

Financial Developments



II. Financial Developments

1. Overview

In 2019, the Bank's policy rates remained unchanged, deposit rates and the base lending rate offered by banks stayed stable, while the weighted average interest rate on deposits and the rate on loans slightly moved downward. Against a backdrop of ample market liquidity, the interbank overnight call loan rate remained low, bills market rates rose modestly, and the average 10-year government bond yield declined. Loans and investments of monetary financial institutions grew at a pace slower than that of the previous year as the domestic economy moderated and stock market turnover shrank. The monetary aggregate M2 growth rate slowed from 3.52% registered in 2018 to 3.46%.

The NT dollar exchange rate was mainly affected by the developments of the US-China trade conflict during the year, with the currency weakening against the US dollar before strengthening later. At the end of 2019, the NT dollar appreciated against the US dollar compared with a year earlier; however, on a daily average basis, the NT dollar depreciated against the US dollar.

In the stock market, the Taiwan Stock Exchange Capitalization Weighted Stock Index, the TAIEX, swung to a yearly high in the middle of December, a record unseen for 29 years. The daily average transaction value shrank compared with the previous year but was the second highest since 2011.

M1B Grew Faster but M2 Growth Slowed

The monetary aggregate M2, measured on a daily average basis, recorded an annual growth rate of 3.46% in 2019. This was lower than the 3.52% registered in 2018 yet remained within the Bank's 2.5% to 6.5% target range for the year. The decline was attributable to increasingly diversified asset allocation and slower growth of bank loans and investments. The annual growth rate of M1B, measured on a daily average basis, rose to 7.15% in 2019 from 5.32% a year earlier, mainly because of faster growth in transaction deposits. Meanwhile, the annual growth rate of reserve money went up in 2019, also as a result of faster growth in transaction deposits.

Bank Loans and Investments Grew More Slowly

The annual growth rate of bank loans and investments decreased from 5.39% at the end of 2018 to 4.96% at the end of 2019. The decrease was due to the US-China trade conflict, export trade contraction, and slower economic growth in the first half of the year. If loans and investments of life insurance companies, non-accrual loans reclassified and bad loans written off by monetary

financial institutions, and funds raised directly from capital markets were all taken into account, the total outstanding amount of funds raised by the non-financial sector would register an annual growth rate of 4.04% at the end of 2019, higher than the 3.85% recorded a year earlier.

Both Deposit Rates and Loan Rates Slightly Declined

In 2019, as the Bank's policy rates remained unchanged, interest rates on deposits and the base lending rate offered by banks stayed steady.

For domestic banks as a whole, the weighted average interest rate on deposits slightly declined by 0.01 percentage points, driven lower mainly by a shift of funds in the third quarter from time deposits to demand deposits, which had lower rates. Meanwhile, the weighted average interest rate on loans slightly declined by 0.03 percentage points, mainly owing to increases in low-interest loans to local governments and government enterprises and interest rate cuts on loans by some banks to boost lending business.

Bills Market Rates Slightly Increased, but the 10-Year Government Bond Yield Decreased

Against the background of mild inflation expectations, the Bank continued to conduct open market operations to maintain market liquidity at an appropriately easy level. The interbank overnight call loan rate remained at a low level, fluctuating between 0.176% and 0.202% during 2019. With regard to the bills market, money market rates fluctuated in a narrow range and edged slightly higher year on year because of stronger demand for funds amid an upturn in private investment.

The yield on the benchmark 10-year government bond trended downward, mainly because of ample market liquidity and the Fed's rate reductions. In terms of issuance, as the Central Government Debt Service Fund renewed maturing government bonds and acted to meet budget needs, the total amount of government bonds issued increased by NT\$62.7 billion over the previous year.

Average Exchange Rate Showed Depreciation

The NT dollar against the US dollar depreciated in May 2019 as the US-China trade conflict flared up. US President Trump announced an additional 10% tariff on US\$300 billion of imported merchandises from China on August 1, causing the NT dollar to depreciate against the US dollar to a yearly low on August 5. In early September, the NT dollar appreciated against the US dollar owing to the easing of US-China trade friction as both sides agreed to resume talks in early October. When the US and China reached the "phase one" trade deal on December 13, shoring up currencies in emerging Asia including the renminbi, the NT dollar against the US dollar also maintained its strength. At the end of 2019, the NT dollar appreciated by 2.08% year on year against the US dollar. However, on a daily average basis, the NT dollar depreciated against the US dollar by 2.49% in 2019.

Stock Index Swung Higher, but Turnover Shrank

In the beginning of 2019, the TAIEX rose along with international stock rallies and reached 11,096 on May 3, bolstered by an apparent cooling of the US-China trade friction, international capital flows back into emerging market countries, net purchases in the local market by foreign investors, and expectations of record high stock dividends from domestic firms. Afterwards, owing to unstable US-China relations, Hong Kong political unrest, and sell-offs by foreign investors in the local market, the TAIEX swung downward until the end of August. Thereafter, bolstered by the Fed's rate cuts, US stock rallies renewing records, better-than-expected sales of new iPhones, the trade diversion effects of US tariffs on Chinese goods, and net foreign purchases of technology shares, the TAIEX rose to a yearly high of 12,122 on December 18, hitting the highest level in 29 years. The TAIEX closed at 11,997 points at the end of the year, increasing by 23.3% compared with the previous year end. The daily average transaction value was NT\$109.4 billion, shrinking by 8.8% compared with the previous year, but still the second highest since the year of 2011.

2. Banking Sector

Number of Monetary Financial Institutions

At the end of 2019, the number of monetary financial institutions (defined hereafter in this chapter as excluding the central bank) decreased to 401. The number of domestic banks decreased by one as ANZ Bank (Taiwan) Limited was merged into Australia and New Zealand Banking Group Limited, Taipei Branch. As for money market mutual funds, the number remained zero after the last remaining fund was liquidated in May 2017. The numbers of the other types of monetary financial institutions all stood unchanged.

In addition to the monetary financial institutions, the number of financial holding companies was 16, the same as 2018.

Number of Monetary Financial Institutions by Type

Types of institutions	End of 2019	End of 2018	Annual Change
Total Number of Main Offices	401	402	-1
Domestic Banks	37	38	-1
Foreign and Mainland Chinese Banks	29	29	0
Credit Cooperatives	23	23	0
Credit Departments of Farmers' and Fishermen's Associations	311	311	0
Chunghwa Post	1	1	0
Total Number of Branches	6,092	6,083	9
Local Branches	5,888	5,879	9
Overseas Branches	145	144	1
Offshore Banking Units	59	60	-1

Sources: 1. *Financial Statistics Monthly*, CBC.
2. Department of Financial Inspection, CBC.

Market Shares of Deposits and Loans

In terms of deposits, the market share of domestic banks grew to 78.56% at the end of 2019, mainly because a year-on-year increases in inward remittances of overseas sales revenues - which were then converted into local currency - caused transaction and non-transaction deposits to rise. The market share of foreign and Mainland Chinese banks rose to 1.66% at the end of 2019 because some foreign and Mainland Chinese banks provided some firms with preferential interest rates for large-value transaction deposits and foreign currency deposits, which caused their passbook deposits and foreign currency deposits to increase.

Chunghwa Post's market share narrowed to 13.96% as postal savings deposits registered an increase smaller than that in total deposits. The market share of credit departments of farmers' and fishermen's associations declined to 4.25%. The market share of credit cooperatives was the same as the previous year.

In terms of loans, the market share of domestic banks continued to slip to 89.44%, mainly because CPC Corporation generated more profits amid international oil price rises and the Taiwan Railways Administration issued more commercial

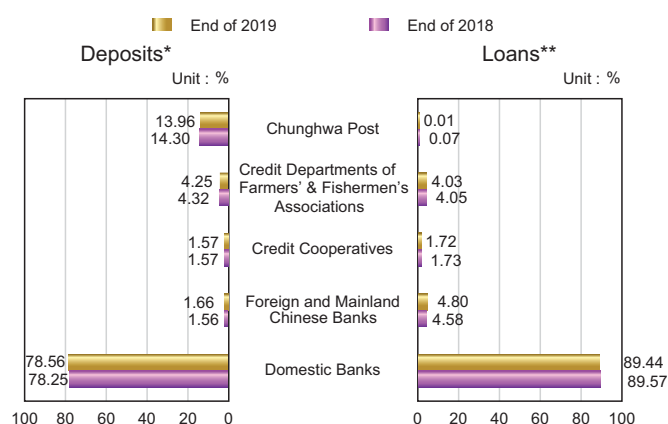
paper, both of which caused a decrease in borrowings from domestic banks. Meanwhile, foreign and Mainland Chinese banks' market share climbed to 4.80% because of faster growth in loans to enterprises. Chunghwa Post's market share declined to 0.01%, reflecting a decrease in lending to bills finance companies. As for the other institution types, the market share of credit departments of farmers' and fishermen's associations fell to 4.03%, while that of credit cooperatives edged down to 1.72%.

Sources and Uses of Funds

At the end of 2019, the total amount of funds in monetary financial institutions was NT\$51,695 billion, increasing by NT\$2,597 billion compared to the end of 2018. The combined share of transaction and non-transaction deposits was nearly 85%. Against a backdrop of abundant market liquidity, the balances of transaction deposits and non-transaction deposits kept growing, with annual growth rates of 7.44% and 2.91%, respectively.

In the case of fund uses, bank loans still accounted for over 50% of total uses of funds at the end of 2019. Although affected by the US-China trade conflict in the first half of the year, the balance of lending by monetary financial institutions increased by NT\$1,371 billion from the end of the previous year owing to stronger demand for funds in the corporate sector in the second half of the year. The annual growth rate was 4.96%, which was lower than the 5.07% at the end of the previous year. As for net foreign assets, the annual growth rate rose to 24.99% under the influence of net foreign capital inflows.

Market Shares of Deposits and Loans by Category of Monetary Financial Institutions



Notes: * Excluding the values of the host contracts of structured products issued by banks.

** Including data for securities acquired under reverse repurchase agreements.

Source: Financial Statistics Monthly, CBC.

Portfolio investments by monetary financial institutions measured on a cost basis grew at a slower pace of 5.32% in 2019, mainly because banks became more conservative with their investments as they were watchful of uncertainties over global economic conditions. As for banks' purchases of CDs issued by the CBC, its share remained broadly the same as in the previous year, while its growth rate turned positive at 0.44% at the end of 2019 from -0.67% a year earlier.

