

Development of Inter-bank Foreign Exchange Market in Mongolia

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ABSTRACT

Inter-bank markets are very limited in Mongolia, even for the basic instrument of money market placement. There is slightly more activity in foreign exchange markets—but the market is still very limited—with the basic instrument being purchases and sales of USD against MNT. Many of the banks have no need, or are not in a position, to use interbank markets. Banks are overly liquid, a reflection of the level of economic activity and the more restrictive credit stance being taken by banks in the aftermaths of widespread banking failures. This, in turn, has led to banks being much more selective with respect to counterparties, with an obvious impact on the demand for interbank products. The most effective way is the use of financial derivatives. It is a very frequently case for business organizations to be effected by the currency rate risk but it can be protected by the operation through banks. One possible way protect from currency rate change in the country is to use a new kind of markets (futures, forward, options etc.) that should be established, and it is important to liberate inter-bank FX market. In conclusion, this paper will define how it will influence the economy and monetary

policy of the country. In addition, the Mongolian banking sector is an important in the Mongolian financial sector.

Keywords: *Bank management, Financial derivatives, FX market, Inter-bank activities, SWIFT*

INTRODUCTION

Inter-bank markets are very limited in Mongolia, even for the basic instrument of money market placement. There is slightly more activity in foreign exchange markets—but the market is still very limited—with the basic instrument being purchases and sales of USD against MNT³. The lack of activity reflects a number of factors. Many of the banks have no need, or are not in a position, to use interbank markets. Banks are overly liquid, a reflection of the level of economic activity and the more restrictive credit stance being taken by banks in the aftermaths of widespread banking failures. This, in turn, has led to banks being much more selective with respect to counterparties, with an obvious impact on the demand for interbank products.

This structure of the banking sector is also having a significant bearing on the emergence of inter-bank markets. The industry is quite fragmented, which is not surprising given the widespread solvency problems that confronted the industry and the substantive restructuring that is still underway. The upshot is that there are few financially sound established banks, and one of them is Trade and Development Bank of Mongolia (TDBM). It dominates the industry, with 24 percent of industry assets. TDBM, Khaan bank, Savings bank and Golomt bank account for

³ MNT is Mongolian currency (Togrog).

almost from 60 to 70 percent of industry assets between them as would be expected.

Influence of banking and financial sector to the development of Mongolia is enormous. This is due to coordinating role of banking and finance sector in the financial inflow and outflow in the economy. In order for successful completion of these functions, banks carry out a wide scope of activities under the special regulations. One of the aspects is the activity of the FX market. Since the time Mongolia was transformed into market economy, the country has expanded its foreign relationship. Therefore, it is predictable that demand for foreign currency will be increased. As a result, it appears a need for FX. In order to satisfy this demand and increase their profits, banking and financial institutions should participate in the FX activities. In relation to it, I have started a research study on the development of inter-bank FX market in Mongolia. Since the time of their foundation any businesses encounter many kinds of risks. Among them, currency risk causes particular difficulties in the economic activities. Currency fluctuations or changes can cause considerable losses. There are many ways to protect from these losses.

The most effective way is the use of financial derivatives. It is a very frequently case for business organizations to be effected by the currency rate risk but it can be protected by the operation through banks. One possible way protect from currency rate change in the country is to use a new kind of markets (futures, forward, options etc.) that should be established, and it is important to liberate inter-bank FX market. In conclusion, the research will define how it will influence the economy and monetary policy of the country.

Nowadays, looking at the FX activities can reveal the following:
Activities of commercial banks are limited in purchasing and

selling currency in cash, and using unofficial currency exchange activities. These are mostly spot exchange activities in which uses spot rates that they hardly use financial derivatives. This has many deficiencies. Because, although there is an intensive need for businesses to purchase and sell currencies there is not any currency available at proper time which increase the possibility to be effected by the risk. Therefore, in order to decrease this risk, it is required to develop FX market in its full sense, which is very significant in protecting businesses from any risks and increasing their profit.

The following goals and tasks are set within the framework of the research work: The main goal of this research work is development interbank foreign exchange markets, to define in real term possibilities for effective use of financial derivatives in Mongolia.

In order to reach this goal the following tasks are required:

1. To define present conditions of FX market in Mongolia.
2. To refine alternatives of development of an interbank FX market.
3. To evaluate alternatives of developing interbank FX market.
4. To improve regulations of interbank FX market.
5. To develop the rules for interbank FX markets activities.

LITERATURE REVIEW

The part of main activities has been carried out by the BOM (Bank of Mongolia) to fulfill the objectives of the State Monetary Policy is exchange rate policy. Within the framework of protecting instability of domestic currency, BOM has conducted exchange rate policy aimed at expanding an inter bank FX market in

Mongolia. It can be perceived that the dollarization process is increasing demand of foreign currency exchange. Therefore, it is vital to investigate an inter bank FX market in Mongolia.

The activities of inter bank foreign exchange market in Mongolia since 1990 is evaluated as unsatisfactory. [David Mitchem, IMF advisor on foreign exchange, *Foreign Exchange and Mongolia Working Paper*, October, 1997]. The activity of Curb market and commercial banks in Mongolia is only buying and selling of exchange currency. Curb market trading in total trading is comparatively small. [G.Tumurkhuyag, Director, of FX Department, BOM, *Curb Market in Mongolia Working Paper*, 1999]. One the one hand, it is directly related to the people's confidence in banks and on the other side, a poor curb market operation in Mongolia.

