

Chapter 5

Foreign Exchange Market Management

International trade, foreign travel, cross-border capital flows, and foreign investment all involve the exchange of currencies. A well-functioning foreign exchange market is essential to facilitating international transactions. The CBC has the regulatory authority over Taiwan's foreign exchange market and is responsible for its efficiency and stability. On the one hand, the CBC has adopted a series of liberalization measures to help broaden and deepen the foreign exchange market. On the other hand, the CBC monitors foreign exchange market activities closely and may intervene in the market when necessary in order to moderate excessive volatility in the NT dollar exchange rate.

This chapter starts by introducing the foreign exchange market in Taiwan, then describes the role of the CBC in the market, including foreign exchange liberalization measures and surveillance work, and then touches on the management of foreign exchange reserves.

Section 1 The Foreign Exchange Market in Taiwan

The foreign exchange market in Taiwan was established in 1979. Since its establishment, transactions in the market have expanded considerably along with the rapid growth of external trade and the gradual liberalization of the capital account. In 2004, the average daily turnover of foreign exchange reached US\$10.24 billion, which was 3.5 times the size ten years before.

The foreign exchange market comprises the customer market and interbank market. The customer market is where authorized foreign exchange banks (hereafter banks) trade foreign currencies with their customers. Customers may trade foreign currencies with banks for exports, imports, foreign travel, and overseas investment, and may also receive a wide range of related services from banks, such as trade financing, international remittances, and foreign currency loans and deposits. To cope with the increasing demand for foreign exchange transactions and services, the CBC had authorized 1,104 local banking units to engage in the foreign exchange business by the end of 2004. Among them, 43

were domestic bank headquarters, 995 were domestic bank branches and 66 were foreign bank branches in Taiwan. Besides banks, postal offices and community financial institutions can be authorized by the CBC to sell and purchase foreign currencies and traveler's checks. Postal offices can also make international remittances for customers. Money exchange outlets, usually located in hotels, department stores, convenience stores, popular tourist destinations, visitor centers, railway stations, temples and national museums, can change foreign currencies into NT dollars.

If a bank buys or sells more foreign currencies than their customers demand, it has to decide whether to run an open foreign exchange position. The interbank market is where a bank could engage in transactions to adjust its foreign exchange position for hedging or profiting purposes. Banks may trade with each other directly or through brokers including voice brokers and electronic broking systems. At the end of 2004, 43 domestic banks and 34 foreign banks participated in Taiwan's foreign exchange interbank market. There were two domestic foreign exchange brokers, the Taipei Forex Inc., established in 1994¹ and the Cosmos Foreign Exchange International Co. Ltd., established in 1998.

In recent years, the interbank market has grown at a much faster rate than the customer market. In 2004, foreign exchange transactions in the interbank market accounted for 67.5 percent of the total transaction volume in the foreign exchange market, with 20.8 percent of trades involving only local banks, and 46.7 percent of trades involving both a local bank and a bank located abroad. Trading in the customer market accounted for 32.5 percent. Chart 5-1 displays



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¹ Before 1994, the Taipei Foreign Exchange Market Development Association (TFEMDA), which was established in 1989, provided foreign exchange broking services for their members.

the average daily turnover in these two markets and the sum of the two over the past ten years.

The top three foreign currencies traded in the foreign exchange market in Taiwan are the US dollar (USD), the Japanese yen (JPY), and the euro (EUR). In terms of currency pairs, the NTD/USD was the most traded currency pair and accounted for a share of 45.3 percent in 2004, followed by USD/JPY with 20.2 percent, and USD/EUR with 16.3 percent. Chart 5-2 displays the composition of foreign exchange transactions by currency pair in 1994 and 2004, respectively.



International transactions are not always completed in a short time. For instance, there is often a lapse between the time importers place an order and the time they make payments. Therefore, to hedge the risk associated with exchange rate fluctuations, foreign exchange derivatives have become increasingly common in the market. Foreign exchange derivatives currently traded in Taiwan include forwards, foreign exchange swaps, cross currency swaps, options, and margin trading. In 2004, the share of spot transactions in total foreign exchange transaction volume declined to 50.0 percent from 67.1 percent in 1994, while foreign exchange swaps transactions accounted for a share of 23.9 percent, followed by options with 13.6 percent, forwards with 10.6 percent, margin trading with 1.2 percent and cross currency swaps with 0.7 percent. Chart 5-3

displays the composition of foreign exchange transactions by instrument in 1994 and 2004, respectively.



