

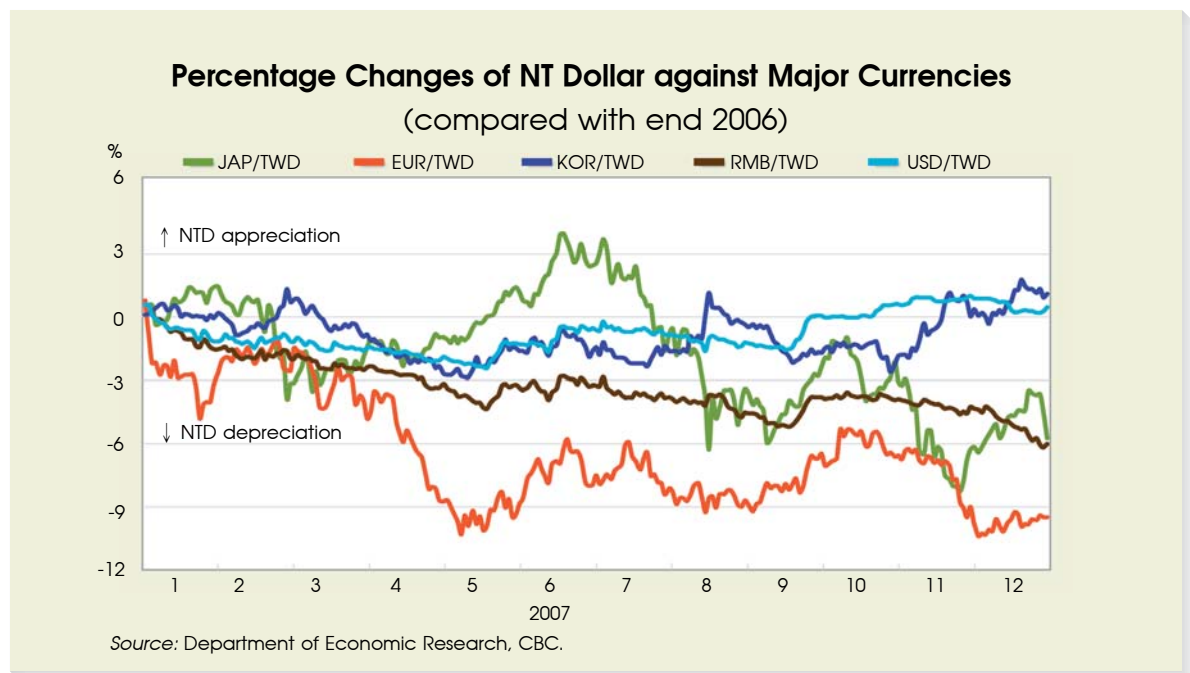
## 5. Foreign Exchange Market

### Moderate Depreciation of the NT Dollar

Although Taiwan's current account surplus continued to increase, the enormous portfolio investment abroad by Taiwan's residents kept the NT dollar relatively weak. On a daily average basis, the trade-weighted nominal effective exchange rate index of the NT dollar declined by 3.86 percent in 2007. The exchange rate movements of the NT dollar against the US dollar, the euro, the Japanese yen, the Chinese renminbi (RMB), and the Korean won are analyzed as follows.

The NT dollar against the US dollar declined to 33.398 on May 23, the lowest level of the year, and climbed to the year's highest level of 32.268 on November 30. During the first four and a half months, the US dollar strengthened because of the diminished American trade deficit, leading the NT\$/US\$ exchange rate to depreciate from 32.403 at the beginning of the year to a yearly low of 33.398 on May 23. After that, the NT dollar started to appreciate following the Bank's action to raise interest rates by 25 basis points and raise the required reserve ratio on foreign currency deposits from 0.125 percent to 5 percent, in addition to foreign capital inflows to the Taiwan stock market. The US dollar gained ground temporarily in the middle of August because American investors tended to hold the US dollar to cope with the high liquidity risk under the subprime mortgage crisis.

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However, from September to the end of the year, as the subprime mortgage crisis escalated and as major financial institutions declared massive losses, the expectation of a weakened American economy forced the Fed to cut the benchmark federal funds rate 3 times, totaling 100 basis points. On the other hand, the Bank raised interest rates twice by 25 basis points in total, which decreased the yield differential with the US dollar and resulted in an appreciation of the NT dollar. On December 31, the NT dollar stood at 32.443 against the US dollar, about 0.47 percent stronger than at the end of 2006. However, on a daily average basis, the NT\$/US\$ exchange rate depreciated by 0.95 percent compared with that in the previous year.

