

Financial Developments

II. Financial Developments

1. Overview

In 2018, the Bank's policy rates remained unchanged, banks' posted interest rates and the weighted average interest rate on deposits stayed stable, while the base lending rate and the weighted average interest rate on loans slightly moved downward. The interbank overnight call loan rate hovered at a low level, whereas bills market rates rose modestly. The average 10-year government bond yield dropped on account of ample market liquidity. Loans and investments of monetary financial institutions grew at a pace faster than that of the previous year as loan growth picked up owing to the economic recovery, increased housing transactions, one big merger deal, and greater financing demand from government enterprises. Meanwhile, M2 growth slowed because of net foreign capital outflows and a broader asset allocation strategy beyond just deposits.

With respect to the exchange rate, the NT dollar against the US dollar fluctuated in the year, against a backdrop of the US-China trade conflicts and the Fed's rate hikes. At the end of 2018, the NT dollar depreciated against the US dollar compared with a year ago, but, on a daily average basis, the NT dollar appreciated against the US dollar in 2018.

In the stock market, driven by factors including US stocks renewing record highs and net purchases in the local market by foreign investors, the Taiwan Stock Exchange Capitalization Weighted Stock Index, the TAIEX, reached 11,253 points on January 23, a record high in the past 28 years. In the fourth quarter, affected by the US-China trade conflict and global stock markets crashes, the TAIEX dropped and closed the year lower, but the daily average transaction value expanded.

M1B Growth Increased but M2 Growth Slowed

The monetary aggregate M2, measured on a daily average basis, recorded an annual growth rate of 3.52% in 2018. This was lower than the 3.75% registered in 2017 yet remained within the Bank's 2.5% to 6.5% target range for the year. The drop was because of a partial shift of bank deposits to life insurance policies and net foreign capital outflows. The annual growth rate of M1B, measured on a daily average basis, rose to 5.32% in 2018 from 4.65%, mainly because of increased stock market turnover in the course of the year and the implementation of pension reform in July. Meanwhile, the annual growth rate of reserve money went up in 2018 as a result of higher growth in transaction deposits.

Bank Loans and Investments Grew Faster

The annual growth rate of bank loans and investments increased from 4.82% at the end of 2017 to 5.39% at the end of 2018. The increase was due to faster loan growth amid the economic recovery, a moderate housing market rebound, one big merger deal, and greater demand from Taiwan Power Company to finance its plant expansion and energy transition-related plans. 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 3.85% at the end of 2018, higher than the 3.68% recorded a year earlier.

Deposit Rates Stayed Steady While Loan Rates Slightly Declined

In 2018, the Bank's policy rates remained unchanged, and banks' posted interest rates on deposits stayed steady. At the end of 2018, the average fixed rate on one-year time deposits of the five major domestic banks was 1.04%, the same as a year earlier, and the base lending rate was 2.631%, slightly lower than 2.632% in 2017. The weighted average rate on new loans decreased from 1.414% the previous year to 1.370%, mainly because of a drop in the rate on loans for current operations.

For domestic banks as a whole, the weighted average interest rate on deposits was unchanged. Meanwhile, the weighted average interest rate on loans slightly declined by 0.02 percentage points, mainly owing to increases in low-interest loans of some banks to local governments and government enterprises.

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

Against the background of a domestic economic recovery and stable prices, 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 stable lower level, fluctuating between 0.178% and 0.183% during the year of 2018. With regard to the bills market, money market rates fluctuated in a narrow range and slightly increased compared with last year because of stronger demand for funds amid the economic recovery.

The yield on the benchmark 10-year government bond trended downward, mainly because of ample market liquidity. In terms of issuance, as tax revenue increased and the amount of issuance was approaching the statutory limit, the total amount of government bonds issued decreased by NT\$52.7 billion over the previous year.

Exchange Rate Swung Up at the End of the Year, but the Average Exchange Rate Rose Slightly

At the beginning of 2018, the US dollar was dampened by the US Treasury Secretary's remarks that a weak US dollar would benefit the US economy. As a Result, the NT dollar appreciated against the US dollar. In April, because of the US-China trade conflict and rising US government bond yields, the NT dollar depreciated against the US dollar. Later, the US and China imposed tariffs on each other's exports. Tensions over the US-China trade conflict induced international capital outflows from emerging Asia, causing the NT dollar to depreciate against the US dollar and to fall to a yearly low on October 11. At the end of 2018, the NT dollar depreciated by 2.88% against the US dollar compared with the end of the previous year. On a daily average basis, the NT dollar appreciated against the US dollar by 0.94% in 2018.

Stock Index Swung Higher but Closed Lower

In the beginning of 2018, the TAIEX rose to a yearly high of 11,253 on January 23, a record unseen for 28 years, bolstered by active trading from domestic individual investors driven mainly by the domestic economic recovery, US stocks renewing record highs, and net purchases by foreign investors. In the fourth quarter, affected by the global stock market crash, rising US bond yields and foreign investors' sell-offs in emerging Asia, the TAIEX slid from 11,052 on October 1 to 9,489 on October 26. Thereafter, the TAIEX fell on weak international stock markets, the US-China trade friction, and domestic uncertainty over major elections. The TAIEX closed at 9,727 points at the end of the year, declining by 8.6% compared with the previous year end.

2. Banking Sector

Number of Monetary Financial Institutions

At the end of 2018, the number of monetary financial institutions (defined hereafter in this chapter as excluding the central bank) decreased to 402. The number of domestic banks decreased by one as Ta Chong Bank was merged into Yuanta Commercial Bank, while the numbers of the other types of monetary financial institutions all remained unchanged.

Number of Monetary Financial Institutions by Type

Types of institutions	End of 2018	End of 2017	Annual Change
Total Number of Main Offices	402	403	-1
Domestic Banks	38	39	-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	6,083	6,106	-23
Local Branches	5,879	5,898	-19
Overseas Branches	144	147	-3
Offshore Banking Units	60	61	-1

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

At the end of 2018, there were no money market mutual funds offered by banks, while the number of financial holding companies remained at 16, the same as 2017.

Market Shares of Deposits and Loans

In terms of deposits, the market share of domestic banks rose to 78.25% at the end of 2018, mainly attributable to the fact that some domestic banks successively provided preferential interest rates for large-value transaction deposits and foreign currency deposits. As a result of deposit inflows to domestic banks, the market shares of foreign and Mainland Chinese banks, Chunghwa Post, credit departments of farmers' and fishermen's associations, and credit cooperatives declined to 1.56%, 14.30%, 4.32%, and 1.57%, respectively.

In terms of loans, the market share of domestic banks continued to slip to 89.57%, mainly as the government collected more tax and treasury revenues, causing a decrease in its borrowings from

domestic banks. Meanwhile, foreign and Mainland Chinese banks' market share climbed to 4.58% as their lower lending rates boosted private corporate lending. Chunghwa Post's market share rose to 0.07%, reflecting an increase in lending to bills finance companies. As for the other institution types, the market share of credit departments of farmers' and fishermen's associations edged up to 4.05%, whereas that of credit cooperatives slightly fell to 1.73%.

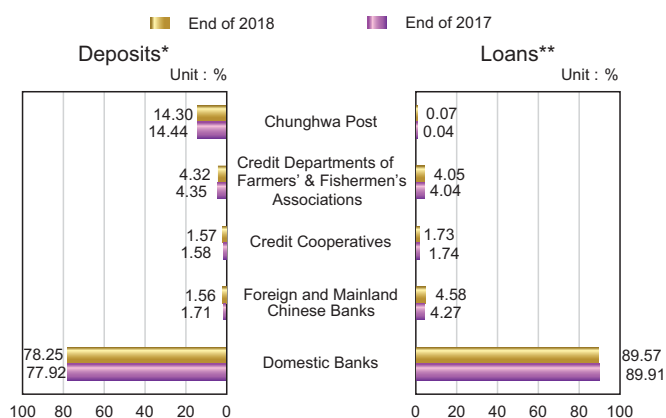
Sources and Uses of Funds

At the end of 2018, the total amount of funds in monetary financial institutions was NT\$49,193 billion, increasing by NT\$1,097 billion compared to the end of 2017. The combined share of transaction and non-transaction deposits was nearly 85%. While transaction deposits kept growing, the annual growth rate of non-transaction deposits fell sharply to -0.03% owing to a higher comparison base and marked decreases in foreign currency deposits along with NT dollar depreciation in the second half of the year.

In the case of fund uses, bank loans still accounted for over 50% of total uses of funds at the end of 2018. Both the share and growth in loans increased compared to the previous year, mainly owing to greater demand from government enterprises and individuals supported by the recovering housing market. As for growth in net foreign assets, it dropped sharply from 5.36% at the end of 2017 to -15.46%, mainly driven by large net foreign capital outflows and slower trade surplus growth.

Portfolio investments by monetary financial institutions continued to post year-on-year rises at the end of 2018. This mainly reflected the effect of the US-China trade conflict and a slowdown in the global economy, which caused monetary financial institutions to increase holdings of government bonds for hedging. As for banks' purchases of CDs issued by the CBC, both its share and growth decreased compared with the end of the previous year.

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.

Sources and Uses of Funds in Monetary Financial Institutions¹

Unit: NT\$ Billion

	End of 2018			End of 2017			Annual Change	
	Amount	Share (%)	Annual Growth Rate (%)	Amount	Share (%)	Annual Growth Rate (%)	Amount	Share (%)
Sources:								
Transaction Deposits ²	15,773	32.06	5.51	14,950	31.08	3.12	823	0.98
Non-transaction Deposits ³	26,189	53.26	-0.03	26,197	54.47	5.27	-8	-1.21
NT Dollar Deposits	20,440	41.55	0.40	20,357	42.33	1.17	82	-0.78
Foreign Currency Deposits	5,750	11.69	-1.54	5,840	12.14	22.61	-90	-0.45
Government Deposits	1,043	2.12	11.13	938	1.95	4.82	104	0.17
Other Items	6,188	12.56	2.94	6,011	12.50	4.84	177	0.06
Total	49,193	100.00	2.28	48,096	100.00	4.53	1,097	0.00
Uses:								
Net Foreign Assets ⁴	3,675	7.47	-15.46	4,347	9.04	5.36	-672	-1.57
Loans	27,660	56.26	5.06	26,328	54.74	4.96	1,332	1.52
NT Dollar Loans	26,666	54.21	5.36	25,309	52.62	4.18	1,357	1.59
Foreign Currency Loans ⁴	994	2.02	-2.41	1,018	2.12	29.11	-24	-0.10
Portfolio Investments ⁵	6,088	12.37	6.34	5,725	11.90	5.48	363	0.47
Purchases of CDs Issued by CBC	7,741	15.74	-0.67	7,793	16.20	4.04	-52	-0.46
Deposits with CBC	4,030	8.21	3.22	3,904	8.12	0.52	126	0.09

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

Because of people's changing asset allocation behavior, such as increased purchases of life insurance products or exchange traded funds (ETFs), the annual growth rate of deposits in 2018 was 2.60%, a significant decline from the 3.46% in 2017. Moreover, as the previous year's net foreign capital inflow turned into a net outflow in 2018, the annual growth rate of deposits showed a general downtrend as a result.

