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ATM pricing and retail bank competition in South Africa

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Abstract

A country's choice of ATM pricing model has implications for competition in cash dispensing services, competition in the deposit taking market, access to banking services, ATM investment and ownership, and non-bank participation in the payment services industry. This paper explores these issues in the South African context.

1. Introduction

A retail bank must be able to offer its customers access to automated teller machines (ATMs). ATMs are often the most frequent point of contact between a customer and its bank, and ATM prices and availability are often uppermost in retail customers' minds when they consider the overall costs of their bank service, or indeed which bank to choose.¹

A bank can invest in its own ATM network, or join a shared network. South African banks can rely on Saswitch², which is part of Bankserv³, and enables any bank card holder to use any ATM. This interoperability generates significant pro-competitive and consumer benefits. Perhaps most important, it removes a significant barrier to entry into the deposit-taking market.

However, interoperability requires competitors to reach agreement on an array of things. In the case of Saswitch, this includes agreeing on the price banks pay each other when customers don't use their own banks' ATMs. This price agreement may itself be anti-competitive, and it may contribute to anti-competitive outcomes in the deposit taking market.

Three main questions arise. First, how does ATM pricing influence competition in the deposit taking market, and vice versa?⁴ Second, is an ATM pricing model dependent on interbank payments fixed by agreement necessarily anti-competitive? Third, if so, what alternatives should be explored, and what risks does each present?

This paper attempts answers to these questions in the South African context. It draws on the on the Banking Enquiry.⁵ As many people know, the Banking Enquiry's recommendation to adopt a so-called 'pure' direct charging pricing model in South Africa has not yet been accepted by government. It is worth trying to understand why this is the case, and what research and policy questions remain unanswered.

¹ This dynamic is slowly changing. Internet and telephone banking, and new cash dispensing channels, are reducing the significance of the ATM in the bank-customer relationship.

² Saswitch had a competitor, Multinet, and both systems launched in 1985. Saswitch proved superior over time, and Multinet faded out of use. Note that Visa's and MasterCard's networks are direct competitors to Saswitch, but have never gained popularity among South Africa's banks.

³ Bankserv Africa ('Bankserv') is South Africa's central (and only) interbank switch for all transactions requiring more than one bank to be involved. It is owned by the banks, and was established at the behest of the South African Reserve Bank. Bankserv's infrastructure serves all of South Africa's payments systems, be they electronic or paper-based.

⁴ Note that the phrase 'bank competition' is nebulous. Banks offer multiple interrelated services, and often price each service, or cluster of services, individually. This paper prefers 'competition for depositors' or 'competition in the deposit-taking market'.

⁵ See the Technical Report of the Banking Enquiry, released on 12 December 2008. Available at <http://www.compcom.co.za/enquiry-in-to-banking>.

2. ATM basics

A typical ATM transaction involves three parties—the ATM owner (the *acquirer*), the customer’s bank (the *issuer*), and the customer. When the customer is making an ‘on us’ ATM transaction, the issuer and acquirer are the same party, and no interbank communication is required. It is only when Bank A’s customer uses Bank B’s ATM—known as an ‘off us’ transaction—that Saswitch becomes necessary. This holds true even if a non-bank company⁶ owns and operates the ATM on behalf of Bank B.⁷

To complete an off us transaction, the acquiring bank communicates, via Saswitch, with the issuing bank, to authenticate and verify the identity of the card-holder and the card-holder’s account balance. If everything is in order, the issuing bank will release the requested funds and the acquiring bank will provide them to the customer on behalf of the issuing bank.

The service the acquiring bank provides to the issuing bank’s customer is not free. Under an arrangement that began in 1985 with the launch of Saswitch, the issuing bank always pays an agreed price to the acquiring bank. This payment is known as *carriage*.⁸ It was last increased in the late-1990s, to R3.25 for the first R100 withdrawn plus 0.65 per hundred thereafter. It remains at that level today.

Table 1: History of carriage in South Africa

Date	ATM Saswitch history	Carriage fee history
1980s	Banks roll out own ATM Infrastructure	
1985	Saswitch launched	R 0.50
1989	Carriage fee increase (amount uncertain)	R1.00 + 15c handling fee? R1.00 + 50c/R100?
1993	Bankserv established, Saswitch incorporated into Bankserv	
March 1997	Carriage fee increased by Standard Bank. All others follow	R2.00 + 50c/R100
March 1999 to date	Carriage fee increased by Standard Bank. All others follow	R3.25 + 65c/R100
2003	Banks’ first bilateral price negotiations for mini-ATMs commences	

Source: Table 1, chapter 5, page 154, Technical Report of the Banking Enquiry

⁶ ‘Non-banks’ encompass a wide variety of companies that do not own a banking license but compete in the markets for banking-related payment services.

⁷ Banks own the vast majority of ATMs in South Africa. Non-bank activity in this industry is very recent but is growing rapidly. Even so, non-banks are legally unable to acquire an ATM transaction and so, for now, may only act on behalf of a licensed bank.

⁸ In most other countries it is called interchange, or ATM interchange. This paper will keep to South African convention.

So, for a R500 off us cash withdrawal, the issuing bank must pay the acquiring bank R5.85 in carriage. Carriage payments are not transferred between banks on a real-time basis. Rather, Bankserv periodically tallies how much each issuing bank owes each acquiring bank, and arranges for the relevant accounts to be debited accordingly.

