

## 4. Foreign Exchange Market

### The NT Dollar Exchange Rate

In 2019, on a daily average basis, the NT dollar appreciated against the Korean won, the euro, and the renminbi (RMB) but depreciated against the Japanese yen and the US dollar. The trade-weighted nominal effective exchange rate index of the NT dollar decreased by 0.24% on a daily average basis. The exchange rate movements of the NT dollar vis-à-vis each of the above foreign currencies are analyzed as follows.

The NT dollar broadly fluctuated against the US dollar in the first eight months and appreciated toward the end of 2019. In May, because of a flare-up of US-China trade tensions, the NT dollar depreciated against the US dollar. Later, US President Donald Trump announced an additional 10% tariff on US\$300 billion worth of Chinese imports, which led the RMB to trade below the symbolic level of 7 against the US dollar on August 5, and, as a result, the NT dollar fell to a yearly low against the US dollar. In early September, as the US and China agreed to reopen trade talks in October, and in mid-December, as the US and China reached the "phase one" trade deal, the NT dollar appreciated against the US dollar. At the end of 2019, the NT dollar appreciated by 2.08% against the US dollar compared with the end of the previous year. On a daily average basis, the NT dollar depreciated against the US dollar by 2.49% in 2019.

At the beginning of 2019, the euro was constrained by the euro area's weak economic performance and Brexit uncertainty, causing the NT dollar to appreciate against the euro. From early May, owing to the euro area's stronger-than-anticipated economic performance and rising US-China trade tensions, the NT dollar against the euro depreciated and reached a yearly low on June 12. Later, the ECB President's talk of a negative euro area outlook, combined with a rate cut in September and announcement to relaunch its QE program at a monthly pace of €20 billion beginning from November, led to euro weakness; therefore, the NT dollar against the euro fluctuated upwards in general. Compared with the end of the previous year, the NT dollar appreciated against the euro by 4.31% at the end of 2019. On a daily average basis, the NT dollar appreciated against the euro by 2.82%.

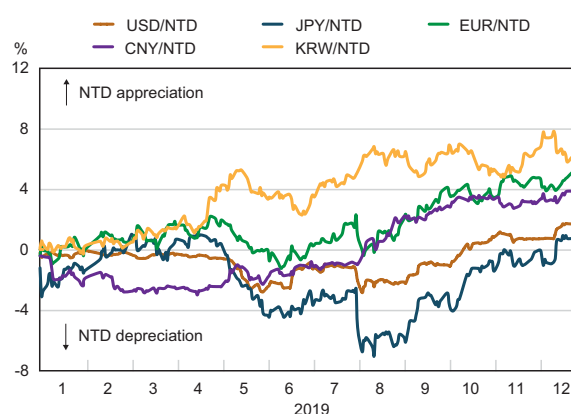
In 2019, the NT dollar vis-à-vis the yen appreciated in the first quarter, depreciated in the second quarter, and appreciated again toward the end of 2019. Early in the year, because of easing US-China trade friction, the NT dollar appreciated against the yen. Later, renewed trade conflict fears drove the yen higher on safe-haven demand, sending the NT dollar against the yen to a yearly low on August 13. Then, as the US and China agreed to resume trade negotiations and the BoJ introduced new forward guidance to signal a greater chance of future rate cuts, the yen weakened, leading

the NT dollar to appreciate against the yen. In sum, the NT dollar appreciated by 0.46% against the yen at the end of 2019 compared with the previous year end. On a daily average basis, the NT dollar depreciated against the yen by 3.74%.

The NT dollar against the RMB fluctuated in the first half of 2019 and appreciated toward the end of the year. Early in the year, as market participants were optimistic about US-China trade negotiations, the NT dollar stayed relatively stable against the RMB. In May, the RMB weakened on rising trade tensions, causing the NT dollar against the RMB to appreciate. In December, although the "phase one" trade deal between the US and China led to refreshed RMB strength against the US dollar, the NT dollar against the RMB appreciated to a yearly high on December 23 because of inflows of foreign portfolio investments. Overall, the NT dollar appreciated against the RMB by 3.58% between end-2018 and end-2019. On a daily average basis, the NT dollar appreciated by 1.82% against the RMB when compared with the previous year.

