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Competition, Barriers to Entry and Inclusive Growth in Retail Banking: Capitec Case Study[1]

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Abstract
This case study examines barriers to entry in retail banking in South Africa, informed by Capitec's experiences as an entrant in this concentrated and highly regulated sector. Capitec's entry and growth in transactional banking sparked a competitive response from incumbents. Across all four incumbent banks, the fees for low-cost accounts have come down in nominal terms. It is unlikely that these effects would have occurred if the status quo had continued without a disruptive entrant, or if Capitec had been acquired by one of the incumbents early on. Capitec overcame barriers to entry including customers' reluctance to switch, complex regulation, and the largely self-regulated payments system, in order to grow, in a sector populated by incumbents with some market power. The case study considers measures that could lower barriers for future entrants.

Keywords
competition, barriers to entry, digital technology advances, retail banking, Capitec Bank, South Africa

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1 The article draws on research supported by the National Treasury of South Africa and the University of Johannesburg. The views expressed are those of the authors alone.

1. Introduction

This article examines a case study of a new entrant building capabilities and engaging in competitive rivalry in a concentrated market with high barriers to entry, namely retail banking in South Africa. The case study provides insights into business model innovations, including the usage of digital technologies that allowed Capitec to navigate market power and emerge as an important participant in the market, albeit one that still holds a relatively low market share. The study relied on interviews with retail banks (Capitec Bank, Mercantile Bank, Ubank); regulators and policymakers (Payment Association of South Africa (PASA), South African Reserve Bank National Payment System Department and Banking Supervision Department, National Treasury); research institutes (Solidarity Research Institute, FinMark Trust, Moody's); the Banking Association; Thutuka (payments processor); and, PSG Investment Bank (PSG). Secondary research included a review of banks' annual reports, industry reports and the Competition Commission's Banking Enquiry (Competition Commission of South Africa, 2008). The study aims to provide lessons for policymakers on how to craft the kinds of policy and regulation that promote competition and that may enable market entry.

A notable feature of Capitec's strategy is its use of digital technology to develop a low-cost banking offering that appeals to mass-market consumers. The bank built an electronic platform that removed paper transactions and simplified operations in the branch. This was a departure from the typical banking experience, which involves complex forms and processes that intimidate newly banked customers (interview with FinMark Trust, 17 June 2015). The study shows how this use of digital technology has enabled Capitec to compete against the incumbents, particularly at the lower end of the market.

It is well established that there are barriers to entry in network industries (Armstrong, 2005; Motta, 2004; Rochet & Tirole, 2003). Consumers tend to be sticky in not readily switching between providers, as a result of the associated inconveniences and "lock-in" features of network services. This implies that such industries are concentrated and firms have market power. Studies of the South African banking industry have confirmed the significantly high levels of concentration with C4 concentration ratios of over 80% (Bikker, Shaffer & Spierdijk, 2012; Simatele, 2015; Simbanegavi, Greenberg & Gwatidzo, 2014). The studies have also identified monopolistically competitive behaviour and suggested that attention needs to be paid to increasing levels of competitive rivalry. This highlights the importance of understanding, in greater detail, the nature of entry barriers and the benefits from successful entry and increased rivalry, of which Capitec is the best exemplar.

Barriers to entry in retail banking are largely a product of sunk costs, related economies of scale, regulation and the need for interoperability (Motta, 2004; O'Donoghue & Padilla, 2006). To offer a basic transaction service, which competes with at least the

minimum product package offered by incumbents, requires IT systems, a branch and automated teller machine (ATM) network, and brand-building expenditures (Autoriteit Consument & Markt, 2014, p. 15; Dick, 2007; Office of Fair Trading, 2010, p. 63). Most of these outlays are sunk investments, which cannot be recovered in case of failure. Retail banking relies extensively on technology, and consumers have come to expect digital solutions that allow easy management of bank accounts, transparency and speedy access to services (Govender & Wu, 2013; Maduku, 2013; PwC, 2012). Product differentiation between banks is influenced by technological choices and capabilities (Competition Commission, 1998, p. 63; interview with FinMark Trust, 17 June 2015).

The intrinsic nature of the industry provides the basis for strategic activity by incumbents, to further raise obstacles to entrants, such as those related to consumer switching costs, which obstacles can increase the expenditures required on marketing and the time period over which these costs can be recouped (Church & Ware, 2000; O'Donoghue & Padilla, 2006). There are substantial entry costs associated with regulations, including the cost of obtaining a banking licence and the related authorisations; the basic cost of compliance; and the need to maintain a certain level of regulatory capital, whose type and quality is usually specified in law. Such regulations are naturally important. However, it is important to consider how regulations are designed and implemented. Entrants also need to access the national payments system and enter into bilateral and/or multilateral arrangements with established incumbents (Competition Commission of South Africa, 1998, p. 55).

The most important regulatory body for retail banking in South Africa is the Reserve Bank[2], through its Banking Supervision and National Payment Systems divisions. The South African Reserve Bank has delegated the management of the payment system to the Payment Association of South Africa (PASA). Other regulatory bodies governing retail banking include the Financial Intelligence Centre, tasked with combating money laundering and the financing of terrorism and related activities; the National Credit Regulator, which oversees lending to retail customers; and the Financial Services Board, which oversees the banks. Efforts at self-regulation are carried out under the auspices of the Banking Association, which has produced a voluntary Code of Banking that outlines the minimum standards of service that a bank must extend to its customers.[3]

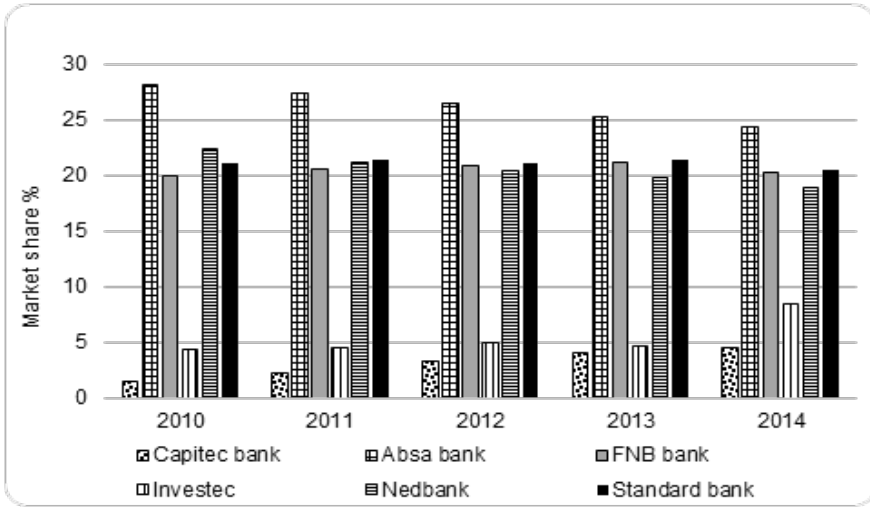
2 The role of the Reserve Bank is set to change with the introduction of a new regulatory regime dubbed "twin peaks". In this new model, the prudential regulation of banks will be separated from the regulation of market conduct. The latter is likely to be performed by a unit outside the Reserve Bank whose mandate includes promoting competition in retail banking.

3 The Independent Communications Authority of South Africa does not have any direct role in regulating retail banks, save for their activities as mobile virtual network operators.

2. Market power and barriers to entry in retail banking in South Africa

The retail banking sector is that part of the financial services industry that is concerned with providing transactional services (payments), credit, savings and other financial intermediation and advisory services to individual consumers and small businesses. Over 85% of the share of retail deposits is accounted for by the "big four" banks namely those that trade as Barclays Africa (ABSA), Standard Bank, First National Bank and Nedbank (Figure 1).

