Chapter 9

ROLE OF PAYMENT AND SETTLEMENT SYSTEMS IN MONETARY POLICY AND FINANCIAL SYSTEM STABILITY IN SRI LANKA

By
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1. Introduction

The Payment and Settlement System (PSS), which is constantly evolving, is complex in structure and functions throughout the world. The integrity of PSS worldwide has made financial institutions to be interdependent and externally exposed to shocks in the global environment.

Payment is a transfer of value. A payment system is a mechanism agreed upon by two or more parties, i.e. buyers and sellers in transferring value between them to accomplish a particular transaction. Certainty and smooth settlement of payments would reduce risks, i.e. exchange rate risk, credit risks, settlement risks and improve liquidity management. In turn, this will enhance the transaction certainty for the financial institutions and facilitate timely availability of critical information for supervisors and monetary authorities. Simultaneously, prompt and smooth financial settlements will further enhance the effectiveness of monetary policy transmission and the overall conduct of monetary policy. An efficient payment and settlement system is therefore a critical infrastructure to the success of attaining monetary and financial stability.

The standard unit of monetary value in Sri Lanka is the Sri Lanka rupee. The Central Bank of Sri Lanka (CBSL) has the sole authority to issue banknotes and coins on behalf of the Government of Sri Lanka. Currency issued by the CBSL is the legal tender in Sri Lanka and can be used for the payment of any amount. Banknotes and coins are the most popular retail payment medium among individuals and business entities to make “face to face” payments for goods and

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1. The views and opinions expressed therein are those of the author and do not necessarily represent the views of the Central Bank of Sri Lanka (CBSL) or The SEACEN Centre.
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services. The CBSL operates number of payments systems; it supervises banks that are the participants in the system. CBSL is the formal regulator in payment clearing and settlement system in Sri Lanka and exercise a substantial influence on the design and overall functioning of the systems.

Prior to implementation of RTGS system, the high value payments were settled through the Current Account System (CAS), via Central bank cheques, on a deferred net settlement basis. Each commercial bank maintained a single current account with the CBSL that served both for settlements as well as to meet requirement to hold statutory reserves. Under this net settlement system payments are accumulated over a day. At the end of the day offsetting bilateral and multilateral payments were netted and only the resulting balances were settled in central bank money.

Before the introduction of RTGS System in 2003, there was no payment instrument which provided immediate payment/settlement as and when required (timeliness), reliability, security and accuracy for settlement of business-to-business large value and time critical payments in Sri Lanka. Similarly individual customers of banks had no instrument to transfer funds in an account of his bank to a client’s account in another bank during the day to pay an obligation as and when required. The only option then available was to make the large or urgent payment on a cash withdrawal/deposit basis. To overcome the liquidity, credit and settlement risks, CBSL introduced the Real Time Gross Settlement System (RTGS) in September 2003. With the new implementation, customers of banks such as government, other financial institutions, corporate and individuals have a payment instrument i.e. RTGS to make their payments instantaneously. Since these transactions are made between RTGS settlement accounts at the Central Bank of Sri Lanka (CBSL) with assurance of finality, recipients can receive funds and re-use immediately.

The CBSL is statutorily responsible for the implementation of a PSS policy and has wider powers to supervise, oversee and regulate PSS. In its modernization programme which commenced in 2001, the CBSL refocused on its core objectives, i.e. the economic and price stability and the financial system stability. The financial system stability objective encompasses a wide range of subjects of which, the establishment of a safe and sound payment system was seen crucial for the development of the financial sector, which is also complementary to the maintenance of price stability. In this context, the CBSL examined the adequacy and the efficiency of the payment system to satisfy the needs of an evolving economy and decided to undertake comprehensive payment reforms. The broader objectives of the reforms were to reduce transaction costs, increase efficiency,
ensure safety and reduce credit, liquidity and systemic risks. As such, the CBSL acts as the apex body in the institutional framework.

In early 2000s, there had been a rapid acceleration in fundamental reforms to national payment systems worldwide, although the pace of implementation of reforms in different countries had been uneven. Planned outcomes had not always been achieved in terms of expected use, benefits or costs of payment system reform projects and many planned reforms had been unexpectedly slow to complete. In line with that, Payment and Settlement Systems of Sri Lanka experienced a rapid development since 2003 and it is a culmination of reforms brought in under the modernization project of the CBSL. The implementation of the LankaSettle System under this Project is a landmark in the development of PSS, as it introduced a very well integrated two systems i.e. The RTGS System which settles payments in real time gross basis and the LankaSecure System which settles securities transactions on Delivery versus Payment (DvP) basis. Further, as a part of the CBSL Modernization Project, the CBSL devolved its clearing functions to the LankaClear (Pvt) Ltd (LCPL) in 2002. Accordingly, all major retail payment clearing systems are operated by the LCPL. Having considered the complexity of PSS and the involvement of a large number of stakeholders, in 2006 the CBSL formed the National Payment Council to obtain the assistance of representatives of all PSS stakeholders in making policy decisions. The CBSL plays a pivotal role in Sri Lanka’s payment and settlement systems, for both large-value and retail payments.

The changes over from cash to non-cash payments in Sri Lanka are gradual but steady. The Real Time Gross Settlement (RTGS) system and the Cheque Imaging & Truncation (CIT) system, which accounted for 99 per cent of the total value of non-cash payments, continued to be the main contributors to the non-cash payments of the country. RTGS system, which is operated by the CBSL, settled 267,289 transactions with a total value of Rs. 57,790 billion during the 2011. Cheques are the most widely used paper based non cash retail payment instrument and have shown a continuous growth of about 10 per cent per year during the period of 2005-2011. Retail credit transfers in the Sri Lanka Interbank Payment System (SLIPS) recorded a significantly high annual growth of 40% since 2004 mainly due to the increase usage of the system for payment of salaries and wages of the public sector and private sector institutions. The LCPL upgraded the system to accommodate, T+0 settlement i.e. same day settlements, the growth in volumes and to improve its security. Credit Cards and ATM cards have exhibited strong and continuous growth of about 51 per cent and 174 per cent respectively from 2005 to 2011.
Many banks offer internet banking services in Sri Lanka, which include access to account information as well as funds transfers between accounts and bill payments and online securities trading. The growth in the number of internet users and the widening reach of internet services will impact significantly on the way credit transfers are carried out. Broader usage of mobile phones has encouraged banks and non-banks to develop new payment services for their customers and Mobile phone based payment applications are explored by the financial industry, as an option to provide electronic payment services in Sri Lanka. In fact, few banks have already commenced providing the banking services to their customers through mobile phones. Owing to the precautions that need to be taken particularly on the security of such financial transactions, the CBSL have issued a set of guidelines to be adopted by licensed commercial banks on mobile payments. Recent products launched by a few banks in cooperation with mobile service providers, facilitating the use of the mobile phone as a delivery channel, have increased the scope of this mode of payment.

1.1 Role of CBSL in PSS

At present, monetary policy management in Sri Lanka is based on a monetary targeting framework which is operated through a monetary programme. The final target of this framework is price stability, is achieved by influencing changes in broad money supply which is linked to reserve money through a multiplier. Reserve money is the operating target of monetary policy. The Central Bank of Sri Lanka takes into account economic factors such as the expected fiscal and balance of payments developments, economic growth, desired levels of growth in credit and inflation when preparing the monetary programme. Based on these factors, the monetary programme sets out the desired path for monetary growth and determines the quarterly reserve money targets necessary to achieve this monetary growth. The Bank would then conduct its Open Market Operations (OMO) within a corridor of interest rates formed by its policy rates namely the repurchase rate and the reverse repurchase rate, to achieve the reserve money target. Policy rates are periodically reviewed and adjusted appropriately, if necessary, to bring the reserve money to the targeted path.

The monetary policy stance by the Central Bank of Sri Lanka during the last years was aimed at reducing the inflationary pressures while facilitating the growth momentum of the economy. The inflation was managed at mid-single digit level and an overall market liquidity level was maintained in line with expected monetary developments. Market interest rates remained stable although a slight increase in rates was witnessed towards the end of the 2011. Excess liquidity in the market remained high at the beginning of the year and considering its
adverse impact on future monetary expansion and inflation, the CBSL raised the Statutory Reserve Ratio (SRR) on all rupee deposit liabilities of commercial banks by 1 percentage point to 8.0 per cent in April 2011 and absorbed permanently about Rs. 18 billion. By the end of 2011, the market liquidity declined below Rs.10 billion. The Central Bank commenced overnight reverse repurchase auctions towards year-end to contain pressure on market interest rates and uneven distribution in market liquidity among banks. Considering the improved investment climate, the government issued Treasury bonds with different maturities which enabled to reconstruct the term structure of interest rates in. The Central Bank continued to facilitate an inclusive growth within the financial sector, particularly through policies that would support a financial system of a US dollars 100 billion economy by 2016.

A number of techniques to identify and analyse systemic risk in the financial sector were also developed by the CBSL. Stress testing of the banking sector was carried out to measure its resilience to shocks relating to credit risk, market risk, and liquidity risks. Macro stress testing commenced in 2011 with the adoption of a credit risk model to assess the impact of macroeconomic variables on the asset quality of the banking sector. The Banking Soundness Indicator (BSI), an aggregate indicator with variables relating to capital, credit quality, earnings, liquidity and sensitivity to market risk, measures the level of soundness of the banking sector. The Financial Stress Indicator (FSI) was constructed last year measures the level of stress in financial markets and the banking sector. The variables included in the FSI represent the money market, the bond market, the foreign exchange market, the stock market and the banking sector.

As a measure to promote financial intermediation and broaden the permissible activities undertaken by Off-shore Banking Units (OBUs) of the licensed commercial banks, residents were permitted to transfer funds between Exporters’ Foreign Currency Accounts (EFCAs) and accounts maintained by non-residents in OBUs. This helps smoothen exports and import related payments while reducing intermediary costs and improving trade relationships. The Central Bank also declared the Chinese Renminbi (RMB) as a designated currency for foreign exchange transactions of commercial banks considering China’s importance as an investor, lender and trading partner of Sri Lanka. Strong customer-bank relationship is considered as the key to promoting financial inclusion and financial system stability.

In this context, the adoption of minimum standards and norms for the banking sector, specifying the responsibilities of banks towards their customers and the customers’ responsibility towards banks was seen as necessary to safeguard
the interests of both banks and customers. Accordingly, the ‘Customer Charter of Licensed Banks’, specifying rights and obligations of banks and customers was issued as a Directive mandating a ‘Code of Conduct’ in banking operations.

With the view to enhancing the Central Bank’s authority and necessary regulatory powers to discharge its responsibility for ensuring financial system stability, a number of amendments have been brought in to the Banking Act, taking into account new developments in the domestic and international financial markets.

During the past few years the financial market infrastructure in Sri Lanka underwent major reforms. Accordingly Central Bank of Sri Lanka performs three key roles in the PSS. They are (1) Overseeing the payment, clearing and settlement system, (2) Operating systemically important payment and settlement systems, (3) Formulating a national payments policy and developing the payment systems. Sri Lankan payment system consists of both large value payment systems and retail payment systems. The LankaSettle System, operated by the Central Bank of Sri Lanka and the CITS, operated by LankaClear (Pvt.) Ltd (LCPL), are the two Systematically Important Payment Systems (SIPS) in Sri Lanka.

The Central Bank takes measures to strengthen the payment and settlement infrastructure in the country to ensure safety, efficiency, competitiveness and stability of the Payment and Settlement System (PSS) to foster financial system stability.

One major objective is to promote electronic retail payment systems in the country. Therefore, the Central Bank initiates action to provide a safe and secure environment while regulating such systems to ensure customer protection. Accordingly, with the increased interest shown by bank and non-bank entities in the recent past in providing mobile payment systems, the Central Bank issued two mobile banking guidelines to regulate such systems. To ensure compliance of credit card issuers to the credit card operational guidelines, the Central Bank examines the self-evaluation reports prepared by them. Furthermore, supervision is also carried out to ensure that the credit card issuers comply with the web disclosure requirements stipulated in the credit card operational guideline. The Central Bank assists credit card issuers to prepare a code of conduct which will

be the benchmark service standard in their dealings with individual customers. As per a decision taken at the National Payments Council (NPC), service providers of payment cards who are functioning as financial acquirers are instructed to migrate to line encryption technology to protect electronic payment cards used in Sri Lanka. As a result, payment card service providers commenced the applying of encryption technology in 2011.

As per a decision taken by the NPC, Lanka Clear (Pvt) Ltd. took steps to establish the Common Card and Payment Switch (CCAPS) under the guidance of the Central Bank to reduce the cost of ATM and Card transactions by sharing payment infrastructure and the Central Bank designated CCAPS as the National Payments Switch in Sri Lanka.

Having considered the increased usage of internet banking services to settle financial transactions and risks associated with such systems, the Central Bank has drafted a guideline to regulate Internet banking services. Measures are also taken with the support of the Treasury to encourage several departments to effect payments through electronic payment mechanisms whenever possible. Accordingly, the Treasury issued a circular to government departments instructing them to use electronic payment systems to make payments higher than Rs. 100 million.

1.2 Objective and Scope of the Study

The main objective and scope of the paper is to study the role of payment and settlement system in monetary policy and financial system stability. Paper also presents a general evaluation of the national payments and settlements system (NPSS) of Sri Lanka and proposes the necessary recommendations for its strategy of the modernization of the NPSS. According, the document includes global concepts that include the generalities of a payment and settlement system, the link of said system with the monetary policy, the role that a Central Bank must play in the system, as well as liquidity and the inherent risks of the payment systems. On the other hand, reference is made to the basic principles on the Systemically Important Payment Systems, carried out by the Bank of International Settlements (BIS).

The objectives of this study are as follows:

- Assess payment and settlement system standards, both on the retail and wholesale levels;
• Identify key challenges and issues to improve the efficiency of the payment and settlement system in Sri Lanka;
• Identify areas where payment and settlement system directly influence domestic monetary and financial stability;
• Assess efforts to further develop and improve payment and settlement system in Sri Lanka;
• Take stock of regional cooperation(s) on the areas of payment and settlement system involving SEACEN economies and evaluate the outcome and shortcoming;
• Identify key areas of cooperation across SEACEN members.

1.3 General Outline of the Paper

This Report is organized into 7 sections. Firstly, Section 1 provides background information to the study. This contains development of PSS, brief explanation of the condition of Monetary Policy, Financial Stability in Sri Lanka, role of Central Bank of Sri Lanka in PSS, and objectives and expected results of this study.

Secondly, Section 2 presents a review of literature, mainly summarizing theoretical and empirical literature on identifying vulnerability and risk of PSS related to Monetary Policy and Financial Stability.

Section 3 contains the policy framework and position of PSS in Monetary Policy and Financial Stability. Financial stability describes in detail the structure of the financial system and components of the financial system in Sri Lanka and the importance of an efficient payment and settlement system. However, there is lack of empirical studies, with special focus on Sri Lanka.