The European Central Bank raised interest rates in March and June to relieve the rising inflationary pressure resulting from the relatively strong growth of the euro area. Nevertheless, America cut the federal funds rate during the last four months of the year to stimulate the economy. Hence, the yield differential between these two areas was narrowed. From April onwards, the euro had continuously climbed to new highs since its launch in 1999. It appreciated to 1.4880 dollars per euro on November 26, the highest level of 2007. At the end of the year, the NT dollar against the euro was 9.07 percent below the level observed one year before. On a daily average basis, the NT dollar depreciated against the euro by 9.20 percent compared with the previous year.

The Japanese yen appreciated against the US dollar in February when investors reimbursed yen loans to unwind their carry trade position because the Bank of Japan (BOJ) raised interest rates. Afterwards, yen carry trade boomed again as the BOJ suspended rate hikes. Consequently, the Japanese yen depreciated against the US dollar. For the second half of the year, the Japanese yen turned strong, supported by positive economic outcome. The Japanese yen closed at 108.09 against the US dollar on November 27, the highest level of the year. The NT dollar kept stable against the Japanese yen for the first four months, and then gradually appreciated to a yearly high on June 23, but it weakened after that and hit the lowest level of the year on November 27. The NT dollar depreciated against the Japanese yen by 5.69 percent between the end of 2006 and 2007. On a daily average basis, the NT dollar slightly appreciated against the Japanese yen by 0.25 percent when compared with the previous year.

Due to the rapid growth of China's economy, increasing export surplus and foreign capital inflows, and the expectation of an RMB appreciation, the RMB was strong against the US dollar and hence against the NT dollar for most of 2007. Between the end of 2006 and 2007, the RMB appreciated by 6.86 percent against the US dollar, and the NT dollar depreciated by 5.98 percent against the RMB. On a daily average basis, the RMB appreciated by 4.83 percent against the US dollar, and the NT dollar depreciated by 5.51 percent against the RMB as compared with the previous year.

The Korean won was weak against the US dollar for the first two months of the year, but turned strong after March. This change was due to increasing foreign capital inflows to the Korean stock market, the action of Bank of Korea to increase the benchmark interest rate by 25 basis points, and the interest rate cuts in America during the second half of 2007 to cope with the subprime mortgage crisis. The Korean won reached an annual peak of 900.7 against the US dollar on October 31, and turned downwards during the last two months of the year. The NT dollar appreciated by 1.13 percent against the Korean won between the end of 2006 and 2007. On a daily average basis, the NT dollar depreciated by 3.60 percent against the Korean won in 2007 when compared with the previous year.

### Marked Increase in Trading in the Foreign Exchange Market

Trading in the Taipei foreign exchange market increased markedly in 2007. After deducting double counting on the part of inter-bank transactions, total net trading volume for the year increased by 18.5 percent from the previous year to US\$4,634.29 billion. The daily average turnover stood at US\$18.61 billion, representing an increase of 19.0 percent over the previous year. The increase in the turnover mainly resulted from an expansion of international trade, intensive capital movements, and a marked rise in third currency transactions, which was attributable to the sharp appreciation of the euro against the US dollar and the significant yield differential between Japan and the US.

In terms of trading partners, transactions between banks and non-bank customers accounted for 31.7 percent of the total net turnover, while inter-bank transactions made up a 68.3 percent share, including 15.3 percent for transactions among local banks and 53.0 percent for those between local banks and overseas banks.

As far as traded currencies are concerned, NT dollar trading against foreign currencies accounted for 40.0 percent of the total trading volume, of which the share of NT dollars against