In terms of monthly movement, in the first half of the year, most months recorded declines except for April and May. In April, along with stronger growth momentum for bank loans and investments, the annual growth rate of deposits also rose. In May, because of faster growth in bank loans and investments and decreased net foreign capital outflows, the annual growth rate of deposits significantly increased.

In the second half of the year, the annual growth rate of deposits generally trended down, except for September and November when the growth momentum for bank loans and investments increased and net foreign capital outflows turned into inflows.

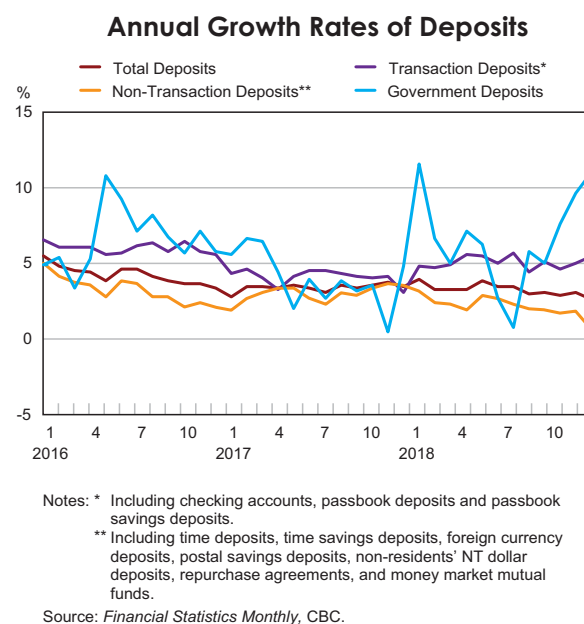
For transaction deposits, because banks rolled out more preferential interest rate deposit programs in March and April, the annual growth rate went up. However, in May and June, as some firms parked their funds in time deposits in preparation for dividend issuance and more effective allocation for higher returns, which caused transaction deposits to temporarily flow to time deposits, the annual growth rate of transaction deposits fell. In the other months, the rate generally fluctuated in tandem with the annual change of deposit balances of securities giro accounts. Overall, for transaction deposits, the annual growth rate roughly trended up in 2018 and its share in total deposits increased

to 36.68% at the end of 2018. The uptrend was most significant in July, when pension reform caused some time savings deposits to flow to passbook savings deposits.

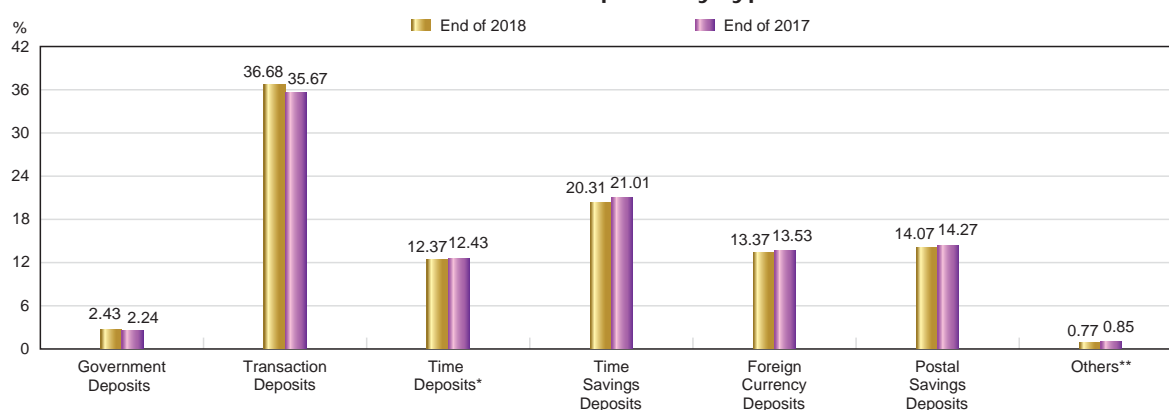
For the year as a whole, non-transaction deposits posted a fall in the annual growth rate from 3.60% at the end of 2017 to 0.62% at the end of 2018, on account of a higher comparison base, preferential interest rate programs for transaction deposits and changes in people's asset allocation behavior.

By type of non-transaction deposits, the annual growth rate of time deposits declined largely owing to a higher base effect, and the share of time deposits dropped to 12.37% at the end of 2018. The shares and the annual growth rate of time savings deposits declined because of the above-mentioned influence from pension reform. The annual growth rate of postal savings deposits rose owing to a lower comparison base, but its share fell to 14.07%.

For foreign currency deposits, the share and the annual growth rate in 2018 decreased to 13.37% and 1.38%, respectively. This was mainly attributable to a shift to foreign currency-denominated insurance products. In addition, NT dollar depreciation pushed up the cost of purchases of foreign currency, thus weakening the incentive to hold foreign currency deposits. Owing to increased tax revenue, the annual growth rate of government deposits went up to 11.20%, and its share in total deposits also rose to 2.43%.



Shares of Deposits by Type



Notes: * Including NCDs.

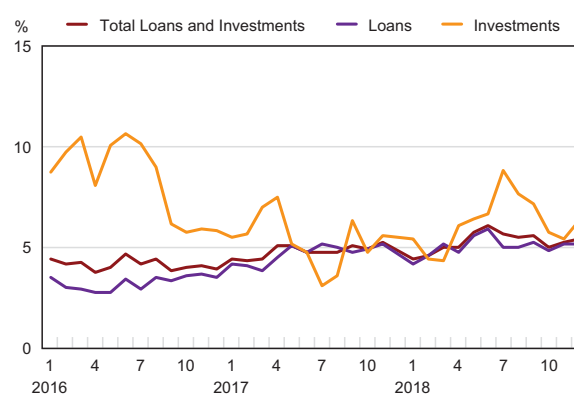
** Including repurchase agreements, non-residents' NTD deposits and money market mutual funds.

Source: *Financial Statistics Monthly*, CBC.

Bank Loans and Investments

The annual growth rate of loans and investments of monetary financial institutions was 5.39% at the end of 2018, increasing from 4.82% at the end of 2017. Growth in loans increased to 5.18% at the end of 2018 from 4.68% at the end of the previous year, owing to a moderate housing market recovery, one big merger deal, and greater demand from Taiwan Power Company to finance its plant expansion as well as national energy transition. Meanwhile, growth in portfolio investment accelerated to 6.34% at the end of 2018 from 5.48% a year earlier because insurance companies partially sold their massive government bond holdings to banks in order to increase their overseas investments, resulting in faster 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) rose to 5.44% at the end of 2018 from 5.16% at the end of 2017. The upturn was mainly due to a recovering housing market and one big merger deal. The annual growth rate of loans to government enterprises returned to positive territory, registering 11.00% at the end of 2018 from

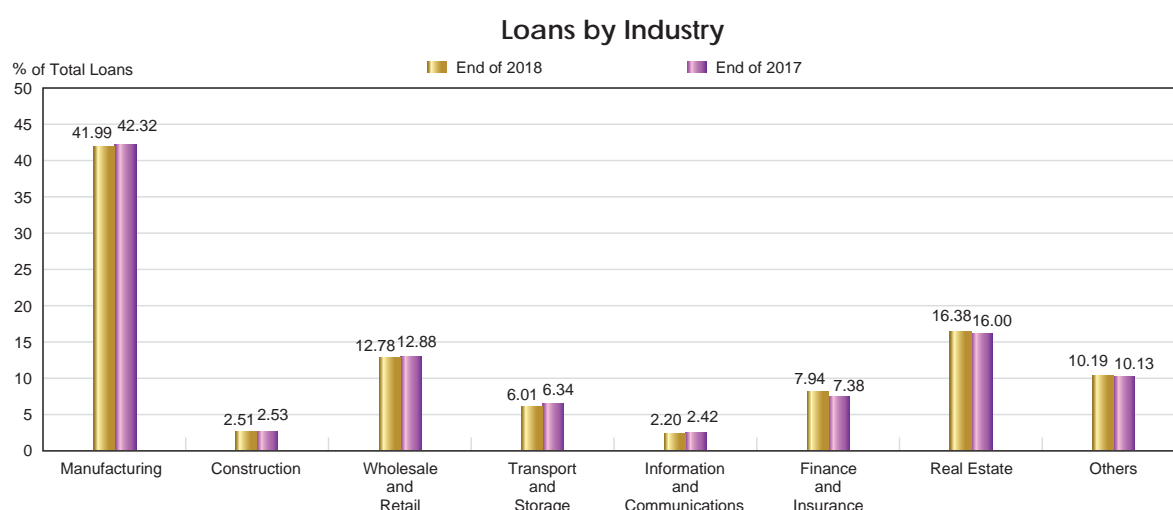
-3.34% at the end of 2017, as Taiwan Power Company increased borrowing from banks to facilitate its plant expansion and energy transition policies. Meanwhile, the annual growth rate of loans to government agencies was -1.52% at the end of 2018 because of reduced demand thanks to increased tax revenues. The growth rate, though negative, still represented an improvement compared to -5.44% the previous year as a result of a lower base effect.

In terms of loan composition, loans extended to the private sector and government enterprises accounted for 93.06% and 2.15% of total loans at the end of 2018, respectively, higher than the 92.84% and 2.03% recorded at the end of 2017. Loans extended to government agencies accounted for 4.79% at the end of 2018, lower than 5.12% 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 41.99% at the end of 2018 compared to 42.32% at the end of 2017, with its annual growth rate also down from 6.88% to 4.76%. The fall was mainly attributable to slower growth in loans extended to electronic parts and components manufacturing, as one semiconductor manufacturing company fully repaid its borrowing for an acquisition completed in 2016 and exports declined in the fourth quarter of the year. While the share of loans extended to the construction industry slightly decreased at the end of 2018, its annual growth rate rose from -8.40% to 4.72% at the end of 2018, in line with a housing market recovery.

