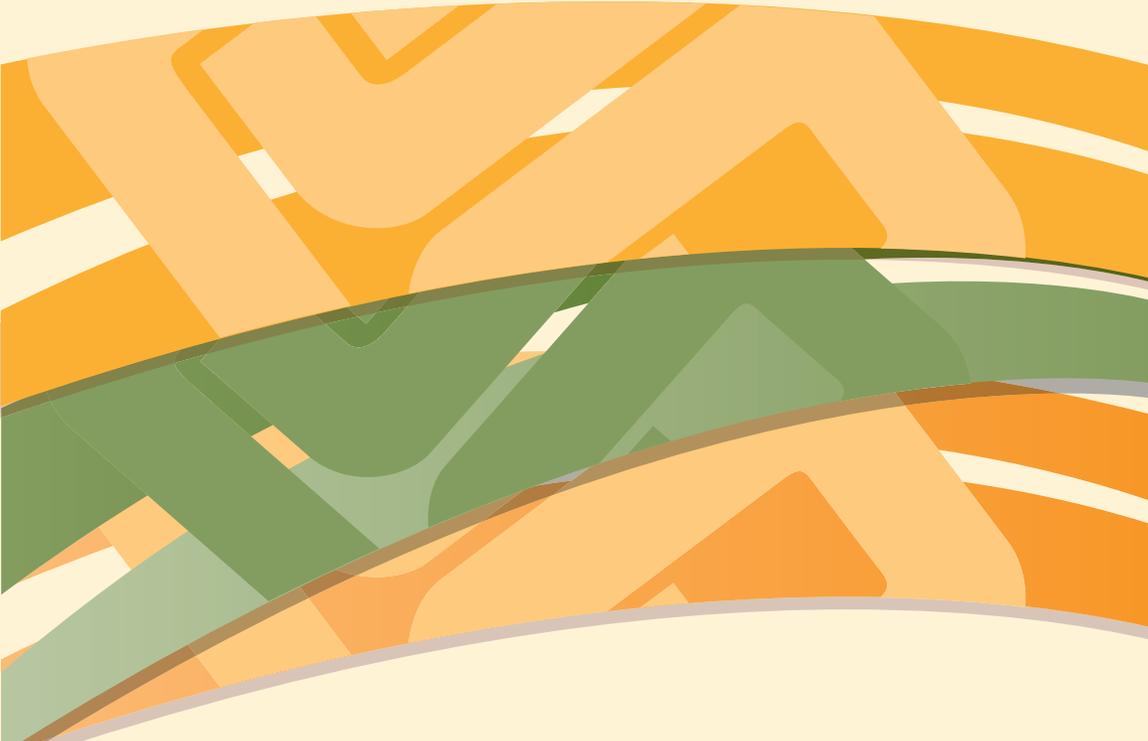




CENTRAL BANK OF
TRINIDAD & TOBAGO

An abstract graphic design consisting of overlapping, curved shapes in various shades of orange, yellow, and green, creating a sense of movement and depth.

THE PAYMENTS SYSTEM IN TRINIDAD AND TOBAGO



PUBLIC EDUCATION PAMPHLET SERIES

ISSN 1817-3160

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FOREWORD

External communications are an important part of the business of the Central Bank of Trinidad and Tobago. The Bank's outreach initiatives are intended both to enhance its contribution to educating and informing the public generally, as well as to assist markets in understanding the Bank's policy actions and intentions.

In addition to the regular publications of its Research Department, the Bank's Outreach Programme has included lectures and speeches to school children by senior Bank officials, mentoring to undergraduate students and supporting an internship arrangement with the University of the West Indies.

This public education series is also a part of the Programme. Its intention is to provide information on topics and policies that are relevant to the management of the economy of Trinidad and Tobago. The world of business and trade is a fast-paced, ever-changing and challenging one and the tools of knowledge and information must be strategically used to navigate it.

This pamphlet series is geared towards a broad readership. It is likely to be a good source of information for students at the secondary and tertiary levels, professionals and other members of the public who are interested in increasing their knowledge of economics and business.

Each pamphlet will cover current and topical issues and explain new economic initiatives. In the series, every effort will be made to present the material in as non-technical a manner as possible while adhering to sound economic analysis and the highest editorial standards.



FOREWORD

To this end, the Bank invited well-known economists from the private sector to join the editorial team, firstly to suggest topics that would be of interest to the public and secondly, to advise on ways to reach the target audience. The Bank also intends to invite guest contributors to the series from time to time.

The current pamphlet examines the payments system in Trinidad and Tobago with special emphasis on non cash methods of payment.

We hope that the series raises the level of public awareness and public discourse on economic issues and contributes to the strengthening of economic policy formation in Trinidad and Tobago.



EWART S. WILLIAMS
GOVERNOR



THE PAYMENTS SYSTEM
IN TRINIDAD AND TOBAGO



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THE PAYMENTS SYSTEM IN TRINIDAD AND TOBAGO

INTRODUCTION

Historically central banks have had responsibility for the safety of their country's payment system. In recent years however there has been an increase in the attention paid to payment systems and this has occurred for several reasons:-

- There is now a greater recognition of the importance of payment systems for the efficiency of markets generally and the stability of the financial system.
- In the wake of various crises and in particular the recent global financial crisis, there is an increased focus on the potential for systemic risk if there is a failure in any payment systems.
- There is now a deeper appreciation of the vast amounts of money that pass through payment systems on a daily basis.
- Recent advances in technology have allowed money to flow ever more quickly and efficiently through payment system.

In 2000 the Central Bank began a process aimed at improving the safety and soundness of the payments system in Trinidad and Tobago. This involved several dimensions:-

- improving the legal framework;
- improving the infrastructure, particularly with the introduction of new technology;
- strengthening the operating rules and the supervision of the system;
- expanding the scope and coverage in the collection of statistics on the domestic payments system;
- educating and disseminating information on the payments system.

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This pamphlet provides an analysis of the payments system in Trinidad and Tobago.

The payments system refers to all the arrangements and institutions that are involved in the exchange of value between a payer and a payee in a financial system. Each means of exchanging value or each payment instrument (e.g. cheques, payment cards) is associated with a specific payment arrangement and the combination of all the different payments arrangements in the country make up the National Payments System.

The most common means of payment in Trinidad and Tobago are cash, cheques, payment cards, and electronic transfers through Point of Sale terminals, the Automated Clearing House (ACH) and the Real Time Gross Settlement (RTGS) systems. Currency notes and coins (cash) are legal tender and value is immediately transferred with this means of payment. For all other means of payment, the payment arrangement involves a process for the clearance and settlement of the instrument so that value is correctly transferred from the payer to the payee.

This pamphlet discusses non-cash payment methods. It is organised as follows: **Section I** explains the role of the Central Bank in the Payments System, **Sections II-IV** describe the common means of non-cash payments - the cheque system, payment cards (credit cards and debit cards) and electronic transfers, **Section V** shows some statistics on the use of these payment instruments and **Section VI** deals with some common delivery channels for payments (e.g. ATMs and the Internet). The pamphlet concludes with three appendices: **Appendix I** is a glossary of common terms used in the payments system. **Appendix II** gives a brief discussion of some more modern forms of making payments that exist internationally and which may also become a part of our payments system in the future. **Appendix III** shows the *Ten Core Principles for Systemically Important Payment Systems* developed by the Basle Committee on Payment and Settlement Systems.



