



safe-tt is a newsletter on developments in the Payments System in Trinidad and Tobago

## Central Bank Holds First Participant Seminar

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This is the second edition of the safe-tt newsletter. In this issue, we will begin to discuss the various elements of the current reform exercise as well as keep you informed about the activities that have taken place since the last issue of the newsletter.

Since our last issue a major event was the inaugural participant seminar held at the Central Bank on May 5<sup>th</sup>. The seminar was attended by staff from the Central Bank and the commercial banks. It was conducted by a representative from LogicaCMG, the vendors whom we have engaged to implement the RTGS and related systems. This seminar provided an overview of the RTGS system covering topics such as how to send and receive a payment instruction. With this new system, participants will be able to manage their accounts better through tools such as prioritizing, cancelling and warehousing of payments. The seminar also discussed the operation of the participant workstation which will be used for enquiring and reporting purposes.

Since the seminar, the Payments System Department has



Attendees at the first participant seminar

seen increased participant interest and a number of questions have been raised about the new systems. We will address some of these questions in the FAQ section of this issue.

Other developments during the month of May included the successful completion of the Extranet and SWIFT testing with the commercial banks. The Extranet is a highly secured network which the Central Bank has developed for communicating between itself and participants of safe-tt. This network will allow

participants, *inter alia*, to control and make enquiries on their respective settlement accounts. SWIFT is an international financial network used for exchanging payment messages. In the RTGS, the SWIFT system will be used by participants as a private group (Closed User Group—CUG) for sending and receiving payment messages.

We appreciate the interest that you have shown in the reform exercise and encourage you to continue sending us your comments and questions. ■



### Safe-tt is published monthly by the Central Bank of Trinidad & Tobago

If you require any further details on any aspect of the reforms process, or would like to offer any suggestions, then please contact the Payments System Department at the Central Bank of Trinidad and Tobago.

Please see our full contact details on the last page.

### Security Arrangements in safe-tt

Some participants have enquired about the security requirements of the RTGS. This article spells out the security arrangements that are incorporated within safe-tt.

Messages to and from safe-tt travel over one of two networks. "Value messages", or payment instructions, are carried over the SWIFT network. This network is completely separate from all other networks such as the Internet. Messages travelling over this network are digitally encrypted so as to be virtually impossible to eavesdrop or decode. The SWIFT system also authenticates every message to guarantee it comes from the organisation having sent it.

Other "non-value messages" such as enquiry messages and statements travel over the Central

Bank's secure Extranet. This network is encrypted like the SWIFT network and each person sending or receiving messages over this network is authenticated by using a "token". This provides randomly changing identifiers that must be entered before access is allowed. It guarantees that the person using the Extranet is known to the Central Bank.

In addition, the computers processing payment messages at the Central Bank are physically secured in controlled access premises with all connections to the Extranet and to SWIFT protected by multiple firewalls.

As part of their membership of safe-tt, participants will be required to have similar auditable security provisions. ■

## The National Payments System (NPS) – Now and Future



In the May issue of *safe-tt*, a payment system was defined as the set of institutions, instruments (cash, paper cheques, debit/credit cards, etc.), rules, agreements and laws which govern the exchange of value for goods and services. In this article, we will describe these components of the NPS as they now exist in Trinidad and Tobago and then show how the system will be configured after the reform. We will also indicate which of the reforms are being undertaken by the Central Bank and which are being done by other institutions.

### EXISTING NPS

The existing payments system in Trinidad and Tobago is

bank nets off the total of cheques used by its customers to make payments against the total of cheques received by its customers from account holders of other banks. All banks meet daily (on working days) at the Central Bank's clearinghouse and agree on the net balances which are then settled by the Central Bank through accounts held at the Central Bank.

Each large value cheque or special clearing is confirmed bilaterally by a specific time each day. The values of special clearings confirmed are consolidated and settled on participants' accounts at the Central Bank on the same day.

and Tobago is generally contract and common law. Paper-based payments are also governed by the Bills of Exchange Act and the Negotiable Instruments (Dishonoured Cheques) Act. In addition, Central Bank has an operating circular which gives guidelines for the use of the clearinghouse and special clearing facilities.