The recovering housing market also kept the share of loans extended to the real estate industry on an upward track. However, following the slowdown in export orders and vehicle sales, the share



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.

of loans extended to the wholesale and retail industry shrank. Both the share and the annual growth rate of loans extended to the finance and insurance industry bounced back as a result of one big merger deal, which induced a significant volume of bank loans to this industry.

Consumer loans

The annual growth rate of consumer loans extended by banks increased from 3.80% at the end of 2017 to 4.42% at the end of 2018. Among them, house-purchasing loans grew by NT\$329.6 billion, or 4.96%, in 2018, a higher year-on-year increase mainly because home sales rose as more owner-occupied buyers entered the market and sellers cut prices. As for the shares of various consumer loans, house-purchasing loans remained the largest component, with its share rising from 83.59% at the end of 2017 to 84.02% at the end of 2018. Car loans accounted for 1.69%, increasing from 1.67%, mainly because of car loan promotion schemes. Meanwhile, house-repairing loans, revolving credit for credit cards, employee welfare loans, and other consumer loans accounted for 1.10%, 1.36%, 0.67%, and 11.16%, respectively.

Investments

Owing to valuation changes, portfolio investments by monetary financial institutions, measured at fair value, recorded a year-on-year increase of NT\$408.4 billion, while the increase was smaller, at NT\$363.1 billion, when measured on a cost basis.

Portfolio investments by monetary financial institutions measured on a cost basis grew at a faster pace of 6.34% in 2018, mainly because banks increased government bond holdings to hedge risks in response to a number of uncertainties such as the US-China trade conflict and slow growth in the global economy.

Among the investment instruments, government bonds accounted for the largest share with 62.85%, higher than the 61.87% registered a year ago, mainly bolstered by massive purchases of government bonds by banks and the Department of Savings and Remittances of Chunghwa Post to seek low-risk investments. At the end of 2018, commercial paper accounted for a share of 16.72%, lower than a year ago, mainly because commercial paper issuance decreased and banks cut back such holdings. Corporate bonds accounted for a share of 14.43%, increasing from the end of 2017.

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

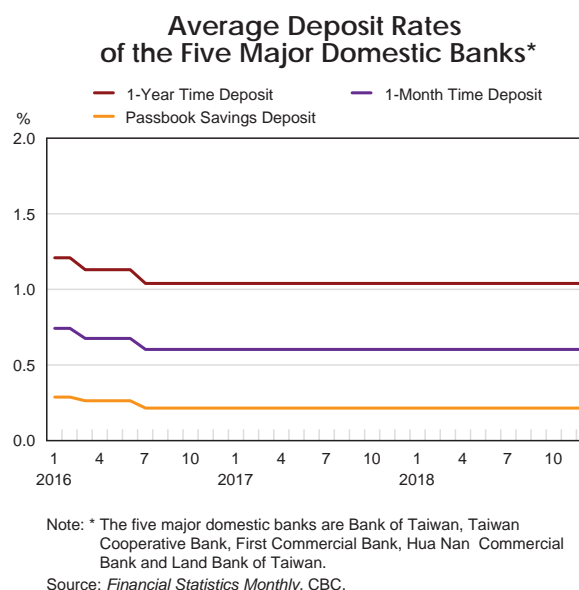
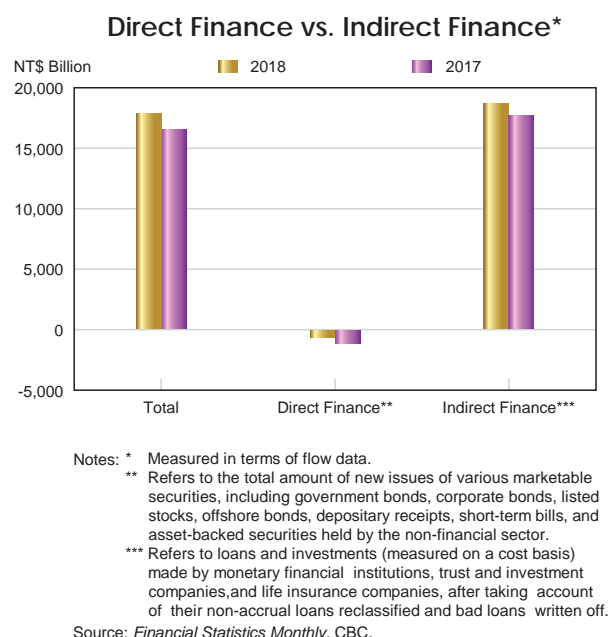
NT\$1,658.1 billion to NT\$1,794.7 billion in 2018. Direct finance decreased by NT\$80.2 billion during 2018, smaller than the decrease of NT\$118.9 billion last year. Indirect finance increased from the previous year's NT\$1,777.2 billion to NT\$1,874.9 billion, which was mainly due to higher growth in loans and investments by financial institutions.

Based on the outstanding balance, the share of direct finance in total funds raised decreased from 19.81% a year before to 18.93% at the end of 2018, while the share of indirect finance increased from 80.19% to 81.07%.

Bank Interest Rates

In the first half of 2018, the domestic economy grew steadily. However, entering the second half of the year, with the Fed interest rate increase and the US-China trade war, global financial markets fluctuated drastically. As the global economic climate cooled, and uncertainty over international economic and financial prospects increased, domestic economic growth slowed down, and inflation expectations remained mild. Against this backdrop, the Bank decided to keep policy rates unchanged; hence 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 2018, 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 2018. Because of an increase in the share of transaction deposits, of which the interest rates were lower, in total deposits, the weighted average deposit rate slightly decreased



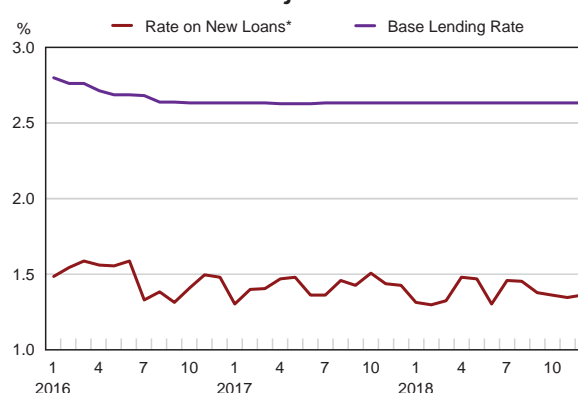
to 0.55% in the fourth quarter of 2018 from 0.56% a year ago. The weighted average interest rate on deposits of domestic banks was stable at 0.56% in the first three quarters of 2018 but slightly dropped to 0.55% in the fourth quarter, averaging 0.56% for the whole year, which was the same as that recorded in the previous year.

As banks' rates on current operations loans dropped in 2018, the weighted average interest rate on new loans of the five major domestic banks edged down from 1.414% in the previous year to 1.370% in 2018. Excluding central government loans, the weighted average interest rate on new loans decreased from 1.472% in the previous year to 1.414% in 2018, down by 0.058 percentage points. Moreover, the average base lending rate decreased to 2.631% at the end of 2018 from 2.632% at the previous year-end.

In the first quarter of 2018, owing to an increase in bank claims on local governments and government enterprises and fierce competition in the mortgage market, some banks offered lower rates on new mortgage loans. The weighted average interest rate on total loans of domestic banks slightly decreased from 1.92% in the previous quarter to 1.91%. The rate dropped to 1.90% in the second quarter, owing to increases in low-interest loans to government enterprises and large-value loans to renowned firms. 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 1.90%, which was 0.02 percentage points lower than that recorded in the previous year.

Because the average lending rate was slightly lower and the average deposit interest rate was stable, the average interest rate spread between deposits and loans slightly shrank to 1.34 percentage points in 2018, which was 0.02 percentage points smaller than that recorded in the previous year.

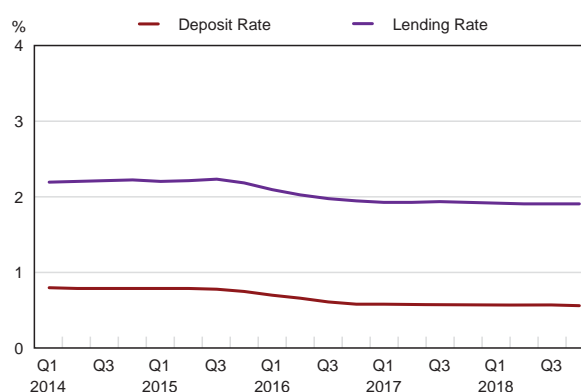
**Average Lending Rates
of the Five Major Domestic Banks**



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

In 2018, the total turnover in the interbank call loan market decreased by 5.70%, while that in the short-term bills market increased by 9.18%. In terms of money market rates, the interbank overnight call loan rate remained at low levels, whereas bills market rates displayed a modest uptrend, as the Bank maintained an accommodative monetary policy stance against a background of slower global and domestic economic growth, heightened uncertainties over international economic and financial prospects, and mild inflation expectations.

Interbank Call Loans Decreased

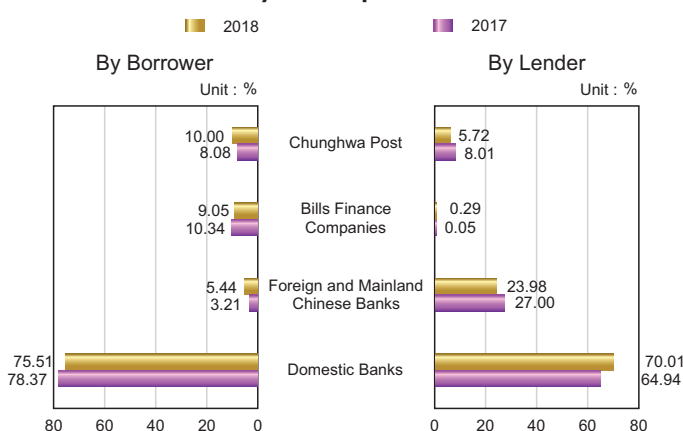
In the first half of the year, banks' demand for call loans rose because of steady growth in bank loans and investments amid robust expansion in the domestic economy. Nevertheless, the escalating US-China trade conflict weighted on the global economy and caused growth in domestic bank loans and investments to decrease in the second half of the year. Total annual turnover of interbank call loans for 2018 decreased by NT\$2,913.5 billion, or 5.70%, to NT\$48,192.7 billion. The outstanding amount of interbank call loans stood at NT\$384.0 billion at the end of the year, recording a slight decrease of 2.28% from the previous year end.

