THE ROLE OF TRADE USAGE AND THE ALLOCATION OF RISK FOR UNAUTHORIZED TRANSACTIONS IN INTERNET BANKING – A RE-EVALUATION OF THE TRADITIONAL BANK-CUSTOMER RELATIONSHIP

by STEFAN ANTON KLEYNHANS

SUBMITTED IN PART FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF LAWS (SPECIALISING IN BANKING LAW)

at the University of South Africa

Supervisor: Professor W G Schulze

14 December 2000
SUMMARY

The Internet has had and will continue to have a major impact in the way in which banking business is conducted. This dissertation primarily considers the allocation of risks associated with Internet banking and in doing so considers the role of trade usage in Internet banking.

The question of what the Internet is and more specifically what constitutes Internet banking is addressed.

In order to have an understanding of the allocation of risks in Internet banking a good understanding of the traditional bank-customer relationship is necessary. The contractual basis for this relationship is discussed.

The duties of the bank and the customer are discussed. In this regard the duty of a bank to act in terms of its customers mandate, the banks duty of confidentiality and the customers duty to exercise reasonable care are considered. The concept of a customer is briefly discussed.

As trade usage plays a significant role in the contract between the bank and its customer, attention is given to the requirement for the recognition of a trade usage generally and more particularly in South Africa.

The effect of Internet banking on the traditional bank-customer relationship is considered. The fact that a bank is still required to act in terms of its customer's mandate but is unable to identify is examined.

As most Internet banking contracts impose an obligation on the customer to take security precautions and also limit the liability of banks, consideration is finally given to the possibility that the practices of banks in regard to Internet banking may have acquired the status of trade usage in this particular sphere of banking.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary</td>
<td>i</td>
</tr>
<tr>
<td>1 Introduction</td>
<td>1</td>
</tr>
<tr>
<td>1.1 What is the Internet?</td>
<td>1</td>
</tr>
<tr>
<td>1.2 Internet banking</td>
<td>2</td>
</tr>
<tr>
<td>2 The bank – customer relationship</td>
<td>5</td>
</tr>
<tr>
<td>2.1 Contractual basis of the relationship</td>
<td>5</td>
</tr>
<tr>
<td>2.1.1 The contract of mandate as the basis for the contract between the bank and its customer</td>
<td>9</td>
</tr>
<tr>
<td>2.1.1.1 The nature of the contract</td>
<td>9</td>
</tr>
<tr>
<td>2.1.1.2 The duties of the parties arising out of the contract of mandate</td>
<td>9</td>
</tr>
<tr>
<td>2.2 Contractual terms</td>
<td>10</td>
</tr>
<tr>
<td>2.3 The bank-customer relationship under South African law</td>
<td>11</td>
</tr>
<tr>
<td>3 The duties of the parties arising from the traditional bank-customer relationship</td>
<td>12</td>
</tr>
<tr>
<td>3.1 Introduction</td>
<td>12</td>
</tr>
<tr>
<td>3.2 The duties of the bank</td>
<td>13</td>
</tr>
<tr>
<td>3.2.1 The bank's duty to repay money received from its customer and act according to its customer’s mandate</td>
<td>13</td>
</tr>
<tr>
<td>3.2.2 The bank's duty of confidentiality</td>
<td>16</td>
</tr>
<tr>
<td>3.3 The customer's duty to exercise reasonable care</td>
<td>19</td>
</tr>
<tr>
<td>3.4 The concept of 'customer' in banking law</td>
<td>20</td>
</tr>
<tr>
<td>4 Custom in banking law</td>
<td>21</td>
</tr>
<tr>
<td>4.1 Introduction</td>
<td>21</td>
</tr>
<tr>
<td>4.2 Requirements for the recognition of a trade usage under South African law</td>
<td>23</td>
</tr>
</tbody>
</table>
1 Introduction

According to a recent newspaper article

'[t]echnology is reshaping the South African banking industry as it encourages new market entrants, new delivery channels and empowers customers. The new service delivery channels, especially the Internet and more sophisticated telecommunications, have changed the structure of banks and their channels to market' (see Greg Gordon 'SURVEY/Internet Financial Services' Sunday Times (Business Times) April 23 2000 at 9).

There is no doubt that the advent of the Internet will fundamentally change the way in which banks have done business in the past. More importantly are the possible changes in the legal relationship between bank and customer resulting from Internet banking.

Changes in the traditional bank-customer relationship will undoubtedly occur (see I Pearson 'The future of banking' at http://www.gadget.co.za consulted on 22 August 2000). It has been said, in dealing with the subject of electronic fund transfers, that it would be an oversimplification to state that '[t]he relationship of banker and customer is fairly well settled, and all that will be needed is the fitting of changed methods into an established framework' (see Enyon Smart 'Electronic Banking: An overview of the legal implications in: Roy M Goode (ed) Electronic Banking: The Legal Implications (1985) at 1).

It is submitted that only a thorough analysis of the traditional bank-customer relationship and the effects of Internet banking will settle the issue with any certainty. However, before embarking on such an analysis two issues merit brief discussion viz. what is the Internet and what is Internet banking.

1.1 What is the Internet?

The Internet has its origins in the Advanced Research Projects Agency Network ('ARPANET') a project of the United States Department of Defense aimed at creating
a computer network linking government agencies and universities. The intention of
the Department of Defense was that ARPANET would continue to function even if it
were destroyed in a nuclear attack (see Reinhardt Buys & Johan Rothman 'The
Internet: An Overview' in: Reinhardt Buys (ed) Cyberlaw @ South Africa: The Law of
the Internet in South Africa (2000) at 34 and; John R Levine & Carol Baroudi The
Internet for Dummies (1993) at 11).

From these beginnings the Internet has grown into a worldwide collection of
computer networks linking not only government agencies and universities, but also
businesses and private individuals. According to one writer more than 60 per cent of
the networks which comprise the Internet are now run by business (Michelle L Kezar
'Logging on to electronic means of payment' (1997) April 13 Government Finance
Review 57 at 58).

There are an estimated 20 to 40 million people in 140 countries, which have access
to the Internet. In South Africa alone it is estimated that in 1999 there were more
than 1 million people using the Internet (see Buys op cit at 34). It is not surprising
therefore that banks throughout the world have seen the Internet as an opportunity to
'expand beyond their "physical footprints" (see Ciaran Ryan 'SURVEY/Retail
Banking' Sunday Times (Business Times) April 30 2000 at 6).

Given that banks are actively endeavouring to establish a net presence consideration
will now be given to the nature of Internet banking.

1.2 Internet banking

Banks have traditionally operated through branch outlets and more recently
Automated Teller Machines (ATMs). The emergence of electronic forms of
conducting banking business such as telephone banking, ATMs and more recently
Internet banking has thus far merely augmented the traditional gateways. According
to Ryan (op cit at 6) '[m]any banks are still struggling to develop a compelling
business case for Internet banking'. The reason is that banks are still somewhat
uncertain of what the full impact of Internet banking will entail.
In a recent report to the Chairman, Committee on Banking and Financial Services, House of Representatives, it is stated that an estimated seven per cent of banks active in the United States had implemented online (or Internet) banking services as of June 1997. In addition to this, the report states that by the end of 1998 an estimated 47 per cent of banks in the United States would be offering some form of online banking service (see Report to the Chairman, Committee on Banking and Financial Services, House of Representatives Electronic Banking – Experiences Reported by Banks in implementing online banking 15 January 1998).

Internet banking however is not limited to traditional banks offering some or all of their services via the Internet. There already are a number of banks worldwide which offer their services exclusively via the Internet. These virtual banks, as they are known, operate without the need for opening offices, with most of the traditional functions associated with back offices being outsourced (see Damon Darlin ‘Try E-banking: electronic banking a maturing technology’ (1997) 159(1) Industry Trend of Event, Forbes January 68 at 68 to 69; Allison J Keyes ‘Virtual Banking’ (1999) 30(3) Black Enterprise, 145 at 145; Bill Orr ‘E-banks or E-Branches’ (1999) 91(7) ABA Banking Journal 32 at 32).

The four major retail banks in South Africa (being First National Bank, Standard Bank, Nedbank and ABSA) all maintain a presence on the Internet in some or other form and all offer some form of Internet banking service.

In South Africa neither the common law nor legislation presently caters for the establishment of virtual banks. However, in a position paper published by the South African Reserve Bank, the Reserve Bank states its intention to:

- support the development of a banking industry vision for electronic substitutes for physical bank notes and coins; and
- support the development of national standards to enable inter-operability of electronic money products and devices.
What services do traditional South African banks offer their customers via the Internet? Two examples will suffice. First National Bank customers are offered the following Internet banking services: Balance enquiries; mini statements; interim statements (30 transactions); account payments; transfer funds; cheque book orders; change ATM card PIN; stop payment of cheques; rates; open investment accounts and stop orders (see *FNB Electronic Banking* (nd) unpaginated). Standard Bank, inter alia, offers the following services to their customers: future dated payments; share and portfolio services; beneficiary services; send messages to your branch; e.mail Standard Bank; update personal Internet information; secure online banking (see *Standard Bank Internet Banking* (nd) at 4).

Internet banking provides customers with the ability to perform most of the traditional banking transactions via the Internet. The only transaction that a customer is unable to perform via a personal computer is the withdrawal of cash. In time however the replacement of 'real' forms of cash with digital or electronic cash may obviate the need for consumers to withdraw money from ATMs. A discussion of this issue is, however not within the ambit of this paper.