Sources and Uses of Funds in Monetary Financial Institutions¹

Unit: NT\$ Billion

	End of 2019			End of 2018			Annual Change	
	Amount	Share (%)	Annual Growth Rate (%)	Amount	Share (%)	Annual Growth Rate (%)	Amount	Share (%)
Sources:								
Transaction Deposits ²	16,946	32.78	7.44	15,773	32.13	5.51	1,173	0.65
Non-transaction Deposits ³	26,831	51.90	2.91	26,072	53.10	-0.02	759	-1.20
NT Dollar Deposits	20,797	40.23	1.75	20,439	41.63	0.40	358	-1.40
Foreign Currency Deposits ⁴	6,034	11.67	7.13	5,633	11.47	-1.54	402	0.20
Government Deposits	1,069	2.07	2.53	1,043	2.12	11.13	26	-0.05
Other Items	6,849	13.25	10.29	6,210	12.65	3.15	639	0.60
Total	51,695	100.00	5.29	49,098	100.00	2.32	2,597	0.00
Uses:								
Net Foreign Assets ⁴	4,500	8.70	24.99	3,600	7.33	-15.46	900	1.37
Loans	29,011	56.12	4.96	27,640	56.29	5.07	1,371	-0.17
NT Dollar Loans	28,063	54.29	5.24	26,666	54.31	5.36	1,397	-0.02
Foreign Currency Loans ⁴	948	1.83	-2.63	973	1.98	-2.41	-26	-0.15
Portfolio Investments ⁵	6,411	12.40	5.32	6,088	12.40	6.34	324	0.00
Purchases of CDs Issued by CBC	7,775	15.04	0.44	7,741	15.77	-0.67	34	-0.73
Deposits with CBC	3,999	7.74	-0.78	4,030	8.21	3.22	-31	-0.47

Notes: 1. Monetary Financial Institutions include Domestic Banks, Local Branches of Foreign and Mainland Chinese Banks, Credit Cooperatives, Credit Departments of Farmers' and Fishermen's Associations, Chunghwa Post and Money Market Mutual Funds.

2. Including checking accounts, passbook deposits and passbook savings deposits.

3. Including time deposits, time savings deposits, foreign currency deposits, postal savings deposits, non-residents' NT dollar deposits, repurchase agreements, and money market mutual funds.

4. Excluding valuation changes in the exchange rate of the NT dollar against foreign currencies.

5. Measured at original costs.

Source: *Financial Statistics Monthly*, CBC.

Deposits

As a net foreign capital outflow in 2018 turned into an inflow in 2019, and the net domestic capital outflow in 2019 was lower than in 2018, the annual growth rate of deposits showed a general uptrend, climbing significantly to 4.28% in 2019 from 2.60% in 2018. The annual growth rates for each month in 2019 increased compared to the previous month, except for May, July, and November. The May downtrend was due to a significant decrease in the deposit balance of securities giro accounts amid local stock market sluggishness and a negative growth rate of foreign currency deposits as a result of firms' payments for overseas purchases and repayments for borrowings. July's dip was caused by a higher base effect and outward foreign currency remittances by some firms. As for November, the annual deposit growth rate dropped because the greater amount of inward

remittances from firms' overseas sales revenues in 2018 constituted a higher comparison base.

For transaction deposits, except for May, July, October and December, the annual growth rate in 2019 showed monthly uptrends. At the end of 2019, the annual growth rate increased from 5.51% to 7.44% and its share in total deposits increased to 37.79%, which was mainly due to a year-on-year increase in the deposit balance of securities giro accounts, incentive programs to attract large-value deposits with preferential interest rates, and liquidity management actions by firms.

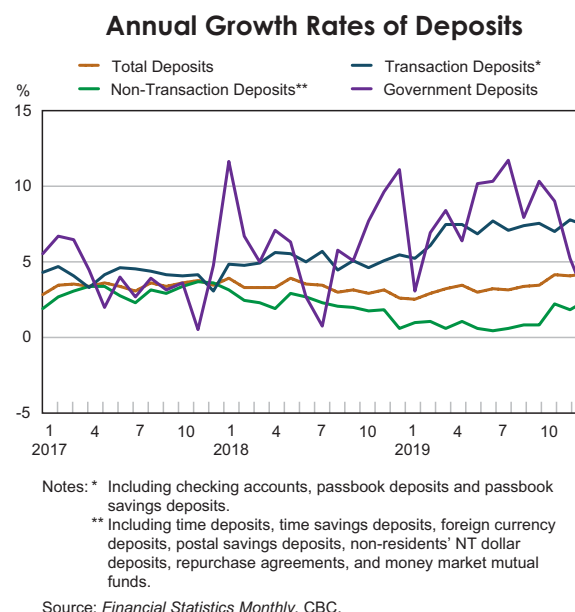
Looking at the months recording slower annual growth, in May, it was because the deposit balance of securities giro accounts decreased significantly. In July, slower growth resulted from a higher base effect and an increase in time savings deposits as some retail investors chose to park their cash dividends there. In October, the drop was attributable to employee bonus payments, a year-on-year increase in provisional payments for profit-seeking enterprise income tax, and common share buyback by some financial holding companies to boost the financial structures of their life insurance subsidiaries. As for December, annual growth in transaction deposits was driven down by a negative checking account annual growth rate, which was because companies withdrew the funds obtained from capital increases or land sales and then parked them in their checking accounts in November to make payments in December.

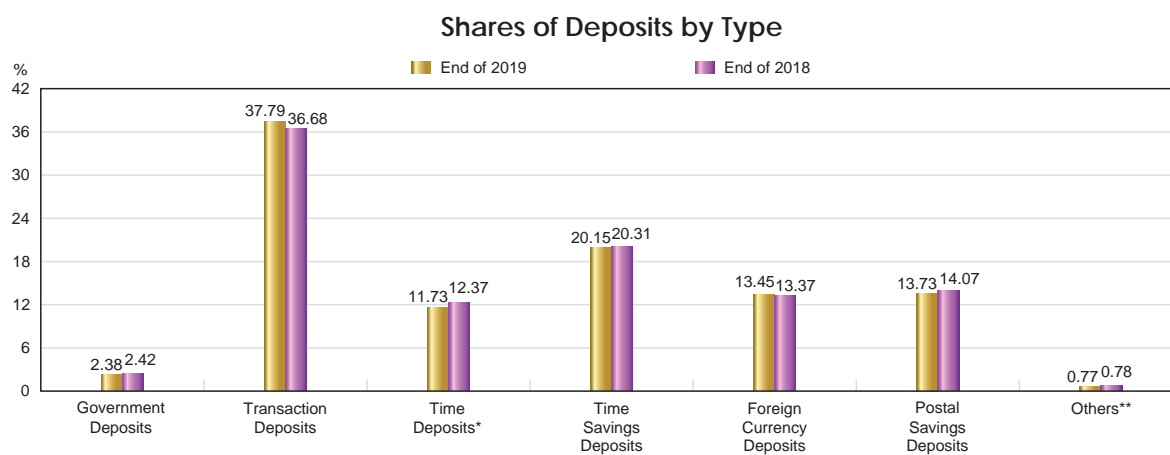
For non-transaction deposits, the annual growth rate rose to 2.45% at the end of 2019 because some firms increased inward remittances of overseas sales revenue to meet their needs for funds to pay taxes, dividends, and bonuses.

By type of non-transaction deposits, the share and annual growth rate of foreign currency deposits rose to 13.46% and 4.94% at the end of 2019, respectively, owing to a decrease in net domestic capital outflows and an increase in inward remittances of foreign sales revenue.

The share and the annual growth rate of time deposits declined to 11.73% and -1.12% at the end of 2019, respectively. It was mainly because some funds in time deposits flowed into time savings deposits as some banks opted against renewing maturing NCDs, citing high costs of issuance.

The annual growth rate of time savings deposits returned to positive territory with a 3.49%





Notes: * Including NCDs.

** Including repurchase agreements, non-residents' NTD deposits and money market mutual funds.

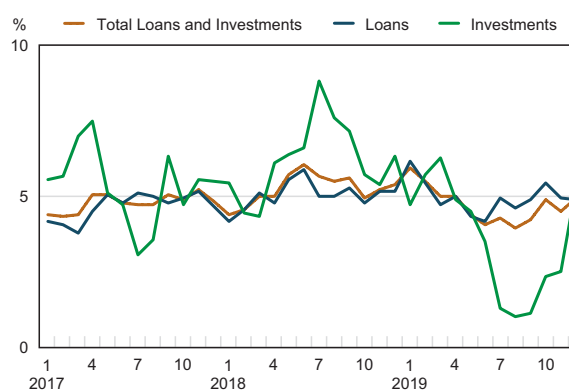
Source: *Financial Statistics Monthly*, CBC.

increase at the end of 2019 from -0.81% at the end of 2018 because of a lower base effect and yield-searching capital flows into time savings deposits. However, its share decreased to 20.15%. The annual growth rate of postal savings deposits went up owing to a larger increase in passbook savings deposits than in 2018, but its share fell to 13.73%.

Bank Loans and Investments

The annual growth rate of loans and investments of monetary financial institutions was 4.96% at the end of 2019, decreasing from 5.39% at the end of 2018. Growth in loans decreased to 4.88% at the end of 2019 from 5.18% at the end of the previous year, owing to a greater repayment by CPC Corporation and the Taiwan Railways Administration and soft demand by private enterprises amid slower economic growth. Meanwhile, growth in portfolio investment decelerated to 5.32% at the end of 2019 from 6.34% a year earlier because more government bonds were repaid, resulting in slower growth in banks' investment in government bonds.

Annual Growth Rates of Loans and Investments



Source: *Financial Statistics Monthly*, CBC.