A curb market still runs in Mongolia though there has not adequate monitor and control over the market. Such constraints cause the impediment for the development of an interbank FX market in Mongolia. As many banks and dealers trade foreign currency in cash there is a common deficiency in commercial banks for keeping their current position in FX and to influence in exchange currency reserve of banks [Vinstar Consulting International, ADB RSC C00466-Mon *Development of an Interbank Market, Final Draft Report*, 2009]. With the intention of eliminating above-mentioned defects, a scope of regulatory actions had been taken. Through it had not worked successfully. Regrettably, Mongolians have pessimistic mentality that "Mongolian laws are in three days". For example, according to the legislations trading in restaurants, shops, hotels shall be dealt in togrog. For such reasons, based on the research papers of those advisors and bankers, I have chosen my research work on "Development of the interbank FX market in Mongolia". As an

inter bank FX market develops, a curb market will be slightly drawn out.

THEORETICAL FRAMEWORK⁴

The exchange rate is the price of one currency in exchange for another - the amount of currency that can be bought or sold with another currency. Demand and supply for the currency in the open market determines this price, but it can also be influenced by the intervention of governments through their central banks. The bank will convert assets held in one currency into funds in another currency. This conversion can take the form of either a "spot" or a "forward" transaction. We will discuss the differences between these transactions. Banking activities in the foreign-exchange field invariably tend to establish a uniform price range for a particular currency throughout the financial centres of the world. If, at a given moment, the market rate in one centre deviates too far from the average, the balance will soon be restored by arbitrage, which is a process of taking advantage of price differences in different centres.

The core of the FX market is an inter-bank market, through which most of the dealing is directed. Non-bank participants generally find it useful to deal with banks, because they have developed dealing rooms over the years and have created an efficient market through good or bad times.

How is foreign exchange rates quoted? Most countries use direct quotation, which means that the exchange rate gives the equivalent of a certain quantity of foreign currency quoted.

Foreign-exchange activity starts at 08:30. A number of telephone calls are placed among Mongolian banks; gradually

⁴ SA Financial Sector Forum: *The Foreign Exchange Market*

foreign markets enter the scene; foreign dealers in Frankfurt enquire about the USD/MNT rate, while Mongolian banks will ask them about a first EUR/USD rate; banks in London, Brussels, Paris, and other cities are called, or they contact Mongolian banks on their own. International and local brokers participate in this rate-finding process. If news has come in overnight that the United States authorities expect US inflation to remain relatively high for several more months and there are widespread doubts that the US trade deficit will narrow, the dollar is likely to weaken.

A critical issue under the fixed-rate system in the fifties and sixties was whether a country in a bad balance-of-payments situation would have to devalue, or one in a strong payments situation would have to revalue. (With countries with weak currencies increasingly unwilling to devalue their currencies in the sixties, pressure on the surplus countries was mounting to revalue their currencies instead.) Under a generalised system of clean floating exchange rates, rates should - according to the purchasing power parity theory - respond primarily to inflation differentials. High inflation, often the result of too generous a growth in the money supply, would lead to a weakening of the currency to the point where the rate was again in equilibrium, reflecting purchasing power parity.

While this theory is relatively accurate in explaining at least long-term exchange rate movements (over periods of several years), it has some shortcomings. For example, it is debatable how best to measure inflation and purchasing power. Second, the only prices of significance are those of goods and services that are, or can be, traded internationally. Third, experience shows that competitiveness in international trade (of goods and services) is not only a matter of price but also of quality, prompt delivery and after-sales service. Finally, the purchasing power theory does not

take into account capital movements as a potentially important determinant of exchange rates. Today, one of the most important developments in the currency market is the move towards a single currency in Europe. Some background on the European Monetary Union will explain why it is such an important factor in the currency markets.

FX can be bought and sold, not only on a spot or cash basis, but also on a forward basis (for delivery on a stipulated future date). In the spot markets, currencies are exchanged on a fixed delivery date, usually two working days. In the forward markets, delivery dates are pushed beyond spot value dates. Except for the time dimension that is introduced in forward transactions, the principles are the same, regardless of whether the delivery date is spot or forward: a buyer will wish to purchase as much of one currency as he can for the lowest cost in terms of another currency.

Apart from the forward market discussed above, foreign-exchange futures (i.e. the so-called currency or FX futures) and currency option markets have, since the seventies, developed abroad to complement the existing hedging instruments (e.g. the traditional forward contract), thereby providing even greater financial flexibility. Currency futures and currency option contracts allow new strategies in hedging operations, which are of particular interest to importers, exporters, investors and, at least abroad, currency speculators.

This section will discuss only briefly the technical aspects of FX futures and currency option contracts, as the contract principles are the same whatever the market. For instance, the principle behind an interest rate futures contract is the same as in the case of a FX futures contract. [For more detail, see Falkena et al., *The Futures Market*, 1989, and Falkena et al., *The Options Market*, 1989.]

A currency futures contract, like any other financial futures contract, is a legally binding agreement between two parties to take or make delivery on a specified date(s) in the future of a given quantity of a currency at an agreed price, established in a regulated market place, on the date the contract is entered into.

The foreign-exchange option market has experienced rapid growth in the last few years, and now accounts for approximately 7% of the daily global foreign-exchange turnover. Options are available on many traditional "physical" products such as equities (i.e. stocks and shares), commodities (e.g. gold, silver, coffee and other agricultural products), interest rate products (e.g. bonds and swaps) and FX. More recently, options have become available on futures where delivery results in a future contract rather than cash. Because of their contingent nature, options are not a suitable replacement for classical forward trading. Although they offer the holder greater leeway, there is an additional premium above the costs of a forward contract. The buyer's risk is, however, limited to the total premium, payable when the contract is made.

Therefore, important considerations in deciding between options and forward contracts are the costs involved and the additional profit potential.