With regard to borrowers, domestic banks were still the largest player during the year, making up 75.51% of total transactions, followed by Chunghwa Post, bills finance companies, and foreign and Mainland Chinese banks, with shares of 10.00%, 9.05%, and 5.44%, respectively. The amount borrowed by domestic banks fell by NT\$3,663.4 billion, or 9.15%, over the previous year because ample liquidity in the banking system caused banks' demand for borrowing to soften. Meanwhile, with market liquidity remaining sufficient, private and government enterprises resorted to other sources for borrowing, leading to weaker demand from bills finance companies for funds used for underwriting commercial paper. Therefore, the amount borrowed by bills finance companies dropped by NT\$922.0 billion or 17.46% during the year. On the other hand, the amount borrowed by Chunghwa Post grew by NT\$691.8 billion or 16.75%, primarily resulting from increased investment in government bonds. The amount borrowed by foreign and Mainland Chinese banks rose substantially by NT\$980.2 billion or 59.67% over the previous year, reflecting greater demand for funds because of net foreign capital outflows.

In terms of lenders, domestic banks continued to be the largest supplier of funds, contributing to 70.01% of total transactions in 2018. Following domestic banks were foreign and Mainland Chinese banks, Chunghwa Post, and bills finance companies, with respective shares of 23.98%, 5.72%, and 0.29%. The amount lent by domestic banks only expanded by NT\$553.3 billion, or 1.67%, compared

with the previous year because of abundant liquidity in the banking system. As for foreign and Mainland Chinese banks, the funds they gained from the custodian business for foreign investors were insufficient because of net foreign capital outflows, bringing down the interbank lending amount of foreign and Mainland Chinese banks by NT\$2,245.6 billion or 16.27%. Meanwhile, the amount lent by Chunghwa Post contracted significantly by NT\$1,335.9 billion or 32.65% over the previous year, largely attributable to less available funds as it increased investment in government bonds.

Composition of Interbank Call Loan Market by Participant



Source: Financial Statistics Monthly, CBC.

In respect of maturity, interbank overnight call loans remained the most actively traded instrument in the market with a predominant share of 63.19%, down by 4.30 percentage points from that of the previous year. Second were those with a maturity of 1 week, accounting for 25.61%, up by 1.62 percentage points from that of the previous year. The share of loans with a 2-week maturity increased by 2.00 percentage points to 8.28%.

Short-Term Bill Transactions Increased

In 2018, newly issued short-term bills amounted to NT\$14,971.9 billion, representing an increase of NT\$93.4 billion or 0.63% over the previous year. Of the new issues, commercial paper still accounted for a dominant share at 86.60%, followed by negotiable certificates of deposit with a share of 12.21%.

As banks issued more negotiable certificates of deposit in an attempt to fill the funding gap or increase the deposit base, the amount of negotiable certificates of deposit issued rose by NT\$267.2 billion from a year before. In contrast, issuance of commercial paper registered a decrease of NT\$112.8 billion compared with the previous year. The decline was mostly because enterprises were less willing to issue commercial paper on account of weakened funding needs and a slight uptrend in money market rates, along with abundant liquidity in the banking system leading banks to actively expand their lending business. The amount of treasury bills and bankers' acceptances fell by NT\$60.0 billion and NT\$0.9 billion, respectively, over the previous year.

As of the end of 2018, total outstanding short-term bills stood at NT\$2,223.1 billion, 3.18% more than that of the previous year end.

Short-Term Bills Market

Unit: NT\$ Billion

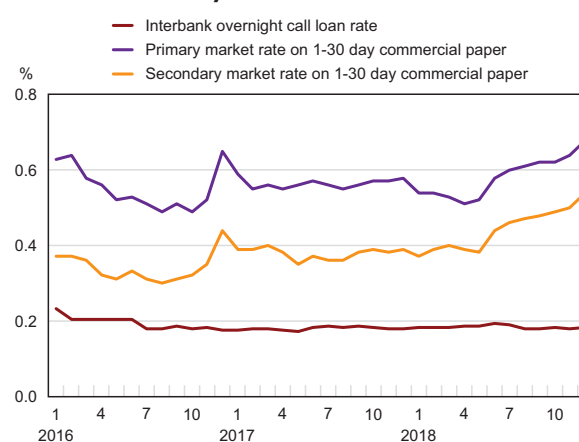
Year	Total		Treasury Bills		City Treasury Bills		Commercial Paper		Bankers' Acceptances		Negotiable Certificates of Deposit	
	Issues	Year-end Outstanding	Issues	Year-end Outstanding	Issues	Year-end Outstanding	Issues	Year-end Outstanding	Issues	Year-end Outstanding	Issues	Year-end Outstanding
2009	6,293.4	1,043.1	435.0	215.0	-	-	5,397.7	651.3	21.9	4.9	438.8	171.9
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

The total turnover of short-term bills in 2018 expanded by 9.18% to NT\$41,255.9 billion. Of the total transactions, commercial paper still made up the lion's share with 89.04%, showing a decrease of 1.67 percentage points from a year earlier. Second were negotiable certificates of deposit with a share of 10.58%, recording an increase of 1.74 percentage points over the previous year. Treasury bills and bankers' acceptances made up negligible shares of transactions. With respect to market participants, private enterprises remained the largest player in the market with a share of 42.89%, followed by banks with a share of 31.35%.

Money Market Rates Remained at Low Levels

For the year 2018, the weighted average interbank overnight call loan rate remained at a low level because of ample market liquidity. In the first half of the year, banks' funding conditions slightly tightened on account of the US-China trade dispute, net foreign capital outflows, enterprise mergers and acquisitions, and income tax collections. As a result, the weighted average interbank overnight call loan rate went up from 0.180% in January of 2018 to 0.192% in June. Later in the year, net foreign capital inflows helped increase market liquidity, thereby sending the rate down to 0.178% in September. However, the weighted average interbank overnight call loan rate slightly fluctuated between 0.179% and 0.183% in December, reflecting higher funding needs of enterprises at the end of the year.

Money Market Interest Rates



The primary market rate on commercial paper with a maturity of 1-30 days moved within a range between 0.51% and 0.68%, while the secondary market rate on commercial paper with a maturity of 1-30 days remained between 0.37% and 0.54% throughout the year.

Money Market Funds Contracted

Amid global financial market turbulence in the year 2018, money market funds were often seen as an ideal investment option to park short-term capital given the benefits of low risk and high liquidity, yet investment trust companies adopted a product diversification strategy which affected their asset allocation during the year. In addition, money market funds tend to generate relatively lower returns. These factors combined to lend to a continuous decline in the size of money market funds. At the end of 2018, there were a total of 43 money market funds in Taiwan with total assets reaching NT\$683.6 billion, down by NT\$99.4 billion or 12.70% from the previous year end.

In respect of portfolio composition, the largest use of the funds was bank deposits with a share of 66.56% at the end of the year. Following bank deposits were short-term bills and repurchase agreements, accounting for 22.10% and 11.25% of total money market funds, respectively.

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 (%)
2016	848.3	551.1	64.97	144.2	17.00	134.7	15.88	18.2	2.15
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
2018/ 1	813.5	551.3	67.77	154.6	19.01	106.7	13.11	0.9	0.11
2	828.5	557.0	67.23	164.5	19.85	106.0	12.80	1.0	0.12
3	826.3	567.7	68.70	155.7	18.84	102.0	12.34	1.0	0.12
4	831.8	571.4	68.69	160.3	19.28	99.0	11.90	1.0	0.12
5	798.9	557.6	69.80	141.2	17.67	99.1	12.40	1.0	0.13
6	725.5	500.9	69.04	129.4	17.83	94.6	13.03	0.7	0.09
7	736.0	503.1	68.36	137.0	18.61	95.3	12.94	0.6	0.09
8	751.6	509.9	67.85	146.3	19.47	94.7	12.60	0.6	0.08
9	716.6	483.1	67.41	150.6	21.02	82.3	11.48	0.6	0.09
10	730.2	483.6	66.23	157.3	21.54	88.7	12.15	0.6	0.09
11	730.6	468.0	64.05	175.2	23.97	86.9	11.89	0.6	0.09
12	683.6	455.0	66.56	151.1	22.10	76.9	11.25	0.7	0.10

4. Foreign Exchange Market

The NT Dollar Exchange Rate

In 2018, on a daily average basis, the NT dollar appreciated slightly against the US dollar but depreciated against the euro, the Korean won, the renminbi (RMB) and the Japanese yen. The trade-weighted nominal effective exchange rate index of the NT dollar decreased by 0.60% 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.

At the beginning of 2018, the US dollar was dampened by the US Treasury Secretary's remarks that a weak US dollar would benefit the US economy. As a result, the NT dollar appreciated against the US dollar. In April, because of the US-China trade conflict and rising US government bond yields, the NT dollar depreciated against the US dollar. Later, the US and China imposed fresh tariffs on each other's exports. The flare-up in US-China trade tensions caused international capital to flow out of emerging Asia, leading the NT dollar to depreciate against the US dollar and to fall to a yearly low on October 11. At the end of 2018, the NT dollar depreciated by 2.88% against the US dollar compared with the end of the previous year. On a daily average basis, the NT dollar appreciated against the US dollar by 0.94% in 2018.

At the beginning of 2018, the NT dollar depreciated against the euro as the euro area's update on 2017 GDP growth data pointed to the fastest expansion in a decade. Later, owing to the euro area's weaker-than-anticipated economic performance and political unrest in Italy, market participants expected the ECB would postpone its policy rate hikes, leading to euro weakness, and therefore the NT dollar against the euro rose to a yearly high on May 29. In the second half of 2018, the euro was dampened by Turkey's currency crisis, Italy's budget issue, and Brexit uncertainty, making the NT dollar against the euro fluctuate and broadly appreciate. Compared with the end of the previous year, the NT dollar appreciated against the euro by 1.34% at the end of 2018. On a daily average basis, the NT dollar depreciated against the euro by 3.63%.