Loans by Sector

The annual growth rate of private sector loans extended by banks (defined in the following paragraphs as including domestic banks and local branches of foreign and Mainland Chinese

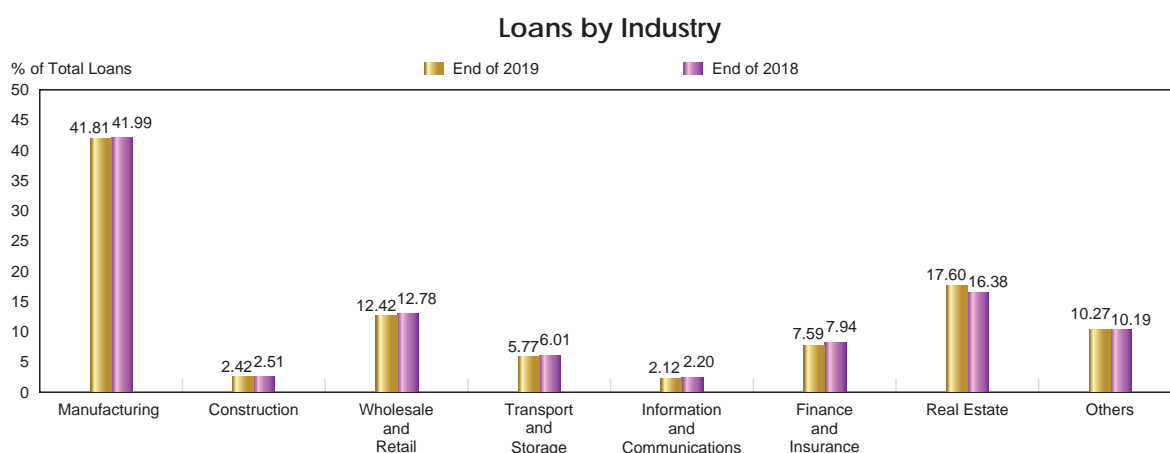
banks) slightly rose to 5.47% at the end of 2019 from 5.44% a year earlier, mostly driven by a housing market recovery that contributed to faster growth in house-purchasing loans and construction loans. The annual growth rate of loans to government enterprises returned to negative territory, registering -3.08% at the end of 2019 from 11.00% a year earlier, as CPC Corporation earned more profits and the Taiwan Railways Administration issued more commercial paper, both of which caused a decrease in borrowings from banks. Meanwhile, the annual growth rate of loans to government agencies improved from -1.52% to 0.45% at the end of 2019 given a greater need for funds for government bond repayment.

In terms of loan composition, loans extended to the private sector accounted for 93.44% of total loans at the end of 2019, higher than the 93.06% recorded at the end of 2018. Loans extended to government enterprises and government agencies accounted for 1.98% and 4.58%, respectively, at the end of 2019, lower than 2.15% and 4.79% at the end of the previous year.

Loans by Industry

Broken down by industry sector, bank loans to the manufacturing sector continued to account for the largest portion, at 41.81% at the end of 2019 compared to 41.99% at the end of 2018, with its annual growth rate also down from 4.76% to 4.32%. The fall was mainly attributable to a decline in loans extended to computers, electronic and optical products manufacturing as exports shrank in 2019. Meanwhile, the share of loans extended to the construction industry decreased, with its annual growth rate down from 4.72% to 1.05% at the end of 2019 as a result of a higher base effect.

Against a background of housing market recovery and government programs launched to attract overseas Taiwanese businesses to invest in Taiwan, both the share and the annual growth rate of loans extended to the real estate industry trended up. However, the share and the annual



Note: Figures include the data of domestic banks and local branches of foreign and Mainland Chinese banks but exclude their data on securities acquired under reverse repurchase agreements.

Source: *Financial Statistics Monthly*, CBC.

growth rate of loans extended to the wholesale and retail industry continued to drop amid trade headwinds in 2019. As for the finance and insurance industry, the share and the annual growth rate of loans to this sector declined because of a greater repayment of its syndicated loan by one investment holding company.

Consumer loans

The annual growth rate of consumer loans extended by banks increased from 4.42% at the end of 2018 to 5.65% at the end of 2019. Among them, house-purchasing loans grew by NT\$435.1 billion, or 6.24%, in 2019, mainly because the housing market rebounded, overseas Taiwanese businesses returned to invest in Taiwan, and some home sellers cut prices. As for the shares of various consumer loans, house-purchasing loans remained the largest component, with its share rising from 84.02% at the end of 2018 to 84.49% at the end of 2019. Car loans accounted for 1.72%, increasing from 1.69%, mainly because of imported car sales promotion strategies. Meanwhile, house-repairing loans, revolving credit for credit cards, employee welfare loans, and other consumer loans accounted for 0.84%, 1.29%, 0.60%, and 11.06%, respectively.

Investments

Owing to valuation changes, portfolio investments by monetary financial institutions, measured at fair value, recorded a year-on-year increase of NT\$390.9 billion, while the increase was smaller, at NT\$323.8 billion, when measured on a cost basis.

Portfolio investments by monetary financial institutions measured on a cost basis grew at a slower pace of 5.32% in 2019, mainly because banks became more conservative with their investments as they were watchful of uncertainties over global economic conditions.

Among the investment instruments, government bonds accounted for the largest share with 60.39%, lower than the 62.85% registered a year ago, mainly because government bonds outstanding declined as increased tax revenue helped service bond repayment. Meanwhile, banks and the Department of Savings and Remittances of Chunghwa Post adjusted their asset allocation to invest more in securities issued by the corporate sector. At the end of 2019, commercial paper accounted for a share of 18.52%, higher than a year ago, mainly because commercial paper issuance increased. Corporate bonds accounted for a share of 14.36%, decreasing from the end of 2018 as banks invested less in government enterprise bonds.

Direct Finance and Indirect Finance

Financing channels of the non-financial sector comprise direct finance and indirect finance, referring respectively to issuing securities in the markets and credit made by financial institutions. The combined amount of direct finance and indirect finance increased from the previous year's

NT\$1,794.4 billion to NT\$1,945.3 billion in 2019. Direct finance decreased by NT\$454.3 billion during 2019, a larger drop than the NT\$80.3 billion the previous year. Indirect finance increased from the previous year's NT\$1,874.7 billion to NT\$2,399.6 billion, which was mainly due to an increase in investments by financial institutions.

Based on the outstanding balance, the share of direct finance in total funds raised decreased from 18.93% a year before to 17.39% at the end of 2019, while the share of indirect finance increased from 81.07% to 82.61%.

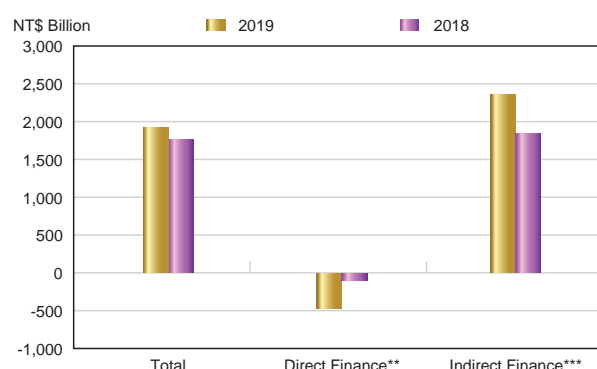
Bank Interest Rates

As the Bank continued with an easy monetary policy stance and kept policy rates unchanged, domestic bank interest rates remained broadly steady. In the case of the interest rates of the five major domestic banks, their average fixed rates on one-month and one-year time deposits remained at 0.60% and 1.04% at the end of 2019, respectively, both the same as the end of the previous year.

The weighted average rates on deposits and loans of domestic banks showed a slightly downward trend in 2019. During the first half of the year, the weighted average interest rate on deposits of domestic banks was stable at 0.56%. In the third quarter, the rate marginally declined to 0.55% owing to the increase in the share of transaction deposits in total deposits. Thereafter, the rate remained broadly steady until the end of the year. On the whole, the weighted average interest rate on total deposits of domestic banks was 0.55% in 2019, which was 0.01 percentage points lower than that recorded in the previous year.

As banks' rates on current operations loans increased in 2019, the weighted average interest rate on new loans of the five major domestic banks moved upward from 1.370% in the previous

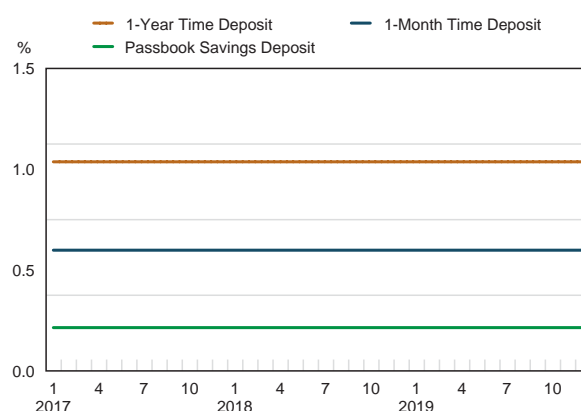
Direct Finance vs. Indirect Finance*



Notes: * Measured in terms of flow data.
 ** Refers to the total amount of new issues of various marketable securities, including government bonds, corporate bonds, listed stocks, offshore bonds, depositary receipts, short-term bills, and asset-backed securities held by the non-financial sector.
 *** Refers to loans and investments (measured on a cost basis) made by monetary financial institutions, trust and investment companies, and life insurance companies, after taking account of their non-accrual loans reclassified and bad loans written off.

Source: *Financial Statistics Monthly*, CBC.

Average Deposit Rates of the Five Major Domestic Banks*



Note: * The five major domestic banks are Bank of Taiwan, Taiwan Cooperative Bank, First Commercial Bank, Hua Nan Commercial Bank and Land Bank of Taiwan.

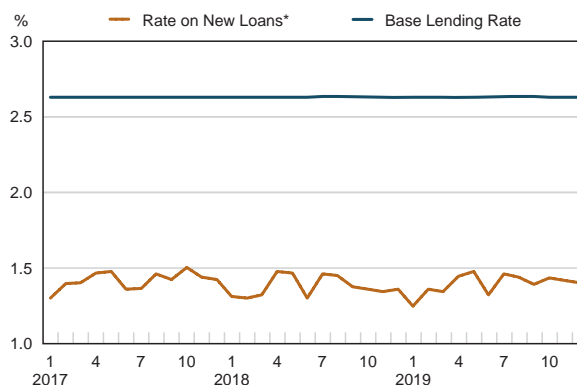
Source: *Financial Statistics Monthly*, CBC.

year to 1.386% in 2019. Excluding central government loans, the weighted average interest rate on new loans decreased from 1.414% in the previous year to 1.409% in 2019, down by 0.005 percentage points. Moreover, the average base lending rate remained at 2.631% at the end of 2019.

In the first quarter of 2019, owing to an increase in bank claims on local governments and government enterprises and fierce market competition, some banks offered lower rates on new loans. The weighted average interest rate on total loans of domestic banks slightly decreased from 1.90% in the fourth quarter of 2018 to 1.88%, and it dropped further to 1.87% in the third quarter. Thereafter, the rate remained broadly steady until the end of the year. For the year as a whole, the weighted average interest rate on loans of domestic banks was 1.87%, which was 0.03 percentage points lower than that recorded in the previous year.