The next section, Section 4 focuses on Sri Lanka payments and settlements system. It covers the payments and settlements regulatory framework, payment instruments and infrastructure.

Section 5 focuses on the assessment of current PSS framework in the country. Finally, Section 6 examines the policy implications related to safety and efficient PSS, possible risk, risk mitigation specific to Monetary Policy and Financial Studies, crisis management protocol and possible needed developments. Section 7 concludes the research study.
2. Literature Review

The type of payments and settlements systems adopted in countries varies, but the Real-Time Gross Settlement (RTGS) has become the foremost system for the settlement of high-value payments in developed economies (BIS, 1997). During the past decade a number of countries, i.e. emerging and developing countries, have introduced RTGS systems for large-value funds transfers and many countries are also considering introducing such systems. The majority of RTGS systems around the world are operated by Central Banks and settlement takes place using central bank money (World Bank Group 2008).

In a World Bank Group (2008) survey in 142 central banks about their national payment systems, 112 of the 142 central bank respondents indicated that an RTGS system is a feature of their national payment systems. The survey results suggested that central bank operational principles and practices vary greatly across these systems in the areas of access, liquidity and credit, and costing and pricing.

Peter Allsopp, Bruce Summers and John Veale (2008), in their paper have revealed that, there are number of benefits which are provided by the RTGS system to the economy and financial sector. Firstly, RTGS systems offer a rich set of banking-related services that provide value throughout the financial and real sectors of the economy. Bank and non-bank financial institutions, commercial and industrial firms, and even individuals benefit from the use of RTGS services. The terms and conditions under which access to RTGS services is granted have an important bearing on how effectively and efficiently an RTGS system supports the financial and real sectors of the economy. Moreover, the terms of access affect the abilities of the providers and users of RTGS services to manage their payment system risks. These ideas were also assured by Wilhelmina C., Agnes M. Yap and MagnoTorreja in their paper “RTGS and its implication on Central Banking” by saying, the payments system, which consists of the set of institutions, instruments, rules, procedures, standards and technical mechanisms for the transfer of money, is an essential part of the financial infrastructure in a market economy.

They have further elaborated that the maintenance of a safe and efficient system for handling payment and settlement transactions is one of the major concerns of central banks as part of their functions as regulatory and monetary authorities. Developments in the payments system have implications for the conduct of monetary policy through their influence on the functioning of financial markets. The payment and settlement system greatly influence the speed, financial
risks, reliability and cost of transacting when financial market participants make payments. The more developed the payments system, the more liquid the assets traded in financial markets become and the lower the associated risks and the transaction costs. Payment system’s technical efficiency determines the effectiveness with which transaction money is used in the economy, and the risks associated with its use. Meanwhile, the reduction in transaction time resulting from reforms in the payments system (e.g., the implementation of an RTGS system) could prevent the occurrence of large float. This, in turn, could result in a more accurate measure of monetary aggregates (such as reserve money, base money and domestic liquidity) and could contribute to the more effective implementation of monetary policies.

The rationale behind the trend towards RTGS has been the perceived need to reduce the risk potentially found in Deferred Net Settlement (DNS), the predominant system for settling high-value payments previously. RTGS entails payments being settled on a gross basis in real time. As a consequence, credit risk and settlement risk between settlement banks are eliminated. But RTGS does not dominate DNS in all respects. With payments settled on a gross basis, settlement banks’ liquidity needs under RTGS are greater than those under DNS (Matthew Willison, 2004).

The design of all payment arrangements must reflect a trade-off between cost and risk. As noted in BIS (2005), “if a system was so costly or burdensome that no one used it, the system would have no effect on risks no matter how extensive its risk controls.” This applies as much to RTGS systems as to any other system design, for while addressing the counterparty credit risks associated with Deferred Net Settlement (DNS) systems, real-time gross settlement of payments can be a significant, and costly, drain on a bank’s liquidity (Kahn and Roberds (2001). To alleviate this burden, central banks also typically offer intraday credit / liquidity to payment system participants. In the absence of such credit, users would have to pre-fund their settlement accounts at the central bank, thereby incurring a substantial opportunity cost of holding liquidity. (Chakravorti, 2000).

2.1 Role of the Central Bank in a Payment System

As stated by Mark Manning and Daniela Russo at the conference on Payments and monetary and financial stability in Frankfurt on 12-13 November 2007, the typical objectives of Central Banks monetary and financial stability have grown from their early roles in the field of payment systems. Today, Central Banks around the world continue to provide the ultimate settlement asset and
strengthen their influence via a role in ownership, operation or oversight of key components of the financial infrastructure. The status of a Central Bank at the top of the hierarchy derived from the fact that it was perceived to be “safe” – that is, an institution with a large capital base, holding high-quality assets. Such a central bank would also need to be concerned about its own soundness. This led the Central Bank to be careful about to whom it should provide settlement accounts and to monitor these banks.

Borio et al. (1992) define the payment system as “that set of arrangements for the discharge of the obligations assumed by economic agents whenever they acquire control over real or financial resources”.

Huang and Wright (2005) set out a theoretical model of the transition from an early monetary economy to one with financial institutions and payment systems. They establish conditions for the introduction of payment systems, noting that it will more likely be the case that the cheaper it is to use such a system, the greater the risk of theft in a cash-only world, and the higher the gains from trade. Lester (2005) and Millard and Willison (2006) have further built on this model, incorporating settlement and operational risks in the use of payment systems, and investigating welfare implications.

2.2 Monetary Policy and Payments

Payment systems affect the daily demand for liquidity of commercial banks / financial institutions and may therefore affect the level of money market interest rates. The Central Bank will need to establish appropriate arrangements for liquidity provision to the banking system. It will also pay attention to the mechanisms by which it carries out such operations, ensuring the safety, resilience and efficiency of the payment and settlement systems. In the past decade, there has been a marked shift away from deferred net settlement to RTGS in large-value payment systems. This implies heightened intraday liquidity demands on payment system participants, which are typically met via the provision of credit by the Central Bank (Kahn and Roberds, 2007)

Millard, Speight and Willison (2007) argue that the difference reflects a tension between different aspects of the central bank’s monetary stability objective: on the one hand, a central bank sets overnight rates to meet its price stability objective; on the other, it may be prepared to inject intraday liquidity into an RTGS payment system at a very low cost to ensure that banks do not have an incentive to delay payments and risk settlement failure.
Central Banks provide liquidity for different purposes. To achieve their primary objective of price stability, monetary authorities supply base money to the economy. By matching the demand for base money with the supply that they control, central banks steer short-term interbank interest rates, which, via the transmission mechanism of monetary policy, have an impact on the price level. (Kahn and Roberds, 2007)

2.3 Payments and Financial Stability

A financial stability objective lies within a broadly interpreted monetary stability objective. Millard and Saporta (2007) capture the dual objectives of price stability and smooth functioning of interbank payment systems in a broad definition of the pursuit of monetary stability: “ensuring that money can perform its functions of unit of account, store of value, medium of exchange and means of deferred payment in all states of the world.”

In its role as the lender of the last resort Central Bank will try to reduce the systemic risk that could arise. Systemic risk can be defined in terms of the risk of losses in the wider economy which are not considered by individual system members when they make their decisions. Some of these threats may derive from the design and operation of payment systems themselves, particularly when the dependence on such systems is high.

Jenkinson and Manning (2007) and Millard and Saporta (2007) identify two principal sources of systemic risk arising from payment and settlement activity: single point of failure risk; and risk arising from strategic interaction between payment system participants.
The relationship between money supply and economic activity can be expressed as:

\[ MV = PT \]

Where:
- (M) Money Supply
- (V) Velocity
- (P) Price Level
- (T) Number of Transactions

In this equation “PT” represents some aggregate level of economic activities. The efficiency of the payments system is reflected in the money turnover rate, which indicates how many times money supply has to be reused in order to meet the transaction and payment demands associated with a given level of aggregate economic activity. As a result, if the efficiency of the payments system improves, payments will take a shorter time to be cleared and settled before the funds being transferred can be reused to finance another payment. Consequently, improvements in the efficiency of the payments system would permit a country to reduce its domestic money supply, assuming that economic growth and other conditions remain constant.

Accordingly, the payments system links economic activity and money. In this regard, the float that normally results from payment processing inefficiencies as well as malfunctions in the clearing and settlement process can affect monetary policy.

Therefore, Central banks have a strong interest in promoting safety and improving efficiency in payments and settlements system as part of their overall concern with financial stability. Central banks play a key role in the domestic payments system because it is their liquid liabilities. In recognising safe and efficient payments and settlements system is critically important for deepening and broadening the financial markets, the CBSL in 2006, formed the National Payment Council (NPC), the highest decision making body of the country with regard to the PSS in Sri Lanka. This provides an industry wide framework represented by all relevant stakeholders to take forward the modernization of PSS.
3. Policy Framework

Professor Charles Goodhart (2010) noted Central Banks have generally had three main objectives or functional roles. These have been (i) to maintain price stability, subject to the monetary regime in current operation, for example the gold standard, a pegged exchange rate or an inflation target; (ii) to maintain financial stability, and to foster financial development more broadly; and (iii) to support the state’s financing needs at times of crisis, but in normal times to constrain misuse of the state’s financial powers. Naturally the balance between these three objectives has shifted over time, with support for state financing becoming prominent during war-times.

3.1 Central Bank of Sri Lanka

The Central Bank of Ceylon was set up by the post-independence Government in recognition of the importance of an active monetary policy regime and a dynamic financial sector to support and promote economic growth. Prior to the establishment of the Central Bank, functions relating to central banking were conducted by the Currency Board System that was set up under the Paper Currency Ordinance No.32 of 1884. After gaining political independence, the Currency Board System was considered inadequate and unsuitable for meeting the needs of a developing country and an independent nation. Therefore, in July 1948, the Government of Ceylon requested the United States Government for technical expertise to set up a central bank, which resulted in Mr. John Exter, an economist from the Federal Reserve Board of the USA being appointed to carry out this task. The Exter Report on the rationale and the legal framework for the Central Bank was presented to the Government of Ceylon in November 1949 and led to its formation. The Central Bank of Ceylon was established by the Monetary Law Act (MLA) No.58 of 1949 and commenced operations on August 28, 1950. It was renamed the Central Bank of Sri Lanka in 1985. Similar to many central banks especially in developing economies, the objectives of the Central Bank of Sri Lanka were stabilization of the domestic value of the rupee, stabilization of the external value of the rupee, and promotion of the economic growth. Since then Central Bank’s focus and functions have evolved since its

5. John Exter was an American economist, member of the Board of Governors of the United States Federal Reserve System, and founder of the Central Bank of Sri Lanka.
formation, in response to the changing economic environment. Meanwhile, a consensus had developed internationally that a central bank’s primary goal should be the maintenance of price stability since it is crucially dependent on stable macroeconomic conditions. Furthermore, as the experience of other countries has demonstrated, the stability of the financial system is crucial in improving the resilience of the economy. Therefore, in keeping with trends in central banking, the objectives of the Central Bank were streamlined by amending the Monetary Law Act (MLA) in 2002, to focus more on the stabilization objectives than the development objectives enabling the Central Bank of Sri Lanka to pursue its core objectives and to free it of the multiple objectives that were originally assigned to it. Therefore, in accordance with the international trends in central banking new objectives were stated as (i) maintaining economic and price stability and (ii) maintaining financial system stability.

3.2 Monetary Policy Framework in Sri Lanka

The CBSL has gradually moved away from direct controls towards more market oriented policy tools with the liberalization of the economy in 1977. While credit controls were gradually eliminated and the administratively determined bank rate was gradually abandoned, the CBSL has increasingly utilised open market operations for the conduct of monetary policy. The floating of the exchange rate in 2001 has added to the operational independence of monetary policy.8

At present, monetary management in Sri Lanka is based on a monetary targeting framework. In this framework, the final target, price stability, is to be achieved by influencing changes in broad money supply which is linked to reserve money through a multiplier. Reserve money is the operating target of monetary policy. The monetary targeting framework is operated through a monetary programme prepared by the Central Bank of Sri Lanka. A monetary programme is prepared considering the economic outlook of the country and projections based on the desired rate of monetary expansion to achieve a target rate of inflation, consistent with the projected rate of economic growth, balance of payments forecast and expected fiscal operations of the government. Accordingly, a reserve money target is established, which is the operating target for monetary policy.9

The Bank would then conduct its Open Market Operations (OMO) within a corridor of interest rates formed by its policy rates i.e. the repurchase rate and the reverse repurchase rate, to achieve the reserve money target. These policy rates, which are the Bank’s signalling mechanism on its monetary policy stance are periodically reviewed and adjusted appropriately, if necessary, to bring the reserve money to the targeted path. A daily auction is conducted either to absorb liquidity through repurchase transactions, if there is excess liquidity, or to inject liquidity through reverse repurchase transactions, if there is a shortage of liquidity and thereby to maintain overnight interest rates stable around a level considered consistent with the path of reserve money targets. Standing facilities are available for those participating institutions which were unable to obtain their liquidity requirements at the daily auction.

Outright transactions are conducted at the discretion of the CBSL to address long term liquidity issues. There also exists another policy rate known as the Bank Rate. The Statutory Reserve Ratio (SRR) also has been widely used to influence money supply in the past. However, the reliance on SRR as a daily monetary management measure has been gradually reduced with a view to enhancing market orientation of monetary policy and also reducing the implicit cost of funds which the SRR would entail on commercial banks.

Figure 1
Transmission Mechanism of Monetary Policy
3.3 Financial System Stability in Sri Lanka

Financial system stability means a safe and secure financial system which is able to withstand external and internal shocks. A stable financial system creates a favourable environment for depositors and investors, encourages financial institutions and markets to function effectively and efficiently, and hence, promotes investment and economic growth. The Central Bank discharges this role by establishing the required legal framework, regulating and supervising key categories of financial institutions, maintaining stability in key financial markets, overseeing the payments and settlements system, acting as lender of last resort and by regular surveillance of the entire financial system, including insurance and stock market activities. It further means creating a trust-worthy and enabling environment favourable to savers and investors helping the transmission of monetary policy, thereby assisting the attainment of price stability, encouraging efficient financial intermediation, which eventually promotes investment and growth, and encouraging effective and efficient operation of markets and improving distribution of resources in the economy.

3.3.1 Structure of the Financial System

The financial system in Sri Lanka comprises the major financial institutions, namely the Central Bank of Sri Lanka, licensed commercial banks (LCBs), licensed specialized banks (LSBs), licensed finance companies (LFCs), specialized leasing companies (SLCs), primary dealers (PDs), pension and provident funds, insurance companies, rural banks, stock brokers, securities market intermediaries, unit trusts and thrift and credit co-operative societies; the major financial markets, such as the foreign exchange market, money market, capital market and the informal financial market; and the financial infrastructure which is the legal framework related to the financial system and the payment and settlement.