The exchange rate in the interbank market is called the market rate, which is mainly governed by the supply and demand conditions in the market and changes frequently over time. The exchange rate in the customer market is called the counter rate, and each bank decides its own counter rate. The counter rate is usually fixed during a day, but customers may negotiate for better rates.

Concerning the exchange rates of the NT dollar against different foreign currencies, the rate of the NT dollar against the US dollar is determined in the local currency market. The rates of the NT dollar against other foreign currencies are cross rates, which are obtained by combining the NTD/USD rate in the local currency market and the rate of a specific foreign currency against the US dollar in the international currency market.

The CBC adopted a managed floating exchange rate regime in 1979. Movements in the NTD/USD exchange rate have basically reflected changes in Taiwan's external trade and cross-border capital flows. Over the past decade, the NT dollar came under pressure to depreciate during the Asian financial crisis in 1997 and 1998, as well as in 2001 when the global IT recession hit Taiwan's export sector seriously. Conversely, the NT dollar appreciated against the US dollar sharply in 1999 and 2004 as exports expanded rapidly and foreign capital inflows surged. Chart 5-4 displays movements in the NTD/USD exchange rate during the past ten years.



Movements in the exchange rate in turn affect the prices of foreign goods and services, the costs of traveling abroad, as well as the values of export receipts and cross-border investments. Under a floating exchange rate regime, movements of the exchange rate tend to balance a country's external account over the long run.

Section 2 Foreign Exchange Deregulation

In the past decade, the CBC continued to deregulate capital movements, increase exchange rate flexibility, allow new foreign exchange derivatives to be introduced into the market and offshore banking units (OBUs) to expand their lines of business. These liberalization efforts helped expand the scale and scope of the foreign exchange market and also enhance market efficiency.

1. Deregulation of Capital Movements

In July 1987, the CBC lifted restrictions on capital flows not involving the NT dollar, as well as capital flows involving the NT dollar and related to trade in goods and services. At the same time, the CBC also lifted foreign exchange

restrictions on capital flows for direct investment purposes with the approval of the Ministry of Economic Affairs.

For capital flows that involve the NT dollar but are not for trade or direct investment purposes, the CBC has taken a gradual approach to lifting restrictions. Annual ceilings on such foreign exchange transactions by each domestic company and individual were gradually raised. From 1997 onwards, a domestic company may freely sell (or buy) foreign currencies for (with) NT dollars up to US\$50 million per year, while for an individual or non-profit entity the ceiling is US\$5 million. Companies or individuals who want to exceed the ceilings need the approval of the CBC.

For foreign portfolio investments in Taiwan, the Ministry of Finance (MOF) and the CBC allowed Qualified Foreign Institutional Investors (QFIIs) to directly invest in Taiwan's equity market in 1991. They gradually removed the quota on QFIIs' total investment in the domestic equity market and the time limit on QFIIs' fund remittances for such purposes. With the exception of a few industries, restrictions on foreign ownership of a single listed company were also lifted. In 1996, the MOF and the CBC allowed foreign individual investors to invest in Taiwan's equity market. In October 2003, they abolished the QFII system and simplified the procedure for foreign investors to buy local shares. Foreign investors investing in domestic securities were reclassified into Foreign Institutional Investors (FINIs) and Foreign Individual Investors (FIDIs). Once registered with the Taiwan Stock Exchange Corporation, they may remit investment principal and proceeds through any bank at any time. Each foreign individual investor may invest up to US\$5 million, while foreign institutional investors are not subject to any ceiling.

The MOF and the CBC have also gradually liberalized the scope of foreign portfolio investments in domestic equity markets. Under current regulations, foreign investors may invest in a wide range of local instruments including stocks, corporate bonds, convertible bonds, Taiwan depository receipts (TDRs), warrants, government bonds, asset-backed securities, beneficiary certificates and financial debentures. Beginning in June 2003, foreign investors are allowed to participate in the domestic securities lending market. For the purpose of hedging, foreign investors are also allowed to trade futures, options, and interest rate derivatives. Instead of domestic equities, 30 percent of inward remittances may also be allocated in government bond repos, time deposits, money market instruments and money market mutual funds.