Figure 1: Market share of retail household deposits, 2011-2014



Source: Capitec (2014), based on South African Reserve Bank data

The issue of market power in South African retail banking has been traversed in a few studies (Alves, 2011; Competition Commission of South Africa, 2008; Hawthorne, Goga, Sihin & Robb, 2014). Notably, the Competition Commission's Banking Enquiry Panel engaged with the matter extensively in its final report. The enquiry report defined market power as "the ability of a firm to charge prices above those that would prevail under competitive conditions" (Competition Commission of South Africa, 2008, p. 34). The Banking Enquiry Panel found that, in the market for personal transactional accounts (PTAs), established banks enjoyed market power derived from various factors. Retail banking was characterised by economies of scale, which make it difficult for medium-sized businesses to compete in the market. High fixed and common costs underpin market concentration. The banks are characterised, in the report, as avoiding price competition as far as was possible, but competing on other dimensions. The Panel argued that the banks were taking advantage of various mechanisms to lock customers in to a particular banking institution. The Panel found that differentiated products and complicated pricing structures allowed

banks to remain highly profitable. Banks' power is also aided by the costs of switching that customers incur when changing banks. The recommendations made by the Banking Enquiry Panel to improve competition in retail banking have been partly implemented, in particular the determination of interchange fees between banks by an independent party, the lowering of penalty fees for low income customers and increased transparency in banking charges (Hawthorne et al., 2014).

Banking Enquiry Panel recommendations on customer switching

The Panel recommended that the following be included in the Code of Banking Practice: standardisation of terminology; a requirement to communicate in "plain language"; the provision of minimum information on bank statements and information on charges on every account; advanced notice of new and altered charges; and a regular rights reminder (Competition Commission of South Africa, 2008, pp. 498-506). Furthermore the Panel outlined other recommendations that were meant to improve information mobility, as well as easy the switching process, including creation of generic banking profiles by the Banking Association to ease comparisons between products; establishment of a central banking fee calculator; abolishment of comparative advertising restrictions; the creation of a code of switching practice;[4] and a central Financial Intelligence Centre Act (FICA) hub to ease switching[5] (Competition Commission of South Africa, 2008, p. 500).

National Treasury (2010) issued a press statement, following engagement with the banking industry, in which it was announced that the recommendations above would be implemented, but at the discretion of the banks. The Code of Banking Practice was revised in 2012 to effect these changes. Recommendations related to easing the comparability of products were not taken forward. It was argued that the creation of generic profiles would risk collusion. Customer profiles and a centralised calculator were not implemented. Though detailed guidelines on switching have been added to the Code of Banking Practice, customers are still liable for any charges or penalties that may arise during the process.

Banking Enquiry Panel recommendations on the payments system

The structure, functioning and governance of the payments system also present a barrier to entry in retail banking. Only banks are allowed to participate in the payment system as settlement and clearing agents. The Banking Enquiry Panel made an extensive range of recommendations related to the governance of the payment system and the pricing of inter-bank arrangements. The Panel also raised concerns

4 It would include criteria on the provision of information and documentation, a schedule setting out the terms on which banks were to provide each other with documentation and in terms of which transfers were to take place. It would allow for customers to be exempt from paying fees that are due to failures in the switching process.

5 This has not been implemented because of lack of clarity about which bank bears responsibility for breaches of the law.

about the level of price competition for ATM services. It identified two causes of market power in the provision of ATM cash dispensing services. The first was interbank pricing arrangements, which the Panel argued inhibited price competition. The second arose because only registered banks could acquire these services.

To implement the Panel's recommendations, banks agreed to: provide a detailed breakdown of fees and charges on bank statement; display a message on ATM screens where customers are to be charged an additional fee for ATM usage; and review the policy of cash back at POS - which is now offered by banks at participating retailers. The Reserve Bank is implementing a multi-phase interchange determination project, which resulted in new ATM fees being set. However, the process does not allow for public scrutiny of the methodology or input from non-banks (Hawthorne et al., 2014).

The Panel raised some concerns about barriers to entry and competition in the payments system: Banks were gatekeepers into the payments system (only banks could become members of the Payments Association of South Africa (PASA), giving them power to supervise their non-bank competitors and entrants); the path to move from a non-clearing bank to a clearing bank was not set out clearly and the process was time-consuming; innovation would have to conform to the preferences and business imperatives of clearing banks and the payment clearing house, placing potential limits on innovations by non-banks; Bankserv Africa's pricing practices could be problematic, as it is dominant and owned by the incumbent banks; only clearing banks could issue electronic money (Competition Commission of South Africa, 2008, p. 478).

To remedy this, the Panel recommended that: Non-bank providers should be allowed to participate in clearing and settlement activities in low value and retail payment streams; the membership and governance of PASA should be revised to include non-bank participants, with objective entry criteria and formal reporting to the National Payment System Department of the Reserve Bank; the creation of a Payment System Ombud to ensure fair treatment of all participations in terms of access and pricing (Competition Commission of South Africa, 2008, p. 471).

Some changes have been implemented to improve the governance of the payments system (interview with PASA, 22 July 2015). The Council of the Payments Association of South Africa (PASA) now has an independent chairperson, who is not affiliated to any bank. The representatives of the banks owe a fiduciary duty to PASA and no longer represent a mandate from the banks that employ them. Non-banks can be designated to become members of the payment system's self-regulatory body, PASA.

The partial and ongoing implementation of the Banking Enquiry Panel's

recommendations improved the competitive environment for retail banking. Capitec executives also note that the promulgation of the National Credit Act, No. 34 of 2005 created certainty in the unsecured lending segment (interview with Capitec, 10 November 2015). This meant that lenders in the unsecured segment had clear legislation and regulations to comply with, instead of operating under an exemption from the Usury Act that could be withdrawn at any time. The exemption had also restricted lenders to loans of up to ZAR10,000 and repayment terms of up to 36 months. With the National Credit Act, these restrictions fell away. This allowed for the emergence of a clearly regulated environment, where institutions with capabilities in lending on the strength of affordability assessments could develop their businesses. With higher loan amounts and longer repayment terms, unsecured lenders were also able to capture middle class clients.

3. The Capitec case study, 2001-2015

Mode of entry into banking

Capitec registered as a bank in 2001 during the "small banks crisis",[6] which was undermining consumer and investor confidence in the sector. The crisis that unfolded from 1999 to around 2002 saw a number of small banks failing. These bank failures include Regal Treasury Bank,[7] Saambou[8] and BOE.[9] The business that became Capitec was formed through the acquisition of a number of micro-lending businesses by PSG Investment Bank. At the time, there were many individually owned micro-lending entities, many of them run by civil servants who had cashed out their pensions after the democratic transition (interview with Capitec, 10 November 2015). The personal loan market was under-developed at the time. Lending consisted mainly of secured loans, in addition to loans extended by furniture and other retailers. The PSG move was an attempt to consolidate a few players to create the platform for a retail bank. From the beginning, the aspiration was to be a mass bank covering all individuals with a regular income.

Significant acquisitions by PSG in micro-lending include SmartFin and Finaid,[10] which were bought in 1997. These acquisitions gave PSG a branch network across

6 Largely caused by the liquidity crisis of 1992 which can be traced to the South-East Asian financial crisis of 1997, the concomitant banking crisis as well as the Russian financial crisis of 1998.

7 The run on Regal Bank is said to be the result of external auditors rescinding their approval of the financial statements of the bank's controlling company in 2001. This led to an outflow of funds creating a liquidity crisis. The bank was placed under curatorship on 26 June 2001 (South African Reserve Bank, 2002).

8 Saambou's demise was due to losses in its microfinance activities. It was the seventh largest bank at the time.

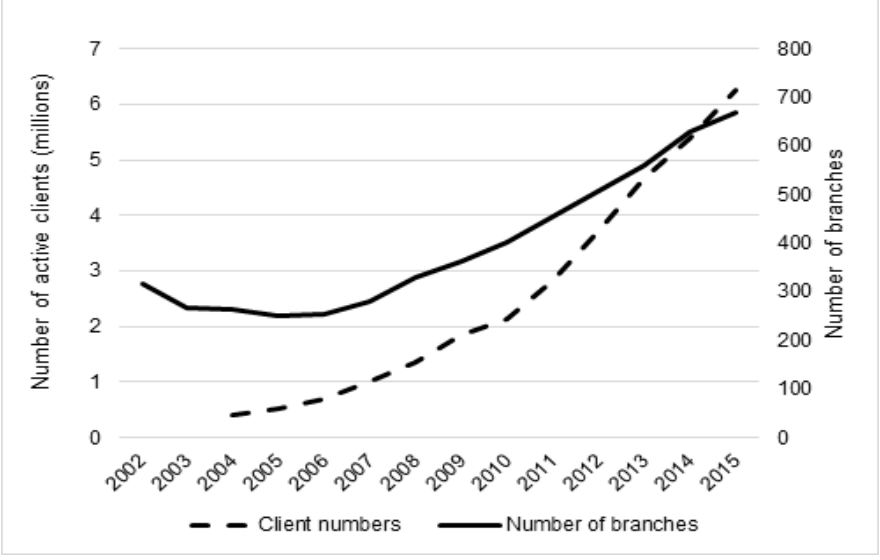
9 BOE faced a run by its wholesale depositors. National Treasury guaranteed that it would fund withdrawals from the bank as a measure to restore confidence. The bank was ultimately acquired by Nedbank.