Issuing banks in South Africa typically do not absorb carriage or Saswitch costs. These are passed onto the issuing bank's customer in the form of an off us fee. The off us fee has many different names, including 'convenience fee', 'Saswitch fee'⁹, 'off us fee', 'foreign fee', 'other ATM fee', and even 'disloyalty fee'. These fees are often much higher than the carriage costs they are ostensibly supposed to cover, and are also higher than typical transaction fees charged for on us transactions. This is an indication that banks possess market power when pricing ATM services.

In their research into ATMs in 2000 Australian authorities managed to establish that carriage fees were about double the costs of providing a foreign ATM withdrawal, and that off us fees charged by issuers were higher again (Reserve Bank of Australia and Australian Consumer and Competition Commission, 2000). This study underpinned the Australian authorities' decision to scrap the carriage arrangement and introduce what is known as direct charging. In this model there are no inter-bank payments when an off-us transaction occurs. Rather, the ATM user pays the ATM owner directly. In Australia it is common to find that the ATM owner is not a bank.

The Banking Enquiry did not manage to establish whether or not current carriage levels in South Africa bear any relationship to the cost of facilitating an off us transaction. It only established that off us fees are usually substantially higher than the carriage that must be paid to the acquiring bank. On average in 2006, for example, an issuing bank kept 65% of the off us fee it charged its client when making when a R100 off us withdrawal. The acquirer received carriage to the value of about 33% of the off us fee, while the Saswitch fee paid to Bankserv accounted for about 1%.¹⁰ The Banking Enquiry nevertheless recommended the introduction of direct charging in South Africa, and modeled its proposals closely on the reform plans that Australian had in place in 2007 and 2008.¹¹

3. Why do banks agree to share their ATMs with their rivals?

ATM networks link two complementary *and interdependent* services: deposit-taking and payment services (the main one being cash withdrawals). ATMs do not constitute an independent market or service. There is no need for ATMs in the absence of deposit accounts

⁹ It is technically incorrect to call carriage a Saswitch fee, because Saswitch charges banks a separate fee to cover the use of Bankserv's processing infrastructure. This fee is typically very small (it was about 13.5c before volume discounts in 2008).

¹⁰ Technical Report of the Banking Enquiry, 2008, chapter 5, Table 2, pg 171. These ratios apply to the big four. Capitec keeps a smaller proportion of the (smaller) foreign fee it charges its clients. In some instances Capitec will make a loss.

¹¹ Australia implemented direct charging in March 2009. The final implementation looked quite different to the plans.

and, increasingly, there is little point in a bank attempting to offer deposit services without also offering access to ATMs.

Retail banks compete first and foremost for depositors—this is their central focus. A bank's ATM network is often an important part of its strategy for gaining new customers. Many consumers consider the size and availability of a bank's ATM network an important factor in choosing a bank.¹² Banks also consider potential carriage revenue earned from off us transactions when choosing ATM locations, and compete for the best ones among those available.

ATM interoperability makes different banks' ATM networks substitutable in the eyes of consumers. Intuitively, banks with large ATM networks should be reluctant to make their ATMs available to rivals' customers. As soon as they do, the deposit market offerings of their rivals, who may own fewer ATMs, become more competitive. Indeed, an interoperable ATM network facilitates entry into the deposit market—a new bank need not invest huge sums in its own ATMs. One need only look at the rapid growth of Capitec and African Bank for pertinent examples.

Why then, do banks with large ATM networks agree to make their ATMs available to rivals' customers? Why would large banks invest in developing an inter-ATM communication system like Saswitch?

The Banking Enquiry tried, unsuccessfully, to establish why Standard Bank, which owned by far the largest ATM network in the 1980s¹³, decided to contribute to building an interoperable national ATM network. Why did Standard Bank decide to concede the significant advantage it had in the deposit market by virtue of its bigger ATM network? All we know is that Standard Bank unilaterally increased the carriage it demanded of rival banks twice in the late 1990s (see Table 1 above). One of the reasons given for this predictably had to do with Standard Bank's concerns that other banks were 'free riding' on its ATM investments.¹⁴

Matutes and Padilla (1994) developed a seminal model of ATM and deposit market competition that attempts to explain why banks might want to share their ATM networks. They first note the main incentive to do so. By sharing ATMs, all banks can offer their depositors more convenient ATM access, which reduces their search costs. In exchange for this, banks can offer their depositors lower rates of interest on their positive balances, or charge them higher deposit account fees. Matutes and Padilla (1994) call this the *network effect* or *externality*. It is what banks gain from sharing their ATMs, and equates to the consumer's willingness to pay for a larger (interoperable), more convenient ATM network.

¹² See the consumer survey carried out by the Banking Enquiry, described on page 151-2 of Chapter 5 of the Technical Report, December 2008.

¹³ Interestingly, building societies pioneered ATMs in South Africa in the 1970s. Standard Banks first ATMs were deployed in 1981. But it and the other commercial banks quickly surpassed the building societies' ATM investments.

¹⁴ Chapter 5, page 164, Technical Report of the Banking Enquiry, December 2008.

Matutes and Padilla (1994) then note the above-discussed problems for banks created by sharing their ATMs with each other. By making their ATMs substitutable in the eyes of depositors, banks actively contribute to an increase deposit market competition. This is known as the *substitution effect* that arises from the introduction of ATM interoperability.

There is a trade-off between the substitution and network effects. To find equilibrium, Matutes and Padilla (1994) assume that banks cannot charge usage fees for any part of their ATM service. That is, banks may levy no off us fees on their own customers, and no surcharges¹⁵ directly on the customers of rival banks. This makes on us and off us transactions equivalent in the eyes of consumers, maximizing the substitution effect. Unless the network effect is sufficiently large, full interoperability is unlikely to result. Partial sharing is the most likely outcome; no sharing at all is also possible.