Early in 2019, the Korean won was dampened by the failure to reach an agreement in the Trump-Kim summit, and the NT dollar appreciated against the Korean won. After that, sluggish exports, and downward revision of the 2019 GDP growth forecast and two interest rate cuts by the Bank of Korea led the Korean won to weaken continuously, and the NT dollar against the Korean won rose to a yearly high on December 11. Compared with the end of 2018, the NT dollar appreciated by 5.65% against the Korean won at the end of 2019. On a daily average basis, the NT dollar appreciated by 3.26% against the Korean won in 2019.

**Percent Changes of NT Dollar  
Against Major Currencies**  
( Compared with End-2018 )



### Annual Changes of NTD Exchange Rate Against Major Currencies

	NTD/USD	NTD/EUR	NTD/JPY	NTD/CNY	NTD/KRW
Exchange Rate (2019/12/31)	30.106	33.749	0.2771	4.3217	0.0261
Exchange Rate (2018/12/28)	30.733	35.203	0.2784	4.4762	0.0275
Annual Change	2.08%	4.31%	0.46%	3.58%	5.65%
Average Exchange Rate (2019)	30.925	34.620	0.2837	4.4765	0.0265
Average Exchange Rate (2018)	30.156	35.595	0.2731	4.5580	0.0274
Annual Change	-2.49%	2.82%	-3.74%	1.82%	3.26%

Source: Department of Economic Research, CBC.

## Foreign Exchange Market

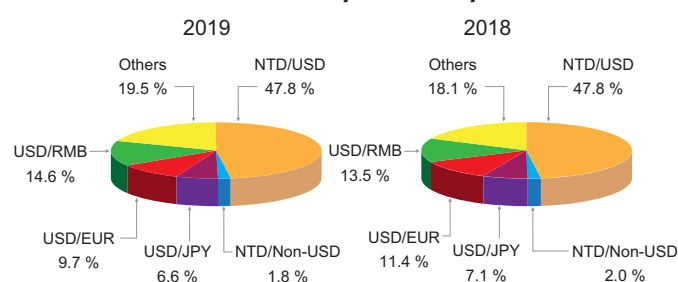
Trading in the Taipei foreign exchange market increased in 2019. Total net trading volume for the year was US\$8,014.0 billion, representing a 0.3% year-on-year increase. The daily average turnover was US\$32.5 billion in 2019.

In terms of trading partners, transactions between banks and non-bank customers accounted for 32.7% of the total turnover, while interbank transactions made up 67.3%, including 23.7% for transactions among local banks and 43.6% for those between local banks and overseas banks.

As far as traded currencies were concerned, NT dollar trading against foreign currencies accounted for 49.6% of the total trading volume, of which trading against the US dollar (USD) made up a dominant 47.8%. Transactions in third currencies contributed to 50.4% of the total trading volume, with trading in currency pairs of USD-RMB, USD-euro, and USD-yen accounting for respective shares of 14.6%, 9.7%, and 6.6%. Compared with 2018, NT dollar trading against foreign currencies increased by 0.02%. Transactions in third currencies increased by 0.64%.

With respect to types of transactions, the major types were foreign exchange swaps and spots, accounting for 50.0% and 38.4% of total turnover, respectively. Compared with 2018, the trading volume of foreign exchange swaps and forwards increased, whereas those of the other types decreased.

**Composition of Foreign Exchange Transactions by Currency Pair**



Source: Department of Foreign Exchange, CBC.