10 Finaid offered pay-day loans.

the country. Finaid had 300 branches and only one product: 30-day loans charging 30% interest per month (Ashton, 2012). These micro-lending branches were steadily converted into banking branches, at significant cost, to form the basis of what would become Capitec Bank.

The PSG Group had two banking licences at the time of the formation of Capitec, one from The Business Bank and another for PSG Investment Bank (interview with PSG, Stellenbosch, 2015). The Business Bank's licence was transferred to Capitec Bank Holdings on March 2001. Capitec listed on the Johannesburg Stock Exchange on 18 February 2002. Though Capitec was built on a set of acquisitions in its early days, it has experienced organic growth since then. Capitec grew quite slowly initially as illustrated in Figure 2 below. The number of branches initially declined between 2003 and 2005. However, its growth in terms of branches and clients accelerated significantly from about 2008 onwards, with the number of branches increasing from 363 in 2008 to 629 in 2014, and the number of clients from 1.1 million to 5.4 million. By February 2015, Capitec had over 6.2 million active clients. This represents a 16% increase from February 2014. According to Moody's, 2.8 million of these clients deposited salaries and made payments from their Capitec account, using it as primary bank account (Moody's, 2015).

Figure 2: Capitec number of branches and clients, 2003-2014

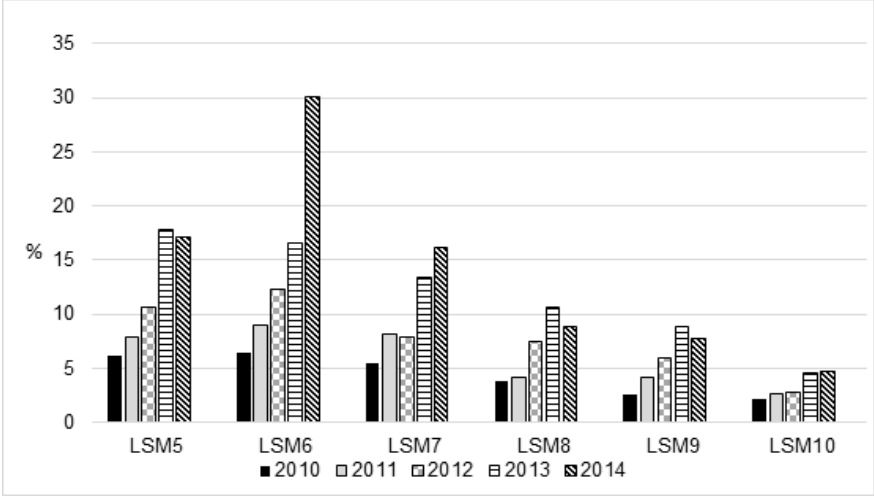


Source: Capitec (2003-2015)

Capitec's growth has been particularly strong in the low-income market. Figure 3 below illustrates Capitec's market share by living standard measure (LSM) band for

the period 2011 to 2013. It shows that Capitec's market share grew strongly in all the bands, but particularly in LSMs 5 and 6 where, by 2013, it had 17.8% and 16.5% market share respectively. Capitec executives attribute the bank's apparent growth acceleration from 2008 to regulatory developments, funding and internal initiatives (interview with Capitec, 10 November 2015). The National Credit Act provided the legal and regulatory framework that allowed the bank to extend loan terms. As capital restraints on lending were done away with (only the interest rate limitation was left after the Usury Act was repealed), the bank's loan book grew. Regulatory certainty allowed the market to develop. Funding lines also became available and Capitec embarked on its debt-raising note programme. Finally, initiatives to improve branches, systems and people matured, which allowed the bank to increase its fee income.

Figure 3: Capitec market share by living standard measure (LSM) band

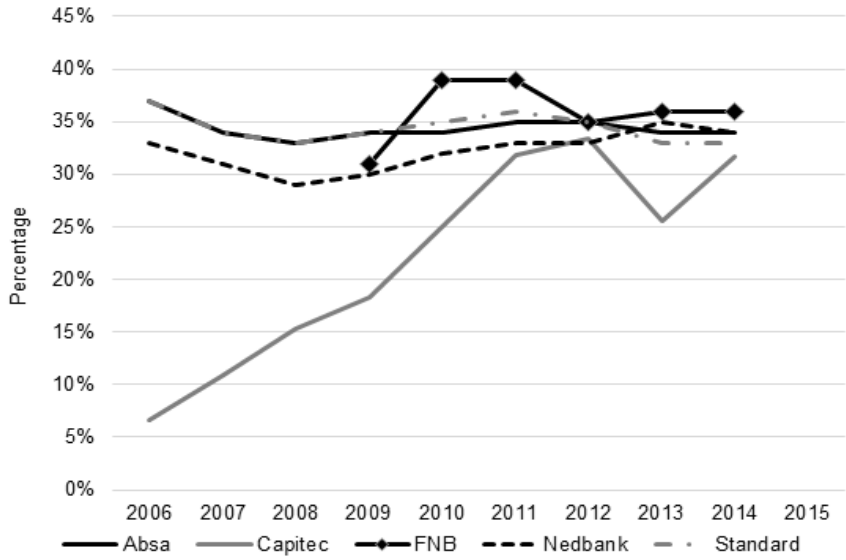


Source: Capitec (2014), based on All Media and Products Study (AMPS) data

Looking at market shares for retail household deposits, however, it is clear that although Capitec's market share has grown strongly, it is still very small compared to the four major banks, at less than 5% in 2013 (see Figure 1 above). This performance does not rule out the possibility that there may still be barriers to growth and expansion in the market. This view ties in with the findings of a recent banking enquiry review, which found that, since the banking enquiry of 2008, newer entrants have increased their share of total deposits, but the retail banking market remains relatively small (Hawthorne et al., 2014). Capitec's transactional fee income reflects

this. As a percentage of Capitec's operating income before impairments, transactional fee income rose from 13% in 2008 to 22% in 2015, while for the big four banks, the ratio has ranged from 29% to 39% over the nine year period 2006-2015 (see Figure 4 below).

Figure 4: Net fee and commission income as a percentage of revenue before impairments



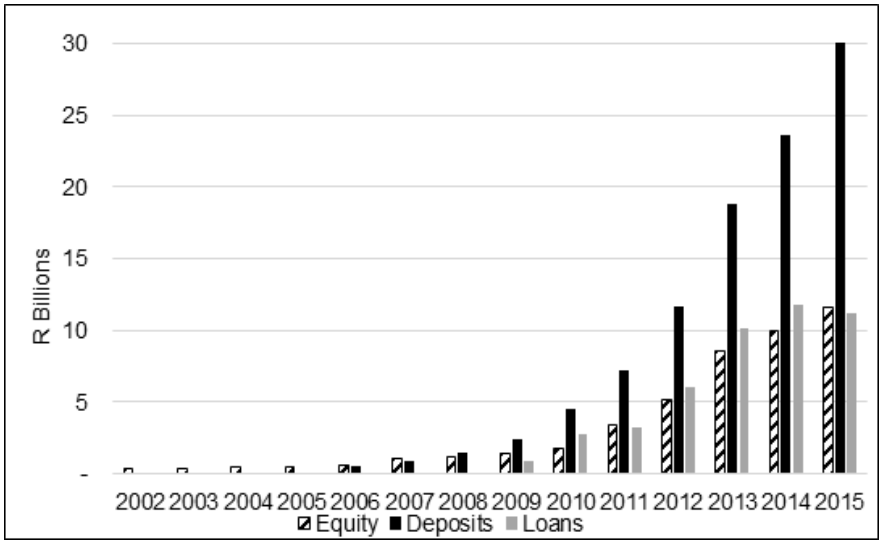
Source: Bank annual reports; Hawthorne et al. (2014)
Note: Net revenues used for ABSA, First National Bank (FNB), Nedbank and Standard Bank, gross revenues used for Capitec based on data availability. Though gross revenues are used for Capitec, its proportion of transaction fees is still lower than that of the other banks.