Matutes and Padilla (1994) compare their own predictions with real world outcomes. They argue that in countries where deposit market competition is weak, such France and Belgium, the substitution effect arising from sharing ATMs is insignificant. This is because people rarely switch banks for many other reasons that have nothing to do with ATM interoperability, or lack thereof. Thus full ATM sharing is often found.

That is, in uncompetitive deposit markets banks are able to fully exploit the network effect (higher deposit account prices/lower interest rates) without worrying about their depositors moving to rival banks. In countries with more competitive markets for depositors, such the USA, partial sharing, joint ventures, or regional networks are common—the substitution effect is a bigger concern to banks in these countries.

4. The effects on deposit market competition of carriage-based ATM pricing

In most countries, South Africa included, interoperability is now taken for granted. It is also most often underpinned by a carriage arrangement, because acquiring banks typically insist on some form of carriage to compensate the costs they incur when servicing a rival's customer. This can be considered the wholesale price of an off us ATM transaction.

Retail pricing of these transactions in a carriage system varies substantially. In many European countries, banks do not levy any explicit ATM usage fees on their customers. European consumers most often pay a fixed monthly fee to own an 'all you can eat' deposit account, which includes on us and off us ATM transactions.

In South Africa, as we know, banks pass on carriage costs to their depositors, and add a significant margin. Although South African banks sell bundles of transactions for fixed monthly fees, these bundles rarely include off us ATM transactions.

¹⁵ Surcharging is like direct charging—the acquirer, in an off us transaction, will charge the rival bank's customer directly for the use of the acquirer's ATM. In some countries acquirers levy surcharges in addition to receiving carriage from the issuer, in effect making the ATM user pay twice for an off us transaction.

Australia has implemented a direct charging model, which scraps carriage and allows the acquirer or ATM owner to charge the ATM user directly. The fee is retrieved either by deducting it from the cash withdrawn, or by having the issuer pay the acquirer via the interbank system. In the case of the latter the issuer can choose to absorb its customer's direct charges, rebate a portion of them, or pass them on fully. Direct charging allows for considerable flexibility, as ATM prices can vary by time and location. And although banks could levy direct charges on their own customers for on us transactions, they tend not to in Australia.

The system in the USA is a hybrid of carriage and direct charging. Acquiring banks receive carriage when they process an off us transaction, *and* they surcharge the ATM user directly. Surcharges are typically retrieved from the issuing bank rather than being deducted from the cash amount withdrawn. Banks, depending on their market position, will decide how much of these off us ATM costs to pass onto their depositors; it is common for smaller banks to offer significant rebates on the surcharges their depositors incur.

4.1. Can carriage result in efficient pricing?

Economides and Salop (1992) examine carriage by applying a familiar model in which competitors sell complementary components of a good under different market conventions. The application to ATMs is quite straightforward. Two banks each sell deposit account services and ATM access. If banks make their ATM networks interoperable, ATM access is complementary to deposit account services, regardless of which bank produced the deposit account service. An alternative way to view this relationship is to notice that, when an off us ATM transaction is made, a shared ATM network resembles a vertical supply chain more than it does a conventional network industry (Economides and White, 1994).

According to Economides and Salop (1992) this complementarity (or vertical relationship) means that the final price for the composite good is lower with joint price setting than it would be if the producers of the complements (the competitors) set prices independently. This fundamental result derives from the fact that joint price setting by firms supplying complements eliminates the problem of double marginalisation that would otherwise arise.

With independent fee setting, the action by one firm to increase its price does not take into account the decline in demand for the other firm's (complementary) output. As a result, final prices to consumers for the composite good (service)—an off us ATM transaction involving a deposit account held at Bank A and the use of Bank B's ATM—can exceed the joint profit-maximising price level.

Economides and Salop (1992) conclude that the scenario in which an independent 'board of directors' of an ATM network sets the carriage fee applicable to all network members at marginal cost, surcharging is not allowed, and banks can independently determine the off us fee, the sum of the final prices for deposit and ATM services combined is always lower than it would be under independent price setting. Joint fee-setting (carriage) *can* therefore be efficient

from a consumer welfare perspective. Whether it is in fact efficient depends on the extent to which real world circumstances diverge from the assumptions made above.

4.2. Competition concerns

The Banking Enquiry characterized the market for personal transaction accounts (deposits) as a tightly-knit oligopoly, with a fringe of smaller players, such as Capitec, who are yet to represent any serious competitive constraint to the big four banks. The big four possess significant market power, explained by a range of familiar demand- and supply-side reasons. On the demand side, product complexity and high switching costs ensure low customer ‘churn’ or high customer inertia. On the supply side the Panel identified significant barriers to entry such as high fixed costs, scale economies and restrictive access regulations. This combination of demand- and supply-side factors limits entry despite high profits.

This context is important when assessing the competition concerns around carriage specifically. The following empirical observations have been made by competition authorities in different parts of the world.¹⁶

- Although ATM technology, deployment and communication costs have decreased over the past decade, carriage fees have remained largely unchanged.
- Although there have been some new entrants, they have not created downward pressures on carriage fees. Indeed, new entrants have an interest in high carriage fees.
- Evidence in many countries suggests that carriage fees involve a substantial mark-up over the average cost to acquirers of facilitating off us ATM transactions. The best examples where this has been established include the UK and Australia.
- Off us fees, when they exist, are on average set substantially above carriage fees. The gap between average costs and carriage fees could have been expected to have attracted new entrants into the provision of ATM services.