The basic types of Internet transactions, which can be performed via the Internet, can be summarised as follows:

- Balance inquiry and funds transfer;
- Account payments;
- Ordering of cheque books;
- Changing of personal identification numbers and other personal Internet banking details;
- Opening of accounts;
- Stop orders; and
- Stop payment of cheques.
According to the American Bankers Association it has been estimated that by the end of 1998 an estimated seven million households (approximately seven per cent of all households) in the United States were making use of Internet banking services. By July 1999 49 per cent of all American households had personal computers and at least 37 per cent of households has accessed the Internet (see Anon 'At last Internet Banking takes off' (1999) 91 (7) ABA Journal 36 at 36).

By the end of 1999 there were approximately 242,000 people subscribing to Internet banking services in South Africa (see Greg Gordon 'Internet Banking steps into the 21st century' Sunday Times (Business Times) May 21 2000 at 17). This represents approximately 20 per cent of all Internet users in South Africa.

Most banks that offer Internet banking services require customers to agree to additional terms and conditions, over and above those, which are usually implied in the traditional bank-customer contract. These additional terms and conditions inter alia provide for authorisation and security methods to verify a customer's identity. In most cases the risk for any loss arising from mistake by the bank or fraud perpetrated by a third party is borne by the customer. Banks generally limit their liability for losses arising only from their own gross negligence. The customer bears the risk for the unauthorized use of his facility (see Dérick Swart 'Online banking law and payment systems' in: Buys op cit at 294).

This paper will consider the effect of Internet banking on the traditional bank-customer relationship. However in order to do this it will be necessary to discuss the legal aspects of the traditional bank-customer relationship.

2 The bank – customer relationship

2.1 Contractual basis of the relationship

The contract between the bank and its customer is based on the principle that when the customer deposits money with his bank, the bank acquires the right to use the money for its own purposes in other words the bank becomes the owner of the money deposited (Foley v Hill [1848] 2 HL Cas 28; S v Kearney 1964 (2) SA 495 (A);
According to Willis (Nigel Willis Banking in South African Law (1981) at 30) the contract between the bank and its customer most closely resembles that of mutuum. Mutuum is described as a contract in which 'one person delivers some fungible thing to another person who is bound subsequently to return to the former a thing of the same kind, quality and quantity' (Wille's Principles of South African Law 8 ed (1991) by Dale Hutchison et al at 576). The borrower under a contract of mutuum becomes the owner of the thing when it is delivered to him. In Joachimson v Swiss Bank Corp ([1921] 3 KB 110 at 127) (as discussed in Chorley & Smart Leading cases in the Law of Banking 6 ed by P E Smart 1990 at 3) the court said, in relation to money which a bank receives from its customer that the money is 'not to be held in trust for the customer, but the bank borrows the proceeds and undertakes to repay them'.

The court further said that

'it is necessarily a term of such contract that the bank is not liable to pay the customer the full amount of his balance until he demands payment from the bank...'

Like Willis, Stassen is of the opinion that the deposit of money with a bank gives rise to a contract of mutuum, not only in relation to deposit accounts, but also in relation to cheque accounts (see J C Stassen ‘n Herwaardering van Engelsregtlike eienaardighede in die lig van die Suid-Afrikaanse gemene reg, Bankwet en Wisselwet’ (1982) 4 Modern Business Law 80 at 82-83).

Although the classification of the contract between the bank and its customer as one of mutuum satisfactorily explains the deposit element of the contract it leaves unresolved the nature of the contract in relation to the other duties a bank owes its customer.
According to Cowen and Gering (Cowen on the Law of Negotiable Instruments in South Africa 4 ed (1966) by Dennis V Cowen & Leonard Gering at 367) the relationship between the bank and its customer in some respects resembles that of agency. For example the use of cheques adopts the principles of agency in that a cheque is a mandate given by the customer to his bank which authorizes the bank to discharge it's indebtedness in a particular way. However Cowen and Geiring (op cit at 368) concludes that the only solution which satisfactorily explains the contract between the bank and its customer is to recognise the contract as a contract sui generis, containing elements of a number of contracts. It is submitted that depending on the particular transaction concluded the contract between the bank and its customer may be similar to either the contract of agency, mandate or mutuum.

In Cambanis Buildings (Pty) Ltd v Gal (1983 (2) SA 182 (NC)) the court, in relation to a stop order instruction given to a bank by its customer, was prepared to regard the stop order as constituting the bank as an agent for purposes of effecting the stop order. According to the court 'it is well known that modern banking is involved in multifarious activities and banks, therefore, act as agents for clients in a variety of transactions.' However, it is submitted that the court's interpretation of the relationship between the bank and its customer generally, as one of agency was incorrect. It is possible that in certain circumstances the bank may find itself as acting as an agent for its customer, but it can not be said that the whole of the relationship between the bank and its customer can be described as one of agency.

An agent is one who performs acts for and on behalf of another (the principal) and thereby places the principal in a legal relationship with a third party (see Willis op cit at 31; De Wet and Yeats: Die Suid-Afrikaanse Kontrakte en Handelsreg 4 ed (1978) by J C De Wet & A H van Wyk at 86).

It is submitted that the bank does not generally perform acts on behalf of its customers with the intention of creating legal obligations of its customer.

According to Hutchison et al (op cit at 594) an agent usually performs some or all of the following acts on behalf of his principal:

7
- Concludes contracts and acquires personal rights against third parties;
- Enforces the principal's rights against third parties;
- Accepts the performances of third persons, thus extinguishing the obligations; and
- Makes performance of the principal's obligations to third parties.

In carrying out his mandate an agent may not delegate his duties, must act within the limits of his powers, carry out his duties with the utmost good faith and to the benefit of only his principal, render an account of the transactions to the principal and deliver to the principal all the property and pay all proceeds he has received in connection with the transaction (see Hutchison et al op cit at 599 et seq).

While a bank, like an agent, owes a duty of secrecy to its customer and although the use of cheques may show elements of agency, the bank in most instances cannot be regarded as an agent of its customer. This is because an agent is required to keep his principals money and property separate from his own, which the bank does not do (see De Villiers and MacIntosh: The Law of Agency in South Africa 3 ed (1981) by Jonathan M Silke at 330). In addition to this the agent, unlike a bank, is also required to act solely for the benefit of the principal (see Willis op cit at 31).

Although the classification of the contract between a bank and its customer as one of agency may be appropriate in certain circumstances, such as in carrying out a stop order instruction, it still falls short of satisfactorily explaining the contractual basis existing between a bank and its customer in the many other instances where the bank does not act as agent of the customer. In Estate Ismail v Barclays Bank (DC&O) (1957 (4) SA 17 (T) at 26 as cited in the Cambanis Buildings case supra at 135G) it was said that

'[a] bank may contract to act as an agent for its customer in certain aspects (my emphasis) of its business...'
2.1.1 The contract of mandate as the basis for the contract between the bank and its customer

If the contract between the bank and its customer can not be satisfactorily explained with reference to agency alone the possibility remains that it could be classified as a contract of mandate.

2.1.1.1 The nature of the contract

Mandate is a contract in terms of which the mandatory undertakes to carry out an obligation on behalf of the mandator (see De Wet op cit at 346).

In Standard Bank of SA Limited v Oneanate Investments (Pty) Ltd (1995 (4) SA 510 (C)) at 530G the court stated that

‘over time jurists have considered characterising and explaining the basic relationship as one of depositum, mutuum or agency. All of these approaches have on analysis proved to be inadequate.’

On the basis of this the contract of mandate alone can not adequately describe the basis of the contract between the bank and its customer. The contract between a bank and its customer is probably best described as a debtor-creditor relationship with a number of super-added obligations on both the bank and the customer. The basic bank-customer relationship may however be extended (or curtailed) by express agreement (see Willie and Millin’s Mercantile Law of South Africa 18 ed (1984) by J F Coaker & D T Zeffert at 730-731).

2.1.1.2 The duties of the parties arising out of the contract of mandate

The mandatory is required to carry out his mandate in good faith and to the best of his ability. He may not derive any benefit out of his mandate and he may receive no secret profits, otherwise he will be liable to the mandator for breach of contract. The mandator, on the other hand, is required to compensate the mandatory for any costs, which it may have incurred (see De Wet op cit at 341-342).
Whilst the bank, in the performance of its duties, is required to perform such duties in good faith and to the best of its ability, a bank does not necessarily derive any benefit from the relationship. Likewise, there is no duty on the customer to compensate the bank for costs incurred in the performance of its duties. The contract arising out of the relationship between a bank and its customer cannot be explained by reference to the contract of mandate.

2.2 Contractual terms

A contract is an agreement between two or more persons giving rise to personal rights and obligations on the part of both parties to the contract (Hutchison et al op cit at 409). The parties may agree to the incorporation of certain terms in a contract or such terms may be incorporated by law. The terms of a contract may be classified as the essentiale, naturale and accidentale.

The essentialia of a contract are those terms that serve to classify a contract as a particular type or class of contract. For example, the essentialia of a contract of sale are that there is consensus as to the thing that is sold, the price and the exchange of one for the other. As far as the price is concerned it should be fixed or at least fixable by a standard agreed upon by the parties. Where the parties, instead of agreeing on a price, agree to exchange something the one has for something the other has without reaching agreement on the price, then the contract would not be one of sale, but rather one of exchange or some other contract.

The contract between the bank and its customer is essentially one of debtor and creditor with a number of super-added obligations. In some cases, such as payment of cheques, certain principles of mandate may apply. In other instances the relationship resembles that of mutuum. However, there are no real and distinct essentialia, which will distinguish the relationship as that of bank and customer.