### Turnover of Major Products in the Taipei Foreign Exchange Market

Unit: US\$ Million

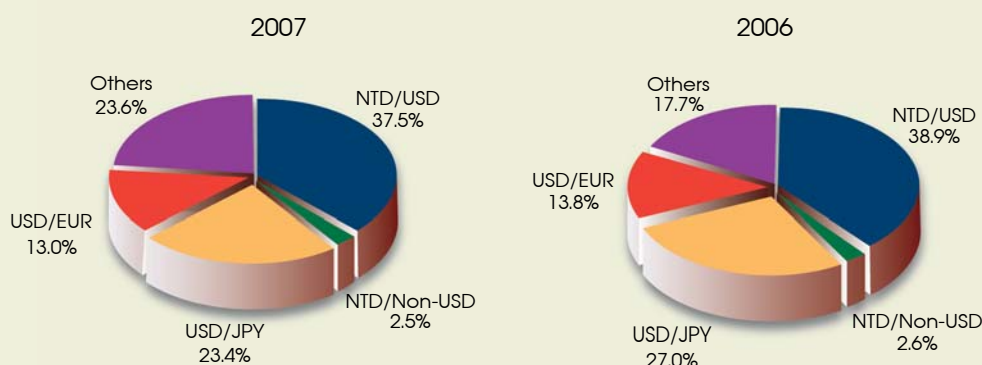
| Year                      | Spots     | Forwards | Forex Swaps | Margin Trading | Options | Cross Currency Swaps | Total     |
|---------------------------|-----------|----------|-------------|----------------|---------|----------------------|-----------|
| 2003                      | 1,058,850 | 156,323  | 361,490     | 33,907         | 213,198 | 13,930               | 1,837,698 |
| 2004                      | 1,289,872 | 273,931  | 617,577     | 30,299         | 350,514 | 17,764               | 2,579,955 |
| 2005                      | 1,550,731 | 274,370  | 823,483     | 24,378         | 295,908 | 39,788               | 3,008,657 |
| 2006                      | 1,910,270 | 411,182  | 1,107,646   | 37,809         | 396,578 | 47,353               | 3,910,838 |
| 2007                      | 2,418,963 | 477,189  | 1,362,112   | 42,482         | 303,857 | 29,683               | 4,634,286 |
| 2006-2007 Growth Rate (%) | 26.6      | 16.1     | 23.0        | 12.4           | -23.4   | -37.3                | 18.5      |

Source: Department of Foreign Exchange, CBC.

US dollars was 37.5 percent. Transactions in third currencies accounted for 60.0 percent of the total trading volume, with trading in currency pairs of US dollar-Japanese yen and US dollar-euro accounting for shares of 23.4 percent and 13.0 percent, respectively.

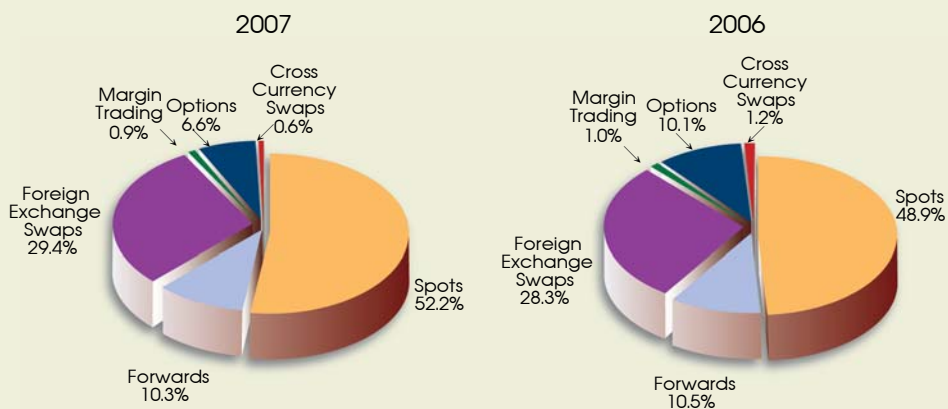
With respect to types of transactions, spot transactions accounted for the highest share of 52.2 percent of total turnover, followed by foreign exchange swaps of 29.4 percent, forwards of 10.3 percent, options of 6.6 percent, margin trading of 0.9 percent, and cross currency swaps of 0.6 percent. Compared with 2006, except for a decrease in cross currency swaps and options transactions, the trading volumes of all the other types increased, and spot transactions and foreign exchange swaps posted the highest growth rates of 26.6 percent and 23.0 percent, respectively. The main reasons for the former were the continued expansion of international

### Composition of Foreign Exchange Transactions by Traded Currency



Source: Department of Foreign Exchange, CBC.

### Composition of Foreign Exchange Transactions by Product



Source: Department of Foreign Exchange, CBC.