In South Africa we do not know what has been happening to the cost of maintaining ATMs over the past decade. Technology costs have probably dropped in line with global trends, but South Africa faces significant challenges such as those presented by violent crime and fraud. Since we don’t have an indication of costs, we have no way of telling whether the carriage level in South Africa exceeds them or not. Note that this was the central factual basis for intervention by authorities in the UK and Australia.

But we do have strong indications that South African issuers secure a substantial mark-up over the carriage costs (marginal costs) they incur when their customer uses a rival’s ATM. The Banking Enquiry found that in 2006, on average across the big four banks, the issuer retains about 65% of the off us fee it charges its client for a R100 off us withdrawal. The acquirer

¹⁶ The following is taken from Donze and Dubec (2006).

receives out of that fee about 33% in carriage.¹⁷ It seems unlikely that other processing costs on the issuing side could account for the markup.

Another concern to which the Banking Enquiry drew attention was the sharp decline in volumes through Saswitch (i.e. off us transactions) following the second-last increase in interchange, which occurred in 1997.¹⁸ By 2006, of the close to one billion ATM transactions made annually, only around 15% went through Saswitch. The Enquiry argued that this small fraction does not signify that there is little demand for off us ATM withdrawals, but rather that there is restricted demand for these withdrawals because of the high prices banks have been able to impose.

Finally, the Enquiry observed that ‘on-us’ ATM prices have also risen over time, and began to rise noticeably only after carriage was significantly raised in the late 1990s. The Enquiry therefore concluded that the carriage arrangement has indirectly allowed banks to increase on-us prices. It argued that high off us prices, in part driven by increases in carriage, has enabled banks to entrench their “...hold over [their] own customers in respect of [their] own ATM services, thus providing a shelter for uncompetitive on-us ATM pricing as well.” The Panel concluded, therefore, that the “... interbank arrangements regarding carriage in off us transactions served to raise price and restrict output throughout the ATM network”.¹⁹

These arguments led to the Enquiry’s conclusion that scrapping carriage in favour of direct charging will generate greater price competition for off us ATM transactions, in turn restricting banks’ ability to raise on-us prices to the extent that they have done so in the past.²⁰

As noted earlier, however, carriage cannot be directly responsible for the large gap between it and the high off us fees that banks charge. This gap is a function of market power in the deposit taking market. Therefore, to understand how carriage might contribute to anti-competitive outcomes, we must explore in more depth the ways in which carriage may weaken competition in the deposit taking. As will be shown below, carriage indirectly supports or promotes banks’ market power in deposit taking.

4.3. Carriage as a ‘collusive device’

Matutes and Padilla (1994) showed that carriage may encourage interoperability, but it isn’t strictly speaking a necessary condition for that outcome. The network externality created by ATM sharing can be incentive enough for banks to agree to share ATMs. However, as the authors showed, this holds only where there is weak deposit market competition.

Where there is strong deposit market competition, banks must find ways to reduce the impact of the substitution effect before they agree to share ATMs. Carriage is one way of achieving this. Carriage counteracts the substitution effect by making “banks less willing to bid to attract

¹⁷ See Table 6 in Chapter 5 of the Technical Report of the Banking Enquiry, 2008, pg 177.

¹⁸ See Figure 1 in Chapter 5 of the Technical Report of the Banking Enquiry, 2008, pg 168.

¹⁹ Technical Report of the Banking Enquiry, 2008, chapter 5, pg. 167-168

²⁰ Before the increases in interchange the differences in costs to banks and therefore prices to consumers were negligible between foreign and on-us transactions.

depositors, because depositors cause costly [off us] withdrawals” (McAndrews, 2003: 150). In other words, carriage softens deposit market competition by reducing banks’ incentive to try and steal depositors from rivals.

Donze and Dubec (2006) extend the findings Matutes and Padilla (1994) by exploring the ways in which different types of ATM retail pricing affects competition in the deposit market. Their model assumes full interoperability with carriage that is jointly determined by competing banks. These banks only sell two things: a deposit account and ATM services. All customers pay a fixed fee to own a deposit account, and this buys unlimited access to the interoperable ATM network. In other words, they assume no discrete ATM usage fees, which common in Europe but not in South Africa.

As there are no discrete ATM usage fees, all ATMs are equivalent in the eyes of consumers, *ceteris paribus*. This means customers have no need to worry about avoiding off us fees, and therefore do not consider the size of a bank’s ATM network when choosing where to open an account. Banks therefore do not deploy ATMs in an attempt to win depositors, but only to compete for off us withdrawals to earn more carriage revenue.

Donze and Dubec (2006) focus on what happens as carriage rises. “On the one hand, the competition for processing withdrawals is strengthened, more ATMs are opened, and banks’ deployment costs increase. On the other hand, each bank is less willing to accept depositors because the [off us] withdrawals they make induce high [carriage] outflows. Consequently the competition for deposits is relaxed, account fees increase *and banks’ revenues rise with the [carriage] fee*” (Donze and Dubec, 2006: 3, emphasis added).

Put differently: “At the wholesale level, banks choose the level of the interchange fee jointly in most countries. Some economists have argued that this level could be reflected in the ATM usage fees or the account fee so that banks may use the collective setting at the wholesale level to relax price competition at the retail level (see the Cruickshank report (2000) for the UK, Balto (2000) for the USA, Donze & Dubec (2006) for France)” (Donze and Dubec, 2009: 2).