2. Greater Flexibility of Exchange Rate Movements

Taiwan's exchange rate regime has undergone a series of changes during the past decades. Taiwan shifted from a fixed to a managed floating exchange rate regime in 1979. At the beginning of the managed floating, daily fluctuations in the interbank rate of the NTD/USD were limited to upper and lower bounds around the central rate, which was the weighted average interbank rate of the previous business day, and the counter rate for small-amount trading was set within a narrow band around the central rate by each bank on a daily basis.

To make the exchange rate more flexible, the CBC abolished the central rate system in April 1989, and the NTD/USD rate began to move freely according to market conditions. However, for small-amount trading with customers, each bank still had to set its counter rate within a band around the base rate, which was determined collectively by major banks at the beginning of each business day. Starting from December 1990, major banks no longer set the base rate, and each bank began to decide its counter rate according to its cost of funds, foreign exchange positions, and business strategies.

To smooth out excessive exchange rate fluctuations, the CBC adjusted the methods applied to calculate banks' foreign exchange positions and imposed ceilings on banks' short and long positions and foreign liabilities. The purpose was to restrain banks' ability to obtain funds to finance speculative transactions in the foreign exchange market. Beginning in 1991, the interbank foreign exchange forward market bloomed as the foreign exchange positions of banks started to be measured on an accrual basis.

To give banks more flexibility in their operations, the CBC gradually lifted the ceilings on banks' short and long positions, and abolished such restrictions in July 1996. Since then, banks may set their own limits on foreign exchange positions according to their own internal risk control needs. However, to prevent banks' overexposure in the foreign exchange market, the CBC required that foreign exchange derivatives should not exceed one third of a bank's total foreign exchange market, and in compliance with the guidelines for liberalization of trade in services set by the World Trade Organization (WTO), the CBC removed the ceiling on banks' outstanding foreign liabilities. Beginning in 1999, banks' foreign liabilities and foreign currency deposits are subject to reserve requirements. Since then, the CBC has focused on strengthening banks' risk management

practices to maintain the stability in the foreign exchange market.

3. Development of the Foreign Exchange Derivatives Market

Against the background of increased exchange rate volatility, foreign exchange derivatives began to be used to reduce risks and enhance market liquidity. The first forward contract in Taiwan was made in 1972. At the time, currency forwards could only be used for the purpose of external trade, and the forward rate was determined by the CBC. Exchange rate risk was actually shifted from exporters and importers to the CBC through banks. NT dollar forward contracts involving the US dollar did not begin to be traded until 1979 when the NT dollar was unpegged from the US dollar. In 1984, the domestic money market was set up, and banks were then able to calculate the forward rate.

Foreign exchange swaps, mainly traded in the interbank market, consist of two contracts: a spot and a forward. In Taiwan, the first foreign exchange swap was traded between two local branches of foreign banks in 1983. Foreign exchange swaps have gradually become an important instrument for local branches of foreign banks to obtain short-term NT dollar funds.

Since the early 1990s, as the CBC allowed more and more foreign exchange derivatives to be introduced to the local market and eased restrictions on banks' foreign exchange positions, the market began to grow rapidly. The CBC allowed banks to engage in foreign exchange margin trading and cross currency swaps involving different foreign currencies in 1991, and foreign currency interest rate swaps, foreign exchange options, and both forward rate agreements and interest rate options based on foreign currency assets in 1993. In 1996, the CBC allowed banks to trade foreign currency commodity-linked derivatives, equity-linked derivatives and structured products.

