

Financial Developments

II. Financial Developments

1. Overview

In 2017, the CBC's policy rates remained unchanged, banks' posted interest rates on deposits and loans stayed stable, while weighted average interest rates on deposits and loans slightly moved downward. Most money market rates slightly increased, and the average 10-year government bond yield turned upwards following the Fed's rate hikes and US bond yield rises. 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 economic recovery, increased housing transactions, and brisk trading in the stock market. Meanwhile, M2 growth slowed because some deposits shifted from banks to life insurance companies.

With respect to the exchange rate, the NT dollar against the US dollar swung upwards in the year, affected by factors including a weak US dollar, larger net foreign capital inflows, and the Fed's rate hikes. 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, swung up from its yearly low in January to over 10,000 points in May and reached its yearly high on November 23, before declining owing to weak international stock markets and net sales by foreign investors.

M2 Growth Slowed

The monetary aggregate M2, measured on a daily average basis, recorded a yearly growth rate of 3.75% in 2017. This was lower than the 4.51% registered in 2016 and remained within the CBC's 2.5% to 6.5% target range for the year. The drop was because part of bank deposits shifted to life insurance companies. The annual growth rate of M1B, measured on a daily average basis, dropped to 4.65% in 2017 from 6.33% recorded a year earlier, mainly because of lower growth in transaction deposits and a higher base effect in the previous year. Meanwhile, the annual growth rate of reserve money decreased in 2017 because growth in banks' demand for reserves slowed as a result of lower growth in transaction deposits.

Growth in Bank Loans and Investments Increased

Although commercial banks were still conservative in making investment decisions on concerns about monetary policy normalization in advanced economies, as well as increasing uncertainty in global political, economic and financial situations, the annual growth rate of loans and investments increased from 3.89% at the end of 2016 to 4.82% at the end of 2017. The increase was due to faster

loan growth as the economic recovery, increased housing transactions, and brisk stock trading combined to boost private sector demand for funds. 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 3.69% at the end of 2017, higher than the 2.56% recorded a year earlier.

Average Rates on Deposits and Loans Slightly Declined

In 2017, the CBC's policy rates remained unchanged, and banks' posted interest rates on deposits and loans both stayed steady. At the end of 2017, 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 2.632%, close to that of 2016. The weighted average rate on their new loans decreased from 1.468% the previous year to 1.414%, mainly because of a drop in the rate on loans for current operations resulting from new low-interest loans to local governments and government enterprises.

For domestic banks as a whole, the weighted average interest rate on deposits slightly decreased by 0.07 percentage points, mainly because the share of time deposits in total deposits shrank from the previous year. Meanwhile, the weighted average interest rate on loans also slightly declined by 0.09 percentage points, mainly owing to increases in low-interest loans of some banks to local governments and government enterprises.

Bills Market Rates and 10-Year Government Bond Yields Increased

Against the background of a domestic economic recovery and stable prices, the CBC 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 0.17% and 0.18% during the year of 2017. 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 upward, mainly because of robust stock trading absorbing funds from the bond market, as well as the Fed's rate hikes. 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\$163.5 billion over the previous year.

Exchange Rate Swung Up

The NT dollar against the US dollar reached a yearly low on January 4. Afterwards, the NT dollar

appreciated owing to foreign capital inflows and a weak US dollar resulting from US president Trump's remarks that the US dollar was too strong and that could hurt the US economy. While the Fed raised the policy rate on June 15, along with the announcement of its balance sheet reduction plan, and foreign capital flowed out of Asia, the NT dollar slightly depreciated. After early July, because of US dollar weakness on concerns that the Fed would slow down the pace of rate hikes, as well as continuous net foreign capital inflows, the NT dollar trended up again to a yearly high on December 28. At the end of 2017, the NT dollar appreciated against the US dollar by 8.14% compared to that at the end of the previous year. The NT dollar against the US dollar also appreciated by 6.17% on an annual average basis.

Stock Index Swung to Rise, Then Closed Lower

After the beginning of 2017, the TAIEX swung up from the yearly low of 9,273 on January 3 to over 10,000 points in May, mainly driven by the domestic economic recovery, US stocks renewing record highs, and net purchases by foreign investors. Afterwards, although there were unfavorable factors including tensions on the Korean Peninsula, the TAIEX continued to climb to a yearly high of 10,855 on November 23, a record unseen for 28 years, mainly bolstered by active trading from domestic individual investors. For the rest of the year, the TAIEX declined on weak international stock markets and net sales by foreign investors. The TAIEX closed at 10,643 points at the end of the year, increasing by 15.01% compared with the previous year end.

2. Banking Sector

Number of Monetary Financial Institutions

At the end of 2017, the number of monetary financial institutions (defined hereafter in this chapter as excluding the central bank) decreased to 403. The number of domestic banks decreased by one because of business model transformation pursued by China Development Industrial Bank, while the numbers of the other types of institutions all remained unchanged.

Number of Monetary Financial Institutions by Type

Types of institutions	End of 2017	End of 2016	Annual Change
Total Number of Main Offices	403	404	-1
Domestic Banks	39	40	-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	6,106	6,111	-5
Local Branches	5,898	5,908	-10
Overseas Branches	147	141	6
Offshore Banking Units	61	62	-1

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

There were no money market mutual funds at the end of 2017 after the final money market mutual fund, offered by Yuanta Commercial Bank, was liquidated in May. The number of financial holding companies remained at 16, the same as in 2016.

Market Shares of Deposits and Loans

In terms of market shares of deposits, domestic banks gained a larger share of 77.92%, mainly because transaction deposits expanded amid net foreign capital inflows and a buoyant stock market. Moreover, higher USD deposit rates offered by domestic banks following Fed rate hikes and NTD appreciation both contributed to a significant increase in foreign currency deposits. As a result of deposit outflows 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 1.71%, 14.44%, 4.35%, and 1.58%, respectively.