This is because, if discreet off us fees are not allowed, carriage costs must be recovered in the deposit market—the flat fee for the account must rise. This would not necessarily be of concern were it not for the fact that Donze and Dubec (2006) show that the latter effect—softened competition for deposits and higher account prices—outweighs the increased competition for withdrawals, such that bank profits rise with carriage.

The profit-maximising carriage level is constrained only by the ‘reserve price’ of the marginal deposit account customer. The feedback between higher carriage, weaker deposit market competition, and higher deposit account fees means that banks will keep raising carriage and account fees until the marginal customer would prefer not to open a bank account. Therefore, “By banning usage fees banks can maximize consumers’ gross surplus and extract it back through the account fee” (Donze and Dubec, 2009: 27). This is a startling result, but it shows clearly how the interrelationship between the ATM ‘market’ and the market for depositors allows jointly-set carriage to be used as a collusive device.

What happens when banks are allowed to charge explicit off us fees? This scenario is applicable to South Africa. Donze and Dubec (2009) introduce off us fees into the model described above and set them equal to carriage. These fees differentiate banks' ATM networks in the eyes of customers. Banks with large ATM networks automatically gain an advantage *in the deposit market*, because now customers have an incentive to avoid off us fees as often as possible.

Deploying an ATM in this scenario therefore earns a bank more carriage revenue *and* makes its deposit offering more attractive. Therefore, for a given carriage fee, ATM deployment is higher in this scenario than when no off us fees are allowed. This is good for consumers, especially if they are sensitive to travel costs.

In addition, because carriage costs are now recovered explicitly through off us fees, and not by increasing the flat account fee, increases in carriage (which cause increases in off us fees) reduce demand for off us transactions. This restricts banks' incentive and ability to raise carriage. This is also good for consumers, because they are very likely, in the first scenario, to be paying for off us transactions they never use.

The fact that extra ATMs are deployed is also bad for bank profits. Deployment will rise along with carriage, and the increased carriage revenue from processing more off us withdrawals initially outstrips the rising deployment costs. So profits rise with carriage, initially. After a certain carriage level is reached, profits will begin to decline. This is because demand for off us withdrawals will begin to slow in response to higher off us fees (which rise with carriage), while deployment costs continue to rise. The profit-maximising level of carriage in this second scenario entails a greater number of ATMs being deployed than in the first scenario, meaning higher costs and lower profits than in the first scenario.

In Donze and Dubec's (2009) model, therefore, banks prefer the first scenario. Consumers prefer the second, especially if they have high travel costs. So, as the title of their paper suggests, it may be better for consumers to explicitly pay for their ATM usage.

This may seem counter-intuitive, but it is the likely outcome. Sustaining the first scenario requires banks to all fail to charge off us fees. This is not stable in the absence of an enforceable agreement. The temptation is too great to use off us fees to differentiate ATM networks in an effort to gain an advantage in the deposit market. It is not individually rational for a bank with a large ATM network to forego the chance at winning depositors who wish to avoid paying off us fees. This is perhaps the clearest illustration of why ATM prices cannot be analysed independently from the dynamics of deposit market competition.

This suggests that the retail pricing model seen in South Africa is a natural outcome.²¹ It also raises the obvious question why this outcome has not obtained in those European markets where one finds no explicit ATM usage fees. The UK is a good example. UK banks and ATM owners are allowed to choose between a carriage system²² and direct charging (but not both).

²¹ This is not to say that the retail price *levels* of ATM services are 'natural'.

²² The carriage system in the UK is known as LINK. The LINK board, in tandem with regulators, sets carriage fees independently of the banks, at levels equal to some accepted measure of costs.

Banks routinely pick carriage, and do not charge explicit off us fees. And, generally speaking, monthly account fees are also low. What explains this?

The simple answer is inertia: UK retail banks have always been under pressure, from politicians as much as the market and consumers, to keep transaction services ‘fee free’. There is a strong commitment in the UK to the traditional notion that retail banks must earn profits from the spread between interest rates on the deposits and loans. It is therefore not surprising that interest rates on deposits are extremely low. It is also unsurprising that penalty fees for dishonoured debit orders and ‘unarranged overdraft facilities’ are very high. UK banks have been forced to recover the costs of transaction services in the only ways they can, given the public pressure to keep account fees low. The idea that banks can earn enough profit from borrowing short and lending long is naïve, but valuable to politicians vying for consumers’ votes.

5. Is carriage a contravention of the Competition Act?

Carriage can facilitate a softening of competition in the deposit market. It also entails banks jointly choosing a price that they will pay each other. It is thus natural to ask if carriage arrangements could amount to a contravention of the Competition Act. What follows is a classic example of how difficult it can sometimes be to fit a set of facts into the requirements of the law.

The Banking Enquiry recommended focusing on section 4(1)(b)(ii)—market division by customer allocation. The legal logic is as follows. If we accept that carriage is not necessary for interoperability, we can then say that it is technically and economically feasible for the acquirer of an off us transaction to charge that ATM user directly, rather than receiving payment from the user’s bank. The only reason why this practice has not emerged, which involves the ‘normal’ direct relationship between seller and buyer, is that the rules and regulations underpinning interoperability are premised on carriage.

These rules acknowledge the fact that during an off us transaction in a carriage system the acquiring party has no direct relationship with the ATM user. The Banking Enquiry actually quoted the Payment Clearing House (PCH)²³ agreement for ATMs thus: “It is recognised that the parties will in the normal course of business conducted in terms of this agreement be obliged to process transactions *on behalf of the other party* and as such are entitled to mutually agreed upon compensation in respect of such services rendered” (Banking Enquiry, Chapter 5: 185, emphasis added). The ‘other party’ is the issuing bank.