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I. ROLE OF THE CENTRAL BANK IN THE NATIONAL PAYMENTS SYSTEM

The Financial Institutions Act, 2008 authorises the Central Bank (Bank) to license payment system operators, oversee their operations and provide advice to the Minister of Finance on regulations to govern their operations.

The **licensing authority** is aimed at ensuring that only those institutions which the Bank deems fit are allowed to carry on this function because of its importance to the financial stability of the country.

The **oversight authority** gives the Bank the power to examine these systems to ensure that they are sound and well managed. The Bank pays particular attention to payment systems that are **systemically important** because a failure in one of these systems can have serious repercussions for the entire financial system.

The Bank uses the ten Core Principles for Systemically Important Payment Systems established by the Basle Committee on Payment and Settlement Systems as its benchmark for the conduct of Oversight (Appendix III).

A payment system is considered to be systemically important either because the sums involved are large or the volume of transactions handled is significant. In Trinidad and Tobago, the payment systems that currently are systemically important are the cheque system, the LINX system (debit card), the Automated Clearing House (ACH) system and the Real Time Gross Settlement (RTGS) system.

Each of these systems is managed by an **Operator** which is required to ensure that participants adhere to its operating rules and

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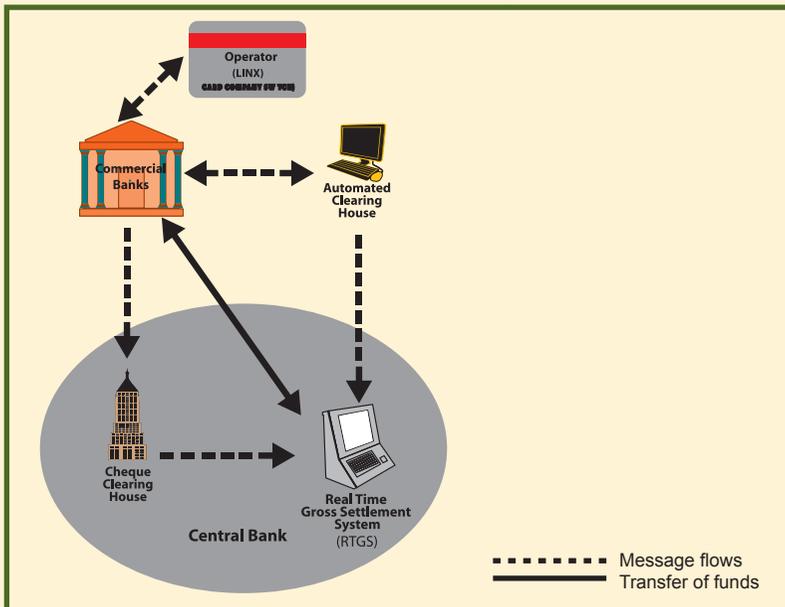
procedures. The Operators for the systemically important payment systems are the following:

- **Cheque System** – Central Bank
- **LINX** – Infolink Services Limited (ISL)¹
- **ACH** – Trinidad and Tobago Interbank Payments System (TTIPS)
- **RTGS** – Central Bank

In addition to being the operator for the cheque system and the RTGS, the Bank is also a participant in these systems as well as the ACH as it carries out payment transactions for itself and its customers.

The diagram below shows the linkages between the Bank and the systemically important payment systems.

Figure 1
**A Simplified Illustration of the
National Payments System**



¹ LINX is operated by Infolink Services Limited (ISL), a joint venture company created in 1993 by four commercial banks.



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II. PAPER-BASED PAYMENTS - CHEQUES

This section discusses the major paper-based payment system, the Cheques system.²

The use of cheques in Trinidad and Tobago is governed by the *Bills of Exchange Act Chapter 82:31*. According to Section 73 of the Act, “a cheque is a bill of exchange drawn on a banker payable on demand”. This means that a cheque is a written order from an account holder instructing his bank to pay upon request a specified sum of money to a named beneficiary (payee).

Cheques are required to have certain information which attest to their authenticity and facilitate their processing. These are as follows:

- Amount
- Bank Name
- Cheque Number
- Customer’s (Payer) Name and Address
- Magnetic Ink Character Recognition (MICR) Line
- Beneficiary’s (Payee) Name
- Payer’s signature

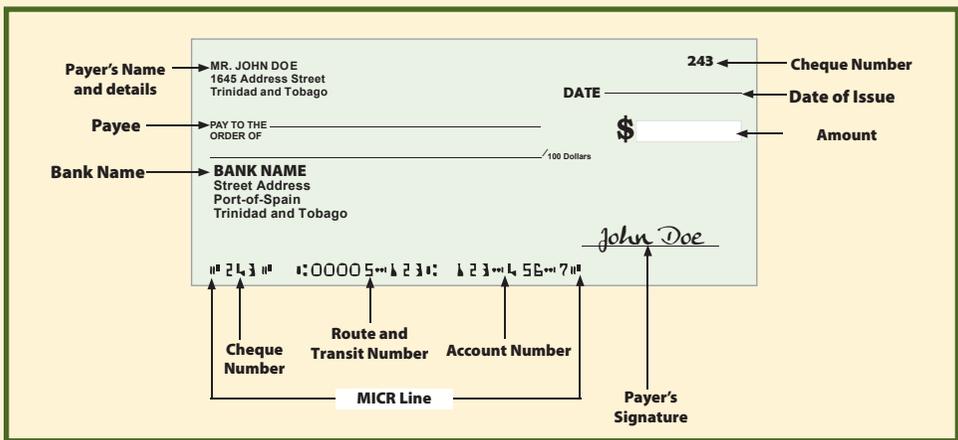
² Other less commonly used paper-based forms of making payments include money orders.

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Figure 2 below shows the location of this information on a typical cheque.

Figure 2
Labelled Image of a Cheque



Types of Cheques

Cheques can be grouped into three broad categories based on the account on which they are drawn:

1. **Personal Cheques** – cheques drawn on the account of a private individual and generally negotiated in the country in which it is issued and in the currency of that country;
2. **Business or Commercial Cheques** – cheques drawn on a company account and negotiated in the currency and country of issue and used to effect payments of the company to its suppliers, creditors, etc.; and



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3. **Manager's Cheques** – cheques drawn directly on the account of a bank rather than the account of a customer (individual or business). These are pre-paid instruments.

Negotiation of Cheques

Cheques must be negotiated to allow the beneficiary (payee) to obtain value. This means that the cheque must be (i) endorsed and (ii) presented for payment. **Endorsement** is done by the payee affixing his signature to the back of the cheque. In Trinidad and Tobago, banks have agreed to use the crossing stamp of the collecting bank as confirmation of endorsement for amounts not exceeding \$10,000.00. However, the bank upon which the cheque is drawn, the paying bank, has the right to request the endorsement of the payee.