Certain terms of a contract are implied, which means that they are not expressly or tacitly included. These terms, known as naturalia, may be implied by law or may be implied by trade usage. The issue of usage in general and trade usage in particular
will be discussed in greater detail in paragraph 4.2 below. At this stage it may be said that a term which is implied

'is ... an unexpressed provision of the contract which the law imports therein, generally as a matter of course, without reference to the actual intention of the parties ... such implied terms may derive from the common law, trade usage or custom, or from statute. In a sense "implied term" is, in this context, a misnomer in that in contract it simply represents a legal duty (giving rise to a correlative right) imposed by law, unless excluded by the parties, in the case of certain classes of contractants. It is a naturalium [naturale] of the contract in question' (see Alfred McAlpine & Son (Pty) Ltd v Transvaal Provincial Administration (1974 (3) SA 506 (A))).

2.3 The bank-customer relationship under South African law

The relationship between the bank and its customer is essentially founded on contract (Willis op cit at 24; A B Fourie The Banker and the Law (1993) at 1). A feature of the relationship is that it is usually governed by a general unwritten and undefined contract (see Paget's Law of Banking 10 ed (1989) by Mark Hapgood et al at 159). Banking law is one of the areas of law where reliance is almost exclusively placed on terms that are implied (Willis op cit at 25) (see also J Milnes Holden The Law and Practice of Banking Vol. 1: Banker and Customer 5 ed (1991) at 50; Gabriel Moens ‘Can you Bank on a Bank? An examination of the Customer-Bank relationship in light of the Cheques and Payment Order Act 1986 (Cth)’ (1988/89) 15 University of Queensland Law Journal 183 at 185-186).

However, although it may be true that the basic relationship is not governed by a written contract, there may be any number of further and specific contracts that a customer may conclude with his bank in the event of him requiring further or specialised services. The terms and conditions of these contracts are invariably reduced to writing and include agreements to loan or borrow money, applications to open letters of credit etc (see William Blair QC ‘England’ in: R Cranston (ed) European Banking Law: The Banker-customer relationship 2 ed (1999) at 12; Megrah op cit at 70)
An application by a customer to, for example, make use of the Internet banking facilities offered by his bank is usually preceded by the customer agreeing to certain terms and conditions governing the use of the facility and setting out specifically the duties and rights of the customer and the bank, respectively.

Notwithstanding the absence of a formal agreement regulating the traditional bank-customer relationship, the relationship is nevertheless a fairly complex one with a number of terms being implied by law. These will now be discussed.

3. The duties of the parties arising from the traditional bank-customer relationship

3.1 Introduction

The leading case dealing with the relationship between bank and customer is undoubtedly the Joachimson case (as discussed in Smart op cit at 3). The court in its judgment expressed the view that

‘there is only one contract made between the bank and its customers. The terms of that contract involve obligations on both sides and require careful statement.’ (Smart op cit at 3).

The content and scope of these obligations will be discussed in greater detail below.

The court further held that

‘[h]aving regard to the peculiarity of that relation there must be, I consider, quite a number of implied superadded obligations beyond the one specifically mentioned in Foley v Hill and Pott v Clegg.’ (see also Coaker op cit at 730).

The terms which deal with the duties of the bank and which are generally implied in the bank-customer relationship and which will be discussed in this paper are:
- The bank's duty to repay money received from its customer and act according to its customers mandate;
- The bank's duty of confidentiality; and
- The customers duty of care.

3.2 The duties of the bank

3.2.1 The bank's duty to repay money received from its customer and act according to its customer's mandate

**Mandate**

The contract of mandate may be described as a contract in terms of which the mandatory undertakes as against the mandator to do something (De Wet op cit at 346). According to De Wet the mandator's performance can take any form including an undertaking to perform services (see the discussion under paragraph 2.1.1 above). As far as a bank's duty to repay money received from its customer is concerned the contract may be regarded as one of mandate with the bank being the mandator and the customer the mandatory. This is evidenced in the many instances where a bank performs or undertakes to perform duties and services on behalf of the customer.

In the *Joachimson* case (supra), for example, the court said that

'[t]he bank undertakes to receive money and to collect bills for its customer's account. The proceeds so received are not to be held in trust for the customer, but the bank borrows the proceeds and undertakes to repay them. The promise to repay is to repay at the branch of the bank where the account is kept, and during banking hours. It includes a promise to repay any part of the amount due against the written order of the customer, addressed to the bank at the branch...' (Smart op cit at 3).

The customer's mandate to his bank may take on various forms. The mandate by the customer to the bank, which is contained in a cheque, is the most common form of mandate encountered in the context of the bank-customer relationship. Other
forms of mandate include debit-order instructions and instructions to remit money to third parties by way of telegraphic transfers etc. Also, a bank would be acting in terms of its customer’s mandate where the customer gives his bank an electronic instruction via an ATM or the Internet to pay a third party.

The role of the signature: General

A signature is in many cases required to validate a particular legal act. In terms of section 2(1) of the Wills Act 7 of 1953 one of the formalities required for the execution of a will is that the will be signed by the testator or some other person in his presence and by his direction. (It should be pointed out that section 2(3) of the Wills Act does provide for an exception as regards compliance with the requirement of signature in certain circumstances.) Likewise, a signature is a requirement for the validity of a bill in terms of section 2(1) of the Bills of Exchange Act.

The Bills of Exchange Act does not define the concept ‘signature’. As far as the Wills Act is concerned signature is defined in such a way as to include a mark.

In *Dempers v The Master* (1977 (4) SA 44 (SWA)), the court, in deciding whether an initial could be regarded as a signature turned to the dictionary definition of signature to determine the issue. According to Sykes (J B Sykes (ed) *The Concise Oxford Dictionary* 6 ed (1976)) a signature is a ‘[p]erson’s name or initials or mark used in signing’. Malan states that a signature is really nothing more than a ‘mark placed on the instrument with the intention of identifying the person signing’ (see F R Malan ‘Legal Implications of Electronic Storage’ (1990) 2 Stellenbosch LR 153 at 165). It is submitted that, to the extent that a person may sign his name in a particular way a signature may be regarded as unique (see *The e-commerce Debate* (*The e-commerce Debate*), published by the Department of Communications in July 1999; Bertus Pretorius ‘Information technology security’ in: Buys op cit at 132; W Long ‘European Initiatives for On-line Financial Services: Part 3 – Financial Services and the Electronic Signatures Directive’ (1999) 14 *Journal of International Banking Law* 471 at 474).
A signature serves a number of purposes, which can be summarised as follows:

- to identify the document to the signatory;
- to confirm the information contained in the document;
- to evidence acceptance of liability.

In addition and as already stated, a signature also serves to identify the person signing the document (see Malan op cit at 165; Long op cit at 474).

**The role of the signature in giving the mandate**

In acting on a customer's mandate the signature of a customer serves to identify the customer as being the person authorized to perform transactions on the particular account. The Appellate Division has held that whilst money which a customer deposits into his bank account becomes the bank's money, the bank remains obliged to honour cheques which have been validly drawn by the customer (see *S v Kearney* supra; Willis op cit at 32; Fourie op cit at 1). (As far as the position in English law is concerned, see Holden op cit at 55 et seq).

In considering the role that a signature plays in providing a bank with the necessary mandate to debit its customers account it is useful to consider the requirements of the Bills of Exchange Act vis-à-vis the validity of a cheque.

In terms of the Act a cheque is valid if it complies with the definition of a bill of exchange. Section 2(1) of the Act defines a bill of exchange as an 'unconditional order in writing, addressed by one person to another, *signed by the person giving it* (my emphasis), requiring the person to whom it is addressed to pay on demand, or at a fixed or determinable future time, a sum certain in money to a specified person or his order, or to bearer.' It is clear that a signature is a requirement for the validity of a cheque.

The Act goes further and in section 21 the Act provides that '[n]o person is liable as drawer, acceptor or indorser of a bill if he has not signed it as such'.

15
Therefore unless a customer has signed a cheque or other document constituting a mandate, the bank has no mandate to debit its customers account.

The effect of a forged signature

According to Willis (op cit at 35) '[i]f a bank pays a cheque to which the customer’s signature as drawer has been forged or where the amount has been fraudulently raised, it can not debit the customers account with the amount so paid'.

Section 22 of the Bills of Exchange Act deals with forged signatures and in this regard provides that

‘if a signature on a bill is forged or placed thereon without the authority of the person whose signature it purports to be, the forged or unauthorized signature is wholly inoperative, and no right to retain the bill or to give discharge therefor or to enforce payment thereof against any party thereto can be acquired through or under that signature.’

In Big Dutchman (SA) (Pty) Ltd v Barclays National Bank Ltd (1973 (3) SA 267(W)) it was held that it was a fundamental principle that a bank may not debit its customer’s account without proper authority. It can be accepted that a forged signature cannot constitute a mandate or order by a customer to pay (see Ina Meiring ‘ATM’s and EFTPOS: Some legal considerations’ (1987) 9 Modern Business Law 115 at 116 (Meiring ATM’s); Julianna J Zekan ‘Comparative Negligence Under the Code: Protecting Negligent Banks against Negligent Customers’ (1992) 26 University of Michigan Journal of Law Reform 125 at 149).