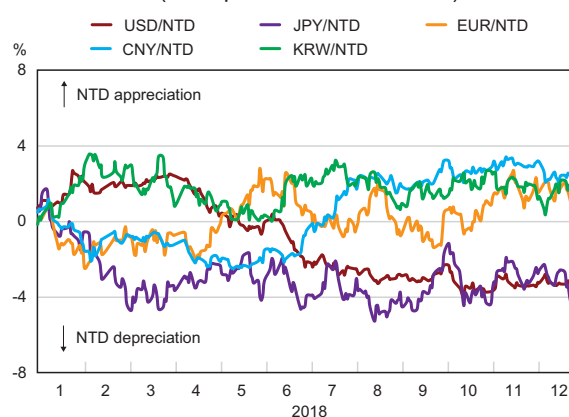
In 2018, the NT dollar depreciated against the yen in the first quarter and fluctuated in the following three quarters. Early in the year, the BoJ announced it would taper bond purchases and start thinking about how to exit its massive monetary stimulus program around the fiscal year starting in April 2019. In addition to the BoJ's plan, market concerns about the US-China trade conflict drove the yen higher on safe-haven demand, sending the NT dollar against the yen to a yearly low on August 13. Late in September, the BoJ decided to keep its interest rate policy unchanged, and thus the yen weakened, leading the NT dollar against the yen to appreciate. At the end of the year, uncertainty over Brexit talks and US-China trade friction caused the yen to rebound on safe-haven

demand, and the NT dollar depreciated against the yen as a result. In sum, the NT dollar depreciated by 4.83% against the yen at the end of 2018 compared with the previous year end. On a daily average basis, the NT dollar depreciated against the yen by 0.63%.

The NT dollar against the RMB depreciated in the first half of 2018 and appreciated toward the end of the year. Early in the year, as China tightened capital controls and the People's Bank of China raised the interest rates for open market operations, the NT dollar depreciated against the RMB. In the second half of 2018, a worsening US-China trade conflict and a slowdown in Chinese economic growth combined to send the NT dollar gradually higher to hit a yearly high against the RMB on November 8. Overall, the NT dollar appreciated against the RMB by 2.40% between end-2017 and end-2018. On a daily average basis, the NT dollar depreciated by 1.19% against the RMB when compared with the previous year.

The NT dollar against the Korean won appreciated in the first quarter, depreciated in the second quarter, and generally fluctuated toward the end of the year. Owing to South Korea's capital outflows induced by its stock market slump, the NT dollar appreciated against the won and reached a yearly high on February 6. Then, won strength, bolstered by the plan of an inter-Korean summit in April, led the NT dollar to depreciate against the won. During the latter half of 2018, amid rising US-China trade tensions and the Fed's interest-rate hikes, the NT dollar against the won fluctuated. Compared with the end of 2017, the NT dollar appreciated by 1.22% against the won at the end of 2018. On a daily average basis, the NT dollar depreciated by 1.73% against the won in 2018.

**Percent Changes of NT Dollar
Against Major Currencies**
(Compared with End-2017)



Source: Department of Economic Research, CBC.

Annual Changes of NTD Exchange Rate Against Major Currencies

	NTD/USD	NTD/EUR	NTD/JPY	NTD/CNY	NTD/KRW
Exchange Rate (2018/12/28)	30.733	35.203	0.2784	4.4762	0.0275
Exchange Rate (2017/12/29)	29.848	35.674	0.2649	4.5835	0.0279
Annual Change	-2.88%	1.34%	-4.83%	2.40%	1.22%
Average Exchange Rate (2018)	30.156	35.595	0.2731	4.5580	0.0274
Average Exchange Rate (2017)	30.439	34.302	0.2714	4.5037	0.0269
Annual Change	0.94%	-3.63%	-0.63%	-1.19%	-1.73%

Source: Department of Economic Research, CBC.

Foreign Exchange Market

Trading in the Taipei foreign exchange market increased in 2018. Total net trading volume for the year was US\$7,987.6 billion, representing a 12.5% year-on-year increase. The daily average turnover was US\$32.1 billion in 2018.

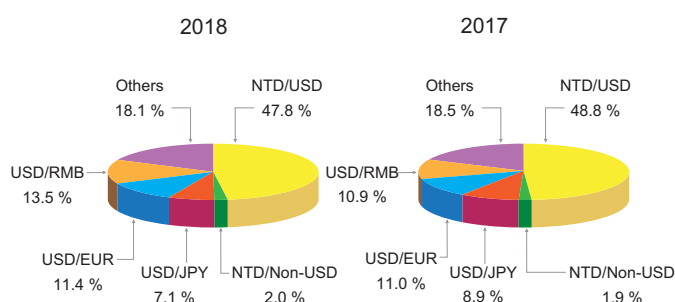
In terms of trading partners, transactions between banks and non-bank customers accounted for 31.9% of the total turnover, while interbank transactions made up 68.1%, including 24.0% for transactions among local banks and 44.1% for those between local banks and overseas banks.

As far as traded currencies were concerned, NT dollar trading against foreign currencies accounted for 49.8% 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 50.2% of the total trading volume, with trading in currency pairs of USD-RMB, USD-euro, and USD-yen accounting for respective shares of 13.5%, 11.4%, and 7.1%.

Compared with 2017, NT dollar trading against foreign currencies increased by 10.5%. Transactions in third currencies increased by 14.6%.

With respect to types of transactions, the major types were foreign exchange swaps and spots, accounting for 50.0% and 39.0% of total turnover, respectively. Compared with 2017, the trading volume of margin trading decreased, whereas those of the other types increased.

Composition of Foreign Exchange Transactions by Currency Pair



Source: Department of Foreign Exchange, CBC.

Turnover of Major Products in the Taipei Foreign Exchange Market

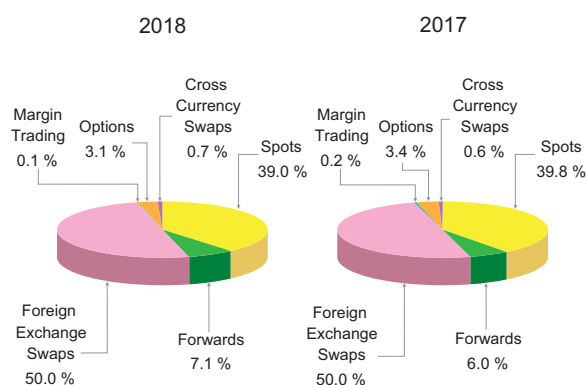
Unit: US\$ Million

Year	Spots	Forwards	Forex Swaps	Margin Trading	Options	Cross Currency Swaps	Total
2014	2,869,175	408,770	3,352,584	20,379	1,134,172	37,365	7,822,445
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
2017-2018 Growth Rate (%)	10.1	34.2	12.5	-36.5	2.8	32.8	12.5

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\$260.9 billion. Of this amount, interest rate-related derivatives accounted for the lion's share with US\$254.1 billion, or 97.4%, with its turnover increasing markedly by 43.0% from the previous year. Interest rate futures accounted for the majority of this increase, up by US\$32.4 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			
2014	22	43,179	1,657	122,236	167,093	3,870	302	1,401	172,666
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
2017-2018 Growth Rate (%)	-	59.4	127.6	27.7	43.0	25.8	232.9	233.7	43.7

Source: Department of Foreign Exchange, CBC.

RMB Business

By the end of 2018, there were 66 domestic banking units (DBUs) and 58 offshore banking units (OBUs) engaging in RMB business. The balance of RMB deposits amounted to RMB298.4 billion; RMB remittances totaled RMB1,484.3 billion in 2018; RMB settlement through the Taipei Branch of the Bank of China totaled RMB4,398.6 billion.

RMB investment tools have become even more diversified during 2018. RMB investment business conducted by financial institutions as of the end of 2018 is shown in the following table.

RMB Business Conducted by Financial Institutions

Unit: RMB Billion

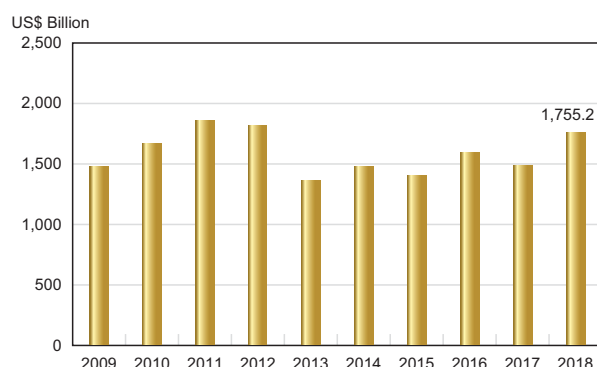
Business Items	Amount
Deposit balance (include NCDs, end of 2018)	298.4
Total remittances (February 2013 to December 2018)	9,706.3
Total settlement through the Taipei Branch of the Bank of China (February 2013 to December 2018)	23,106.2
Total value of 136 RMB-denominated bonds issued (up to the end of 2018)	93.4
Accumulated premium receipts from RMB-denominated investment-linked insurance business (up to the end of 2018)	13.6
Accumulated premium receipts from RMB-denominated traditional insurance business (up to the end of 2018)	4.2

Source: Department of Foreign Exchange, CBC.

Foreign Currency Call Loan Market

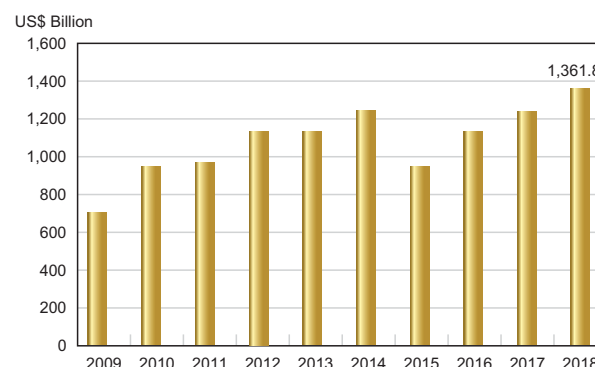
The transaction volume in the foreign currency call loan market in 2018 was US\$1,755.2 billion, an increase of 18.2% over the previous year. Of this amount, US dollar transactions accounted for a dominant share with US\$1,638.2 billion, making up 93.3% of the total while increasing by 19.0% from 2017. RMB transactions reached RMB650.2 billion in 2018, making up a share of 5.6% of the total but recording a year-on-year decrease of 0.7% in volume. Japanese yen transactions reached ¥1,197.0 billion in 2018, representing a small share of 0.6% of the total with a year-on-year rise of 125.2% in volume. The amount of euro transactions amounted to €0.6 billion, with a modest share of 0.04%. Other currencies accounted for a combined 0.46% of the total transaction volume. The balance

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.

of foreign currency call loan transactions at the end of 2018 was US\$46.6 billion.

