Chapter 6
THE ROLE OF PAYMENT SYSTEMS IN THE MONETARY AND FINANCIAL STABILITY IN MYANMAR

By
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1. Introduction

The Payment and Settlement System (PSS) plays a critical role for economic and financial stability. A safe and efficient payment system contributes to the maintenance and promotion of financial stability and economic growth. The effective implementation of monetary policy depends on the orderly settlement of transactions and effective distribution of liquidity. Therefore, payment systems that are functioning properly enhance the stability of the financial system, reduce transaction costs in the economy, promote efficient use of financial resources, improve financial market liquidity and facilitate the conduct of monetary policy.

The central bank has a legitimate and important part in guaranteeing the safety, soundness, efficiency and fairness of the payment system. As the lender of last resort, it is necessary for the central bank to have the information and the means to oversee and, if necessary, assist the institutions participating in the payments system. Given the roles of the central bank and its special responsibility to avoid systemic risk, any largevalue payment mechanism requires the central bank’s particular attention.

Like the rest of the other central banks, the Central Bank of Myanmar (CBM) is in charge of monetary and financial stability and supports the development of the national economy. In accordance with the law, the CBM implements monetary policy to safeguard economic stability and oversee the smooth functioning of the financial system. In this regard, the CBM has a significant role to maintain a safe and sound PSS and to develop the PSS in Myanmar. The CBM also endeavours to promote the efficiency of the payment mechanism. To facilitate the smooth functioning of the payment system, the CBM provides intraday liquidity support (ILS) to the financial institutions that have opened accounts at the Central Bank for a period not exceeding 92 days for the government securities guaranteed by the government.

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The aims of this paper are to assess the PSS standards; identify the key challenges and issues to improve the efficiency of the PSS; identify areas where the PSS directly influence domestic monetary and financial stability; assess the efforts to further develop and improve the PSS; and identify the key areas of cooperation among the SEACEN members.

This paper is organised as follows. Following this introduction, Section 2 describes the background of the economy and the PSS framework. Section 3 reviews the literature on PSSs in relation to monetary policy and financial stability, followed by the assessment of the current PSS framework in Section 4. Section 5 highlights the policy implications based on the assessment results and offers some suggestions for the improvement of the PSS. The conclusion is presented in Section 6 and includes some of the major challenges for improving PSS efficiency and some suggestions for PSS promotion in Myanmar in the future.

2. Background of Economy and PS System Framework in Myanmar

2.1 Background of Economy

The Republic of the Union of Myanmar has formulated its short-term five-year development plan, now in its second year of implementation. This plan spans the Financial Year (FY) 2011-2012 to FY 2015-2016, and purposes to achieve more balanced development through economic reforms and sustainable economic growth.

The new government which was elected by the people in accordance with the State constitution in March 2011, initiated reform measures in the economic and financial areas with a view of improving the country’s macroeconomic framework. Some relevant laws and procedures have been enacted and some existing laws and procedures amended.

One of the important macroeconomic policy reform measures is the unification of the exchange rate and the lifting of exchange restrictions on international transactions. Myanmar changed its official exchange rates to a managed floating exchange rate with effect from 1st April, 2012. Under this exchange rate regime, the external value of the national currency, the Myanmar kyat, is determined by the supply and demand conditions in the exchange market. The official exchange rate, which has been pegged since 1977 at the level of 8.50847 kyats to SDR with a market determined exchange rate, is the first step toward unifying the various exchange rates. In all these areas, the CBM, domestic and relevant international agencies are working together to establish the smooth operation of the exchange rate regime.
Regarding the reforms in financial sector, the CBM has issued money changer licences to six private banks starting from September, 2011. The Money Changer Licensed banks can buy or sell foreign exchange within the band of reference rate which is determined by the CBM. At the end of May, there are 66 money changer counters. On November 25, 2011, the CBM has issued to Authorised Dealers Licences to 11 private banks to engage in the foreign banking business.

During the FY 2010-2011, the value of exports increased by 28.06% as compared to the previous year, mainly due to increase in natural gas, pulses and beans, marine product, garments, teak, hardwood, rice and rice products. During the reporting period, the value of imports increased by 56.52% compared to the previous year.

During the FY 2010-2011, the overall balance of payment position continued to be positive, due mainly to the significant rise in the trade surplus. With the increase in exports earnings and other capital inflows, gross international reserves at the end of March 2011, are sufficient to cover about 13.1 months of imports.

In the FY 2010-2011, the real Gross Domestic Product (GDP) rate increased 10.42% over the previous year (Figure 1).

Figure 1
Real GDP Growth Rate

Source: Statistical Year Book, Myanmar.
During FY 2010-2011, agriculture, livestock, fishery and forestry sectors were the main contributors to GDP with the share of 37.84%, followed by 37.89% by services and other sectors, and 24.27% by the industrial sector.

The inflation rate as measured by the Consumer Price Index (CPI) decreased significantly from 2.40% in FY 2009-2010 to 8.22% in FY 2010-2011. This was due to prudent fiscal and monetary policies.

2.2 Monetary Policy and Financial Stability in Myanmar

2.2.1 Monetary Policy

The main objectives of monetary policy in Myanmar are to maintain macroeconomic stability and promote domestic savings. Currently, the CBM uses interest rate policy as its main monetary policy instrument while using reserve requirements and open market operations to a certain extent.

The Central Bank rate, as at March 2011, was 12.00% per annum and the maximum interest rate for bank deposit and maximum interest rate for bank lending were at 12.00% and 17.00% per annum, respectively.

As an indirect instrument of monetary control, the CBM, on behalf of the government, has issued 2-year, 3-year and 5-year government Treasury bonds. The interest rate of treasury bonds are 8.75%, 9.0%, and 9.5%, respectively.

2.2.2 Financial Sector Development in Myanmar

The financial sector plays an important role in the development of the country’s economy. The Myanmar government is trying to improve financial sector development to support the changing needs of the economy. The financial sector in Myanmar consists essentially of the banking sector and the non-banking sector comprising insurance business, finance companies and small-loan enterprises.