In terms of loans, the market share of domestic banks slipped to 89.91%, as the government collected more tax and treasury revenues, the CPC Corporation generated more profits amid oil

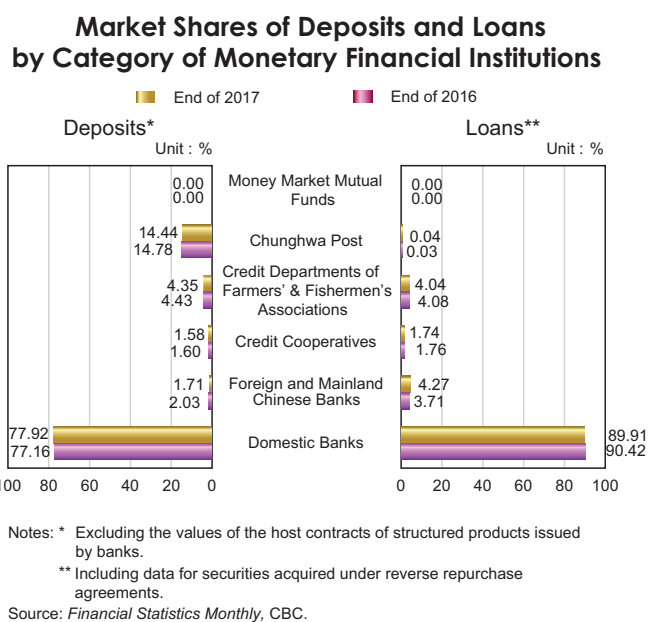
price rises, and the Taiwan Power Company raised more debt, all of which caused a decrease in borrowings from domestic banks by the government and government enterprises. Meanwhile, foreign and Mainland Chinese banks' market share climbed to 4.27% as their lower lending rates boosted corporate lending. Chunghwa Post's market share edged up to 0.04% owing to an increase in lending to bills finance companies. As for credit departments of farmers' and fishermen's associations and credit cooperatives, their market shares continued to fall to 4.04% and 1.74%, respectively.

Sources and Uses of Funds

At the end of 2017, the total amount of funds in monetary financial institutions was NT\$48,570 billion, increasing by NT\$2,157 billion compared to the end of 2016. The combined share of transaction and non-transaction deposits accounted for nearly 85%, yet the annual growth rate rose to 4.42% thanks to marked increases in both the balance and growth of foreign currency deposits. As for other items, its balance increased mainly owing to a rising amount of deposits from life insurance companies as well as the gains in banks' profits.

Regarding the uses of funds, all the items expanded at the end of 2017 compared to the end of 2016. Bank loans accounted for over 50% of total uses of funds. Both the share and growth in loans increased compared to the previous year, mainly owing to greater demand from private enterprises and individuals supported by an economic recovery, a robust stock market and a pickup in the housing market. In addition, growth in net foreign assets decreased slightly to 6.16% over the end of the previous year.

Because of ample liquidity in the banking system, both portfolio investments and banks' purchases of CDs issued by the CBC continued to post year-on-year rises at the end of 2017. Growth in portfolio investments by monetary financial institutions slowed, mainly because banks became more conservative with their investments in response to the gradual normalization of monetary policy in advanced economies and uncertainties over global economic conditions. As for banks' purchases of CDs issued by the CBC, its share remained broadly the same as in the past few years, while its growth accelerated to 4.10% at the end of 2017 from 1.00% a year earlier.



Sources and Uses of Funds in Monetary Financial Institutions¹

Unit: NT\$ Billion

	End of 2017			End of 2016			Annual Change	
	Amount	Share (%)	Annual Growth Rate (%)	Amount	Share (%)	Annual Growth Rate (%)	Amount	Share (%)
Sources:								
Transaction Deposits ²	14,950	30.78	3.12	14,497	31.24	5.61	453	-0.46
Non-transaction Deposits ³	26,029	53.59	5.18	24,747	53.32	2.54	1,281	0.27
NT Dollar Deposits	20,357	41.91	1.17	20,122	43.35	1.14	235	-1.44
Foreign Currency Deposits	5,671	11.68	22.61	4,625	9.97	9.12	1,046	1.71
Government Deposits	938	1.93	4.81	895	1.93	5.83	43	0.00
Other Items	6,653	13.70	6.06	6,273	13.51	3.53	380	0.19
Total	48,570	100.00	4.65	46,413	100.00	3.68	2,157	0.00
Uses:								
Net Foreign Assets ⁴	4,769	9.82	6.16	4,492	9.68	8.83	277	0.14
Loans	26,379	54.31	5.00	25,122	54.12	3.57	1,257	0.19
NT Dollar Loans	25,309	52.11	4.18	24,294	52.34	3.78	1,016	-0.23
Foreign Currency Loans ⁴	1,069	2.20	29.11	828	1.78	-2.27	241	0.42
Portfolio Investments ⁵	5,725	11.79	5.48	5,427	11.69	5.81	297	0.10
Purchases of CDs Issued by CBC	7,793	16.05	4.10	7,487	16.13	1.00	307	-0.08
Deposits with CBC	3,904	8.03	0.52	3,884	8.38	1.15	20	-0.35

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.

Deposit Growth

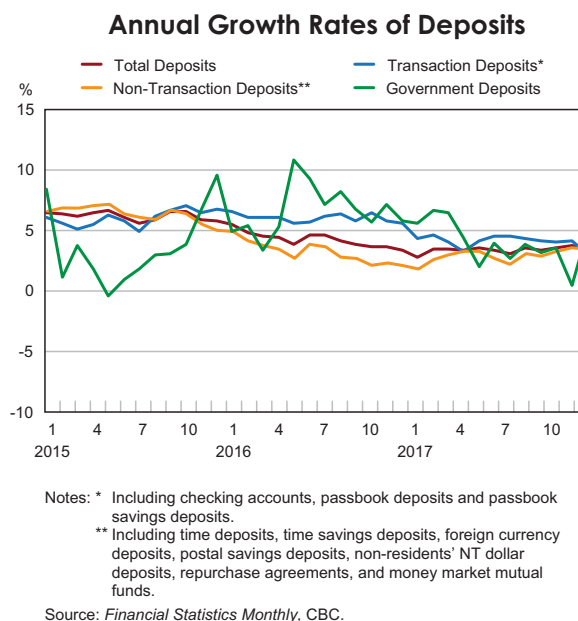
Because of an increase in net foreign capital inflows and higher growth in bank loans and investments, the annual growth rate of deposits slightly trended upward in 2017. However, owing to a higher comparison base in the previous year, the annual growth rate of deposits only increased 0.01% from 3.45% in 2016 to 3.46% in 2017.