Banks play a central role within the financial system, as they have the capacity to provide liquidity to the entire economy. Banks are also responsible for providing payment services, thereby facilitating all entities to carry out their financial transactions. On the other hand, banks can create vulnerabilities of systemic nature, partly due to a mismatch in maturity of assets and liabilities. Therefore, the soundness of banks is important, as it contributes towards maintaining confidence in the financial system and any failure may have the potential to impact on activities of all other financial and non-financial entities.

The banking sector in Sri Lanka, which comprises 24 LCBs and 9 LSBs, dominates the financial system and accounted for 55 per cent of the total assets.
of the financial system as at end 2011. Even though a large number of LCB exist in the country, the stability of the financial system is primarily dependent on the performance and financial strength of the six largest LCBs, consisting of the two state banks and the four largest domestic private commercial banks. These six banks, which are generally referred to as the Systemically Important Banks (SIBs), represented 76 per cent of the LCB sector assets and 64 per cent of the banking sector assets.

In terms of the asset base and the magnitude of services provided, the LCBs are the single most important category of financial institution within the banking sector. As at end 2011, the LCBs dominated the financial system with a market share of 46 per cent of the entire financial system’s assets and 84 per cent of the banking sector’s assets. The LSB sector represented 9 per cent and 16 per cent of the entire financial system’s assets and banking sector’s assets, respectively. The systemic importance of the LSB sector is relatively low in comparison to the LCBs, both in terms of size and their impact on the financial system, as it does not play an intermediary role in the payment cycle. Table 1 indicates the total assets of the major financial institutions in Sri Lanka as of end 2011.
The financial system consists of the Central Bank, as the apex financial institution, other regulatory authorities, financial institutions, markets, instruments, a payment and settlement system, a legal framework and regulations. The financial system carries out the vital financial intermediation function of borrowing from surplus units and lending to deficit units. The legal framework and regulators
are needed to monitor and regulate the financial system. The payment and settlement system is the mechanism through which transactions in the financial system are cleared and settled.

3.3.2.1 Regulatory Authorities

i) Central Bank of Sri Lanka

The regulation and supervision of banking institutions is mainly governed by the Monetary Law Act No.58 of 1949, the Banking Act No.30 of 1988 and the Exchange Control Act No. 24 of 1953. The regulation and supervision of finance companies is undertaken in terms of the Finance Business Act, No 42 of 2011. The regulation and monitoring of finance leasing establishments is conducted under the Finance Leasing Act No.56 of 2000. The regulation of supervision of primary dealers in government securities is carried out in terms of the Local Treasury Bills Ordinance No.8 of 1923 and the Registered Stocks and Securities Ordinance No.7 of 1937.

ii) Securities and Exchange Commission

The Securities and Exchange Commission (SEC) is responsible for licensing and regulating stock exchanges, stock-brokers, stock dealers and unit trust companies, in terms of the Securities and Exchange Commission of Sri Lanka Act No. 36 of 1987. The SEC also registers underwriters, margin providers, credit rating agencies, investment managers and securities clearing houses. In order to co-ordinate financial stability issues, the Central Bank is a member of the Board of Directors of the SEC and the Deputy Governor in charge of Financial System Stability represents the Central Bank on the SEC Board.

iii) Insurance Board of Sri Lanka

The Insurance Board of Sri Lanka (IBSL) regulates and supervises the insurance industry - insurance companies and their agents and insurance brokers, under the Regulation of Insurance Industry Act No.43 of 2000 to safeguard the interests of policy-holders. The Central Bank is a member of the IBSL and is represented on it by the Deputy Governor in charge of Financial System Stability.
3.3.2.2 **Financial Institutions regulated by the Central Bank of Sri Lanka**

i) **Licensed Commercial Banks (LCBS) & Licensed Specialized Banks (LSBs)**

The Central Bank issues banking licenses for two categories of banks, namely Licensed Commercial Banks and Licensed Specialized Banks (which are savings and development banks). The main difference between a Licensed Commercial Bank and a Licensed Specialized Bank, is that the former is permitted to accept demand deposits from the public (operate current accounts for customers) and is an Authorized Dealer in foreign exchange which entitles it to engage in a wide-range of foreign exchange transactions, whereas the latter is permitted to limited engagements in foreign exchange with Central Bank’s approvals. The regulatory and supervisory function relating to banks licensed by the Monetary Board is carried out by the Bank Supervision Department of the Central Bank. The supervision of banks is based on the internationally accepted standards for bank supervision set out by the Basel Committee for Banking Supervision.

During the year 2011, two more banks came into operation resulting in the number of banks in the sector reaching 33. Accordingly, the banking sector consists of 12 domestic LCBs, including 02 state owned banks, 12 foreign banks and 09 LSBs. One of the new banks was established to offer Islamic banking services in Sri Lanka and is expected to introduce new mechanisms to further increase financial inclusion. The banking network increased to 6,122 outlets (including 12 overseas outlets) and 2,240 automated teller machines (ATMs). The total network expanded by 201 outlets. Table 2 indicates the distribution of Banks and Bank branches in Sri Lanka as of end 2011.
Table 2
Distribution of Banks and Bank Branches

<table>
<thead>
<tr>
<th>Licensed Commercial Banks (LCBs)</th>
<th>End 2010(a)</th>
<th>End 2011(b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Total No. of LCBs</td>
<td>22</td>
<td>24</td>
</tr>
<tr>
<td>Domestic banks</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>Foreign banks</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>2. Total No. of LCB Branches and Other Outlets</td>
<td>5,164</td>
<td>5,347</td>
</tr>
<tr>
<td>Branches</td>
<td>1,470</td>
<td>1,581</td>
</tr>
<tr>
<td>Domestic Bank Branches</td>
<td>1,424</td>
<td>1,533</td>
</tr>
<tr>
<td>Foreign Branches</td>
<td>46</td>
<td>48</td>
</tr>
<tr>
<td>Extension Offices</td>
<td>905</td>
<td>978</td>
</tr>
<tr>
<td>Domestic Banks</td>
<td>735</td>
<td>807</td>
</tr>
<tr>
<td>Foreign Banks</td>
<td>170</td>
<td>171</td>
</tr>
<tr>
<td>Student Savings Units and Other Outlets</td>
<td>2,789</td>
<td>2,788</td>
</tr>
<tr>
<td>Automated Teller Machines</td>
<td>1,862</td>
<td>2,082</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Licensed Specialized Banks (LSBs)</th>
<th>End 2010(a)</th>
<th>End 2011(b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Total No. of LSBs</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Regional Development Banks (c)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>National Level Savings Banks</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Long-term Lending Institutions</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Housing Finance Institutions</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Private Savings and Development Banks</td>
<td>2 2</td>
<td></td>
</tr>
<tr>
<td>2. Total No. of LSB Branches and Other Outlets</td>
<td>757</td>
<td>775</td>
</tr>
<tr>
<td>Branches</td>
<td>500</td>
<td>511</td>
</tr>
<tr>
<td>Regional Development Banks (c)</td>
<td>230</td>
<td>233</td>
</tr>
<tr>
<td>National Level Savings Banks</td>
<td>173</td>
<td>179</td>
</tr>
<tr>
<td>Long-term Lending Institutions</td>
<td>23</td>
<td>24</td>
</tr>
<tr>
<td>Housing Finance Institutions</td>
<td>28</td>
<td>29</td>
</tr>
<tr>
<td>Private Savings and Development Banks</td>
<td>46 46</td>
<td></td>
</tr>
<tr>
<td>Extension Offices</td>
<td>69</td>
<td>76</td>
</tr>
<tr>
<td>Student Savings Units and Other Outlets</td>
<td>188</td>
<td>188</td>
</tr>
<tr>
<td>Automated Teller Machines</td>
<td>158</td>
<td>158</td>
</tr>
<tr>
<td>Total No. of Bank Branches and Other Outlets</td>
<td>5,921</td>
<td>6,122</td>
</tr>
<tr>
<td>Total No. of Automated Teller Machines (ATMs)</td>
<td>2,020</td>
<td>2,240</td>
</tr>
<tr>
<td>Total No. of Electronic Fund Transfer Facilities at the Point of Sale Machines (EFTPOS)</td>
<td>27,588</td>
<td>27,073</td>
</tr>
<tr>
<td>Banking Density: No. of Bank Branches Per 100,000 Persons</td>
<td>9.5</td>
<td>10</td>
</tr>
</tbody>
</table>

An Internal Supervisory Rating system of banks is in place, taking into consideration of quantitative measures such as Capital Adequacy, Asset Quality, Management, Earnings and Liquidity (i.e. CAMEL model components) and other qualitative measures such as assessment of bank’s compliance with statutory requirements, applicable laws and regulations, internal controls and the standards of corporate governance, in order to categorise them under different risk ratings and take necessary regulatory and supervisory actions to improve the positions of weaker banks.
ii) Licensed Finance Companies (LFCs) and Specialized Leasing Companies (SLCs)

The Non-Bank Financial (NBF) sector consisting of Licensed Finance Companies (LFCs) and Specialised Leasing Companies (SLCs).

The regulation and supervision of LFCs is governed by the Finance Business Act No. 42 of 2011 which was enacted in November 2011 to strengthen the regulation of finance companies. The new law which replaces the Finance Companies Act has broadened the definition of “deposits” and “finance business” and has empowered the regulator with more investigative powers and enhanced penalties for offences. The regulation and monitoring of SLCs is conducted under the Finance Leasing Act No. 56 of 2000.

The Department of Supervision of Non-Bank Financial Institutions of the CBSL carries out the regulatory and supervisory functions in respect of LFCs and SLCs, with the objective of ensuring that these institutions comply with the minimum prudential requirements stipulated by the Central Bank. These functions are carried out mainly through off-site surveillance and on-site examinations. Table 3 indicates the Composition of assets and liabilities of NBFIs sector in Sri Lanka as of end 2011.

| Table 3 |

Composition of Assets and Liabilities of NBFIs Sector

<table>
<thead>
<tr>
<th>Item</th>
<th>2010 (a)</th>
<th>2011 (a)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rs. bn</td>
<td>Share (%)</td>
</tr>
<tr>
<td><strong>Assets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accommodation</td>
<td>265.5</td>
<td>68.4</td>
</tr>
<tr>
<td>Finance Leasing</td>
<td>87.5</td>
<td>22.6</td>
</tr>
<tr>
<td>Hire Purchase</td>
<td>96.0</td>
<td>24.7</td>
</tr>
<tr>
<td>Investments</td>
<td>25.2</td>
<td>6.5</td>
</tr>
<tr>
<td>Others</td>
<td>97.2</td>
<td>25.1</td>
</tr>
<tr>
<td><strong>Liabilities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Deposits</td>
<td>146.1</td>
<td>37.7</td>
</tr>
<tr>
<td>Total Borrowings</td>
<td>138.9</td>
<td>35.8</td>
</tr>
<tr>
<td>Capital Elements</td>
<td>48.1</td>
<td>12.4</td>
</tr>
<tr>
<td><strong>Total Funds</strong></td>
<td>333.2</td>
<td>85.9</td>
</tr>
<tr>
<td>Other</td>
<td>54.7</td>
<td>14.1</td>
</tr>
<tr>
<td><strong>Total Assets/Liabilities</strong></td>
<td>387.9</td>
<td>100</td>
</tr>
</tbody>
</table>

(a) Revised
(b) Provisional
iii) Authorized Primary Dealers (PDs)

There are two categories of institutions that are eligible to be Authorized PDs - LCBs and Dedicated Primary Dealers Companies. The supervision of PDs is carried out to ensure an efficient, sound and safe primary dealer system, to promote the stability of the government securities market and to safeguard the interests of investors. The main Directions issued to Primary Dealers cover Minimum Capital Requirement, Capital Adequacy, Special Risk Reserve, Segregation of Securities Accounts, Custodial Holdings of Securities, Market Valuation, Repurchase Agreements, Forward Rate Agreements and Interest Rate Swaps, Financial statements, Dividend Declaration and Diversification. The Public Debt Department supervises Authorized Primary Dealers through off-site surveillance and on-site examinations.

3.3.2.3 Institutions Not Regulated by the Central Bank of Sri Lanka

Certain financial institutions are not regulated by CBSL. These include Stock Broking / Dealing Companies, Unit Trust Companies and Investment Management Companies, which come under the purview of the SEC, Insurance Companies and Insurance Brokers which are regulated by the Insurance Board of Sri Lanka (IBSL), and Venture Capital Companies, Pension and Provident Funds and Micro-Finance Institutions.

3.3.2.4 Financial Markets

The Financial Market, which is the market for credit and capital, can be divided into the Money Market and the Capital Market. The Money Market is the market for short-term interest-bearing assets with maturities of less than one year, such as Treasury bills, commercial paper, and certificates of deposits. The major task of the Money Market is to facilitate the liquidity management in the economy.

The Capital Market is the market for trading in assets for maturities of greater than one year, such as Treasury bonds, private debt securities (bonds and debentures) and equities (shares). The main purpose of the Capital Market is to facilitate the raising of long-term funds.

The Financial Market can be also be classified according to instruments, such as the debt market and the equity market. The debt market is also known
as the Fixed Income Securities Market and its segments are the Government Securities Market (Treasury bills and bonds) and the Private Debt Securities Market (commercial paper, private bonds and debentures).

The Central Bank through its conduct of monetary policy influences the different segments of the Financial Market in varying degrees. The Central Bank’s policy interest rates have the greatest impact on a segment of the Money Market called the inter-bank call money market and a segment of the Fixed Income Securities Market, i.e. the Government Securities Market. The Central Bank may also intervene in the inter-bank Foreign Exchange Market, which is closely connected to the Money Market.

i) Inter-bank Call Money Market

The inter-bank call money market is the first step in the transmission of the Central Bank’s monetary policy signals to the economy. Hence, the Central Bank closely monitors the inter-bank market and makes a daily assessment of the liquidity in the banking system. Under the current open-market operations system, the Central Bank will conduct either a Repo or Reverse Repo auction for a determined amount, in order to reduce large fluctuations in the inter-bank call money market interest rate. If there is excess liquidity in the market, the Central Bank will conduct a Repo auction to mop-up the surplus money. Likewise, if there is a shortage of liquidity in the market, the Central Bank will conduct a Reverse Repo auction to inject money into the market. The magnitude of the Central Bank intervention depends on the overall liquidity excess or shortfall, prevailing interest rate environment and perfect interest rate level. In 2011, the excess liquidity in the inter-bank money market that was brought forward from the previous year gradually declined. The daily inter-bank call money market transactions averaged Rs.10.1 billion in 2011.