2.2.3 Banking System in Myanmar

At present, the banking sector in Myanmar consists of the CBM, four state-owned banks, and 19 private banks. The state-owned banks include the Myanmar Economic Bank (MEB), Myanmar Foreign Trade Bank (MFTB), Myanma Investment and Commercial Bank (MICB) and Myanmar Agricultural Development Bank (MADB).
At present, the foreign banks have been permitted to open representative offices in Myanmar. As at end of May 2012, there are 16 foreign bank representative offices in Myanmar.

2.2.4 Non-bank Financial Institutions

In the non-banking financial sector, there is one state-owned finance company, the Myanmar Small Loan Supervisory Enterprise (MSLSE); one private finance company, the Myanmar Oriental Leasing Co., Ltd. (MOLC); one state-owned insurance enterprise, the Myanmar Insurance (MI); one private insurance company, the Myanmar International Insurance Company (MIIC); and four foreign insurance companies’ representative offices.

2.2.5 Supervisory and Regulatory Framework in Myanmar

The CBM takes over the functions for monetary stability and financial sector stability under the Central Bank of Myanmar Law 1990. For the management of financial stability, the Central Bank uses the CAMEL framework which looks at the six major aspects of a financial institution. The CAMEL framework is simple and effective supervisory framework consisting of these components:

C - Capital Adequacy;
A - Asset Quality;
M - Management Soundness;
E - Earnings;
L - Liquidity; and
S - Sensitivity to Market Risk

The Banking Supervision Department (BSD) of the CBM undertakes off-site monitoring and on-site examination of banks. The CBM takes regulatory action on the operations of banks by applying the following provisions:

1. 10% of total deposits is required to be maintained by each bank as the minimum reserve requirement. 75% of the required reserve is to be deposited with the Central Bank and 25% of the reserve may be maintained in the form of cash.
2. The required reserve for a bank to be maintained with the Central Bank must not exceed 35% of the total liabilities of the bank. However, in the
event of serious inflationary pressure, the Central Bank may increase the 35% ceiling requirement.

3. Banks are required to maintain the level of their liquid assets against their eligible liabilities at not less than 20%.

4. The risk weighted assets of a bank shall not exceed ten times the combined total of its capital and reserves.

5. The banks must inform the CBM about their reserve position and liquidity ratio on a weekly basis and report on their capital adequacy ratio on a monthly basis.

6. The banks are taking appropriate measures to cover the loans as much as possible and the CBM is also giving them instructions and guidance in order to take necessary steps.

7. All banks are required to build up and maintain a general provision account amounting to at least 2% of total outstanding loans and advances at the end of the year. They are also required to maintain specific provision for doubtful and/or bad loans on a case-by-case basis.

8. Also, according to the financial Institutions of Myanmar Law, a bank cannot lend more than 20% of its capital plus reserves to a single individual, an enterprise of an economic group.

2.2.6 Current Banking Regulatory and Supervisory Measures

In order to reinforce the regulatory and supervisory framework on anti-money laundering, the Central Bank issued a series of instructions and guidelines on bank inspection for compliance with the AML/CFT requirements pursuant to the Control of Money Laundering Law and Rules enacted in June 2002 and December 2003, respectively.

The CBM has examined all the domestic private banks based on the AML/CFT requirements in conjunction with its regular on-site inspection which is conducted applying a special audit programme for the state-owned banks for compliance with the AML/CFT rules and regulation since September 2004.

Under the guidance of the Central Supervision Committee (CSC) led by the Minister for Ministry of Finance and Revenue, the CBM is continuously strengthening the supervisory and regulatory controls as well as taking the necessary actions. The CBM also monitors closely the bank activities and encourages the banks to be in compliance with the international standards and norms.
2.3 Payment and Settlement System Infrastructure

2.3.1 Payment and Settlement Systems in Myanmar

The CBM is responsible for the development and oversight of the national payment system that it is efficient, fast, safe and reliable.

2.3.2 Large Value Payment System

The PSSs have not seen much development in Myanmar up to as late as 2012. Only two clearing and settlement mechanisms are relevant to the operations of the financial institutions for the large-value payments, notably the paper-based cheque clearing house and electronic fund transfer system.

2.3.3 Cheque Clearing Houses

At present the paper-based cheque clearing system does not cover the whole country. The CBM operates three manual clearing houses at Nay Pyi Taw (Head Office), Yangon and Mandalay. All state-owned banks and private banks are eligible to participate as clearing members. The clearing members in Nay Pyi Taw (Head Office), Yangon Branch and Mandalay Branch are 15, 56 and 22, respectively. The CBM issues the daily balance positions of the banks with CBM and all the banks carry out final settlement (net settlement) at the end of the day. During 2006-07 to 2010-2011, the total value of transactions settled through the clearing house averaged about nine times Myanmar’s Gross Domestic Product.
2.3.4 The Electronic Fund Transfer

The Electronic Fund Transfer (EFT) was introduced in December, 2011 allowing banks to make large value fund transfers through EFT. It is operated by the CBM. All state-owned banks and private banks can access this system. All participating banks can transmit payment instructions rapidly and these payments are settled almost in real time.

2.3.5 Retail Payment System

The retail payment system includes systems that process small-value payments, such as cash, chequers, payment order and debit cards. Table 1 shows a summary of the retail payment systems operating in Myanmar. For retail payment system, cash remains an important payment method.

In order to reduce the currency in circulation within the country and the problem of handling large denomination currencies, the CBM launched a new payment instrument in the form of certified cheque to enhance public confidence in making payments by cheque.

Regarding retail payments, the Myanmar Payment Union (MPU) which was formed in November 15, 2011, under the guidance and supervision of the
Myanmar Payment System Development Committee (MPSDC), issues the MPUCard, a debit card, which can be used in all sectors of the banking network.

The MPU membership consists of 3 state-owned banks and 14 domestic private banks. All MPU members contribute equal shares to the capital of MPU. For the initial stage, the MPU cards can be used in the major cities of Yangon, Nay Pyi Taw and Mandalay. One MPU member, a state-owned bank, performs the settlement service for MPU cards.