A cheque may be transferred to a third party, that is, someone other than the named beneficiary. In this case, banks require instructions (written at the back of the cheque) along with the endorsement of the named beneficiary to make the item payable to the third party. Banks may also request identification documents of the named beneficiary in order to confirm that good title is being transferred to the third party. Details of these documents, such as an identification card number, may be written at the back of the cheque alongside the beneficiary's endorsement as further confirmation of the authenticity of the transfer request.



Crossing of Cheques

A crossed cheque has two parallel transverse lines, with or without any words, drawn at the top of the cheque. A crossed cheque without any words indicates a **General Crossing**, while the inclusion of words to the effect “Account Payee Only” indicates a **Restrictive Crossing**.

By **crossing a cheque**, a payer gives instruction to his bank to deposit the funds to the payee’s account rather than to pay cash at the counter. A crossed cheque is therefore payable only through a collecting bank (that is, it must be deposited). By contrast, an **open cheque** can either be deposited or encashed at the counter of the bank upon which it is drawn (payer’s bank).

Clearance and Settlement of Cheques

Cheques negotiated at the counter of the bank on which they are drawn are treated as direct debits to payers’ accounts. This means that funds are directly withdrawn from the payer’s account and either paid in cash (open cheques) or deposited to the payee’s account for immediate value. Cheques which are not negotiated at the payer’s bank must be **cleared** and **settled** through the cheque payment system.

Clearance is the process of verifying that the payer has the money to make the payment and that the cheque is valid (has all the required



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information) while **settlement** refers to the transfer of funds to the payee or beneficiary with finality. Clearance ought to be completed ahead of settlement.

At the end of each business day, banks sort the cheques they receive, list them and send the cheques and listing to the respective paying banks on which they are drawn. Upon receipt of the physical cheques, the paying banks peruse the cheques (for cheque details such as the payer's signature) and verify the availability of funds in the payers' accounts. The total value to be paid to each bank as evidenced by the cheques is reconciled against the value on the listing submitted by each bank.

At 9.30 a.m. each morning, banks (including the Central Bank) meet at the clearinghouse at the Central Bank, to reach mutual agreement on the net amounts due to each other on the basis of the cheque listings received the previous day. The Central Bank is the operator of the Clearinghouse and supervises this meeting. At the close of the meeting, the clearance process is complete and the Central Bank carries out the settlement. The latter is achieved by making a credit or debit of the agreed amount to each bank's account through the RTGS.

By agreement, there is a limit of 4 days, starting from the day the cheque was received by the payer's bank, for the return of cheques which have any kind of irregularity or for which there is a lack of funds in the payer's account.

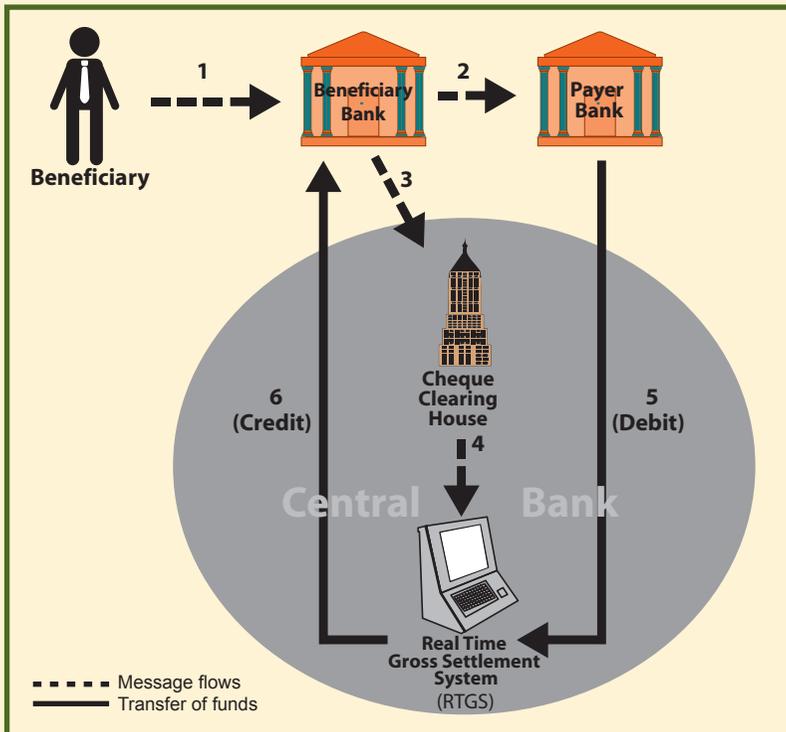
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Although modern technologies such as cheque sorting and counting machines are now used to improve the cheque processing operations, there is still a large amount of manual processing in this means of payment.

The following is a diagrammatic representation of the clearing and settlement process for cheques.

Figure 3
Cheque Clearing and Settlement
Process





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III. PAYMENT CARDS

This section describes the key characteristics as well as the processing arrangements for payment cards. Like cheques, payment cards have some essential information and security features that confirm their validity, as well as clearance and settlement arrangements to transfer value to the beneficiary. However, unlike the cheque system, the clearance and settlement arrangements are automated.

The two most common types of payment cards are credit cards and debit cards.³

Credit Cards

A credit card is a type of payment card which allows the owner to make payments (or obtain cash) drawing on a line of credit (loan) granted by the issuer of the card. In Trinidad and Tobago, credit cards are issued by the commercial banks under the *VISA* and *Mastercard* labels. This facilitates their acceptance both locally and internationally at any merchant (or ATM) that is set up to accept these labels. Credit cards are also accepted over the internet and the telephone to pay for goods and services.

Issuers of credit cards usually charge an annual membership fee to the cardholder's account. Additionally, if the cardholder does not

³ There are also prepaid cards, e.g. phone cards, which tend to have less broad-based use. The issuer of a prepaid card is paid upfront for the value on these cards. It operates somewhat like a debit card that is drawn on the issuer.

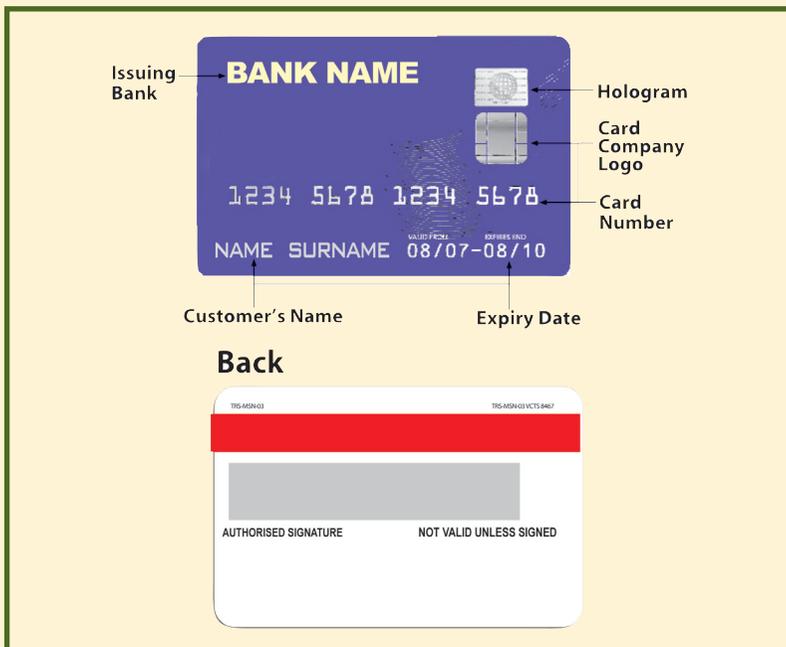
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repay the entire balance in full when due, an interest fee is applied to the unpaid portion. In addition some card issuers charge a late fee.