Because the decrease in the average deposit rate was less than that in the average lending rate, the average interest rate spread between deposits and loans slightly shrank to 1.32 percentage points in 2019, which was 0.02 percentage points smaller than that recorded in the previous year.

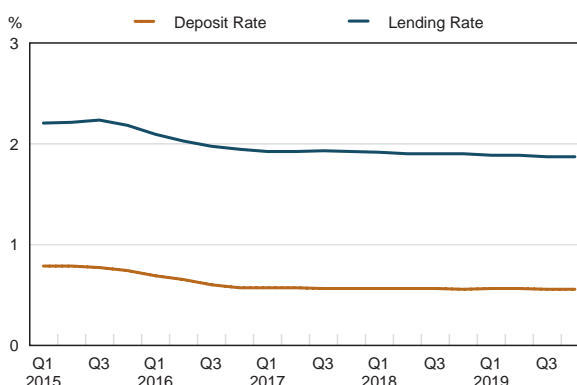
Average Lending Rates of the Five Major Domestic Banks



Note: * Including housing loans, capital expenditure loans, current operations loans and consumer loans.

Source: *Financial Statistics Monthly*, CBC.

Weighted Average Interest Rates of Domestic Banks



Source: *Financial Statistics Monthly*, CBC.

3. Money Market

For the year 2019, the total turnover in the interbank call loan market went down significantly by 37.74%, while that in the short-term bills market posted a modest decrease of 1.82%. With respect to money market rates, as the Bank maintained an accommodative monetary policy stance, the interbank overnight call loan rate stayed at low levels, whereas bills market rates slightly moved up during the year.

Decrease in Interbank Call Loans

Trading in the interbank call loan market was less active in 2019 on account of sufficient domestic liquidity and the interbank overnight call loan rate remaining at low levels. Total annual turnover of interbank call loans fell markedly by NT\$18,185.9 billion or 37.74% to NT\$30,006.8 billion over the previous year. At the end of 2019, the outstanding amount of interbank call loans reached NT\$265.8 billion, representing a year-on-year decrease of NT\$118.2 billion or 30.79%.

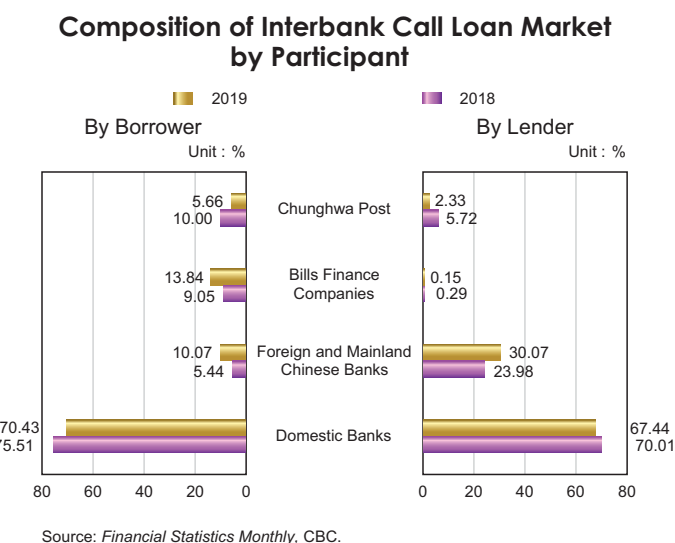
In terms of borrowers, domestic banks still made the largest contribution to total transactions, with a share of 70.43%, followed by bills finance companies, foreign and Mainland Chinese banks, and Chunghwa Post, with respective shares of 13.84%, 10.07%, and 5.66%, respectively.

With ample liquidity in the banking system, banks' demand for borrowing weakened in the year, leading the amount borrowed by domestic banks to drop substantially by NT\$15,253.4 billion or 41.92% over the previous year. On the other hand, bills finance companies, in consideration of liquidity and profitability, chose to finance through outright sales or repurchase agreement transactions, thereby reducing their funding needs. The amount borrowed by bills finance companies showed a decrease of NT\$207.3 billion or 4.76% from a year before.

Meanwhile, the amount borrowed by Chunghwa Post also declined by NT\$3,122.9 billion or 64.77% compared with the previous year, owing to softened funding needs. With net foreign capital inflows rising by NT\$15.9 billion in 2019, foreign and Mainland Chinese banks obtained funds from the custodian business for foreign investors. However, as some of these banks became more cautious about fund allocation, their demand for borrowing increased, driving the amount borrowed by foreign and Mainland Chinese banks to climb by NT\$397.7 billion or 15.16% over the previous year.

With respect to lenders, domestic banks remained the largest supplier of funds, accounting for 67.44% of total transactions in 2019. The second were foreign and Mainland Chinese banks with a share of 30.07%, followed by Chunghwa Post and bills finance companies, contributing to 2.33% and 0.15% of total transactions, respectively.

The amount lent by domestic banks recorded a significant decline of NT\$13,503.5 billion, or 40.02%, compared with the previous year. Meanwhile, the lending amount of foreign and Mainland Chinese banks contracted by NT\$2,530.9 billion or 21.90% owing to less available funds at hand. The amount lent by Chunghwa Post also fell by NT\$2,057.0 billion or 74.65% over the previous year, largely because of increased investment in commercial paper.



With regard to maturity, interbank overnight call loans remained the most actively traded instrument in the market with a predominant share of 48.75%, down by 14.44 percentage points from that of the previous year. The second were those with a maturity of one week, accounting for 36.73%, up by 11.12 percentage points from that of the previous year, while the share of loans with a two-week maturity increased by 2.51 percentage points to 10.79%.

Decline in Short-Term Bill Transactions

For the year 2019, newly issued short-term bills stood at NT\$14,927.3 billion, registering a decrease of NT\$44.6 billion or 0.30% from a year before. Commercial paper made up a dominant 91.20% of the new issues, followed by negotiable certificates of deposit (NCDs) with a share of 6.60%.

The slide in the volume of newly issued short-term bills mainly resulted from reduced issuance of NCDs. This was because when part of the NCDs reached maturity, some banks did not renew the issuance of NCDs after assessing their own funding conditions or enterprises holding NCDs did not renew their purchases in order to free up funds for other purposes. As a result, the amount of NCDs issued went down by NT\$842.8 billion from the previous year.

Meanwhile, the amount of banker's acceptances dropped slightly by NT\$4.5 billion in 2019. On the contrary, issuance of commercial paper grew by NT\$648.6 billion compared with the previous year as government enterprises and private enterprises issued commercial paper to raise funds amidst a low interest rate environment. The amount of treasury bills expanded by NT\$154.0 billion over the previous year, primarily on account of an increase in issuance to support fiscal funding needs.

As of the end of 2019, total outstanding short-term bills amounted to NT\$2,353.2 billion, showing an increase of NT\$130.1 billion or 5.85% from that of the previous year end.

Short-Term Bills Market

Unit: NT\$ Billion

Year	Total		Treasury Bills		City Treasury Bills		Commercial Paper		Bankers' Acceptances		Negotiable Certificates of Deposit	
	Issues	Year-end Outstanding	Issues	Year-end Outstanding	Issues	Year-end Outstanding	Issues	Year-end Outstanding	Issues	Year-end Outstanding	Issues	Year-end Outstanding
2010	7,140.8	1,167.5	365.0	240.0	-	-	5,903.4	686.1	33.1	6.2	839.3	235.2
2011	7,424.0	1,192.6	321.2	180.3	-	-	6,270.5	735.2	30.1	5.7	802.2	271.5
2012	8,187.7	1,454.0	265.0	195.0	-	-	7,311.6	1,023.6	24.2	4.3	586.9	231.1
2013	9,809.0	1,650.2	324.6	214.6	-	-	8,827.4	1,199.2	23.5	4.2	633.5	232.3
2014	10,840.6	1,641.2	244.9	130.0	10.0	0.0	9,919.5	1,306.8	24.1	4.3	642.2	200.2
2015	11,512.8	1,677.7	233.7	90.0	-	-	10,426.0	1,346.6	20.8	3.5	832.3	237.6
2016	12,778.5	1,873.5	217.3	90.0	-	-	11,371.3	1,480.1	18.3	4.1	1,171.6	299.4
2017	14,878.5	2,154.5	220.0	25.0	-	-	13,077.8	1,709.0	19.4	4.2	1,561.3	416.4
2018	14,971.9	2,223.1	160.0	30.0	-	-	12,965.0	1,760.6	18.5	4.0	1,828.5	428.5
2019	14,927.3	2,353.2	314.0	65.0	-	-	13,613.6	2,034.1	14.0	2.6	985.7	251.5

Source: Financial Statistics Monthly, CBC.

The total turnover of short-term bills in 2019 posted a year-on-year decrease of NT\$750.4 billion or 1.82% to NT\$40,505.5 billion. Of the total transactions, commercial paper still accounted for the lion's share of 94.63%, rising by 5.59 percentage points from a year earlier. The second were NCDs with a share of 4.72%, 5.86 percentage points lower than the previous year. Treasury bills and banker's acceptances made up negligible shares of transactions. As for market participants, private enterprises were still the largest player in the market with a share of 46.30%, followed by banks with a share of 28.22%.

Money Market Rates Remaining at Low Levels

In 2019, the weighted average interbank overnight call loan rate stayed at a low level on the back of ample market liquidity. In the first half of the year, the interbank overnight call loan rate exhibited a broad uptrend and reached 0.189% in April, driven by higher transaction demand for money prior to the extended holiday weekend for Tomb-Sweeping Day.

In the following two months, banks' funding conditions slightly tightened on account of income tax collections, the Dragon Boat Festival holidays, and enterprises' preparation to release semi-annual financial statements. The interbank overnight call loan rate thus went up and registered an all-year high of 0.202% in June.

Later in the year, some banks became cautious about fund allocation because of enterprises' dividend payouts and continuous net foreign capital outflows; nevertheless, market liquidity remained abundant, bringing down the interbank overnight call loan rate to 0.180% in August.

From September onwards, despite several public holidays and the approach of the year end leading to stronger transaction demand for money, market liquidity was at a reasonably ample level, and foreign capital recorded four consecutive months of net inflows. Therefore, the weighted

average interbank overnight call loan rate only slightly fluctuated between 0.176% and 0.177%.

