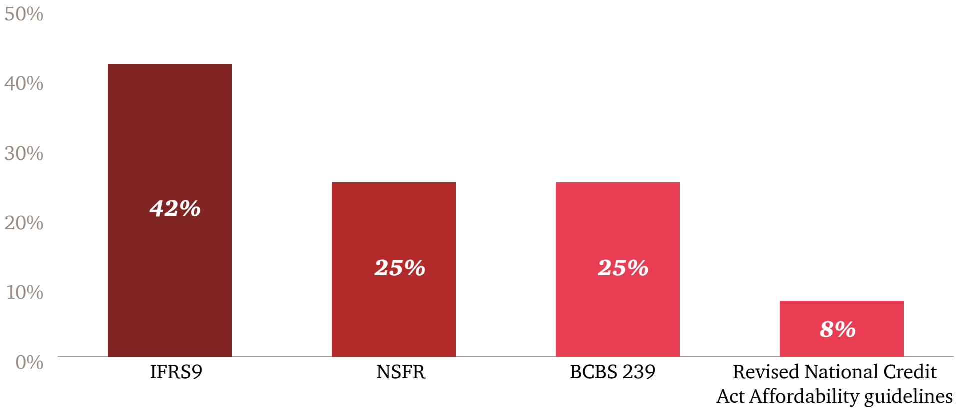
Implementing current regulations

Let's look now at how banks navigate the waters of the current regulatory requirements. We asked bankers which single regulation posed the biggest challenge to their organisation: IFRS 9 came in first followed by the NSFR (Net Stable Funding Ratio) and BCBS 239.

IFRS 9 will have a significant impact on how banks account for credit losses on their loan portfolios. The new standard has a mandatory effective date of 1 January 2018, but may be adopted sooner. Provisions for bad debt will be larger and are likely to be more volatile, while adopting new rules will require a lot of time, effort and money. A major issue for banks will be how adoption of the new standard will affect regulatory capital ratios such as the NSFR.

It is no surprise that the NSFR is considered to be the biggest challenge by 25% of respondents. The implementation date for the NSFR is also 1 January 2018 The NSFR will impact banks that traditionally rely on wholesale banking for funding. This will lead to a challenge in the market for participants and present a headwind to funding at profitable levels, consequently impacting liquidity.

Figure 50: Regulatory challenges
Which regulation poses the biggest challenge to your organisation?



Participants could choose one answer out of the following: Recovery and resolution planning; BCBS 239; Ring fencing; Fundamental review of the trading book; IFRS 9; Revised National Credit Act Affordability guidelines; Revisions to the standard approaches to credit, counterparty credit and operational risk capital; Leverage ratio; Net Stable Funding Ratio; Retail Distribution Review; Other.

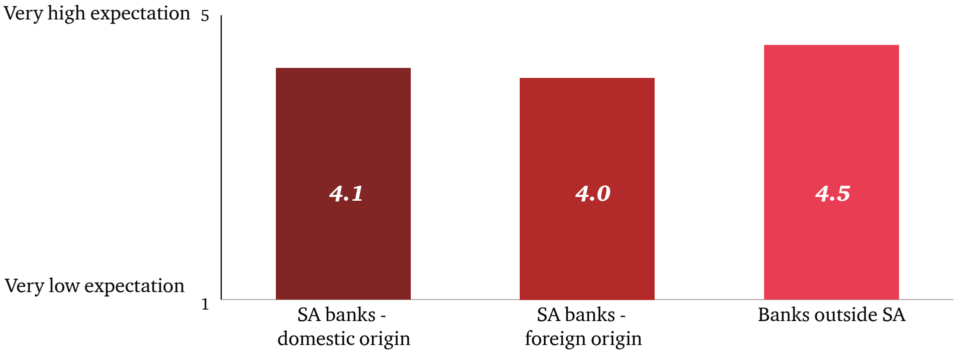
% of respondents. Based on responses from 12 banks. Source: PwC's African Banking Survey 2016.

Participants expect formalised stress testing and asset quality reviews to become prominent supervisory tools. Large international banks began using internal stress tests in the early 1990s, and in 1996, the Basel Capital Accord was amended to require banks and investment firms to conduct stress tests to determine their ability to respond to market events. However, up until 2007 stress tests were typically performed only by banks themselves, for internal self-assessment. Beginning in 2007, governmental regulatory bodies became interested in conducting their own stress tests to ensure the effectiveness of the stress tests. Regulators also now perform so-called asset quality reviews in addition to the stress tests. The SARB performed an industry-wide stress test during 2015 and it is understood that the results were favourable.

BCBS 239 refers to the 'Principles for effective risk data aggregation and risk reporting' published by the Basel Committee. BCBS 239 applies to global systemically important banks but will also be implemented in South Africa. The main objective of this reform is to ensure that data used for risk calculation and reporting has the appropriate level of quality and that the published risk figures can be trusted.

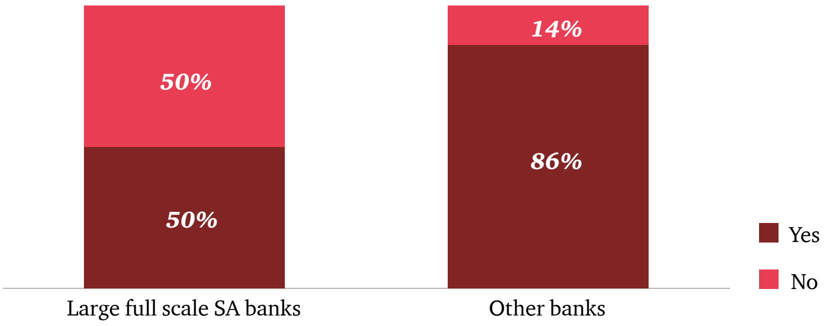
By probably anticipating the need to build trust with the regulator and other stakeholders, the majority of banks intend to hold capital buffers above the Basel III requirements. The large full-scale South African banks who intend to hold additional capital buffers will keep those around 1.5% to 1.3% above the threshold. On the other hand, smaller banks are willing to make a sustained effort to hold capital buffers up to 1.6% over the required threshold.

Figure 51: Stress testing and asset quality reviews
Do you expect formalised stress testing and asset quality reviews to become a more prominent prudential supervisory tool in your home country?
(From 1 - Very low expectation to 5 - Very high expectation)



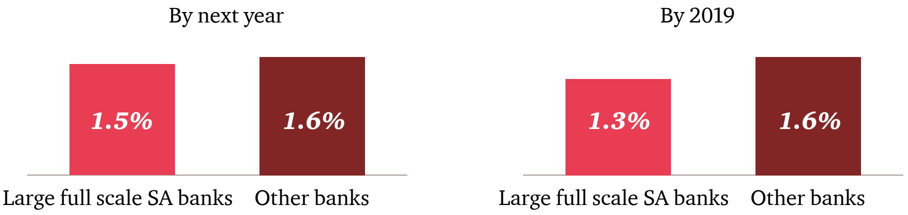
Average rating. Based on responses from 13 banks.Source: PwC's African Banking Survey 2016

Figure 52: Additional capital buffers
Does your organisation intend to hold any capital buffers in addition to those that will be implemented under Basel III (D-SIB, Capital Conservation buffer and countercyclical buffer)?



% of respondents. Based on responses from 13 banks. Source: PwC's African Banking Survey 2016

Figure 53: Additional capital buffer ranges
If you intend to hold additional capital buffers, what will be the likely ranges: for next year? By 2019 (when all items of national discretion are required to be implemented)?



Based on responses from 13 banks. Source: PwC's African Banking Survey 2016

Additional highlight

Adapting the NSFR to emerging economies – the case of South Africa

The NSFR was designed as a structural balance sheet ratio, ensuring that banks' longer-dated assets are funded with longer-dated and more stable sources of funding.