SITUATION ANALYSIS

Experience of Foreign Country⁵

The FX market in Tokyo, London, New York, Frankfurt, and Paris has been expanding along with the economic development of the country. The Tokyo FX market is the third largest in the world, behind the London and New York markets. The FX market in Thailand has grown rapidly in the line with the liberalization

⁵ <http://www.emeap.org>

of FX control, in Australian has considerably grown since the Australian dollar was floated and exchange control. An Indonesian FX market started to grow considerably with the adoption of a free FX system. The Hong Kong FX market has grown and the fifth biggest FX trading center in the world.

The Tokyo inter-bank FX transactions are settled according to market practice. Banks confirm their transactions with the counter-parties first, and then deliver cash on the value date. Confirmation used to be made by exchange of slips. More recently, many banks use SWIFT for confirmation. Through their computer network, the two banks involved in the transaction can confirm contract details such as the amount, exchange rate, settlement date, and payment method. Along with many other traders in the Australian FX market, is a member of SWIFT accord. This system allows all trade details – for example, the currency code, amount, counter-party and date of trade – to be confirmed automatically between participants prior to settlement. Settlement for transactions in currencies other than the Australian dollar is usually arranged through correspondent banks participating in the relevant local clearing system overseas. The Australian market is the first major FX market to open (see [Chart 1](#)) for the overseas customers of Philippine banks, the bulk of the transactions are settled through SWIFT. Some big banks settle their transactions through their electronic in-house settlement system. For the Hong Kong dollar portion of trades, settlement is made through the inter-bank payment system. Payment of the foreign currency portion of a transaction is settled in the country of the respective foreign currency through presence of correspondent banks in that country. The payment message is transmitted through SWIFT or tested telex.

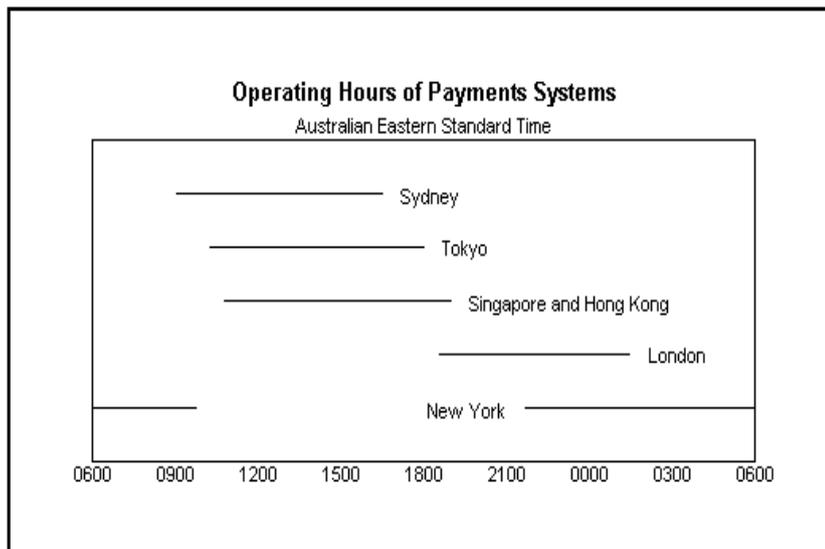


Chart 1. Schedule of World FX

Source: *BIS survey*

SITUATION OF INTER-BANK FX MARKET IN MONGOLIA

Financial markets, be they money markets, FX markets or securities markets share a number of common features. These are provides the basis for reviewing the constraints to the development of inter-bank markets in Mongolia and the strategy for overcoming these constraints. The general framework is

illustrated in Figure 1. Any analysis of the market can be reduced to the familiar supply and demand approach. Figure 1 is an attempt to diagrammatically capture the interactive nature of the marketplace and the factors influencing these interactions. The diagram illustrates that the existence of both a means for market interaction and instruments, which can be bought and sold, while clearly crucial for the existence of financial markets, are not in themselves enough. For markets to function smoothly there must be some rules and procedures, or supporting systems, that allow for already interaction. For example, buyers need to be sure that they will have legal ownership of the instrument they have purchased and sellers need to be sure that they will receive payment. These rules and procedures exist at various levels, from laws to operating procedures such as cut-off times for settlement. Special emphasis is being given in this technical assistance to the importance of the legal system to market development and a legal expert was also fielded as part of this assignment.⁶

Mongolia operates a managed floating exchange rate regime whereby the Government, through BOM, is concerned with maintaining reasonable stability in the external value of the Togrog. BOM transacts in the marketplace to smooth seasonal fluctuations in the exchange rate. But this is a second order priority to maintaining togrog domestic stability. BOM conducts these transactions around an indicative BOM rate, which is updated each week on the basis of commercial bank rates prevailing in the previous week.

⁶ Mr. Henry Schiffman was the legal expert. For a detailed discussion of the legal issues impacting interbank market development see his report *Mongolia: Legal and regulatory reforms for Interbank Markets*.