Table 4
Money Market Transactions

<table>
<thead>
<tr>
<th>Market</th>
<th>Volume (Rs. bn)</th>
<th>Interest/Yield Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inter-bank repo</td>
<td>1,162.0</td>
<td>1,128.0</td>
</tr>
<tr>
<td>Central Bank repo</td>
<td>1,786.0</td>
<td>10,723.0</td>
</tr>
<tr>
<td>Central Bank reverse repo</td>
<td>907.0</td>
<td>-</td>
</tr>
<tr>
<td>Central Bank Securities</td>
<td>1,781.0</td>
<td>1,467.0</td>
</tr>
</tbody>
</table>

ii) **Fixed Income Securities Market**

The Treasury bill market is another segment of the Money Market. Treasury bills are highly liquid money market instruments that provide financial institutions with an alternate source of liquidity and investment. Furthermore, interest rate movements in the Treasury bill market provide a benchmark for the short-term credit market. Hence, changes in the volumes and rates in the Treasury bill market affect the cost, profitability and liquidity of financial institutions.

### Table 5

**Market Volumes of Government Securities**

<table>
<thead>
<tr>
<th>Item</th>
<th>Rs. billion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issued in the Primary Market</td>
<td>2009 2010 2011</td>
</tr>
<tr>
<td>Treasury bills</td>
<td>1,522.6 1,508.6 1,767.5</td>
</tr>
<tr>
<td>Treasury Bonds</td>
<td>821.2 1,000.1 1,164.6</td>
</tr>
<tr>
<td>Trading in the Secondary Market (as recorded in LankaSecure)</td>
<td>20,542.5 41,250.0 53,679.1</td>
</tr>
<tr>
<td>Treasury bills</td>
<td>701.4 508.6 603.0</td>
</tr>
<tr>
<td>Treasury Bonds</td>
<td>8,048.6 21,379.7 25,679.1</td>
</tr>
<tr>
<td>Trading in the Secondary Market (as recorded in LankaSecure)</td>
<td>12,493.9 19,870.3 28,655.4</td>
</tr>
<tr>
<td>No. of Investor Accounts at LankaSecure</td>
<td>64,680.0 73,396.0 76,286.0</td>
</tr>
</tbody>
</table>


### iii) Domestic Foreign Exchange Market

One of the main purposes of the domestic foreign exchange market is to obtain foreign currency funds for the purchase of imports of goods and services and to service loan repayments. The foreign exchange market consists of the spot market and the forward market. The foreign exchange market in Sri Lanka consists of two tiers, the client or retail market and the inter-bank or wholesale market. The transactions in the inter-bank market partly result from transactions that banks have had with their customers in the retail market. The inter-bank market is mainly organized among Authorized Dealers in foreign exchange, which comprise all commercial banks and plays an important role in the Sri Lankan financial system by redistributing liquidity within the banking system.

As the floating exchange rate system was adopted in January 2001, the price of the Sri Lanka Rupee, in terms of foreign currencies, is determined by market forces of demand and supply. The US Dollar / SL Rupee exchange rate is determined in the inter-bank foreign exchange market. The Central Bank intervention in the foreign exchange market is mainly to prevent excessive volatility.
in the exchange rate and to maintain a comfortable level of external reserves. However, with effect from 10th February 2012, the Central Bank decided to limit its intervention in the FOREX market.

The total value of inter-bank foreign exchange transactions in 2011 increased to US dollars 16,442 million as against US dollars 11,066 million in 2010. The daily average volume of inter-bank foreign exchange transactions was US dollars 68.5 million in 2011 as against US dollars 46.3 million in 2010, resulting in an increase of 48 per cent. The rupee depreciated slightly against the US dollar in 2011.

3.3.2.5 Financial Instruments Used in Sri Lanka

i) Deposits

Deposits are sums of money placed with a financial institution, for credit to a customer’s account. There are three types of deposits - demand deposits, savings deposits and fixed or time deposits. Demand deposits are mainly used for transaction purposes and for the safekeeping of funds. Funds can be withdrawn on demand. Demand deposits do not earn interest, but banks provide a number of services to demand deposit holders like cheque facilities, standing orders, Automated Teller Machine (ATM) cards and debit cards to facilitate withdrawals and payments. Savings deposits earn interest, which may be calculated on a daily, weekly, monthly or annual basis. Financial institutions issue pass-books or statements detailing transactions to savings deposit holders and also provide services such as ATM and debit cards. Fixed or time deposits are funds placed at financial institutions for a specified period or term. Fixed / time deposits earn a higher rate of interest than savings deposits. Fixed / time deposits can be for short, medium or long term. Funds can only be withdrawn before the maturity date with prior notice and a penalty may be imposed. A fixed / time deposit holder has a facility to borrow funds from the financial institution using the deposit as collateral.

ii) Loans

A loan is a specified sum of money provided by a lender, usually a financial institution, to a borrower on condition that it is repaid, either in instalments or all at once, on agreed dates and at an agreed rate of interest. In most cases, financial institutions require some form of security for loans.
iii) Treasury Bills and Bonds

Treasury bills are government securities that have a maturity period of up to one year. Treasury bills are issued by the Public Debt Department of the Central Bank, on behalf of the Government of Sri Lanka, under the provisions of the Local Treasury Bills Ordinance. Treasury bills are issued in maturities of 91 days, 182 days and 364 days. Treasury bills are zero coupon securities and are sold at a discount to face value, which is paid at maturity. Treasury bonds are medium and long-term government securities and are issued in maturities ranging from 2 years to 20 years. Treasury bonds are issued by the Public Debt Department of the Central Bank, on behalf of the Government of Sri Lanka, under the provisions of the Registered Stocks and Securities Ordinance. Treasury bonds are interest-bearing securities, with interest paid bi-annually. Treasury bills and bonds are guaranteed by the Government and are the safest of all investments, as they are default risk free. Treasury bills and bonds are tradable securities which are sold by auction to Primary Dealers, who in turn market the securities to the public. The yields on Treasury bills and bonds are market determined and the market is both active and liquid. From 2004, Treasury bills and bonds are issued in scrip-less (paperless) form and transactions are recorded electronically in the “LankaSecure” system of the Central Bank.

iv) Repurchase Agreements

Repurchase agreements (Repo) are arrangements which involve the sale, for cash, of securities (usually government securities) at a specified price with a commitment to repurchase the same or similar securities at a fixed price on a specified future date. The difference between the sale price and the repurchase price is the interest income. The agreement is called reverse repo when viewed from the perspective of the securities buyer. A repo is similar to a loan that is collateralized by the securities underlying the agreement. Most repos are very short-term money market instruments.

v) Commercial Paper

Commercial papers (CPs) are short-term, non-collateralized (unsecured) debt securities issued by private sector companies to raise funds for their own use, by banks and other financial intermediaries. CPs are generally issued by creditworthy (high-rated) institutions in large denominations and have additional bank guarantees of payment. CPs are usually sold at a discount, although some are interest bearing.
vi) Corporate Bonds and Debentures

Corporate bonds are medium or long-term securities of private sector companies which obligate the issuer to pay interest and redeem the principal at maturity. Corporate bonds that are not backed by a specific asset are called debentures.

Debentures are unsecured, medium or long term, interest-bearing bonds issued by private sector companies, banks and other financial institutions that are backed only by the general credit of the issuer. Debentures are usually issued by large, well-established institutions. The holders of debentures are considered creditors and are entitled to payment before shareholders in the event of the liquidation of the issuing company.

vii) Asset-backed Securities

Asset-backed securities (ABS) are bonds collateralized (secured) by mortgages, loans, or other receivables. Typically, the issuing institution sells mortgages, loans, instalment credit, credit card or other receivables to a trust or a special purpose vehicle (SPV) that in turn sells ABSs to the public. ABSs are interest-bearing instruments and are often enhanced through the use of guarantees or insurance.

viii) Financial Leases

Financial leases are accommodations provided to finance the purchase of capital or durable equipment in which the legal owner (lessor) lends the equipment to the lessee for payments that cover the full principal and interest cost. The lessee receives all benefits from the use of the asset and incurs the costs associated with its ownership, such as maintenance, insurance and taxes. Legal ownership of the equipment passes to the lessee when the loan principal and interest payments are settled in full.

ix) Shares

Shares are securities representing a portion of the ownership of a company that are a claim on the company’s earnings and assets. Shareholders are paid dividends which are a percentage of the profits of the company.
x) Financial Derivatives

A financial derivative is a financial instrument that is linked to another specific financial instrument, indicator or commodity and through which specific financial risks (such as interest rate risk, foreign exchange risk, equity and commodity price risk) can in their own right, be traded in financial markets. The value of a financial derivative comes from the price of an underlying item such as an asset or index. Financial derivatives can be used for risk management, hedging (protecting) against financial losses on commercial transactions and financial instruments and arbitrage between markets and speculation. There are two distinct classes of financial derivatives - forwards and related instruments, and options. The most common forward instruments are forward contracts, futures contracts, forward rate agreements (FRAs) and interest rate swaps (IRS). Financial derivatives are traded over-the-counter, in which case they are customized and can be purchased from financial institutions or are standardized products which are traded on organized exchanges. Although, financial derivatives are still not widely used in Sri Lanka, the market for forward contracts, FRAs and IRS is starting to develop.

3.4 Efficient Payments and Settlements System

A payment and settlement system can be described as a system which consists of a particular group of institutions and a set of instruments and procedures, designed to ensure the circulation of money and speed up interbank and other settlements resulting from the various economic transactions either within a country or between countries.  

This system is supported by the country’s banking system, which allows all players in the economy to come together and interact in a payment system through the use of their instruments and procedures that enable, people to effect payments and move their funds as and when necessary. The final settlement of payment transfers takes place across the accounts which banks hold with the central bank that plays the role to facilitate the functioning of the economy as a whole.

One of the most important functions of the financial system is to ensure safety and efficiency in payments and securities transactions. Financial

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infrastructure refers to the different systems that provide for the execution of both large-value and small-value payments. Payment and settlement systems enable the transfer of money in the accounts of financial institutions to settle financial obligations between individuals and institutions.

Payment systems affect the daily demand for liquidity of commercial banks and financial institutions and may therefore affect the level of money market interest rates. Therefore, smooth functioning of payment systems becomes a precondition for

- Efficient and safe execution of monetary policy operations
- Smooth functioning of the money markets

The objectives of payment and settlement system policy can be listed as,

1. Protecting transmission channel for monetary policy,
2. Maintaining systemic stability,
3. Ensuring efficient payment and settlement systems, and
4. Maintaining public confidence in systems, instruments and currency

4. Sri Lanka Payments and Settlements System

In the modernization programme which commenced in 2001, the Central Bank of Sri Lanka refocused on its core objectives, i.e. economic and price stability and the financial system stability. The establishment of a safe and sound payment system therefore is seen crucial for the development of the financial sector. In this context, the Central Bank examined the adequacy and the efficiency of the payment system to satisfy the needs of an evolving economy and decided to undertake comprehensive payment reforms. These reforms aimed at reducing transaction costs, increasing efficiency, ensuring safety and reducing credit, liquidity and systemic risks.

Sri Lanka’s payment instruments and their clearing and settlement processes are wide ranging. Cash is the common mode of payment, because it has finality in settlement of a transaction and is readily and legally acceptable as a medium of exchange. However, the inconvenience of carrying cash and increased security threats has encouraged the use of other payment instruments. Even though non-cash payment instruments are considered to be more secure, paper based
instruments like cheques, drafts and travellers cheques are not so convenient or efficient instruments. In the recent past, card and electronic payments are treated as the most convenient and safer instruments, although they too are subject to certain risks, card frauds in particular and technology related issues.

There are three systemically important payment systems in Sri Lanka.\textsuperscript{11} They are:

(i) The high value and time critical payments and settlement system used by banks, primary dealers, the Central Bank for inter-bank and inter-market transactions.

(ii) The cheque-based retail payment system used by all segments of the population.

(iii) The Automated Trading System operated by the Colombo Stock Exchange (CSE) which settles stocks and shares.

Any disruptions to these three payment systems can result in financial system-wide impacts leading to financial system instability. These critical payment, clearing and settlement systems that are in operation today are backed by a strong institutional, legal and regulatory framework. The key elements include:

(i) The payment and settlement services
(ii) Legal and regulatory framework
(iii) Mechanisms for consultation with stakeholders
(iv) Catalyst and oversight roles of the payment system

4.1 Payments and Settlements Regulatory Framework

4.1.1 Laws and Regulations

The Central Bank of Sri Lanka was established in 1950 under the Monetary Law Act No 58 of 1949 and is the apex institution in the financial sector. Since inception, the Central Bank has been responsible for regulating the financial system of the country. Several key legislative enactments provide powers to the

\textsuperscript{11} Jayamaha, Ranee, (2007), Modernization of the National Payment System, Central Bank of Sri Lanka, Available at: www.cbsl.gov.lk/pics_n_docs/05_fss/_docs/article1.pdf
Central Bank to carry out its functions to achieve its primary objectives of economic and price stability and financial system stability. Under these powers, the Central Bank issues directions for the establishment and operations of all categories of financial institutions under its supervisory and regulatory purview.

### 4.1.2 Legislative Enactments

The financial system of the country is regulated by several legislative enactments. The key Acts relevant to the regulatory role of the Central Bank are the Monetary Law Act, the Local Treasury Bills Ordinance, Registered Stocks and Securities Ordinance, Exchange Control Act, Banking Act, Finance Business Act, Finance Leasing Act, Financial Transactions Reporting Act and Payment and Settlement Systems (PSS) Act.

PSS enable the transfer of money in the accounts of financial institutions to settle financial obligations between individuals and institutions. In a systemically important PSS, a significant proportion of transactions in terms of value consist of transactions conducted in financial markets. Although disruptions to operations of such systemically important PSS are rare, the potential consequences of such a disruption are substantial and widespread and could lead to a systemic disruption and financial shock even beyond the system and its participants, which could adversely affect the stability of the financial sector. Therefore, the safety and efficiency of the PSS, particularly systemically important ones, is critical for the effective functioning and stability of the financial system.

The legal and regulatory environment in Sri Lanka is conducive to the growth of electronic payment systems. In this regard, Parliament of Sri Lanka has enacted the Payment and Settlement Act, No 28 of 2005 (PSSA), which was certified on 20th September 2005. The objective of the above Act is as follows:

(i) To provide for regulation, supervision and monitoring of payments, clearing and settlement system.
(ii) To provide for the disposition of securities in securities accounts maintained at the Central Bank.
(iii) To provide for the regulation, supervision and monitoring of providers of money services, and
(iv) To facilitate the electronic presentments of cheques.
The Act also states that the Central Bank be the authority for the preparation of a plan for a national payment system. According to PSSA the Central Bank performs three key roles in the PSS namely,

1. Overseeing the payment, clearing and settlement system
2. Operating systemically important payment and settlement systems, and
3. Formulating a national payments policy and developing the payment systems

Electronic Transactions Act, No. 19 of 2006 which encourages the use of reliable form of electronic commerce also strengthens growth of electronic systems in the country. The banks that intend to provide SMS based payment solutions are safeguarded by the Act. The objective of this Act is as follows:

1. To facilitate domestic and international electronic commerce by eliminating legal barriers and establishing legal certainty.
2. To encourage the use of reliable forms of electronic commerce.
3. To facilitate electronic filing of documents with government and to promote efficient delivery of government services by means of reliable forms of electronic communication, and
4. To promote public confidence in the authenticity, integrity and reliability of data message, electronic documents, electronic records or other communications.