The volume of foreign currency-NTD swap transactions reached US\$1,361.8 billion, 9.7% more than 2017, while the balance was US\$263.9 billion at the end of 2018.

OBU Assets

There were 60 OBUs at the end of 2018. Domestic banks operate 37 of these OBUs, while foreign banks run the other 23. The total assets of all OBUs decreased to US\$201.0 billion at the end of the year, representing a decrease of US\$2.0 billion or 1.0% from the previous year end owing to decreasing claims on financial institutions. Domestic OBUs made up 88.8% of these combined assets with an amount of US\$178.5 billion, and the OBUs of foreign banks accounted for US\$22.5 billion, or 11.2%, of the total.

In terms of the uses of funds, loans to non-financial institutions, at US\$82.2 billion, represented the majority share of 40.9% of total OBU assets. Securities investments came in second place, accounting for 29.4% of total OBU assets. In terms of the destination for funds, Asia accounted for the majority with 52.0%, followed by America at 31.0%.

The OBUs' main source of funds was due to financial institutions, making up 48.1% of total liabilities and equity. Furthermore, deposits of non-financial institutions accounted for 39.2% of the total. The main funding origin of OBUs was Asia, accounting for the majority with 62.0%, followed by America, with a share of 24.0%.

Forex trading turnover of all OBUs rose by 12.9% to US\$636.2 billion, of which US\$348.6 billion went for spot transactions, US\$139.9 billion for forward transactions, and US\$147.7 billion for forex swap transactions. Compared with the previous year, the growth rates of trading of spots, forwards, and forex swaps were -3.1%, 77.2%, and 18.4%, respectively.

For OBUs, the total turnover of other derivatives products grew to US\$356.1 billion, an increase of 27.8% over the previous year. Of this amount, futures transactions registered US\$155.3 billion, making up 43.6% of the total.

Balance Sheet of OBUs in Banking System

Unit: US\$ Million

Year/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
2014/12	87,849	22,066	43,518	26,379	179,811	57,818	97,509	338	24,146
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
2017/12-2018/12 Growth Rate (%)	1.3	10.0	-16.8	14.0	-1.0	2.0	-9.5	0.0	34.3

Source: Financial Statistics Monthly, CBC.

5. Stock Market

Strong volatility associated with international financial market turbulence marked the year of 2018 for Taiwan's benchmark stock index, the Taiwan Stock Exchange (TWSE) weighted stock price index (TAIEX). For the first three quarters of the year, the TAIEX fluctuated wildly at relatively high levels, reflecting a mix of bullish and bearish influences such as US-China trade conflicts, international market movements, geopolitical concerns, and investor expectations of the Federal Reserve's policy rate paths. However, the TAIEX retreated from above the 10,000 mark in the fourth quarter, as global stock market crashes, rising US bond yields, and foreign investor sell-offs in Asian emerging markets (EM) dragged the local stock index out of a 1-year plus streak of strength.

At the end of 2018, the TAIEX dropped by 8.6% compared with the end of the previous year. Most categories lost ground, except for Cement, Textile, Trading & Consumers' Goods, Iron & Steel, and Building Material & Construction. The two worst-performing groups were Glass & Ceramics and Paper & Pulp, posting year-on-year declines of 38.3% and 31.7%, respectively as their 2017 surges were contrasted by plunges in 2018. Tourism shares also suffered a fall of 26.0%, owing to a dwindling number of Chinese tourists and a rush of hotels scrambling out of the market.

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
2016	9,253.5	68.7	64.6	27,247.9	320.2	-19.9	-86.6
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
2018/ 1	11,103.8	127.5	8.4	33,277.3	75.5	-1.3	17.2
2	10,815.5	127.0	5.1	32,434.1	-99.4	1.8	-11.2
3	10,919.5	113.3	8.0	32,748.5	-45.1	-5.1	-21.9
4	10,657.9	124.5	7.0	31,872.8	-82.3	0.9	-9.4
5	10,875.0	132.1	8.9	32,527.6	-28.1	-3.8	-10.9
6	10,836.9	150.1	9.3	32,437.0	-83.2	-0.1	2.1
7	11,057.5	132.7	8.8	33,122.3	8.3	4.8	-1.3
8	11,063.9	116.7	8.1	33,241.1	32.8	9.2	-23.5
9	11,006.3	118.7	6.8	33,057.5	65.9	-0.9	-1.8
10	9,802.1	109.5	8.2	29,529.6	-143.0	-7.7	-12.3
11	9,888.0	103.2	7.6	29,753.8	10.4	1.1	-9.1
12	9,727.4	88.7	6.4	29,318.5	-66.9	-0.5	-17.4

Source: Securities and Futures Bureau, FSC.

The TAIEX daily average trading value was NT\$119.9 billion in 2018, a year-on-year increase of 23.0%, as the extension of the day-trading transaction tax break shored up market momentum.

The Taipei Exchange (TPEX) weighted stock price index for the over-the-counter market slipped by 16.8% in 2018, with most categories posting year-on-year declines. Among them, the Electric Machinery and Electronics categories sank by 24.2% and 23.6%, respectively, affected by the US-China trade conflict and weakness of technology shares in the US market. For the year of 2018, the TPEX daily average trading value increased by 5.8% to NT\$33.0 billion.

The TWSE Market

Listings Increased; Capitalization Shrank

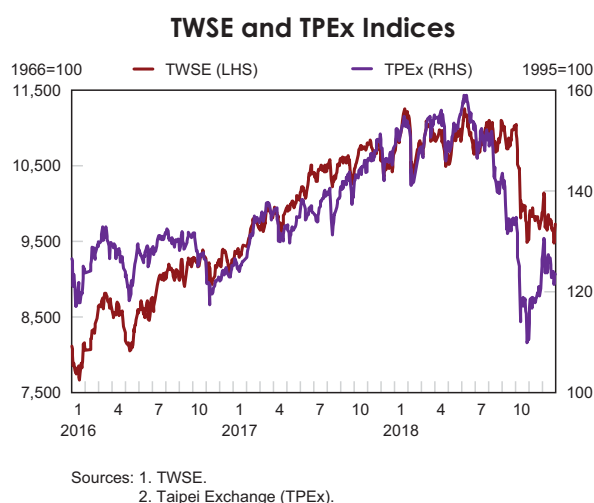
At the end of 2018, the number of TWSE listings totaled 928, with the number of initial public offerings reaching a 5-year record of 31. The par value of total shares issued rose by a modest 0.3% to NT\$7.2 trillion, while total market capitalization shed 7.9% to NT\$29.3 trillion. The number of Taiwan Depository Receipts (TDRs) remained 17.

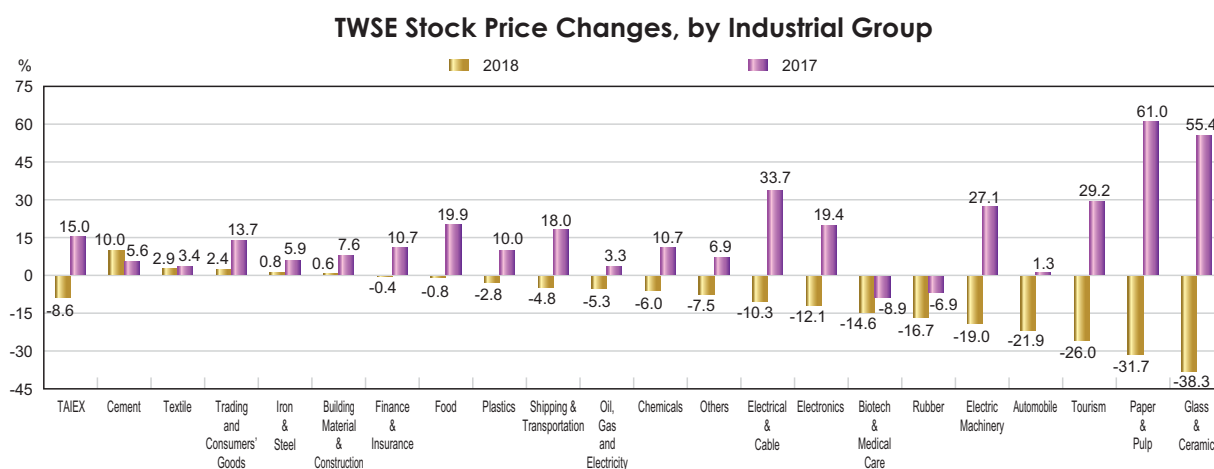
TAIEX's Record Start Was Reversed by Market Downswings amid International Slump

At the start of 2018, as US equities hit multiple historical records and foreign investors bought heavily in the local market, the TAIEX set off a gaining streak and peaked at 11,253 points on January 23, the highest mark in 28 years. The index pulled back afterwards and dropped to 10,372 points on February 9, owing to European and US stock market crashes and investor concern about steeper US rate hikes, as well as profit-taking sell-offs on the TWSE.

Thereafter, up until the end of the third quarter, the TAIEX fluctuated sharply at high levels. The local benchmark oscillated wildly in the interim, reflecting the upside and downside developments on the international scene, including US-China trade talk progress, global stock market performance, geopolitical risks, and investor expectations about the Fed's rate decisions.

The fourth quarter, though, was characterized by a broader downtrend. With global equities crumbling, the US bond yield climbing, and foreign investors offloading a lot of their Asian EM positions, the TAIEX plunged to 9,489 points on October 26 from 11,052 points on October 1, halting a bull run that had lasted for more





Source: TWSE.

than one year. In the final months of 2018, uncertainties including trade conflicts among major economies and domestic elections caused the main board shares to seesaw at lower price levels. The TAIEX closed the year at 9,727 points, down by 8.6% compared to 10,643 points a year before.