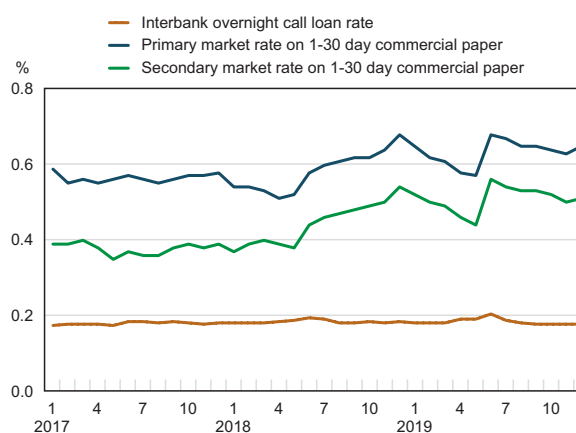
The primary market rate on commercial paper with a maturity of 1-30 days moved within a range between 0.57% and 0.68%, while the secondary market rate on commercial paper with a maturity of 1-30 days swung between 0.44% and 0.56% throughout the year.

Expansion in Money Market Funds

In the year 2019, amid a low interest rate environment, international financial market turmoil, and the global stock market rally, money market funds were often seen as an ideal investment option to park short-term capital given the benefits of stable returns, low risk, and high liquidity. As a consequence, the size of money market funds expanded during the year. At the end of 2019, there were a total of 42 money market funds in Taiwan and the total assets reached NT\$793.7 billion with an increase of NT\$110.1 billion or 16.11% from the end of the previous year.

With regard to portfolio composition, the largest use of the funds was bank deposits with a share of 57.64% at the end of the year. Following bank deposits were short-term bills and repurchase agreements, accounting for 29.45% and 12.67% of total money market funds, respectively.

Money Market Interest Rates



Source: Financial Statistics Monthly, CBC.

Portfolio Composition of Money Market Funds

Unit: NT\$ Billion

Year/Month End	Total	Bank Deposits		Short-Term Bills		Repurchase Agreements		Bonds	
		Amount	Share (%)	Amount	Share (%)	Amount	Share (%)	Amount	Share (%)
2017	783.1	550.3	70.27	132.9	16.97	99.0	12.64	0.9	0.11
2018	683.6	455.0	66.56	151.1	22.10	76.9	11.25	0.7	0.10
2019	793.7	457.5	57.64	233.7	29.45	100.6	12.67	1.9	0.24
2019/ 1	701.7	464.8	66.24	160.9	22.93	75.3	10.74	0.6	0.09
2	737.7	467.0	63.31	172.8	23.43	97.1	13.16	0.7	0.10
3	745.9	464.4	62.26	179.4	24.06	101.4	13.59	0.7	0.10
4	779.8	475.8	61.01	198.6	25.47	104.6	13.42	0.8	0.10
5	741.7	467.1	62.97	201.5	27.16	72.1	9.72	1.1	0.15
6	723.6	442.5	61.16	193.2	26.70	86.8	11.99	1.1	0.15
7	736.9	444.5	60.31	201.1	27.29	90.2	12.25	1.1	0.15
8	790.3	454.7	57.54	233.4	29.53	101.0	12.78	1.2	0.15
9	764.3	443.8	58.06	226.1	29.58	92.9	12.16	1.5	0.20
10	833.1	462.3	55.49	264.5	31.74	104.4	12.53	1.9	0.23
11	825.8	472.6	57.23	253.1	30.65	98.2	11.89	1.9	0.24
12	793.7	457.5	57.64	233.7	29.45	100.6	12.67	1.9	0.24

Source: Securities Investment Trust & Consulting Association of the R. O. C.

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%.

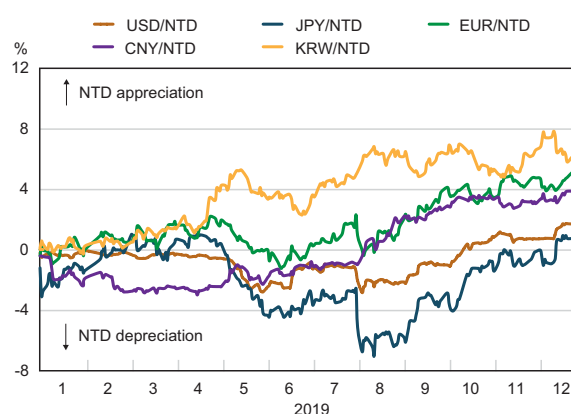
In 2019, the NT dollar vis-à-vis the yen appreciated in the first quarter, depreciated in the second quarter, and appreciated again toward the end of 2019. Early in the year, because of easing US-China trade friction, the NT dollar appreciated against the yen. Later, renewed trade conflict fears drove 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

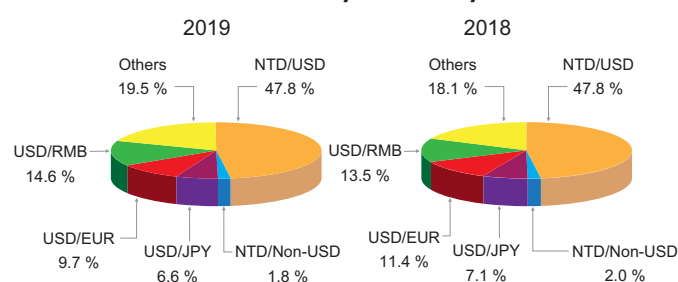
Trading in the Taipei foreign exchange market increased in 2019. Total net trading volume for the year was US\$8,014.0 billion, representing a 0.3% year-on-year increase. The daily average turnover was US\$32.5 billion in 2019.

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

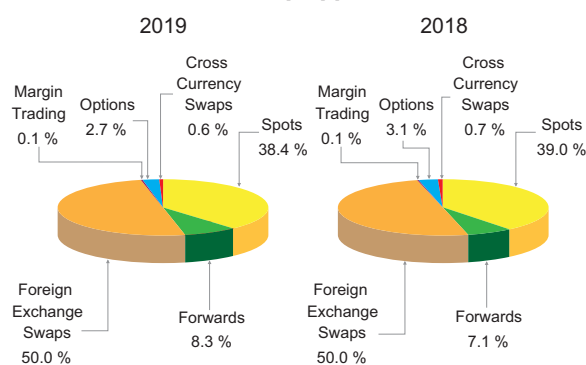
Unit: US\$ Million

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

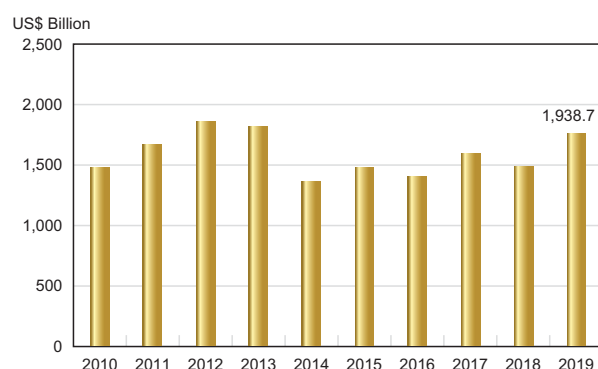
Source: Department of Foreign Exchange, CBC.

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.

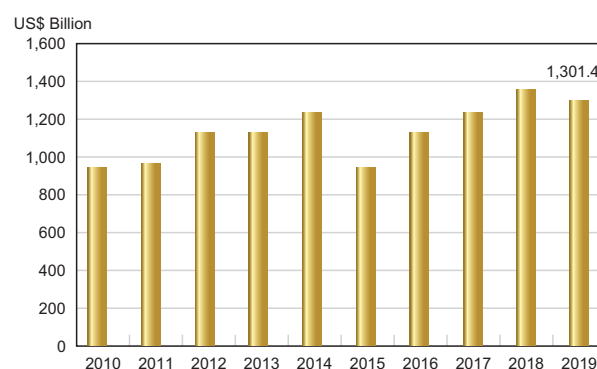
The volume of foreign currency-NTD swap transactions reached US\$1,301.4 billion, 4.4% less than 2018, while the balance was US\$242.8 billion at the end of 2019.

**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.

5. Stock Markets

In the first few months of 2019, positive developments at home and abroad combined to bolster Taiwan's benchmark stock index, the Taiwan Stock Exchange (TWSE) Capitalization Weighted Stock Index (TAIEX). First, signs of thawing in US-China trade friction sent a wave of international capital back into emerging markets, and, as a result, foreign portfolio investors net bought in Taiwan as they increased long positions of TAIEX stocks and futures. Along with local market expectations of record high dividends and rallies on major foreign stock exchanges, the TAIEX climbed to a period high in early May. The gains were followed by a series of corrections through the end of August amid a flurry of developments regarding the US-China trade dispute, political instability in Hong Kong, and net foreign investor selling of TAIEX stocks.

Later, the TAIEX was boosted by several favorable factors, including US stock rallies successively breaking records, iPhone sales exceeding expectations, and the prospect of factory orders being diverted to Taiwan amid US-China trade friction that led to aggressive foreign buying of associated tech stocks. Such upside forces lifted the TAIEX towards a 29-year high in mid-December. At the end of 2019, the TAIEX closed with a 23.3% year-on-year increase.

Major Statistics of the TWSE Market

Year/Month	Stock Price Index (end of period)	Daily Average Trading Value (NT\$ Billion)	Turnover Rate (%)	Market Capitalization (NT\$ Billion)	Net Buying Positions (NT\$ Billion)		
					Foreign Investors Net Buy/Sell	Securities Investment Trust Companies Net Buy/Sell	Securities Dealers Net Buy/Sell
2017	10,642.9	97.5	78.4	31,831.9	155.2	-33.5	11.4
2018	9,727.4	119.9	92.6	29,318.5	-355.1	-1.5	-99.4
2019	11,997.1	109.4	80.4	36,413.5	244.2	11.3	52.5
2019/ 1	9,932.3	83.5	5.9	29,919.9	37.0	2.4	20.8
2	10,389.2	113.3	4.7	31,286.3	64.7	-1.9	11.9
3	10,641.0	101.4	6.3	32,126.6	1.7	0.4	4.7
4	10,967.7	119.5	7.2	33,106.6	54.4	-4.3	17.2
5	10,498.5	105.9	7.3	31,717.1	-144.9	-0.9	9.5
6	10,730.8	94.8	5.6	32,424.5	39.4	5.4	10.1
7	10,823.8	107.2	7.5	32,706.5	-12.7	3.8	-3.2
8	10,618.1	113.9	7.4	32,117.2	-121.3	5.3	-0.6
9	10,829.7	109.5	6.4	32,784.6	89.7	1.6	-16.5
10	11,358.7	122.9	7.5	34,388.6	124.8	1.3	-16.8
11	11,489.6	122.4	7.4	34,809.1	57.9	1.6	-0.8
12	11,997.1	118.3	7.2	36,413.5	53.4	-3.5	16.2

Source: Securities and Futures Bureau, FSC.

