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***The macroeconomic impact of e-money in South Africa***

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Abstract

Over the past two decades, the economic environment has been changing in fundamental ways. In line with these trends, the South African Reserve Bank's monetary policy is aimed at creating an environment of financial stability that is conducive to economic growth in the medium to long term. Financial innovations such as the spread of automated teller machines, electronic funds transfers, smart cards and home banking may be a threat to financial stability since they affect the speed and volume of transactions.

This paper analyses the macroeconomic impact of developments in e-money in South Africa. It begins with a definition of the concept of e-money, followed by an analysis of the features of an e-economy. Macroeconomic trends with specific reference to the money market are

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also examined. Finally, developments in South Africa with regard to e-economy are highlighted.

**Key words:** E-money, money market, smart cards

**JEL:** E44, E52 and E58

*“...Looking into the future is always a hazardous undertaking. It requires a careful analysis of what has changed already and what likely changes will occur in the coming years.” (T T Mboweni 2004)*

## **1.1 Problem statement**

Over the past two decades, the economic environment has been changing in fundamental ways and inflation rates have generally fallen. However, at the same time, financial crises have become more frequent and severe. These changes have taken place alongside a number of structural shifts which are underpinned by modifications in institutions. The first prominent shift has been central banks' stronger focus on price stability. A second has been greater fiscal discipline and reform aimed at improving the growth potential of the economy. A third and more fundamental one has been financial market liberalisation and the related deepening of the globalisation of finance and economic activity. In the wake of financial liberalisation and innovation, financial markets have become more integrated globally. Greater financial market integration has fostered an acceleration of cross-border financial flows which are supported by technological advances. In line with these trends, the South African Reserve Bank's (the Bank) monetary policy is aimed at creating an environment of financial stability that is conducive to economic growth in the medium to long term.

South Africa, like many other developing countries, has established that changes in the money supply have become less useful in anchoring

monetary policy. As a result, in February 2000 the Bank introduced an inflation-targeting approach. Some of the reasons which contributed to the unreliability of monetary targeting were according to Goodhart (1995:109) "...financial innovations, that were hold... to be largely responsible for the break-down in the statistical relationships between the various monetary aggregates on the one hand and nominal incomes and social changes e.g. the spread of automated teller machines, electronic funds transfers...home banking, etc. threatened potential instability here too." Advances in information computer technology (ICT), financial innovation, and liberalisation, the globalisation of trade, improved functioning of markets contributed to the so-called e- economy.

E-money is transforming the financial landscape in fundamental ways and it will continue to do so for sometime to come. It has therefore become essential to take note of developments in this regard. Financial system transformation affects the implementation of monetary policy and also relates to the impact that structural changes in the financial systems may have on financial stability.

The possibility of e-money taking over from physical cash for most small-value payments continues to invoke interest among both the public and central banks. Its development raises policy issues for central banks with regard to payment system supervision, the possible implications for central banks' revenues and the implementation of monetary policy. In view of these potential policy concerns, G10 Central Bank Governors announced their intention to closely monitor the evolution of electronic money schemes and products and take appropriate action if necessary (BIS, 2004).

## 1.2 Definition and development of e-money<sup>2</sup>

E-money is defined as an electronically stored monetary value on a technical device (either card-based or network-based) that functions as a prepaid bearer instrument. It can be widely used for making payments to undertakings other than the issuer, with or without involving bank accounts in the transaction.

A more technical definition is given by the Bank for International Settlements (BIS) which states that e-money is “monetary value as represented by a claim on the issuer which is: (i) stored on an electronic device (ii) issued on receipt of funds of an amount not less in value than the monetary value issued; (iii) accepted as means of payment by undertakings other than the issuer” (BIS, 2004:12). The development of e-money will depend on the decisions made by customers and merchants as to whether or not to use it as a payment instrument. It will also depend on large investments in infrastructure and a general acceptance of this payment instrument by the public. Customers are now able to choose among a wide variety of payment schemes.

Card-based e-money schemes have been launched and are operating relatively successfully in many countries. E-money products that are comparatively more successful are those supported by public transport and public telephone companies and parking meter or vending machine operators. The viability of these products is currently being investigated in South Africa.

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<sup>2</sup> The definition of other types of money is discussed in the Appendix.