Broken down by subcategory, most industrial groups registered lower prices than the previous year. Glass & Ceramic and Paper & Pulp shares suffered the hardest, as high comparison bases in 2017 and steeper corrections in 2018 dragged them down by 38.3% and 31.7%, respectively. Tourism shares decreased by 26.0%, affected by a fall in Chinese tourism to Taiwan and the ensuing spate of hotel shutdowns. The stocks in the Automobile subcategory also slipped by 21.9%, owing to trade war-related impacts and declining car sales. By contrast, shares in Cement, Textile, Trading w& Consumers' Goods, Iron & Steel, and Building Material & Construction all recorded positive year-on-year growth, with Cement shares harvesting the biggest rise of 10% thanks to record-high corporate earnings.

Market Turnover Increased

In 2018, trading momentum built up mainly because the day-trading tax cut was extended until the end of 2021. For the year of 2018, the TWSE market turnover, measured on a daily average basis, increased by 23.0% to NT\$119.9 billion from the NT\$97.5 billion recorded the previous year. Robust trading activity also sent the turnover rate higher from the 78.4% of 2017 to 92.6%.

TWSE Witnessed Net Sales by Institutional Investors

In 2018, all three major types of institutional investors net sold in the local stock market. Foreign investors offloaded a net NT\$355.1 billion of TAIEX shares, an amount unseen since the 2009 global financial crisis. Meanwhile, local securities investment trust companies and securities dealers recorded net sales of NT\$1.5 billion and NT\$9.94 billion, respectively, in the TWSE market.

Looking at foreign investor behavior in 2018, they collectively became net sellers in the TWSE market in months other than January, July, August, September, and November. The net sales were mainly attributable to international headwinds, including escalating US-China trade friction, growing expectation of the Fed's rate hikes, increased geopolitical tensions, and slumping global equities. Indeed, the global stock market crash triggered the year's heaviest net sale of NT\$143.0 billion of main board shares in October and pushed the TAIEX below the 10,000 mark.

In terms of local securities investment trust companies, they were net buyers in February, April, July, August, and November. In the rest of the year, they became net sellers with profit-taking transactions for the purpose of fund redemption, financial statement boosting, or portfolio adjustments.

Local securities dealers, with inclination for short swing trading, net bought during the bullish months of January and June in 2018 and net sold in the rest of the year to hedge their positions or lock in gains.

The TPEX Market

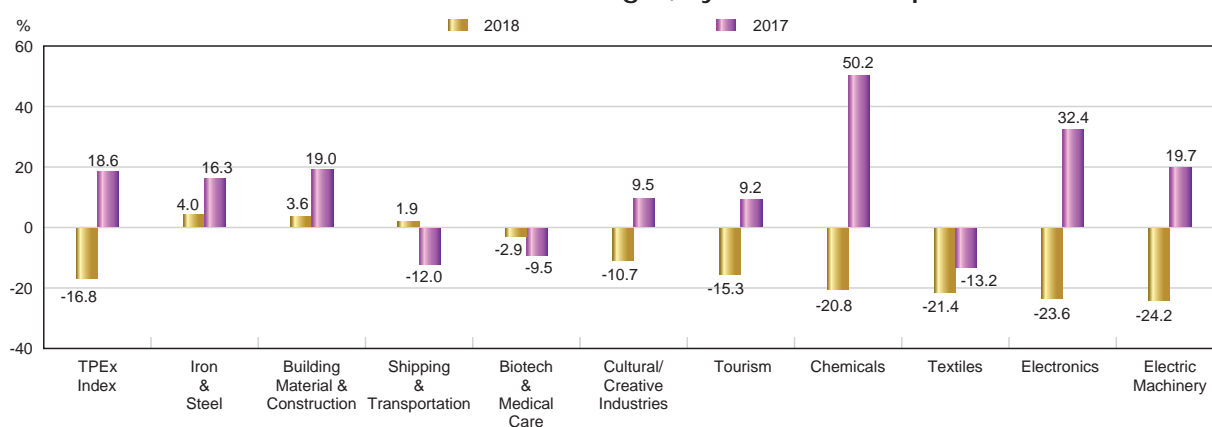
Listings Increased but Capitalization Fell

At the end of 2018, the number of TPEX listings increased to 766, with 31 new listings mostly from the technology industry. The total par value rose by 2.2% year on year to NT\$738.5 billion, while market capitalization fell 14.8% to NT\$2.83 trillion.

TPEX Index Rallied but Then Dropped with Sharp Swings

In 2018, the TPEX experienced wilder fluctuations than the TWSE. The index opened the year with upswings and peaked at 159.1 points on June 6 but sharper corrections followed. Amid economic worries and financial market turmoil at home and abroad, the TPEX Index plummeted to 109.9 points

TPEX Stock Price Changes, by Industrial Group



Source: TPEX.

on October 26. Despite a rebound afterwards, the index closed the year at 123.5 points. Not only did it fall by 16.8% compared to the previous year's 148.5 points, it also suffered a decline nearly twice as large as that in the TAIEX.

For the year of 2018, net sales by foreign investors, local securities investment trust companies, and local dealers were NT\$13.5 billion, NT\$7.6 billion and NT\$156.4 billion, respectively. The historical record of net sales by local dealers was because these investors offloaded in large quantity their holdings of bond ETFs and call/put warrants.

The daily average turnover in the TPEx market increased by 5.8% from the NT\$31.2 billion of the previous year to NT\$33.0 billion.

Key Measures for the Stock Markets

Key measures for Taiwan's stock markets in 2018 include the following:

- (1) January 1: The withholding tax on dividends paid to foreign shareholders would be raised from 20% to 21%.
- (2) January 18: With the passing of tax reforms, the tax credit imputation of the integrated income tax system was abolished. Resident shareholders may now be levied for income from dividends in either of the following ways — a 8.5% deduction on dividend income as part of total taxable income, up to a maximum of NT\$80,000, or a flat tax rate of 28% on dividend income only.
- (3) April 13: With the passage of an amendment to the Securities Transaction Tax Act, the transaction tax cut for day trading would be extended to December 31, 2021, effective from April 28, 2018. The extended tax reduction also applies to day trading by securities dealers.
- (4) May 29: The Financial Supervisory Commission (FSC) announced that qualified securities firms may issue exchange-traded notes (ETNs), an instrument to be officially defined as a security from July 2, 2018.
- (5) August 9: A draft amendment to the *Futures Trading Act* was approved by the Cabinet, paving the way for a central counterparty clearing mechanism of over-the-counter derivatives transactions. In addition, the maximum administrative fine for violations against futures trading regulations would be raised from NT\$0.6 million to NT\$2.4 million.
- (6) September 10: The FSC announced that, starting in 2019, the TWSE would no longer offer makeup sessions for trading and settlement on those Saturdays adjusted to be work days, which used to be the norm under the government's mechanism to substitute a Saturday for an extra weekday off in order to complete an extended national holiday weekend.

6. Bond Market

For the year 2018, the total volume of bond issuance displayed a downtrend. New issues of bonds amounted to NT\$1,930.5 billion, decreasing by NT\$191.6 billion or 9.03% over the previous year. At the end of 2018, the total outstanding of bonds issued stood at NT\$13,564.3 billion, rising by NT\$904.4 billion or 7.14% from the previous year end.

Central government bond issuance for 2018 totaled NT\$347.3 billion, falling by NT\$52.7 billion or 13.17% from the previous year, mainly because the increase in tax revenues reduced fiscal funding needs.

Issuance of corporate bonds for 2018 posted an increase of NT\$26.6 billion or 6.90% to NT\$412.3 billion. The rise was primarily because corporations issued new bonds in order to roll over old ones and repay short-term loans.

In terms of bank debentures, the main purpose for banks to issue bonds was to strengthen their capital base and meet mid-to long-term operation funding needs. Bank debenture issuance amounted to NT\$231.8 billion for the entire year, increasing by NT\$42.3 billion or 22.31% over the previous year.

In 2018, 116 foreign currency-denominated international bonds were issued in Taiwan by foreign institutions with a total amount of NT\$903.7 billion, contracting by NT\$235.5 billion or 20.67% compared to the previous year. Meanwhile, foreign institutions issued 12 NT dollar-denominated foreign bonds totaling NT\$7.1 billion, down by NT\$0.6 billion or 8.44% over the previous year.

In the secondary market, abundant domestic liquidity and the international oil price slump brought down annual average yields on bonds with different maturities in 2018. For the 10-year government bond, its yield slid by 12 basis points to 0.942%.

In addition, with Taiwan's bond exchange-traded fund (ETF) market growing considerably, surging demand for bonds drove the bond trading volume higher. As a result, annual transactions reached NT\$64,822.1 billion, rising by NT\$3,238.7 billion or 5.26% over the previous year.

Reduction in Government Bond Issuance

With respect to central government bonds, as tax revenues increased and public debt approached the statutory ceiling, central government bond issuance declined by NT\$52.7 billion or 13.17% from the previous year to NT\$347.3 billion in 2018.

Among the total volume of government bonds issued by the Ministry of Finance, 10-year bonds accounted for the largest share with NT\$145.0 billion, while 5-year bonds came in second

with NT\$90.0 billion. 2-year, 20-year, and 30-year government bonds recorded issuance of NT\$27.3 billion, NT\$45.0 billion, and NT\$40.0 billion, respectively.

The weighted average issuing rates in 2018 on central government bonds with different maturities were all lower than the previous year, reflecting ample market liquidity and a drop in international oil prices. The issuing rate on 20-year bonds registered the largest decrease of 36 basis points, and second was that on 30-year bonds with a decrease of 34 basis points.

In terms of bonds issued by governments of special municipalities, all new bonds in 2018 were issued by the government of Kaohsiung Special Municipality with a total amount of NT\$14.6 billion. At the end of the year, the outstanding amount of bonds issued by governments of special municipalities totaled NT\$43.9 billion, up by NT\$2.3 billion or 5.65% from the previous year end.

Growth in Corporate Bond Issuance

Corporate bonds refer to NT dollar- or foreign currency-denominated bonds issued in Taiwan by domestic corporations. For the year 2018, the issuing amount of corporate bonds increased by NT\$26.6 billion or 6.90% to NT\$412.3 billion, mainly because corporations issued new bonds in order to roll over old ones and repay short-term loans.