Among the categories listed on the TWSE, the Automobiles category gained the most with a 78.5% rise, benefiting from government subsidies and successful new model launches. The 36.0% rise in the Electronics category was the second largest, thanks to transferred orders in response to the US-China trade war, strong sales of new iPhones, investor enthusiasm, mounting up in reaction to a positive 5G outlook, and robust net foreign buying of tech stocks.

Overall, the TAIEX daily average trading value amounted to NT\$109.4 billion in 2019. Though 8.8% lower than the previous year, the value was the second highest since 2011 and continued to register above NT\$100 billion.

In 2019, the Taipei Exchange (TPEX) weighted stock price index of the over-the-counter market closed the year 20.9% higher than 2018, with most categories posting year-on-year rises except for Iron & Steel and Biotech & Medical Care equities. The Electronics group registered the largest gain of 36.1%, boosted by bullish sentiment with respect to TWSE-listed Electronics shares. Shipping & Transportation companies enjoyed a 21.8% rise in their share prices, the second largest of all groups, as international oil price declines helped trim their operation costs. Overall, the TPEX daily average trading value decreased by 4.8% year on year, totaling NT\$31.4 billion in 2019.

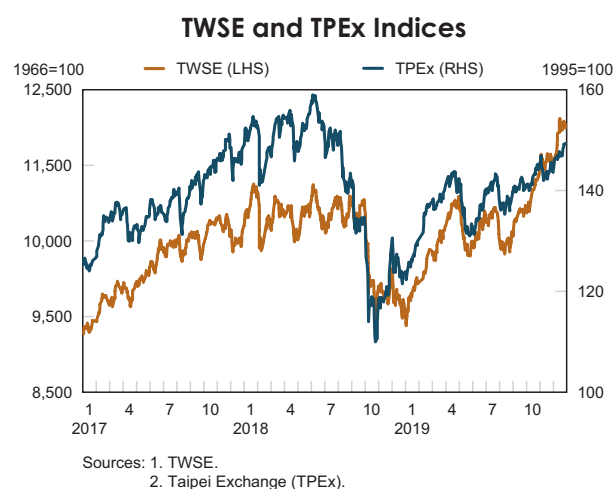
The TWSE Market

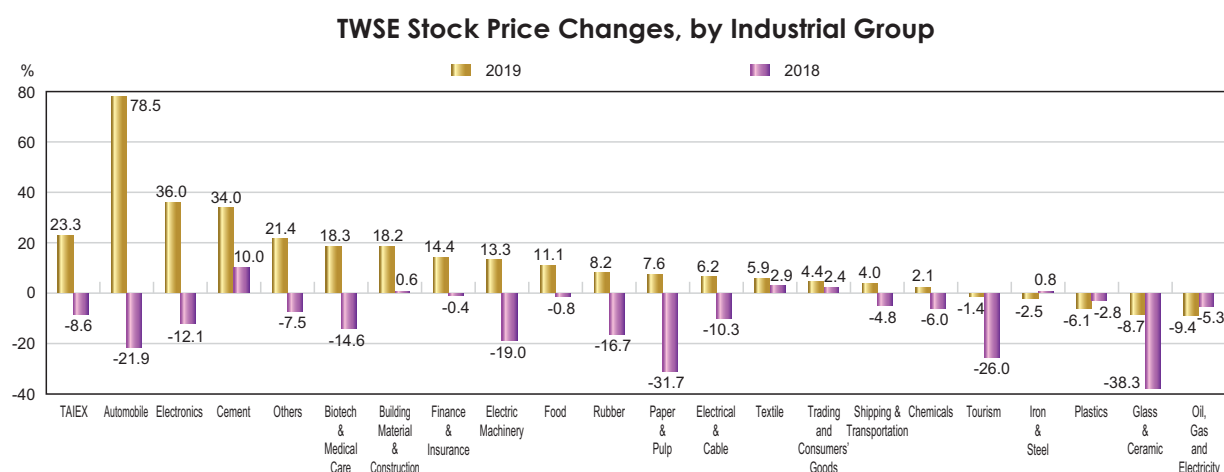
Listings and Capitalization Both Increased

At the end of 2019, the number of TWSE listings increased by 14 to reach a total of 942. The par value of total shares issued decreased marginally by 0.05% year on year to NT\$7.2 trillion owing mainly to a handful of de-listings and capital reduction. Total market capitalization was NT\$36.4 trillion, a marked rise of 24.2% from the year before. As for Taiwan depository receipts (TDRs), the total number stood at 14 at the end of 2019 as three existing TDRs went delisted.

TAIEX Swung to Record High in 29 Years

As the year 2019 unfolded, US-China trade friction eased markedly, inducing renewed capital flows into emerging market economies, and foreign investors net bought in the TWSE market to increase equity and futures long positions. Meanwhile, investor sentiment was generally buoyed by anticipation of record-high stock dividends. As a result, the TAIEX joined major foreign stock indices in rebounding and climbed to 11,096 points on May 3.





Source: TWSE.

However, volatile months followed. Across the world, market sentiment was chiefly driven by the twists and turns of the US-China trade conflict - including an additional tariff hike to 25% on US\$200 billion worth of Chinese exports to the US (announced on May 6), the trade blacklisting of Chinese tech giant Huawei in mid-May, market optimism surrounding the end-of-June Trump-Xi meeting, the proceeding of bilateral trade talks in July, the imposition of 10% tariffs on another US\$300 billion of Chinese goods (announced in early August), and a 90-day reprieve on the US ban on Huawei (extended to Nov. 19). These developments, combined with pro-democracy protests in Hong Kong and net foreign selling of Taiwan shares, triggered wild fluctuations in the TAIEX through the end of August.

Later, the TAIEX was led higher by bullish factors at home and abroad, including the Fed's three consecutive rate cuts, multiple US stock rallies to record highs, better-than-expected sales of new iPhones, favorable tariff implications of trade diversion for Taiwanese businesses, and a related foreign net buying of the tech shares expected to benefit therefrom. As a result, the local mainboard index continued trending upwards, reaching the yearly peak of 12,122 points on December 18, which was the highest level recorded on the TAIEX in 29 years. The TAIEX closed the year of 2019 at 11,997 points, representing a 23.3% rise over the 9,727 points of the year 2018.

Broken down by subcategory, most industrial groups recorded year-on-year rises, except for four categories, namely Oil, Gas & Electricity, Glass & Ceramics, Plastic, Iron & Steel, and Tourism. Automobile shares rose by 78.5%, the largest gain among all categories, as the car market was bolstered by a government incentive program to encourage trading old vehicles for new ones and strong sales of new car models. The Electronics category's 36.0% gain was the second largest, as foreign investors aggressively built up tech positions on the TWSE against a backdrop of a huge increase in diverted orders, particularly for the smartphone IC and manufacturing industries, to

avoid US tariffs on Chinese goods, a positive market response for new Apple iPhones, and bullish sentiment about 5G network and AI technologies. The third largest gainer, with a rise of 34.0%, was the Cement category because a price rebound and sustained demand from China's urban development and housing policy reform boosted revenues of major cement producers.

On the other hand, among those with year-on-year declines, Oil, Gas & Electricity suffered the largest loss of 9.4% as international oil prices experienced a relative slump. Glass & Ceramics took a dive of 8.7%, as slow business dampened pull-in momentum and hurt company revenues. Plastics dropped 6.1%, weighed down by falling plastic-chemical product quotations owing to overcapacity in the China market.

Market Turnover Decreased

For year 2019, TWSE market turnover, measured on a daily average basis, decreased by 8.8% to NT\$109.4 billion from the NT\$119.9 billion of the previous year. The value, albeit lower, was the second highest since 2011 and still registered above the significant NT\$100 billion level. Reflecting that moderate decrease, the turnover rate also slipped from the 92.6% of 2018 to 80.4%, which was higher than those of the US and the UK and similar to that of Japan.

Net Purchases by Institutional Investors

In 2019, all three types of institutional investors, who were net sellers the year before, net bought on the TWSE, with foreign investors, local securities investment trust companies and local securities dealers posting net purchases of NT\$244.2 billion, NT\$11.3 billion, and NT\$52.5 billion, respectively.

Foreign institutional investors were net buyers in the first four months of 2019, encouraged by a reprieve in US-China trade tensions that also sparked a wave of capital flows back to emerging market economies. However, foreign net selling was recorded in May, July, and August, in tandem with a capital outflow from the region in the midst of renewed escalation in the trade conflict and political unrest in Hong Kong. Then, the last four months of the year witnessed a successive row of net foreign buying, buoyed by Fed rate cuts, solid sales of new iPhones, and expected benefits of orders diverted to Taiwan's tech firms owing to the US-China trade conflict.

Local securities investment trust companies were net sellers in February, April, May, and December, during which they offloaded shares to take profits in order to meet fund redemption demand, to boost their financial statements, or to adjust portfolios at higher price levels. In the other months, net purchases were recorded.

Local securities dealers, with inclination for short swing trading, net sold in the months of July through to November as a result of hedging or portfolio adjustment and net bought in the other months of the year.