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

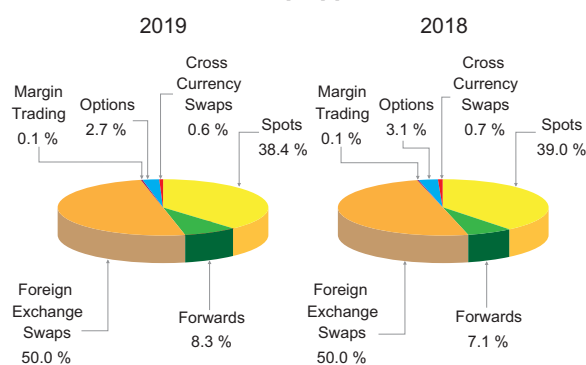
Unit: US\$ Million

Year	Spots	Forwards	Forex Swaps	Margin Trading	Options	Cross Currency Swaps	Total
2015	3,405,177	475,473	3,292,799	25,055	973,082	33,023	8,204,608
2016	2,780,002	477,036	3,430,524	17,437	358,694	50,109	7,113,802
2017	2,826,236	423,119	3,550,558	12,402	242,537	43,934	7,098,786
2018	3,111,414	567,790	3,992,873	7,876	249,254	58,354	7,987,560
2019	3,079,471	661,954	4,007,094	6,430	213,734	45,308	8,013,990
2018-2019 Growth Rate (%)	-1.0	16.6	0.4	-18.4	-14.3	-22.4	0.3

Source: Department of Foreign Exchange, CBC.

For other foreign currency derivatives, including forwards, swaps, and options based on foreign currency interest rates, stock price indices, commodity prices, and credit derivatives, the total turnover amounted to US\$185.1 billion. Of this amount, interest rate-related derivatives accounted for the lion's share with US\$180.0 billion, or 97.2%, with its turnover decreasing by 29.2% from the previous year. Interest rate futures accounted for the majority of this decrease, down by US\$52.6 billion.

### Composition of Foreign Exchange Transactions by Type of 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	Subtotal	Commodity Options			
2015	4,928	42,763	2,152	56,088	105,930	4,058	486	1,122	111,596
2016	120	41,952	5,743	51,222	99,037	3,053	145	933	103,168
2017	-	49,453	11,412	116,911	177,776	2,802	121	857	181,556
2018	-	78,848	25,974	149,310	254,132	3,524	403	2,861	260,920
2019	-	70,809	12,429	96,751	179,989	3,771	384	969	185,113
2018-2019 Growth Rate (%)	-	-10.2	-52.1	-35.2	-29.2	7.0	-4.7	-66.1	-29.1

Source: Department of Foreign Exchange, CBC.

### RMB Business

RMB investment tools became even more diversified during 2019. By the end of 2019, there were 65 domestic banking units (DBUs) and 57 offshore banking units (OBUs) engaging in RMB business. The balance of RMB deposits amounted to RMB261.0 billion; RMB remittances totaled RMB1,666.1 billion in 2019; RMB settlement through the Taipei Branch of the Bank of China totaled RMB4,631.6 billion.

## RMB Business Conducted by Financial Institutions

Unit: RMB Billion

Business Items	Amount
Deposit balance (include NCDs, end of 2019)	261.0
Total remittances (February 2013 to December 2019)	11,372.4
Total settlement through the Taipei Branch of the Bank of China (February 2013 to December 2019)	27,737.8
Total value of 152 RMB-denominated bonds issued (as of the end of 2019)	99.4
Accumulated premium receipts from RMB-denominated investment-linked insurance business (up to the end of 2019)	19.5
Accumulated premium receipts from RMB-denominated traditional insurance business (up to the end of 2019)	5.8

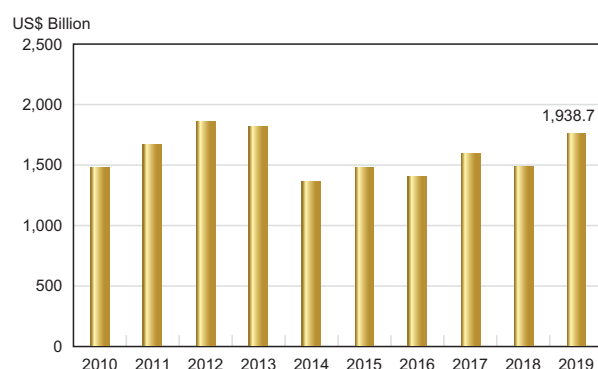
Source: Department of Foreign Exchange, CBC.

## Foreign Currency Call Loan Market

The transaction volume in the foreign currency call loan market in 2019 was US\$1,938.7 billion, an increase of 10.5% over the previous year. Of this amount, US dollar transactions accounted for a dominant share with US\$1,815.9 billion, making up 93.7% of the total while increasing by 10.8% from 2018. RMB transactions reached RMB732.7 billion in 2019, making up a share of 5.5% of the total and recording a year-on-year increase of 9.2% in volume. Japanese yen transactions reached ¥754.7 billion in 2019, representing a small share of 0.4% of the total with a year-on-year fall of 36.4% in volume. The amount of euro transactions amounted to €0.7 billion, with a modest share of 0.04%. Other currencies accounted for a combined 0.36% of the total transaction volume. The balance of foreign currency call loan transactions at the end of 2019 was US\$49.3 billion.