3.2.2 The bank’s duty of confidentiality

The content of the duty

It is an accepted principle in our law of banking today that a bank is expected to treat, in confidence, the affairs of its customer.
The extent of the bank's duty of confidentiality was explained in *Tournier v National Provincial and Union Bank of England* ([1924] 1 KB 461). According to the court the duty extends to all transactions which go through a customer's account, as well as to securities. It was said that the duty did not end when an account was closed or when an account ceased to be active. Furthermore, the information which is subject to the duty is not limited to account information only, but to information obtained from other sources as well. The only instance where, according to the court, the duty no longer applied was where information was obtained by the bank after the customer had ceased to be a customer of that particular bank.

**The origin of the duty**

**Common law**

In South Africa the bank's duty of confidentiality was recognised as early as 1914. In *Abrahams v Burns* (1914 CPD 452) as discussed in Fourie op cit at 51 the court held that

'[t]he...rule is that a banker will be liable for any actual damage sustained by his customer in consequence of an unreasonable disclosure to a third party of the state of his account ... I incline to the view that the rule which would now be adopted according to the authorities in the English courts, is that a banker would be held liable if he, without sufficient reason, disclosed the state of a customer's account to a third party and damage resulted.'

**Case law**

Over the years the bank's duty of confidentiality has been approved in a number of decisions (*Cambanis Buildings* case (supra); *G S George Consultants and Investments (Pty) Ltd and others v Datasys (Pty) Ltd* (1988 (3) SA 726 (W)). In *Densam (Pty) Ltd v Cywilnat (Pty) Ltd* (1991 (1) SA 100 (A) the Appellate Division finally approved the bank's duty of confidentiality.
In the G S George Consultants case the court held that the tacit or implied duty of secrecy between a bank and its customer was so personal in nature that an element of delectus personae was present. This precluded a bank from ceding its claim against its customer as it would mean revealing information about its customer to a third party.

In the Densam case the Appellate Division rejected the decision in the G S George case holding that where a bank ceded the claim against its customer it did so to further its own interest in collecting an overdraft. Where a bank therefore acted in furthering its own interest it was able to ceded its claim and reveal information about its customer to a third party.

**Banking code**

The Banking Council of South Africa published The Code of Banking Practice on 3 April 2000 ('the Banking Code'). The Banking Code was extensively advertised in the press for some time before the date on which it became effective. Member banks are also required to make available to their customers copies of the Banking Code.

The Banking Code has enforced the position at common law, which requires a bank to keep its customer’s personal account information confidential. In this regard clause 4.1.1 of the Banking Code provides that

> '[w]e will treat all your personal information as private and confidential (even when you are no longer a customer).'

Member banks have accepted the jurisdiction of the Banking Adjudicator to, where appropriate, make binding rulings which are based on law and to make recommendations based on the Banking Code.

**Exceptions to the general rule**

The duty of confidentiality is an implied term of the bank-customer relationship and, save for four exceptions, a bank is always obliged to keep its customer’s personal
account information confidential. The four exceptions to a bank's duty of confidentiality, first raised in the Tournier case (supra), are:

- where disclosure is under compulsion by law;
- where there is a duty to the public to disclose;
- where the interests of the bank require disclosure; or
- where the disclosure is made with the express or implied consent of the customer.

3.3 The customer's duty to exercise reasonable care

The court, in the Joachimson case (supra) (as discussed in Smart op cit at 3), said that

'[t]he customer on his part undertakes to exercise reasonable care in executing his written orders so as not to mislead the bank or to facilitate forgery.'

We have seen that a bank is precluded from debiting its customer's account if the customer's signature is forged or if the instruction to the bank was not authorized (see paragraph 3.2.1). However, should the customer know of the forgery or know of the lack of authority and he fails, nevertheless, to inform his bank in time, the bank may be allowed to debit its customers account notwithstanding the fraudulent signature or lack of authority (see Malan on Bills of Exchange, Cheques and Promissory Notes 3ed (1997) by F R Malan & J T Pretorius ('Malan on Bills of Exchange') 350).

On the basis of the aforegoing it has been held that a customer owes his bank a duty to draw his cheques in such a way as to prevent forgery or alteration. Therefore where a customer, in drawing a cheque, leaves blank spaces or in some other fashion makes it easier to perpetrate a fraud using his cheque, the customer would bear the loss (see Willis op cit at 35).

In Tai Hing Cotton Mill Ltd v Liu Chong Hing Bank Ltd (1984 1 Lloyd's Rep 555) the Privy Council held that, unless there was an express agreement between a bank and
its customer, the customer's duty of care would be limited only to a duty not to draw a cheque so as to facilitate fraud or forgery and to inform the bank as soon as he became aware of any forged or unauthorized cheques (see also Moens op cit at 186-189). The customer's duty did not, according to the Privy Council, extend to taking reasonable precautions to prevent forged cheques from being presented for payment. According to Malan (op cit at 354), the position in South Africa would probably be the same.

3.4 The concept of 'customer' in banking law

A further issue, which merits a brief discussion under this paragraph, is the one of when and how a person becomes a customer of a bank. Put differently, at what point in time can one say that the implied terms of the bank-customer relationship apply to the relationship between the bank and its customer actually be implied? One reason why it is necessary to establish whether a customer is indeed a customer of a bank is that the various terms which are implied by law in the bank-customer relationship exist only if there is in fact a bank-customer relationship (see Anon 'Implied terms in the banker and customer relationship (The Maira (No.3)') (1989) 1 Lloyds Maritime and Commercial Law Quarterly 40 at 41).

Only if there is in fact a bank-customer relationship does the bank's duty of confidentiality and duty to pay strictly in terms of the customer's mandate arise. Likewise, in the absence of the bank-customer relationship there is no duty on the customer to take reasonable precautions to prevent forgery. In Internet banking it is possible that one may encounter a new type of banking customer who does not fit the traditional mould of a customer as contemplated in the bank-customer relationship (see paragraph 3.2).

As a recent newspaper article puts it '[i]nternet banking may increase convenience, but it also has the potential to reduce loyalty,' (see Ryan op cit at 6). It is submitted that with the advent of Internet banking, customers may be inclined to move more regularly between banks hence the need to understand when a customer may be regarded as a customer.
According to Willis (op cit at 24) the court in Standard Bank of SA Ltd v Minister of Bantu Education 1966 (1) SA 229 (N) referred with approval to a statement made by Lord Davey in The Great Western Railway Co v London and County Banking Co Ltd ([1901] AC 414 at 420) to the effect that:

'[i] think that there must be some sort of account, either a deposit or a current account or some similar relation, to make a man a customer of a banker.'

The starting point in determining whether someone is a customer of a bank or not is to determine whether he maintains a bank account with a banking institution. However, this need not always be the case as the court in Importers Company v Westminster Bank Ltd ([1927] 2 KB 297 at 305) alluded to the possibility that persons doing other types of business with a bank could also be regarded as customers.

It would seem that the possibility of persons switching their accounts on a regular basis would not preclude them from being regarded as customers of a particular bank. According to the court in Commissioners of Taxation v English, Scottish and Australian Bank ([1920] AC 683) the duration of the relationship is not of the essence in the bank-customer relationship (Willis op cit at 27, I F G Baxter The Law of Banking 3 ed (1981) at 13 and Hapgood op cit at 160-161). In National Bank of Greece SA v Pinos Shipping Co. No. 1(The Maira) (No. 3) ([1988] Lloyds Rep. 126) a bank-customer relationship was assumed to exist despite there having been only three transactions on the account in a period of eight years (see (The Maira)(No.3) op cit at 41). Provided that a person has an account with a bank or some other relationship, such a person will be regarded as a customer of the bank regardless of how long he maintains the account.

4 Custom in banking law

4.1 Introduction

The terms and conditions normally associated with the traditional bank-customer relationship may be amended by agreement between the parties. In the field of banking law a number of specific contracts may contain certain terms and conditions
which may be regarded as standard terms and conditions applying to all Internet banking agreements. These terms and conditions may, over time, acquire the status of a trade usage in the particular field of business. However before a rule can be regarded as a trade usage a number of requirements have to be satisfied.

Before proceeding with a discussion of custom in banking law it is necessary to determine what is meant by the term custom.

English law draws a distinction between custom and usage. The term custom in English law refers to a particular rule, which has existed from time immemorial and has obtained the force of law in a particular locality. The rule of law need not be consistent with general common law to subsist. Hugo summarises the concept of custom as a rule which is 'immemorial, reasonable and certain' (Charl Hugo 'The Legal Nature of the Uniform Customs and practice for Documentary Credits: Lex Mercatoria, Custom or Contracts?' 6 (1994) SA Merc LJ 145 at 156).

Usage, in English law is regarded as a rule which is notorious, certain, reasonable and does not offend against the intention of any legislative enactment (Hugo op cit at 157).

Where a rule in English law may not qualify as a custom it may nevertheless be treated as a usage. A usage acquires the nature of a trade usage if it acquires such notoriety in a particular trade that any person who enters into a contract of a nature affected by a trade usage must have done so with the intention of being so bound by the usage (Hugo op cit at 158).

For purposes of this paper the term custom is used to refer to a particular type of trade usage. It is submitted that as we are dealing with a particular trade or business, namely banking and more particularly with a specific branch of that trade such as Internet banking that any rules which emanate therefrom may be capable of being regarded as a trade usage. According to Sharrock a trade usage is a rule of law which 'is read into contracts made within the trade concerned even if one or both of the parties concerned are unaware of it' (R Sharrock Business Transaction Law 4 ed (1996)).
4.2 Requirements for the recognition of a trade usage under South African law

Unlike English law no distinction is drawn in South African law between a custom and a trade usage (see *Tropic Plastic and Packaging Industry v Standard Bank of SA Ltd* (1969 (4) SA 108 (D) at 119); for a discussion of the distinctions which do exist between South African law and English law, see Hugo op cit at 162-165; A N Oelofse *The Law of Documentary Letters of Credit in Comparative Perspective* (1997) at 17-18).