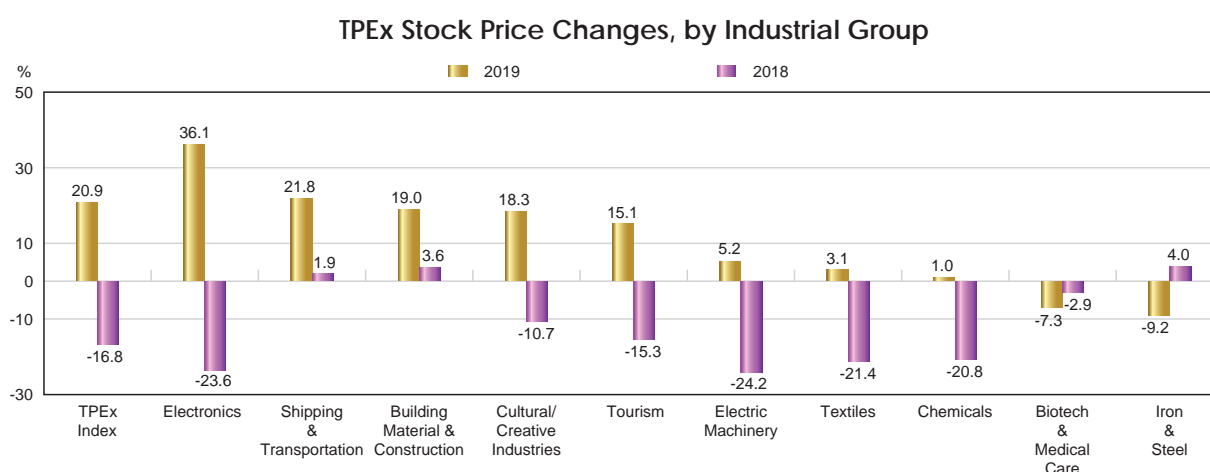
The TPEX Market

Listings and Capitalization Increased

At the end of 2019, the number of TPEX listings increased by 9 to 775. The total par value rose by 1.1% year on year to NT\$746.7 billion, while market capitalization mounted by 21.5% over the previous year to NT\$3.43 trillion.

TPEX Index Swung Higher

Share movements on the TPEX in 2019 were generally similar to those on the TWSE. The index opened the year higher and continued an uptrend toward a period high of 143.8 points in late April, before bouts of the US-China trade disputes sent the index on a bumpy ride through the end of August. Later in the year, stronger-than-expected sales of new iPhones and the effects of diverted orders from China to Taiwan gave a considerable boost to electronics shares, driving the TPEX index to swing upwards to the yearly high of 149.4 points at the end of the year, a 20.9% year-on-year rise compared to 123.5 points at end-2018.



Source: TPEX.

Most TPEX-traded industrial groups posted gains in the year, except for Iron & Steel and Biotech & Medical Care shares. The largest year-on-year increase of 36.1% was registered by the Electronics category, spurred by rallies on the TWSE for the same industrial group. Shipping & Transportation companies recorded the second highest rise in share prices, climbing by 21.8% as cheaper oil helped reduce their costs.

In terms of institutional investor behavior, foreign investors and local securities investment trust companies net bought TPEX securities worth NT\$38.3 billion and NT\$2.1 billion, respectively. Local dealers posted a record high net sale of NT\$299.9 billion as they slashed their positions in bond exchange-traded funds (ETFs).

For year 2019, the daily average turnover in the TPEx market decreased by 4.7% from the NT\$33.0 billion of 2018 to NT\$31.4 billion.

Key Measures for the Stock Markets

Key measures for Taiwan's stock markets in 2019 included the following:

- (1) January 1: Effective from this date, there would be no stock trading and settlement on the Saturdays adjusted to be business days to reflect holiday date changes.
- (2) February 1: The Financial Supervisory Commission (FSC) would allow all 14 foundations under its management to invest in mutual funds and ETFs linked to Taiwanese equities, and unsecured corporate bonds, with the maximum investment capped at 20% of the total property value of the foundation.
- (3) April 30: First-ever local listings of exchange-traded notes (ETNs) began to be launched.
- (4) August 15: The FSC promulgated the *Regulations Governing the Financial Investment, Management, and Utilization of Repatriated Offshore Funds*, stipulating that such funds could be drawn into a segregated trust account or segregated securities discretionary account for financial investment within the following scope only: (1) domestic securities, (2) trading of securities-related futures or options on the Taiwan Futures Exchange, and (3) domestic insurance products.
- (5) October 3: The FSC promulgated the *"Operation Directions Governing Securities and Futures Businesses' Application for the Approval of Business Trial Runs"* in an effort to encourage the offering of innovative financial products or services, which would in turn help promote corporate competitiveness and strengthen financial consumer rights.

6. Bond Market

For the year 2019, new issues of bonds stood at NT\$1,808.2 billion, falling by NT\$108.1 billion or 5.64% over the previous year. Meanwhile, the total outstanding of bonds issued amounted to NT\$13,872.1 billion at the end of 2019, an increase of NT\$408.0 billion or 3.03% from the previous year end.

To support debt refinancing operations of the Central Government Debt Service Fund and to raise funds for the central government general budget and special budget, issuance of central government bonds totaled NT\$410.0 billion for 2019, increasing by 18.05% from the previous year.

Corporate bond issuance in the year showed a marginal decrease of 2.31% to NT\$402.8 billion, mainly resulting from lower funding needs of enterprises.

With regard to bank debentures, the amount of issuance totaled NT\$162.2 billion for 2019, sliding by 29.07% over the previous year primarily because of reduced issuance of US dollar-denominated bank debentures.

For the entire year, foreign currency-denominated international bonds issued in Taiwan by foreign institutions stood at NT\$776.5 billion, representing a decrease of 14.30% compared to the previous year. As for NT dollar-denominated foreign bonds issued by foreign institutions, the volume of issuance recorded a year-on-year increase of 148.72% to NT\$17.5 billion in 2019.

In the secondary market, annual average yields on bonds with varying maturities all displayed a downtrend in 2019 in reflection of ample domestic liquidity and the Fed's policy rate reductions. For 10-year government bonds, the yield slipped to 0.736%, 21 basis points lower than the previous year.

Moreover, as narrower yield spreads led to a less vibrant bond market, annual transactions contracted by 10.70% to NT\$57,888.5 billion for the entire year.

Significant Increase in Government Bond Issuance

Central government bond issuance rose markedly by NT\$62.7 billion or 18.05% from the previous year to NT\$410.0 billion in 2019. The growth was to support debt refinancing operations of the Central Government Debt Service Fund and to raise funds for the central government general budget as well as special budget.

In regard to the total volume of government bonds issued by the Ministry of Finance, 10-year bonds made up the lion's share with NT\$170.0 billion, followed by 5-year bonds with NT\$90.0 billion,

while 2-year, 20-year, and 30-year government bonds registered issuance of NT\$20.0 billion, NT\$85.0 billion, and NT\$45.0 billion, respectively.

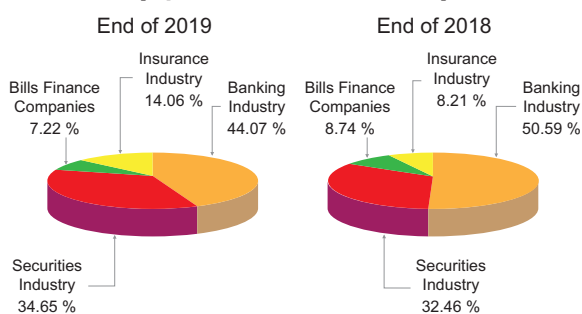
In terms of issuing rates, sufficient domestic liquidity and three policy rate cuts announced by the Fed during the year brought down the weighted average issuing rates on central government bonds with varying maturities. The issuing rate on 30-year bonds recorded the largest decline of 38 basis points, followed by a 28 basis point slide in the issuing rate on 20-year bonds.

Broken down by institutional investor, bonds held by the banking industry accounted for a dominant share at 44.07%, followed by the securities industry with a share of 34.65%. The share of bond holdings of the insurance industry went up whereas that of the banking industry fell in 2019. This was because many international bonds were redeemed before maturity and insurers invested the redeemed amount in government bonds instead, lowering the banking industry's probability of winning bond auctions.

As of the end of 2019, the total outstanding of central government bond issuance stood at NT\$5,483.3 billion, down by NT\$75.3 billion or 1.35% from the previous year end.

In respect of bonds issued by governments of special municipalities, all new bonds in 2019 were issued by the government of Kaohsiung Special Municipality with a total amount of NT\$33.8 billion. At the end of the year, the outstanding amount of bonds issued by governments of special municipalities reached NT\$67.7 billion, expanding considerably by NT\$23.8 billion or 54.20% from the previous year end.

**Shares of Government Bond Holdings
(by Institutional Investor)**



Source: Department of the Treasury, CBC.

Modest Decrease in Corporate Bond Issuance

Corporate bonds refer to NT dollar- or foreign currency-denominated bonds issued in Taiwan by domestic corporations. For the year 2019, the issuing amount of corporate bonds dropped slightly by NT\$9.5 billion or 2.31% to NT\$402.8 billion, largely reflecting weakened funding needs of corporations on account of faltering exports.

With regard to bond maturities, 5-year corporate bonds made up the majority of the issuance with a share of 48.57%, followed by 7-year bonds with a share of 22.06%. The six largest corporate

Issues and Outstanding Values in Bond Market by Category

Unit: NT\$ Billion

Year/ Month	Total		Central Government Bonds		Local Government Bonds*		Corporate Bonds		Bank Debentures		Beneficiary Securities**		Foreign Bonds		Int'l Bonds	
	Issues	Outstanding	Issues	Outstanding	Issues	Outstanding	Issues	Outstanding	Issues	Outstanding	Issues	Outstanding	Issues	Outstanding	Issues	Outstanding
2017	2,122.1	12,575.4	400.0	5,594.8	0.0	41.6	385.7	1,937.8	189.5	1,227.3	0.0	11.4	7.7	14.5	1,139.2	3,748.1
2018	1,916.3	13,464.1	347.3	5,558.6	14.8	43.9	412.3	2,022.6	228.7	1,317.1	0.0	5.0	7.1	15.1	906.1	4,501.8
2019	1,808.2	13,872.1	410.0	5,483.3	33.8	67.7	402.8	2,113.1	162.2	1,313.7	5.3	8.4	17.5	26.7	776.5	4,859.2
2019/ 1	110.5	13,417.9	55.0	5,491.6	0.0	43.9	17.3	2,023.0	8.0	1,309.3	0.0	5.0	0.2	14.4	30.0	4,530.6
2	60.8	13,418.1	30.0	5,481.6	0.0	43.9	7.0	2,012.2	2.5	1,311.8	0.0	5.0	0.0	14.0	21.3	4,549.5
3	275.2	13,589.3	45.0	5,446.6	0.0	43.9	3.5	2,003.1	14.7	1,323.5	0.0	5.0	0.0	13.5	212.0	4,753.7
4	141.2	13,655.4	25.0	5,435.6	0.0	43.9	53.1	2,048.3	9.0	1,315.2	0.0	5.0	1.5	14.9	52.6	4,792.5
5	159.3	13,770.0	25.0	5,460.6	0.0	43.9	49.4	2,068.2	1.6	1,311.2	0.0	5.0	1.4	16.1	82.0	4,865.0
6	193.6	13,837.2	30.0	5,457.7	15.0	48.9	64.9	2,090.0	36.8	1,335.4	0.0	5.0	0.0	15.6	46.9	4,884.5
7	135.4	13,866.8	25.0	5,422.7	0.0	48.9	41.1	2,102.9	11.1	1,344.3	0.0	5.0	0.0	14.3	58.2	4,928.6
8	140.2	13,947.7	25.0	5,447.7	0.0	48.9	29.8	2,084.2	11.0	1,349.2	0.0	5.0	0.0	13.8	74.4	4,998.8
9	128.4	13,844.1	50.0	5,417.7	0.0	48.9	39.2	2,094.7	28.5	1,355.6	0.0	4.5	0.0	13.2	10.7	4,909.4
10	129.2	13,845.6	30.0	5,413.3	18.8	67.7	32.2	2,102.7	6.6	1,347.0	0.0	4.0	1.0	13.9	40.6	4,897.0
11	188.8	13,906.9	40.0	5,453.3	0.0	67.7	26.5	2,110.5	15.7	1,343.9	0.0	3.6	12.4	26.0	94.2	4,902.0
12	145.6	13,872.1	30.0	5,483.3	0.0	67.7	38.9	2,113.1	16.7	1,313.7	5.3	8.4	1.1	26.7	53.6	4,859.2

Notes: * Referring to bonds issued by governments of special municipalities.