The PCH agreement was drafted by and exists between banks. As can be seen from the quote above, it has interpreted the carriage system as requiring an acquiring bank to process an off us ATM transaction on behalf of issuing banks. This, the Panel argued, has the effect of allocating customers to their own banks for all ATM transactions, thereby preventing competition for off us transactions. The Panel argued further that eliminating competition for off us transactions has

²³ An agreement setting out rules for participating in the ATM payment stream. PCH agreements exist for each payment stream (e.g. cards, cheques, EFTs) and form the foundations of the South African payment system.

sheltered the prices of on us transactions, allowing them to rise above competitive levels. The basic idea is that, through carriage, issuing banks have permanently captured their customers, and can charge them supra-competitive prices.

The Panel noted the point made by the Tribunal in *Nedschroef*²⁴ that market or customer allocation cases only require firms to be potential competitors. Banks are arguably potential competitors for off us transactions, and would be actual competitors were it not for carriage, so the argument goes. The Panel also argued that the anti competitive effects of carriage are substantial and demonstrable (higher on us prices being the main anticompetitive outcome), and therefore recommended that the Commission also consider a section 4(1)(a) investigation.

There is an argument that when an off us transaction occurs, banks are, strictly speaking, in a vertical relationship rather than a horizontal one. The acquiring bank provides an input or 'service' to the issuing bank by enabling the issuing bank's customer to access his or her account. Carriage is the compensation an issuer pays and acquirer for this input.²⁵ Since the applicability of section 4 to any particular conduct is dependent on firms being in a horizontal relationship, this argument is worth exploring. It appears spurious.

Even if it is true that banks are in a vertical relationship during the exact moment of an off us transaction, it also remains true that competing banks decided to implement a uniform carriage fee. In a traditional vertical supply relationship, supplier and customer alone negotiate and agree on the price the customer will pay the supplier for services rendered. That does not occur for off us transaction 'services' provided by acquirers to issuers. Pairs of banks have not separately negotiated agreements to 'supply' each other with off us services. Had they done so, it is unlikely that carriage would be uniform, because each bank has a different number of ATMs deployed, and 'supplies' each other bank with different quantities of off us transactions.

Furthermore, in *The Competition Commission and others versus United South African Pharmacies and others*²⁶ the Tribunal ruled that "What the Act requires by the notion that parties are in a horizontal relationship is an allegation that they are in the same line of business ... Proof of an agreement between firms in the same line of business, which has the effect of substantially preventing or lessening competition in a market, would suffice"²⁷

In the case of off us transactions, the big four banks are in the same line of business, and they are *potential* price competitors for off us ATM transactions (they already compete on location). They would compete on price were it not for the carriage arrangement.²⁸ It is therefore highly likely that, if carriage was assessed under the Competition Act, section 4 would be the most suitable section to employ. Section 5(1) does not appear to be appropriate in light of the facts.

²⁴ The Competition Commission vs Nedschroef Johannesburg (Pty) Ltd, case number 114/CR/Nov07.

²⁵ This argument was first raised by Absa during hearings in 2007.

²⁶ Case number 04/CR/JAN02.

²⁷ See page 8 of the Tribunal's ruling.

²⁸ This last assertion does not apply, however, to banks with no ATMs. When the client of a bank such as Investec, with no ATMs of its own, uses an ATM, Investec is always in a vertical relationship with the bank that owns the ATM being used. This relationship is one-way, and Investec is not a potential competitor for off us ATM transactions, as it has no ATMs. But even a bank like Investec could be considered a potential competitor for off us transactions—it has the wherewithal to deploy ATMs if it so chooses.

Within section 4, however, there are three further challenges that would need to be overcome. First, the way in which carriage came about in South Africa seems to demand a characterization exercise of the type carried out by the Supreme Court of Appeal in *ANSAC*.²⁹ Banks could rely on the following paragraph in that judgement: “The concept of ‘price fixing’, both in lay language and in the language of the Act uses, may, for example, be limited to collusive conduct by competitors that is *designed to avoid competition*, as opposed to conduct that *merely has that incidental effect*” (emphasis added).³⁰

Based on the historical information the Banking Enquiry managed to establish, it seems wrong, in light of *ANSAC*, to characterise the purpose of the carriage arrangement as anti-competitive. Carriage was not designed to avoid competition—it was natural consequence of, or requirement for, ATM interoperability, in the mid-1980s. The Banking Enquiry conceded that the banks responsible for introducing carriage did not seem to do so because they wanted to restrict competition.

And second, as discussed above, it may prove difficult to identify specific anti-competitive effects that can be attributed to carriage. It is unlikely that the Banking Enquiry’s argument that carriage prevents competition for off us transaction is accurate—as shown above banks *do* compete for off us transactions. They compete for the best locations as they chase carriage revenue and seek to entice depositors sensitive to the size of a bank’s ATM network away from rivals. Even though carriage prevents them from competing directly on the price of these transactions, location-based competition surely cannot be ignored.

Moreover, recall that even though carriage softens deposit market competition, it cannot completely eliminate the substitution effect arising from interoperability. The net effect of interoperability on competition for depositors must be positive. This raises the issue of the appropriate counterfactual to use when assessing the anticompetitive effects that have been caused by carriage.