Compared to card-based schemes, developments in network-based or software-based e-money schemes have been less rapid. Network-based schemes are operational in a few countries (Austria, Columbia, Greece, Hong Kong, Italy, Korea, Norway, Russia, Spain and Taiwan), but they remain limited in their usage, scope and application. The majority of countries in the BIS survey have indicated that they have no plans to introduce network-based e-money products in their respective countries.

E-money is ultimately only a dematerialised form of money that developed from barter economy to other forms of money. In South Africa there are some initiatives that should contribute towards more people using electronic payment systems in future. The development of e-money will be determined by market forces and reflect competition between the various issuers of electronic money.

### **1.3 E-money and monetary policy**

The impact of e-money on monetary policy has been a widely debated issue since the developments in technology made the widespread use of e-money feasible. Some observers have predicted that monetary policy will become ineffective in the future while others have remained unconvinced that it will gain popularity among users and envisage it having a limited impact on monetary policy (ECB, 2000:54).

The role of e-money in the economy derives from its function as a retail payment instrument. In this regard, e-money is analogous to banknotes and coin, cheques, bank transfers or credit and debit cards. Each of the existing retail payment instruments offers certain specific services which

make that payment instrument particularly attractive to certain customers or for certain types of transactions.

Policymakers have to tackle several challenges in formulating their attitude to the development of e-money. For example, they need to ask themselves whether there is a real need for issuers of e-money to be governed by regulations similar to those imposed on other financial institutions; whether licenses to issue e-money should be restricted only to those institutions that already fall within such regulatory controls; if there should be restrictions on the types of e-money product that can be offered and when it would be best to legislate (Federal Reserve Bank, 2000:3).

Another challenge for monetary policy is that e-money could reduce the reliability of monetary aggregates and other indicators of monetary conditions. If e-money payments were more efficient, the velocity of money could increase. This would reduce the usefulness of (narrow) monetary aggregates – in terms of monitoring these aggregates.

In a reformed and relatively more efficient payment system, there will be a shift in the demand for reserves, mainly arising from the shift in risk premia associated with the new system. Central banks whose monetary policy is focused on liquidity management may have to adopt more flexible approaches to policy implementation.

The development of e-money raises three issues:

Firstly, there is a need to safeguard economic transactions. Society reaps substantial benefits from using a single, well-defined and stable unit of account for conducting transactions, irrespective of the issuer or the form

in which the money is issued. Secondly, the effectiveness of monetary policy instruments might be affected by a widespread adoption of e-money. This relates mainly to effects on central bank balance sheets. Thirdly, the emergence of e-money might have repercussions on the information content of monetary indicator variables.

There is a risk that e-money might lead to the emergence of multiple units of account in the economy. In the absence of any regulation of the issuance of e-money, e-money issuers might be tempted to issue excessive amounts of e-money in an attempt to profit from the placement of these funds. Over time, there may be a change in market views about the creditworthiness of e-money issuers engaging in excessively risky investment activities, which could lead to e-money instruments being traded at variable rates. This would undermine the role of money in providing a single unit of account as a common financial denominator for the whole economy (Friedman, 1999:4).

A concern of the National Payments System Department of the Bank is the establishment of so-called prepaid schemes that offer multiple goods or services that are not necessarily those of the issuer of the prepaid tokens. A large float<sup>3</sup> may be built up by the selling of tokens especially where such operators are not subject to any risk management requirements.

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<sup>3</sup> Float is defined as cash items in the process of collection minus deferred-availability cash items. In other words, the lag or delay in the check (or e-money) delivery and clearing system is called float.

## **1.4 Possible solutions**

A widespread substitution of privately issued e-money for central bank money could reduce the size of central banks' balance sheets, which in turn might have an impact on the implementation of monetary policy. The potential shrinking of central banks' balance sheets might also exert downward pressure on their profits through a reduction in seigniorage income – unless the money definition is adjusted to include e-money in the official definition of money supply.

In order to retain the potential to target money-market interest rates, central banks could, take measures to broadly maintain the size of their balance sheets by replacing currency in circulation with other types of liabilities. One particular type of liability on central banks' balance sheets is minimum reserves, and central banks could consider imposing minimum reserves on e-money. In addition, it would also be possible for central banks to issue e-money themselves.