Sources of finance

Main sources of funding

Various sources of finance have been utilised by Capitec since its inception. In the early period between 2001 and 2003, the company was mainly financed by equity, which represented more than 80% of long term financing at the end of the 2003 financial year. Debt instruments were first utilised in 2004, while deposits became a significant source of finance between 2007 and 2008. The bank raised debt funding against future growth from European development finance institutions. Discussions about raising debt funding were lengthy and difficult (interview with Capitec, 10 November 2015). The remaining sources of finance utilised over time are depicted in the graph in Figure 5 below.

Figure 5: Sources of finance, 2002-2015

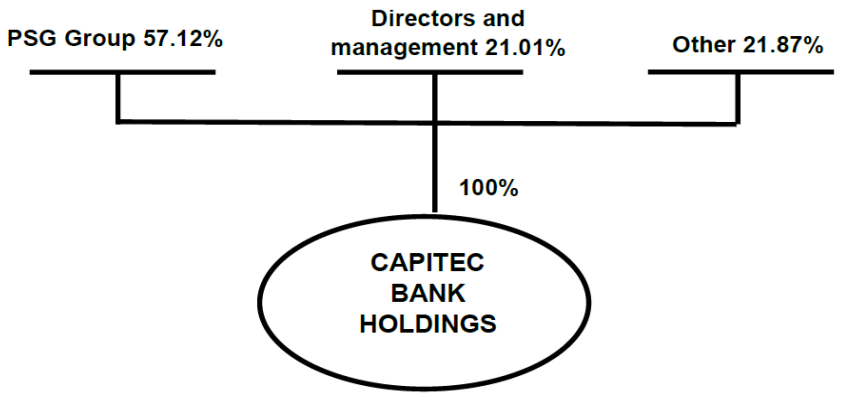


Source: Capitec (2003-2015)

Share capital and other components of equity

Financing remains one of the biggest challenges for new entrants in the banking sector. Capitec struggled to raise financing in the early years. For the greater part of the infant years, the company was self-funded and significant portions of profit were retained by the entity. The bank started off with one-month loans, in order to quickly recoup capital and make profit, so that this could be reinvested. As a result, on average, 71% of profits were reinvested into the entity between 2002 and 2007, while the highest retention rates of 100% and 99.1% were recorded in 2002 and 2004 respectively (Capitec, 2003-2008). The partnership with PSG played a pivotal role in ensuring the survival of the entity, specifically in the early days when other investors were sceptical about investing in Capitec (Figure 6).

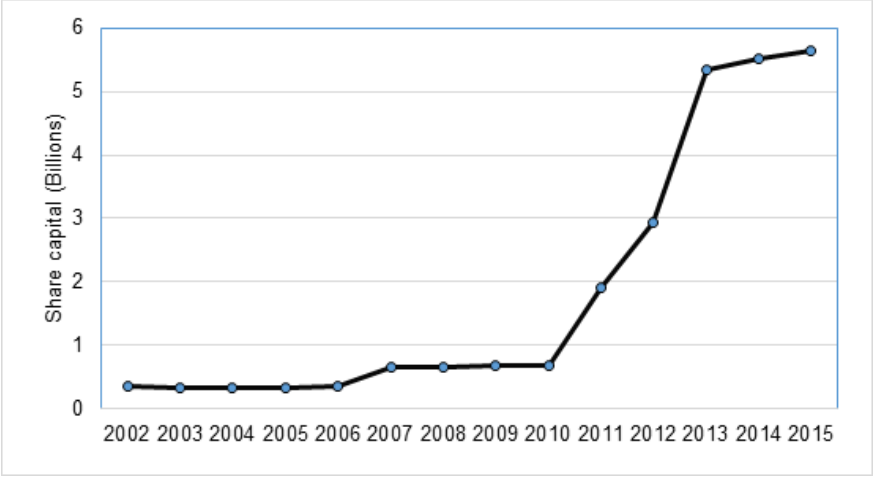
Figure 6: Capitec's shareholding as at 28 February 2003



Source: Capitec (2003)

Capitec's reputation grew over time and investors' confidence started to increase, which enabled Capitec to raise more capital. During the 2007 financial year, Capitec issued 10 million shares that increased the share capital by 86%. There were also share issuances in 2011, 2012, 2013 and 2014, which raised ZAR1.2 billion, ZAR1.007 billion, ZAR2.4 billion, ZAR136 million respectively. Figure 7 below shows the movement in Capitec's share capital over the years 2002-2015

Figure 7: Growth of Capitec's share capital 2002-2015

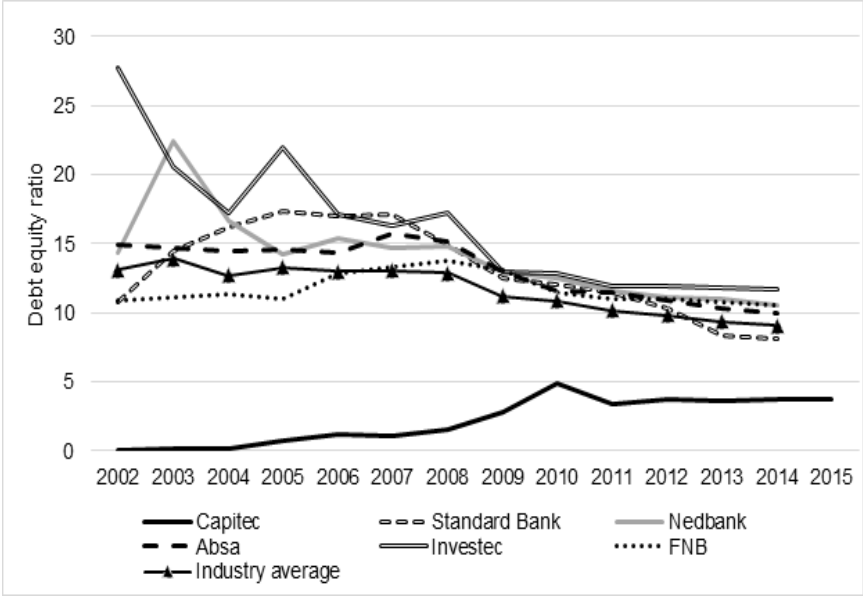


Source: Capitec (2003-2015)

Long-term loans and deposits

Capitec Bank adopted a conservative approach towards the utilisation of debt financing. The bank first took on debt instruments in 2004. After 2007, negotiable instruments and the domestic medium term note were the two main sources of debt instruments, while subordinated and senior bonds were issued during the 2015 financial year. Despite emphasis on conservatism, Capitec also attributes the low levels of debt funding partly to the inaccessibility of debt markets for small companies. In the early years, Capitec could not issue investment grade debt instruments, because they were a small organisation with no track record, hence they were limited to specialist financiers, such as development finance organisations (interview with Capitec, 10 November 2015). Capitec's level of debt within the capital structure has improved over the years, however, it is still very low, relative to the industry average and the other five banks (Figure 8).

Figure 8: Capitec's capital structure relative to other banks



Source: Annual reports of ABSA (2003-2015), Capitec (2003-2015), FirstRand Group (2003-2015), Investec (2003-2015), Standard Bank Group (2003-2015).

Capitec's lack of access to debt financing, especially in the early years, did not only impact the ability to expand the entity's operations, but also affected the entity's profitability, as a result of a low financial leverage. The passage of the National Credit Act No. 34 of 2005 brought some relief, as the bank issued bigger loans with a term longer than 36 months, allowing for leverage.

4. Capitec's competitive strategy

Target market and customer acquisition strategy

In line with its ambition to become a retail bank for the mass market, particularly low-income households and the unbanked, Capitec branched into deposit-taking and payments, despite its origins as a micro-lending institution. The Capitec Group describes its focus as providing "retail banking services to all individuals based on the principles of simplicity, affordability, accessibility and personal service" (Capitec, 2008). The large unbanked and "badly banked" population in South Africa presented a significant market opportunity, as, in 2004, only 45% of the population was considered to be banked (FinMark Trust, 2013).