In paragraph 2.2 it was pointed out that the naturalia of a contract may be implied by, amongst others a trade usage. In *Crook v Petersen Ltd* (1927 WLD 62 at 71) and *Golden Cape Fruits (Pty) Ltd v Fotoplate (Pty) Ltd* (1973 (2) SA 642 (C) at 645G) the requirements for a trade usage to be implied as a term of a contract were set out as follows:

- be universally and uniformly observed within the particular trade concerned;
- be long established
- notorious;
- be reasonable and certain; and

It is not certain whether a trade usage is required to be long established in order to qualify as a trade usage. Christie queries this requirement, as does Kerr (R H Christie *The Law of Contract in South Africa* 3 ed (1996) at 183, Kerr op cit at 355). According to Christie ‘if a trade usage in a new trade, or an old trade or an old trade experiencing new circumstances, fulfills all the other requirements, it would seem wrong not to imply it in a contract simply on account of its recent origin, but of course recent origin may have an important bearing on whether the usage is notorious.’
According to Kerr the requirement of notoriety is met and the other party is bound even if that party had no knowledge of the usage. A particular usage will acquire notoriety within a branch of trade when any person in that branch entering into a contract affected by the usage does so with the intention that the usage forms part of the contract (see also Coutts v Jacobs (1927 EDL 120)).

As far as Roman Dutch law is concerned the court in Catering Equipment v Friesland Hotel (1967 (4) SA 336 (O) at 399) came to the conclusion that there is no authority supporting a distinction between trade usage and custom such as which exists in English law.

In two recent cases ABSA Bank Bpk v Saunders (1997 (2) SA 192 (NC); ABSA Bank h/a Volkskas Bank v Retief (1999 (2) SA 322 (NC) the requirements for the recognition of trade usages in banking law were discussed. In the Saunders case the court, in accepting that there is a long-standing usage among commercial banks to charge interest rates on overdrawn facilities, accepted without question the requirements for the recognition of a trade usage as laid down in the Golden Cape Fruits case. However in the Retief case the court came to a different conclusion holding that before a bank could rely on a trade usage it would have to prove such usage.

It is submitted that, in South African law at least, there should be no requirement that a custom had to have existed since time immemorial to find application (see Kerr op cit at 355; Schulze op cit at 51-52). As far as banking law is concerned Schulze is of the opinion that banking practice qualifies as a type of trade usage, as it is one prevalent in the banking sphere (Schulze op cit at 53).

If a trade usage is not required to be a long standing usage in order for it to be recognised as such, then it is conceivable that in the fast moving world of banking certain practices may become accepted as trade usages fairly quickly. According to Schulze (op cit at 53), in the field of banking law the fast pace of development has resulted in the law lagging behind. In relation to banking it is necessary for the law to be more flexible in order that it can adapt to changing and new circumstances (see in this regard Standard Bank of SA Limited v Oaneante supra at 530G – 531B).
5 The effects of Internet banking on the bank-customer relationship

5.1 Introduction

It has been argued that 'the flexibility offered by Internet banking particularly the ability to conduct banking business at any time and through any Internet connection, coupled with relatively low transaction costs' outweigh the risks involved in transacting banking business online' (see Swart 'Online banking law and payment systems' in: Buys op cit at 294).

However, it is precisely the risk involved in transacting banking business via the Internet that raises questions regarding the obligations of the bank and its customer in the bank-customer relationship. Other issues which may also be raised in connection with Internet banking include, the time and place of payment and the time and place of the formation of contract to name but a few. These issues will, however, not be addressed in this paper.

Internet banking holds a number of consequences for the traditional bank-customer relationship. For purposes of this paper attention will be given to:

- The obligation of the bank to act according to its customers mandate when honouring a payment instruction (including the need for the bank to identify its customer);
- The bank's duty of confidentiality which requires of a bank to keep its customer's personal information confidential; and
- The duty of care imposed on a customer that requires that the customer does not allow an opportunity for his account to be used fraudulently.
5.2 The bank's duty to act in terms of its customer's mandate

5.2.1 Introduction

We have indicated under paragraph 3.1.1 above that a bank has a duty to pay on demand and in accordance with its customer's instructions, provided that there are no legal reasons preventing the bank from paying. Therefore, where a signature is forged the customer's authority to his bank is lacking.

Any mark, which identifies an act with a certain party, may be regarded as a signature. Over and above identifying a person, a signature may also indicate a willingness to be bound to a particular contract and acknowledgement that the contents of a particular agreement at the time of signing are correct (see Gezina Aletta Meiring 'Regsaspekte van die Rekenarisering van die Betalingstelsel ((1998) LLD thesis, University of South Africa) at 199) (Mering Regsaspekte); Tana Pistorius 'Formation of Internet contracts: An analysis of the contractual and security issues' (1999) 11 SA Merc LJ 282 at 295; paragraph 3.2.1 above).

An area of concern in Internet banking is the inability of the bank to identify its customer. The validity of the customer's mandate (as evidenced by his signature) continues to be a requirement for debiting a customers account whether a transaction is paper based (such as a cheque) or electronic (such as an instruction given by way of the Internet).

A perusal of the various Internet banking contracts reveals that banks generally, will not verify or inquire into the authority of a person initiating a transaction where such a person uses the correct password and personal identification number. According to Meiring (ATM's op cit at 116) banks are authorized to debit the accounts of their customer's where withdrawals (from an ATM) are effected by using the card/PIN even if the use of the card/PIN was unauthorized.

Meiring (Regsaspekte op cit at 206-207) points out that as it is impossible for the issuer of an electronic signature to verify whether the user is indeed the authorized user it is usually agreed that the customer bears the risk for unauthorized access.
An unauthorized user may have gained access to an account using the correct password and/or personal identification number but in gaining access user has either

- obtained the password and/or personal identification number by fraudulent means; or
- accessed the account with the knowledge of the account holder but has performed transactions which he was not authorized to perform.

5.2.2 The electronic signature

Electronic signatures, like paper signatures, are intended to serve as binding declarations of the intent of the signor. It is submitted that both electronic signatures and paper signatures indicate acceptance by the signor, to be bound by the content of an agreement (see *The e-commerce Debate* op cit at 20; Long op cit at 474).

The term electronic signature is usually used in a broader sense to describe all technologies (both electronic and digital signatures) which replace hand written signatures in an electronic environment (see B P Aalberts & S van der Hof 'Digital Signature Blindness Analysis of Legislative Approaches to Electronic Authentication' (2000) 7 *The EDI Law Review* 1 at 2).

An electronic signature in the narrower sense refers to any electronic form or symbol used by a party to indicate his intention to be bound to a contract. These electronic signatures may include any unique qualities of the signor such as a fingerprint, the signor's voice or even a retinal impression or a PIN number. In this sense an electronic signature can be regarded as unique (see Malan op cit at 165; Meiring ATM's op cit at 117; Long op cit at 473; Aalberts op cit at 2, *The e-commerce debate* op cit at 20). For purposes of this paper the term electronic signature should be taken as a reference to an electronic signature in the narrower sense. It is submitted that the use of an electronic signature does serve as a means of identifying the person in the same way as paper signature would identify the signor.
A digital signature on the other hand refers, in simple terms, to a numerical code or algorithm which is affixed to a document or message with the intention of assuring the recipient that the document or message is authentic. In reality a digital signature is not a signature at all but a form of encryption (see Malan op cit at 165; Long op cit at 473 to 474; Pistorius op cit at 294 to 296).

According to Meiring (Regsaspekte op cit at 207) an 'electronic signature' neither identifies the customer, nor serves to indicate an intention to be bound. Rather, so Meiring argues, an electronic signature should rather be regarded as an access key. It is submitted that if by electronic signature is meant the digital signature that this view is correct. However, if electronic signature refers to electronic signature in the narrow sense then this view is incorrect. An electronic signature in the narrow sense is clearly unique to the person whose signature it purports to be and by attaching such electronic signature a person can be identifies and show is indicating his intention to be bound.

In United States of America the recognition of electronic signatures to identify parties gained added impetus. The Electronic Signatures in Global and National Commerce Act 2000 was signed into law in June 2000. In terms of this Act electronic signatures have been given the same force in law as ink on paper. The Act will allow American consumers to 'sign checks, complete applications for loans or services without the need for a paper signature' (Deborah Charles ‘Clinton to e-sign digital signature law’ http://www.boot.co.za/reuters/jun00/esignature30.htm consulted on 30 June 2000).

As far as the position in South Africa is concerned the Department of Communications has recognised that

'South Africa does not at this time have a legal framework in place for addressing ... digital signatures'. (see The e-commerce debate op cit at 20)

It is submitted that the recognition of electronic signatures in South Africa is still some way from implementation. However the need for legislation catering for the recognition of electronic signatures as opposed to paper signatures has been recognised. At present references to signature are still understood in the context of
paper based signatures. Until such time as statutory recognition is given to electronic and digital signatures the question of whether an electronic signature will adequately serve to identify the signor and indicate acceptance will remain.