## Turnover of Other Products in the Taipei Foreign Exchange Market

Unit: US\$ Million

| Year                      | Interest rate-related Products |                     |                       |  | Commodity-related Products |                       | Stock Index Options | Credit Derivatives | Total   |
|---------------------------|--------------------------------|---------------------|-----------------------|--|----------------------------|-----------------------|---------------------|--------------------|---------|
|                           | Forward Rate Agreements        | Interest Rate Swaps | Interest Rate Options | Foreign Currency Interest Rate Futures | Commodity Options          | Commodity Price Swaps |                     |                    |         |
| 2003                      | 20,121                         | 41,855              | 10,066                | 12,036                                 | 3,313                      | 175                   | 663                 | –                  | 88,229  |
| 2004                      | 20,020                         | 77,664              | 45,635                | 12,500                                 | 6,733                      | –                     | 1,012               | 168                | 163,823 |
| 2005                      | 25,089                         | 78,528              | 23,668                | 29,385                                 | 4,594                      | –                     | 389                 | 581                | 162,235 |
| 2006                      | 24,796                         | 69,219              | 11,970                | 40,992                                 | 1,827                      | –                     | 1,005               | 964                | 150,772 |
| 2007                      | 12,958                         | 93,072              | 17,475                | 176,723                                | 6,947                      | –                     | 627                 | 5,243              | 313,044 |
| 2006-2007 Growth Rate (%) | -47.7                          | 34.5                | 46.0                  | 331.1                                  | 280.3                      | –                     | -37.6               | 444.2              | 107.6   |

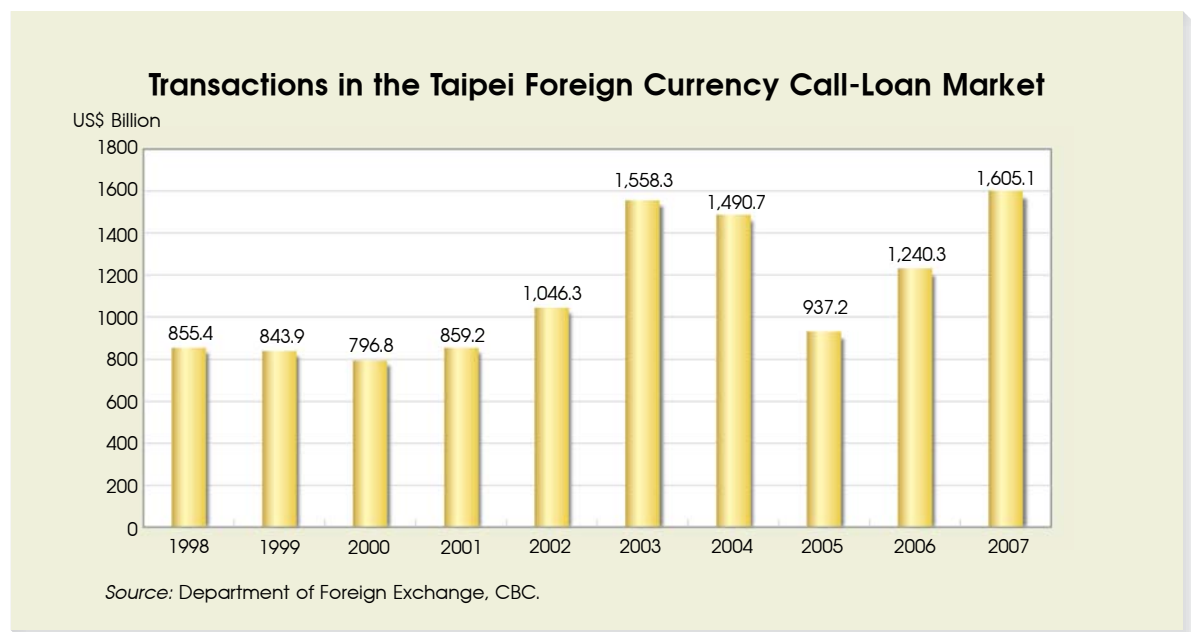
Source: Department of Foreign Exchange, CBC.

trade, the increased overseas investments of domestic companies and individuals, and the expectation of an NT dollar appreciation. The latter was because domestic companies used cross currency swaps and foreign exchange swaps to hedge risks and also because banks used the inter-bank swap market to adjust their currency composition.

In 2007, the turnover of forwards, swaps and options based on foreign currency interest rates, stock price indices, commodity prices, and credit amounted to US\$313.04 billion. Of this amount, interest rate-related derivatives accounted for the lion's share of US\$300.23 billion or 95.9 percent, representing a significant annual growth rate of 104.3 percent.