A rapid development of e-money could have repercussions on different components of monetary aggregates and on the velocity of money. For example, if e-money were to contribute to a more efficient payments structure in the economy, it could boost the velocity of circulation of monetary aggregates. However, the potential implications of a rapid growth in e-money for the control of money market conditions at the short end should not be overstated. Central bank money can thus be expected to retain its appeal as a risk-free means of settlement among private agents. As long as some form of ultimate market recourse to central

banks remains, the ability of central banks to influence money-market interest rates will be preserved.

In the euro system, the money and banking statistics include e-money issued by monetary financial institutions (MFIs) as part of monetary aggregates, which are the focus of analysis under the European Central Bank's (ECB) monetary policy strategy. The ECB defines e-money as an electronic store of monetary value on a technical device that may be widely used as a prepaid bearer instrument for making payments to undertakings other than the issuer without necessarily involving bank accounts in the transactions. In order to be considered as e-money, such devices must operate as general-purpose payment instruments. The ECB's statistics capture e-money that is issued by MFIs located within the euro area. In accordance with Regulation ECB/2001/13, as amended, the amount outstanding of e-money issued by euro area MFIs is included in the balance sheet under "overnight deposits".

In South Africa, e-money will be included in money aggregates as and when systems are established and values reach a significant amount. The development of e-money products is monitored on a continuous basis.

Regulation can become a contentious issue. Central banks may respond by regulation in which the monetary authorities in each country continually expand the coverage of reserve requirements to blanket new issuers of what amounts to money, while the issuers of private monies may respond by continually changing their product in order to evade each new set of expanded requirements (Goodhart, 2000:192).

Efficiency gains can only be realised if sufficient safeguards are put in place to ensure that the general public has confidence in e-money and that it is seen to be a reliable way of making payments. A number of risks can be identified, in particular the intrusion of counterfeit value, major technical failures, float mismanagement and, ultimately, failure on the part of issuers of e-money could have a negative impact on the credibility of various e-money products and possibly even on other electronic payment products. Hence a framework is needed to ensure that e-money schemes are safe and efficient and that e-money issuers are sound. The regulatory framework also needs to ensure that there is a level playing field across the different types of e-money providers. In addition, in view of the possible expansion of e-money schemes, such a framework should help to protect the stability of the financial system.

Risk management is a primary concern of central bankers. Innovation does not stop and new forms of payment systems are evolving which, in some circumstances, can enable participants to manage their own liquidity more efficiently. Innovation brings new challenges for central banks in assessing the risks and any trade-offs with efficiency in the circumstances of the time and in the particular applications.

#### **1.4.1 Money multiplier**

As e-money will function as a medium of exchange, it will ultimately be included in the definition of money. Thus, the money multiplier will reflect changes in reserves in the banking system that include e-money.

## 1.4.2 Mechanics of the money multiplier

The multiplier model originally developed by Brunner (1961) and Brunner and Meltzer (1964) has become the standard tool to explain how policy actions influence money stock. According to the traditional textbook theory, the monetary base is the sum of currency in circulation plus reserves.<sup>4</sup> If the money supply would be adjusted to include e-money, the money supply would change to:

$$M = C + D \text{ (Including } D_e\text{)}^5$$

The multiple increase in deposits generated from an increase in the banking system's reserves is called the simple deposit multiplier. The simple deposit multiplier equals the reciprocal of the required reserve ratio, so the formula for the multiple expansion of deposits can be written as:

$$\Delta D = (1/ r_D) \times \Delta R$$

where  $\Delta D$  = change in total demand deposits in the banking system

$r_D$  = required reserve ratio

$\Delta R$  = change in reserve for the banking system. Total reserves include required reserves as well as excess reserves.

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<sup>4</sup> In South Africa, M0 = Notes and coin in circulation outside the SARB plus required reserve balances and deposits of banks and mutual banks with the SARB.

<sup>5</sup> In the European Union, the amount of outstanding e-money is included in the balance sheet under overnight deposits.

The multiple deposit multiplier also works in reverse, when the central bank withdraws reserves from the banking system. In this case, there should be a multiple contraction of deposits.