In terms of monthly movement, the growth rate of deposits went up from January to May, except for April. In April, with lower net foreign capital inflows and the decreased deposit balance of securities giro accounts due to a decline in TAIEX trading value, the growth rate of deposits slowed.

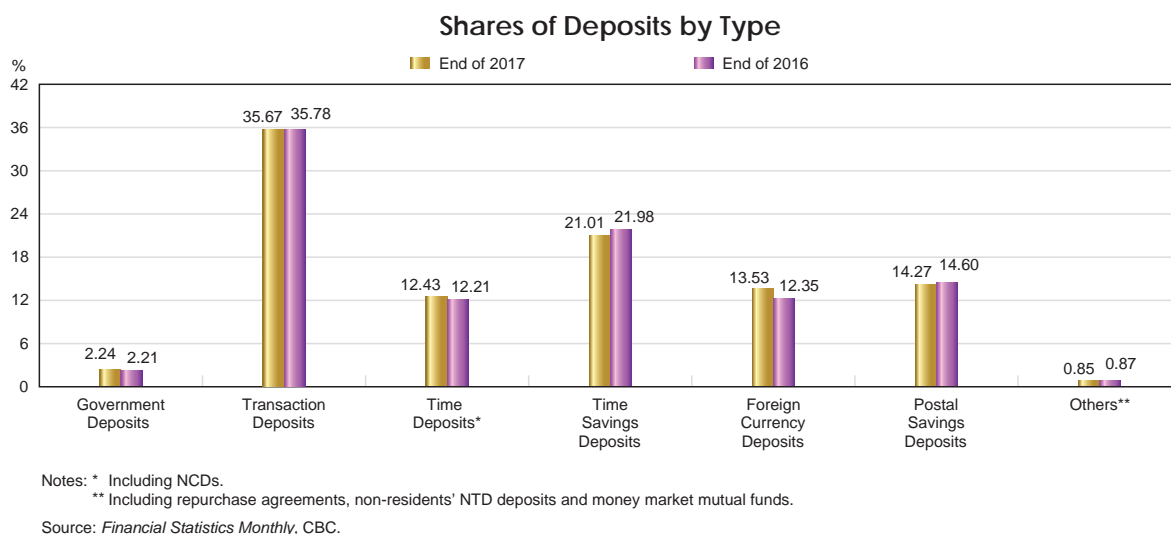
After that, the growth rate of deposits rose during the period from May to November, except for June, July and September. Because growth momentum for bank loans and investments weakened in June and July, and net foreign capital inflows decreased and even turned into net outflows from June to July, the growth rate of deposits declined. In September, the lure of foreign currency insurance policies caused bank deposits to experience slower growth. In December, because of net foreign capital outflows and decelerating growth in bank loans and investments, the growth

rate of deposits dropped to 3.46%.

For transaction deposits, owing to a buoyant domestic stock market, the growth rate ascended in the first half of 2017 except for March and April. As a result of a shift of funds from deposits to insurance products and a decrease in TAIEX trading value, the growth rate of transaction deposits declined significantly in March and April. Growth continually declined in the third quarter because funds originally deposited into bank accounts went to insurance products. And in the fourth quarter, as the FSC was set to enforce the net stable funding ratio in 2018, some banks sought to increase their time deposits business, leading transaction deposits to partially shift to time deposits. As a result, the growth rate of transaction deposits fell to 3.12%, and its share in total deposits declined to 35.67% at the end of 2017.



For the year as a whole, non-transaction deposits posted a rise in annual growth rate from 2.17% in 2016 to 3.60% in 2017, on account of a lower comparison base and a partial shift of funds from transaction deposits to time deposits. By type of non-transaction deposits, the share of time deposits rose to 12.43% at the end of 2017, as some banks increased capital by issuing NCDs. The shares and annual growth rates of time savings deposits and postal savings deposits declined because some depositors moved their money to insurance products.



For foreign currency deposits, the share and annual growth rate in 2017 increased to 13.53% and 13.38%, respectively. This was mainly attributable to the NT dollar appreciation which led to more purchases of foreign currency for higher gains, for travel, or for premium payment for foreign currency insurance policies. In addition, owing to a higher base effect, the annual growth rate of government deposits dropped to 4.82%, but its share in total deposits went up to 2.24%.

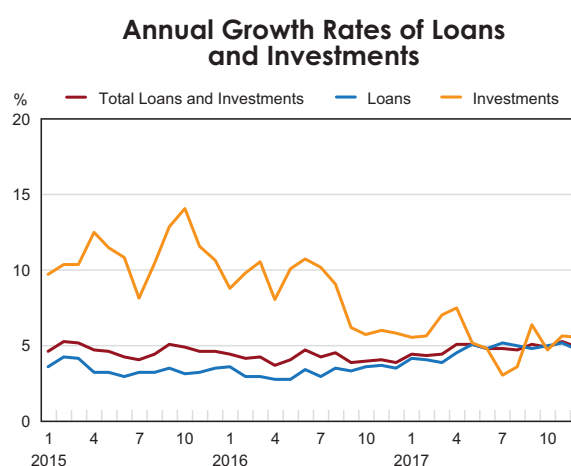
Growth in Bank Loans and Investments

The annual growth rate of loans and investments of monetary financial institutions was 4.82% at the end of 2017, increasing from 3.89% at the end of 2016. Growth in loans increased to 4.68% at the end of 2017 from 3.48% at the end of the previous year, mainly owing to greater demand from private enterprises and individuals amid an economic recovery, a buoyant stock market, and a recovering housing market. In contrast, growth in portfolio investment decelerated to 5.48% at the end of 2017 from 5.80% a year earlier. Banks were still conservative

with their investments on concerns about the gradual normalization of the monetary policies of the US and the UK and the uncertainties over global economic and financial conditions.