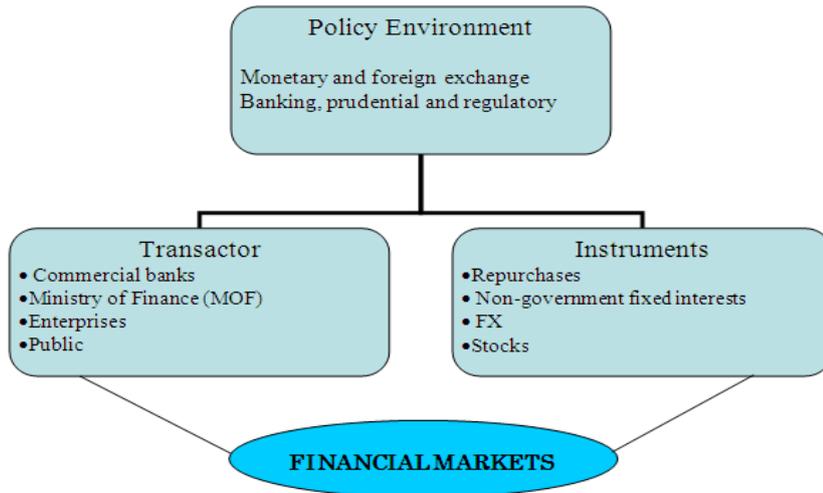


Figure 1. A Framework for Financial Markets Development⁷

Support Systems				
Risk management	Legal	Trading, settlement, and payment	Market conventions	Information
<ul style="list-style-type: none"> Managing counter-party risks Adequate liquidity Cash management 	<ul style="list-style-type: none"> Legal basis for instruments Legal foundation for transferability and negotiability 	<ul style="list-style-type: none"> Trading systems Means of payment How to handle large value transactions 	<ul style="list-style-type: none"> Means of communications Pricing conventions Times for dealing and settlement 	<ul style="list-style-type: none"> Market communication systems Reporting to the central bank

⁷ ADB RSC C00466-MON *Development of interbank markets*

The level of this rate is important to inter-bank activity, and this is one of the reasons that BOM remains the dominant player in the FX market⁸. There is a licensing regime for FX but, on the whole, FX is freely available through banks and exchange points, subject of course to overall supply and demand conditions in the wider marketplace. The domestic currency is widely used although USD also used in transactions. There are no FX controls and parallel markets are not features of the system⁹. Banks maintain foreign currency current accounts at BOM.

The Mongolian FX environment is BOM's presence in the gold market. BOM buys unrefined gold from Mongolian producers, which increases reverse money supply, requiring the sale of additional BOM bills to offset the monetary impact. At a later stage the FX receipt from the sale of refined gold can be sold against togrog monetary impact. To being a source of FX, the gold transactions can also be an alternative monetary instrument¹⁰. But they will not promote inter-bank markets in the same way as other instruments that are transacted directly with banks.

INSTITUTIONS, INSTRUMENTS, AND MARKETS OF FX IN MONGOLIA

A. Institutions of FX. The financial system in Mongolia is dominated by commercial banks, but non-banks play also

⁸ ADB RSC C00466-MON *Development of interbank markets*

⁹ Mongolians often refer to the exchange points as the curb market, or the parallel market, or black market but, strictly speaking, none of descriptions apply. The points are licensed nonblank FX outlets and banks very close to those offer the rates. Any premium is more in the nature of a convenience premium and does not reflect pressure in the FX market.

¹⁰ There is an obvious conflict here and the costs of issuing BOM bills consequent to the gold purchases should be netted off the sales of refined gold to get the effective net margin on gold sales.

a significant role in the development of inter-bank markets, as well in the security industry. The banking sector is quite fragmented, which is not surprising given the widespread solvency problems that confronted the industry, and the substantive restructuring that has followed.

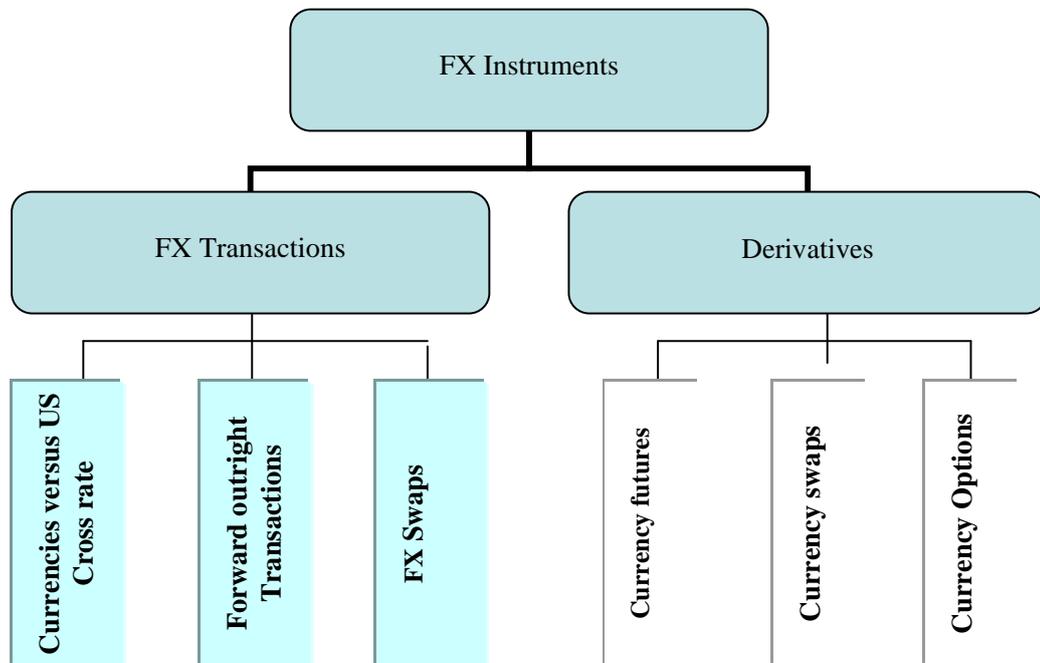


Figure 2: Foreign Exchange Market Instruments¹¹

¹¹ Reuters, An Introduction to FX Markets, 1999

Several institutions are still working through the restructuring process. Furthermore, there are several smaller banks that have commenced operations in recent years. Many of the banks have no need, or are not in a position, to use inter-bank markets. In terms of structure, at least, the security industry is quite well established in Mongolia, although it is plagued by the general weakness in economic activity and lack of companies' quality.