<table>
<thead>
<tr>
<th>Sr.</th>
<th>Main Payment Instruments</th>
<th>Service Providers</th>
<th>Users</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cash</td>
<td>Central Bank, Commercial Banks and Private Banks</td>
<td>Consumers</td>
<td>Personal Expense</td>
</tr>
<tr>
<td>2</td>
<td>Cheque</td>
<td>Central Bank, Commercial Banks and Private Banks</td>
<td>Enterprises</td>
<td>Payment</td>
</tr>
<tr>
<td>3</td>
<td>Certified cheque</td>
<td>Commercial Banks and Private Banks</td>
<td>Customers</td>
<td>Payment</td>
</tr>
<tr>
<td>4</td>
<td>Payment Order</td>
<td>Central Bank, Commercial Banks</td>
<td>Government Organisation and enterprise</td>
<td>Payment</td>
</tr>
<tr>
<td>5</td>
<td>Debit Card, ATM Card</td>
<td>MPU</td>
<td>Customers</td>
<td>Personal Expenses and Payment</td>
</tr>
</tbody>
</table>

Source: Author’s Compilation.

2.3.6 General Legal Aspects

One of the objectives of the CBM is to promote efficient payment mechanisms and the liquidity, solvency and operation of a sound financial system in Myanmar.
Although the Payment System Law has not been enacted, the CBM Law covers the smooth functioning of the payment mechanism in Myanmar. The CBM issues regulations covering the clearing business and clearing settlement to the clearing houses; and regulations covering payments by electronic card to the financial institutions.

2.3.7 **Oversight of Payment and Settlement Systems**

The CBM sets the limit on the credit line that the banks may grant to borrow from the Central Bank. The credit line may not exceed the total amount of free treasury bonds that the banks hold.

The failure of one participant to manage its intraday liquidity effectively may result in its inability to meet its payment obligations within the expected timeline, thereby affecting its own liquidity position and that of other participants. The recent global financial turmoil highlighted how quickly interbank liquidity can dry up, underscoring the paramount importance of effective liquidity risk management, both at the system level as well as by the individual participants, in view of the systemic repercussions of a liquidity shortfall of a single institution².

The CBM law provides for liquidity support to the banks for maintenance of a smooth payment system in Myanmar. The CBM is responsible for ensuring prompt payment settlement and provides ICF facility to the banks to cover any fund shortage for them to settle their clearing positions.

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2.4 Importance of PSS in Supporting Economic Development

It is important for all the economic sectors to be developed, especially trade, services, hotel and tourism, and the banking, to stimulate the development of the Myanmar economy. Safe, efficient and reliable payment systems are required to support the development of these sectors. The MPSDC and MPU were established to coordinate the development and promotion of a sound PSS.

<table>
<thead>
<tr>
<th>Types of Payment System</th>
<th>Mechanism</th>
<th>Operator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large-value Payment and Settlement System</td>
<td>- EFT</td>
<td>CBM</td>
</tr>
<tr>
<td></td>
<td>- Cheque Clearing House</td>
<td>CBM</td>
</tr>
<tr>
<td>Retail Payment and Settlement System</td>
<td>- Cash</td>
<td>Commercial banks and private banks</td>
</tr>
<tr>
<td></td>
<td>- Cheque</td>
<td>Commercial banks and private banks</td>
</tr>
<tr>
<td></td>
<td>- Payment Order</td>
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<td>- Debit Card</td>
<td>MPU</td>
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<td></td>
<td>- ATM</td>
<td>MPU</td>
</tr>
<tr>
<td>Securities’ Settlement System</td>
<td>- Cash</td>
<td>Underwriters*</td>
</tr>
<tr>
<td></td>
<td>- Transfer</td>
<td>CBM</td>
</tr>
</tbody>
</table>

Source: Author’s Compilation.

3. Securities include government Treasury bonds issued by the CBM on behalf of the government.
4. Underwriters include the MEB and the Myanmar Securities Exchange Centre.
2.5 Development of Payment Systems

2.5.1 Myanmar Bankers’ Association

The Myanmar Bankers’ Association (MBA) was formed in 2007 with the aim of developing the banking sector and financial system. It is chaired by the Minister of Ministry of Finance and Revenue and includes the Governors of the CBM, state-owned banks and private banks. Under the guidance of the MBA, many committees are formed to perform specific duties relating to the development of the banking and financial sectors.

2.5.2 Banking Network Committee

The Banking Network Committee (BNC) was formed on September 29, 2007 to develop the payment mechanism in Myanmar. At present, the BNC is launching the fund transfers among the financial institutions using online system.

2.5.3 Myanmar Payment System Development Committee

The MPSDC was formed in 2008 in order to develop the payment mechanism in Myanmar. The Committee has also set up the Electronic Fund Transfer (EFT) which banks can use to make fund transfers.

2.5.4 Myanmar Payment Union

Under the guidance and supervision of the MPSDC, the MPU was formed in November 15, 2011 to issue the Myanmar Payment Union Card which can be used in all sectors covered by the Banking Network.

2.6 Regional Payment Systems

The Asian Clearing Union (ACU) was established at the initiative of the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP). The Draft Agreement establishing the ACU was finalised at a meeting of senior officials of the governments and central banks held at ESCAP, Bangkok, in December 1974 after five central banks (India, Iran, Nepal, Pakistan, and Sri Lanka) signed the Agreement. Bangladesh and Myanmar were the sixth and seventh signatories to this Agreement. Bhutan and Maldives signed the Agreement in 1999 and 2009, respectively. At present, there are nine member
countries, consisting of Bangladesh, Bhutan, India, Iran, Maldives, Myanmar, Nepal, Pakistan and Sri Lanka.

The ACU began its operations by the first week of November 1975. The secretariat office is located in Tehran, Iran. Myanmar formally applied for membership in November 1976 and became a member of the ACU on January 13, 1977. Participation in the ACU shall be opened to the Central Bank or Monetary Authority of each regional member or associate member of ESCAP.