### REFORMED NPS

The objective of the Central Bank in reforming the NPS is to have a system that is efficient, minimises risk, is convenient and economical to all users and measures up to international best practices. To this end, it seeks to encourage the use of non-paper based instruments and use of auto-

*The objective of the Central Bank in reforming the NPS is to have a system that is efficient, minimises risk, is convenient and economical to all users and measures up to international best practices.*

dominated by the use of cash and cheques. However, there are other instruments used to make TT payments, including funds transfers, standing orders, postal and money orders, vouchers/coupons, debit/credit cards: EFTPOS payments.

The major institutions in the payments system are the commercial banks since cash is issued through them and cheques are also drawn on them. The institution for the clearing of the small value cheques is the clearing house, while there is a special clearing facility for large value transactions. With regard to the small value cheques or retail cheque payments, each

The payments system is also used for the funds settlement of securities trades. Trading in bonds and equities takes place on the Trinidad and Tobago Stock Exchange (The Exchange) three times per week. The Exchange operates on a cash basis and settlement takes place within five business days of the original transaction date (T + 5). The settlement of securities is handled by the central depository (TTCD) which provides net settlement figures to the Central Bank for settlement of the funds on commercial banks' accounts held at the Central Bank.

Apart from the Central Bank Act, the legal basis for payment transactions in Trinidad

and Tobago is generally contract and common law. Paper-based payments are also governed by the Bills of Exchange Act and the Negotiable Instruments (Dishonoured Cheques) Act. In addition, Central Bank has an operating circular which gives guidelines for the use of the clearinghouse and special clearing facilities.

matized systems. However it is expected that cheques will also continue to be an important payment instrument. The reformed NPS will comprise a number of components, some of which are managed by the Central Bank and others which are being spearheaded by other operators in the system. The elements of the reforms that are being solely managed by the Central Bank include the RTGS (*safe-tt*), for the clearance and settlement of large value and time critical transactions; Government Securities System (GSS) which will be the depository for government securities in a dematerialised form and

*(Continued on page 3)*



**National Payments System—Now and Future**  
(Continued from Page 2)

an auction system for the issuing of all government securities. The components of the payments reform which are being managed by other parties include the Automated Clearing House, the Stock Exchange trading system, the central securities depository (TTCD) and the Automated Credit Bureau.

The Central Bank is also reviewing the legal framework including the operating circulars for payments, clearance and settlement. Rules and procedures to accompany the operations in all systems are being developed.

Figure 1 shows a pictorial representation of the institutions, most of which will be electronically linked. ■

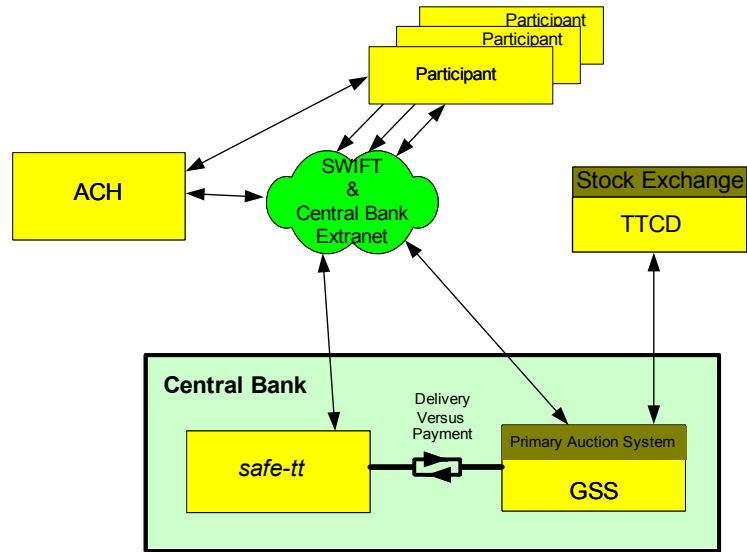


Figure 1. The Trinidad and Tobago Payments System

**The Trinidad and Tobago RTGS System—safe-tt**

The Trinidad and Tobago RTGS, called *safe-tt*, can be viewed as the central component of the NPS. The role of *safe-tt* is to transfer securely large value and time critical payments between participants. In the RTGS system, transactions are processed electronically. The system will check to ensure that the paying bank has sufficient funds in its settlement account with the Central Bank and if there are, the payment is cleared and settled immediately. If there are insufficient funds, the transaction will be held pending the availability of funds.