The Government of Sri Lanka having created necessary legal environment for popularizing electronic payment system also went few steps ahead of all the other countries in South–East Asia by enacting special legislation for punishing perpetrators of frauds using these payment systems. The legislation enacted by the Parliament of Sri Lanka is cited as the Payment Devices Frauds Act, No. 30 of 2006 which was certified on 12th September 2006. The main objectives of this Act are as follows:

1. To create offences connected with the possession or use of unauthorized payment devices
2. To protect persons lawfully issuing and using such payment devices, and
3. To make provision for investigation, prosecution and punishment of offenders.

The Computer Crimes Act, No. 24 of 2007 which was enacted by Parliament and was certified on 09th July 2007 also supplements the above Act in mitigating
payment card frauds related to electronic payment systems. The objectives of this Act are:

1. To provide for the identification of computer crime, and
2. To provide the procedure for investigation and prevention of such crimes.

### 4.1.3 Regulations, Directions, Rules, Guidelines, Circulars and Operating Instructions

Some departments of the Central Bank have been empowered to carry out functions directly by statute, while other departments carry out functions and duties imposed by statute on the Central Bank itself. Accordingly, powers are vested with those departments to issue regulations through the Minister and directions, guidelines, circulars and operating instructions from time to time to achieve its objective of financial system stability.

The guidelines and directions issued by Central Bank in pursuance of the Payment and Settlement Act, No.5 of 2005 has laid down the operational procedures, system integrity and safety required for introducing an electronic payment system in the country. Regulations made by the President in terms of the Payment and Settlement Act, No.28 of 2005 is cited as the Service Providers of Payment Card Regulations No.1 of 2009. The main highlights of these regulations are:

1. The appointment of the Central Bank as the supervisory authority responsible for the regulation and monitoring of service providers of payment cards.
2. No person shall engage in or function or cause another person to be engaged in or function as a service provider of payment cards except under the authority and in accordance with the terms and conditions of a license issued by the authority.
3. The following persons shall be eligible to apply for a license to be engaged in or to function as a service provider of payment cards.
   - any licensed commercial bank,
   - any licensed specialized bank,
   - any registered finance company,
   - any public company having an unimpaired capital of at least rupees seventy five (75) million.
Having considered the recent developments in the field of payment system interest of banks and non-banks service provider in electronic payment mechanism and requirement of providing a secure and safe environment for innovative payment instrument with diversified economic activities, The Central Bank of Sri Lanka in order to regularize electronic payment methods such as policy making licensing monitoring and supervision with the collaboration of others who are engaged in the payment and settlement related activities took the initiative to issue Service Providers of Payment Card Regulation No.1 of 2009, which covers almost all the electronic fund transfer mechanisms. The Central Bank issued Credit Card Guidelines No 01/2010 on 31 July 2009 in terms of the Service Providers of Payment Card Regulations No.1 of 2009. These guidelines cover the following areas of credit cards business:

1) Marketing of credit cards
2) Issue of credit cards
3) Interest and other charges
4) Billing process
5) Collection/recovery
6) Confidentiality and protection of customer rights
7) Dispute resolution
8) Outsourcing of marketing/recovery function and other operations
9) Right to impose non-compliance
10) Legal provisions
11) Business continuity, internal control and compliance
12) General conditions

The rapid expansion of mobile phone networks and users in the country over the last few years prompted, commercial banks, other financial institutions and mobile operators to seek permission from Central Bank to introduce innovative mobile based payment products resulting in the issuance of mobile payment guidelines to ensure security, safety and reliability of these products.

National Payment Council established by CBSL which represents all stakeholders of payment industry also identified and recommended the necessity of issuing these guidelines with the objective of promoting safety and effectiveness of phone based payment services and thereby enhancing the
confidence of such services and safeguarding the stability of the national payment system.

The salient features of these guidelines are two separate sets of guidelines for banks and non-bank service providers.

(i) Mobile Payments Guidelines No.1 of 2011 for the banks lead model

(ii) Mobile Payment Guidelines No. 2 of 2011 for custodian account based mobile payment services

4.1.4 Licensing, Registration, Appointment and Authorization Procedures

Requirements and procedures to be followed by a person to establish a local bank, foreign bank branch, a finance company, a finance leasing company, a primary dealership, a dealership in foreign currency and as a money changer have been issued by the Central Bank from time to time.

4.2 Payment Instruments

Payment Instrument is a tool or a set of procedures enabling the transfer of funds from the payer to the payee. Payment instruments in Sri Lanka can be broadly classified into cash, non-cash and electronic money (e-money). Non-cash payments can be further categorized into paper-based instruments and electronic instruments. Further, based on the party submitting the payment instrument for processing can be further categorized into Credit based instruments (Credit Push) and Debit based instruments (Debit Pull).

4.2.1 Cash

Cash is the common mode of payment, because it has finality in settlement of a transaction and is readily and legally acceptable as a medium of exchange. The Central Bank of Sri Lanka has the sole right and authority to issue currency in Sri Lanka which includes both currency notes and coins as stipulated in the Monetary Law Act No. 58 of 1949. In fulfilling this task, the Bank is entrusted with designing, printing and distributing of Sri Lanka’s bank notes and minting of coins. The purpose of currency management is to build and maintain public confidence in the currency by preserving its value and integrity and by making available adequate stocks to meet the demand for currency, which is essential for the proper functioning of the economy. The Central Bank of Sri Lanka issued
a new series of currency notes on the theme “Development, Prosperity and Sri Lanka Dancers” on 4th February 2011. This is the 11th series of currency notes of the Central Bank to be issued since its establishment in 1950. The new series consists of six denominations i.e. Rs. 5,000, Rs. 1,000, Rs. 500, Rs. 100, Rs. 50 and Rs. 20. The high value Rs. 5000 note is being introduced to facilitate expansion in transactions that has taken place with the growth of the economy. However, the inconvenience of carrying cash and increased security threats has encouraged the use of other payment instruments.

4.2.2 Non-cash Payments

The use of non-cash payment instruments is increasing gradually reflecting the change of payment habits of the general public. Major non-cash payment instruments in use include:

- Paper based instruments: cheques, drafts, bills of exchange, promissory notes, money orders and postal orders; and
- Electronic payments: credit transfers, direct debits, debit cards, credit cards, and prepaid cards.

4.2.2.1 Cheques

Cheque is a retail payment instrument widely used by business entities and individuals. It is also the most extensively used non-cash paper based retail payment instrument and is widely accepted by the business sector. However, the use of cheques for large value payments between banks, and in capital and securities market transactions has dropped significantly with the introduction of the RTGS system in September 2003. Since September 2003, LCBs and PDs have not been allowed to use cheques drawn on the CBSL to settle their large value and time critical payments under normal circumstances. However, they would be able to use cheques drawn on the CBSL only as a backup measure, if and when the CBSL declares a contingency situation in the RTGS system. The Government and some government agencies, which maintain current accounts with the CBSL, can use cheques drawn on the CBSL. The LCPL clears such cheques.

4.2.2.2 Credit Transfers

Customers of LCBs submit credit transfer orders to their banks by written instructions or by electronic means such as ATMs, telephone or Internet. For
the interbank settlement of such credit transfers, LCBs send the payment order to the SLIPS operated by LCPL. The SLIPS clears the credit transfer between banks with a value date of T+0 to T+14. Corporate customers use direct credit transfers mainly to pay salaries, dividends and pensions. They submit details of such bulk payments to their banks using diskettes, magnetic tapes and electronic file transfers.

4.2.2.3 Direct Debit

Direct debit transfer is an instrument used by customers for their regular payments such as paying for utility services (i.e. electricity, telephones and water etc.), loan repayments, and dues on credit cards. Bank customers give direct debit authorization in advance to their banks for debiting the amounts claimed by the billing utility/financial organizations from their specific accounts. The billing organization sends details of such preauthorized direct debit transfers in a magnetic tape or diskette to the bank and also informs details of the bill to each customer well in advance the payment date. Such direct debit transactions are sent to the SLIPS by LCBs for clearing. The use of direct debit transfers is very limited and has shown a very slow growth in recent years.

4.2.2.4 Payment Cards

i) Credit Cards

Credit cards were first introduced to Sri Lanka in 1989. It represents a “pay later type” payment instrument, which permits cardholders to purchase goods/services up to a revolving credit limit approved by the issuing bank. Cardholders are also permitted to withdraw cash up to an approved limit from their credit card accounts using ATMs or over the counter at any bank, which accepts the respective card for cash withdrawals.

Customers are permitted to make the minimum sum/part/full payment by the due date. An interest is charged on the amounts unsettled by the due date. An additional fee is charged on transactions, which are considered as cash withdrawals. The use of credit cards to purchase petrol, diesel, traveller’s cheques, drafts and telegraphic transfers are generally considered as cash withdrawals.

The majority of the credit cards issued by LCBs are affiliated with Visa, MasterCard, or AMEX. Almost 78% of these cards are globally accepted. The non-bank company issues domestic credit cards only.


ii) Debit Cards

Debit cards are mainly used by cardholders to effect payments and withdraw cash from their accounts through an ATM or at an EFTPOS terminal which has direct access to a Sri Lanka rupee or foreign currency account (current, savings, non-resident foreign currency account, etc.) of the cardholder. Debit cards are not permitted to be used for purchasing/importing goods in commercial quantities and for capital transfers.

iii) Prepaid Cards

Prepaid cards, which allow “pay before” type transactions, are largely in use for obtaining small value services such as public telephones, Internet services and overseas telephone calls. The use of these prepaid cards have increased significantly with the introduction of card-based public telephones by a number of telephone companies.

4.2.3 E-money

Customers are permitted to have a cash account in their mobile phones in to which they can top-up money and then carry out a range of cash transactions including cash withdrawals direct from the mobile phone without having an actual bank account. Currently ‘eZ cash’ from Dialog Axiata PLC operates these services for both its prepaid and post-paid customers. This is scheme is approved by the Central Bank of Sri Lanka.

4.2.4 Other Access Channels for Banking and Payments

(i) Telephone Banking

Under telephone banking facilities, bank customers are given an access to their bank accounts and to send messages to banks using a telephone/mobile phone at any time of the day to obtain the following services:

a) Checking the balance of his/her account;

b) Credit card services including checking of credit card balance, applying for a new credit card and checking of the status of a credit card application;
c) Reporting of a lost or stolen cash/credit card; and
d) Information on banking services and products.

The privacy and security of telephone banking are secured with phone banking number/credit card number and personal identification number (PIN). As of June 2004, nine LCBs had been providing telephone banking facilities to individual and corporate customers. The quality of services and level of these services vary from bank to bank depending on their business strategies. The total number of bank customers registered for telephone banking services was 438,515 at the end of 2003, which showed a year-on-year increase of 75%.

(ii) **Internet Banking**

Internet banking was started in Sri Lanka in 1999 in order to allow bank customers to access the banking services in a convenient and efficient manner. Banks have developed Internet services to provide better customer services particularly to their corporate customers to perform large value payment and import/export related transactions. The level of usage of Internet banking varies from bank to bank depending on the level of technology, customer base and business strategies. The total number of bank customers enjoying this facility showed an increase during last two years and reached 24,650 at the end of 2003. The total volume and value of Internet banking transactions during 2003 amounted to 188,057 and LKR 81 billion (USD 0.8 billion) respectively.

(iii) **Postal Instruments**

Post offices, which are scattered nationwide, issue money orders and postal orders to transfer funds from person to person. The postal network is the largest branch network in terms of customers and regions in Sri Lanka. At the end of 2003, there were 4,680 post offices, including sub-post offices and agency post offices. Postal and money orders are mainly used to make small value payments to individuals and to pay pension and social security payments by government. The total value of payments made through postal instruments was LKR 11 billion (USD 118.6 million) during 2003.

4.3 **Payment and Settlement Infrastructure**

Financial infrastructure refers to the different systems that provide for the execution of both large-value and small-value payments. PSS enable the transfer of money in the accounts of financial institutions to settle financial obligations between individuals and institutions.
The main payment, clearing and settlement systems in Sri Lanka are Lanka Settle, comprising the Real Time Gross Settlement System (RTGS) and the Scripless Securities Settlement Systems (LankaSecure) operated by the Central Bank of Sri Lanka, Cheque Imaging and Truncation System (CITS), the inter-bank cheque clearing system operated by Lanka Clear Ltd. and Sri Lanka Inter-Bank Payment System (SLIPS) operated by Lanka Clear Ltd.

**Figure 2**
Financial Infrastructure Network in Sri Lanka

**Abbreviations**
- CBSL: Central Bank of Sri Lanka
- CDS: Central Depository System
- CSE: Colombo Stock Exchange
- ETP: Employee Provident Fund
- FUTS: Foreign Unofficial Term Settlement System
- LCB: Licensed Commercial Bank
- RTGS: Real Time Gross Settlement System
- SSSS: Scripless Securities Settlement System
- CREST: The Central Securities Depositary Utility
- FedWire: Federal Wire Transfer System
- LKR: Sri Lankan Rupee
The Central Bank operates LankaSettle, the systemically important high value payment and securities settlement system. The LankaSettle system has two components i.e. the RTGS system (which processes large value and time critical payments) and the LankaSecure system (Scripless Securities Settlement System). The integration of the RTGS System and LankaSecure System provides the most secured securities settlement mechanism based on Delivery versus Payment for scripless securities transactions. Participants of the LankaSettle System, as at end Dec 2011, are the Central Bank, 24 Licensed Commercial Banks, 7 Non-Bank Primary Dealers, the Employees’ Provident Fund and the Central Depository System of the Colombo Stock Exchange. The RTGS System is operated by the Payments and Settlements Department of the Central Bank.

4.3.1 LankaSettle - Real Time Gross Settlement(RTGS) System

The RTGS System is a computer based fund settlement system which processes and settles each payment instruction individually and irrevocably on real time basis using funds in the participants’ RTGS Settlement Accounts in the RTGS System. The value of transactions settled in the RTGS System accounts for about 89 per cent of the non-cash payments in Sri Lanka. The RTGS System settles large value and time critical rupee payments. The majority of RTGS transactions are relating to: transactions in the inter-bank call money market, Government securities markets, Open Market Operations, the rupee leg of transactions in the foreign exchange market, urgent payments of customers and net obligations under the systems operated by LankaClear (Pvt) Ltd. The Central Bank provides an Intra-day Liquidity Facility (ILF) to participating Commercial Banks and Primary Dealers, free of charge against collateral of scripless securities in the LankaSecure System. The average value of ILF granted by the Central Bank per day during 2011 was Rs.11.6 billion.