Loans by Sector

The annual growth rate of private sector loans by banks (defined in the following paragraphs as including domestic banks and local branches of foreign and Mainland Chinese banks) rose to 5.16% at the end of 2017 from 4.84% at the end of 2016. The upturn was mainly due to increasing demand from private enterprises and individuals. The annual growth rate of loans to government enterprises was -3.34% at the end of 2017, mainly because the CPC Corporation and the Taiwan Power Company reduced their borrowing from banks. For the part of the CPC Corporation, the reduction was mainly a reflection of the company's considerable gains in annual profits; as for the Taiwan Power Company, it was mainly due to the company changing its policy to raise funds for factory expansion by issuing corporate bonds instead. Though negative, the growth rate of loans to government enterprises was still higher than the -15.64% growth rate of the previous year end mainly as a result of a lower base effect. Meanwhile, the annual growth rate of loans to government agencies was -5.44% at the end of 2017, mainly on account of increased tax revenues thanks to the economic recovery and 4G network license fees of NT\$20.0 billion received by the national treasury, which reduced the borrowing needs of the government.



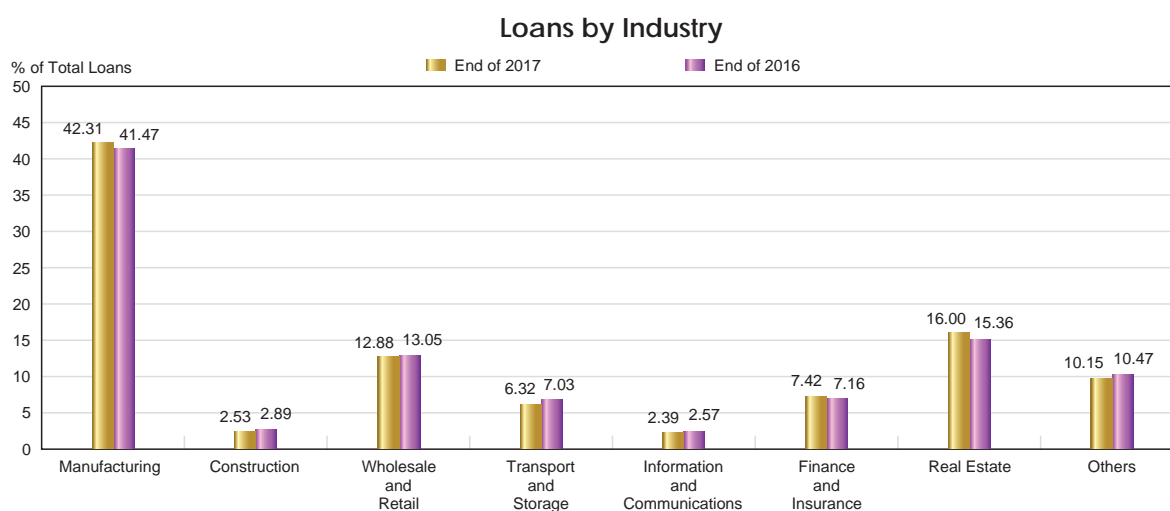
Source: *Financial Statistics Monthly*, CBC.

In terms of loan composition, loans extended to the private sector accounted for 92.84% of total loans at the end of 2017, higher than the 92.15% recorded at the end of 2016. Loans extended to government agencies and government enterprises accounted for 5.12% and 2.03% at the end of 2017, respectively, lower than 5.65% and 2.20% 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 42.31% at the end of 2017, increasing from 41.47% at the end of 2016. This increase was mainly due to faster growth in loans for the manufacturing of computers and electronic and optical products as the demand for new laptops and tablet computers rose. Meanwhile, compared with the end of 2016, the share of loans extended to the construction industry decreased from 2.89% to 2.53% at the end of 2017, reflecting soft loan demand from the construction sector.

Both the share and the annual growth rate of loans extended to the real estate industry increased at the end of 2017, mainly reflecting the recovery in the housing market. The share of loans extended to the finance and insurance industry also exhibited an uptrend. However, some securities firms earned profits from the stock rally, which contributed to a decrease in the annual growth rate of loans extended to this industry.



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.

Consumer Loans

The annual growth rate of consumer loans extended by banks increased from 2.86% at the end of 2016 to 3.80% at the end of 2017. Among them, house-purchasing loans increased NT\$282.6 billion, or 4.44%, in 2017, a higher year-on-year increase mainly because home sales increased as a result of sellers cutting prices. As for the shares of various consumer loans, house-purchasing loans remained

the largest component, with its share rising from 83.07% at the end of 2016 to 83.59% at the end of 2017. Car loans accounted for 1.67%, increasing from 1.65%, mainly because car sales were stimulated by the commodity tax cut for vehicle trade-ins. Meanwhile, house-repairing loans, revolving credit for credit cards, employees' welfare loans and other consumer loans accounted for 1.43%, 1.39%, 0.66% and 11.27%, respectively.

Investments

In terms of valuation changes, portfolio investments by monetary financial institutions, measured at fair value, recorded a year-on-year increase of NT\$330.1 billion, while the increase was smaller, at NT\$297.4 billion, when measured on a cost basis.

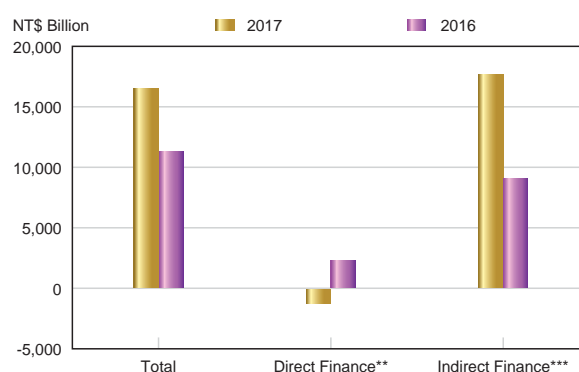
Portfolio investments by monetary financial institutions, measured on a cost basis, showed slower growth with an annual increase of 5.48% in 2017, mainly because banks became more conservative with their investments as they were watchful of the gradual normalization of monetary policy in advanced economies and uncertainties over global economic conditions.

Among the investment instruments, government bonds accounted for the largest share with 61.87%, lower than the 63.70% registered a year ago, mainly because government bond issuance declined as increased tax revenue and rising funding costs reduced the government sector's funding needs. 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 2017, commercial paper accounted for a share of 17.76%, larger than a year ago. Corporate bonds accounted for a share of 14.08%, increasing from the end of 2016.

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\$1,130.0 billion to NT\$1,659.1 billion in 2017. Direct finance decreased NT\$118.1 billion during 2017, compared to the previous year's increase of NT\$227.4 billion. Indirect finance increased from the previous year's NT\$902.6 billion to NT\$1,777.2 billion, which was mainly due to higher growth

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.

in loans and investments by financial institutions.