**Major characteristics of safe-tt**

Once *safe-tt* has processed a payment, it is deemed **final and irrevocable**. This means that the payment has been made and cannot be reversed. If an error occurred e.g. if the sending institution sent the payment to the wrong bank, a new payment transaction for return of funds must be made. This will be processed like any other new payment request.

Each transaction through *safe-tt* is cleared and settled on a payment by payment basis. This means that each transaction is processed on a **gross basis** as opposed to batched transactions. Therefore, assuming that the sender has sufficient funds, the transaction will be completed, and the funds

made available to the receiving bank almost instantaneously.

*Safe-tt* would have the ability to resolve **gridlock** which is a condition that can occur where some banks are waiting on incoming funds and as a result have insufficient funds to settle their payments. For example if Bank A is waiting on a payment from Bank B who is waiting on a payment from Bank C that in turn is waiting on a payment from Bank A, each bank is waiting for sufficient funds to make its respective payment. This gridlock will be recognised by *safe-tt* and it will attempt to settle the group of related payments as a single payment.

One of the key features of the RTGS is its ability to **queue** payment instructions. If a participant instructs *safe-tt* to transfer funds to another participant and there are insufficient funds for that transaction, rather than cancelling the instruction, it is held in a queue until sufficient funds are available. In the unlikely event that there are insufficient funds at the end of the day for the transaction to be completed, it is cancelled and the instructing participant is informed.

**Backup and Recovery**

The RTGS system will be core of the country's financial system. A failure of the RTGS system for any length of time, for whatever

reason, must always be avoided. Consequently, the Central Bank has established a Business Continuity Plan that provides a replica of the main processing site which would go into operation should any major problem occur at the main processing site. The plan calls for the transfer all operations to the backup site with the minimum of processing time lost. The backup site is at a physical location away from the Central Bank.

**Benefits**

Some of the benefits of *safe-tt* include:-

- A modern payments system providing secure settlement services for local and international investors;
- Immediate clearing and settlement of transactions—once funds have been correctly credited to your account they cannot be returned;
- Risk-free settlement of large payments. ■

**Answers to the puzzle on the back page**

PAYMENT HOTSITE EXTRANET SWIFT DEPOSIT SECURITIES QUEUE GRIDLOCK GROSS CLEARINGHOUSE BROWSER AUCTION CLEARANCE CHEQUES LARGEVALUE CREDITBUREAU LINKAGES IRREVOCABLE BATCH



## Test Your Powers of Observation

The grid below contains a number of words that relate to payment systems. These may be horizontal, vertical or diagonal. How many can you find? 25 words—truly amazing, 15 words—very good, less than 10 words, back to the Job Centre! **Answers on page 3.**



### Coming Events

- Follow up GSS Meeting
- Test Planning
- Other Participant Meetings

### In next month's issue

- GSS Features Explained
- Browser Workstation
- Project Progress
- Frequently Asked Questions

**If you would like to see any additional features in this publication, please send us an e-mail.**

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## Frequently Asked Questions

### What is SWIFT?

SWIFT stands for Society for Worldwide Interbank Financial Telecommunication. This is a worldwide secure private network owned by participant banks to facilitate the exchange of payment and other financial messages.

### Why is there both a SWIFT network and an Extranet?

These two networks are complementary. Banks already use the SWIFT network for making international payments and this is a system used by banks worldwide. Therefore it was agreed that participants will use this system for sending and receiving payment instructions. It however comes with a cost and for non-value messages the intention was to find a less costly means of communicating. Additionally, there are other participants in other parts of the payments system with whom the Bank needs to interact in a secure environment. Consequently, the Central Bank developed the Extranet for these purposes. It will be used, for example, to allow Government Securities Intermediaries access to an on-line auction system for Government Securities.

### Is there any limit to the value of transactions sent through safe-tt?

Safe-tt is designed for large value payments. Values equal to or in excess of \$TT500,000 must be transferred using safe-tt. However, safe-tt will also accommodate transactions of lesser value



and can be used for payments of any size. In such situations, while the cost per unit of value is higher, cost effectiveness would not be the primary consideration.

### Why are you implementing a Government Securities System at the same time as the RTGS?

Introducing the automated Government Securities system at the same time as the RTGS has several benefits including cost savings in the implementation of the integrated systems, and efficiency in the operations of several markets. Banks will be better able to manage their liquidity by access to automated repurchase activities utilising government securities. ■