The key information on a credit card is the bank's name, the cardholder's name, a unique card number, the expiry date, the international company label as well as special security features. There is a magnetic strip to the back of the card which stores essential customer and account information and bears the signature of the card owner. The following diagram shows the key elements on a credit card.

Figure 4
Labelled Diagram of a Credit Card





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Clearance and Settlement of Credit Card Transactions

Credit card payments processing takes place in two phases:

(i) authorisation and (ii) clearance and settlement.

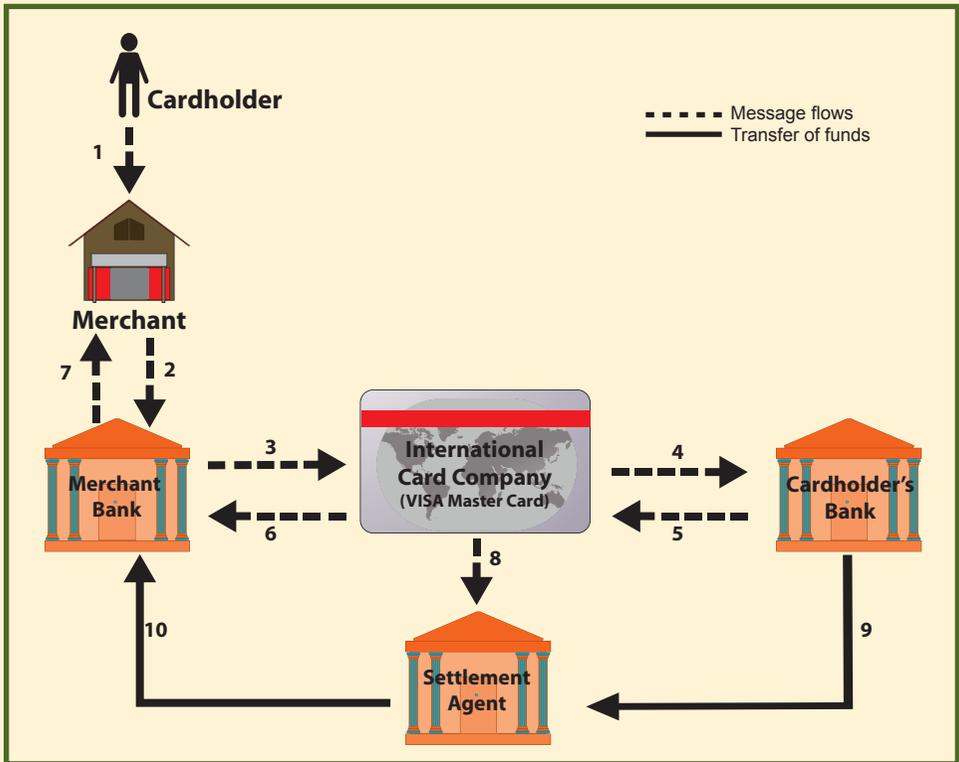
At the **authorisation stage**, approval is granted for the card to be used in payment for goods and services when the cardholder presents it to a merchant. When the merchant swipes the card in the specified terminal, the transaction information is transmitted electronically to the issuer which almost instantly returns the authorisation. The cardholder is required to sign a copy of the payment receipt to confirm the transaction (with some exception, for example, purchases made over the internet).

The transfer of value to the merchant takes place through the **clearance and settlement process** when the merchant sends his credit card sales information to his banker. The information is sent to the hub of the international credit card company which has pre-approved authorisation from all participating banks to clear and settle balances. At the hub, the accounts of banks are debited and credited accordingly and advices sent to the merchant's bank that settlement is made whereupon the merchant is paid. An advice is also sent to the cardholder's bank to reduce the available credit. The cardholder has a deadline by which to settle payment after which he pays interest on the outstanding balance.

The following diagram illustrates the clearance and settlement process for credit cards.



Figure 5
Credit Card Clearance and Settlement Process



Debit Cards

A debit card is a type of payment card which allows the owner to make payment (or obtain cash) by drawing directly on his account at a deposit-taking institution. Debit cards have broadly similar features and uses as credit cards.



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The main differences, apart from the source of the funds being used, are the following:

1. For point of sale transactions, debit card users must enter a personal identification number (PIN) to effect a transaction, whereas credit card users affix their signatures to a copy of the receipt to complete the transaction.
2. As a security measure, debit cards tend to have a defined maximum amount which may be utilised within a specified cycle time, whereas for credit cards the limit reflects the amount of the credit line granted to the holder by the issuing institution.
3. From the merchant's point of view, there is a flat fee per transaction with the debit card facility, whereas the fee for the credit card is usually based on a percentage of the transaction value.
4. The credit card has a flat annual fee while in general there is no annual fee for the debit card.

In Trinidad and Tobago, debit cards are issued either under the local brand, *LINX* or under international brands such as *VISA* and *Mastercard*, but the *LINX* card is the most common debit card. In some instances, the *LINX* debit card is associated with an international network to allow cardholders the capability of use wherever the international network resides.



Clearance and Settlement of Debit Card Transactions

As with credit cards, debit card payments processing takes place in two phases: (i) **authorisation** and (ii) **clearance and settlement**. Similar to credit cards, the approval process at the **authorisation stage** is completed almost instantaneously. When a cardholder presents a debit card in payment for goods and services, he is required to enter his Personal Identification Number (PIN). Information on the transaction as well as the PIN is transmitted electronically to the cardholder's bank which checks that funds are available and returns a message approving the payment, at which point the merchant completes the transaction with the customer.

The transfer of value to the merchant takes place through the **clearance and settlement process**. For internationally-branded debit cards, the processing arrangements are similar to those for credit cards (except that money is drawn from the users' banks and ultimately the users' bank accounts rather than from a credit facility). The merchant sends the transaction information to his banker who then pays the merchant based funds from the settlement agent.