The RTGS System settled an average of 1,114 transactions a day in 2011, with a daily average turnover value of Rs.241 billion.

4.3.2 LankaSecure - Scripless Securities Settlement System (SSSS) and Scripless Securities Depository System (SSDS)

The LankaSecure System comprises of the Scripless Securities Settlement System (SSSS) and Scripless Securities Depository System (SSDS). LankaSecure facilitates the issue of Government securities and Central Bank securities in electronic or scripless form and settlement of trades of such scripless securities on a Delivery versus Payment (DvP) basis. Accordingly, transactions are settled in the system if the participant who sells securities has sufficient eligible securities
in his Securities Account in LankaSecure and the buying participant has sufficient funds in his Settlement Account in the RTGS System to pay for the transaction. All securities transactions settled in the system are irrevocable. The SSDS is the title registry as well as the custodian for Government securities. The ownership of securities is recorded to the beneficiary level in the SSDS. The holders of scripless securities in the SSDS can obtain up to date details of their investments at any point of time through LankaSecureNet, an internet based facility. During the first half of 2009, LankaSecure settled about 57 DvP transactions per day. The average number of Delivery Free transactions settled in the system amounted to 48 a day, while transactions relating to repositioning of securities accounted for about 1969 transactions per day.

4.3.3 Cheque Imaging and Truncation (CIT) System - LankaClear Interbank Cheque Clearing

The Central Bank is responsible for providing facilities for the clearance of retail payments, such as cheques, bank drafts and off-line fund transfers. In 2002, the Central Bank authorized LankaClear (Pvt) Ltd (LCPL), a company jointly owned by the Central Bank and Licensed Commercial Banks to provide cheque clearing facilities. The average number of cheques cleared by LCPL in 2011 was 191,718 per day, while the average value of cheques cleared amounted to Rs. 26 billion per day. The total value of cheques cleared through the CIT system represented 12 per cent of the total value of non-cash payments. In May 2006, LCPL introduced the CIT system, which facilitates the electronic presentment of cheque images and clearance of cheques. The CIT system introduced a uniform cheque clearing time schedule of T+1(where T is the day on which LCPL receives the cheque for clearing and 1 is the following business day) throughout the country, enabling Commercial Banks to credit proceeds of cheques to their customers’ accounts on the following business day. Under this system, dishonoured / returned cheques have been replaced with a Cheque Return Notification (CRN). The net clearing balances under the CIT system are settled in the RTGS system at 8.30 a.m., while net balances of the Settlement Clearing System of the CIT system (which handles CRNs) are settled in the RTGS system at 2.45 p.m. on each business day. In March 2011, Lanka clear migrated to the direct connectivity mode of settlement clearing enabling the advancement of window cut-off time to 7.30 p.m. the next day. This enables commercial banks to release cheque proceeds to customers’ accounts before 3.00 p.m. the next day.
4.3.4 Sri Lanka Interbank Payment System (SLIPS)

Sri Lanka Interbank Payment System (SLIPS) was introduced in 1993 by the Central Bank, as an off-line retail fund transfer system. With the establishment of LCPL, operations of SLIPS were handed over to LCPL in 2002. SLIPS handle pre-authorized small value bulk payments (direct credit and debit transfers). In 2010, SLIPS was upgraded to an on-line interbank payment system to facilitate settlement of transactions on T+0 basis. Transactions are cleared electronically on a multilateral net settlement basis and interbank net balances arising from SLIPS transactions are settled in the RTGS at 8.30 a.m. and 3.00 p.m. on each business day. During the year 2011, the daily average value of transactions cleared through SLIPS was 1.8 billion. CBSL issued the General direction, Sri Lanka Interbank Payment System No.01 of 2011 to the participants of the system and Lankaclear, with the objective of facilitating the smooth operation of SLIPS.

4.3.5 Rupee Draft Clearing System

LCPL also operates a Rupee Draft Clearing System and US Dollar Cheque Clearing System. In the Rupee Draft Clearing System, cheques and drafts of foreign banks drawn on their ‘nosto’ accounts with Commercial Banks in Sri Lanka and in favour of customers of Commercial Banks in Sri Lanka are cleared manually by LCPL. The net clearing balances of this system are settled at the RTGS at 2.15 p.m. on each business day. The daily average value of cheques cleared by this system was Rs. 2.3 million in 2011.

4.3.6 US Dollar Cheque Clearing System

The US Dollar Cheque Clearing System was launched in 2002 and is a semi-computerized clearing system for cheques and drafts in US Dollars issued by Commercial Banks in Sri Lanka and payable to Sri Lankan individuals and institutions, and issued by banks and exchange houses abroad and drawn on Commercial Banks in Sri Lanka. This system reduced the time lag for clearing and settlement of US Dollar cheques and drafts from 3 weeks to about 4 days. The system also reduced the clearing charges by banks significantly, as previously cheques and drafts had to be dispatched to correspondent banks abroad for realization, whereas now they are exchanged over the counter locally. The settlement of interbank clearing balances of the US Dollar Cheque Clearing System takes place through the accounts of participants maintained in a private Commercial Bank. A daily average of 231 cheques worth of US $ 953,246 was cleared in the system during 2011.
4.3.7 Equities Trading System and Debt Securities Trading System

The Colombo Stock Exchange (CSE) operates two on-line systems: i.e. the Automated Trading System (ATS) for real time trading of equity (shares) and the Debt Securities Trading System (DEX) for trading of beneficial interest of Government securities and corporate debt securities. Stockbrokers licensed by the Securities and Exchange Commission of Sri Lanka (SEC) perform as direct participants in the ATS and DEX. At the end of Dec 2011 there were 28 direct participants, 15 member firms and 13 trading members permitted to trade in the DEX System.

Table 6
Transactions Through Payment System

<table>
<thead>
<tr>
<th>Payment systems</th>
<th>2010 Volume ('000)</th>
<th>Value (Rs. bn)</th>
<th>2011 Volume ('000)</th>
<th>Value (Rs. bn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large Value Payment Systems</td>
<td>247</td>
<td>47,806</td>
<td>267</td>
<td>57,790</td>
</tr>
<tr>
<td>RTGS System</td>
<td>247</td>
<td>47,806</td>
<td>267</td>
<td>57,790</td>
</tr>
<tr>
<td>Retail Value Payment Systems</td>
<td>81,064</td>
<td>6,054</td>
<td>91,069</td>
<td>7,079</td>
</tr>
<tr>
<td>Main Cheque Clearing System</td>
<td>42,795</td>
<td>5,346</td>
<td>46,012</td>
<td>6,202</td>
</tr>
<tr>
<td>Rupee Draft Clearing System</td>
<td>n.a</td>
<td>0.7</td>
<td>n.a</td>
<td>0.5</td>
</tr>
<tr>
<td>Sri Lank Interbank Payment System (SLIPS)</td>
<td>12,530</td>
<td>332</td>
<td>12,443</td>
<td>422</td>
</tr>
<tr>
<td>Credit Cards</td>
<td>16,451</td>
<td>75</td>
<td>18,609</td>
<td>93</td>
</tr>
<tr>
<td>Debit Cards</td>
<td>5,340</td>
<td>16</td>
<td>8,346</td>
<td>24</td>
</tr>
<tr>
<td>Internet Banking</td>
<td>4,319</td>
<td>269</td>
<td>5,461</td>
<td>321</td>
</tr>
<tr>
<td>Phone Banking</td>
<td>229</td>
<td>5</td>
<td>198</td>
<td>5</td>
</tr>
<tr>
<td>Postal Instruments</td>
<td>n.a</td>
<td>10</td>
<td>n.1</td>
<td>11</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>81,911</strong></td>
<td><strong>53,860</strong></td>
<td><strong>91,336</strong></td>
<td><strong>64,869</strong></td>
</tr>
</tbody>
</table>

(a) Provisional

5. Assessment of the Current PSS Framework

5.1 Compliance with the CPSS-BIS Ten (10) Core Principles for Systemically Important Payment Systems (CPSIPS)

Safe and efficient payment systems are critical to the effective functioning of the financial system. Payment systems are the means by which funds are transferred between Banks, and the most significant payment systems, which this report refers to as systemically important payment systems, are a major channel by which shocks can be transmitted across domestic and international financial systems and markets. Robust payment systems are, therefore, a key
requirement in maintaining and promoting financial stability. Over the past few years, a broad international consensus has developed on the need to strengthen payment systems by promoting internationally accepted standards and practices for their design and operation.\textsuperscript{12}

In ensuring a safe and efficient payments system, Both, LankaSettle and CITS in Sri Lanka adheres to the Core Principles for Systematically Important Payment System (SIPS) developed by the Committee on Payment and Settlement System (CPSS) of the CBs of the group of 10 countries.

5.1.1 LankaSettle - Real Time Gross Settlement (RTGS) System

5.1.1.1 Core Principle 1

“The system should have a well-founded legal basis under all relevant jurisdictions”

CBSL owns and operated the LankaSettle System. The Payment and Settlement Systems Act. No. 28 of 2005 (PSSA) is a dedicated piece of legislation applicable to the payment system in Sri Lanka. It provide for the regulation of payments, clearing and settlement system, for the deposition of securities on the books of CBSL. The Act provides the CBSL a set of clearly defined legal powers to regulate and oversee the domestic PSS.

The legal basis for the CBSL’s operation involvement in the payment system is the Monetary Law Act (MLA). In 2002, amendments were made to the MLA to make the CBSL responsible for administration, supervision and regulation of monetary financial and payments systems of Sri Lanka. Further, it provides wider powers for the CBSL to establish systems for transfer of funds and transfer and settlement of scripless securities. Accordingly, this amendment to MLA empowered the CBSL to:

- Establish finality and irrevocability of transactions;
- grant validity and enforceability to electronic records and transactions; and
- provide for the outsourcing of transactions related to payment and settlements.

\textsuperscript{12} Report of the BIS Task Force on Payment System Principles and Practices on Core Principles for Systemically Important Payment Systems.
Regulations and system rules have improved over the years with periodical reforms. The system rules are issued to participants from time to time with a new set of complete and updated versions. The regulations are publicly available on the CBSL website.

Other legislations of relevance are:

- The local treasury bills ordinance (LTBO) No. 98 of 1923. The ordinance provides for the issue of treasury bills either in scrip or scripless form.
- The registered stock and securities ordinance (RSSO) No. 07 of 1937 which provides for the issue of registered stock, government promissory notes, bearer bonds, the treasury bonds in scrip or scripless form. The CBSL is empowered to appoint primary dealers as the participants, to regulate & supervise them and to issue direction to participants.
- Payment Devices Fraud Act No. 30 of 2006
- The Bills of Exchange Ordinance, No. 25 of 1927
- The Banking Act No. 30 of 1988
- The Prevention of Money Laundering Act No. 6 of 2006
- The Exchange Control Act, No 24 of 1953

The regulations do not ensure that conflict of law problems can be avoided in the event of bankruptcy of foreign participants. There are no policies and mechanisms to deal with insolvency process and procedure with respect to their country laws. Assessment is broadly observed.
5.1.1.2 Core Principle II

“The system’s rules and procedures should enable participant to have a clear understanding of the systems’ impact on each of the financial risk they incur through participating in it”

LankaSettle has comprehensively updated system rules. It describes the duties, obligations and rights of CBSL and participants and how CBSL and participants interact at business level in the system. The system rules broadly cover:

- Access criteria for participation;
- Payment messaging in RTGS
- Queue management
- Intraday liquidity facility (ILF)
- Net settlement batches
- Operating calendar and schedule
- Security of LankaSettle operations
- Technical security and backup standards
- Contingency planning
- System administration and user assistance
- System changes and change control
- Settlement of disputes between participants
- Fees and charges

There are four related agreements namely:

- Mandate Agreement
- Accession Agreement
- Master Repo Agreement
- Agreement on Intra-day Liquidity facility
The work schedules, the procedures of technical and operational risk management are set forth in the system rules and the above mentioned agreements. The system rules are amended from time to time whereby all participants are informed by circulars well in advance. The system rules itself clearly describes the handling of abnormal situation. System rules and related agreements will be publicly available as soon as legal clearance for the amendment is received. Assessment is observed.

5.1.1.3 Core Principle 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”

All payment in the RTGS system is settled in Central Bank money (the commercial banks have to maintain statutory reserve requirement (SRR) of 7% of total deposits with the CBSL). Therefore, the instant finality does not lead to any credit risk among participants in the system. But CBSL is subject to credit risk to the extent it provides credit to participant during the day. However, this risk is mitigated by CBSL requiring collateral, i.e. government securities, for any credit provided. therefore, the system as a whole is not exposed to any credit risk. The main sources of liquidity are reserve balances (only for the commercial banks) and the intraday liquidity facility (ILF). Participants, except, CDS of the Colombo Stock Exchange and Employee Provident Fund have to identify their requirements of the ILF and submit collateral to a special ILF account held in LankaSecure in order to obtain necessary funds to participant’s accounts. The system’s queue management facility helps the participants to manage their liquidity needs. It is possible to assign different priorities to payments in the queue by overruling the order in which payments were sent. The gridlock resolution mechanism in built into the system allows simultaneous settlement of two or more transactions, while keeping the defined priority and first in first out (FIFO) order. Assessment is observed
5.1.1.4 Core Principle 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”

LankaSettle payments are final and irrevocable according to the real-time gross settlement principle on the value date of the payment if the participant has sufficient funds. Participants have the ability to cancel their payment instructions from the system as long as it has been settled or could change the priority. Payments that are unable to be settled due to lack of liquidity are cancelled by the end of the day. Assessment is observed.

5.1.1.5 Core Principle V

“A system in which multilateral settlement takes place should, at a minimum, be capable of ensuring in time completion of daily settlement in the event of an inability to settle by the participant with the largest single settlement obligation”

In the LankaSettle system, individual transactions are processed one by one in real time. Assessment is not applicable.

5.1.1.6 Core Principle VI

“Assets used for the settlement should preferably be a claim on the Central Bank; where other assets are used, they should carry little or no credit risks and little or no liquidity risk”

Central Bank money acts as settlement asset in LankaSettle which is provided in the form of intraday liquidity facility against collateral issued by CBSL (government bonds and bills) which has no formal risk on the nominal value of the collateral. Assessment is observed.
5.1.1.7 Core Principle VII

“The system should ensure a high degree of security and operational reliability and should have contingency arrangement for timely completion for daily processing”

Within the CBSL, the Security Serviced Department (SSD) is responsible for the physical security, the IT Department if responsible for the IT security, the Payment and Settlements Department (PSD) is responsible for operations and oversight and the Management Audit Department is responsible for audit at the LankaSettle system. The LankaSettle security policies and procedures are set out in the system rules and these apply to both the system operators and participants. CBSL as the regulator is entitled to make on-site inspection of participants and the system has facilities to monitor user activities on real time basis. The system also creates logs that show events, actions, errors, warning, and identification of the users who initiated the transactions and are checked each day by the PSD. On-line backup is available with the secondary site and at the end of the day two backup tapes are stored at a trusted third place. The LankaSettle has well equipped disaster recovery site (DRS), 10 km away from the primary site, located in less risky area. The CBSL has persuaded all participants to have fully equipped DRS available for use during a contingency event.