As a result, the principles underpinning the design and calibration of the NSFR posed some challenges to banks operating in emerging market economies, like South Africa, with regard to their ability to easily access sources of funding and comply with the NSFR requirements. **In South Africa, banks face a relatively short-tenure funding structure as wholesale and institutional deposits far outweigh retail deposits. Coupled with large stocks of relatively longer-dated banking assets such as retail mortgages or corporate term loans, this results in material contractual liquidity mismatches being prevalent in the domestic banking sector.**

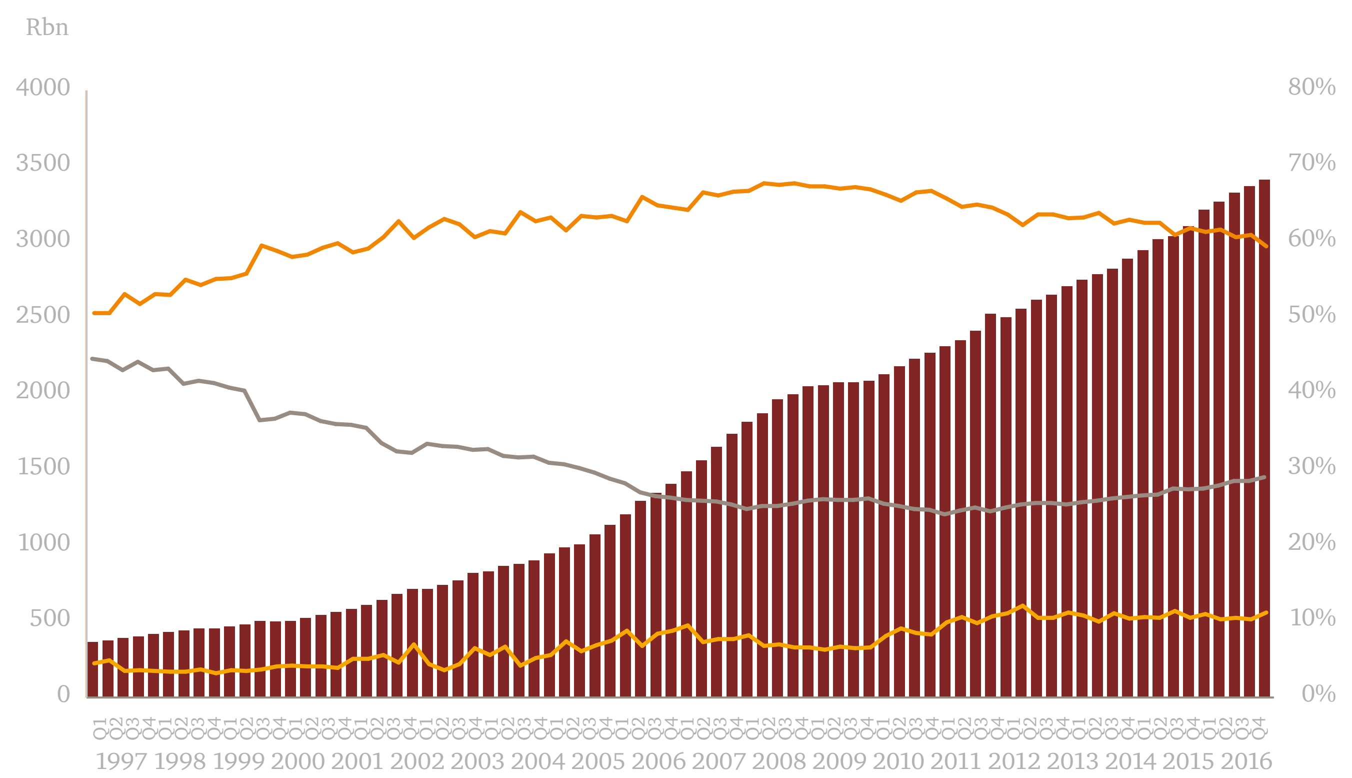
In seeking to adopt a pragmatic approach to the implementation of the NSFR requirements in South Africa, the SARB issued Directive 4/2016 in August 2016. Through this Directive, the SARB has applied its national discretion in respect of the treatment of deposits with maturities of up to six months received from financial institutions (i.e. wholesale deposits). The NSFR framework assigns a 0% ASF factor to these funds whereas the SARB elected to apply a 35% factor.

The SARB is of the view that this particular calibration of 0% in the NSFR framework by the BCBS 'does not reflect the actual stability of this funding source in South Africa given various regulatory and economic barriers that prevent liquidity from flowing out of the domestic economy.'

The SARB noted that 'these barriers cause these deposits to be more stable in South Africa compared to other jurisdictions. The barriers include, for example, the exchange control regime that is in place, prudential requirements on financial corporates and the limited reliance on foreign exchange funding by South African banks. The rand funding that the South African banks use is contained within the financial system and therefore the rand is unlikely to be drained by currency withdrawal from off-shore sources, or placements in off-shore accounts.'

It is anticipated that this change will significantly assist the South African banking sector in meeting NSFR requirements from its effective date of 1 January 2018 In moving towards full NSFR compliance, key areas of focus for South African banks and the SARB will centre on finalising various interpretational matters related to the NSFR framework and ensuring that compliance is achieved within the context of balance sheet optimisation.

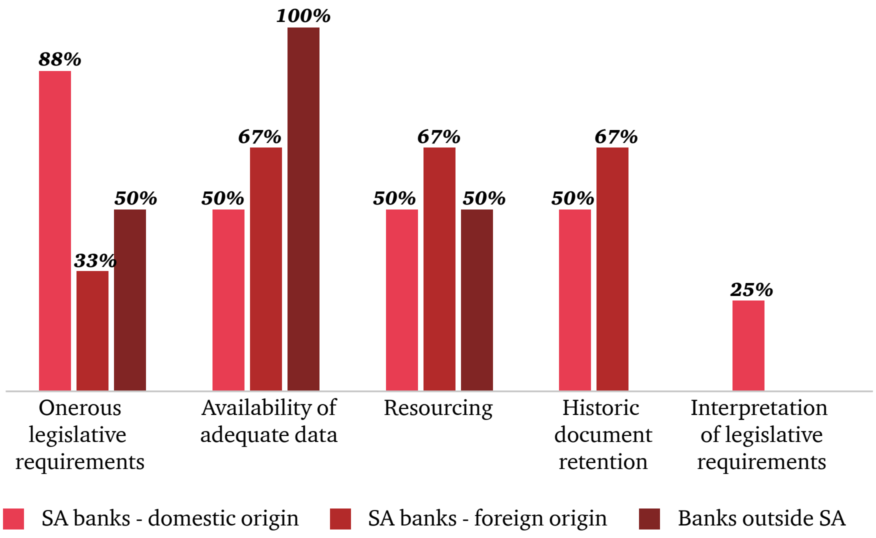
Figure 54: Deposits on the balance sheets of South African banks



Source: SARB

From an operational point of view, compliance with Anti-Money Laundering/Know Your Client legislation is without doubt the most disruptive area. Domestic South African banks are more concerned about the cost of the legislation. But banks operating outside South Africa are clearly worried about the availability of adequate data. On the other hand, it is important to note that interpretation of the legislative requirements is not a major concern, which demonstrates the focus these areas have received in the last few years.

Figure 55: AML/KYC compliance
What are the biggest challenges you are currently experiencing relating to ensuring compliance with Anti-Money Laundering/Know Your Client legislation?



% of respondents. Multiple choice question.
Based on responses from 13 banks. Source: PwC's African Banking Survey 2016

Looking ahead

Looking ahead for sub-Saharan Africa, a significant number of institutional and structural reforms still need to be implemented. In South Africa, the National Development Plan (NDP) specifies a series of targets to be met over the next two decades with the objective of eradicating poverty by 2030. These targets are of an economic nature (e.g. the creation of 11 million jobs and an average annual real GDP growth of 5.7%) but also involve institutional and structural reforms. In this section, we will look at significant pieces of new legislation that are underway in South Africa's financial sector.

Twin Peaks

The so-called Twin Peaks regulatory regime is set to be the most significant legislative development in the South African financial sector since 1994. The new regime mandates the creation of two dedicated regulators.

A prudential authority will ensure that financial institutions are sound. The role will be granted to the South African Reserve Bank (SARB), the central bank of the country. Among other tasks, the SARB will ensure that banks are well capitalised and can withstand potential economic shocks.

A market conduct authority will protect customers and ensure that they are fairly treated by financial institutions. The role will be granted to the Financial Services Board (SFB). Consumer protection has been a focus in South Africa and the government is planning to step up the protection of individuals from untrustworthy micro-lenders and unregulated financial products. Furthermore, there are plans to broaden access to financial services by encouraging micro-insurance.