The counterfactual relied upon by the Banking Enquiry was a world in which acquirers charge off us ATM users directly. With direct charging, the argument goes, price competition for off us withdrawals would be possible and would be strong. This would expose on us fees to greater competition too. Compared to the *status quo*, this does indeed seem like a more competitive scenario.

But the appropriate counterfactual is not what would be possible if regulators intervened and reformed a country’s ATM pricing model.³¹ The appropriate counterfactual in this case, as in any case, is that which would obtain were it not for the impugned conduct (carriage). Given our understanding of the history of Saswitch, that is highly likely to have been world with no ATM

²⁹ *American National Soda Ash Company and another v Competition Commission and others* 2005 (6) SA 158 (SCA).

³⁰ *Ibid*, paragraph 49.

³¹ As discussed below, the implementation of direct charging in Australia was led by regulators. Australia showed that industry-wide reform effort, coordinating all banks and ATM owners, must be led by a regulatory authority. There are too many conflicts and other challenges to address during such a process for it to be left to industry alone.

interoperability, not direct charging. As shown above, a move from no interoperability to interoperability with carriage must result in a net increase in deposit market competition, however small.

This suggests strongly that carriage could not properly be assessed under the *per se* provisions of section 4, and should rather be assessed under its rule of reason provisions. If so, one is then only left with the idea that carriage is no longer required for interoperability, but remains in use. One might argue that any pro-competitive contribution carriage may have made in the past is long gone, and only the anti-competitive effects remains. One could argue further that the fact that banks persisted with it knowing that it had outlived its purpose, and knowing that it helps to soften competition for depositors, amounts to a section 4 contravention.

This line of argument carries merit. But recall that carriage last changed in South Africa in 1998. According to the banks, the reason it hasn't changed since then is because the Competition Act came into force in the same year. Banks, so they say, have adopted an extremely cautious approach to competition law, particularly section 4, and claim that they cannot and do not ever discuss, collectively, the possibility of changing the carriage level, or indeed changing the entire pricing model. Banks stated repeatedly during the Banking Enquiry that since 1998 carriage and interchange (a similar interbank payment made in, *inter alia*, off us card transactions) has been negotiated on a strictly bilateral basis. Banks have taken legal advice arguing that this is the only way to discuss interbank payments without risking prosecution under section 4. They are probably wise to err on the side of caution in this respect.

A coordinated industry effort would be necessary to move away from carriage and implement, for example, direct charging. Regulatory authorities would also need to be involved, as they were in Australia. Technically, therefore, banks could argue that they have been prevented by competition law from attempting to reform a system that may be causing anticompetitive effects. They could also argue that they have had no indication from the relevant regulators (the National Treasury and the South African Reserve Bank) that any reform should be discussed or attempted.

Overall, therefore, an investigation into carriage under either subsection of section 4 appears to be fraught with several risks. It is quite likely not the most appropriate way of introducing the kind of reform identified by the Banking Enquiry as being necessary for addressing the competition concerns associated with the existing arrangement.

6. Should South Africa move on from carriage?

All agree that carriage is no longer needed to maintain interoperability. Given the problems it causes, should South Africa not be seeking alternatives? As has happened in Australia, one could consider implementing direct charging. The UK has chosen a hybrid system where ATM owners are given a choice between receiving carriage, regulated at cost, and charging directly. The US has for a long time operated a surcharging model, where acquiring banks receive carriage and charge off us ATM users directly. Which of these should South Africa choose?

That question cannot be answered without a proper consideration of some prior issues. What are the trends in ATM deployment, and cash dispensing technology? Is accessing cash becoming easier and cheaper in South Africa, or not? What are South Africa's financial sector policy priorities concerning ATMs, given the country's desperate need to improve access to financial services?

These questions are important because the pricing model chosen affects ATM deployment decisions and ownership models as much as it does ATM prices. In fact the little evidence there is suggests that reforming the pricing model has a greater impact on deployment and ownership than it does on pricing.

The US and Canada have the highest density of ATMs per person anywhere in the world (Donze and Dubec, 2009). Neither country consciously adopted a particular pricing model. A carriage arrangement first emerged when ATM network owners, which are not necessarily banks, first began to share their networks with each other. Surcharging for off us transactions emerged much later, and grew quickly. To remind the reader, surcharging in this context means that when a customer of Bank A uses Bank B's ATM, on top of Bank A paying carriage to Bank B, the customer will pay a surcharge directly to Bank B.

It has meant that off us ATM transactions in the US are very expensive and some issuers, as part of their customer retention strategy, rebate their customers the value of the surcharges they incur. This does not seem like a consumer-friendly outcome, but it has produced an extremely high prevalence of ATMs. Search costs in the US are therefore very low (Donze and Dubec, 2009).

A similar effect developed in the UK after authorities elected to regulate carriage at cost, and also allow direct charging. Non-bank ATM operators responded by deploying hundreds of charging ATMs in under-serviced (low volume) areas. Some high street banks also sold parts or all of their ATM networks to these non-bank operators, reducing the number of 'free' ATMs available. This is a natural consequence of regulating carriage at cost in a country where banks encounter such fierce opposition to explicit fees for payment services. Again, however, access to ATM services increased, albeit it at prices exceeding high street levels (Donze and Dubec, 2009).

In Australia, direct charging was partly motivated by Parliamentary concerns over dwindling access to financial services in remote areas of the country. Direct charging was seen as a chance to access to ATM services in remotes areas just as much as it was seen as a means to make ATM pricing more competitive. And, if one reads Australia's planning and policy documents around direct charging, it is explicitly recognised that new direct charging ATMs in remote areas will cost more than those available in urban areas.