In March 2006, CBSL issued Business Continuity Guidelines which inter alia requires all participants to submit to the CBSL annually a risk assessment statement and quarterly reports, which consist of contingency events that occurred during that period. A SWIFT Service bureau was established to implement a more economical and safe SWIFT connectivity for all participants enabling them to have backup SWIFT connection for their DR sites. Assessment is observed.

5.1.1.8 Core Principle VIII

“The system should provide a means of making payments which is practical for its users and efficient for the economy”

RTGS system is large value and time critical payments and settlement occurs in real time in Central Bank money. The RTGS system provides a number of operational and technical features, such as queuing, payment priorities and intraday information, facilitating smooth processing of payments. Payments in LankaSettle are subject to a flat fee around USD 3 (Rs. 400) per transaction as present and there is no entry fee or a license fee for the participants’ instructions.
At present the LankaSettle system does not serve its full potential to the financial markets and the economy at large. Due to lower than expected transaction volumes cost recovery is lower than originally expected. However, with the increase in transaction fee it is anticipated to break-even in future. Assessment is broadly observed.

5.1.1.9 Core Principle IX

“The system should have objective and publicly disclosed criteria for participation, which permits fair and open access”

LankaSettle system rules are available to all participants. The rules will be published as soon as legal clearances are obtained for the latest amendment. Assessment is observed.

5.1.1.10 Core Principle X

“The system should ensure a high degree of security and operational reliability and should have contingency arrangements for timely completion for daily processing”

RTGS and LankaSecure are operating as two independent system. RTGS is operated by Payments and Settlement Department (PSD) and LankaSecure is operated by Public Debt Department (PDD). The different Assistant Governors and Deputy Governors supervise each department work. Therefore, governance arrangements are clearly defined.

The highest decision making body on LankaSettle matters is the CBSL Monetary Board. The Governor of the CBSL regularly meets with chief executive officers of banks and other participants. The National Payment Council (NPC), involving a large stakeholder representation, meets at least six time per year and has received a broad mandate from the CBSL Monetary Board to provide advice and guidance on broad range of payments and securities clearing and settlement matters. Payments System Reform Steering Committee which has representatives from all LankaSettle participants and from CBSL, meets often to discuss the operational and procedural issues concerning the two settlement systems. Assessment is observed.
5.1.2 Cheque Imaging and Truncation (CIT) System

5.1.2.1 Core Principle I

“The system should have a well-founded legal basis under all relevant jurisdictions”

Legal basis for electronic cheque presentment is provided by the Payments and Settlements Act (PSSA) No.28 of 2005. The Act replaced the previous requirement to deliver cheques physically to the paying bank and opened the way for cheque imaging the truncation system. In a situation where presenting banks have to return cheques, cheque Return Notifications (CRN) are issued to the customers, instead of physical cheques. Legal validity for CRN is provided by the PSSA and it states that the CRN shall be deemed as the related cheque. Under the PSSA, the CBSL has power to issue Directions to LCPL and the participants of the CIT System. The CBSL issued a direction in respect of the CIT system, enabling the LCPL to legally operate the system. Under the powers vested on the LCPL by the above General Direction, the LCPL has issued CIT System rules and an Operations Manual to the participants.

Bills of Exchange Ordinance No. 25 of 1927, deals with negotiable instruments. It codifies aspects related to the cheque payments instruments, the procedures for endorsement, presentment and payment of cheques.

The regulations do not ensure that conflict of law problems can be avoided in the event of bankruptcy of foreign participants. There are no policies and mechanisms to deal with insolvency process/procedures with respect to their country laws. Assessment is broadly observed.

5.1.2.2 Core Principle II

“The systems’ rules and procedures should enable participants to have a clear understanding of the systems’ impact on each of the financial risks they incur through participating in it”

The LCPL operates the CIT system with a set of System Rules and operations manual. It describes all the necessary details for the participants i.e. the duties/role of the participants, right of the LCPL etc. The System Rules cover the following areas:
• Access criteria for the participation in the CIT system;
• Suspension of participants;
• Termination of participants;
• Routing policy;
• Cheque return notification;
• Settlement of overall net balances; and
• Contingency and business continuity plans.

The Operations Manual covers the following areas:

• Types of services;
• Modes of participation;
• Responsibilities of participants;
• Responsibilities of the LCPL;
• Operating timetable;
• Clearing reports;
• Cheque Return Notification;
• Archiving of cheque images; and
• Contingency arrangements.

If the System Rules in the operations manual need to be amended, the updated version would be informed well in advance to all participants. Assessment is observed.

5.1.2.3 Core Principle 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”

The CIT system has reduced risks significantly by reducing the cheque realization time which spanned from 1 to 10 days to one day (T+1, where T is
the day receiving the cheque for clearing at the LCPL and 1 is the following business day). Credit and liquidity risk is mitigated by the facility provided by the CBSL for LCBs to use the reserves maintained under the Statutory Reserve Requirement (SRR) and Intra-day Liquidity Facility (ILF) for the settlement of net clearing obligations, arising from the cheque clearing, in the RTGS System. However, the inherent risks in cheques as a debit instrument still exists. Therefore, recent oversight efforts of the CBSL have centred on ensuring T+1 settlement, reducing cheque returns and increasing the efficiency of the CIT System by moving from CD submission mode to direct connectivity mode to submit online the cheque images to reduce transmission times.

A circular has been issued to all participants to migrate to direct connectivity mode through which the cheque images are submitted for clearing from the collecting bank itself by end 2009. This will facilitate the full adherence of T+1 cheque clearing by all bank branches island wide. Assessment is observed.

5.1.2.4 Core Principle 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”

The LCPL provide clearing of cheques and drafts in Sri Lanka rupees to Licensed Commercial banks (LCBs) in Sri Lanka subject to guidelines and directions issued by the CBSL. Its cheque system includes three types of clearing.

- Main cheque clearing: automated processing and clearing of cheques
- Cheque settlement clearing: manual processing of returned cheques and
- Rupee draft clearing and, manual processing of cheques and drafts of foreign banks drawn on their “nosto” accounts with LCBs in Sri Lanka.

Multilateral net settlement (MLNS) positions of the participants under the main cheque clearing are settled in a batch in the RTGS system at 8.30 a.m. on the following business day of the cheque clearing. Rupee draft clearing is settled at 2.15 p.m. on the same day. The net positions arising from the settlement clearing and the net clearing obligations of the adjustment clearing (correcting of technical mistakes) are settled in the RTGS system at 2.45 p.m. on the same day. It enables the participants to credit their individual customers’ account on the same day approximately before 3.30 p.m. Assessment is observed.
5.1.2.5 Core Principle V

“A system in which multilateral settlement takes place should, at a minimum, be capable of ensuring in time completion of daily settlement in the event of an inability to settle by the participant with the largest single settlement obligation”

Settlement of net amounts in batches that are derived from LCPL are made through the RTGS and CBSL does not take any liability on behalf of a third party. The settlement of multilateral net batch is executed if all participants have enough fund to debit their part of the batch. If not, the batch will be suspended for later re-trial and participants must make immediate arrangements to fund their settlement account in RTGS enabling the settlement to complete. If a participant fails to maintain adequate funds in its RTGS settlement account at the specified time of submitting MLNS clearing batch files to the RTGS system, such participant will have to pay a default charge based on the time the participant spent to provide fund to his account. Assessment is observed.

5.1.2.6 Core Principle 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 risks and little or no liquidity risk”

Central Bank money acts as the settlement asset for the MLNS batches, derived from LCPL, in the RTGS system. The system provides ILF against collateral for smooth operations of the system without any liquidity risk during the day. Assessment is observed.

5.1.2.7 Core Principle VII

“The system should ensure a high degree of security and operational reliability and should have contingency arrangement for timely completion for daily processing”

Physical security for the main processing centre (MPC) at LCPL is provided by the security department of Bank of Ceylon i.e. the LCPL is established at the Bank of Ceylon (BOC) Head Office premises which is a state owned commercial bank and LCPL and BOC have an internal arrangement for physical security. IT department of LCPL is responsible for IT security and all operations relating to cheque clearing process. Payments and Settlements Department (PSD)
of CBSL is responsible for oversight of the system and ensuring that proper Business Continuity arrangements are in place. Assessment is observed.

5.1.2.8 Core Principle VIII

“The system should provide a means of making payments which is practical for its users and efficient for the economy”

The main objective introducing the CIT system is to establish a uniform clearing system which provides optimum efficiency in cheque clearing i.e. crediting the proceeds of a cheque to the relevant customers account on the next business day (T+1) across the entire country eliminating the regional disparities in the process of cheque clearing.

Participants pay a cheque processing fee of LKR 1.60 per cheque (for over 100,000 cheques) and this cost is not passed down to the customers. The participants submitting cheques to the regional centres have to pay Rs: 13.50 per cheque for scanning and submission. If the participant requests for a additional report there will be a separate charge for that. In addition, LCPL undertakes archival of cheques at a nominal payment. Assessment is observed.

5.1.2.9 Core Principle IX

“The system should have objective and publicly disclosed criteria for participation, which permit fair and open access”

CITS system rules are available to all participants of the system and if there is any amendment to the system rules, all participants are informed regarding the amendment to the rule well in advanced. The system rules will be publicly available on the LCPL website soon. Assessment is observed.

5.1.2.10 Core Principle X

“The systems governance arrangement should be effective, accountable and transparent”

Operation of the CIT system is governed by the CIT operations manual in terms of the general direction No.01/2008 issued by the CBSL. The LCPL and each CIT participant are bound by the system rules and the conditions. The Board of Directors of the LCPL is the decision making authority who handles all policy issues of the system. The LCPL will take decisions on systemic issues
in consultation with the CBSL and Sri Lanka Bank’s Association, which is the representative body to all licensed commercial banks. CITS system is supervised by the PSD of CBSL. Assessment is observed.

6. Policy Implications

The payments and settlements landscape in Sri Lanka is continuously growing and changing significantly. This is mainly due to the rapid increase in financial transactions with expansion of the economy and integration of financial markets at home and abroad. The rapid advancement of information and communication technology has contributed to this result as well. With the wider use of electronic payment and settlement systems, and the increasing payment and settlement system interconnectivity, systemic risk is growing.

Likewise, payment systems play a fundamental role in the economy by providing a range of mechanisms through which transactions can be easily settled. Bank notes are the part of this broad notion of payment systems. In spite of the expanding role of its various substitutes the banknote is still a fundamental payment instrument in the economic life. Therefore the Monetary Policy has been focusing mainly on gradual modernization of the payment system.

The robust payment system is a key requirement in maintaining and promoting economic and financial stability. They contribute towards promoting economic activity and improving macroeconomic management as well as the micro objective, particularly in the core area of payment systems. But payment systems can also involve significant exposures and risks for participants and users when payment systems failures occur. In addition, this can be a channel for transmission of disturbances from one part of the economy or financial system to another, disrupting the smooth function of the payment system and stability of the financial system and thereby disordering of the entire economy. This systemic risk is an important reason for the close interest and observation that central banks have always taken in the oversight of payment systems.

Due to the rapid development in financial sector in Sri Lanka, the risk and efficiency related concentration might arise; it would be beneficiary to take advance policy measures regarding the payment and settlement system oversight.

Policy therefore should take into consideration the market development and needs to balance between moving toward regional integration and readiness of the authorities in term of capacity.
When payment systems become more developed in the future with better technology, faster settlement arrangement, and higher settlement volume and value, there will be stronger needs in policy design to take into account its interconnection with monetary policy and financial stability of the country.

7. Conclusion

Payment system in Sri Lanka is at an early stage of development, staying behind other developed countries in the world. Cash remains widely used in the economy. There are increasing uses of other payment tools such as credit cards, debit cards and electronic transfer from a very low base. The central bank plays an important role as operator, facilitator and overseer of the clearing house. The PSS in Sri Lanka is important in building blocks in the establishment of a solid legal framework designed to underpin commercial activities and financial transactions. They thus underlie the development and enhancement of a market economy based on the rule of law.

Payment system has interconnection with monetary policy and financial stability. This interconnection has gained more interests among policy makers. On top of the above mentioned importance of PSS, it is evident that payment system is well underway to be further developed to meet the future demand arising from new market development of the financial markets such as money or interbank markets, stock markets, insurance markets, and pensions. When these markets are developed, there will be significant demand for a rapid and more efficient payment and settlement arrangement. This is necessary for the central bank to enhance its capacity in controlling, forecasting, and arranging liquidity provision to or absorption from the banking system although it is very difficult at this stage to identify any direct linkage between payment system and monetary policy in the country.

The emergence of innovative payment and settlement mechanisms and the improvements made to the existing systems to cater to the increasing payment needs have led to broaden of the role of the Central Bank as the regulator and facilitator of the national payment system. The introduction of the mobile based e-money system in June 2012 was one of the latest developments to facilitate fund transfers, payments for goods and services and variety of other services through electronic cash.