The Twin Peak model was orginally created in Australia. The reason why it is now being emulated elsewhere is that Australia fared relatively well during the global financial crisis (GFC), which then attracted positive attention from the Basel Committee, IMF, G20 and World Bank, among others. A number of countries have implemented the regulatory model (e.g. the UK, France, Netherlands, Belgium and New Zealand) while other countries have signalled a desire to adopt it (South Korea, Hong Kong).

However, some factors that have contributed to the model's success in Australia may not be available everywhere. First of all, the model relies upon inter-agency cooperation. Therefore, the absence of rivalry, turf wars and political interference is paramount. Secondly, in the advent of the GFC, Australian banks were only moderately exposed internationally and less exposed to highly leveraged toxic financial products. Future adopters of the model, with more internationally connected banking systems, may not fare as well as Australia in the advent of another financial crisis.

Deposit insurance

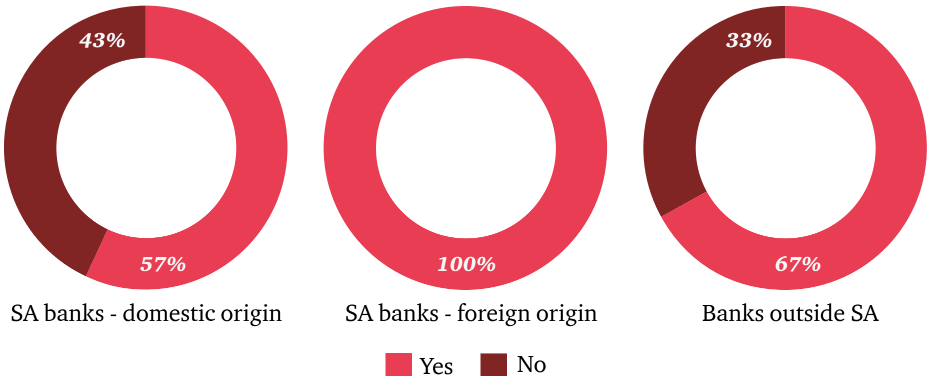
Deposit insurance systems form an important component of a financial system's safety net. According to the IADI[42], deposit insurance – whether explicit or implicit – is a political reality in effectively all jurisdictions that have a banking system. The IADI, along with the Basel Committee on Banking Supervision (BCBS), is actively promoting the adoption of explicit deposit insurance systems by banking regulatory bodies around the world.

According to the IADI, 13 sub-Saharan African countries have an explicit deposit insurance system, including Kenya and Nigeria. However, such a system is still under development in South Africa. In 2015, the South African Reserve Bank, the National Treasury and the Financial Services Board issued a discussion paper titled *Strengthening South Africa's resolution framework for financial institutions*. This paper sets out the key elements of an effective resolution framework to prevent bank failure, as could be applied to South Africa, and includes the introduction of a deposit guarantee scheme.

In the survey, we asked banks' CEOs if they support the concept of deposit insurance. As may have been expected, respondents from countries which already have explicit systems in place said that they were in favour, while respondents from South Africa were more likely to say 'no' as they are worried about the added cost and layer of regulatory compliance involved.

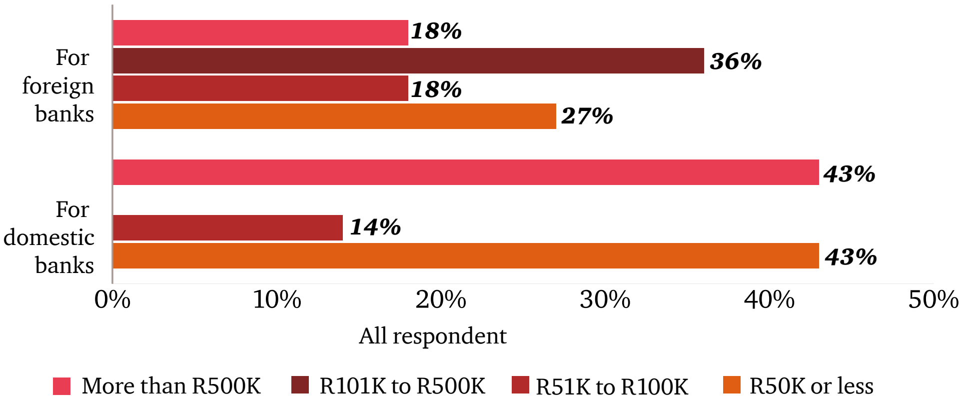
We also asked what the appropriate level of the insurance would be. Respondents were split between those who advocate for a high level of deposit insurance (43% of respondents believe the appropriate level to be above R500K for domestic banks) and those who advocate a low level (43% of respondents believe the appropriate level to be below R50K for domestic banks).

Figure 56: Deposit insurance
Do you support the concept of deposit insurance?



% of respondents. Based on responses from 12 banks. Source: PwC's African Banking Survey 2016

Figure 57: Deposit insurance levels
What would you consider to be the appropriate level of deposit insurance: For foreign banks? For domestic banks?



% of respondents. Based on responses from 11 banks. Source: PwC's African Banking Survey 2016

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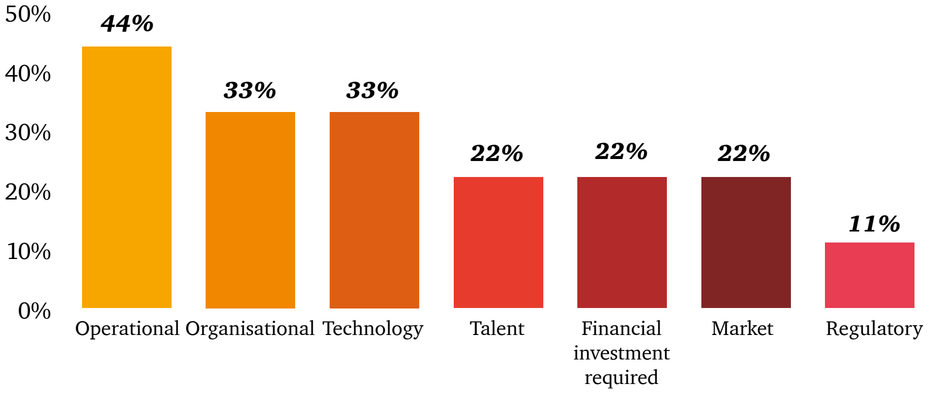
[42] The International Association of Deposit Insurers (IADI) was formed in May 2002 to enhance the effectiveness of deposit insurance systems in the world. It is a non-profit organisation constituted under Swiss Law and is domiciled at the Bank for International Settlements (BIS) in Basel, Switzerland. In 2009, the IADI and the Basel Committee on Banking Supervision (BCBS) published the Core Principles for Effective Deposit Insurance Systems, setting an important benchmark for jurisdictions to use in establishing or reforming deposit insurance systems.

Ethical standards

Beyond the adoption of new pieces of legislation by regulators, establishing a mature and trustworthy financial sector in sub-Saharan countries will entail that all market players adopt the highest levels of worldwide ethical standards. This is why we asked banks' CEOs what obstacles their organisations face in establishing a stronger culture and conduct focused on meeting higher ethical standards.

Operational constraints were mentioned first, closely followed by organisational and technology constraints, while talent recruitment and financial investment were of less importance. In other words, this is a multi-factor equation that needs to be solved by banks' CEOs on an ongoing basis – an equation that links operational and organisational aspects with technology.

Figure 58: Ethical standards
What are the obstacles to establishing a stronger culture and conduct that is more focused on ensuring higher ethical standards?



% of respondents. Multiple choice question. Based on responses from 13 banks.
Source: PwC's African Banking Survey 2016

Part six

Performance

Profitability, in particular the capacity to generate sustainable profitability, is essential for a bank to maintain ongoing activity. The main drivers of a bank's profitability remain its revenue growth, its return on equity and its efficiency – i.e. the capacity to mobilise physical and non-physical assets to generate earnings. In the following part, we highlight the main findings in terms of these measures.