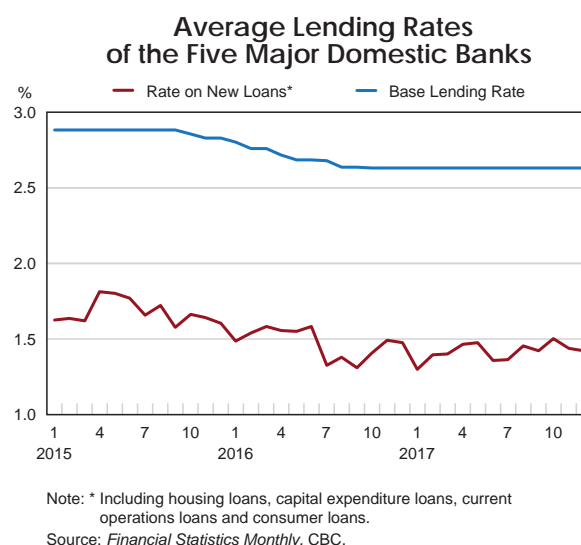
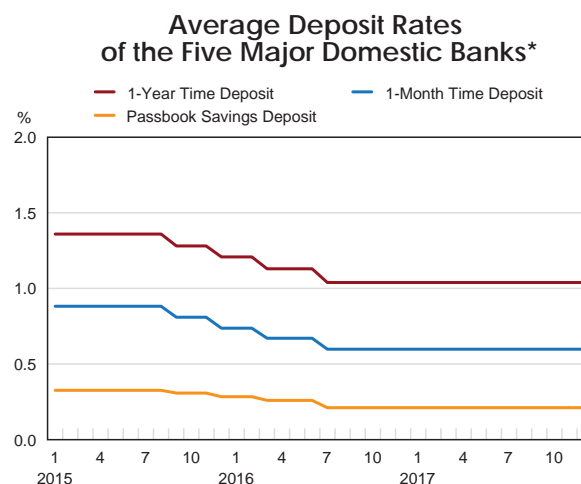
Based on the outstanding balance, the share of direct finance in total funds raised decreased from 20.62% a year ago to 19.82% at the end of 2017, while the share of indirect finance increased from 79.38% to 80.18%.

Bank Interest Rates Remained Steady

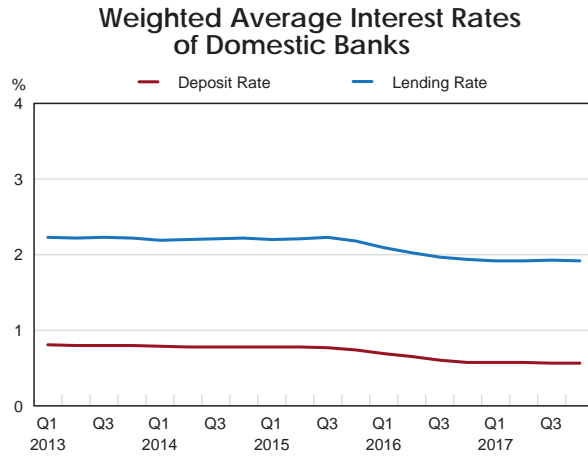
Throughout 2017, the domestic economy experienced a moderate recovery and inflationary pressures were modest, but global uncertainties remain. As a result, the CBC to decide to keep policy rates unchanged; hence domestic bank interest rates remained broadly steady. In the case of the interest rates of the five major domestic banks, their average fixed rates on one-month and one-year time deposits, respectively, remained at 0.60% and 1.04% at the end of 2017.

The weighted average rates on deposits and loans of domestic banks showed a slightly downward trend in 2017. Because of an increase in the share of transaction deposits in total deposits, the weighted average deposit rate slightly decreased to 0.56% in the fourth quarter of 2017 from 0.57% a year ago. For the year as a whole, the weighted average interest rate on deposits of domestic banks was 0.56% in 2017, which was 0.07 percentage points lower than that recorded in the previous year.

As banks' rates on current operations loans dropped in 2017, the weighted average interest rate on new loans of the five major domestic banks edged down from 1.468% in 2016 to 1.414% in 2017. Excluding central government loans, the weighted average interest rate on new loans decreased from 1.560% in 2016 to 1.472% in 2017, down by 0.088 percentage points. Moreover, the average base lending rate remained at 2.632% at the end of 2017.



In the first quarter of 2017, owing to an increase in bank claims on local governments and government enterprises, the weighted average interest rate on total loans of domestic banks moved downward from 1.94% in the previous quarter to 1.92%. Then, in the third quarter, the weighted average interest rate on loans moved upward to 1.93% because the loan repayments by local governments and government enterprises were slightly greater than the amount of new loans they took out. The weighted average interest rate on loans dropped again to 1.92% in the fourth quarter. For the year as a whole, the weighted average interest rate on loans of domestic banks was 1.92%, which was 0.09 percentage points lower than that recorded in the previous year.



Source: *Financial Statistics Monthly*, CBC.

Because the decrease in the average deposit rates was less than that in the average lending rates, the average interest rate spread between deposits and loans slightly shrank to 1.36 percentage points in 2017, which was 0.02 percentage points smaller than that recorded in the previous year.

3. Money Market

For the year 2017, the global economy regained growth momentum, yet uncertainties still lingered. In Taiwan, both current inflation and inflation expectations stayed anchored, and the CBC maintained an adequately accommodative monetary policy stance in an attempt to support the domestic economic recovery. The interbank overnight call loan rate remained at low levels, whereas bills market rates exhibited a slight uptrend. In 2017, the total turnover in the interbank call loan market and short-term bills market increased by 15.39% and 6.27%, respectively, over the previous year.

Growth in Interbank Call Loans

With the domestic economy registering a solid recovery, steady growth in bank loans and investments increased banks' demand for call loans. However, as net foreign capital inflows rose compared with the previous year, market liquidity remained sufficient. Total annual turnover of interbank call loans for 2017 expanded by NT\$6,815.9 billion, or 15.39%, to NT\$51,106.2 billion.