In the case of a LINX card, on a daily basis, the operator of the LINX network (a) sorts all switched transactions received through POS terminals and ATMs and calculates net settlement positions for member banks and (b) sends advices to all banks on their net settlement position; and (c) sends payment instructions to the settlement bank. The settlement bank is responsible for transferring

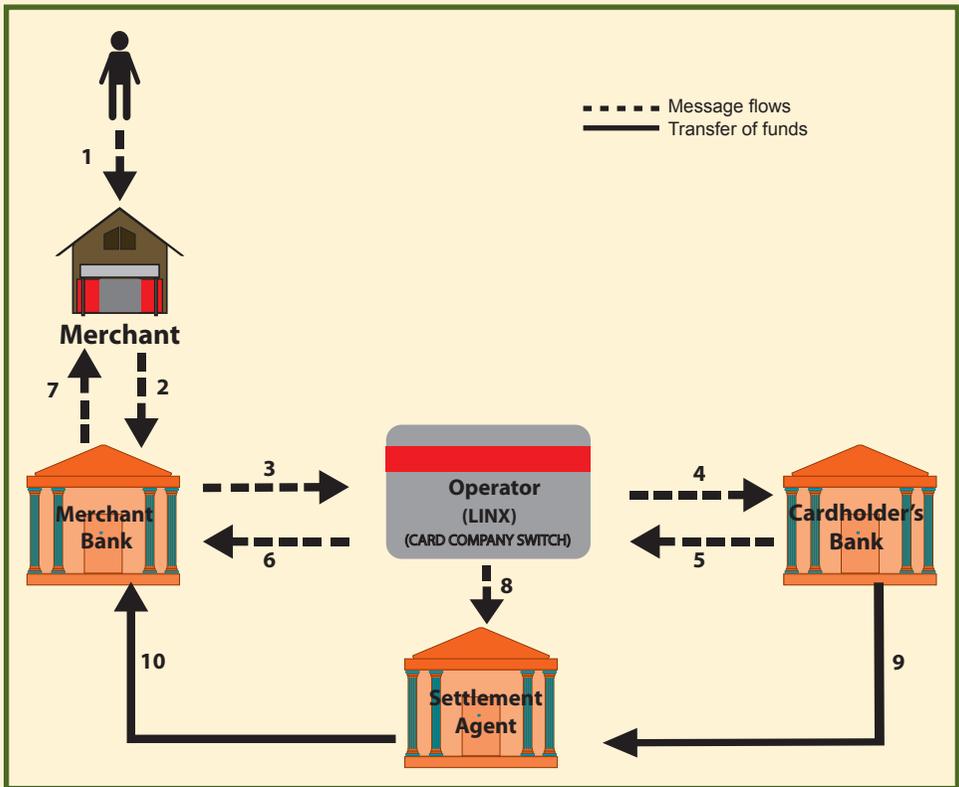


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value to net creditor banks, while the banks in a net debtor position are required to transfer funds to the settlement bank.

The following diagram illustrates the clearance and settlement process for *LINX*.

Figure 6
LINX Clearing and Settlement Process





IV. ELECTRONIC TRANSFER SYSTEMS

Electronic transfer systems are becoming a more and more popular means of payment because they are faster and provide greater convenience for a variety of transactions. In this form of payment, there is no physical payment instrument, rather instructions are entered in an electronic system which completes the processing. In Trinidad and Tobago, the **Automated Clearing House (ACH)**, which is locally branded as *Transach*, and the **Real Time Gross Settlement (RTGS)** system, branded as **safe-tt⁴**, are the major electronic payment transfer mechanisms.

Automated Clearing House (ACH)

The ACH is owned by six commercial banks and the Central Bank, which have established a company, the Trinidad and Tobago Interbank Payments System (TTIPS), to manage its operations.⁵ The ACH is used for large volume, low value (under \$500,000) payments. Payments sent through the ACH are cleared and settled within 24 hours.

Anyone with access to a bank who wants to make a payment to someone who has a bank account can use this system. To use the ACH, an individual (or company) simply has to request a bank to use this means of payment and provide details of the payment such as the amount, the beneficiary's account number and the date of payment.

⁴ Safe-tt- Settlement Assured for Financial Exchange in Trinidad and Tobago.

⁵ At the time of the introduction of the ACH, there were only six commercial banks.



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Companies can send an electronic file containing multiple payment requests to their bank. (Note if the payer and the beneficiary have the same bank, this would be processed as an internal transfer and there is no need to do an ACH transaction).

There are two types of ACH transactions: (a) Direct Debit transactions and (b) Direct Credit transactions. A **direct credit** is an electronic transfer of a payment from a customer (an individual or company) into the account of the beneficiary *on the instruction of the customer*. A **direct debit** is an electronic transfer of a pre-authorised payment from a customer's account to the account of a beneficiary *on the instruction of the beneficiary*. The latter is generally used for regular payments such as for utility bills.

Clearance and Settlement of ACH transactions

The processing arrangements for ACH transactions (direct credit) are as follows:

- Customers request their banks to make payments through the ACH.
- The banks deduct funds from their customers' accounts and electronically send the payment instructions to the ACH.
- The ACH Operator sorts and batches payment instructions received from all banks and (i) forwards instructions to the respective receiving banks to credit

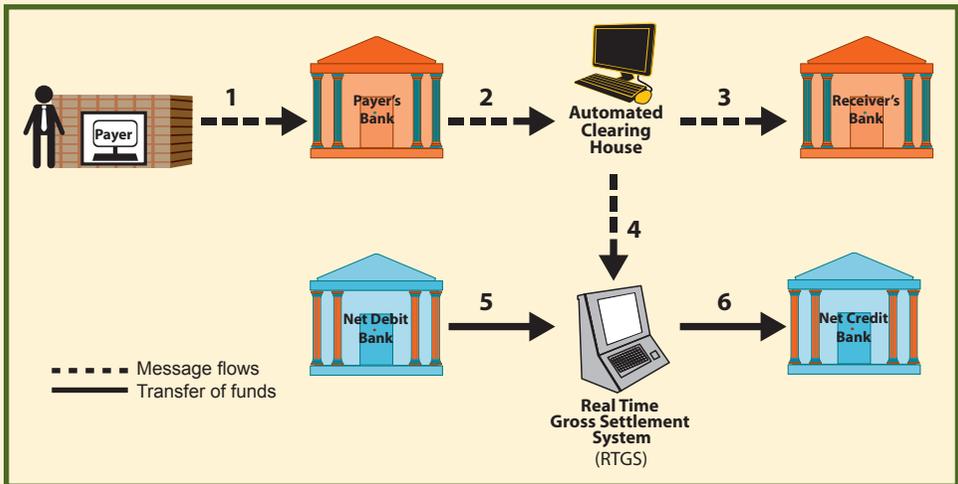
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beneficiaries' accounts and (ii) sends a net settlement file to the RTGS to execute the payment.

- The payment is settled on the RTGS by debiting and crediting the respective banks. These steps are shown in the diagram below.

Figure 7
Diagrammatic Representation of
ACH Clearing and Settlement



Direct debit transactions on the ACH network are processed in a similar manner to the direct credits except that the flows are in the opposite direction, that is, from the beneficiary's bank to the ACH to the payer's bank.



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Real Time Gross Settlement (RTGS)

The RTGS system is owned and managed by the Central Bank. It is used for large value (\$500,000 and over) or time critical payments of any amount. It is the only non-cash system in which value is transferred from payer to payee with finality almost immediately. All commercial banks are required to participate in the RTGS system.