Main findings

- Large full-scale South African banks achieve ROEs in the 18%–20% range in their retail and CIB businesses; they expect those to remain in the same range in the coming years.
- Other banks in our survey[43] achieve ROEs around 10% in their retail and CIB businesses; they expect to increase those to 17% in the coming years.
- The contribution to profit after tax of African operations ranges on average between 7% and 13% and will likely remain in this range. However, it is difficult to reach any meaningful conclusion from an average percentage because of the different strategies adopted by banks.
- Domestic South African banks achieve on average CI ratios of approximately 51%, while foreign banks operating in South Africa achieve CI ratios of approximately 54%. Nigerian and Kenyan banks have the highest CI ratio at approximately 55%.
- On a longer-term horizon (over five years), half of respondents consider achieving a CI ratio below 50% and even below 40% as remaining competitive.

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[43] This comment refers to respondents categorised as Non-full scale South African banks. Please consult Appendix 1.

Our performance assessment of the African banking industry in our 2016 survey focuses on three main metrics: the return on equity (ROE), the expected contribution to profit after tax of African operations outside the home country, and the cost-to-income ratio.

Return on equity

The ROE is highly variable depending on the banking segment considered. In 2015, the asset management segment was the most profitable, with an ROE of 33% and above, followed by the corporate and investment banking segment while the retail and business banking segment was the least profitable. Large variations also appeared between large full-scale South African banks and other banks,[44] with large full-scale South African banks attaining and foreseeing higher ROE than other banks.

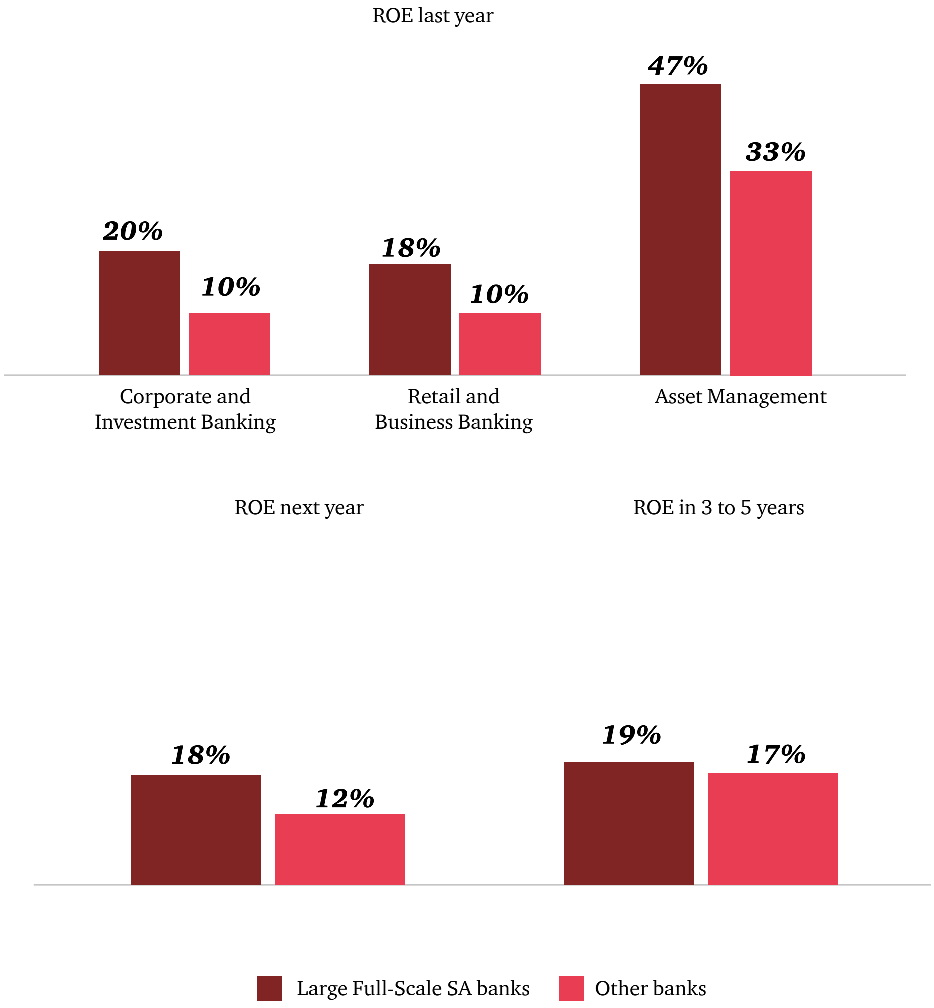
CFOs of large full-scale South African banks foresee a one-percentage point increase of their ROE from 18% next year to 19% in the following three to five years. In contrast, other banks expect their ROE to surge by five percentage points during the same period (from 12% to 17%). Interviewees mentioned that growing their market share and revenue while containing their costs was the preferred plan of action to achieve their ROE targets.

Another factor which will impact ROEs in the short term is the final phasing of the Basel III capital rules by 2018 as well as new changes (in particular with regard to the size of the Risk-Weighted-Assets against which capital has to be held) introduced by Basel IV in the medium term. Managing ROEs given these ongoing changes will remain challenging particularly given the difficult current operating environment.

Figure 59: ROE

Over the last year, what was the ROE for the following areas?

What would your expected return on equity (ROE) be for next year/next three to five years?



Based on response from 14 banks. Source: PwC's African Banking Survey 2016

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[44] This comment refers to respondents categorised as Non-full scale South African banks. Please consult Appendix 1.

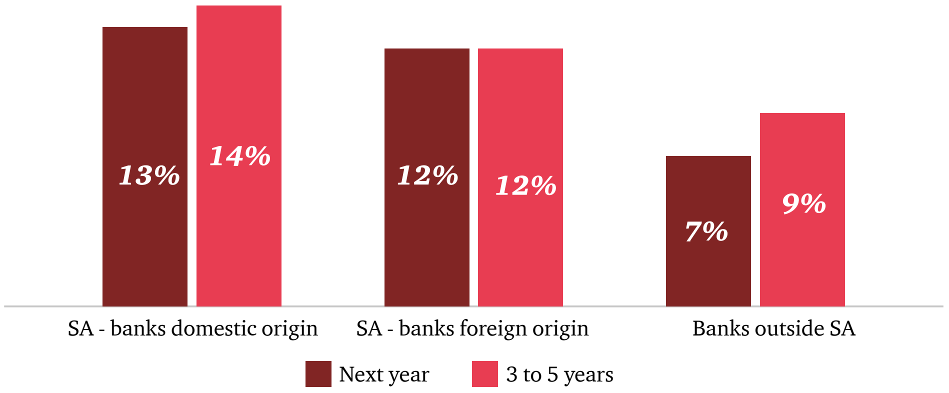
Contribution to profit after tax of African operations

As part of the performance assessment, the contribution of African operations outside the country of origin and its expected evolution represent robust metrics of banks' market penetration into African markets. Our 2016 survey shows that:

- Despite a strong domestic financial performance, the South African banking industry expects to have an overall stable contribution to profit after tax from African operations outside the home market over the short and medium terms.
- Banks operating in Nigeria and Kenya foresee a greater contribution to profit after tax from their African operations outside the country of origin in the medium term, with an increase from 7% to 9% in the next three to five years. Domestic South African banks expect a slight increase of 1%, while foreign banks operating in South Africa do not foresee any change in the contribution of their African operations outside South Africa.
- As such, it can be deduced that the core profits for the South African banking industry are home market-oriented. However, it is difficult to reach any meaningful conclusion from an average percentage because of the different strategies adopted by banks.

The key findings are that African banks' profits after tax are driven by their domestic market; and that market penetration outside the country of origin is not regarded as a significant driver of profit growth.

Figure 60: Contribution to profit after tax of African operations
What is the expected contribution to profit after tax of your African operations outside your home market?



Based on responses from 11 banks. Source: PwC's African Banking Survey 2016

Cost-to-income ratio

Regarding the cost-to-income (CI) ratio performance of the African banking industry, our 2016 survey shows that:

- Domestic South African banks foresee a small decrease in their CI ratio, already low in the 45% to 50% range. It appears that domestic South African banks achieve a higher operating efficiency compared to other banks in our sample.
- Foreign banks operating in South Africa expect their CI ratio to remain stable at 54.3%.
- Banks outside South Africa expect the largest drop (over 3%) in their CI ratio in the next three to five years.

Overall, CFOs expect the African banking industry to reduce its CI ratio, aligning with other developing economies (cf. A global perspective of cost-to-income ratio).

We then asked CFOs for their target level, i.e. which CI ratio they believed was necessary to remain competitive in the long term.