The CBM has appointed the MFTB, MI and MEB for the purpose of making the payments to be made through the clearing facility.

2.6.1 Purposes

The ACU seeks to achieve four basic objectives for its participating member countries: (1) Provide a facility to settle on a multilateral basis, payments for current international transactions among the territories of the participants; (2) Promote the use of participants’ currencies in current transactions between their respective territories, thereby encouraging the use of the participants’ exchange reserves; (3) Promote monetary co-operation among the participants and better integration between the banking systems in their territories, thereby contributing to the expansion of trade and economic activity among countries in the ESCAP region; and (4) Provide for currency swap arrangement among the participants so as to make Asian Monetary Units available to them temporarily.

2.6.2 Operations

The accounts of the ACU are maintained using a common currency designated as Asian Monetary Units (AMUs). The value of one AMU is, with effect from 1 January, 1996, equivalent to one US dollar. The AMU is denominated as the ACU Dollar. Upon approval of the 37th ACU BOD Meeting, the AMUs are denominated as ACU dollar and ACU euro, which are equivalent in value to one US dollar and one Euro, respectively, with effect from January 1, 2009.

2.6.3 Settlement of Balances

Settlement shall be made of the net positions and accrued interest at the end of each two monthly settlement period. The Secretary-General
notifies each participant of its net position, including accrued interest, and of the amount it shall pay to, or receive from the other participants at the end of each settlement period. Each debtor shall make the payments within four working days of receipt of notification from the Secretary-General. Settlements with members countries of the ACU are made in ACU dollar or ACU euro through the ACU Mechanism. Payment may be made in the currency of the creditor subject to specific consent. Starting from the settlement period at the end of August, 2003, the CBM has been making settlement in euro with ACU member’s central banks.

2.6.4 Currency Swap Arrangement

Any participant in net deficit at the end of a settlement period is eligible to avail the facility. Every eligible participant is entitled to the facility from every other participant up to 20% of the gross payments made by it through the ACU mechanism to other participants during the three previous calendar year. The rate of interest chargeable on each draw is equal to US dollar or euro LIMEAN derived from the respective two months LIBOR declared by the British Bankers’ Association, applicable for the concerned value date. A participant may draw under the swap arrangement for a period of two months at a time.

2.6.5 Myanmar’s Trade with ACU Member Countries

Myanmar exports beans, timber, ply wood, betel nuts, dry ginger, natural rubber latex and other commodities to ACU member countries. Myanmar imports bicycles, parts for tractor, medicine and other commodities form the ACU member countries.

3. Theoretical and Conceptual Basis of PSS to Money, Monetary Policy and Financial Stability

3.1 Definition of Payment and Settlement Systems

The term payment system has a range of meanings. The PSS is “a set of arrangements including instruments, organisations, operating procedures, information and communication system that serve to initiate and transmit payments from payers to payees and to settle payments or transfer of money.”

5. BIS CPSS.
A payment system is generally categorised as either a retail payment system (RPS) or a large-value payment system (LVPS). A RPS is a fund transfer system that typically handles a large volume or relatively low-value payments in such forms as cheques, credit transfers, direct debits and card payment transactions. RPSs may be operated either by the private sector or by the public sector, using a multilateral deferred net settlement (DNS) or a real-time gross settlement (RTGS) mechanism.

A LVPS is a fund transfer system that typically handles large-value and high-priority payments. In contrast to retail systems, many LVPSs are operated by central banks, using RTGS or equivalent mechanism.

The payment systems usually address the major risks connected with the payment systems. The most important risks are the following:

1. Systemic risk
2. Credit risk
3. Liquidity risk
4. Counterparty risk
5. Legal risk
6. Operational risk

3.2 Theoretical and Conceptual Basis of PSS to Money and Monetary Policy

Humphrey (1995) states that “the relationship between money supply and economic activity is expressed in the well known relationship MV = PT”. The money supply (M) times its velocity (V) is equal to the price level (P) times the number of transactions (T).”

PT represents some aggregate level of economic activity, such as GNP. The efficiency of the payments system is reflected in the money turnover rate, which indicates how many times money supply has to be re-used 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 payment system improves, payments will take a shorter time to be cleared and settled before the

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funds being transferred can be re-used to finance another payment. Consequently, improvements in the efficiency of the payment system would permit a country to reduce its domestic money supply, assuming that economic growth and other things remain constant. Holding PT (or GNP) constant, an increase in payment system efficiency raises velocity (V) allowing money supply (M) to be reduced in the absence of economic growth to support the same level of economic activity.

Therefore, the payment system links economic activity and money. The efficiency with which money is used is largely determined by the efficiency of the payment system. 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.

### 3.3 Role of Central Banks in Payment and Settlement Systems

Listfield and Negret (1994) state that “the central bank has a legitimate and important role in guaranteeing the safety, soundness, efficiency and fairness of the payment system. The central banks as the lender of last resort much have the information and the means to oversee and, if necessary, assist the institutions participating in the payments system. Given the central bank roles and special responsibility to avoid systemic risk, any large-value payment mechanism requires the central bank’s particular attention.”

Destruction in the payment system has the potential to weaken confidence in individual financial institutions and, conversely, bank supervisory problems have the potential to trigger disruptions in the payment systems. Thus, the proper construction of payment system risk policies by the central bank is vital to the long-term stability of the payment system and to confidence in the financial markets. Such policies are necessary to help avoid financial crises from arising, payment institutions and systems will provide stability. Furthermore, central banks should establish designs and operations for public and private sector arrangement that can help prevent or reduce fraud, errors and other major types of risks in the payment system. These policies should be as clearly defined as possible, so that private institutions know the rules of the game and can focus on the enhancement of the payment system. It can reduce uncertainty and risk, and provide the needed clarity.

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3.4 Payment Systems and Financial Stability

Padoa-Schioppa (2002) contends that “financial stability is a condition where the financial system is able to withstand shocks without giving way to cumulative processes, which impair the allocation of savings for investment opportunities and the processing of payments in the economy”\(^8\). The payment services are important because, like disruptions to the intermediation function, disturbances to the payment system have the capacity to inflict adverse effects on the level of economic activity.