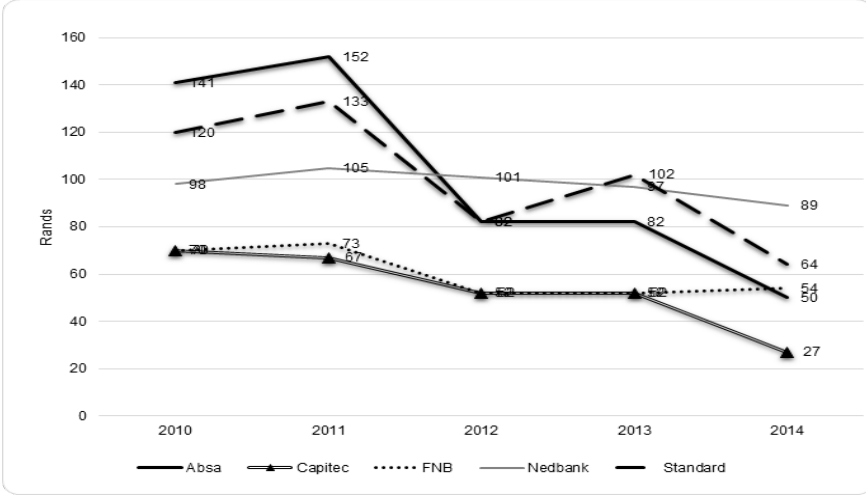
During Capitec's early years, the banking industry introduced the Mzansi account for the unbanked. The incumbents also introduced products and services aimed at the low income/low revenue end of the market. These included FNB's roll-out of mobile branches, Pick 'n Pay's Go Banking partnership with Nedbank and Standard Bank's branchless banking. Capitec did not participate in the Mzansi initiative, but introduced its own attractive offering (interview with FinMark Trust, 17 June 2015). According to Capitec executives, the bank did not want to differentiate clients by income (interview with Capitec, 10 November 2015). They sought to establish a "single status" culture, without the stigma associated with an account for the poor. Incumbents spend a lot of time on market segmentation, and tailoring products to segment. Capitec offers simple products across all segments. This approach meant that the bank could benefit from economies of scale reaped by providing standardised products. The standardised approach also meant that the bank was able to use recent graduates and school leavers with just seven weeks of internal training.

Historically, South African retail banking customers did not switch banks easily, partly because it was seen as a cumbersome process. Previously underserved, low-income customers might also trust the big four banks more than new entrants, as the former had established brands and had built credibility over time. According to FinMark Trust (2014), banking customers have been more sophisticated. In the run-up to the Finscope study, four million people switched banks (FinMark Trust, 2014). Banks have also become more transparent about charges, thus facilitating switching. Capitec has overcome some of the challenges to switching by making its prices and product structures simple and transparent. The customer's entire banking relationship is managed through the Global One account. The bank's electronic platform is built to give the customer visibility of their savings, credit and transactional history through one bank account. The bank's executives emphasised that this is key to the Capitec value proposition (interview with Capitec, 10 November 2015. This simplicity, in an opaque industry, appears to be a key competitive advantage for Capitec. In effect, it has turned barriers to switching into an advantage, because what sets it apart most from other banks is its transparency.

Product design (low transaction fees, high rates on daily savings, low interest on loans)
In line with the "one status" culture mentioned above, the Global One account is available to all income segments. The high interest rates on positive balances are part of the affordability proposition to customers. This has not affected earnings negatively, as the bank has a low cost base (very low cost-to-income ratio by global standards) and has a high margin lending business. The main omissions in the offering are credit cards and overdrafts.

Though three of the four main incumbents did not initially see Capitec as a challenger, they have now responded with similar offerings (Capitec, 2015). These include FNB's Easy Account and Smart Unlimited and ABSA's Transact. Capitec offered the cheapest account until around 2012, see Figure 9 below. According to Solidarity Research Institute, ABSA's Transact account and FNB's Easy Account now compete strongly with Capitec (interview with Solidarity, 2 July 2015). A key element of the bank's strategy is to locate its branches in places that are convenient to the consumer, for example commuter nodes such as taxi ranks.

Figure 9: Lowest priced bank account (monthly fees)



Source: FinMark Trust (2014)

IT infrastructure and digital technology advances
Unlike its incumbent competitors, Capitec was not encumbered by a legacy IT system. Therefore, it could build custom IT infrastructure in line with current market needs. The bank could also consider newer, more advanced information technologies, as it could not afford a mainframe system. It settled on a core banking system used by banks worldwide, in particular banks in India that dealt with high volumes of

transactions. It also relied on the Windows platform, which is a low cost and scalable approach. There was no pressure for the bank to expand into its capacity, instead, it increased its capacity as needed. On the negative side, it had to import most of its IT requirements and customising for South African conditions was difficult (interview with Capitec, 10 November 2015). Capitec acknowledged, in interviews, that the IT requirements for starting a new bank are not insignificant. A retail bank needs the system, not only to provide services to their own clients, but to connect to other banks. Systems also have to be customised for legislation.

The cost of building a new IT system was not a significant constraint on cash flow, as the bank could start small. The systems were available within a reasonable time, as their IT service providers were also minor players at the time. Now that these service providers have been acquired by larger technology companies, their systems are more expensive. The IT systems enabled Capitec to build their services around the customer. Whereas traditional banks have silos, i.e., a cheque system, a card system, other, Capitec built the various components into one core client-centric system.

Incumbent banks may have developed advanced digital platforms to cater to affluent customers. Capitec deployed its technological capabilities to serve the mass market. It built a business model based on efficient and customer-friendly branches, enabled by the utilisation of queue management systems, digital signatures, biometric and photographic identification, and the digital storage of supporting documentation, amongst other technology uses (Capitec, 2015, p. 23). This improved the customer experience and lowered the cost of servicing its market, which the incumbent banks considered to be expensive. The ease of transacting supported Capitec's efforts to convert the previously unbanked to become active users of their accounts, in contrast to the outcomes of the Mzansi initiative, which saw many accounts lying dormant (interview with FinMark Trust, 17 June 2015).

Digitally-mediated payment channels: ATM network and cash-back at point of sale

Access to cash is important to the low- and middle-income customer base that Capitec competes for. In general, an ATM network is a significant competitive feature in the market for deposit-taking. For small banks with a limited ATM network, the chances are that their customers would withdraw money from other banks' ATMs – off-us transactions – attracting interchange fees from incumbents. The Banking Enquiry found that off-us ATM charges were quite high in South Africa. The mark-up by a customer's own bank was also much higher than the interchange it pays on the transaction. For the reasons above, it was important for Capitec to roll out infrastructure for its customers to withdraw cash. Its branches did not handle cash, but customers had access to ATM machines co-located at branches. The location of Capitec's ATMs and customer's transaction behaviour (a few major withdrawals per month) will have alleviated demand for cash at rivals' ATMs.

Another cheap way for consumers to access cash is to withdraw at retail points of sale (cash-back at till). When Capitec enabled customers to receive cash-back at tills in 2005, it was still an under-utilised service in South Africa. This was an attempt by Capitec to save on ATM costs. It was also a secure option for customers. Furthermore, the retailer benefitted as it allowed it to move cash, which is costly to manage and transfer by road. Members of Capitec's executive team were able to tap into relationships they had with retailers from their time at Distillers and at Boland Bank to effect this digital and process innovation (interview with Capitec, 10 November 2015). At the time, most banks could not process cash back transactions. Initially, Capitec had a direct line at Pick n Pay. It got an exemption from PASA to "sort at source" for cash back at point-of sale.[11] According to the Reserve Bank, this allowed the bank to continue with its business, whilst others got their house in order (interview with South African Reserve Bank, 8 October 2015). Other banks appealed this exemption. It can thus be deduced that banks used the appeals process to block innovation, or to buy time for winning back their competitiveness.

Cash-back at till transactions have not had mass take-up, with low volumes transacted. Only 4% of customers use this instrument, compared to 78% using ATMs. Capitec is of the view that fees are not the barrier to greater take-up. Cash back fees are lower than those for ATM withdrawals. The main challenge is likely to be how customers have been socialised into using ATMs for cash withdrawal. Campaigns to create awareness and encourage behavioural change could increase utilisation of this digitally-mediated payment channel (interview with Capitec, 10 November 2015).