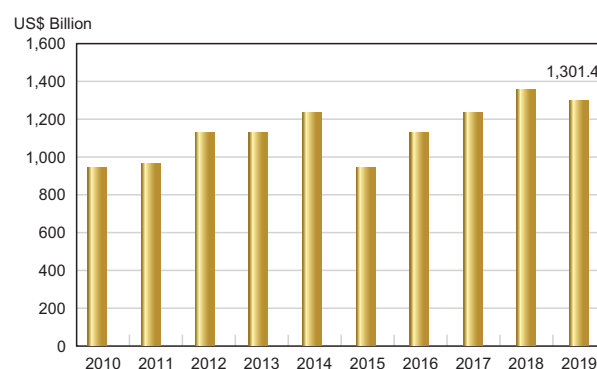
The volume of foreign currency-NTD swap transactions reached US\$1,301.4 billion, 4.4% less than 2018, while the balance was US\$242.8 billion at the end of 2019.

**Transactions in the Taipei Foreign  
Currency Call Loan Market**



Source: Department of Foreign Exchange, CBC.

**Transactions in the Foreign Currency  
Swap Market**



Source: Department of Foreign Exchange, CBC.

## OBU Assets

There were 59 OBUs at the end of 2019, with 36 of them operated by domestic banks and the other 23 by foreign banks. The total assets of all OBUs increased to US\$221.9 billion at the end of the year, representing an increase of US\$20.9 billion or 10.4% from the previous year end owing to increasing portfolio investments. Domestic bank OBUs made up 89.0% of these combined assets with an amount of US\$197.5 billion, and the OBUs of foreign banks accounted for US\$24.4 billion or 11.0% of the total.

In terms of the uses of funds, loans to non-financial institutions, at US\$80.2 billion, represented the majority share of 36.2% of total OBU assets. Securities investments came in second place, accounting for 32.5% of total OBU assets. In terms of the destination for funds, Asia accounted for the majority with 51.0%, followed by America at 32.0%.

The OBUs' main source of funds came from due to financial institutions, making up 50.0% of total liabilities and equity. Deposits of non-financial institutions accounted for 39.1% of the total. The main funding origin of OBUs was Asia, accounting for the majority with 64.0%, followed by America with a share of 24.0%.

Forex trading turnover of all OBUs rose by 6.3% to US\$676.5 billion, of which US\$394.7 billion went for spot transactions, US\$113.9 billion for forward transactions, and US\$168.0 billion for forex swap transactions. Compared with the previous year, the growth rates of trading of spots, forwards, and forex swaps were 13.2%, -18.6%, and 13.8%, respectively.

For OBUs, the total turnover of other derivatives products decreased by 5.1% to US\$337.8 billion over the previous year. Of this amount, options transactions registered a turnover of US\$142.9 billion, making up 42.1% of the total.

### Balance Sheet of OBUs in Banking System

Unit: US\$ Million

Year/month (End of Month)	Loans to Non-financial Institutions	Portfolio Investment	Claims on Financial Institutions	Other Assets	Total Assets= Total Liabilities & Equity	Deposits of Non-financial Institutions	Due to Financial Institutions	Securities Issued	Other Liabilities & Equity
2015/12	81,198	29,547	43,932	18,388	173,065	66,137	88,228	0	18,700
2016/12	77,236	42,803	44,929	11,467	176,435	72,245	86,865	0	17,326
2017/12	81,074	53,819	58,336	9,717	202,946	77,144	106,712	0	19,090
2018/12	82,161	59,180	48,552	11,074	200,968	78,704	96,622	0	25,641
2019/12	80,227	72,195	58,407	11,026	221,855	86,680	110,843	0	24,332
2018/12-2019/12 Growth Rate (%)	-2.4	22.0	20.3	-0.4	10.4	10.1	14.7	0.0	-5.1

Source: Financial Statistics Monthly, CBC.