Table 2. Clearing and Settlement for FX transactions in Mongolia

Type of Transaction	Funds Transfer Mechanism	Ownership Transfer
Togrog against foreign currency	Mostly through bank togrog and foreign currency current accounts at BOM, but can also be done through correspondent accounts.	Not available (N/A)
Foreign currency against foreign currency	Mostly through foreign currency current accounts at BOM, but can also be done correspondent accounts.	N/A

The Financial Regulatory Commission of Mongolia (FRC) regulates the industry, which comprises of the Mongolian Stock Exchange (MSE), about 40 broker dealers, as at end of April 2010, and several investment funds. These institutions will have an important role in the development of non-equity markets as well, since the legislation governing FRC and MSE is quite broad in terms of the definition of securities, permitted activities, and markets.

B. Instruments and markets. In reviewing instruments and markets in Mongolia, it is useful to do this against some form of standard classifications. One of the classifications is that used by Reuters and this is shown in Figure 2. This classification will also be used in later discussions on the development of instruments and markets in Mongolia.

The policy framework adopted by BOM narrows down the options available for benchmarks for domestic instruments. BOM does not provide a financial facility for clearing and settlement, nor does it use an official cash rate. This is in keeping with using bank reserves as the operational target for monetary policy¹².

¹² Alternatively, the central bank may target short-term interest rates and transact in the market place to bring about the change it wants in short-term rates. Other interest rates would adjust accordingly. This second approach amounts to the central bank setting a base rate. A central bank rate can be set in various ways. It could be deposit rate, a discount rate, or some other refinancing rate. It could be for overnight maturity or some other maturity. It could be penalty rate. The central bank cash rate is commonly used and there are two broad approaches: the cash corridor approach or the discretionary approach. With cash corridor the central bank sets a corridor, or band, for overnight rates and undertakes to transact at the upper and lower rates on demand. Interbank rates are tied closely to these rates because there is no incentive for market participants to transact above rates at which they can source funds from the central bank. Banks will not normally make inter-bank deposits at rates lower than they can receive from the central bank. Canada and Australia use this approach.

OPTIONS FOR DEVELOPMENT OF AN INTER-BANK FOREIGN EXCHANGE MARKET IN MONGOLIA

This section will focus on the following incremental actions.

- I. Development of alternatives for interbank markets in Mongolia
- II. Evaluation of potential alternatives;
- III. Selection of the potential alternatives; and
- IV. Development of selected alternatives

Stage-I: Based on the research work, I have proposed the following alternatives for development of an interbank foreign exchange market in Mongolia. These would include:

1. Foreign exchange transactions will be settled within commercial banks through Reuters systems;
2. Internet Explorer Dealing System should be adapted for the settlement of foreign exchange transactions among commercial banks. It is very essential to apply electronic system as well as to purchase high-tech online software.
3. Establishment of foreign exchange units under the Stock Exchange is vital. It would be responsible for the exchange transactions between commercial banks. Operation of the Clearing unit for Stock Exchange is practical.
4. Establishment of a Clearinghouse. This in turn would assist in foreign exchange transactions.
5. An application of SWIFT system for the foreign exchange transactions.

Due to the following reasons the operation of Inter-bank foreign exchange transactions in Mongolia is not conducted effectively.

1. There is not adequate self-assurance between commercial banks;
2. The clearing and settlement system is fragile. Due to the poor interbank settlement system, promptness is the major constrains for failure of interbank settlements as well as limitation work hours of commercial banks creates more hurdle.
3. The majority of banks are anxious of risk. Hence, they have a preference to keep their current position in the foreign exchange and engage a specific number of inactive banking services rather than generating enough profits.
4. In addition, there are no substantial qualified dealers for foreign exchange transactions. Professional trainings are needed in preparing specialized dealers at internationally accepted standard.

The following alternatives were proposed with the intention of developing an interbank foreign exchange market in Mongolia, reducing the constraints, enhancing exchange transactions as well as to support the participation of the commercial banks in the exchange market.

Alternative 1: The Reuters dealing system for interbank foreign exchange markets;

The Reuters is a trading system that is being applied throughout the world. With the assistance of Reuters Company, advanced and electronic software has been installed in 10 commercial banks in Mongolia at the end of June, 1997 in order to encourage the development of viable domestic interbank

exchange market that meets international standards as well as to drive steadily out an informal exchange market in the economy of Mongolia. Basically, this would give commercial banks and their corresponding institutions more opportunities to see the bank–bank transactions at the same time in the screen. However, as a consequence of certain constraints and reasons in the economy, the utilization of dealing system has been stopped. The constraints would include: (i) Insolvency of commercial banks; (ii) Due to the shortage of foreign exchange supply in the market, commercial banks do not carry out foreign exchange transactions; (iii) Market sensitive of bank for exchange rate is low; (iv) The operating cost for system is more expensive etc.

Even though, Reuters dealing system has not been used successful in the market. It is being considered as one of potential alternatives for development of an interbank market in Mongolia. Comparing to the situation of commercial banks during that time, considerable improvements have been occurred in commercial banks in terms of solvency, operation, framework and participation of commercial banks in the foreign exchange transactions. In addition, mutual confidence¹³ for commercial banks has significantly increased. A survey result indicates that it is premature for the majority of commercial banks to move to Reuters dealing system for interbank exchange transactions. With the aim of standardizing interbank transactions, Bank of Mongolia (BOM) has connected commercial banks to Reuters dealing system through a branch office of Reuters firm in Hong Kong at 50 percent discount¹⁴. Somehow, too high operating costs of system caused commercial banks to stop the trading system. Today, commercial banks are not able to re-use previously

¹³ It can be proved by the cooperation of commercial banks

¹⁴ Reuters representative office in Mongolia.

installed system. If they wish to connect to Reuters, it is available. However, they are fully responsible for installation and monthly payments. Usage of Reuters trading system in current situation costs more and a possibility of effective use a comparatively low in an attempt to develop interbank foreign exchange market in Mongolia.