3.5 Payment Systems, Monetary Policy and Financial Stability

Gertude Tumpel Gugerell mention that “central banks all round the world are involved in payment systems and market infrastructures in many different ways owing to their roles and responsibilities in relation to monetary policy and financial stability. Payment system disruption would not only affect financial stability, but may potentially also have an impact on monetary policy implementation. Central banks have found ways of safeguarding price stability while at the same time ensuring the smooth functioning of the payment system, by drawing a clear line between providing intraday liquidity for payment system purposes and providing credit for monetary policy implementation. Moreover, the sufficient availability of collateral is important today as a contribution of central banks to financial stability.”\(^9\)

The stability of the financial system is also dependent on the assumption of ample market liquidity and most critically of the smooth functioning of the payment system and market infrastructures.

3.6 Liquidity Shortage Problem: Myanmar Case

In early 2003, Myanmar suffered a severe banking and financial crisis. It was caused by the collapse of a succession of informal finance schemes in late 2002, the crisis spreaded quickly to the country’s emerging private banking sectors.

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The informal finance firms gave high interest rate on deposits in order to attract investors. In the case of Myanmar’s informal finance sector, they were at best a function of highly speculative investments in the real estate, construction and commodity trading. The informal finance sectors were not authorised as deposit-taking institutions under the financial institution of Myanmar Law, and as such could not legally accept deposits. The collapse of the informal finance companies brought about direct losses for at least some of the authorised banks.

The liquidity shortage which surfaced as the result of the crisis, caused instability in the banking system and affected financial stability. However, the CBM managed to resolve the financial crisis by carrying out its lender-of-last-resort function. The CBM provided liquidity support to the troubled banks with the aims of preventing the collapse of the banking system and of maintaining the payment system.

4. Assessment of Current PSS Framework

4.1 Financial Market Infrastructure

The Financial Market Infrastructure (FMI) is defined as a multilateral system among participating institutions including the operators of the system, used for the purposes of clearing, setting or recording payments, securities, derivatives, or other financial transactions. It is important that FMIs be safe and efficient and allow for the reliable transfer of funds and securities between the central bank, its counterparties and the other participants in the financial system so that the effect of the monetary policy transactions can be spread widely and quickly throughout the economy.  

Principles for FMIs are principles which consist of standards for systemically important payment systems (SIPSs), central securities depositories (CSD), securities settlement systems (SSS), central counterparties (CCP) and trade repositories (TR), (collectively “FMIs”), which have been introduced by the Committee on Payment and Settlement Systems (CPSS) and the Technical Committee of the International Organisation of Securities Commissions (IOSCO).

FMIs typically establish a set of common rules and procedures for all participants, a technical infrastructure, and a specialised risk-management framework appropriate to the risks they incur.

4.2 Assessment of Current PSS Framework

This section covers the assessment of the current PSS framework in Myanmar by the author. In Myanmar, the cheque clearing system (CCS) is a systemically important payment system. Our CCS will assessed based on the relevant principles of the 24 principles prescribed for FMIs. All the state-owned banks and private banks are eligible to participate as clearing members. Therefore, we will use the term ‘participants’ to refer to ‘clearing house members’ in this paper.

Principle 1: Legal Basis

A FMI should have a well-founded, clear, transparent, and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions.

There is no specific legislation for payment systems in Myanmar. However, the legal basis for the clearing house and fund transfers are covered by the following laws, act and instructions. The laws that are important for the payment systems are:

- The Central Bank of Myanmar Law (1990) which defines the aims, duties and functions of the CBM.
- The Financial Institution of Myanmar Law (1990) regulates the establishment and operations of financial institutions.
- The Control of Money Laundering Law (CMLL).
- The regulatory guidelines and instructions to enforce the CMLL, 2002, issued by the CBM, cover the compliance of CDD (Customer Due Diligence), record keeping and STR (Suspicious Transaction Reports) and CTR (Currency Transaction Report) reporting requirement.
- The negotiable Instruments Act covers the negotiable instruments under the Negotiable Instruments Act of 1881.
- Instruction for the Electronic Payment Card (2/2012) issued by the CBM covers the payments for all electronic cards.

The PSSs in Myanmar have not been assessed by any organisations until now, and this assessment by the author is carried out in line with the current law, procedures and rules relating to the PSS.
**Principle 2: Governance**

A FMI should have governance arrangements that are clear and transparent, promote the safety and efficiency of the FMI, and support the stability of the broader financial system, other relevant public interest considerations, and the objectives of relevant stakeholders.

According to the CBM Law 1990, the Board of Directors (Policy Board) comprises of eight members and supervises the policy matters of the CBM. The Board consists of the Governor, six members appointed by the government and a secretary. The Governor serves as chief executive officer of the Central Bank and the Board is responsible for the day-to-day management of the Central Bank and the implementation of the policy.

The Head of Payment and Settlement System Department (PSSD) supervises the daily operation and smooth functioning of the PSS. The other senior management level and middle level managers take charge of the daily operation of the cheque clearing house and fund transfer function.

The participants of the clearing members are required to open their current accounts with the CBM for their daily cheque clearing operation. They are also required to deposit enough balance for their operations.

**Principle 3: Framework for Comprehensive Management of Risks**

A FMI should have a sound risk-management framework for comprehensively managing legal, credit, liquidity, operations, and other risks.

For the PSSs, there may be found the risks like legal, credit, liquidity, operations, and other risks.

The CBM issue the instructions regarding the daily operations for the clearing house, liquidity support for the daily operation, collateral arrangement and credit problem to mitigate the risk management. It covers the credit risk management, liquidity risk management and collateral. The authorities of the PSSD review the procedures of risk management to be in line with the current economic situation.
The team of PSSD monitors the balance amount of current accounts of the participants with the CBM, the credit line for collateral for their daily operation and liquidity.