The process for use of the RTGS is similar to that for the ACH. An individual or company simply requests a bank to use this system and provides the required payment details. Unlike with the ACH which processes payments on a batch basis, the RTGS receives and processes each transaction individually as the customer makes the request.

Clearance and Settlement of RTGS transactions

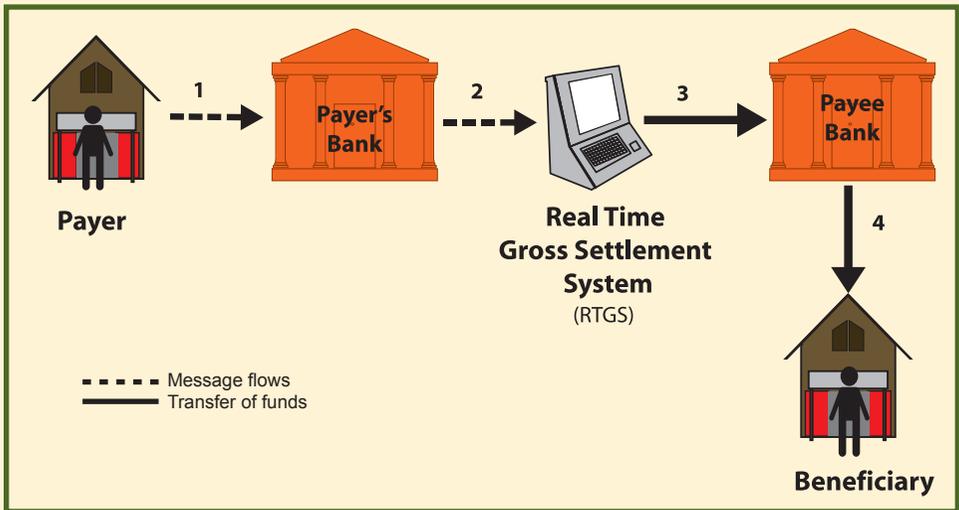
Having received the customer's instructions, the bank withdraws money from the customer's account and electronically sends a payment instruction to the RTGS. The RTGS system immediately debits the paying bank account and credits the beneficiary's. All banks are able to view their transactions on line. The receiving bank is required to pass on the funds to the beneficiary's account within two hours of receipt.

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The clearing and settlement process for an RTGS payment is depicted in Figure 8 below.

Figure 8
RTGS Clearing and Settlement



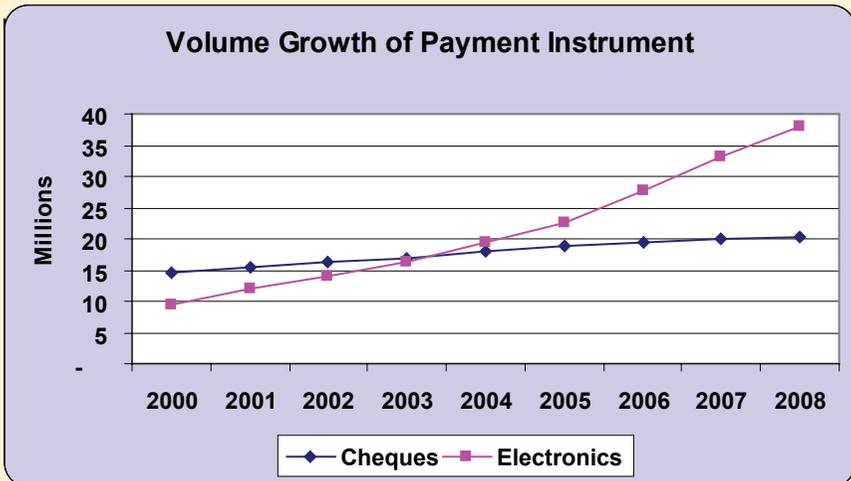


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V. USAGE OF PAYMENT INSTRUMENTS

Cheques have continued to be an important means of payment; however its usage has slowed since 2000. By contrast, there has been a steady increase in the use of electronic payments. The volume of electronic transactions grew at an average annual rate of 19% between 2000 and 2008 while the volume of cheques usage grew at an average annual rate of only 2.3%⁶ (See Chart I).

CHART I



Source: Central Bank of Trinidad and Tobago

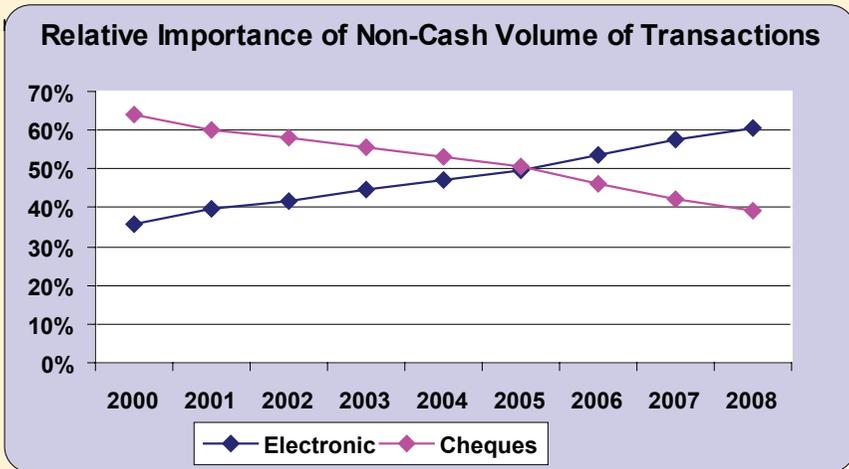
In 2000, 61% of non-cash payments were made by cheques and 39% were paid by electronic means. By 2008, the situation was reversed with 35% of non-cash payments being made by cheques and 65% by electronic methods. (See Chart II).

⁶ Electronic payment instruments consist of debit and credit point of sale transactions, RTGS and ACH transactions. The point of sale transactions have been in existence since 1994 while the RTGS and ACH transactions were introduced in October 2004 and October 2005 respectively.

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CHART II



Source: Central Bank of Trinidad and Tobago

Cheques⁷

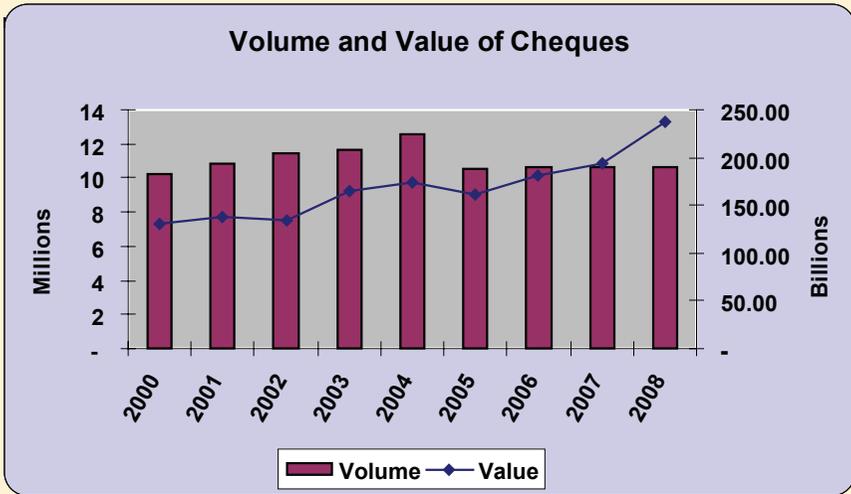
The data shows that cheque usage grew at an average annual rate of 5% between 2002 and 2004 and remained steady thereafter. In terms of the value of payments made by cheque, there was an almost steady increase throughout the entire period with a greater acceleration since 2007. The latter may reflect the higher level of inflation in that period. Chart III shows the volume and value of cheque usage between 2000 and 2008.