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
2016	2,522.1	11,581.9	563.5	5,542.3	0.0	63.1	286.0	1,898.3	140.1	1,209.5	5.0	97.8	3.0	9.8	1,524.6	2,761.0
2017	2,122.1	12,659.9	400.0	5,594.8	0.0	41.6	385.7	1,938.1	189.5	1,227.3	0.0	95.6	7.7	14.5	1,139.2	3,748.0
2018	1,930.5	13,564.3	347.3	5,558.6	14.8	43.9	412.3	2,023.0	231.8	1,320.2	13.6	104.2	7.1	15.1	903.7	4,499.3
2018/ 1	207.9	12,712.7	25.0	5,504.8	0.0	41.6	43.8	1,945.8	6.8	1,232.7	0.0	95.8	0.0	14.3	132.3	3,877.9
2	209.8	12,852.3	25.0	5,499.9	0.0	41.6	2.4	1,936.1	31.8	1,257.5	0.0	96.0	1.8	16.1	148.8	4,005.3
3	266.8	12,971.8	25.0	5,449.9	0.0	41.6	23.5	1,941.3	53.1	1,291.0	0.0	92.8	0.0	15.9	165.2	4,139.4
4	275.6	13,214.4	25.0	5,474.9	0.0	41.6	18.3	1,936.8	26.5	1,312.8	0.0	92.5	0.0	15.3	205.8	4,340.6
5	222.4	13,358.3	20.0	5,494.9	0.0	41.6	70.2	1,984.1	15.9	1,310.0	0.0	91.6	0.6	15.9	115.7	4,420.2
6	170.0	13,458.7	37.3	5,532.2	0.0	41.6	65.1	1,998.0	9.9	1,308.7	3.0	94.3	0.4	16.1	54.4	4,467.9
7	126.3	13,546.3	25.0	5,557.2	0.0	41.6	56.6	2,027.8	11.5	1,311.6	0.0	94.3	0.6	15.5	32.6	4,498.5
8	76.4	13,557.6	25.0	5,582.2	0.0	41.6	25.5	2,018.2	7.5	1,309.5	0.0	94.3	0.9	13.9	17.5	4,498.0
9	95.9	13,524.1	40.0	5,542.2	0.0	41.6	31.7	2,029.5	19.9	1,312.9	0.0	94.2	0.6	14.1	3.7	4,489.7
10	83.0	13,493.4	25.0	5,513.6	14.8	43.9	20.2	2,024.0	3.8	1,302.6	0.0	94.7	1.0	14.8	18.3	4,499.8
11	97.7	13,521.9	40.0	5,523.6	0.0	43.9	31.0	2,033.0	19.9	1,307.2	0.0	93.5	0.4	14.5	6.4	4,506.3
12	98.8	13,564.3	35.0	5,558.6	0.0	43.9	24.0	2,023.0	25.4	1,320.2	10.6	104.2	0.8	15.1	3.1	4,499.3

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.

Regarding bond maturities, the majority of the issuance went for 5-year corporate bonds with a share of 43.92%, followed by 7-year bonds with 22.91%. The six largest corporate bond issuers were Taiwan Power Company, Fubon Life, China Steel Corporation, Hon Hai/Foxconn Technology Group, Far Eastern New Century Corporation, and Taiwan Mobile Co., Ltd., with a combined issuance amount of NT\$145.3 billion, accounting for 35.24% of total issuance.

At the end of 2018, the outstanding amount of corporate bonds totaled NT\$2,023.0 billion, expanding by NT\$84.9 billion or 4.38% from the previous year end.

Rise in Bank Debenture Issuance

For the year 2018, 28 domestic banks issued bank debentures in support of their funding needs, with an issuance amount of NT\$231.8 billion, increasing by NT\$42.3 billion or 22.31% over the previous year. The rise was largely because banks issued new debentures to lock in mid- to long-term funding costs at low levels amidst a low interest rate environment.

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. Subordinated debts made up the lion's share of 64.50% in total issuance.

As for 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. Therefore, the majority of the issuance went for senior bank debentures with lower issuing rates, amounting to NT\$99.0 billion.

In respect to the maturity of new issues, perpetual debentures made up a dominant 43.73% of total NT dollar bank debenture issuance, while 10-year, 3-year, and 7-year debentures accounted for 14.68%, 11.97%, and 11.63%, respectively.

In 2018, issuance of foreign currency bank debentures was primarily composed of 30-year debentures and perpetual debentures, with respective shares of 92.78% and 7.22%. At the end of the year, the outstanding amount of bank debentures was NT\$1,320.2 billion, expanding by NT\$92.8 billion or 7.56% from the previous year end.

Expanding Asset Securitization Products

New issues of asset securitization products amounted to NT\$13.6 billion for the entire year. The outstanding amount of asset securitization went up by NT\$8.6 billion or 8.94% from the previous year end to NT\$104.2 billion.

Contraction 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).

For the year 2018, issuance of foreign bonds totaled NT\$7.1 billion, a decrease of NT\$0.6 billion or 8.44% from a year earlier. At the end of the year, the outstanding amount of foreign bonds stood at NT\$15.1 billion, growing by NT\$0.7 billion or 4.50% over the previous year end.

Deceleration in International Bond Issuance

International bonds refer to corporate bonds issued in Taiwan by foreign institutions and are currently denominated in foreign currencies. In 2018, international bond issuance fell by NT\$235.5 billion or 20.67% from a year before to NT\$903.7 billion.

The Financial Supervisory Commission (FSC) announced the amendments to the Regulations Governing Foreign Investments by Insurance Companies on November 21, 2018. According to Article 10 of the Regulations, the total foreign investment amount (including investments in international bonds) of an insurer shall not exceed 145% of the insurer's approved foreign investment limit. Furthermore, the aforementioned total amounts of some insurers had nearly reached the limit prior to the promulgation of the amended regulations. Both factors caused demand for international bonds to soften compared to the previous year.

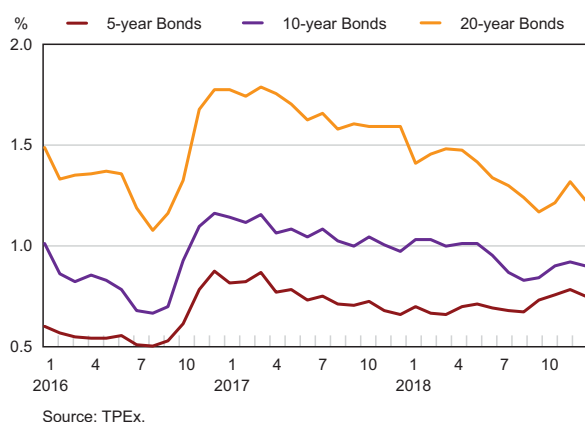
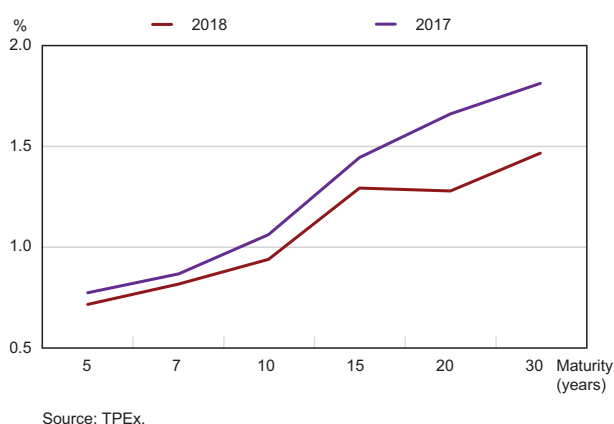
In terms of currency composition, issuance of US dollar-denominated, RMB-denominated, and ZAR-denominated bonds in 2018 stood at NT\$822.1 billion, NT\$79.6 billion, and NT\$0.3 billion, respectively. At the end of the year, the outstanding amount of international bonds reached NT\$4,499.3 billion, an increase of NT\$751.3 billion or 20.04% over the previous year end.

Downtrend in Average Government Bond Yields yet Uptick in Transactions

In 2018, on account of sufficient domestic liquidity and plunging international oil prices, the 10-year government bond yield moved downward and averaged 0.942% for the entire year, 12 basis points lower than the 1.064% of the previous year.

Compared to the previous year, the average yield curve of central government bonds shifted downward for the year 2018. The average yield on 20-year bonds recorded the biggest decline of 38 basis points over the previous year. Second was that on 30-year bonds with a decrease of 35 basis points. Moreover, average yields on 5-year, 7-year, and 15-year bonds in 2018 dropped by 6, 5, and 15 basis points, respectively, compared to 2017.

With regard to transaction volume, total bond transactions expanded by NT\$3,238.7 billion or 5.26% from the previous year to NT\$64,822.1 billion for the year 2018. The rise was because the growing domestic bond ETF market helped push up demand for bonds.

Yield on Central Government Bonds with Different Maturities**Yield Curve of Central Government Bonds**

By type of bonds, the majority of total bond transactions went for government bonds with a share of 65.36% and an annual trading volume of NT\$42,369.8 billion. The second most actively traded were corporate bonds, making up 28.60% of total transactions with an annual trading volume of NT\$18,536.3 billion. Bank debentures came in third, contributing to 4.11% of total transactions with an annual trading volume of NT\$2,665.3 billion.

Meanwhile, international bonds, foreign bonds, and asset securitization products made up marginal shares of 1.17%, 0.14%, and 0.02% in total transactions, with their respective annual trading reaching NT\$1,149.7 billion, NT\$88.5 billion, and NT\$12.5 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				
2016	66,817.9	45,243.5	16,546.7	655.3	2,376.9	19.4	29.4	1,946.8
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
2018/ 1	6,394.2	4,392.1	1,556.2	88.5	190.0	1.3	5.4	160.7
2	3,889.1	2,506.3	1,009.1	61.0	141.9	0.2	8.7	162.0
3	5,711.7	3,825.9	1,377.3	82.8	249.6	1.3	7.9	166.9
4	4,865.1	3,238.9	1,228.0	63.8	228.0	1.2	5.7	99.4
5	5,872.9	3,873.6	1,541.5	77.8	253.3	1.2	8.3	117.1
6	5,509.4	3,503.6	1,572.2	102.0	212.9	1.2	6.8	110.8
7	5,858.1	3,764.6	1,690.1	77.0	264.7	1.2	7.3	53.1
8	5,933.3	3,897.7	1,616.7	88.2	256.9	1.2	7.0	65.6
9	5,047.2	3,303.8	1,396.5	78.5	216.2	0.0	4.7	47.5
10	5,683.6	3,763.6	1,522.3	88.7	234.3	1.2	14.1	59.5
11	5,196.3	3,332.9	1,514.8	76.4	207.5	1.2	5.8	57.8
12	4,861.1	2,966.9	1,528.4	98.4	210.1	1.2	6.8	49.2

Source: TPEX.