Alternative 2: Internet Explorer dealing system for interbank foreign exchange markets

An electronic dealing system is the fastest growing and new type of system. Internationally, the system is being used broadly. For Mongolia, several companies that engage in foreign exchange transactions were established. One of them is MFX Capital Company. Initially, it has started its operation since 2000 and it mostly transacts foreign exchange transactions through FX Capital system all the way through the world. However, it is not likely possible for Mongolian commercial banks to settle FX transactions by a system. Since an Internet explorer system is just at the beginning of development in Mongolia, it has too high risk for transaction participants. In addition, the consistency of electronic dealing system is very low.

Alternative 3: Establishment of Foreign Exchange Department in the Stock Exchange

With respect to current foreign exchange transaction of the Stock Exchange of Mongolia, it is recommended to establish Foreign Exchange Department by integrating all exchange transactions. The Department would be responsible for interbank foreign exchange transactions. However, I have conducted a research work to determine if foreign exchange transactions are

being settled at the Stock Exchange in other countries. A result of research work indicates that a foreign exchange market of former Soviet Union countries is located at the interbank foreign exchange stock while only in Kazakhstan; foreign exchange is transacted at the Stock Exchange. In contrast, shares trading are conducted at the same time in the interbank foreign exchange stock in Moscow, Russia. Broadly speaking, it is common experience that interbank foreign exchange stock was established as a department or division of central bank. Despite the fact that this gives approach for replication in the future, it always has consequences of creating free or floating exchange rates.

Alternative 4: Establishment of a Clearing House in BOM

According to the Banking Law of Mongolia, all interbank settlements shall be transacted through a clearing center at the BOM. While BOM has taken its activities and responsibilities in line with a law, it always conflicts with market changes and causes delay in the settlements. Hence, as to meet clearing center activities the market requirements a project for establishing a clearinghouse is being implemented at the BOM. In case of successful implementation of the project, it will provide an opportunity in dealing with interbank payments promptly and in turn it will be allowed dealing with interbank foreign exchange transactions. Since it will be operated by special computerized software it can be fully protected from any risks such delay in making payments other problems. However, payment risk in togrog will be reduced while risks in payment of other currencies still remain. For example: Let's assume that a dealer of Golomt Bank issued to a dealer of TDBM to buy in total 10000 US dollars at rate of 1329 togrog. Current economic situation, foreign exchange transacts as hand-to-hand principle. TDBM account

transfers US \$ 10000 from its fund to Golomt bank. Golomt transfers 13290000 togrog to TDBM account through a clearing center at the BOM. However, transactions are recorded next day. With the establishment of a clearing house, above transactions will be settled through it and transactions will be recorded at the same time. Due to the time differences, foreign currency transaction may take longer time since it will be transacted through a clearinghouse in the USA. It can be concluded that foreign currency payment risk will still remain and this alternative is not effective as other alternatives.

Alternative 5: Application of SWIFT system for the foreign exchange transactions

The global interactions on the foreign exchange markets are carried out by SWIFT (Society for Worldwide Interbank Financial Telecommunications). Needs of banks to settle the growing number of cross-border payments and settlement and an increase in information cost in the 1960s have lead commercial banks and non-banking organizations to accelerate the introduction of new technology for external transactions and transferring informations. However, the establishment of different data processing system by various institutions caused the impediment for exchanging information. Furthermore, demand of transferring information in short period of time has been noticeably increased. The most appropriate way of solving such constraints is to standardize foreign exchange transactions of commercial banks and to secure promptness and accurate information of the foreign exchange transactions.

A number of commercial banks in Europe and North America took an initiative to develop an integrated dealing system. Originally, SWIFT was created in 1973 in Belgium. Around 293 commercial banks from 15 different countries including: Austria,

Belgium, Canada, Denmark, Germany, Finland, France, Italy, Luxembourg, Holland, Norway, Sweden, Switzerland, England and USA supported SWIFT system.

At present, nearly 7000 financial institutions and commercial banks in 197 countries have a SWIFT account and more than 2 million volume of trade in transaction is being processed per day. The SWIFT is a cooperative society of Belgium and is owned and controlled by its members. Any commercial bank can become membership and as a shareholder. While non-banking financial institutions will be only participants. SWIFT two main headquarters are in Holland and the USA, which is responsible for coordinating regional centers. Regional centers of SWIFT, which are responsible for clearing the transfers required in foreign exchange transactions, are located in London, Hong Kong, New York, and Rio de Janeiro.

In all commercial banks in Mongolia have a SWIFT system and 2 of them have a limited authorization of operation while others have full rights for transactions. SWIFT system operations in Mongolian commercial banks are mainly as follows:

1. Transferring financial data through system: Transfer financial data from one customer to another. Processing and communications services of the highest security and reliability.
2. Information format: Message is formatted according to SWIFT message standards. Message formats have to be updated. This one of requirements of SWIFT to attract more financial services.
3. Conducting trainings and workshops: Depending on customers' capability and type, various trainings on SWIFT operation are being conducted. In addition, SWIFT conducts seminars on SIBOS activities. As result of annual seminar for customers, SWIFT proposes an expectation

forward international finances and future approaches. Based on the perceptions, they carry out their planning activities.

4. Rendering value added services: Value added processing includes promotion of the most reliable customers and exchange inter-bank data and information.
5. Seasonal services:

TEN MESSAGE CATEGORIES ARE LISTED BELOW.