⁷ The data for cheque usage in this section pertain to those cheques cleared through the clearinghouse. It does not include cheques drawn on the banks at which they were deposited.



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CHART III



Source: Central Bank of Trinidad and Tobago (Cheques cleared via the Central Bank Clearinghouse)

Electronic Payments

The largest volumes of electronic payments are made with debit and credit cards. In 2008, they accounted for 95% of all electronic payments with debit card point of sale transactions accounting for approximately 61% and credit card point of sale transactions making up the remaining 34%. In value terms however these transactions reflect only 3% of electronic payments. This reflects the high usage of these cards for small retail transactions.

The ACH, which is also used for retail payments, accounts for a smaller number of transactions in both volume and value terms. However, in terms of value, it is rapidly reaching the level of payments through payment cards.

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On the other hand, the RTGS system accounted for the largest portion of payments in value terms but the smallest number in volume terms. In 2008, 96% of the payments in terms of value were made via the RTGS system but this represented only less than one percent in terms of the volume of payments. This is because, an increased number of large value (\$500,000) private sector transactions are now made through the RTGS system (See Table I).⁸

TABLE I
Composition of Electronic Payment Instruments
(2006-2008)
Percentage

Year		RTGS	ACH	Debit and Credit Cards
2006	Volume	0.1	0.7	99.2
	Value	95.9	1.1	3.0
2007	Volume	0.1	3.0	96.9
	Value	96.0	1.4	2.6
2008	Volume	0.1	5.3	94.6
	Value	95.6	1.7	2.7

Source: Central Bank of Trinidad and Tobago

Country Comparison

The trend to greater use of electronic payments in Trinidad and Tobago mirrors what is happening worldwide. As countries become more developed, there is a growing demand for faster and more

⁸ The Ministry of Finance is in the process of amending the Exchequer and Audit Act to allow the Government to make payments by electronic means.



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convenient means of payments and this has led to an increased use of electronic systems for payments. Consequently, there tends to be an increase in the use of more advanced electronic payment instruments (See Appendix II). The use of these means of making payments, while growing, is less prevalent in Trinidad and Tobago because of the lower level of internet penetration and mobile technology. Table II below shows the proportionate use of cheques and electronic payments by a select group of countries. In the case of more developed countries, electronic payments include internet, mobile and other more modern forms of making payments.

TABLE II
Use of Payment Instruments in Selected Countries 2008
(Percentage)
(2006-2008)

Year	RTGS	ACH
Australia	8	92
Canada*	15	85
Japan*	5	95
Sweden*	0	100
T&T	38	62
United Kingdom*	11	89
United States*	29	71

Source: * CPSS Red Book Statistical Update (All other countries) Central Bank Websites



VI. DELIVERY CHANNELS

Delivery channels are the mechanisms used to deliver payment instructions. They are not payment systems since they do not perform the clearance and settlement function, rather they are the networks through which payments instructions are transmitted. Some common forms of delivery channels are Automated Teller Machines (ATMs), Point-of-Sale (POS) networks, telephones and the internet.⁹

Automated Teller Machines (ATMs)

An Automated Teller Machine (ATM) is a computerised self-service device permitting the holders of an appropriate card and personal identification number (PIN) to withdraw cash from their account and access other banking services.¹⁰ They also form a part of the networks used by card companies (such as *LINX*, *VISA* and *MasterCard*) to deliver cash to customers. These machines are owned and operated by the commercial banks and are generally located at their branches and areas with high commercial traffic which have adequate security, such as hotels and shopping malls.

ATMs were introduced in Trinidad and Tobago in 1985-86 and there are currently about 324 of them located throughout the country. The number of withdrawals from ATMs has increased more than three-fold since 2000.

⁹ There are also a number of payment intermediaries which collect payments on behalf of companies e.g. TTPost.

¹⁰ Banking services refer to proprietary customer transaction requests such as account transfers and bill payments.



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Point-of-Sale (POS) Terminals

A Point-of-Sale (POS) terminal is the front end for a computerised system that processes credit and debit card transactions. They are conveniently located at the cashier stations of a large number of merchants.

POS machines were introduced to Trinidad and Tobago in 1997. As at the end of 2008 there were approximately 12,000 POS terminals installed throughout the country. The use of these terminals has been increasing steadily although the volume and value of transactions through them remain lower than those through ATMs. In 2008, the volume of transactions through the POS terminals was over five times that in 2000.

Telephone and Internet

Telephone and internet or online banking were first offered by commercial banks in Trinidad and Tobago in 1993 and 2000 respectively. They offer customers the convenience of monitoring their accounts and making payments wherever they have access to these channels and whenever they choose to access the service. Although historical data on their usage is not available, the statistics for 2008 show that there were approximately 390,000 telephone banking and 443,000 internet banking transactions.

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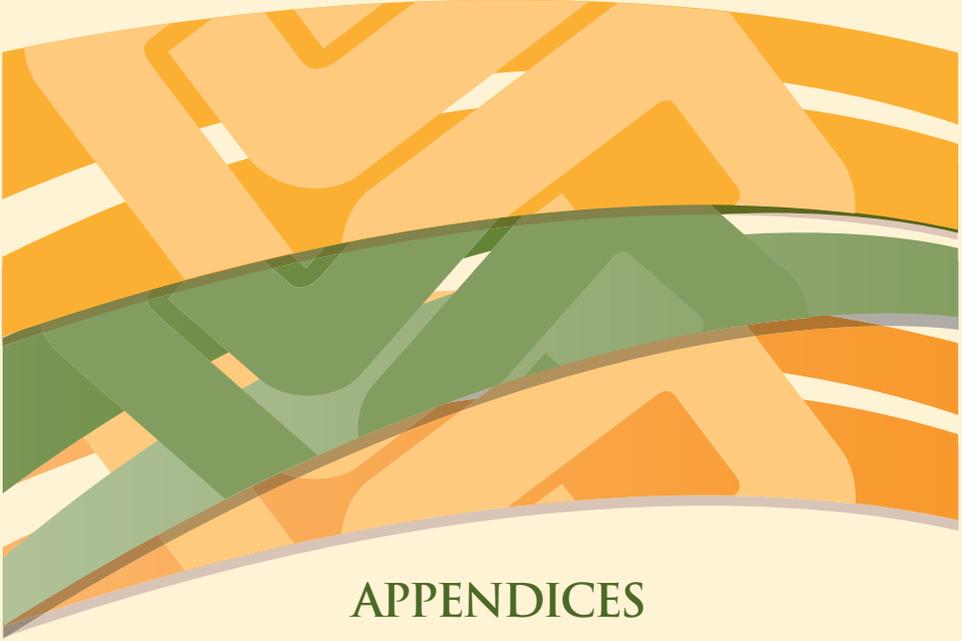


CONCLUSION

Recently, more focus has been placed on the operations of the payments system and their role in the financial system. Developments in technology have led to many innovations in the way in which payments are made – both in respect of payment instruments and the clearing and settlement arrangements.