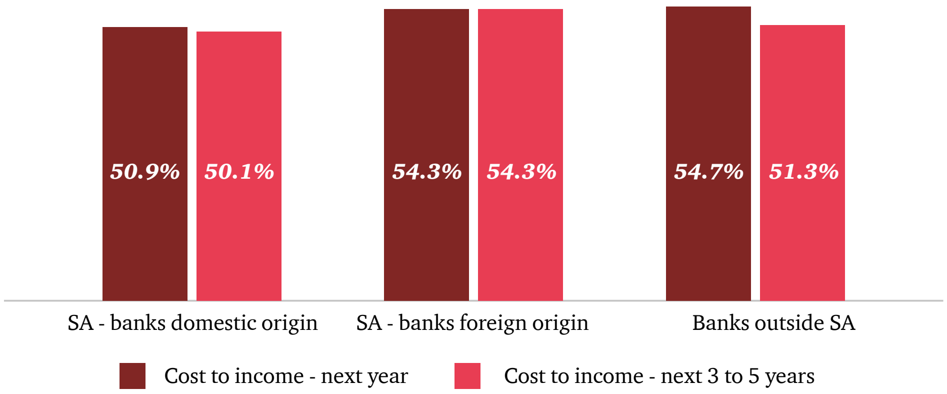
Our main findings are the following:

- Half of respondents answered that an efficiency ratio of 50% or less is essential.
- A third of respondents answered that an efficiency ratio of 45% or less is necessary.

These findings are in line with our discussions with CEOs. Banks operating in South Africa in the commercial banking segment are particularly keen to maintain low CI ratios in order to remain competitive.

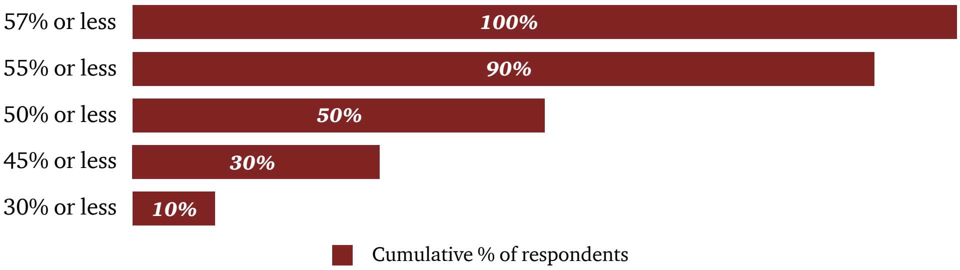
Lower ratios generally indicate higher efficiency, but a number of factors can affect the ratio, including a bank's business model and size. Banks that focus on commercial banking and generate a greater share of their revenues from interest income have achieved historically lower ratios than universal banks, which earn a larger share of their revenues through non-interest sources.

Figure 61: Cost-to-income ratio
What do you expect your cost-to-income ratio to be the next year? In the next 3 to 5 years?



Based on responses from 14 bank. Source: PwC's African Banking Survey 2016

Figure 62: Target efficiency ratio
What efficiency ratio do you believe you need to achieve to remain competitive over 5 years?



Based on responses from 10 banks. Source: PwC's African Banking Survey 2016

Additional highlight

A global perspective of cost-to-income ratio

One of the main measures of operational efficiency is the cost-to-income ratio (CI), which considers operating costs excluding total impairment charges and provisions, divided by total operating income. Lower ratios generally indicate higher efficiency, although a number of factors can affect the ratio, such as a bank's business model and size.

The map below presents the consolidated CI ratio per country based on banks ranked in The Banker's Top 1000 World Banks. In order to take the banks' size into consideration, the ratio was created by weighting the banks' CI ratio with their assets.

Generally, the average CI ratio for the 20 most efficient banks has risen from 38.2% in 2014 to 39.1% in 2015, showing a less efficient global market.

The map reveals three principal facts:

Developed economies have high levels of CI ratio: This phenomenon is confirmed by most of the European and North American countries. Inefficiencies do not explain the high CI ratios in developed economies. The high CI ratios lie in the heavy operating costs of banks in developed economies. Indeed, when decomposing operating costs, it is clear that personnel is the largest component of banks' total costs and therefore an important driver of CI ratios. Most European banks – in particular Swiss banks – report a high personnel CI ratio, which creates an upward pressure on the overall ratio. Additionally, regulation intended to make the system more resilient by reducing the systemic risk diminishes the benefits of economies of scale as it entails additional costs for large and complex banking groups. Since most of the developed economies have strict regulatory requirements, banks have a 'disadvantage' when competing with emerging markets. Nevertheless, more banks from developed economies appear in the 2016 rankings, reducing the number of banks from emerging countries.

Asian banks achieve greater productivity and efficiency: Regardless of the maturity of the economy, all relevant Asian countries performed at low levels of CI ratio during 2015 Overall, banks in the region have reduced their CI ratios in the past few years, suggesting stronger control of operating costs. Chinese banks top the ranking of most efficiently run lenders to such an extent that the first bank from a different country appears only in 12th position in the form of Japan, a highly developed banking industry with impressive results. But the low CI ratio in some countries is not sustainable, and the decline of the ratio is not expected to continue. Banks are challenged to maintain profitability and find it more difficult to make further cuts in operating costs.

South Africa and Nigeria have high CI ratios: South Africa has a high CI ratio for a developing economy; however, the maturity of its financial industry may be partly responsible for this. Furthermore, the negative impact of dollar-based costs for those banks with large physical footprints in the rest of Africa continues to weigh on operating costs in the context of a weak rand-to-dollar exchange rate. Nigeria presents a high CI due to its high costs of operation and inefficiencies of scale. However, the country showed an overall improvement last year, reducing the aggregated CI ratio.

With the development of their industries, South Africa and Nigeria will face two opposing forces that will impact the CI ratio. On one hand, as emerging economies, their living standards are rising and, consequently, the salaries, commissions and bonuses being earned, which in turn will put upward pressure on the costs of banks. On the other hand, technology will play an important role in reducing CI ratios as constant innovation will allow banks to streamline their back- and middle-office operations. Additionally, focusing on cutting high-cost and low-value operations will result in the closure of branches or a stagnation in their numbers. Therefore, sound management of these two forces will be crucial to gain a competitive advantage. South Africa may also follow the example of countries that have drastically reduced their CI ratio.

Australia is an interesting country to look at in terms of CI reduction. The country's CI ratio has decreased from 64% in 1994 to 43% in 2016. This is largely due to the digital integration of cost control tools across banks. Australian banks have taken several steps during the last 20 years to achieve cost reduction that have transformed basic tools into high value-added tools.