In reality, all banks do not lend out all they can (that is, excess reserves do not equal zero) and people hold some cash.

$$\Delta D = 1/[r_D + e + c] \times \Delta MB$$

where  $e$  = excess reserve ratio

$c$  = currency held as ratio to deposits

$MB$  = Monetary base

Combining the relationship

$$M = C + D$$

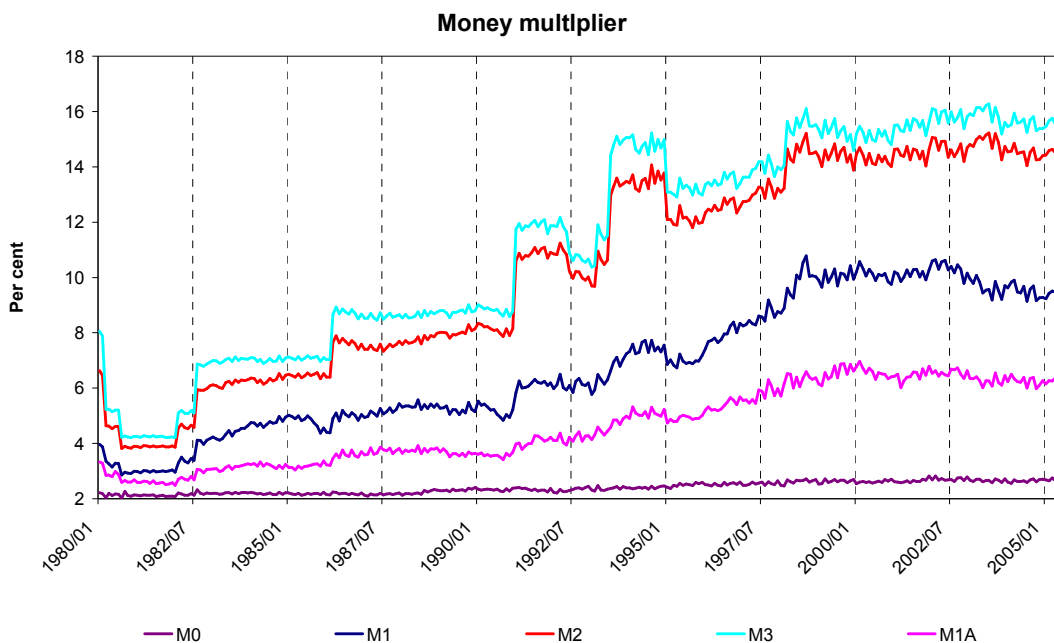
$$\Delta M = [(1+c)/r_D + e + c] \times \Delta MB$$

The money multiplier is thus a function of the currency ratio set by depositors, the excess reserves ratio set by banks and the required reserve ratio set by the central bank. Although there is multiple expansion of deposits in the money supply model, there is no such expansion for currency.

In the case of the development of e-money products, the immediate effect of e-money on the money supply will be that the overall quantity of money will increase with the addition of e-money. Accordingly, the immediate effect would be to raise the value of the money multiplier. However, the indirect, long term effects of e-money on the money multiplier are not as

clear. Currency does not expand like deposits. Should cash be substituted for e-money the multiplier would remain unchanged.

Pertaining to on-line banking, there will be no effect on the money supply process as long as funds are re-deposited in the banking system. However, if non-depository institutions are able to find a way of issuing e-money, the multiplier will increase (Craig, 1999).



Source: South African Reserve Bank

### 1.5 Developments in South Africa<sup>6</sup>

In South Africa, a number of innovative products have been developed in recent years. Transactions made by using these innovative products are accounting for an increasing proportion of the volume and value of domestic and cross-border retail payments. The smart card industry is

<sup>6</sup> Other developments in South Africa are discussed under Appendix B

poised for unprecedented growth in South Africa, with some new projects set to begin in 2005. E-money has the advantage of expanding banking services to more locations in South Africa than ever before and facilitates the introduction of previously unbanked South Africans into the banking system. The telkom card for instance, serves as a typical example of e-money that is a big success in South Africa. Telkom and the mobile network operators are expected to issue 20 million cards in 2005, through the issue of new pre-paid and Sim cards.