To prevent excessive speculation in the foreign exchange market, the CBC was more cautious about the deregulation of NT dollar related foreign exchange derivatives. Regarding foreign exchange forwards, bank customers other than exporters and importers, such as property insurance companies and cargocarriers, were allowed to use forwards to hedge their currency risks in 1994. In 1996, all bank customers were allowed to use forwards for hedging purposes. The CBC also allowed banks to engage in NT dollar related cross-currency swaps and non-delivery forwards in 1995, NT dollar related foreign exchange options in 1997, and NT dollar interest rate related structured products in 2003. Regarding the deregulation of foreign exchange derivative products, the CBC gradually adjusted its position over time. In the first stage, the CBC required banks to obtain permission for selling foreign exchange derivatives on a case-by-case basis. In the second stage, permissions were required for banks trading foreign exchange derivatives on a product-by-product basis. Finally, the CBC shifted to a negative listing approach for foreign exchange forwards in 1996 and for all foreign exchange derivatives in January 2005. The development in foreign exchange derivatives has broadened the scale of Taiwan's foreign exchange market.

4. Development of Offshore Banking Unit Businesses

In December 1983, the *Offshore Banking Act* was promulgated to encourage Taiwanese banks' participation in the international financial arena. The first OBU was set up in June 1984. Initially, OBUs were limited to taking foreign currency deposits and making foreign currency loans to nonresidents. To enhance OBUs' competitiveness in international markets, they were exempt from reserve requirements on deposits, business tax, business income tax, and stamp duties. Interest paid on deposits to nonresidents was also exempt from withholding tax. However, the early operation of Taiwan's OBUs focused on channeling foreign currency funds from foreign financial institutions to local banks. Their syndicated loans were mainly extended to overseas subsidiaries of large Taiwanese businesses. Both OBUs' assets and operating profits were limited.

In October 1997, the MOF and CBC adopted deregulation measures to expand OBUs' lines of business. OBUs were allowed to conduct foreign exchange business with residents. The MOF and CBC also adjusted OBUs' preferential tax status to allow domestic banking units (DBUs) to compete with OBUs on a level playing field. OBUs' revenue and income from business with residents was subject to the *Business Tax Law* and the *Business Income Tax Law*. Interest payments made to residents by OBUs were also subject to the same taxation as those by DBUs. However, the preferential tax status of OBUs' business with nonresidents remained unaltered. The MOF and the CBC also set the *Regulations for OBUs*, and applied the *Banking Act* mutatis mutandis to OBUs' credit business to strengthen the risk management of OBUs.

As Taiwanese businesses expanded their investment abroad, the demand from overseas operations for funding and other financial services continued to increase. Since most of the overseas investment was bound for China, the CBC and related government agencies began to deregulate cross-strait financial activities. In 1990, they took the first step by allowing local banks to remit funds from Taiwan to China through banks in a third location. In April 1993, they took a further step by allowing overseas branches of domestic banks to do business with foreign banks' branches in China, overseas branches of China-based banks, and overseas legal entities, groups, institutions and individuals from China. To further facilitate the transfer of funds between Taiwan and China, a mechanism was built to enable parent companies in Taiwan to transfer funds to and from their businesses in China through OBUs without rerouting funds through a third location. The key measures to build up the mechanism from 2001 onwards are listed as follows:

- (1) In June 2001, the OBUs were allowed to conduct financial transactions with foreign banks' branches in China, overseas branches of China-based banks, and overseas legal entities, groups, institutions and individuals from China. This measure significantly reduced the time and expense involved. In addition, upon approval, banks could set up representative offices in China to gain a better understanding of their borrowers with investments in China and to provide consultation to Taiwanese businesses in China.
- (2) In November 2001, both overseas branches of domestic banks and OBUs were permitted to conduct financial transactions directly with China-based banks, and legal entities, groups, institutions and individuals in China. The CBC also allowed overseas subsidiaries of Taiwanese businesses to make inward remittances to their parent companies without being subject to the US \$50 million annual ceiling. This measure made it possible for parent companies to utilize the funds deposited at the OBUs by their overseas subsidiaries.
- (3) In February 2002, DBUs and OBUs could directly remit funds to China-based banks and conduct trade-related foreign exchange business with China-based banks.
- (4) In August 2002, overseas branches of domestic banks and OBUs were allowed to extend credit and provide factoring services to Taiwanese businesses in China subject to risk control requirements.