Table 3: The Message Categories

No	Type of message	Code Record
1.	Customer's transaction	MT100
2.	Financial institution's transaction	MT 200
3.	Foreign currency exchange <ul style="list-style-type: none"> • Foreign currency option • Loan and Savings • Forward commitment • SWAP 	MT 300
4.	Cash in process of collection	MT400
5.	Securities	MT500
6.	Precious metal syndicate	MT 600
7.	Letter of Credit	MT 700
8.	Traveler's checks	MT 800
9.	Bank statement <ul style="list-style-type: none"> • Interest change • Nostro account 	MT900
10	Miscellaneous	MT 90

The abbreviation for “Message Type” is “MT.” MT’s are numbered (e.g., MT 111, MT 112, etc.) depending on the information type and contents. The SWIFT market is related to the information contents and sphere that are transferred through SWIFT (see Table 3). In other words, SWIFT covers a wide range of markets, which are handled by financial institutions. For example, the foreign currency exchanges, the monetary market, trade finance, and the securities market.

The Significance of SWIFT

Member organizations have the following advantages when using SWIFT:

1. SWIFT transfers the information and messages in a short period of time to the customers. If the sender and recipient are connected to the electronic network simultaneously, the message can be transferred within 10 seconds.
2. The information and messages have high level of precision. In this way, the receiver can understand the message
3. The security, confidentiality, and completeness of the message are guaranteed. All messages are encoded and have a code protection so it is impossible to alter, delete, or transfer without permission during the transmission process.
4. The cost of the message transmission is lower compared to the other methods available. The cost per product decreases as the products’ quantity increases. As the number of messages transferred increases, the cost of the message transmission decreases. In the recent cost estimates, it is expected to be 0.17 USD
5. The recipient always confirms whether they have received the message. Thus, the system prevents the loss or damage

to messages. SWIFT retains all the messages and information in its secure memory.

6. SWIFT does not only offer a quick transfer of funds; it also offers a variety of training courses and seminars.

The commercial banks that are connected to SWIFT place the orders through the telephone by using MT 300 and can also make the payments through the network. In order to conduct inter-bank transactions by using SWIFT, commercial banks are required to be connected to the network. A total of 12 commercial banks in Mongolia are connected to the SWIFT network in order to conduct foreign settlement activities. The Mongolian banks are able to conduct FX transactions as well. If the bank maintain a sufficient currency reserve, it is possible to make transactions and settlements directly. Currency trade via SWIFT is a method by which the Mongolian foreign currency trade can attend international standards. Therefore, SWIFT is the most efficient and reliable way to manage interbank FX market.

Stage II – Evaluation of the Five Alternatives.

In order to evaluate the five alternatives in the first stage, I have developed the following criteria:

1. Delivery time - 20 score
2. Costs - 20 score
3. Implementation possibility - 20 score
4. Bank participation - 20 score
5. Risks - 20 score

Evaluation of the five versions analyzed by the above-mentioned criteria:

Table 4: Evaluation of alternatives

	1 st	2 nd	3 rd	4 th	5 th
Delivery time	Short period of time /20 scores/	Short period of time /20 scores/	Time required /10 scores/	Time required /10 scores/	Short period of time /20 scores/
Costs	High /5 score/	High /5 score/	High /5 score/	Mid-range /10 score/	Low /20 score/
Implementation Possibility	Seldom /0 score/	Mid-range /10 score/	Low /5 score/	High /15 score/	Very high /20 score/
Bank participation	Banks cannot participate /5 score/	It is possible /15 score/	It is possible /15 score/	It is possible fully /20 score/	It is possible fully /20 score/
Risks	Only commercial risks /15 score/	Commercial and Internet Risks /10 score/	Commercial and liquidity Risks /10 score/	Commercial and liquidity Risks /10 score/	Only commercial risks /15 score/
Total score	45 scores	60 scores	45 scores	65 scores	95 scores

Each alternative was evaluated by 100 of scoring. Each alternative was assessed five criteria, which are 20 scores each.

Table 5: Score of Criteria

Delivery time	<ul style="list-style-type: none"> • Possibility of making payment and transferring it in short period: 20 score • Able to make payment in a short period of time while transfer require time: 10 score • Requires time for transfer: 5 score
Costs	<ul style="list-style-type: none"> • High cost 5 score • Normal cost 10 score • Low cost 20 score
Implementation Possibility	<ul style="list-style-type: none"> • Very little 0 score • Little 5 score • Middle 10 score • High 15 score • Very high 20 score
Bank participation	<ul style="list-style-type: none"> • Little 5 score • Available 15 score • Full 20 score
Risk	<ul style="list-style-type: none"> • High 5 score • Not high 10 score • Little 15 score • No risk 20 score

Stage III – Conclusion from the Above Mentioned Table.

Alternative 1: 45 score. It is possible to conduct inter-bank FX transactions in a relatively short period of time if banks are connected to the Reuters network. However, the connection cost is very expensive. Furthermore, it is not possible to implement this method in a short period of time. The implementation process is lengthy. It is not possible for each bank to connect to the Reuters

Network so the sphere of inter-bank FX transaction is very limited. Banks connected to the Reuters Network will face FX transaction risks. It is potential to decrease the foreign currency risks with the development of the currency market.

Alternative 2: 60 score. The use of Internet Explorer will be quicker because the two parties communicate online. In order for Mongolian banks to make, inter-bank transactions, or remittances, will require installation of a new software program. In order to participate, the dealing banks will have to allocate the funds in advance. The implementation possibility is ranked at mid-range because the banks consider that it has a very high network risk and are not interested in participating in the trading. In this case, banks have the possibility of being connected directly to the Internet network. There is a high risk of being affected by the Internet Explorer network.