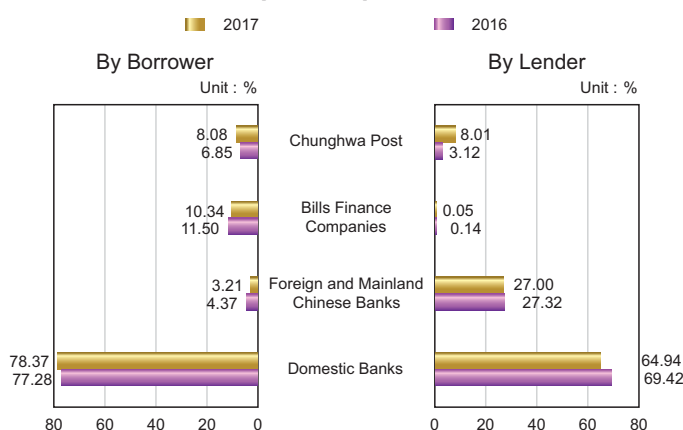
In terms of borrowers, domestic banks were still the largest player during the year, contributing 78.37% of total transactions, followed by bills finance companies, Chunghwa Post, and foreign and Mainland Chinese banks, with shares of 10.34%, 8.08% and 3.21%, respectively. In light of continuous foreign capital inflows, the CBC increased the issuance of certificates of deposit to manage market liquidity, yet later in the year banks' demand for borrowing rose to meet their funding needs. The amount borrowed by domestic banks grew by NT\$5,823.8 billion, or 17.01%, over the previous year. On the other hand, the amount borrowed by bills finance companies climbed by NT\$190.7 billion or 3.75% during the year. The rise was largely because private and government enterprises issued more commercial paper owing to low bills market rates, leading to greater demand from bills finance companies for funds used for underwriting commercial paper. The borrowed amount of Chunghwa Post also expanded significantly by NT\$1,094.2 billion or 36.05%, whereas that of foreign and Mainland Chinese banks fell by NT\$292.8 billion or 15.13%.

With regard to lenders, domestic banks continued to be the largest supplier of funds, accounting for 64.94% of total transactions in 2017. Following domestic banks were foreign and Mainland Chinese banks, Chunghwa Post, and bills finance companies, with respective shares of 27.00%, 8.01%, and 0.05%. The amount lent by domestic banks posted an increase of NT\$2,440.0 billion, or 7.94%, compared with the previous year. As foreign and Mainland Chinese banks gained abundant funds from the custodian business for foreign investors because of net foreign capital inflows, the lending amount of foreign and Mainland Chinese banks grew by NT\$1,701.8 billion or 14.07%. Meanwhile,

Chunghwa Post supplied more funds to the interbank call loan market on account of statutory restrictions on its lending business. Therefore, the amount lent by Chunghwa Post rose substantially by NT\$2,708.0 billion or 195.75% over the previous year.

In respect of maturity, interbank overnight call loans remained the most actively traded instrument in the market with a predominant share of 67.49%, up by 12.99 percentage points from that of the previous year. Second were those with a maturity of 1 week, accounting for 23.99%, down by 11.20 percentage points from that of the previous year. The share of loans with a 2-week maturity also dropped by 2.02 percentage points to 6.28%. Shares for the trading of interbank call loans with maturities of 3 weeks, 1 month, 2-6 months, and above 6 months were negligible.

Composition of Interbank Call Loan Market by Participant



Source: Financial Statistics Monthly, CBC.

Rise in Short-Term Bill Transactions

In 2017, newly issued short-term bills amounted to NT\$14,878.5 billion. Of the new issues, commercial paper continued to make up the lion's share, at 87.90%, followed by negotiable certificates of deposit with a share of 10.49%.

As market interest rates remained at low levels, private and government enterprises were more

Short-Term Bills Market

Year	Unit: NT\$ Billion											
	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
2008	6,948.6	969.8	240.0	106.8	-	-	6074.7	690.2	33.3	4.9	600.6	167.8
2009	6,293.4	1,043.1	435.0	215.0	-	-	5397.7	651.3	21.9	4.9	438.8	171.9
2010	7,140.8	1,167.5	365.0	240.0	-	-	5903.4	686.1	33.1	6.2	839.3	235.2
2011	7,424.0	1,192.6	321.2	180.3	-	-	6270.5	735.2	30.1	5.7	802.2	271.5
2012	8,187.7	1,454.0	265.0	195.0	-	-	7311.6	1023.6	24.2	4.3	586.9	231.1
2013	9,809.0	1,650.2	324.6	214.6	-	-	8827.4	1199.2	23.5	4.2	633.5	232.3
2014	10,840.6	1,641.2	244.9	130.0	1.0	0.0	9919.5	1306.8	24.1	4.3	642.2	200.2
2015	11,512.8	1,677.7	233.7	90.0	-	-	10426.0	1346.6	20.8	3.5	832.3	237.6
2016	12,778.5	1,873.5	217.3	90.0	-	-	11371.3	1480.1	18.3	4.1	1171.6	299.4
2017	14,878.5	2,154.5	220.0	25.0	-	-	13077.8	1709.0	19.4	4.2	1561.3	416.4
2017-2016 Change	2,100.0	281.1	2.7	-65.0	0.0	0.0	1,706.5	228.9	1.1	0.1	389.7	117.0

Source: Financial Statistics Monthly, CBC.

willing to issue commercial paper instead of borrowing from banks. Therefore, the amount of commercial paper issued went up by NT\$1,706.5 billion from a year before. Negotiable certificates of deposit came in second with an increase of NT\$389.7 billion. The growth was primarily because banks issued more negotiable certificates of deposit to fill the funding gap. The amount of treasury bills and bankers' acceptances only slightly expanded by NT\$2.7 billion and NT\$1.1 billion, respectively, compared with the previous year.

As of the end of 2017, total outstanding short-term bills reached NT\$2,154.5 billion, 15.00% more than that of the previous year end.

The total turnover of short-term bills in 2017 rose by 6.27% to NT\$37,785.6 billion. Of the total transactions, commercial paper still accounted for the largest share with 90.71%, representing a decrease of 1.53 percentage points from a year earlier. Second were negotiable certificates of deposit with a share of 8.84%, recording an increase of 1.61 percentage points over 2016. Treasury bills and bankers' acceptances made up negligible shares of transactions. As for market participants, private enterprises remained the largest player in the market with a share of 44.52%, followed by banks with a share of 29.61%.