Although the Mzansi Account Initiative is not e-money per se, but rather a savings scheme, it serves as an example of potential growth in the industry since it was launched on 25 October 2004. The Mzansi initiative is a major part of the Financial Sector Charter commitment to increase access to financial services for as many South Africans as possible. In terms of the Charter, the banking sector was committed to providing banking services within 20 kilometres of 80 per cent of people in the Living Standard Measure (LSM) 1-5 category to make access easier. The Mzansi Account allows people who previously had no access to banking, to open a low-cost account at selected banking institutions and the Post Office. By the middle of May 2005, over 1 million Mzansi accounts had been opened, bringing an additional 4 per cent of the population into the formal banking system since October 2004.

### **1.5.1 Future initiatives**

The South African Government initiated a few programmes that will enhance the use of electronic money. The Department of Home Affairs (HANIS project) plans to issue a multi-application smartcard, known as the Smart ID card, to each South African citizen, which will replace the

present identity documents. It is envisaged that the Smart ID card will become South Africa's national identity card with a payment application for state pensioners and grant beneficiaries to receive their monthly allowance, and a generic bank payment application. The card's chip will store an electronic purse and a digitised version of the cardholder's fingerprints. The electronic purse will facilitate pension and welfare payments to the country's unbanked 10 to 15 million people.

In addition, the South African Post Office will issue a combi card, i.e. a smartcard with a magnetic stripe that will remove some of the cost, risk, inconvenience and danger that social grant beneficiaries face in receiving their allowances. The social grant beneficiary's fingerprints and identity number will be saved to the chip on the card. The magnetic stripe part will contain the details of the beneficiary's PostBank account. With this card, the beneficiary will have access to his/her social grant through any banking system in South Africa.

In the health care profession, some developments are also worth noting. MediSmart cards will be used by patients at CareCross medical and dental network providers. The Medismart e-purse will offer up to 16 or more potential separate and secure e-purses per card as well as support for debit, credit and other stored value forms of payments. This is an important innovation since there is an emerging market of 13 million managed-care patients in the private sector in South Africa.

Capital Bank and MasterCard Southern Africa announced a pilot of the world's first pre-authorized debit card based on the EMV<sup>7</sup> standard in the

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<sup>7</sup> EMV" is an acronym often referred to mean the specifications issued by EMVCo, LLC covering the operation of Smart card payment cards. Vendors also often refer to being

Qwa-Qwa town of Phuthaditjaba (please check spelling) in the Free State Province. Customers will be issued a Maestro card, which in addition to having a magnetic stripe, will come with a pin-protected microchip. Cardholders will load this chip with a pre-authorized amount of funds from their bank account. The chip will also calculate the total amount being spent, and when the pre-authorized amount has been reached, the cardholder will simply need to reload at any Capitec Bank point of sale machine or branch.

With the introduction of e-money, cardholders benefit by not having to carry large amounts of cash to buy goods and services. Participating retailers also benefit as they are guaranteed payment for all transactions with the Maestro card without having to constantly go online for authorisation.

The above examples bring the advantages of banking services to more locations in South Africa than ever before and facilitate the introduction of previously unbanked South Africans into the banking system.

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"EMV Approved" when their products have been certified as having passed tests to ensure compliance with these specifications.

Europay International, MasterCard International and Visa International formed EMVCo, LLC ("EMVCo") in February 1999 to manage, maintain and enhance the EMV Integrated Circuit Card Specifications for Payment Systems as technology advances and the implementation of chip card programs become more prevalent. The objective of EMVCo is to ensure that single terminal and card approval processes are developed at a level that will allow cross payment system interoperability through compliance with the "EMV" specifications. (Europay Mastercard Visa Integrated Chip Card Standard).

## 1.6 Conclusion

South Africa has a diverse population and a broad geographic spread. Of importance is the 53 per cent of the population that is younger than 24 years. The younger generation may influence consumer spending and the means of payment since they are more eager to use electronic goods. A steady increase in the number of households in South Africa, which is predicted to increase from 9,8 million to 11,2 million in 2008, signals an increase in spending for these households. In addition, cell phone consumers increased from 8,3 million in 2001 to 18,2 million customers in 2004. This increase is indicative of the progress of and accessibility to technology and the increased importance of such technology in the South African market.

In South Africa, e-money will be included in money aggregates as and when systems are established and values reach a significant amount. The development of e-money products is monitored on a continuous basis and should not endanger financial stability. Presently, central banks do not intend to issue smart cards nor provide any other form of e-money to the public. However, the possibility that this may happen some time in the future is not excluded.