These systems have allowed for faster and more convenient means of making payments. Given the many choices that are now available, the speed with which transactions are settled and the potential consequences for their malfunction, the central banks are now paying closer attention to the oversight of these systems.

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APPENDICES



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APPENDIX I

GLOSSARY

- Batch:** The transmission or processing of a group of payment orders and/or securities' transfer instructions as a set at discrete intervals of time.
- Beneficiary:** A recipient or receiver of a payment, which can be a person or an institution (also known as the payee.)
- Bill of Exchange:** An unconditional order in writing addressed by one person to another, signed by the person giving it, requiring the person to whom it is addressed to pay on demand, or at a fixed or determinable future date, a sum of money to, or to the order of, a specified person or bearer.
- Collecting Bank:** The bank (usually the seller's bank) that collects payment from a buyer's bank. The collecting bank forwards the payment instrument to the paying bank (usually the buyer's bank) for settlement.



GLOSSARY

- Crossing Stamp:** A stamp which indicates the name of the bank, the location of the office and the date of the transaction which is imprinted on the face of negotiated instruments.
- Deposit-Taking Institution:** A licenced financial institution authorised to receive deposits from an institution or individual.
- Draft:** An order drawn by a bank on itself or another local or foreign bank for a sum of money payable to order on demand.
- Electronic Money:** The monetary value represented by a claim on the issuer which is (a) stored on an electronic device; (b) issued on receipt of funds of an amount not less in value than the monetary value issued; and (c) accepted as a means of payment by persons other than the issuer.
- Encash:** To convert a payment instrument for example a cheque, into cash.



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GLOSSARY

- Finality:** A settlement or a transfer is final when it is unconditional, enforceable and irrevocable.
- Hub:** A centralized location that provides coordination and synchronization of services to electronic commerce, its users or partners.
- Netting (bilateral / multilateral):** This is an agreed offsetting of positions or obligations by trading partners or participants. The netting reduces a large number of individual positions or obligations to a smaller number of obligations or positions. In bilateral netting there is an arrangement between two parties to net their bilateral obligations. With multilateral netting the arrangement is among three parties or more.
- Operator:** An institution which is responsible for operating a payment system.

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GLOSSARY

- Oversight:** A public policy activity principally intended to ensure the safety, soundness, reliability and efficiency of the payment system in order to promote the effectiveness of monetary policy, contribute to the stability of the financial system by limiting the risk of systemic crises, and ensure the preservation of public confidence in money, money transfer mechanisms and the use of payment instruments.
- Payee:** See Beneficiary
- Payer:** The party to a payment transaction which issues the payment order or agrees to the transfer of funds.
- Payment Instrument:** Any instrument which enables the holder/ user to transfer funds.



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GLOSSARY

Point Of Sale (POS) Terminal:

Device allowing the use of payment cards at a physical (not virtual) point of sale. The payment information is captured either manually on paper vouchers or by electronic means.

Pre-paid Card:

A card on which value is stored and for which the holder has paid the issuer in advance.

Settlement Account:

An account held at a central bank or a central securities depository or with a central counterparty or any other institution acting as a settlement agent, which is used to settle transactions between participants in a system.

Settlement Agent:

The institution across whose books transfers between participants take place in order to achieve settlement within a settlement system.

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GLOSSARY

Switched Transactions:

Switched transactions are transactions that are exchanged between financial institutions through a processing network.

Wire transfer:

A wire transfer is an electronic transfer of funds. The identities of the bank account holders are confirmed and the funds are guaranteed, so the potential of fraud in a wire transfer transaction is limited. A wire transfer can also be called a bank transfer or EFT (electronic funds transfer).



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APPENDIX II

Advances in Payments Internationally

Internationally, companies have been introducing more sophisticated technology to payment cards and mobile phones to facilitate day to day payments. Some of the newer payment methods include the following:-

- Contactless payment cards
- Smart cards
- Mobile payments

Contactless Payment Cards

Contactless payment instruments, also referred to as “*touch and go*”, are credit or debit cards which use radio frequency identification technology to capture the payment information and transmit it to a payment network. They contain a chip and antenna which enable cardholders to make their payments by having their card in close proximity to the terminal, rather than physically swiping or inserting a card into a point-of-sale device. The benefit of this innovation is the added convenience and speed with which consumers complete their transactions. This form of payment is used for high-volume operations such as fast-food outlets and mass transit systems in larger territories such as the United States, Europe and Japan.



Smart Cards

A smart card, also known as a chip card or integrated circuit card, contains an operating system similar to that in a personal computer. It is capable of storing large amounts of information, including payments data, which can be processed at terminals configured to accept them. For example, a single smart card can be used as an identification card, a pre-paid card and a credit card. In Europe, smart cards are widely used in the health, insurance and banking industries.

Mobile Payments

Mobile phones are increasingly being used as a channel to make purchases for small value transactions such as transportation fares, books and magazines in countries in Europe and Asia. In some cases, payment is made through customary payment instruments such as payment cards, while in other cases, the consumer's mobile account is charged for the purchase of goods and services. A key advantage of this technology is that a payment transaction does not necessarily involve the use of a payment card or a bank account, thereby making it convenient for the un-banked.



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APPENDIX III

Core Principles for Systemically Important Payment Systems

- I. The system should have a well founded legal basis under all relevant jurisdictions.
- II. The system's rules and procedures should enable participants to have a clear understanding of the system's impact on each of the financial risks they incur through participation in it.
- III. The system should have clearly defined procedures for the management of credit risks and liquidity risks, which specify the respective responsibilities of the system operator and the participants and which provide appropriate incentives to manage and contain those risks.
- IV. The system should provide prompt final settlement on the day of value, preferably during the day and at a minimum at the end of the day.
- V. A system in which multilateral netting takes place should, at a minimum, be capable of ensuring the timely completion of daily settlements in the event of an inability to settle by the participant with the largest single settlement obligation.

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- VI. Assets used for settlement should preferably be a claim on the central bank; where other assets are used, they should carry little or no credit risk and little or no liquidity risk.
- VII. The system should ensure a high degree of security and operational reliability and should have contingency arrangements for timely completion of daily processing.
- VIII. The system should provide a means of making payments which is practical for its users and efficient for the economy.
- IX. The system should have objective and publicly disclosed criteria for participation, which permit fair and open access.
- X. The system's governance arrangements should be effective, accountable and transparent.



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