Alternative 3: 45 score. It is impracticable to make the transactions or remittances any faster by establishing the foreign exchange unit at the Stock Exchange. Currently, the activities of the Mongolian Stock Exchange are not profitable. There is often a delay in payments and transactions. The establishment of a foreign exchange unit at the Stock Exchange cannot eliminate these problems. Regarding the cost, it is considered to be relatively high, as all banks have to be connected to the Mongolian Stock Exchange by internal network. All banks may be involved to organize this issue in a unified manner. In addition to the foreign exchange risks, there are also the liquidity risks to be considered.

Alternative 4: 65 score. It is possible to make togrog transactions and settlements quicker without any delay by establishing a

Clearing House. Regarding the other foreign currencies, it will require 2 working days. The Clearing House will be built in the under the Financial Project so it will be eliminated from the establishing costs or expenses. However, all banks have to install the new software program to deal with the foreign exchange. The implementation possibility is mid-range. If the banks will install the necessary programs, they will be able to participate. A Clearing House is available only for the togrog. Other countries' currencies have to be concentrated at their own Clearing Houses. In addition to the foreign exchange risks, there are also the liquidity risks to be considered.

Alternative 5: 95 score. SWIFT is the quickest way to carry out foreign exchange. SWIFT combines security and reliability of via its messaging platforms. Risks are reduced, costs lowered, and improved delivery to the customers is ensured. Since almost of banks are connected to the SWIFT network, there are no additional costs required. The costs of SWIFT decrease the more often it is used. Settlements can be conducted on time and the participating banks will only cover the foreign exchange risks. In order to decrease the foreign exchange risks, it is possible to use the financial derivatives such as Forward, Futures, Options, and SWAP. From all the alternatives listed above, the 5th is the most effective, economical, and has the highest implementation possibility.

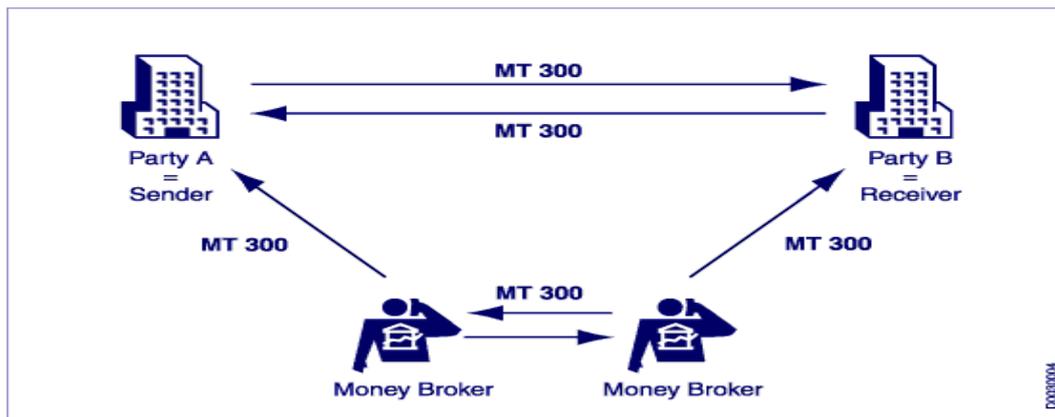
Stage V – The Creation of the Inter-bank Foreign Exchange by using SWIFT.

The assessment of the alternatives is as follows by descending:

1. Alternative 5 – 95 score
2. Alternative 4 – 65 score
3. Alternative 2 – 60 score
4. Alternative 1 and 3 – 45 score

*As per result of assessment, I have chosen Alternative 5:
Application of SWIFT system for the foreign exchange
transactions as most appropriate options.*

The interbank FX transactions through SWIFT network:



Source: www.swift.com

Figure 3. Scheme 1: SWIFT FX transactions

1. Bank brokers trade the transactions on the phone. In order to trade on the phone, a dealer must be professional.
2. Based on the settled transactions, trading information is sent to exchange currency centers respectively by using SWIFT MT-300.

3. Correspondent banks of the exchange currency center.

CONCLUSION

The interbank foreign exchange market is a wholesale market for both spot and forward foreign currency transactions (either outright or swaps). Both banks and non-bank financial institutions may participate in FX market. However, the market is usually organized around authorized dealers, and sometimes assisted by brokers, with some dealers behaving as market-makers to maintain liquid and continuous markets. An interbank FX market represents a form of market structure where market participants determine a decentralized allocation of FX. Ensuring that participants are free to establish buying and selling exchange rates for transactions with their customers and among themselves by providing for efficient dissemination of information on bids and asks fosters competition in the market.

It is essential to develop a spot market in Mongolia in particular as trading is being conducted in cash hand to hand. In other words, the most effective way of developing a FX market is to give people a better understanding of FX market incrementally since Forward and Futures transactions cannot be conducted directly.

Within the framework of the research work "Development of the Inter bank FX market in Mongolia", commercial banks will be able to conduct transactions and transfer reliable information in short time and using SWIFT network. Once, all commercial banks are connected to SWIFT network, not only spot market also forward, option and futures markets will be developed accordingly.

Application of SWIFT network for FX transaction has more advantages in many senses. Particularly, transactions can be settled promptly and accurately. It can be concluded that an

alternative is the most effective options. In addition, except spot transactions, other financial derivatives can be settled thorough SWIFT network.

Outcomes of using Alternative 5 are as follows:

1. All commercial banks will be connected to the SWIFT network and operation of foreign settlements expands;
2. Volume of FX transactions will be increased and fully protected from any risks; and
3. It will be a root of the FX market development in Mongolia

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