Another major deregulation effort was to increase access to offshore banking services. In the beginning, with the OBU business conducted by an independent

branch of each bank, mostly located in Taipei, access to offshore banking services was inconvenient. From June 2000 onwards, domestic branches of banks were able to act on behalf of their OBUs to provide trade-related financing to nonresidents. They were allowed to make outward remittances for nonresidents on behalf of their OBUs in November 2001, and inward remittances in October 2004. The offshore business that domestic banks were authorized to conduct on behalf of their OBUs was further expanded to include making foreign currency loans to nonresidents in May 2003, and taking foreign currency deposits from nonresidents in October 2004. At the end of 2004, there were 1,104 local branches allowed to act as agents for their OBUs.

The above deregulation measures have helped OBUs develop into funding centers for Taiwanese businesses operating overseas and have increased the efficiency and security of fund transfers across the Taiwan Strait. Among the wide range of services offered by OBUs, cross-strait remittances, as well as the deposit and loan business with non-financial institutions, have grown most rapidly. At the end of 2004, there were 70 OBUs in operation. Among them, 42 were run by domestic banks, while the other 28 were run by foreign banks. The total assets of all OBUs amounted to US\$69.2 billion at the end of 2004, triple those of end-1991. Chart 5-5 displays the growth trend of OBU assets in the past two decades. In 2004, earnings contributed by OBUs accounted for 10.3 percent of the total earnings of domestic banks.



Section 3 Surveillance over the Foreign Exchange Market

The deregulation measures on capital flows and OBU business, greater flexibility of exchange rate movements, and the development of foreign exchange derivatives market have helped Taiwan's foreign exchange market to expand. The NT dollar exchange rate has, however, become increasingly volatile due to surges in capital flows related to portfolio investment. As a result, the NT dollar exchange rate may deviate from economic fundamentals at times. Since Taiwan is a small and highly open economy, with the ratio of external trade in goods and services to GDP exceeding 90 percent, wild swings in the exchange rate is likely to have adverse influences on international trade and financial stability. To cope with the external shocks transmitted via fluctuations in the NT dollar exchange rate, the CBC monitors foreign exchange transactions and capital movements closely and intervenes in the market when necessary.

To enhance the surveillance over the foreign exchange market, the CBC developed the Foreign Exchange Declaration System and the Reporting System of Foreign Exchange Transactions. The CBC also set regulations on foreign exchange derivatives to reduce excessive speculative trading in the market. The details of these measures are described as follows:

1. Establishing the Foreign Exchange Declaration System

Although cross-border capital movements have been deregulated, it is still important for the CBC to monitor foreign exchange market developments and to collect data for compiling statistics on foreign exchange transactions and the balance of payments. To meet these ends, the CBC introduced the Foreign Exchange Declaration System in 1987.

The Foreign Exchange Declaration System requires that each foreign exchange transaction involving the NT dollar with a value equal to or over NT\$500 thousand should be declared by customers. Based on the content and value of the transaction, foreign exchange declaration can be grouped into three categories.

For the first category of transactions, bank customers are only required to fill out declaration statements when trading with banks. This category includes (1) foreign exchange receipts from the export of goods and services, (2) foreign

exchange payments for the import of goods and services, (3) a single foreign exchange trade with the value below US\$1 million for a local company and below US\$500 thousand for an individual while not exceeding annual ceilings (US\$50 million and US\$5 million for a company and an individual, respectively), and (4) a single remittance by a non-resident not exceeding US\$100 thousand.

For the second category of transactions, bank customers should submit required documents together with declaration statements to banks for verification when trading with banks. (1) A single transaction made by a local company with the value exceeding US\$1 million or by an individual with the value exceeding US\$500 thousand, (2) remittances already approved by the competent authorities for direct investment or portfolio investment, and (3) outward remittances to China except for the exemptions stipulated in other CBC regulations belong to the second category.

For the third category, the CBC's approval for the transaction is required. A remittance by a local company or an individual whose accumulated remittance amount exceeds the annual ceiling and a single remittance by a non-resident exceeding US\$100 thousand fall in this category.

For a single transaction with the equivalent value below NT\$500 thousand, banks have the responsibility to classify the transaction according to its use and report to the CBC.

In line with the development of Internet banking, the CBC began to allow bank customers to make foreign exchange transactions via the Internet in May 2001. Trading over a bank's counter is no longer the only choice for bank customers making foreign exchange transactions. However, the amount of each transaction must be less than NT\$500 thousand. After the *Digital Signature Act* was enacted on April 1, 2002, with better trading security, the CBC allowed bank customers to trade large-value foreign exchange equal to or more than NT\$500 thousand through digital certification. Documents and declaration statements can be submitted via the Internet.