5.2.3 Unauthorized electronic signatures – the banks dilemma

Although it is relatively easy for a bank to identify its customer on the basis of a written order such as a cheque and hence to detect forgery or fraud, where Internet banking transactions are concerned the identification of a customer is made more difficult as the bank is not in a position to positively identify its customer. As far as the bank is concerned the person logging on to the website is either its customer or is someone who is authorized to transact on behalf of its customer or someone without authority but with the correct electronic signature (see Long op cit at 471).

Whilst the use of electronic signatures may ensure the identity of the person accessing the account only up to a point, the problem which remains is whether the person accessing the account is actually the customer and if not, whether the person has the necessary authority to access the account. As the user remain faceless, there is, ultimately no way of knowing or determining whether the user is in fact the authorized user or not (see Meiring ATM's op cit at 116).

Section 22 of the Bills of Exchange Act provides that a signature is wholly inoperative if it is forged or placed on a bill without the authority of the person whose signature it purports to be and that no right to give discharge for the bill or enforce payment thereof can be acquired through under that signature. If one applies section 22 to Internet banking then the bank would not have any authority to debit its customer’s account if the use of a password was unauthorized (see generally C Reed 'Consumer Electronic Banking' (1994) 11 Journal of International Banking Law 451 at 452; G Smith 'Online Banking liability: Liability for computer errors in Online Banking (1996) 12 The Computer Law and Security Report 277 at 277).
5.2.4 Possible solutions

Visser addresses the issue of unauthorized withdrawals from ATMs and in doing so asks whether the bank or the customer should bear the risk for any unauthorized withdrawals (see Coenraad Visser ‘Banking in the Computer Age: The Allocation of some of the risks arising from the Introduction of Automated Teller Machines’ (1985) 102 SALJ 646 at 646). According to Visser (op cit at 654 – 656) Oelofse’s concept of legitimation may address the issue of who bears the risk for an unauthorized ATM withdrawal. According to the concept of legitimation the ‘combination of card and PIN should be construed as formal legitimation, with the result that the customer will bear the risk of unauthorized withdrawals.’ Put differently the customer would bear the risk in the event that it is found that the withdrawal was unauthorized but that the customer’s card and correct PIN number has been used.

The concerns regarding unauthorized Internet banking transactions may, it is submitted, be addressed in the same way as the concerns relating to unauthorized ATM withdrawals have been addressed. As Smith (op cit at 278) explains in comparing ATMs with the Internet, the technology is in many respects similar:

‘the browser as a whole is the plastic card, the electronic signature, the magnetic stripe and the password or the PIN number’.

The solutions which have been suggested for overcoming problems of identity vis-à-vis ATM customers, may serve as a useful guide in solving the legal problems associated with identifying customers making use of Internet banking services.

In the event of the unauthorized use of a password being the equivalent of a forged instruction then the liability would be on the bank, except in those restricted circumstances which would result in the bank not being liable. The Banking Code provides that a bank would be liable for any losses incurred:

- after the banker was informed that a password, PIN or other selected information was known to another; and
where faults have occurred in the system etc. (see clause 4.4.4 of the Banking Code).

It is submitted that the duty of a bank to pay strictly in terms of its customer’s mandate may also be specifically excluded or curtailed by contract (see Coaker op cit at 730-731; Tai Hing Cotton Mill Ltd supra discussed under paragraph 3.2.3 above)

Where the instruction is genuine (in form), but is unauthorized, such as where a customer has left his password lying around thereby allowing a third party to obtain the password, the customer would be liable for any loss suffered (see Smith op cit at 278).

By analogy a customer, in an Internet banking environment, would be liable for any unauthorized transaction relating to his account, notwithstanding the absence of the customer’s mandate. The majority of banks place the onus on their customers to ensure that passwords (and PIN numbers) are kept safe and failure to keep passwords safe excludes liability on the part of the banks. But the question arises as to whether a distinction can and should be made where liability has not been excluded. In most cases banks will only accept liability for losses incurred after the customer has informed his bank of the loss or theft of a password number (see clause 4.4.4 the Banking Code).

It would be difficult for a customer to discharge the burden of proof in those cases where the correct password was used to carry out a transaction. A distinction can therefore not really be made between those instances where liability is contractually excluded and those cases where it is not excluded. It is submitted that where the bank’s liability is not contractually excluded a customer would still be required to prove that a particular transaction was carried out without his authority or that his password had been stolen. The computer records of the bank would show only that the customer’s password was used to perform a transaction.
5.3 The bank's duty of confidentiality in Internet banking

The Banking Code essentially enforces the common law principle (see GS George Consultants (supra) that recognises that personal account information will be treated as private and confidential and that nothing regarding a person's account, his name or address will be disclosed to anyone. The Banking Code further recognises that information will only be disclosed in the four exceptional cases set out in the Toumier case (supra) (see paragraph 3.2.2).

At the time the Toumier case was decided the records a bank held on its customers were held in paper form and a bank would have had a measure of control regarding how and where such information was kept. It would have been reasonably easy to restrict unauthorized access to a customer's records. This is certainly no longer the case. Account information is now invariably stored on a bank's computer system making such information easily accessible to anyone who can gain access to a computer.

According to the US National Commission on Electronic Funds Transfers ('the US National Commission') there are five areas in which the development of Electronic Funds Transfers (EFTs) could pose a threat to individual privacy:

- EFT will create new records of transactions;
- EFT will result in an increase in the amount of information available in new records;
- Because EFTs are electronically readable they will be more easily accessible;
- More institutions might gain access to an individual's financial records; and
- The place where a person operates a terminal would be precisely located (Anu Arora Electronic Banking and the Law (1988) at 154).

The Electronic Funds Transfer Act 15 USC § 1693 (EFTA) whilst primarily aimed at 'regulating access, defining consumer liability for unauthorized access and protecting consumers' (Donald A Doheny Sr & Graydon John Forrer 'Electronic Access to
Account Information and Financial Privacy' (1992) 109(5) Banking Law Journal 436 at 448) does, to a limited degree, address issues relating to privacy.

The EFTA does not specifically deal with the five areas in which EFTs could pose a threat to individual privacy. Rather the EFTA provides that banks must advise their customers under what circumstances the bank will disclose information concerning the customer's account to third parties.

Appendix A of the Code of Federal Regulations of the EFTA provides a model disclosure statement for use by banks. In terms of this model statement banks will disclose information to third parties in certain circumstances only (see Doheny op cit at 448). According to Doheny (op cit at 454) banks would considerably reduce their liability if they allowed their customer's a choice between easy access to their accounts or record confidentiality. In other words if customer's who were wanting to make use of Internet banking facilities were advised that the use of the Internet may impact on the confidentiality of their personal account information they may not be so willing to transact on the Internet.

In South Africa the Department of Communications has expressed the view that

'[t]he technology of the Internet has made it increasingly easy to obtain detailed, personal information about users, without their knowledge or consent' (see The e-commerce debate op cit at 16).

The concerns raised by the US National Commission regarding the threat that EFTs could pose for individual privacy can just as readily be applied in the South African context (see page 32 above).

According to the South African Department of Communications financial information is one of three categories of information which consumers regard as being particularly sensitive information (the other two categories being medical information and child-related information) (see The e-commerce Debate op cit at 16).
The risk of the unauthorized access of personal confidential information via the Internet should not be underestimated. As computer technology becomes more advanced so it becomes easier for unauthorized persons ('hackers') to gain access to information. Reports of hackers gaining access to and making use of personal information abound. One such report concerns a hacker by the name of Kevin Mitnick who allegedly broke into a computer network and stole thousands of credit card numbers (see M E Budnitz 'Privacy protection for consumer transactions in electronic commerce: Why self regulation is inadequate' (1998) 49 South Carolina Law Review at 851). (For an in depth discussion of the Mitnick case as well other incidents see W Stent Risk of fraud with specific reference to Internet Banking (((1997) M.Comm dissertation, RAU) at 18 et seq).

Although the literature does not indicate what Mitnick did with the credit card numbers it does illustrate that the threat of a third party obtaining access to a customer's account is real rather than perceived. This then raises the question whether it can be implied that, inherent in a bank's duty of confidentiality, there is also an additional duty to ensure that sufficient precautions are taken to ensure the security of their systems against unauthorized access.

According to Wilna Faul Grondslae van die Beskerming van die Bankgeheim (((1991) (LLD thesis, RAU) at 479) the position is different should a third party and not the bank publisize information regarding it's client. Faul (op cit at 479) cites as an example the unauthorized access of a bank's computer system by a person resulting in the customer's personal confidential information being made public. In such a case a bank would, according to Faul op cit at 479 have a duty to take reasonable precautions to ensure that its information is protected. Should a bank not take reasonable precautions then the bank would be acting wrongfully and would be liable for a breach it's duty of confidentiality.

It is submitted that there should be a duty on a bank to provide adequate security for its computer systems. In this regard one of the fundamental principles of the South African Banking Code provides that

34
"[w]e the members of the Banking Council undertake that we will ... have safe, secure and reliable banking and payment services'.

Most banks are aware of the dangers that exist vis-à-vis their computer systems and take proactive measures to ensure that they comply with the duty to provide adequate security systems. The establishment of specific Information Technology departments to ensure computer security and develop new tools to counter possible breaches in their networks usually accomplishes this.

5.4 The customer's duty to take reasonable care

Implied in the bank-customer relationship is a duty on the customer to exercise reasonable care in executing written orders in such a way so as not to mislead the bank or to facilitate forgery which would result in the bank incurring losses. However unless expressly agreed this duty does not include a duty to take reasonable precautions to prevent fraud and forgery.