From the point of view of prudential supervision, the main element in relation to the potential development of e-money is that the regulatory and supervisory framework is adequate to promote a prudent attitude to risk on the part of electronic money issuers. E-money is poised for growth in South Africa and developments in this regard are constantly monitored. The development of e-money raises issues relating to monetary policy,

payment system supervision and the prudential supervision of financial intermediaries.

Consumers would be able to maximise their utility by using e-money as a means of payment. Whether this new means of payment will be taken into consideration by consumers depends on the technological efficiency of the payments system, as well as the price. The cheaper the new money is with respect to the input of resources into its production, the higher the probability for it becoming a substitute for ordinary means of payment.

## **Appendix A**

### **Definition of other types of money**

Card-based products, also known as multi-purpose prepaid cards or electronic purses, are designed to facilitate small-value face-to-face retail payments by offering a substitute for traditional retail payment instruments such as cheques and credit and debit cards. Similarly, network-based or software-based products are designed to facilitate small-value payments via telecommunication networks such as the internet, as a substitute for making payments using credit cards on open networks.

Network-based products are specialised software installed on a standard personal computer for storing the “value”. The loading of value onto the device is akin to the withdrawal of cash from an ATM and the product is used for purchases through a transfer of value to the merchant’s electronic device.

The rapid growth of e-commerce and the use of the internet has led to the development of new payment mechanisms capable of exploiting the internet’s unique potential for speed and convenience. Similarly, the broader use of mobile phones has encouraged banks and non-banks to develop new payment services for their customers.

Mobile payments cater largely for micropayments segments. Some products use the phone as an access channel through which to initiate and authenticate transactions from existing payment means such as bank

accounts or payment cards. Another arrangement allows customers to pay using the prepaid value stored on the cell phone.

## **Appendix B**

### **Other developments in South Africa**

#### **Card based products**

##### **(a) Gambling**

A casino developer has introduced smartcards in its casinos across South Africa and intends to create a tokenless and coinless environment in these casinos. These cards can only be used in the casino and entertainment resort where they can be used for gambling, buying food and beverages, paying for parking etc. Patrons may purchase value using cash, a credit card, a debit card or traveller's cheques, whereupon the cashier loads the value onto the card. Value can also be loaded onto the cards at any of the slot machines.

##### **(b) E-tag – Bakwena**

This electronic toll collection device has been implemented on certain toll roads. Upon passing through the toll station, the e-tag is identified by a reader device and the owner billed for the fee.

##### **(c) GSM**

Prepaid mobile communication has undergone rapid expansion in South Africa and comprises more than 15 million cards.

### **1.3.1 Network/software based products**

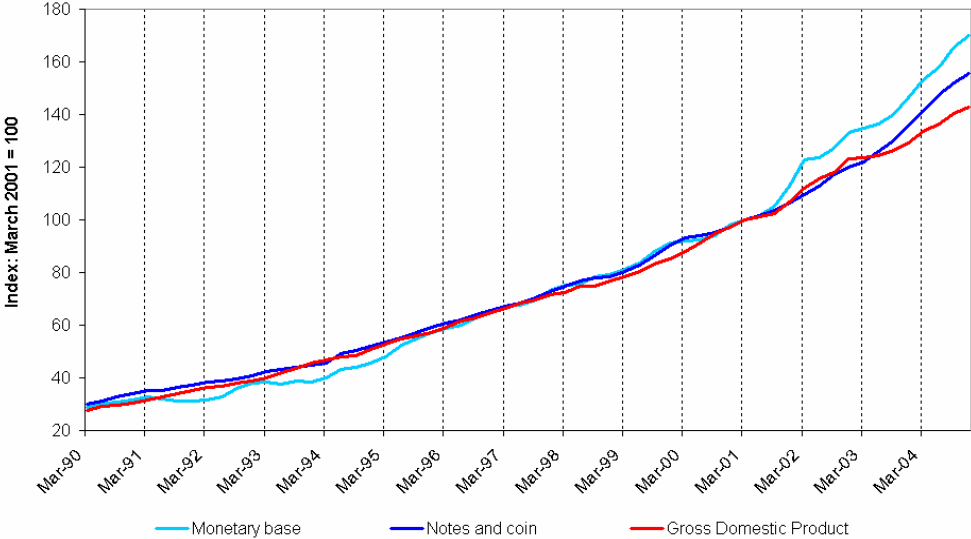
South Africa is still at an early stage of development with regard to network products.