Skills and capabilities

Though Capitec was established by an investment bank, it soon acquired executives with retail and banking experience, with key personnel having worked at Boland Bank, Board of Executors Bank and Distell. These executives had experience in banking, but also in operating in low-income communities. It is interesting to note that the banking institutions that the executives were previously involved with and other banks that had been taken over by PSG, such as The Business Bank and Real Africa Durolink, had encountered difficulty if not outright failure. Hence, the executive team came to the Capitec experience with cautionary tales that would have prepared them for building this bank. This is likely to have informed the deliberate and conservative approach to expansion and financing taken by the bank in its early days (interview with PSG, 2015). Some key IT appointments were made early on.

11 A customer who wanted cash back at the till would have their transaction processed directly to Capitec Bank, even though Pick n Pay had another bank acquiring transactions at its tills. Sorting at source allows the merchant to choose which bank they will use to complete a transaction. Hence it allows for bilateral transactions that do not have to be cleared and settled in the interbank system. If all merchants were able to sort at source, in the extreme case, there would be little need for the interbank system.

Luck played a part too, with the shut-down of an IT division belonging to another company in Paarl, making it possible for Capitec to pick their best employees.

The take-off in branches and operations

Capitec experienced a pick-up in the number of customers around 2008. Its executives gave a number of reasons for this: The National Credit Act formalised the legal and regulatory framework to extend the terms of loans. The capital restraint fell away, with only interest rate limitations remaining. The loan book grew on the back of regulatory certainty. Funding lines became more open. The bank embarked on its note programme in 2008. Its internal initiatives on branch expansion, and systems and people development, began to pay off, leading to the growth of fee income. The bank survived the vulnerable period when it could have been bought out (interview with Capitec, 10 November 2015). However, the larger banks began to imitate Capitec's branch physical layout, advertising messages, switching service and opening hours. As Solidarity Research Institute (2010-2014) reports demonstrate, there was a heightened focus on pricing.

5. Payment system regulation and entry into banking

To offer banking products to their clients, banks have to enter into inter-bank arrangements to facilitate payments between customers across the banking sector. Payment instructions are exchanged (cleared) and then settled through Bankserv daily and the Reserve Bank's Real Time Gross Settlement system immediately. The payments system is built on the principles of process and IT interoperability and stability. Banks have to ensure that they are able to process the instruments provided by other banks and that their products also meet agreed-upon specifications. The various types of payment instruments (cheque, electronic funds transfer) are organised as payment clearing houses (PCHs). Each PCH is made up of member banks that offer that service (interview with PASA, 22 July 2015). The member banks devise the rules and modalities of the PCH, which are approved by the PASA Council. Non-compliance with PASA rules attracts financial penalties.

According to PASA, the main risks within the payment system stem from its interconnectedness, while the failure of one institution can lead to the failure of others (interview with PASA, 22 July 2015). The settlement system represents the biggest concentration of risk. It is common for this area to be reserved for banks, as the banking regulator can enforce collateral requirements against them. Any non-bank wanting to operate in this field should become a bank, PASA argues, as this would be an easy way to monitor collateral and capital adequacy. Non-banks could enter as "designated" member, exempt from banking licence. In this way, they can participate in clearing, but not settlement.

Capitec's experience in entering and participating in the payments system

According to Capitec (interview with Capitec, 10 November 2015), entry into the payments system was not difficult. In line with PASA's rules, Capitec found a mentor bank to ease it into the various payment clearing houses. ABSA performed that role. The fees that are charged for these arrangements are likely to be high by international standards (interview with PASA, 22 July 2015). Sponsorship fees are based on values and volumes. There are no guidelines for sponsorship and mentoring arrangements. In PASA's view, entrants can shop around for the best arrangement and PASA was not aware of a situation where a new entrant has not been able to secure a sponsor. PASA was not aware of any rejections to requests to join the body. However, PASA has no direct influence over negotiations between mentors and mentee banks.

As a new bank unburdened by legacy systems, Capitec was able to introduce new ways of doing business, like moving away from fax notification for EFT disputes. Capitec was the first to issue a debit MasterCard (as opposed to a Maestro card), which came with a transaction processing methodology[12] that was typically used for credit card transactions. Initially, some banks did not process the messaging properly. Capitec had to wait for the other banks to develop the capability to process payments from the card. To move unilaterally would have meant a poor customer experience for those holding the card, as it would be declined at merchants who use card acceptance facilities provided by the incumbent banks. This meant a significant delay in roll-out of the Mastercard offering (interview with Capitec, 10 November 2015).

To introduce a new financial instrument depends on the pace of the slowest acquirer. The Banking Enquiry Panel Report argued that introducing innovation is beset by two main challenges: (i) gaining permission from the incumbent to introduce the development in a payment clearing house, and (ii) negotiating inter-bank fees. The report argues that innovation could meet resistance from incumbents who feel threatened and may expose the innovator's intellectual property. When it was put to PASA that new developments may be thwarted in this way, the Association countered that this is no longer a significant issue. Furthermore, PASA imposes penalties for breaches of its rules on interoperability.

A note on other entry episodes into retail banking

Capitec entered the retail banking market largely through internal financing. Since 2008, Capitec has grown into one of the top six banks in the country, however, this is a relatively unique success story in South Africa. Other small banks and recent entrants show a contrast with Capitec's experiences.

12 A dual messaging system. In a single messaging system, authorisation of the transaction and clearing occur simultaneously for each transaction, but in a dual system, clearing is done in batches.

Ubank, formerly known as Teba Bank, was established to provide financial services to mineworkers in the 1960s, through facilitating the distribution of salaries to the mines, before becoming a deposit-taking institution in the 1980s. In an attempt to develop a customer base outside the mining industry, it rebranded itself as Ubank in 2010. It could be argued that Ubank should have been the front-runner in banking the low-income, unbanked market, given its decades of experience in providing basic banking services to mineworkers and running a remittance system between mining and "labour-sending" areas. Yet, its forays into the general population have not been successful to date, largely as a result of lack of financing.

The bank does not have a "shareholder of reference" as it is owned by a trust, whose beneficiaries are miners represented by the majority trade union, currently the National Union of Mineworkers, and the Chamber of Mines. Its Tier I capital comprises solely of retained earnings and it has no debt on its balance sheet. The bank has engaged a range of investors with limited success and it faces a challenge in accessing debt, as it does not have a credit rating. Ubank's struggle with raising Tier 1 capital is not unique, as other small banks such as Ithala, Sasfin and the former Abil also experienced problems, reliant mostly on bonds. Without a significant capital injection and a revitalised business strategy (which Ubank claims to have, but which is hampered by lack of capital), it is difficult to see Ubank emerging as a competitive force to challenge the big four and Capitec.

Mercantile Bank is another small bank, which has been operating in South Africa for 50 years. It started out as the Bank of Lisbon, with a focus on the Portuguese-South African consumer market. In 1996 it became known as Mercantile Lisbon Bank, after a merger with Mercantile, a non-banking financial institution. In 2005, the bank changed its name to Mercantile Bank. After a period of weak performance, the bank was restructured, with a new core focus on commercial and business banking. It still relied on cheap deposits from retail clients, which were lent out into segments such as commercial property. Currently the bank focuses on attracting entrepreneurs to its bank, a segment it believes is badly served by the banking industry.

As a wholly owned subsidiary, Mercantile's experience with access to finance is largely determined by the standing of its Portuguese parent, which does not enjoy a robust credit rating. The key area of difficulty identified by Mercantile is the cost of compliance with regulatory changes. Some of these changes are justified, but prove to be a disproportionate burden on smaller banks. PASA penalties also hit small banks harder than larger banks, as they are imposed as flat rates (not turn-over based). From the bank's comments, it appears that a more rigorous evaluation of the costs versus benefits of new regulation is needed.

6. Analytical highlights

The benefits of entry

Capitec's entry and growth in transactional banking sparked a competitive response from incumbents, especially FNB and ABSA. These banks now offer products that are positioned to compete with Capitec's simple, information technology-driven and digitally-mediated, low cost offering. Across all four incumbent banks, the fees for low-cost accounts have come down in nominal terms. It is unlikely that these effects would have occurred if the status quo had continued without a disruptive entrant, or if Capitec had been acquired by one of the incumbents early on. Capitec introduced disruptive effects at the technology innovation layer and at the service layer.

The positive effects of Capitec's entry are expressed in three ways: (i) new-to-banking customers that now have access to finance, (ii) lower bank charges for customers who switch from the incumbents to Capitec and (iii) lower prices from incumbents' clients as their banks react to Capitec. This can be illustrated by the simple exercise below that shows the "savings" the latter two effects are likely to have had in the market.