In relation to Internet banking transactions it may be asked firstly, how a customer would facilitate forgery and secondly whether a customer could facilitate 'forgery'. It is submitted that the implied duty of a customer to take reasonable care could be extended to include a duty to take reasonable care in regard to his password. This reasonable care could include, for example, not giving his password to a third party or negligently allowing a third party to obtain his password by leaving it lying around.

In so far as ATM transactions are concerned the Banking Code advises customers as follows:

- Please ensure that you:
  - do not allow anyone else to use your card, PIN and/or password;
  - always take reasonable steps to keep their card safe and your PIN, password and selected personal information secret at all times; never tell anybody who offers to help you your PIN or password, including any bank employee;
- never write down or record their PIN, password or selected personal information without disguising it; for example, never write down or record your PIN using the numbers in the correct order' (see clause 4.4.2). (See also paragraph 3.2.2 above where it is pointed out that for all intents and purposes customers should be aware of the Banking Code and that member banks have to provide customers with copies of the Banking Code).

According to the Banking Code failure to take the recommended precautions would be regarded as gross negligence on the part of the customer which would result in the customer being liable for any losses incurred.

In addition to these precautions customers are advised to inform their bank’s as soon as they suspect or discover that someone else knows their PIN, password etc.

The majority of banks require their customers to:

- Ensure the safekeeping and confidentiality of the PIN which has to be issued to them; and
- Notify the bank immediately should he become aware that his PIN has fallen into the hands of an unauthorized person.

The contractual arrangements applying to Internet banking services generally provide that should customers fail to follow recommended security procedures this could inter alia lead to unauthorized transactions between their linked accounts.

6 Internet banking custom

The traditional bank-customer relationship has emerged over many years. Internet banking has, however, resulted in a new way of conducting personal banking transactions. The question that arises is whether the terms and conditions of Internet banking agreements can be regarded as a form of trade usage, alternatively whether they may be regarded as an extension of the implied duties arising out of the traditional bank-customer relationship (see paragraph 4.2 for a discussion on the requirements of a trade usage).
The possible emergence of Internet banking custom will be examined under the following headings:

- liability for unauthorized transactions (including the customers duty to keep his PIN and password safe); and
- the bank's duty to provide secure systems.

6.1 Liability for unauthorized transactions

One of the duties arising out of the traditional bank-customer relationship is the duty which rests on the bank to act in terms of the customer's mandate. This duty implies that where the customer's signature has been forged, the bank would be precluded from debiting its customer's account. Advances in banking technology will, however, make it increasingly difficult for customers to detect unauthorized or fraudulent transactions (see Zekan op cit at 129). So, for example, if an account were accessed without authority using the correct password the customer would be unable to assert that the transaction was unauthorized. Unlike a cheque which is signed and which can be checked, the unauthorized use of password can not be verified (see again the discussion under paras 5.2.2 and 5.2.3 above).

As far as Internet banking is concerned, banks do not accept responsibility for unauthorized transactions (see eg clause 1(ii) of First National Bank's FirstOnline Internet Service Terms and Conditions at http://firstonline/terms.asp consulted on 18 July 2000; clause 6.1 of Nedbanks Netbank Terms and Conditions at http://www.nedbank.co.za/1.online/online_terms.html consulted on 4 July 2000; Terms and Conditions for Standard Bank Internet Banking at http://www.standardbank.co.za/banking/ibterms.htm consulted on 24 July 2000). In terms of these agreements customers are informed that passwords (and PIN numbers) are to be safeguarded and that their bank's should be notified in the event that their passwords and PIN numbers fall into the wrong hands. Failure by a customer to notify his bank would entitle the bank to debit its customer's account notwithstanding the possibility that it may be acting without the customer's mandate. Even if a PIN number were stolen and used by a thief it is submitted that a bank
would be entitled to debit a customer's account until such time that the customer notified the bank of the theft of the PIN number.

These contractual arrangements regulating the Internet banking are clearly a departure from the terms usually implied by law in the traditional bank-customer relationship. If this is the case then could it perhaps be argued that the practices of banks in relation to Internet banking transactions have resulted in the establishment of a trade usage which may be implied in all Internet banking transactions?

The phenomenon of the ATM in the late 1970's and early 1980's raised issues similar to those being raised now in respect of Internet banking. Questions were asked regarding the authority of banks to debit their customer's account where cards and PIN numbers fell into the wrong hands. Today it is generally accepted that, where a customer fails to report the loss of his ATM card and PIN number to his bank, he bears the loss for any unauthorized withdrawals prior to reporting the loss. In the United States the EFTA limits a customers liability to $50 or the amount of the unauthorized transfer, whichever is the lesser, before notice has been given to the bank (see in this regard Meiring ATM's op cit at 119; Reed op cit at 455). Where a customer fails to notify his bank of the unauthorized use within two days of the loss of his means of access his liability my be up to $500. Where a customer fails to advise his bank at all of the loss of his password he would bear any losses resulting from unauthorized transactions.

It is submitted that rather than regarding these contractual arrangements as a departure from the bank's traditional duty of acting in accordance with its customers mandate, that the contractual arrangements should be seen as an extension of the customers implied duty which requires that he draws cheques in such a way so as not to facilitate fraud or forgery (see Nick Locket 'How to secure electronic transactions' (1999) 8(3) International Financial Law Review 9 at 11).

Since the electronic signature serves to authenticate a customer's Internet banking transaction in much the same way as a signature serves to authenticate a paper based transaction (see Malan op cit 164-165), a customer should ensure that he
does not negligently leave his password lying around or divulge the password to a third party.

Whilst the Banking Code cannot be regarded as legally binding on banks (see the preamble of the Banking Code) it is submitted that it may nevertheless be regarded as a reflection of current practice among banks.

Although the Banking Code states that the provisions of the Banking Code will not give rise to a trade custom it is submitted that the Banking Code nevertheless does leave one with the impression that the provisions are regarded as trade customs. This is reflected in the fact the trade usages and practices, which have been incorporated in the Banking Code, have existed in their own right prior to their incorporation in the Banking Code. The Banking Code may therefore be regarded as a reflection of current bank practice.

Even though only a small fraction of bank customers make use of the Internet to perform their banking transactions, it is possible for a trade usage to develop within a closed or small group of users (see B Kozolchyk 'The Paperless Letter of Credit and Related Documents of Title' (1992) 55 Law and Contemporary Problems 92 at 95). The limited number of users of Internet banking services should therefore not be regarded as an impediment to the recognition of a trade usage within the field of Internet banking.

The extension of the customer’s duty to include an obligation on the customer to protect his passwords is certainly a characteristic of most Internet banking contracts. As Swart (op cit at 294) points out ‘the flexibility offered by Internet banking, particularly the ability to conduct banking business at any time and through any Internet connection, coupled with relatively low transaction costs, probably outweighs the risks involved.’ It is submitted that users of Internet banking services are generally aware of the dangers posed by the Internet and therefore understand the need to secure their PIN numbers and passwords.

In conclusion. As far as the customer’s liability for Internet banking transaction is concerned it is submitted that the extension of the customer’s traditional duty may, in
relation to users of Internet banking services, be regarded as a form of trade usage vis-à-vis Internet banking.

6.2 The duty to provide secure systems

The failure of bank to provide secure systems may result in the bank being liable for a breach of its duty of confidentiality (see Arora op cit at 155, Swart op cit at 287).

A perusal of various Internet banking contracts reveals that the contracts themselves do not provide much comfort for a customer as far as the security of systems is concerned. Security issues are generally dealt with in a section called ‘frequently asked questions’ and do not purport to bind the bank in any way. The security measures adopted by banks vary, but generally the following measures are taken:

- 128 bit encryption technology to scramble transaction details so that data intercepted on the Internet cannot be used;
- login codes and passwords;
- time out, where the link between the customers computer and the banks mainframe is terminated after a number of minutes have elapsed; and
- limitations on the amount of a transaction (see R Buys ‘Internet Banking: The Risks and Benefits’ (June 2000) 389 De Rebus 30 at 30).

One of the requirements for the recognition of a trade usage is that it should be universally and uniformly observed. Recognition has, in principle, been given to the need for secure systems (see The e-commerce Debate op cit at 16 et seq). Likewise the Banking Code provides that banks will provide safe, secure and reliable banking services. It may be argued that the need for secure systems are not detailed enough to be regarded as a trade usage. It is submitted that, on the basis of the fact that anyone making use of Internet banking services expects that reasonable security systems will be provided, that the requirement for a trade usage in this particular sphere of banking is met (see par 4.2 especially Kerr’s requirement of notoriety).

It may be argued that, as the Banking Code reflects current banking practice that all banks, which subscribe to the Banking Code, should provide adequate Internet
security measures. What is adequate depends very much on what security measures are currently available. Smith, for example, suggests that banks should, at the very least 'keep up to date with the strongest readily available encryption, at least to the extent practicable' (see Smith op cit at 279; Meiring ATMs op cit at 117). The fact that security measures are subject to constant change should not affect the recognition of the need for security measures as a trade usage (see par 4.2 where it is pointed out that in the fast moving world of banking certain practices have become accepted as trade usages relatively quickly).

It is submitted that the failure by banks to provide adequate security measures which result in a third party obtaining access to a customer's private account information would be regarded as a breach of a bank's duty of confidentiality. A strong argument exists for the recognition of a trade usage requiring banks to provide adequate security systems.

7 Conclusion

Most of the terms implied in the traditional bank-customer relationship were developed at a time when most customers maintained only one account with their banks and gave their payment instructions in writing, for example by way of a cheque.