Surcharging for off us transactions, in any form, makes low-volume ATMs in far-flung areas more viable, but only at high prices. Can this tradeoff be tolerated in a country like South Africa? If it can, only then should the competition risks associated with direct charging be closely analysed. If it cannot be tolerated, then South Africa should not consider any pricing model involving surcharging.

6.1. Risks of direct charging

Let's assume for argument's sake that South Africa can tolerate ATMs being more expensive in remote areas than they are in cities. What are the *competition* risks posed by direct charging? Again, it is not necessarily competition in the ATM space that we are most concerned with. We should at all times ensure we understand how changing an ATM pricing model will affect competition in the deposit market—this is where, over the longer term, overall efficiency gains in the retail banking sector will come from.

The Panel noted that, “Whether in fact ATM charges do come down [under direct charging] will depend upon whether the banks engage in effective price competition; whether there is entry by new ATM providers; and whether consumers are responsive to the new opportunities to shop around.”³²

This is extremely important. We know with certainty that entry by non-bank ATM providers will not be forthcoming; the payment system regulatory changes needed to allow this have not been forthcoming from the South African Reserve Bank. Consumers might change their behaviour, but will that be sufficient to force banks to compete harder on price? There are reasons to believe that banks will be able to avoid direct price competition, even under direct charging.

Part of the point of direct charging is to eliminate price-based differentiation between different banks' ATM networks. As networks become perfect substitutes for each other in the eyes of consumers, off us price competition intensifies, in turn causing off us transactions to become closer substitutes for on us transactions. On us prices therefore come under pressure too.

Note, however, that this should be expected only if banks are banned from levying off us fees on their own customers.^{33 34} If banks do levy off us fees, all other ATMs are more expensive for their customers to use, just as they were under the carriage system. In high density areas like shopping malls, where all major banks already have their own ATMs installed, shoppers will respond to this by always seeking their own ATM. In low density areas, where only one ATM can be supported, customers of most banks will pay significantly more compared to an on us transaction. This is no different from the situation that obtains today, and suggests that there will be no significant pressure on the price of off us transactions under direct charging if off us fees are allowed.

Note further that direct charging allows the acquiring bank to control how much their ATMs will cost customers of other banks, whereas before this was controlled by the issuing bank. By raising the direct charge, an acquirer makes its deposit services more attractive (assuming it owns a sizeable ATM network). Knowing this, all banks with ATMs have an incentive to set

³² Technical Report of the Banking Enquiry, 2008, pp. 197.

³³ Even under direct charging, an off us transaction causes the issuing bank to incur some processing costs. However small they are, banks with market power are unlikely to absorb them, and will argue that they are entitled to pass them on.

³⁴ It is highly unlikely that South African regulators would consider banning this fee. The Banking Enquiry also did not recommend banning it, although no reasons were given for this.

direct charges above the level they would choose if they did not take into account the effect these charges have on deposit market competition. Banks with the largest ATM networks can be expected to enjoy the biggest gain in depositors (Donze and Dubec, 2009).

Even if off us fees are banned *and* there are significant competitive constraints on direct charges for of us transactions, banks with large ATM networks can respond by offering larger on us discounts to their customers. On us discounts can take many forms, such as more free on us transactions per month, or lower out of bundle on us fees. The effect of on us discounts is similar to that of high direct charges.

Nevertheless, this second scenario is no doubt better for customers of those large banks—we are assuming direct charges are constrained in some way, and now on us discounts are significant. But customers of smaller banks suffer, because their banks do not own large ATM networks, and so cannot offer the same benefits. These smaller banks are forced to respond by rebating their customers for the direct charges they incur. If they don't, they become significantly less competitive in the deposit market. All of a sudden, not owning a large ATM network becomes a significant barrier to entry and expansion in the deposit market.

In short, banks with large ATM networks will make every effort to maximize the gap between the direct charges they control and the on us discounts they offer their customers. They will seek to maximize the deposit-stealing effect of direct charging. This will cause disproportionate harm the prospects of small banks in the deposit market, which is the antithesis of the outcome intended by proponents of direct charging.

7. Conclusion

This paper has attempted to make clear one simple message: in considering the most appropriate ATM pricing model, a country must look well beyond the expected impact on ATM prices. There is an unbreakable link between ATM prices and deposit market competition. There are impacts on ATM deployment and ownership to consider. And most of all, there are financial sector policy priorities to be taken into account.

In South Africa today, with carriage still at 1999 levels, there are risks that incentives to invest in ATMs are blunted. We have seen in the UK that when carriage came under cost-based regulation, the vast majority of new ATMs deployed were charging ATMs. UK banks, being under severe pressure to charge no off us fees, have seen their ATM revenue dry up, and some, as mentioned, have sold their ATM networks to non-bank operators. South African banks are able to charge off us fees, and the extent to which they exceed carriage may reflect the extent to which the current carriage level is insufficient, on its own, to incentivize ATM deployment.

Nevertheless, access to cash does seem to be improving in South Africa. The main driver is so-called cash-back at point of sale, which retailers view positively as a means to reduce cash handling costs. This channel is not a perfect substitute to ATMs, but it is significantly cheaper.

South Africa's paramount consideration in considering the future of ATM pricing must be the effect any reforms will have on deposit market competition. The recent growth successes of smaller banks like African Bank, Capitec, and Bidvest, all of which own very few ATMs, should be preserved. The competition they are injecting into the deposit market is, after all, why the Banking Enquiry was established in the first place.

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