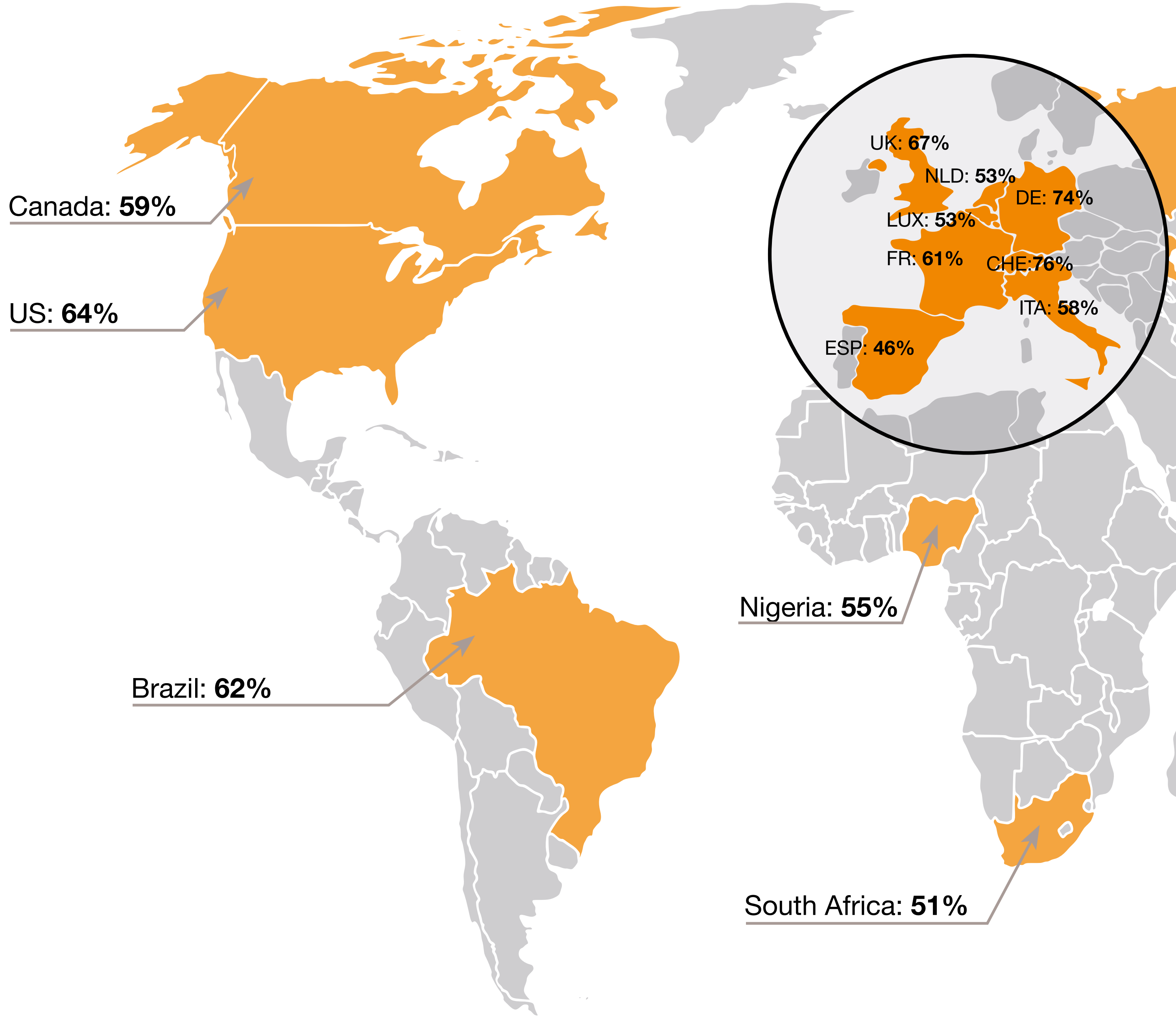
Basic tools have included cost schedules, benefits tracking, allocation and baselining. Australian banks have baselined all of their costs and expenses, such as FTEs, to track changes over time. Implementing such tools has required forecasting and scenario modelling capabilities.

The implementation of such tools later led Australian banks to develop more advanced, high value-added tools. High value-added tools have included dynamic budget balancing and tracking, portfolio risk modelling and stress testing. These tools have been 'standard' in Australia since the late 1990s.

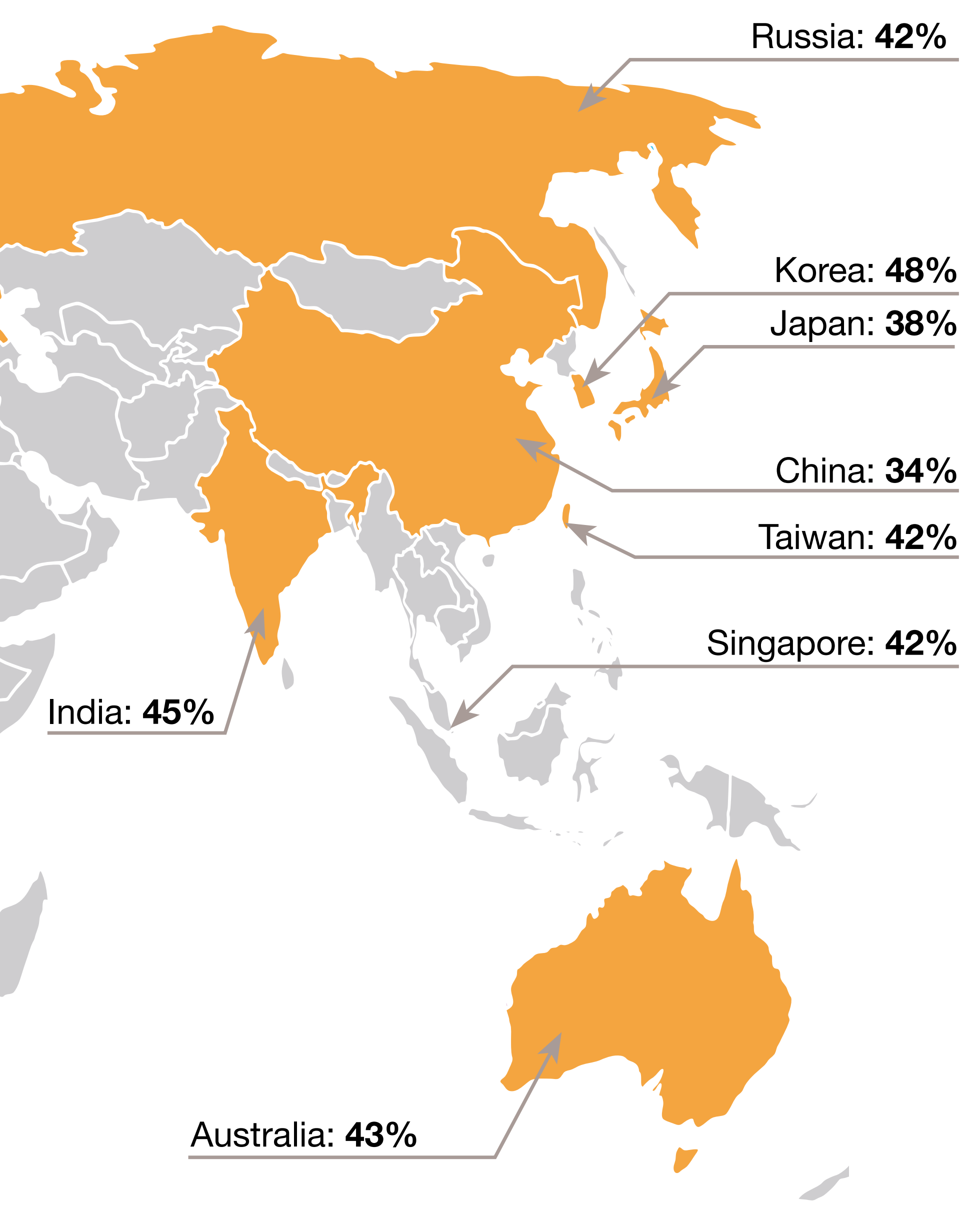
Additionally, the highly competitive environment amongst banks in Australia and the strong focus on cost metrics have been crucial to the reduction of the CI ratio of Australian banks. They have put an emphasis on understanding the underlying drivers of costs for each transaction, making them leaders in dynamic monitoring.

Additional highlight

Figure 44: Cost-to-income ratios across the globe



Source: PwC Analysis based on The Banker, Top1000 World Banks, 2016



Country	*Cost-to-income ratio %*
China	34
Japan	38
Singapore	42
Taiwan	42
Russia	42
Australia	43
India	45
Spain	46
Korea	48
South Africa	51
Netherlands	53
Belgium	55
Nigeria	55
Italy	58
Canada	59
France	61
Brazil	62
United States	64
United Kingdom	67
Germany	74
Switzerland	76

Appendix 1: *Methodology and sample composition*

Our survey was conducted on a sample of 21 respondents which we thought to be the most representative for the target population. Participants included nine South African banks of domestic origin, seven foreign banks operating in South Africa and five banks operating in Nigeria and Kenya. Our participants were also split by size, ranging from local niche players and branches of global banks to the Big Four domestic banks (Absa, Nedbank, FirstRand and Standard Bank).

Our data collection involved an online questionnaire which took place from March to June 2016 in addition to one-hour face-to-face interviews based on 30 questions. Mr Johannes Grosskopf of PwC SA, Banking and Capital Markets leader for Africa based in Johannesburg, and Mr Stefan Beyers of PwC SA, Partner, conducted on-site interviews with participants who were all senior executives (CEOs, CFOs and CROs) of banks operating in South Africa, Nigeria and Kenya.

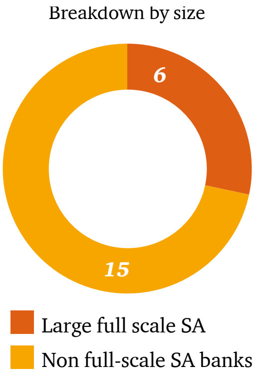
Following the collection of data consisting of our respondents' preferences, opinions and factual knowledge, we performed an analysis in order to determine patterns in the current state of the South African banking sector and the potential direction in which it is heading.