As ATMs revolutionised the way in which customers did business with their banks, so to is the Internet changing the way in which customers bank. Ultimately this will require the adaptation of the existing legal framework to provide for a new form of transactability. If the law does not change then the legislature will have to step in to protect the consumer and set new rules for conducting business (see The e-commerce Debate op cit at 17).

Most of the Internet banking terms and conditions which were studied for purposes of this paper impose on the customer a duty to protect his password and to notify his bank should it fall into the wrong hands or is lost. Banks can and do legitimately exclude liability where the account has been legitimately accessed by using a password.
Internet banking has resulted in banks expressly providing that when a customer makes use of Internet banking services the bank is not liable for unauthorized transactions. This is clearly a departure from the traditional duties implied in the bank-customer relationship. As most banks exclude liability and as the Banking Code also alludes to this exclusion of liability it is submitted that in as far as Internet Banking is concerned, that the practice has acquired the status of a trade usage.

Computer security and the confidentiality of personal account information remains one of the biggest concerns for customers wanting to make use of Internet banking facilities. Although breaches in computer security are not restricted to the banking industry it is submitted that given the sensitivity of information held by banks that there is an added duty on banks to take adequate precautions. At present issues of computer security and confidentiality are mainly left to self-regulation. This, it is submitted, is not sufficient and legislation is required to, at the very least, ensure a measure of standardisation as regards security of computer data.
BIBLIOGRAPHY

Aalberts, BP, van der Hof, S 'Digital Signature Blindness Analysis of Legislative Approaches to Electronic Authentication' (2000) 7 The EDI Law Review 1

Anonymous 'At last Internet Banking takes off' (1999) 91 (7) ABA Journal 36

Anonymous 'The Maira (No.3)’ (1989) 1 Lloyds Maritime and Commercial Law Quarterly 40


Budnitz, ME 'Privacy protection for consumer transactions in electronic commerce: Why self regulation is inadequate' (1998) 49 South Carolina Law Review

Buys, R 'Internet Banking: The Risks and Benefits' (June 2000) 389 De Rebus 30


Charles, D 'Clinton to e-sign digital signature law'
http://www.boot.co.za/reuters/jun00/esignature30.htm June 30, 2000


Faul, W Grondslae van die Beskerming van die Bankgeheim ((1991) (LLD thesis, RAU))

First National Bank’s FirstOnline Internet Service Terms and Conditions at http://firstonline/terms.asp consulted on 18 July 2000

Fourie, AB The Banker and the Law (1993)

FNB Electronic Banking (nd)

Gordon, G ‘Internet Banking steps into the 21st century’ *Sunday Times (Business Times)* May 21 2000

Gordon, G ‘SURVEY/Internet Financial Services’ *Sunday Times (Business Times)* April 23 2000


Hugo, C ‘The Legal Nature of the Uniform Customs and practice for Documentary Credits: Lex Mercatoria, Custom or Contracts?’ 6 (1994) *SA Merc LJ* 145


Keyes, AJ ‘Virtual Banking’ (1999) 30(3) *Black Enterprise* 145


Levine, JR & Baroudi, C *The Internet for Dummies* (1993)


Malan, FR ‘Legal Implications of Electronic Storage’ (1990) 2 *Stellenbosch LR* 153


Meiring, GA ‘Regsaspekte van die Rekenarisering van die Betalingstelsel’ ((1998) LLD thesis, University of South Africa)


Nedbank Netbank Terms and Conditions at [http://www.nedbank.co.za/1_online/online_terms.html](http://www.nedbank.co.za/1_online/online_terms.html) consulted on 4 July 2000

44
Oelofse, AN The Law of Documentary Letters of Credit in Comparative Perspective (1997)
Orr, B 'E-banks or E-Branches' (1999) 91(7) ABA Banking Journal 32
Paget's Law of Banking 10 ed (1982) by Mark Hapgood
Pearson, I 'The future of banking' http://www.gadget.co.za 22 August 2000
Ryan, C 'SURVEY/Retail Banking' Sunday Time (Business Times) April 30 2000
Chorley & Smart: Leading cases in the Law of Banking 6 ed (1990) by Smart, PE
Standard Bank Internet Banking (nd)
Stassen, JC "n Herwaardering van Engelsregetlike eienaardighede in die lig van die Suid-Afrikaanse gemene reg, Bankwet en Wisselwet' (1982) 4 Modern Business Law 80
Stent, W Risk of fraud with specific reference to Internet Banking ((1997) M.Comm, dissertation RAU))
Visser, C 'Banking in the Computer Age: The Allocation of some of the risks arising from the Introduction of Automated Teller Machines' (1985) 102 SALJ 646

45

**TABLE OF CASES**

<table>
<thead>
<tr>
<th>Case</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong></td>
<td></td>
</tr>
<tr>
<td>ABSA Bank h/a Volkskas Bank v Retief 1999 (3) SA 332 (NC)</td>
<td>24</td>
</tr>
<tr>
<td>ABSA Bank Bpk v Saunders 1997 (2) SA 192 (NC)</td>
<td>24</td>
</tr>
<tr>
<td>Abrahams v Burns 1914 CPD 452</td>
<td>17</td>
</tr>
<tr>
<td><em>Alfred McAlpine &amp; Son (Pty) Ltd v Transvaal Provincial Administration</em></td>
<td></td>
</tr>
<tr>
<td>1974 (3) SA 506 (A)</td>
<td>11</td>
</tr>
<tr>
<td><strong>B</strong></td>
<td></td>
</tr>
<tr>
<td><em>Big Dutchman (SA) (Pty) Ltd. v Barclays National Bank LTD</em></td>
<td></td>
</tr>
<tr>
<td>1973 (3) SA 267(W)</td>
<td>16</td>
</tr>
<tr>
<td><strong>C</strong></td>
<td></td>
</tr>
<tr>
<td><em>Cambanis Buildings (Pty) Ltd v Gal</em> 1983 (2) SA 182 (NC)</td>
<td>7,8,17</td>
</tr>
<tr>
<td><em>Catering Equipment v Friesland Hotel</em> 1967 (4) SA 336 (O)</td>
<td>24</td>
</tr>
<tr>
<td><em>Commissioner of Customs and Excise v Bank of Lisbon International Limited</em></td>
<td></td>
</tr>
<tr>
<td>1994 (1) SA 205 (N)</td>
<td>6</td>
</tr>
<tr>
<td><em>Commissioners of Taxation v English, Scottish and Australian Bank</em></td>
<td></td>
</tr>
<tr>
<td>[1920] AC 683</td>
<td>21</td>
</tr>
<tr>
<td><em>Coutts v Jacobs</em> (1927) EDL 120</td>
<td>24</td>
</tr>
<tr>
<td><em>Crook v Petersen Ltd</em> 1927 WLD 62</td>
<td>23</td>
</tr>
<tr>
<td><strong>D</strong></td>
<td></td>
</tr>
<tr>
<td><em>Dantex Investment Holdings (Pty) Ltd v National Explosives (Pty) Ltd</em></td>
<td></td>
</tr>
<tr>
<td>1990 (1) SA 736 (A)</td>
<td>6</td>
</tr>
<tr>
<td><em>Densam (Pty) Ltd v Cywilnat (Pty) Ltd</em> 1991 (1) SA 100 (A)</td>
<td>17,18</td>
</tr>
</tbody>
</table>

46
E
Estate Ismail v Barclays Bank (DC&O) 1957 (4) SA 17 (T) ........................................ 8

F
Foley v Hill [1848] 2 HL Cas 28 ........................................................................ 5,12

G
Golden Cape Fruits (Pty) Ltd v Fotoplate (Pty) Ltd 1973 (2) SA 642 (C) ............ 23
G S George Consultants and Investments (Pty) Ltd and others v Datosys (Pty) Ltd
1988 (3) SA 726 (W) .................................................................................. 17,18,32

I
Importers Company V Westminster Bank Ltd [1927] 2 KB 297 ................................ 21

J
Joachimson v Swiss Bank Corp [1921] 3 KB ................................................. 6,12,13,19

N
National Bank of Greece SA v Pinos Shipping Co. No. 1(The Maira) (No. 3)
[1988] Lloyds Rep. 126 .............................................................................. 21

S
Standard Bank of SA Ltd. v Minister of Bantu Education 1966 (1) SA 229 (N) ..... 21
Standard Bank of SA Limited v Oneanate Investments (Pty) Ltd
1995 (4) SA 510 (C) .................................................................................. 9,24
S v Kearney 1964 (2) SA 495 (A) .............................................................. 5,15

T
Tai Hing Cotton Mill Ltd v Liu Chong Hing Bank Ltd
1984 1 Lloyd's Rep 555 ............................................................................. 19,31
The Great Western Railway Co. v London and County Banking Co. Ltd
[1901] AC 414 .......................................................................................... 21
Tournier v National Provincial and Union Bank of England
[1924] 1 KB 461 ...................................................................................... 17,19,32
TABLE OF STATUES AND REPORTS

SOUTH AFRICA


The e-commerce debate published by the Department of Communications in July 1999)

The Code of Banking Practice published by The Banking Council of South Africa on 3 April 2000

Bills of Exchange Act 34 1964

Wills Act 7 1953 14

UNITED STATES OF AMERICA

Report to the Chairman, Committee on Banking and Financial Services, House of Representatives Electronic Banking – Experiences Reported by Banks in implementing online banking 15 January 1998

Electronic Funds Transfer Act 1978

Electronic Signatures in Global and National Commerce Act 2000