**Principle 4: Credit Risk**

AFMI should clearly measure, monitor, and manage its credit exposures to participants and those arising from its payment, clearing, and settlement processes. A FMI should maintain sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence. In addition, a CCP that has activities with a more complex risk profile or that is systemically important in multiple jurisdictions should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would potentially cause the largest aggregate credit exposure to the CCP in extreme, but plausible market conditions. All other CCPs should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not limited to, the default of the participant and its affiliates that would potentially cause the largest aggregate credit exposure to the CCP in extreme but plausible market conditions.

The participants of the cheque clearing house perform settlements for their cheque clearing using their balances at the central bank. They are allowed access to intraday credit extended against collateral. The CBM may lend to the banks that have opened accounts at the CBM for a period not exceeding 92 days secured by government securities as collateral in accordance with the CBM Law. The CBM controls the credit risk since the current accounts cannot be overdrawn.
Principle 5: Collateral

A FMI that requires collateral to manage its or its participants’ credit exposure should accept collateral with low credit, liquidity, and market risks. A FMI should also set and enforce appropriately conservative haircuts and concentration limits.

In order to mitigate the credit risk and liquidity risk, the CBM provides its participants access to the ILF with collateral. In order to tender the collateral for their daily liquidity positions, the following procedures must be followed:

- The banks need to open their accounts at the CBM.
- If the banks face a daily liquidity problem, they can borrow money from the CBM by pledging government Treasury bonds which are bought from the CBM as collateral.
- 10% of total deposits is required to be maintained by each bank as the minimum reserve requirement, with 75% at CBM and 25% in the form of cash. If there is sufficient funds in the current accounts with CBM, banks can purchase Government treasury bonds or free bonds. These bonds can be used as collaterals for daily settlements. The amount of collateral of the banks should not exceed free bonds.
- If the participants want to get the collateral from the CBM, the participants must apply the following procedures:
  - First, the participants must apply to the head of PSSD regarding the amount of advance.
  - The relevant official of PSSD checks the amount of Treasury bonds which are bought from the CBM and the approval of the credit line.
  - When they meet our requirements, the CBM lends the money and transfers the money to their accounts with the CBM.
  - The CBM gives advance to the participants according to their need for credit and liquidity.
- First, the participants must apply to the head of PSSD regarding the amount of advance.
- The relevant official of PSSD checks the amount of Treasury bonds which are bought from the CBM and the approval of the credit line.
- When they meet our requirements, the CBM lends the money and transfers the money to their accounts with the CBM.
- The CBM gives advance to the participants according to their need for credit and liquidity.
**Principle 7: Liquidity Risk**

A FMI should effectively measure, monitor, and manage its liquidity risk. A FMI should maintain sufficient liquid resources in all relevant currencies to effect same-day and, where appropriate, intraday and multiday settlement of payment obligations with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate liquidity obligation for the FMI in extreme but plausible market conditions.

The CBM Law provides the liquidity support for the banks to maintain a smooth payment system in Myanmar. The CBM has the responsibility for overseeing prompt payment settlement and for responding to any eventuality of banks failing to settle their clearing due to lack of funds in their accounts with the CBM, by providing them ICF.

In the cheque clearing system, all the transactions that coursed through the CCH are in kyats.

**Principle 8: Settlement Finality**

A FMI should provide clear and certain final settlement, at a minimum by the end of the value date. Where necessary or preferable, a FMI should provide final settlement intraday or in real time.

The operating hours of clearing house is from 12:00 noon – 3:00 p.m. At the manual clearing house, the participants can settle the debit and credit of the payments and receipts availing of the funds in the current account with CBM within operating hours. According to the instructions issued by the CBM for the clearing house, the members of clearing house perform daily clearing operations. The current manual clearing system provides for final settlement at the end of the day.

The CBM issues separate instruction for the transfer of fund and discharge of payment for the government Treasury bonds. For the fund transfer, the concerned participants inform the CBM of the fund transfer. The officer-in-charge in CBM verifies the signatures, signing authority of the persons and the account balance of the participant. If the requirements are in order, the payment transaction is executed and the amount is credited to the beneficiary bank on the value date.
Principle 9: Money Settlement

A FMI should conduct its money settlements in central bank money, where practical and available. If central bank money in not used, a FMI should minimise and strictly control the credit and liquidity risks arising from the use of commercial bank money.

All the participants must open a current account with the CBM for their daily operations. Therefore, the settlement money of the participants is in money of the CBM.

Principle 12: Exchange of Value Settlement System

If a FMI settles transactions that involve the settlement of two linked obligations (for example, securities or foreign exchange transactions), it should eliminate principal risk by conditioning the final settlement of one obligation upon the final settlement of the other.

As Myanmar does not introduce the system of DvP and PvP, Myanmar does not face principal risk by conditioning the final settlement of one obligation upon the final settlement of the other.

Principle 13: Participant-default Rules and Procedures

A FMI should have effectively and clearly defined rules and procedures to manage a participant default. These rules and procedures should be designated to ensure that the FMI can take timely action to contain losses and liquidity pressures and continue to meet its obligations.

The instruction of the clearing house includes the default of settlement of participants. If a participant cannot cover its settlement position, the officer-in-charge of the clearing house informs to the authorised personnel of the participant bank to remedy the situation. The participant can utilise such methods as discount window facility to fund its account with the CBM.
Principle 15: General Business Risk

A FMI should identify, monitor, and manage its general business risk and hold sufficient liquid net assets funded by equity to cover potential general business losses so that it can continue operations and services as a going concern if those losses materialise. Further, liquid net assets should at all times be sufficient to ensure a recovery or orderly wind-down of critical operations and services.

In order to participate in the clearing system, participants are required to open their accounts with CBM.

Principle 16: Custody and Investment Risks

A FMI should safeguard its own and its participants’ assets and minimise the risk of loss on and delay in access to these assets. A FMI’s investment should be in instruments with minimal credit, market, and liquidity risks.

The cheque clearing system is for the settlement of the participants and the participants’ accounts are maintained for daily operation.