### **1.3.2 Internet and mobile banking products**

All major banks in South Africa offer internet banking services and provide their customers with services that are available for 24 hours a day and seven days a week, including telephone operator assistance should the internet service not be available.

The major South African banks also offer secure banking by utilising mobile telephone technology.

**Figure A1: Monetary base, notes and coin and gross domestic product**



Appendix Alternative payment methods \*

Percentage of total

	<b>Cheques</b>		<b>ATM</b>		<b>EFT debits</b>		<b>-EFT credits</b>		<b>Credit card authorisations</b>		<b>Debit cards</b>	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value
1993	100	100	-	-	-	-	-	-	-	-	-	-
1994	100	100	-	-	-	-	-	-	-	-	-	-
1995	83,6	99,8	16,4	0,2	-	-	-	-	-	-	-	-
1996	55,7	89,5	23,7	0,3	13,2	1,5	7,4	8,6	-	-	-	-
1997	42,8	79,3	22,3	0,4	22,0	3,1	12,9	17,3	-	-	-	-
1998	41,5	75,0	21,0	0,3	22,6	3,1	14,8	21,6	-	-	-	-
1999	38,4	71,7	19,6	0,3	25,4	3,5	16,7	24,5	-	-	-	-
2000	36,6	62,5	18,9	0,3	26,1	3,8	18,4	33,3	-	-	-	-
2001	30,2	52,2	18,2	0,4	26,2	5,0	19,4	42,4	5,8	0,0	0,1	0,0
2002	24,0	47,2	18,9	0,9	27,8	6,2	21,7	45,6	7,2	0,0	0,6	0,0
2003	17,8	40,0	18,9	0,9	28,9	6,7	24,0	51,7	8,4	0,6	2,0	0,1
2004	14,4	35,6	17,8	0,9	28,2	6,9	25,0	53,6	10,2	1,2	4,3	0,2

\* Source: Payments Association of South Africa (PASA) and Bankserv

**Table 7 Percentage change in monetary and credit aggregates**

Per cent

Period	M1A	M1	M2	M3	Total loans and advances **
<b>Quarterly change*</b>					
2003					
1st qr .....	-0,4	-1,4	14,7	11,6	12,4
2nd qr .....	0,8	-3,7	23,5	19,8	22,3
3rd qr .....	13,0	3,0	15,9	9,8	8,4
4th qr .....	16,9	25,7	11,9	10,0	7,3
2004					
1st qr .....	40,6	37,3	10,2	15,0	12,5
2nd qr .....	8,1	-1,2	5,9	13,0	10,1
3rd qr .....	0,7	10,0	13,8	13,0	12,5
4th qr .....	10,6	14,0	19,1	17,6	27,0
2005					
1st qr .....	17,0	-0,4	7,0	6,0	20,0
<b>Twelve-month change</b>					
2004					
Jan .....	15,5	13,0	14,8	12,6	12,2
Feb .....	22,1	19,3	16,6	14,9	12,5
Mar .....	14,9	14,1	14,7	14,2	12,3
Apr .....	16,9	13,0	11,5	12,6	9,9
May .....	21,6	16,0	10,6	11,9	9,0
Jun .....	18,3	18,9	9,7	11,8	8,8
Jul .....	15,0	15,2	8,9	11,3	9,3
Aug .....	16,7	17,6	10,2	13,3	11,4
Sep .....	16,6	17,4	12,1	14,7	13,2
Oct .....	14,9	14,9	12,3	14,9	15,2
Nov .....	13,8	13,9	11,5	14,2	15,6
Dec .....	12,3	9,0	11,0	12,8	16,1
Average .....	16,6	15,2	12,0	13,3	12,1
2005					
Jan .....	10,1	5,7	10,5	12,0	17,0
Feb .....	6,2	4,2	11,3	12,2	17,6
Mar .....	13,4	8,4	12,6	11,9	17,8

\* Quarter-on-quarter growth at annual rates of seasonally adjusted data

\*\* Total loans and advances to the domestic private sector excluding investments and bills discounted

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