A stable demand for money is the prerequisite for conducting monetary policy, especially for the monetary targeting regime. The payment system is
supposed to act a transmission channel through which the Central Bank conducts its monetary policies. In practice, the linkage between payment systems and monetary policy depends on the design and management of intraday liquidity facilities/markets; while the linkage between payment systems and financial stability depends on the settlement arrangements – DNS, RTGS or hybrid. Both settlement arrangements and intraday liquidity facilities aim at addressing the payment float problem, which may produce potential settlement risk and financial instability.
References


Bank for International Settlements, (2003), The Role of Central Bank Money in Payment Systems, Committee on Payment and Settlement Systems, Available at: <http://www.bis.org/publ/cpss55.htm>


Appendix

Comparative Tables

1. **Basic Statistical Data**

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mid year population ('000 persons)</td>
<td>20,039</td>
<td>20,217</td>
<td>20,450</td>
<td>20,653</td>
<td>20,869</td>
</tr>
<tr>
<td>GDP (Rs. billions)</td>
<td>3,579</td>
<td>4,411</td>
<td>4,835</td>
<td>5,604</td>
<td>6,543</td>
</tr>
<tr>
<td>GDP per capita (Rs.)</td>
<td>178,845</td>
<td>218,167</td>
<td>236,445</td>
<td>271,346</td>
<td>313,511</td>
</tr>
<tr>
<td>Exchange Rate (Annual average) Rs/USD</td>
<td>110.62</td>
<td>108.33</td>
<td>114.94</td>
<td>113.06</td>
<td>110.57</td>
</tr>
<tr>
<td>GDP per capita (USD)</td>
<td>1,616.75</td>
<td>2,013.91</td>
<td>2,057.12</td>
<td>2,400.02</td>
<td>2,835.41</td>
</tr>
</tbody>
</table>

Source: Central Bank of Sri Lanka

2. **Banknotes and Coins in Circulation (End of Year)**

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Value (Rs millions)</td>
<td>173,364</td>
<td>186,099</td>
<td>217,430</td>
<td>255,652</td>
<td>293,233</td>
</tr>
<tr>
<td>Total Value (USD millions) (a)</td>
<td>1,596.59</td>
<td>1,644.86</td>
<td>1,900.94</td>
<td>2,304.21</td>
<td>2,652.01</td>
</tr>
<tr>
<td>Value per inhabitant (USD) (a)</td>
<td>79.57</td>
<td>81.36</td>
<td>92.96</td>
<td>111.57</td>
<td>127.08</td>
</tr>
<tr>
<td>Value as a percentage of GDP</td>
<td>4.84</td>
<td>4.22</td>
<td>4.50</td>
<td>4.56</td>
<td>4.45</td>
</tr>
<tr>
<td>Value as a percentage of Narrow Money (b)</td>
<td>65.03</td>
<td>67.11</td>
<td>64.57</td>
<td>62.78</td>
<td>66.84</td>
</tr>
</tbody>
</table>

Source: Central Bank of Sri Lanka

(a) Year-end figures converted at end-of-year exchange rates, unless otherwise noted.
(b) Narrow money: M1

3. **Transferable Deposits Held by Non-banks**

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Value (Rs millions) (a)</td>
<td>119,409</td>
<td>122,300</td>
<td>154,870</td>
<td>190,643</td>
<td>195,836</td>
</tr>
<tr>
<td>Total Value (USD millions) (b)</td>
<td>1,098.52</td>
<td>1,080.96</td>
<td>1,354.00</td>
<td>1,718.28</td>
<td>1,719.37</td>
</tr>
<tr>
<td>Value per inhabitant (USD) (b)</td>
<td>54.81</td>
<td>53.47</td>
<td>66.21</td>
<td>82.20</td>
<td>82.39</td>
</tr>
<tr>
<td>Value as a percentage of GDP</td>
<td>3.34</td>
<td>2.77</td>
<td>3.20</td>
<td>3.40</td>
<td>2.99</td>
</tr>
<tr>
<td>Value as a percentage of Narrow Money (c)</td>
<td>44.79</td>
<td>44.10</td>
<td>46.00</td>
<td>46.82</td>
<td>44.64</td>
</tr>
</tbody>
</table>

Source: Central Bank of Sri Lanka

(a) Demand deposits held by the public
(b) Year-end figures converted at end-of-year exchange rates, unless otherwise noted.
(c) Narrow money: M1

4. **Settlement Media Used by Banks**

<table>
<thead>
<tr>
<th></th>
<th>Banks' reserves at central bank (USD millions)</th>
<th>Banks' reserves at central bank as a percentage of narrow money</th>
<th>Transferable deposits at other banks (USD millions)</th>
<th>Transferable deposits at other banks as a percentage of narrow money (USD billions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sri Lanka</td>
<td>1487.33</td>
<td>0.3748</td>
<td>-</td>
<td>-</td>
</tr>
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</table>

Source: Central Bank of Sri Lanka
5. **Institutional Framework**

<table>
<thead>
<tr>
<th>Number of institutions offering payment services (a)</th>
<th>Number of institutions offering payment service (per million habitant)</th>
<th>Number of central bank branches (per million habitant) (b)</th>
<th>Number of bank branches (per million habitant) (c)</th>
<th>Number of post office branches (per million habitant)</th>
<th>Others (per million habitant)</th>
<th>Total number of branches offering payment services (per million habitant)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sri Lanka</td>
<td>24</td>
<td>1.14</td>
<td>0.05</td>
<td>75.65</td>
<td>226.9</td>
<td>352.6</td>
</tr>
</tbody>
</table>

(a) "Number of institutions" includes both domestic and foreign licensed commercial banks, excludes licensed specialized banks.

(b) "Number of central bank branches" includes only the head office which provides cashless payment services.

(c) "Number of bank branches" includes both domestic and foreign licensed commercial banks branches, excludes the branches of central bank and the licensed specialized banks.

Source: Central Bank of Sri Lanka

6. **Use of Cashless Payment Instruments**

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</thead>
<tbody>
<tr>
<td>Sri Lanka</td>
<td>35.49</td>
<td>36.48</td>
<td>37.69</td>
<td>40.07</td>
<td>44.34</td>
<td>46.15</td>
<td>44.55</td>
<td>40.64</td>
<td>42.79</td>
<td>46.01</td>
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</table>

Payment by credit/debit cards (a):

|------|------|------|------|------|------|------|------|------|------|------|

Credit transfers (b):

<table>
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</thead>
<tbody>
<tr>
<td>Sri Lanka</td>
<td>1.61</td>
<td>2.92</td>
<td>3.41</td>
<td>3.67</td>
<td>4.13</td>
<td>3.91</td>
<td>3.72</td>
<td>3.02</td>
<td>12.52</td>
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Direct debit (c):

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</thead>
<tbody>
<tr>
<td>Sri Lanka</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.03</td>
<td>0.04</td>
<td>0.03</td>
<td>0.03</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
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</table>

Source: Central Bank of Sri Lanka

(a)2007 only credit card transactions are included since reliable debit card transaction data are not available

(b) Credit transfers related to SLIPS

(c) Direct debit transactions related to SLIPS

7. **Use of Cashless Payment Instruments**

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<tbody>
<tr>
<td>Sri Lanka</td>
<td>1.867</td>
<td>1.895</td>
<td>1.919</td>
<td>2.037</td>
<td>2.23</td>
<td>2.305</td>
<td>2.204</td>
<td>1.987</td>
<td>2.072</td>
<td>2.205</td>
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Payment by credit/debit cards (a):

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<tbody>
<tr>
<td>Sri Lanka</td>
<td>0.329</td>
<td>0.497</td>
<td>0.628</td>
<td>0.834</td>
<td>0.824</td>
<td>0.941</td>
<td>1.041</td>
<td>0.975</td>
<td>1.055</td>
<td>1.292</td>
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Credit transfers (b):

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<tbody>
<tr>
<td>Sri Lanka</td>
<td>0.085</td>
<td>0.105</td>
<td>0.123</td>
<td>0.156</td>
<td>0.208</td>
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<td>0.387</td>
<td>0.441</td>
<td>0.606</td>
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Direct debit (c):

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<tr>
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<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.002</td>
<td>0.002</td>
<td>0.002</td>
<td>0.001</td>
<td>0.001</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Source: Central Bank of Sri Lanka

(a)2007 only credit card transactions are included since reliable debit card transaction data are not available

(b) Credit transfers related to SLIPS

(c) Direct debit transactions related to SLIPS

401
8. **Features of Selected Interbank Funds Transfer Systems**

(end of 2011)

<table>
<thead>
<tr>
<th></th>
<th>Type (LV or R)</th>
<th>Owner</th>
<th>No. Of participants</th>
<th>Processing</th>
<th>Settlement</th>
<th>Membership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sri Lanka</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RTGS</td>
<td>LV</td>
<td>CB</td>
<td>34</td>
<td>RTT</td>
<td>RTGS</td>
<td>O(c)</td>
</tr>
<tr>
<td>CITS</td>
<td>R</td>
<td>PA(b)</td>
<td>25</td>
<td>ACH</td>
<td>RTGS</td>
<td>O(c)</td>
</tr>
<tr>
<td>SLIPS</td>
<td>R</td>
<td>PA(b)</td>
<td>27(d)</td>
<td>ACH</td>
<td>RTGS</td>
<td>O(c)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Degree of Centralization</th>
<th>Pricing(s)</th>
<th>Closing time for same day transaction</th>
<th>Number of transactions (thousands)</th>
<th>Transaction Value (billions USD)</th>
<th>Ratio of transactions value to GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sri Lanka</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RTGS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CITS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SLIPS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Central Bank of Sri Lanka

(a) F=Full costs (including investments), V=Variable costs, S=Symbolic costs
(b) LCPL (Payment Association) owned by Central Bank of Sri Lanka and all Licensed Commercial Banks operating in Sri Lanka
(c) O=Any bank can apply.
(d) 24 Direct participants and 3 Indirect participants

9. **Operating Hours of Selected Large-Value Interbank Funds Transfer Systems**

(end of 2011)

<table>
<thead>
<tr>
<th></th>
<th>Gross (G) or not (%)</th>
<th>Opening/closing time for same-day value in local time</th>
<th>Settlement finality in local time</th>
<th>Cut-off for all third party payment orders</th>
<th>Cut-off for international correspondent’s payment orders in local time</th>
<th>Memo Item: Standard money market hours in local time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sri Lanka</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RTGS</td>
<td></td>
<td>08:00 - 16:30</td>
<td>Real/Time</td>
<td>15:00</td>
<td></td>
<td>08:00 - 16:30</td>
</tr>
</tbody>
</table>

Source: Central Bank of Sri Lanka

10. **Features of Selected Securities Settlement Systems**

(end of 2011)

<table>
<thead>
<tr>
<th></th>
<th>Owner</th>
<th>No. Of participants</th>
<th>Settlement of cash</th>
<th>Securities settlement</th>
<th>Delivery lag</th>
<th>DVP mechanism *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sri Lanka</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SSSS</td>
<td>CB</td>
<td>32</td>
<td>RTGS</td>
<td>N</td>
<td>T=0</td>
<td>DVP2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Intraday finality</th>
<th>Central Securities</th>
<th>Cash settlement Agent</th>
<th>Number of transactions (thousands)</th>
<th>Value of transactions (USD billions)</th>
<th>Ratio of transactions value to GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sri Lanka</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SSSS</td>
<td>Yes</td>
<td>SSSS</td>
<td>CB</td>
<td>624</td>
<td>485</td>
<td>8.196</td>
</tr>
</tbody>
</table>

Source: Central Bank of Sri Lanka

402
11. Direct Participants in Central Bank Funds Transfer Systems

<table>
<thead>
<tr>
<th>Sri Lanka</th>
<th>Total direct participants</th>
<th>Deposit-taking institutions</th>
<th>Non-deposit taking institutions</th>
<th>of which</th>
<th>Central bank</th>
<th>Public authorities</th>
<th>Postal institution</th>
<th>Securities companies</th>
<th>Others</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>USD</td>
<td>34</td>
<td>24</td>
<td>1</td>
<td>(a)</td>
<td>0</td>
<td>7</td>
<td>1(b)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(a) Employee Providance Fund
(b) Central Depository Systems

Source: Central Bank of Sri Lanka

12. Participants in Selected Securities Settlements Systems

<table>
<thead>
<tr>
<th>Sri Lanka</th>
<th>Of which:</th>
<th>Total</th>
<th>banks</th>
<th>securities companies</th>
<th>others</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSSSS</td>
<td></td>
<td>32</td>
<td>23</td>
<td>6</td>
<td>3(a)(b)(c)</td>
</tr>
</tbody>
</table>

(a) Employee Providance Fund
(b) Central Depository Systems
(c) Central Bank of Sri Lanka

Source: Central Bank of Sri Lanka

13. Banknotes and Coin Issued

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total banknotes issued</strong></td>
<td>128492</td>
<td>152919</td>
<td>168,782</td>
<td>181,307</td>
<td>212,173</td>
<td>249,977</td>
<td>287,080</td>
</tr>
<tr>
<td>of which</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LKR 5,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>31,536</td>
<td></td>
</tr>
<tr>
<td>LKR 2,000</td>
<td>-</td>
<td>15,054</td>
<td>40,162</td>
<td>54,189</td>
<td>72,652</td>
<td>99,271</td>
<td>105,717</td>
</tr>
<tr>
<td>LKR 1,000</td>
<td>98,583</td>
<td>104,599</td>
<td>95,291</td>
<td>93,189</td>
<td>101,922</td>
<td>109,382</td>
<td>105,363</td>
</tr>
<tr>
<td>LKR 500</td>
<td>14,551</td>
<td>16,531</td>
<td>14,988</td>
<td>15,693</td>
<td>18,771</td>
<td>19,683</td>
<td>21,391</td>
</tr>
<tr>
<td>LKR 200</td>
<td>517</td>
<td>280</td>
<td>221</td>
<td>175</td>
<td>176</td>
<td>210</td>
<td>165</td>
</tr>
<tr>
<td>LKR 100</td>
<td>9,370</td>
<td>10,370</td>
<td>11,269</td>
<td>11,416</td>
<td>12,255</td>
<td>13,333</td>
<td>14,317</td>
</tr>
<tr>
<td>LKR 50</td>
<td>2,457</td>
<td>2,654</td>
<td>3,015</td>
<td>2,773</td>
<td>3,052</td>
<td>3,568</td>
<td>3,688</td>
</tr>
<tr>
<td>LKR 20</td>
<td>1,486</td>
<td>1,713</td>
<td>1,892</td>
<td>1,899</td>
<td>2,068</td>
<td>2,605</td>
<td>3,013</td>
</tr>
<tr>
<td>LKR 10</td>
<td>1,460</td>
<td>1,648</td>
<td>1,875</td>
<td>1,904</td>
<td>1,807</td>
<td>1,857</td>
<td>1,821</td>
</tr>
</tbody>
</table>

|                       | 3,944    | 4,320    | 4,582    | 4,792    | 5,257    | 5,675    | 6,153    |
| **Total coin issued** |          |          |          |          |          |          |          |
| of which              |          |          |          |          |          |          |          |
| LKR 10                | 476      | 448      | 424      | 405      | 447      | 646      | 849      |
| LKR 5                 | 1,817    | 2,040    | 2,225    | 2,372    | 2,501    | 2,625    | 2,775    |
| LKR 2                 | 537      | 635      | 703      | 762      | 811      | 863      | 920      |
| LKR 1                 | 424      | 493      | 522      | 540      | 574      | 614      | 661      |
| cts 50                | 173      | 181      | 182      | 183      | 184      | 186      | 186      |
| cts 25                | 118      | 119      | 120      | 120      | 121      | 121      | 121      |
| cts 10                | 39       | 39       | 39       | 39       | 39       | 39       | 39       |
| cts 05                | 23       | 23       | 23       | 23       | 23       | 23       | 23       |
| cts 02                | 6        | 6        | 6        | 6        | 6        | 6        | 6        |
| cts 01                | 4        | 4        | 4        | 4        | 4        | 4        | 4        |

| **Total currency issued** | 132,436  | 157,240  | 173,364  | 186,999  | 217,430  | 255,652  | 293,233  |

End of year, in billions of rupees