Principle 17: Operational Risk

AFMI should identify the plausible sources of operational risk, both internal and external, and mitigate their impact through the use of appropriate systems, policies, procedures, and controls. Systems should be designed to ensure a high degree of security and operational reliability and should have adequate, scalable capacity. Business continuity management should aim for timely recovery of operations and fulfillment of the FMI’s obligations, including in the event of a wide-scale or major disruption.

The CBM has not drawn up a business continuity plan as yet. At the current Manual Clearing System, the interbank credit transfer process performed is a paper-based system. For operational risk management, the CBM keeps the back-up data for the daily clearing and settlement operations in electronic form.

The CBM has trained, educated and experienced staff to run the daily operations. The operational procedures, records and data are audited by the
external auditor from the the Accountancy Office. The audit department, one of the department of the CBM, also examines the operation of the PSS.

**Principle 18: Access and Participation Requirements**

A FMI should have objective, risk-based and publicly disclosed criteria for participation, which permit fair and open access.

The CBM issued the instruction for the clearing house. It includes the participation and designation of the clearing house, operational procedures, mechanism of clearing house, and miscellaneous. The membership of clearing house includes the state-owned banks and private banks. If a banks desires to participate in the clearing house, it is required to submit an application 14 days in advance.

**Principle 19: Tiered Participant Agreements**

A FMI should identify, monitor, and manage the material risks to the FMI arising from tiered participation arrangements.

The clearing house members are state-owned commercial banks and private banks and they are mostly direct participants.

**Principle 21: Efficiency and Effectiveness**

A FMI should be efficient and effective in meeting the requirements of its participants and the markets it serves.

The current settlement system is a net settlement system and manual clearing system. The current clearing system can fulfill the requirements of all its participants in line with the country's economy and market demand.

**Principle 22: Communication Procedures and Standards**

A FMI should use, or at a minimum accommodate, relevant internationally accepted communication procedure and standards in order to facilitate efficient payment, clearing, settlement, and recording.

For the clearing house, the CBM issues instructions and guidelines to all the banks. The CBM uses the standardised messaging formats for them. All the
representatives of the participating banks must submit the form which includes the cheques for collection and payment.

**Principle 23: Disclosure of Rules, Key Procedures and Market Data**

A FMI should have clear and comprehensive rules and procedures and should provide sufficient information to enable participants to have an accurate understanding of the risks, fees and other material costs they incur by participating in the FMI. All the relevant rules and key procedures should be publicly disclosed.

The CBM issues instructions and guidelines for the clearing house and provides them to all the participating banks.

**4.3 Findings Assessment of Payment and Settlement System**

From the assessment, it is observed that the PSS in Myanmar is broadly in compliance with the applicable CPSS principles for FMIs. CBM is endeavoring to develop its payment system in accordance with its objectives stipulated by the CBM Law. However, the CBM Law should include a more comprehensive legal framework to regulate payment systems. Much work remains for Myanmar to develop the payment system law, procedures of the oversight payment system, default-rules, crisis management and designated parties responsible for handling crisis situations.

**4.4 Responsibilities of Central Banks, Market Regulators, and Other Relevant Authorities for FMI**

Responsibility A: Regulation, Supervision, and Oversight of FMIs

FMIs should be subject to appropriate and effective regulation, supervision, and oversight by a central bank, market regulator, or other relevant authority.

Responsibility B: Regulatory, Supervisory, and Oversight Powers and Resources

Central banks, market regulators, and other relevant authorities should have the powers and resources to carry out effectively their responsibilities in regulating, supervising, and overseeing FMIs.

Responsibility C: Disclosure of Policies with Respect to FMIs

Central banks, market regulators, and other relevant authorities should clearly define and disclose their regulatory, supervisory, and oversight policies with respect to FMIs.
Responsibility D: Application of the Principles for FMIs
Central banks, market regulators, and other relevant authorities should adopt the CPSS-IOSCO Principles for financial market infrastructures and apply them consistently.

Responsibility E: Cooperation with Other Authorities
Central banks, market regulators, and other relevant authorities should cooperate with each other, both domestically and internationally, as appropriate, in promoting the safety and efficiency of FMIs.

4.5 Role of CBM in Payment and Settlement Systems

Like other central banks, the main functions and duties of the CBM are acting as the sole issuer of the domestic currency, banker to the government, formulating and implementing monetary policy and exchange rate policy, banker for the financial institutions and managing the international reserve of the state. While implementing these objectives in accordance with the CBM Law, the CBM is endeavoring to promote an effective payment mechanism. The CBM is performing as operator, overseer and regulator of the payment system. In doing so, the CBM is coordinating with the national payment system development committee (NPSDC) and other regional payment system in promoting the safety and efficiency of FMIs.

5. Policy Implications

According to the result of the author’s assessment of the FMIs for the PSS, the following issues can be surmised:

(1) In Myanmar, the payment system law has not yet been enacted. The payment system issues are covered in the CBM Law and the Financial Instruction of Myanmar Law. The legal basis for the payment system appears to be sound.

(2) At present the cheque clearing system is a paper-based manual system and not in real time. Cheque clearing service is not available nation-wide. The clearing houses are in three places, namely, Nay Pyi Taw, Yangon, and Mandalay. To speed up the collection of cheques, an Automated Clearing House (ACH) should be introduced.

(3) In order to reduce the waiting period for payment transactions and lower the settlement risk and credit risk, RTGS should be introduced.
(4) Myanmar is a cash-based society and the public need to be educated on the use of the cheque, cards and other electronic payments for the development of the payment system.

(5) Myanmar needs to develop the procedures for the oversight of the payment system, default rules and procedures, crisis management and assign the party(s) responsible for handling a crisis situation.

(6) For the development of the retail payment system, Myanmar needs to develop credit cards and other developed payment methods instead of payment by cash.

6. Conclusion

It is important for Myanmar to have a safe and effective payment system for the country to maintain the stability of its financial system and to facilitate economic development. The Central Bank, as operator, regulator and overseer of the PSS, has an essential role to play in contributing to the development of a safe and effective PSS.

In Myanmar, the CBM is endeavoring to develop its payment system in accordance with its objectives as stipulated by the CBM Law. However, the CBM Law should provide more transparency and better coverage of the CBM objectives in the area of payment systems.