Table 1: Lower prices for clients at incumbent banks

Bank	Clients 2014	Price decrease (2010-2014)	Savings
ABSA	8,600,000	ZAR91.00	ZAR782,600,000
FNB	7,600,000	ZAR16.00	ZAR121,600,000
Nedbank	6,700,000	ZAR9.00	ZAR60,300,000
Standard Bank	10,400,000	ZAR56.00	ZAR582,400,000
Total Savings (monthly)			**ZAR1,546,900,000**
Total Savings (annual)			**ZAR18,562,800,000**

Source: BusinessTech (2015) (number of clients); Solidarity Research Institute (2010-2014)

If, in 2014, customers on the lowest cost accounts at incumbent banks had been charged the same prices as in 2010, they would have paid ZAR1.55 billion more per month.[13]

13 This is not, strictly speaking, the actual savings by customers as the client base in 2014 includes new to banking customers attracted by lower prices.

Table 2: Lower prices for clients who switched from incumbents to Capitec

Bank	Average price - lowest cost account (2010 -2014)	Weighted market share	Weighted average price
ABSA	ZAR101.40	29%	ZAR29.41
Standard Bank	ZAR100.20	24%	ZAR24.05
Nedbank	ZAR98	22%	ZAR21.56
FNB	ZAR60.20	24%	ZAR14.45
		Weighted average price – big four banks (2010-2014)	**ZAR89.46**
		Average Capitec price 2010-2014	ZAR53.60
		Difference	ZAR35.86
		Number of clients who switched (assumed 75% of new Capitec clients)	2,449,500
		Monthly savings for clients who switched	**ZAR87,843,969**
		Annual savings for clients who switched	**ZAR1,054,127,628**

Source: Using data from Table 1 above

Customers who switched from any of the big four banks to Capitec between 2010 and 2014 would have paid, on average, ZAR35.86 less per month in banking charges upon joining Capitec. This gives total savings of ZAR87.8 million per month or ZAR1.05 billion for the year 2014. This is an estimate, as some clients would have switched from a more expensive account, not necessarily the cheapest alternative of any of the big four banks. The figures are also distorted by the presence of multi-banked clients. For the two groups of beneficiaries (switchers to Capitec and those enjoying price decreases at incumbent banks), this brings estimated annual savings in 2014, compared to 2010, to ZAR19.6 billion. This figure is driven by the fall in bank charges at the big four banks. While this is an estimate, it indicates the order of magnitude of the benefits accruing to mass market consumers from a more competitive retail banking market. The presence and behaviour of Capitec does not fully account for why banking charges fell since 2010, but is a significant factor in increasing competitive intensity in the mass market.

Table 3: Total savings[14]

Category of savers	Annual amount saved
Clients at incumbent banks	ZAR18,562,800,000
Clients that switched to Capitec	ZAR1,054,127,628
Total annual savings	**ZAR19,616,927,628**

The exception that proves the rule?

In some ways, Capitec's experience is exceptional. In an interview with Moody's (2015), the rating agency's analysts could not think of a similar bank anywhere in the world. It has surged ahead of early attempts to bank the excluded, such as Ubank (former Teba Bank) and the Mzansi initiative. Its early financial backer chose to go into banking, precisely because of the high barriers to entry in that sector. Capitec overcame customers' reluctance to switch, a key barrier to entry in retail banking, by developing a simple product that is easily understood. It also worked deliberately to convert its lending clients into transactional service clients. Some of the bank's executives, having banking experience, were familiar with the payments system. However, it is clear that the ability of a small, nimble bank to introduce changes in this environment is subject to the incumbents' willingness to change, as well as a rapid pace of change. This is a consequence of digital technology and process interoperability.

Capitec a beneficiary of regulatory changes in the industry

The competitive environment for Capitec was enhanced by regulatory and policy changes that sought to make the playing field more open and more level. The Banking Enquiry Panel Report focused attention on retail banking and heightened awareness about competitive behaviour in the sector. The partial and ongoing implementation of its recommendations improved the competitive environment for Capitec. The bank's executives also emphasised the formalisation of the National Credit Act as a measure that created certainty in the unsecured lending segment, allowing the bank to operate effectively in that space. The regulatory regime governing retail banking supports the adoption of a wide range of digital technology. However, in the payments sphere, the self-regulatory mechanism may slow down the pace of technology adoption. As mentioned earlier, payment instruments are most valuable to the customer if they have universal acceptance. Yet, there is little in the regulatory environment that encourages laggards to adopt or adapt to innovations introduced by disruptors.

14 Though Capitec would not be drawn on a specific figure, it indicated that in recent times, the profile of its clients has changed. With more mid-market customers, it is likely that the majority of its new clients were previously banked. However, even if only 50% of new clients were previously banked, the overall savings for banking clients would come down from ZAR19.6 billion (calculated at 75%) to ZAR19.26 billion per year.

7. Conclusion: Going forward

The Capitec case study analysed here confirms the significance of entry barriers identified in the literature. The duration required for Capitec to build its business, to the point where it was able to challenge incumbents, highlights the magnitude of these barriers. From its establishment in 2002, it grew slowly, mainly due to limited funding and a narrow branch network (although this is likely to be less so for future entrants given technology changes). The experience of other small banks, like UBank, further reinforced the significance of access to finance and regulatory challenges, which have limited UBank's growth since 1994. The article also highlighted the benefits of entry and the resultant competition in the retail banking sector.

The study demonstrates that Capitec's entry into the industry resulted in significantly lower bank charges, which are conservatively estimated at annual client savings of ZAR19.6 billion in 2014. Furthermore Capitec's entry also sparked competition in low cost bank accounts, a development that resulted in established banks offering products that mimicked Capitec's Global One account. This facilitated better services for the low-income clients and enhanced financial inclusion.

However, there are certain areas that can still be improved to facilitate entry and the proliferation of small banks. One of these key areas is the switching process. This could be could be improved by instituting a regulated process with mandatory timelines, as suggested by the Banking Enquiry Panel 2008. The incoming ISO 20022 messaging standard makes provision for automated debit order and incoming (salary) payment switching. With the system having better information on debit order originators, switching will become easier. The South African Reserve Bank should consider a process where consumers are not liable for interest, penalty fees and other charges incurred due to delays in switching bank accounts (Hawthorne et al., 2014). The sharing of FICA information, with clear guidelines on where liability lies in the case of contraventions (the original or second bank), would also ease switching.

A stricter process to ensure that participants adopt and facilitate innovation, in particular further digital innovation, new instruments and other changes is called for. Regulators can play an active role in facilitating innovation. In the UK, the Financial Conduct Authority (FCA) has an innovation hub. The support offered to new and established, regulated and unregulated financial business includes: a dedicated support team; help to innovator businesses to understand the regulatory framework and how it applies to them; assistance in preparing and making an application for authorisation; and a dedicated contact person for a year after an innovator is authorised to conduct business (FCA, 2015). Potential innovators bring ideas to the regulator, not necessarily complete applications, and also their concerns about how the current regulatory framework limits them.

Capitec had aspirations to become a fully-fledged bank, but digital technology and

business model innovations have expanded the range of institutions that can offer transactional banking services. A tiered banking licensing regime could facilitate other modes of entry in the future. Both the National Treasury and the Reserve Bank support the development of a tiered banking licensing and regulatory regime.

References

ABSA. (2003-2015). *Annual reports 2003-2015*. Retrieved from http://www.absa.co.za/Absacoza/About-Absa/Absa-Bank/Reports-and-SENS

ABSA. (2015). History. Retrieved from http://cib.absa.co.za/AboutUs/Pages/History.aspx

Alves, P. (2011). ATM pricing and retail bank competition in South Africa. Paper presented to the Fifth Annual Competition Law Conference, University of Johannesburg, 4-5 October. Retrieved from http://www.compcom.co.za/wp-content/uploads/2014/09/Alves-2011-ATM-pricing-and-retail-bank-competition.pdf

Armstrong, M. (2006). Competition in two-sided markets. *The RAND Journal of Economics*, *37*(3), 668-691.

Ashton, S. (2012, August 1). Capitec Bank: Securing a structural advantage. *Monthly View*. Investec. Retrieved from https://www.investec.co.za/research-and-insights/newsletters/monthly-view-newsletter/august-articles/capitec-bank-looking-for-something-secure.html

Autoriteit Consument & Markt. (2014). *Barriers to entry into the Dutch retail banking sector*. The Hague: Monitor Financial Sector, The Netherlands Authority for Consumers and Markets.