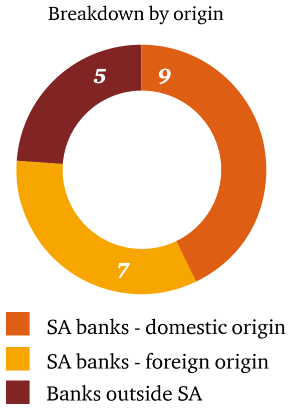
As indicated in the graphical representations below, the exact categories into which our participants were grouped are as follows:

1. By origin: SA banks of domestic origin, SA banks of foreign origin, Banks operating outside SA
2. By size: large full-scale SA banks vs non-full-scale SA banks

Survey participants

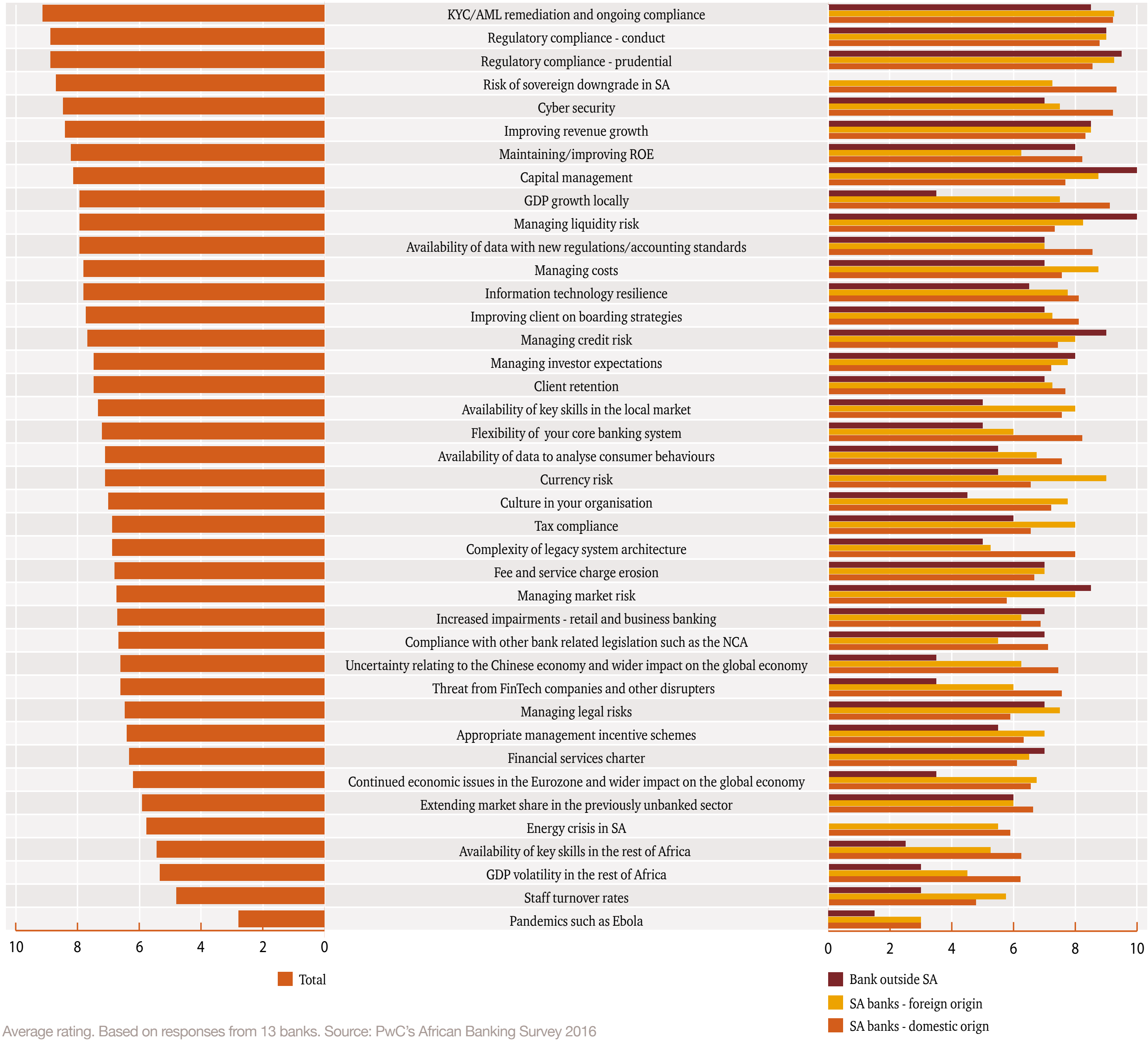
Bank	*Country*	*Categorisation by origin*	*Categorisation by size*
Barclays Africa	South Africa	SA banks – domestic origin	Large full-scale SA banks
African Bank	South Africa	SA banks – domestic origin	Non full-scale SA banks
Bank of Athens	South Africa	SA banks - foreign origin	Non full-scale SA banks
BNP Paribas	South Africa	SA banks - foreign origin	Non full-scale SA banks
Capitec	South Africa	SA banks – domestic origin	Non full-scale SA banks
China Construction Bank	South Africa	SA banks - foreign origin	Non full-scale SA banks
Citibank	South Africa	SA banks - foreign origin	Non full-scale SA banks
Credit Bank	Kenya	Banks outside SA	Non full-scale SA banks
Deutsche Bank	South Africa	SA banks - foreign origin	Non full-scale SA banks
First Bank of Nigeria	Nigeria	Banks outside SA	Non full-scale SA banks
FirstRand	South Africa	SA banks – domestic origin	Large full-scale SA banks
Guaranty Trust bank	Nigeria	Banks outside SA	Non full-scale SA banks
Heritage Bank	Nigeria	Banks outside SA	Non full-scale SA banks
Investec	South Africa	SA banks – domestic origin	Large full-scale SA banks
Nedbank	South Africa	SA banks – domestic origin	Large full-scale SA banks
Rand Merchant Bank (FirstRand)	South Africa	SA banks – domestic origin	Large full-scale SA banks
Sasfin	South Africa	SA banks – domestic origin	Non full-scale SA banks
Société Générale	South Africa	SA banks - foreign origin	Non full-scale SA banks
Standard Bank	South Africa	SA banks – domestic origin	Large full-scale SA banks


Breakdown by size


Breakdown by origin

Appendix 2:
Most pressing issues

Please rate the bank related pressing issues from 1 - Not particularly pressing to 10 – Very pressing



Average rating. Based on responses from 13 banks. Source: PwC's African Banking Survey 2016

Appendix 3: Peer analysis

We asked survey respondents to rank the top three financial services companies in terms of success (performance, presence, momentum, etc.) in a series of markets.

Following the methodology adopted in 2013, a simple scoring method awarded three points to the first place, two points to the second and one point to the third.

The arrows in the right-hand column show a directional change from the 2013 ranking. In this survey, several categories appear for the first time; therefore, change cannot be shown for every category.

Note: 'FirstRand' encompasses 'FirstRand (RMB)', 'FirstRand (WesBank), 'FirstRand FSB', 'FirstRand FSR', and 'FirstRand FNB'.