Moving forward, Myanmar should adopt a roadmap for the development of its clearing system incorporating the ACH, RTGS for large-payment values and enactment of the PSS law. Myanmar also needs to address the development of a retail payment system promoting the usage of card payments, mobile payments and mobile banking.
References

Central Bank of Myanmar, Annual Reports, 2007/08 to 2011/12.


Malaysia Financial Stability and Payment System Report, 2010
## Appendix

### Table 1
**Currency in Circulation**

<table>
<thead>
<tr>
<th>Year</th>
<th>Currency in Circulation (USD million)</th>
<th>Value per inhabitant (USD)</th>
<th>Value as a % of GDP</th>
<th>Value as a % of narrow money</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007-08</td>
<td>567996.15</td>
<td>0.01</td>
<td>2.5</td>
<td>18.43</td>
</tr>
<tr>
<td>2008-09</td>
<td>581763.45</td>
<td>0.01</td>
<td>2.0</td>
<td>16.20</td>
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<tr>
<td>2009-10</td>
<td>742293.51</td>
<td>0.01</td>
<td>2.2</td>
<td>15.92</td>
</tr>
<tr>
<td>2010-11</td>
<td>967880.93</td>
<td>0.02</td>
<td>2.5</td>
<td>16.38</td>
</tr>
<tr>
<td>2011-12</td>
<td>1124087.41</td>
<td>0.02</td>
<td>2.5</td>
<td>16.72</td>
</tr>
</tbody>
</table>

### Table 2
**Clearing House Turnover**

<table>
<thead>
<tr>
<th>Year</th>
<th>2006-07</th>
<th>2007-08</th>
<th>2008-09</th>
<th>2009-10</th>
<th>2010-11</th>
<th>2011-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal GDP (in million Kyat)</td>
<td>16,852,758</td>
<td>2,333,113</td>
<td>29,233,288</td>
<td>33,894,039</td>
<td>39,846,694</td>
<td>4,427,875</td>
</tr>
<tr>
<td>Value of Clearing House Transactions (in million Kyat)</td>
<td>1,015,458.18</td>
<td>3,964,792.09</td>
<td>3,844,132.08</td>
<td>4,668,801.86</td>
<td>7,881,349.36</td>
<td>-</td>
</tr>
<tr>
<td>Clearing House Turnovers</td>
<td>16.60</td>
<td>5.89</td>
<td>7.6</td>
<td>7.26</td>
<td>5.05</td>
<td>-</td>
</tr>
</tbody>
</table>
### Table 3
Basic Statistical Data

<table>
<thead>
<tr>
<th></th>
<th>2007-08</th>
<th>2008-09</th>
<th>2009-10</th>
<th>2010-11</th>
<th>2011-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal GDP (in million USD using FX Rate Average)</td>
<td>4362300.77</td>
<td>5039230.17</td>
<td>5929969.81</td>
<td>7379017.41</td>
<td>8199791.67</td>
</tr>
<tr>
<td>Population (in millions)</td>
<td>47.76</td>
<td>48.14</td>
<td>53.41</td>
<td>53.49</td>
<td>54.58</td>
</tr>
<tr>
<td>Exchange rate (Average)</td>
<td>5.2</td>
<td>5.8</td>
<td>5.7</td>
<td>5.4</td>
<td>5.4</td>
</tr>
</tbody>
</table>

### Table 4
Monetary Data

<table>
<thead>
<tr>
<th></th>
<th>2007-08</th>
<th>2008-09</th>
<th>2009-10</th>
<th>2010-11</th>
<th>2011-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currency in Circulation</td>
<td>2,953.58</td>
<td>3,374.23</td>
<td>4,231.07</td>
<td>5,226.56</td>
<td>6,070.07</td>
</tr>
<tr>
<td>Narrow Money (M1)</td>
<td>3081.6</td>
<td>3589.7</td>
<td>4660.4</td>
<td>5901.6</td>
<td>7484.0</td>
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<tr>
<td>Broad money (M2)</td>
<td>4392.5</td>
<td>5420.7</td>
<td>7304.9</td>
<td>9957.4</td>
<td>13268.5</td>
</tr>
</tbody>
</table>

Sources: Statistical Year Book, 2011.
Article IV IMF Country Report.
Table 5  
**Volume and Value of CBM’s Clearing House**

<table>
<thead>
<tr>
<th></th>
<th>2006-07</th>
<th>2007-08</th>
<th>2008-09</th>
<th>2009-10</th>
<th>2010-11</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBM’s Clearing House</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value of Clearing House Transactions (in million Kyat)</td>
<td>1,015,458.18</td>
<td>3,964,792.09</td>
<td>3,844,132.08</td>
<td>4,668,801.86</td>
<td>7,881,349.36</td>
</tr>
<tr>
<td>Volume of Clearing House Transactions</td>
<td>324,261</td>
<td>320,322</td>
<td>281,556</td>
<td>305,312</td>
<td>348,121</td>
</tr>
</tbody>
</table>

Source: CBM Annual Reports.

Table 6  
**Framework of Financial Institutions**

<table>
<thead>
<tr>
<th>Categories</th>
<th>Institutions</th>
<th>Branches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Bank</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>State-owned Banks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>☑ Myanmar Foreign Trade Bank</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>☑ Myanmar Investment and Commercial Bank</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>☑ Myanmar Economic Bank</td>
<td>1</td>
<td>*</td>
</tr>
<tr>
<td>☑ Myanmar Agricultural and Rural Development Bank</td>
<td>1</td>
<td>*</td>
</tr>
<tr>
<td>Banks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domestic Private Banks</td>
<td>19</td>
<td>*</td>
</tr>
<tr>
<td>Foreign Representative Offices</td>
<td>25</td>
<td>---</td>
</tr>
<tr>
<td>Microfinance institutions</td>
<td>70</td>
<td>*</td>
</tr>
</tbody>
</table>

Source: Author’s compilation.  
Notes: As of 31.12.2012 (Estimate)  
*Exact number not available.  
— none.