To ensure the accuracy of the contents of foreign exchange declarations, the CBC published guidelines and instructions on how to fill out the declaration statement correctly. The CBC also routinely reviews the foreign exchange declaration statements and conducts target examinations when necessary.

2. Launching a Large-Value Foreign Exchange Reporting System

As the foreign exchange declaration system only provides information on customer market conditions, in order to get a full picture of the market, the CBC thus requires banks to report their transactions in both the customer market and interbank market, as well as their positions. In September 1997, after the outbreak of the Asian financial crisis, the CBC established a large-value transaction reporting system in order to monitor capital movements in a more timely manner. At the beginning, banks were required to report each forward transaction with a value of US\$1 million or above in writing to the CBC. Each spot transaction with a value of US\$1 million or above with a local company and US\$500 thousand or above with an individual or association should be reported to the CBC by facsimile. In January 2002, banks began to report the above-mentioned transaction information to the CBC online to enhance efficiency. Another function of the reporting system is to gather information on banks' foreign exchange business by product, currency and counterparty to better understand the structure of the market.

3. Regulating Foreign Exchange Derivatives

As more complex foreign exchange derivatives were introduced into the market, the risk of market instability increased. In view of the possible problems associated with derivatives trading, the CBC adjusted regulations on foreign exchange derivatives to reduce excessive speculative trading in the market. The most important example was that the CBC set three additional regulations on banks engaging in foreign exchange margin trading, swaps and NDF transactions on May 25, 1998 against the background of excessive speculation in the foreign exchange market in the wake of the Asian financial crisis. For margin trading, the CBC restricted banks from engaging in foreign exchange margin transactions on behalf of individual or corporate clients through joint accounts. For swap transactions, the CBC restricted individuals from engaging in swap transactions involving the NT dollar as these transactions could be used by banks to circumvent reserve requirements and could also affect taxation. For NDF transactions, the CBC restricted local legal persons from undertaking NDFs involving the NT dollar in order to prevent banks from getting around the limitations on their foreign exchange positions. However, local legal persons could still hedge their exchange rate risk by using foreign exchange forwards, foreign exchange swaps, cross currency swaps and options.

In addition, the CBC stipulated that financial personnel engaging in the foreign exchange derivatives business should have professional licenses. For banks with permission to engage in the foreign exchange derivatives business, the CBC required them to enhance risk management practices and disclose complete risk information to their customers.

In sum, the Foreign Exchange Declaration System and the Large-Value Foreign Exchange Reporting System have been very important tools for the CBC's surveillance over the foreign exchange market. The regulations on foreign exchange derivatives set by the CBC have also helped reduce excessive speculative trading to some extent without impairing the ability of exporters and importers to hedge their exchange rate risk. However, during the post Plaza Accord period in 1986 and 1987, the Taiwan Strait crises in 1995 and 1996, and the Asian financial crisis in 1997, surges in speculative cross-border capital flows caused the NT dollar exchange rate to deviate from economic fundamentals. As a result, the CBC had to intervene in the market. Furthermore, the CBC has also made every effort to regularly provide more complete data on Taiwan's economic, trade, and financial statistics to the public in order to provide market participants with adequate and updated information on Taiwan's macroeconomic conditions. All these efforts have helped maintain an orderly foreign exchange market in Taiwan.

Section 4 Foreign Exchange Reserves Management

International reserves are external assets available for financing a country's trade deficits or coping with capital outflows. For member countries of the International Monetary Fund (IMF), international reserves consist of Special Drawing Rights (SDRs), reserve positions in the IMF, foreign exchange assets, monetary gold, and other claims. Since Taiwan is not a member of the IMF, it does not have SDRs or a reserve position in the IMF, and hence its international reserves only comprise foreign exchange reserves and monetary gold.