** Including those purchased back by originators for credit enhancement.

Sources: 1. *Financial Statistics Monthly*, CBC.

2. Banking Bureau, Financial Supervisory Commission.

3. Department of Foreign Exchange, CBC.

bond issuers were Taiwan Power Company, Cathay Financial Holdings, Advanced Semiconductor Engineering Inc., Far Eastern New Century Corporation, Taiwan Cement Corporation, and Nan Ya Plastics, with a combined issuance amount of NT\$151.0 billion, accounting for 37.50% of total issuance.

At the end of 2019, the outstanding amount of corporate bonds totaled NT\$2,113.1 billion, an increase of NT\$90.5 billion or 4.48% from the previous year end.

Deceleration in Bank Debenture Issuance

A total of 23 domestic banks issued bank debentures in 2019 in support of their funding needs, with an issuance amount of NT\$162.2 billion, slipping by NT\$66.5 billion or 29.07% over the previous year. The contraction was mostly attributable to decreased issuance of US dollar-denominated bank debentures amidst investor expectations of the Fed's rate cuts.

The main purpose for banks to issue NT dollar bank debentures was to strengthen their capital base and support mid- to long-term operation funding needs. The majority of the issuance went for subordinated debts with a share of 54.13%.

In respect to foreign currency bank debentures, the purpose of issuance was to meet mounting demand for foreign currency loans and support mid to long-term foreign currency funding needs.

As a consequence, senior bank debentures with lower issuing rates accounted for the largest share of total issuance, with an amount of NT\$0.9 billion.

As for the maturity of new issues, perpetual debentures made up a dominant 35.18% of total NT dollar bank debenture issuance, while 10-year, 5-year, and 3-year debentures accounted for 20.30%, 18.35%, and 10.72%, respectively. Debentures of the other maturity ranges made up a combined share of 15.45%.

In 2019, issuance of foreign currency bank debentures was primarily composed of 5-year and 10-year debentures, with respective shares of 66.72% and 33.28%. At the end of the year, the outstanding amount of bank debentures reached NT\$1,313.7 billion, down by NT\$3.4 billion or 0.26% from the previous year end.

Increase in Asset Securitization Products

New issues of asset securitization products totaled NT\$5.3 billion for the entire year. The outstanding amount of asset securitization climbed by NT\$3.4 billion or 67.26% from the previous year end to NT\$8.4 billion.

Growth in Foreign Bond Issuance

Foreign bonds are defined as NT dollar-denominated corporate bonds issued in Taiwan by foreign enterprises. The foreign bonds currently in circulation are corporate bonds issued by offshore companies listed on the Taiwan Stock Exchange or the Taipei Exchange (the over-the-counter market).

During 2019, foreign bond issuance amounted to NT\$17.5 billion, rising significantly by NT\$10.5 billion or 148.72% from a year earlier. The growth was mainly because the Danish energy company, Ørsted, issued green bonds in Taiwan for an amount of NT\$12.0 billion. At the end of the year, the outstanding amount of foreign bonds stood at NT\$26.7 billion, an increase of NT\$11.6 billion or 76.71% over the previous year end.

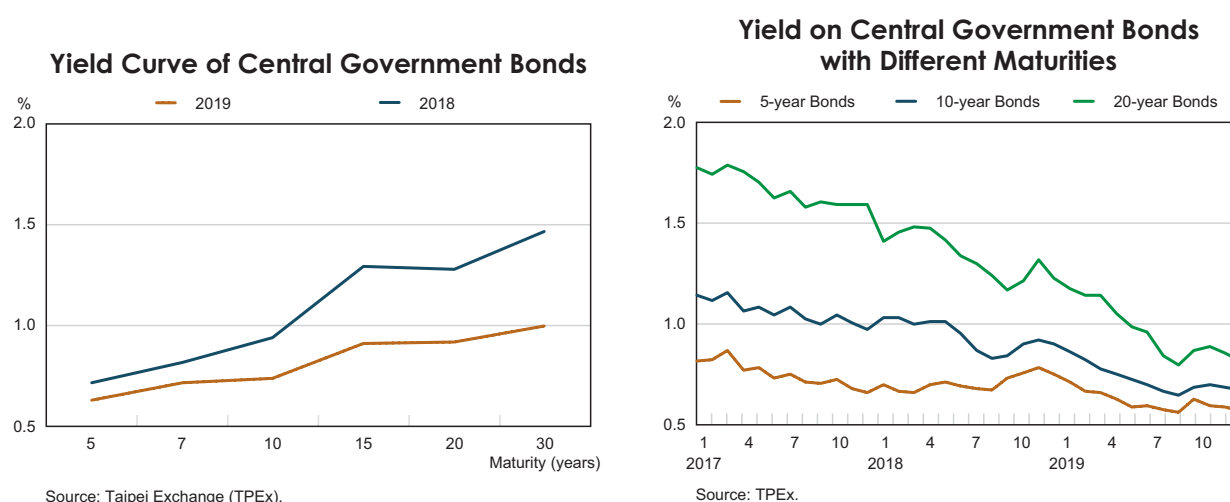
Contraction in International Bond Issuance

International bonds refer to corporate bonds issued in Taiwan by foreign institutions and are currently denominated in foreign currencies. For the year 2019, issuance of international bonds went down by NT\$129.6 billion or 14.30% from a year before to NT\$776.5 billion. The contraction was because some insurers' total foreign investment amounts (including investments in international bonds) had approached the statutory cap and they turned to invest in exchange-traded funds (ETFs) that held bonds issued overseas.

In respect of currency composition, issuance of US dollar-denominated, RMB-denominated, ZAR-denominated, and AUD-denominated bonds in 2019 reached NT\$721.4 billion, NT\$26.7 billion, NT\$16.8 billion, and NT\$11.6 billion, respectively. At the end of the year, the outstanding amount of international bonds stood at NT\$4,859.1 billion, up by NT\$357.3 billion or 7.94% over the previous year end.

Slide in Average Government Bond Yields and Drop in Transactions

Abundant domestic liquidity and the Fed's successive rate reductions in 2019 combined to send government bond yields lower. The yield on 10-year government bonds trended down and averaged 0.736% for the entire year, around 21 basis points lower than the 0.942% of the previous year.



Compared to the previous year, the average yield curve of government bonds shifted downward for the year 2019. The average yield on 30-year bonds posted the biggest decline of 47 basis points from a year before, while that on 15-year bonds came second with a decrease of 39 basis points. On the other hand, average yields on 5-year, 7-year, and 20-year bonds in 2019 moved down by eight, ten, and 36 basis points, respectively, over the previous year.

In terms of transaction volume, as narrower yield spreads led to a less vibrant domestic bond market, annual transactions shrank by NT\$6,933.6 billion or 10.70% to NT\$57,888.5 billion for the entire year.

By type of bonds, the majority of total bond transactions went for government bonds with a share of 62.01% and an annual trading volume of NT\$35,896.7 billion. The second most actively traded were corporate bonds, contributing to 31.36% of total transactions with an annual trading

volume of NT\$18,155.1 billion. Bank debentures came in third, accounting for a smaller share of 4.69% with an annual trading volume of NT\$2,713.1 billion.

Meanwhile, international bonds, foreign bonds, and asset securitization products made up marginal shares of 1.62%, 0.29%, and 0.03% in total transactions, with their respective annual trading registering NT\$937.5 billion, NT\$168.4 billion, and NT\$17.7 billion.

Turnover in Bond Market by Category

Unit: NT\$ Billion

Year/ Month	Total	Government Bonds	Corporate Bonds		Bank Debentures	Beneficiary Securities	Foreign Bonds	Int'l Bonds
			Nonconvertible	Convertible				
2017	61,583.5	39,532.0	17,202.1	887.2	2,295.8	21.7	57.9	1,586.8
2018	64,822.1	42,369.8	17,553.2	983.1	2,665.3	12.5	88.5	1,149.7
2019	57,888.5	35,896.7	17,103.2	1,051.9	2,713.1	17.7	168.4	937.5
2019/ 1	5,453.7	3,502.9	1,561.9	80.1	236.4	1.2	6.8	64.4
2	3,882.6	2,580.9	1,016.9	65.4	165.0	1.0	4.9	48.6
3	5,465.2	3,621.4	1,442.5	103.6	215.7	1.2	6.5	74.2
4	5,261.9	3,424.4	1,475.8	85.1	215.8	1.0	10.5	49.4
5	5,524.6	3,449.6	1,642.5	93.4	239.5	1.4	14.2	83.9
6	4,293.1	2,512.8	1,390.1	87.2	213.6	0.6	10.0	78.9
7	5,135.5	3,102.5	1,591.3	96.9	248.7	0.8	19.9	75.4
8	5,036.4	3,094.8	1,504.7	92.1	239.7	0.8	9.0	95.3
9	4,561.5	2,870.8	1,278.1	83.5	257.4	1.9	9.4	60.5
10	4,719.7	2,823.0	1,471.6	85.6	235.3	1.0	12.7	90.6
11	4,109.7	2,332.4	1,329.1	81.3	215.7	0.8	29.3	121.1
12	4,444.7	2,581.3	1,398.8	97.7	230.3	6.1	35.3	95.2

Source: TPEx.