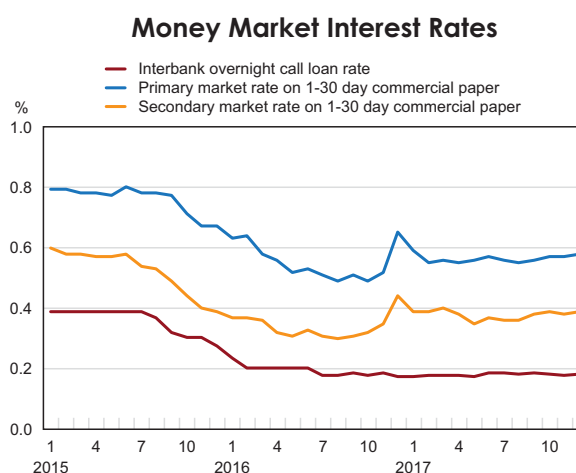
Money Market Rates Staying at Low Levels

In 2017, banks' demand for call loans strengthened amid the steady recovery in the domestic economy. As net foreign capital inflows increased for the year and the CBC maintained an adequately accommodative monetary policy stance, market liquidity remained ample. The weighted average interbank overnight call loan rate stayed at a low level between 0.172% and 0.184%.

The primary market rate on commercial paper with a maturity of 1-30 days fluctuated within a narrow range between 0.55% and 0.59%, while the secondary market rate on commercial paper with a maturity of 1-30 days remained between 0.35% and 0.40% throughout the year.

Reduction in Money Market Funds

With the benefits of low risk and high liquidity, money market funds tend to be an ideal investment option to park short-term capital. Nevertheless, the product diversification strategy adopted by investment trust companies have affected their asset allocation in recent years. Furthermore, the world's major stock markets have rallied, while money market funds tend to generate relatively lower returns. All the above factors led to a decline in the size



Source: *Financial Statistics Monthly*, CBC.

of money market funds. At the end of 2017, there were a total of 44 money market funds in Taiwan with total assets reaching NT\$783.1 billion, contracting by NT\$65.2 billion or 7.69% over the previous year.

With respect to portfolio composition, the largest use of the funds was bank deposits with a share of 70.27% at the end of the year. Following bank deposits were short-term bills and repurchase agreements, accounting for 16.97% and 12.64% 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 (%)
2015	993.5	655.2	65.95	161.2	16.23	165.6	16.67	11.4	1.14
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
2017/ 1	791.9	538.9	68.05	141.4	17.85	95.7	12.09	15.9	2.01
2	818.4	549.1	67.09	140.6	17.17	118.4	14.47	10.4	1.27
3	808.8	558.2	69.02	131.8	16.30	112.0	13.85	6.8	0.84
4	870.4	592.2	68.04	149.7	17.20	122.5	14.08	6.0	0.69
5	883.8	604.8	68.43	146.1	16.53	127.8	14.47	5.1	0.57
6	824.6	561.0	68.03	136.3	16.53	122.9	14.90	4.5	0.54
7	803.8	561.8	69.89	132.4	16.48	106.7	13.28	2.9	0.35
8	842.4	570.4	67.71	148.1	17.59	121.4	14.41	2.4	0.29
9	768.7	536.5	69.79	125.0	16.26	105.8	13.76	1.4	0.19
10	803.2	542.6	67.56	142.5	17.74	116.9	14.55	1.2	0.15
11	817.7	561.7	68.70	146.1	17.86	108.7	13.29	1.2	0.15
12	783.1	550.3	70.27	132.9	16.97	99.0	12.64	0.9	0.11

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

4. Foreign Exchange Market

The NT Dollar Exchange Rate

At the end of 2017, the NT dollar appreciated against the US dollar, the euro, the Japanese yen, the renminbi (RMB), and the Korean won when compared with the previous year end. The trade-weighted nominal effective exchange rate index of the NT dollar increased by 6.94% 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.

During the course of the year, the NT dollar against the US dollar appreciated slightly. In the first half of 2017, the US dollar was dampened by President Donald Trump's remarks that a strong US dollar would hurt the US economy. As a result, combined with an improvement in Taiwan's exports and inflows of foreign capital into Taiwan's financial markets, the NT dollar appreciated against the US dollar. In June, international capital flowed out of emerging Asia because the Fed announced a rate hike and its balance sheet reduction plan, leading the NT dollar to depreciate slightly against the US dollar. Later, as market participants expected the Fed would slow down the pace of interest rate hikes and Taiwan recorded net foreign capital inflows, the NT dollar climbed to a yearly high against the US dollar on December 28. At the end of 2017, the NT dollar appreciated by 8.14% 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 6.17% in 2017.

The NT dollar against the euro appreciated in the first quarter and depreciated toward the end of 2017. Early in the year, as the ECB's QE policy remained unchanged and the UK government initiated the Brexit procedure, the euro weakened, leading the NT dollar against the euro to rise to a yearly high on April 13. Then, as the euro area economic recovery heightened market expectations of ECB tapering, the NT dollar against the euro turned to depreciate. On October 26, the ECB announced an extension to its bond-buying program, and the NT dollar appreciated slightly against the euro as a result. Later, because of the euro area's positive economic performance, the NT dollar depreciated against the euro. Compared with the end of the previous year, the NT dollar depreciated against the euro by 4.93% at the end of 2017. On a daily average basis, the NT dollar appreciated against the euro by 4.22%.

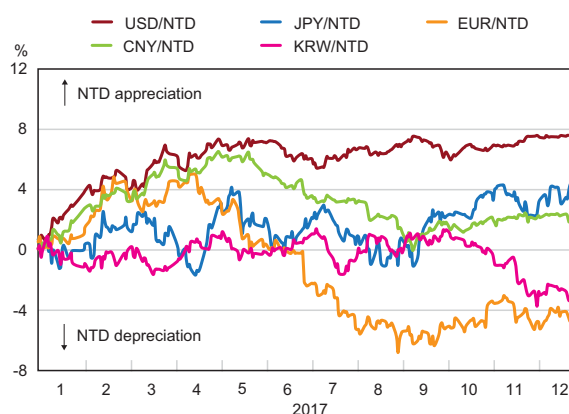
The NT dollar against the yen fluctuated and broadly appreciated in 2017. Early in the year, the yen was dampened because the BoJ decided to buy an unlimited amount of bonds at a fixed rate, and the NT dollar appreciated against the yen. In April, North Korea's missile launch caused the yen to soar on safe-haven demand, and the NT dollar against the yen hit a yearly low on April

17. After that, in addition to capital outflows amid monetary policy divergence between the US and Japan, the BoJ offered unlimited bond buying to curb rising yields, and Prime Minister Shinzo Abe's party won parliamentary elections. The developments led investors to expect that the BoJ's QE would remain unchanged, leading the NT dollar to generally appreciate against the yen. In sum, the NT dollar appreciated by 4.05% against the yen at the end of 2017 compared with the previous year end. On a daily average basis, the NT dollar appreciated against the yen by 9.46%.