The foreign exchange reserves of Taiwan are held and managed by the CBC, and are accumulated mainly from direct purchases in the local foreign exchange market by the CBC and returns on investments. The foreign exchange reserves are mostly denominated in the US dollar, the Japanese yen, and the euro. Changes in the exchange rates of the US dollar against the Japanese yen or the euro result in changes in the US dollar value of the foreign exchange reserves. Taiwan's foreign exchange reserves have exhibited an upward trend over the past forty years. As of the end of 2004, foreign exchange reserves held by the CBC amounted to US\$241.7 billion.

The CBC holds foreign exchange reserves for two major purposes. One is to support the exchange rate of the NT dollar when necessary, and the other is to serve as reserves for the issuance of the national currency. With regard to the first purpose, two major events have occurred in the past. During the Taiwan Strait crises in 1995 and 1996, as well as the Asian financial crisis in 1997, the CBC sold large amounts of foreign exchange in the market in order to stabilize the NT dollar exchange rate amidst heavy depreciation pressure caused by massive capital outflows. With regard to the second purpose, it is stipulated in the *CBC Act* that the issuance of the NT dollar notes and coins must be backed by foreign exchange reserves. In practice, the NT dollar value of foreign exchange reserves held by the CBC always far exceeds the amount of currency issued.

The CBC focuses on liquidity, security, and profitability when managing foreign exchange reserves. To achieve these purposes, most of the foreign exchange reserves are invested in government bonds issued by major industrialized countries or deposited in foreign banks of high credit standing. The CBC adjusts its portfolio whenever changes in international economic conditions and the financial status of individual correspondent banks affect the return or risk profile of the reserve portfolio.

To make the best use of the foreign exchange reserves, the CBC appropriated a portion of the foreign exchange reserves as seed funds to set up the Taipei Foreign Currency Call-loan Market in August 1989. Through the market, local banks can borrow foreign currency funds with lower costs than they would pay in the international money market, and lend their



excess foreign currency funds with higher returns than they could obtain from overseas deposits. Initially, the US dollar, the Deutsche mark and the Japanese yen were the only three currencies traded in the call-loan market. Since February 1991, all foreign currencies quoted by local banks have been traded in the market. To attract market participants from abroad, brokerage firms in the local market have links with brokerage firms in Singapore and Hong Kong. The CBC has also increased seed funds for the market six times. The total amount of seed funds provided by the CBC accumulated to US\$20 billion, EUR1 billion, and JPY15 billion at the end of 2004. The volume of transactions in the market has grown approximately five-fold over the past ten years, as depicted in Chart 5-6.

Date of	Balance of Seed Funds (in billions)		
Appropriation	US Dollar	Mark / Euro	Japanese Yen
Aug. 7, 1989	3		
Oct. 5, 1989	4		
May 1, 1990	5	0.5 Mark	
Aug. 7, 1991	7	0.5 Mark	
Aug. 22, 1994	10	1 Mark	10
Apr. 29, 1995	10	1 Mark	15
Aug. 16, 2002	20	1 Euro	15

Table 5-1 Balance of Seed Funds for the Taipei ForeignCurrency Call-loan Market

Note: The seed funds denominated in the Deutsche mark has changed to the euro since January 1, 2000.



To promote economic development and industrial upgrading, the CBC has appropriated US\$10 billion of foreign exchange reserves to accommodate banks making loans to major investment projects. The CBC also deposited a small portion of foreign exchange reserves with overseas branches and OBUs of domestic banks. This measure has helped domestic banks expand their international banking business, which in turn has helped Taiwanese manufacturers operating overseas. Especially, during the Asian financial crisis when overseas branches of domestic banks faced a significant markup in the cost of foreign currency funds, the CBC increased the amount of foreign exchange reserves deposited with them.

In recent years, local life insurance companies began to increase the proportion of foreign currency assets in their portfolios. As a result, local banks frequently demand more foreign currency funds to meet the hedging needs of life insurance companies. The CBC began to swap foreign currency funds with banks when they experienced temporary shortages of foreign currency funds.

For most central banks, safety and liquidity are the two most important considerations for foreign exchange reserves management. This is especially the case for the CBC since it has no access to the liquidity support provided by the IMF. Furthermore, Taiwan's capital account has been largely liberalized. External shocks can be quickly transmitted to the Taiwan economy. Therefore, the CBC has to hold relatively large foreign exchange reserves and give priority to liquidity and safety over profitability when managing foreign exchange reserves.