Bikker, J. A., Shaffer, S., & Spierdijk, L. (2012). Assessing competition with the Panzar-Rosse model: The role of scale, costs, and equilibrium. *Review of Economics and Statistics*, *94*(4), 1025-1044. Retrieved from http://repository.uwyo.edu/cgi/viewcontent.cgi?article=1036&context=econ_facpub

Bolin, L. (2003, January 24). Capitec looks to the future. *Fin24*. Retrieved from http://www.fin24.com/Companies/Capitec-looks-to-the-future-20030124

BusinessTech. (2015, May 4). Battle to be the biggest bank in SA. Retrieved from https://businesstech.co.za/news/banking/86284/battle-to-be-the-biggest-bank-in-sa/

CNBC. (2015). Capitec CEO Gerrie Fourie: Sparkling results but do they justify 150% share price surge? Retrieved from http://www.biznews.com/interviews/2015/03/24/capitecs-gerrie-fourie-the-share-price-doesnt-lead-us-business-does/

Capitec. (2003-2015). *Annual reports 2003-2015*. Retrieved from https://www.capitecbank.co.za/investor-relations/financial-results/2014

Church, J. R., & Ware, R. (2000). *Industrial organization: A strategic approach*. San Francisco: Irwin McGraw-Hill. Retrieved from http://202.74.245.22:8080/xmlui/bitstream/handle/123456789/284/Industrial%20organization%3A%20a%20strategic%20approach?sequence=1

Coetzee, G. (2003). *Innovative approaches to delivering microfinance services: The case of Capitec Bank*. Microsave case study. Retrieved from http://www.microsave.net/files/pdf/Innovative_Approaches_to_Delivering_Microfinance_Services_The_Case_of_Capitec_Bank.pdf

Competition Commission of South Africa. (2008). *The banking enquiry: Report to the Competition Commissioner by the Enquiry Panel*. Retrieved from http://www.compcom.co.za/banking-enquiry/

Competition and Markets Authority. (2015). Retail banking market investigation: Virgin Money case study. Draft working paper. Retrieved from https://assets.digital.cabinet-office.gov.uk/media/5571b85540f0b615b8000017/Retail_banking_-_Virgin_Money_case_study.pdf

Dick, A. (2007). Market size, service quality, and competition in banking. *Journal of Money, Credit and Banking, 39*(1), 49-81. doi: 10.1111/j.0022-2879.2007.00003.x

Financial Conduct Authority (FCA). (2015). Project Innovate and Innovation Hub. Retrieved from https://www.fca.org.uk/firms/project-innovate-innovation-hub

First National Bank (FNB). (2015). The world of FNB. Retrieved from https://www.fnb.co.za/about-fnb/the-world-of-fnb.html.

FinMark Trust. (2014). *FinScope financial inclusion report 2014*. Midrand, South Africa. Retrieved from http://www.banking.org.za/docs/default-source/financial-inclusion/finscope/finscope-sa-2014.pdf

FirstRand. (1998). Abridged revised listing particulars. Retrieved from https://trade.imara.co/free/sens/disp_news.phtml?tdate=19980525093633&seq=480&scheme=imaraco

FirstRand Group. (2003-2015). *Annual reports 2003-2015*. Retrieved from http://www.firstrand.co.za/InvestorCentre/Pages/annual-reports.aspx

Govender, J., & Wu, J. (2013). The adoption of Internet banking in a developing economy. *Journal of Economics and Behavioral Studies, 5*(8), 496-504. Retrieved from http://www.ifrnd.org/Research%20Papers/496-504.pdf

Hasenfuss, M. (2010, June 10). PSG's mistake. *Fin24.* Retrieved from http://www.fin24.com/Opinion/Columnists/Marc-Hasenfuss/PSGs-mistake-20100610

Hawthorne, R., Goga, S., Sihin, R., & Robb, G. (2014). *Review of the Competition Commission banking enquiry*. Regulatory Entities Capacities Building Project, Centre for Competition, Regulation and Economic Development (CCRED), University of Johannesburg. Retrieved from https://static1.squarespace.com/static/52246331e4b0a46e5f1b8ce5/t/537f2e91e4b059f40771e6b3/1400843921605/1400407_EDD-UJ_RECBP_Project+Report_App13_Case+Study+-+Banking+Enquiry_Final.pdf

Investec. (2003-2015). *Annual reports 2003-2015*. Retrieved from https://www.investec.co.za/about-investec/investor-relations/financial-information/group-financial-results.html

Maduku, D. K. (2013). Predicting retail banking customers' attitude towards Internet banking services in South Africa. *Southern African Business Review, 17*(3), 76-100.

Mercantile Bank. (2014). *Integrated annual report 2014*. Retrieved from https://www.mercantile.co.za/Stakeholder_Relations/Documents/Financials/2014/Mercantile%20Bank%20Holdings%20Limited%20-%20Integrated%20Annual%20Report%202014.pdf

Moody's. (2015). Credit opinion. Retrieved from https://www.capitecbank.co.za/resources/Capitec_Bank_-_Credit_Opinion_201408.pdf

Motta, M. (2004). *Competition policy: Theory and practice*. New York: Cambridge University Press.

National Treasury. (2010). *Facilitating the implementation of the recommendations of the Banking Enquiry Panel*. Retrieved from http://www.treasury.gov.za/comm_media/press/2010/2010060102.pdf

Nedbank. (n.d.). About history. Retrieved from http://www.nedbankgroup.co.za/abouthistory.asp

Nedbank. (2015). *Integrated annual reports*. Retrieved from https://www.nedbank.co.za/content/nedbank/desktop/gt/en/aboutus.html/financialAnnualResults.asp

O'Donoghue, R., & Padilla, A. J. (2006). *The law and economics of Article 82 EC*. Oxford: Hart Publishing.

Office of Fair Trading. (2010). *Review of barriers to entry, expansion and exit in retail banking*. London. Retrieved from http://webarchive.nationalarchives.gov.uk/20140402142426/http:/www.oft.gov.uk/shared_oft/personal-current-accounts/oft1282

Payments Association of South Africa (PASA). (2015). *Annual reports*. Retrieved from http://www.pasa.org.za/resource.aspx

PSG SENS. (2003). Unbundling of Capitec. Retrieved from http://www.profile.co.za/sens.asp?id=51643

PricewaterhouseCoopers (PwC). (2012). *The new digital tipping point*. Retrieved from https://www.pwc.com/gx/en/banking-capital-markets/publications/assets/pdf/pwc-new-digital-tipping-point.pdf

Rochet, J. C., & Tirole, J. (2003). Platform competition in two-sided markets. *Journal of the European Economic Association*, *1*(4), 990-1029. Retrieved from http://www.rchss.sinica.edu.tw/cibs/pdf/RochetTirole3.pdf

Simatele, M. (2015). Market structure and competition in the South African banking sector. *Procedia Economics and Finance*, *30*, 825-835. doi: 10.1016/S2212-5671(15)01332-5

Simbanegavi, W., Greenberg, J. B., & Gwatidzo, T. (2015). Testing for competition in the South African banking sector. *Journal of African Economies*, *24*(3), 303-324. Retrieved from https://mpra.ub.uni-muenchen.de/43627/1/Testing_for_competition_in_SA_banking_sector.pdf

Solidarity Research Institute. (2009-2015). *Bank charges reports*. Retrieved from https://solidariteit.co.za/en/kategorie/press-releases/

South African Reserve Bank. (2002). *Annual report 2002*. Retrieved from https://www.resbank.co.za/Publications/Reports/Documents/Annual%20Report%202002.pdf

South African Reserve Bank. (2015). Management of the South African money and banking system. Retrieved from https://www.resbank.co.za/AboutUs/Functions/Pages/Management-of-the-South-African-money-and-banking-system.aspx

Standard Bank. (n.d.). History of Standard Bank. Retrieved from http://www.standardbank.com/History.aspx

Standard Bank Group. (2003-2015). *Group annual reports 2003-2015*. Retrieved from http://reporting.standardbank.com

Werksmans. (2013). *Banking regulation in South Africa*. Retrieved from http://www.polity.org.za/article/global-legal-insights-banking-regulation-1st-edition-south-africa-chapter-2013-07-11