Business banking - Lending, deposit taking, and transactional banking

Ranking	First	Second	Third	Score	Change
Standard Bank	5	2		19	→
FirstRand (FNB)	1	3	3	12	→
Barclays Africa	1	3	2	11	↗
Nedbank	1	1	4	9	↘

Based on responses from 9 banks

Trade and working capital

Ranking	First	Second	Third	Score	Change
Standard Bank	7			21	→
FirstRand (RMB)	1	4	1	12	↗
Barclays Africa		3	2	8	↘
Nedbank			5	5	→
Investec		1		2	→
Ecobank		1		2	↗
Standard Chartered			1	1	↘

Based on responses from 9 banks

Transactional Services

Ranking	First	Second	Third	Score	Change
Standard Bank	5	1	2	19	➡
FirstRand (RMB)	1	4	1	12	➡
Barclays Africa	1	2	2	9	↗
Nedbank	1	1	3	8	↘
Ecobank		1		2	↗
Standard Chartered			1	1	↗

Based on responses from 9 banks

Electronic banking – Wholesale internet/online offering

Ranking	First	Second	Third	Score	Change
Standard Bank	7	2	1	26	➡
FirstRand (RMB)	3	4	2	19	➡
Barclays Africa	1	2	2	9	↗
Nedbank		2	4	8	↘
Ecobank		1		2	↗
Standard Chartered			1	1	↗

Based on responses from 12 banks

Markets: Trading activities - Foreign Exchange

Ranking	First	Second	Third	Score	Change
Standard Bank	9			27	➡
Barclays Africa		4	4	12	↗
FirstRand (RMB)		4	2	10	↘
Nedbank		1	3	5	➡

Based on responses from 10 banks

Markets: Trading activities - Rates

Ranking	First	Second	Third	Score	Change
Standard Bank	5	3		21	↗
Barclays Africa	2	1	4	12	↗
FirstRand (RMB)		4	2	10	↘
Nedbank		1	2	4	→
JP Morgan	1			3	↗
HSBC			1	1	↗

Based on responses from 9 banks

Markets: Trading activities - Equities

Ranking	First	Second	Third	Score	Change
Standard Bank	2	5		16	↗
FirstRand (RMB)	2	3	1	13	↘
Barclays Africa	1		2	5	↗
Investec	1		2	5	↘
UBS	1			3	↗
Nedbank			3	3	↗
Citi				2	↘
Bank of America Merill Lynch			1	1	↗

Based on responses from 9 banks

Markets: Trading activities - Commodities

Ranking	First	Second	Third	Score	Change
Standard Bank	6	1	1	21	→
Barclays Africa	1	3	3	12	↗
FirstRand (RMB)		5		10	↘
Nedbank			4	4	→
Investec			1	1	→

Based on responses from 9 banks

Markets: Trading activities - Credit

Ranking	First	Second	Third	Score
Standard Bank	5	2		19
FirstRand (RMB)	1	3	2	11
Barclays Africa	1	3	2	11
Nedbank			3	3
JP Morgan		1		2
Deutsche Bank			1	1
BNP Paribas			1	1

Based on responses from 9 banks

Markets: Structuring - Equity Structuring

Ranking	First	Second	Third	Score
FirstRand (RMB)	7	1		23
Standard Bank	1	5	2	15
Investec	1	3		9
Barclays Africa			4	7
Nedbank			3	3

Based on responses from 9 banks

Markets: Structuring - Debt Structuring

Ranking	First	Second	Third	Score
FirstRand (RMB)	6	1		20
Standard Bank	2	5	2	18
Nedbank		1	4	6
Barclays Africa		2	2	6
Investec		1	1	6

Based on responses from 10 banks

Investment Banking & Advisory - Equity Capital Markets

Ranking	First	Second	Third	Score
FirstRand (RMB)	5		1	16
Standard Bank		5	1	11
Investec	2	2		10
Barclays Africa	1		3	6
Nedbank		1	2	4
Citi	1			3
Peregrine Securities		1		2
Bank of America Merill Lynch			1	1
Grindrod Bank			1	1

Based on responses from 10 banks

Investment Banking & Advisory - Debt Capital Markets

Ranking	First	Second	Third	Score
Standard Bank	4	3		18
FirstRand (RMB)	4	2		16
Nedbank	1	1	3	8
Barclays Africa		1	4	6
Investec		1	1	3

Based on responses from 9 banks

Investment Banking & Advisory - Mergers & Acquisitions

Ranking	First	Second	Third	Score	Change
FirstRand (RMB)	7	1		23	→
Standard Bank	2	4	1	15	↗
Investec	1	1	2	7	↗
Barclays Africa		1	2	4	↗
Nedbank			3	3	↗
Deutsche Bank		1		2	↘
Rothschild & Co		1		2	↗
Peregrine Securities			1	1	↗

Based on responses from 10 banks

Investment Banking & Advisory - Project & Infrastructure Finance

Ranking	First	Second	Third	Score	Change
Standard Bank	6	1		20	→
FirstRand (RMB)	1	4	2	13	↗
Barclays Africa		2	4	8	↗
Nedbank	1		2	5	↘
Investec	1			3	↗
Standard Chartered		1		2	↗

Based on responses from 9 banks

Investment Banking & Advisory - Acquisition & Leverage Finance

Ranking	First	Second	Third	Score
Standard Bank	4	2	1	17
FirstRand (RMB)	4		1	13
Barclays Africa		3	2	8
Nedbank		2	3	7
Investec	1	1		5

Based on responses from 9 banks

Investment Banking & Advisory - Resources Finance

Ranking	First	Second	Third	Score
Standard Bank	6			18
Nedbank	1	3	1	10
FirstRand (RMB)	1	2	2	9
Barclays Africa		2	3	7
Investec		1		2
HSBC			1	1
Bank of China			1	1

Based on responses from 9 banks

Retail banking - Lending, deposit taking and transactional banking

Ranking	First	Second	Third	Score
FirstRand (FNB)	6		2	20
Standard Bank	2	4	1	15
Barclays Africa	1	3	3	12
Capitec	1	1	3	8
Nedbank		2		4

Based on responses from 10 banks

Secured Lending - Home Loans

Ranking	First	Second	Third	Score	Change
Standard Bank	5	3		21	→
Nedbank	4	1	3	17	↗
FirstRand (FNB)		4	3	11	→
Barclays Africa			3	3	↘

Based on responses from 9 banks

Secured Lending - Vehicle & Asset Finance

Ranking	First	Second	Third	Score	Change
FirstRand (WesBank)	8			24	→
Nedbank	1	4	1	12	↗
Standard Bank		4	1	9	→
Barclays Africa		1	7	9	↘

Based on responses from 9 banks

Unsecured Lending - Credit Cards

Ranking	First	Second	Third	Score	Change
Standard Bank	4	3	1	19	→
Nedbank	3	2	2	15	↗
Barclays Africa	3	1	1	14	↘
FirstRand (FNB)		3	2	8	↘

Based on responses from 10 banks

Unsecured Lending - Personal Loans

Ranking	First	Second	Third	Score	Change
Capitec	4			12	↗
FirstRand (FNB)		5	2	12	↗
Standard Bank	1	2	3	10	↘
Barclays Africa	2	1		8	↗
Nedbank	1		3	6	↗

Based on responses from 8 banks

Unsecured Lending - Micro Lending

Ranking	First	Second	Third	Score	Change
Capitec	5			15	→
Barclays Africa	2	2	1	11	↗
FirstRand (FNB)		1	1	3	↗
Nedbank		1		2	↗
Standard Bank		1		2	↘
Transaction Capital		1		2	↗
Old Mutual			2	2	↗

Based on responses from 9 banks

Wealth (Private Banking)

Ranking	First	Second	Third	Score	Change
Investec	5	2	1	20	→
FirstRand (FNB)	2	2	3	13	→
Barclays Africa	2	1		8	↗
Standard Bank		2	4	8	↗
Nedbank		1	1	3	↘

Based on responses from 9 banks

Stockbroking - Retail

Ranking	First	Second	Third	Score	Change
Standard Bank	4	2		16	→
Barclays Africa	1	1		5	↗
Investec		2	1	5	↘
FirstRand (FNB)		1	3	5	↗
Easy Equities	1			3	↗
PSG		1	1	3	↘
Nedbank			1	1	↘

Based on responses from 8 banks

Electronic banking - retail internet/online offering

Ranking	First	Second	Third	Score	Change
FirstRand (FNB)	7	2		25	→
Standard Bank	2	4		14	→
Nedbank	1	1	2	7	↗
Barclays Africa		1	5	7	↘
Investec		1		2	↗
Capitec		1		2	↗

Based on responses from 10 banks

Insurance

Ranking	First	Second	Third	Score
Barclays Africa	2	2		10
Standard Bank	2	1	1	9
Old Mutual	1		1	4
Stanlib	1			3
FirstRand (FNB)			3	3
Nedbank		1		2
Liberty		1		2
Discovery			1	1

Based on responses from 8 banks

Asset Management

Ranking	First	Second	Third	Score
Coronation	2	2		10
Allan Gray	2	2		10
Standard Bank	2			6
Investec	1		2	5
Barclays Africa		1	2	4
Nedbank		1	1	3
FirstRand (Ashburton)		1		2
MMI Holdings			1	1
Stanlib			1	1

Based on responses from 7 banks

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