### Increasing Transactions in the Foreign Currency Call-Loan Market

The transaction volume in the foreign currency call-loan market in 2007 was US\$1,605.12



billion, an increase of 29.4 percent over the previous year. Of this amount, US dollar transactions accounted for US\$1,601.15 billion, about 29.3 percent higher than that in 2006. The increase was mainly because banks used over-night call loans to allocate short-term funds efficiently or to relieve the credit crunch resulting from America's subprime mortgage crisis. Japanese yen transactions totaled ¥259.87 billion in 2007, representing a large increase of 2.57 times the figure recorded in 2006, but the share remained rather small at only 0.14 percent. The increase in turnover mainly reflected the increase in yen carry trade, as the stall in the BOJ's rate rises caused the interest rate spread between Japan and the US to remain significant. The amount of euro transactions totaled only €1.0 billion, 91.7 percent higher than that in the previous year.

### **Moderate Increase in the Assets of Offshore Banking Units**

There were 65 offshore banking units (OBUs) in operation at the end of 2007. Domestic banks operated 38 of the OBUs, while foreign banks ran the other 27 units. Owing to the increases in claims on foreign financial institutions and nonresidents and in portfolio investment, the combined assets of all OBUs reached a historic high of US\$91.28 billion at the end of the year, representing an obvious increase of US\$14.60 billion or 19.0 percent from the previous year-end. The OBUs' main uses of funds were due from affiliated branches and deposits with financial institutions. These accounted for the lion's share, or 53 percent of total assets. Second to these were loans with a share of 27 percent. Domestic bank OBUs accounted for US\$66.08 billion or 72 percent of these combined assets, and foreign bank OBUs accounted for US\$25.20 billion, or 28 percent of the total. In terms of fund destination, 55 percent of funds went to Asia, and 24 percent went to the Americas.

The OBUs' main sources of funds were due to affiliated branches and deposits by financial institutions, which together accounted for 61 percent of total liabilities. These were followed by deposits of non-financial institutions, which accounted for 29.9 percent of total liabilities. OBUs have been gradually developing into funding centers for overseas Taiwanese firms. In terms of geographical origins, 68 percent of funds came from Asia, and 21 percent from the Americas.

The forex-trading turnover of all OBUs in 2007 was US\$117.82 billion, of which US\$66.90 billion was for spot transactions, and US\$23.95 billion was for foreign exchange swap transactions, decreasing by 7.7 percent and 9.5 percent, respectively, compared with the previous year. However, forward transactions significantly increased by 69.7 percent to US\$26.97 billion, mainly because of companies' risk hedging actions which reflected the expectations over the appreciation of the RMB and the euro and the volatility of the Japanese yen against the US

## Consolidated Balance Sheet of Offshore Banking Units in Banking System

Unit: US\$ Million

| End of Year               | Loans to Non-financial Institutions | Portfolio Investment | Claims on Financial Institutions | Other Assets | Total Assets= Total Liabilities | Deposits of Non-financial Institutions | Due to Financial Institutions | Securities Issued | Other Liabilities |
|---------------------------|-------------------------------------|----------------------|----------------------------------|--------------|---------------------------------|--|-------------------------------|-------------------|-------------------|
| 2003                      | 15,939                              | 7,648                | 37,420                           | 3,541        | 64,548                          | 16,307                                 | 44,288                        | 0                 | 3,953             |
| 2004                      | 18,066                              | 6,734                | 37,105                           | 7,314        | 69,219                          | 18,810                                 | 42,688                        | 0                 | 7,721             |
| 2005                      | 18,697                              | 8,718                | 38,432                           | 4,311        | 70,158                          | 20,712                                 | 44,305                        | 0                 | 5,141             |
| 2006                      | 19,473                              | 10,805               | 40,352                           | 6,056        | 76,686                          | 24,227                                 | 46,664                        | 483               | 5,312             |
| 2007                      | 23,931                              | 11,969               | 47,788                           | 7,593        | 91,281                          | 27,263                                 | 55,939                        | 499               | 7,580             |
| 2006-2007 Growth Rate (%) | 22.9                                | 10.8                 | 18.4                             | 25.4         | 19.0                            | 12.5                                   | 19.9                          | 3.3               | 42.7              |

Source: Financial Statistics Monthly, CBC.

dollar. The total turnover of other derivative products, including margin trading, options, foreign currency interest rate swaps, financial futures, foreign currency forward rate agreements, cross currency swaps, commodity swaps, and credit derivatives, amounted to US\$27.24 billion, representing a significant increase of 86.7 percent over the previous year. Among these, foreign currency interest rate futures tremendously increased to US\$1.76 billion, 3.31 times more than that in the previous year. This was mainly because banks expected a downward trend of the US federal funds rate and, therefore, increased US dollar interest rate future transactions to hedge the risk.