The NT dollar against the RMB appreciated in the first three quarters and depreciated toward the end of 2017. Early in the year, although China's capital outflows slowed under tightened capital controls, international capital flowed into Taiwan, sending the NT dollar against the RMB to a yearly high on May 2. After that, the China Foreign Exchange Trade System (CFETS) considered introducing a "counter-cyclical factor" to the way it calculates the RMB's daily midpoint rate to dampen the market's "herd instinct," leading the NT dollar to depreciate against the RMB. Later, as another international credit rating agency downgraded China's sovereign credit rating, and the People's Bank of China (PBoC) conducted reverse repurchase agreements, the NT dollar strengthened against the RMB. Overall, the NT dollar appreciated against the RMB by 1.34% between end-2016 and end-2017. On a daily average basis, the NT dollar appreciated by 8.00% against the RMB when compared with the previous year.

In 2017, the NT dollar against the Korean won fluctuated and broadly depreciated. Owing to tensions on the Korean Peninsula, the NT dollar against the won fluctuated in the first three quarters. During the fourth quarter,

Percent Changes of NT Dollar Against Major Currencies
(Compared with End-2016)



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 (2017/12/29)	29.848	35.674	0.2649	4.5835	0.0279
Exchange Rate (2016/12/30)	32.279	33.917	0.2757	4.6448	0.0268
Annual Change	8.14%	-4.93%	4.05%	1.34%	-3.81%
Average Exchange Rate (2017)	30.439	34.302	0.2714	4.5037	0.0269
Average Exchange Rate (2016)	32.318	35.749	0.2971	4.8639	0.0278
Annual Change	6.17%	4.22%	9.46%	8.00%	3.43%

Source: Department of Economic Research, CBC.

bright economic prospects of South Korea and easing tensions on the Korean Peninsula led the NT dollar against the won to a yearly low on December 29. Compared with the end of 2016, the NT dollar depreciated by 3.81% against the won at the end of 2017. On a daily average basis, the NT dollar appreciated by 3.43% against the won in 2017.

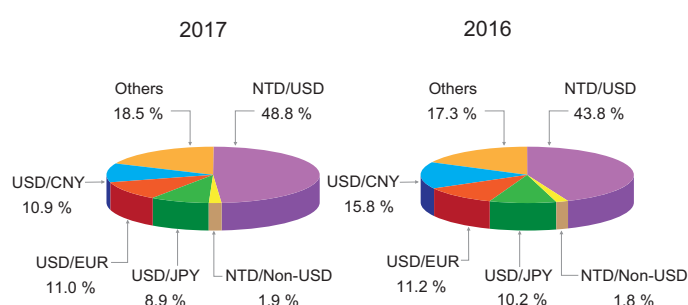
Lower Turnover in Foreign Exchange Market

Trading in the Taipei foreign exchange market decreased in 2017. Total net trading volume for the year was US\$7,098.8 billion, representing a 0.2% year-on-year decrease. The daily average turnover was US\$28.6 billion in 2017.

In terms of trading partners, transactions between banks and non-bank customers accounted for 32.2% of the total turnover, while interbank transactions made up 67.8%, including 24.5% for transactions among local banks and 43.4% for those between local banks and overseas banks.

As far as traded currencies were concerned, NT dollar trading against foreign currencies accounted for 50.7% of the total trading volume, of which trading against the US dollar (USD) made up a dominant 48.8%. Transactions in third currencies contributed to 49.3% of the total trading volume, with trading in currency pairs of USD-euro, USD-RMB and USD-yen accounting for respective shares of 11.0%, 10.9% and 8.9%. Compared with 2016, NT dollar trading against foreign currencies increased by 11.0%. Transactions in third currencies decreased by 9.6%.

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

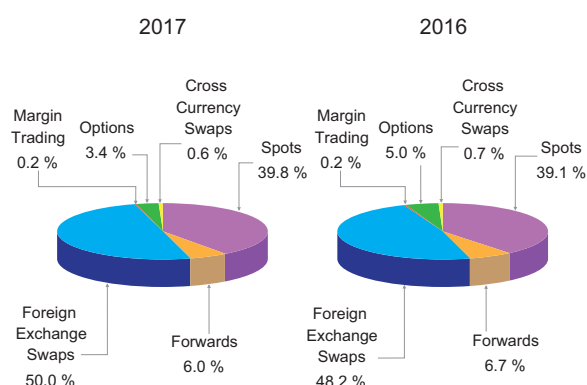
Year	Spots	Forwards	Forex Swaps	Margin Trading	Options	Cross Currency Swaps	Total
2013	2,681,798	373,006	2,991,819	21,730	1,072,740	32,983	7,174,076
2014	2,869,175	408,770	3,352,584	20,379	1,134,172	37,365	7,822,445
2015	3,405,177	475,473	3,292,799	25,055	973,082	33,023	8,204,608
2016	2,780,002	477,036	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
2016-2017 Growth Rate (%)	1.7	-11.3	3.5	-28.9	-32.4	-12.3	-0.2

Source: Department of Foreign Exchange, CBC.

With respect to types of transactions, the major types were foreign exchange swaps and spots, accounting for 50.0% and 39.8% of total turnover, respectively. Compared with 2016, the trading volumes of spots and foreign exchange swaps increased, whereas those of the other types decreased.

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\$181.6 billion. Of this amount, interest rate-related derivatives accounted for the lion's share with US\$177.8 billion, or 97.9%, with its turnover increasing markedly by 79.5% from the previous year. Interest rate futures accounted for the majority of this increase, up by US\$65.7 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

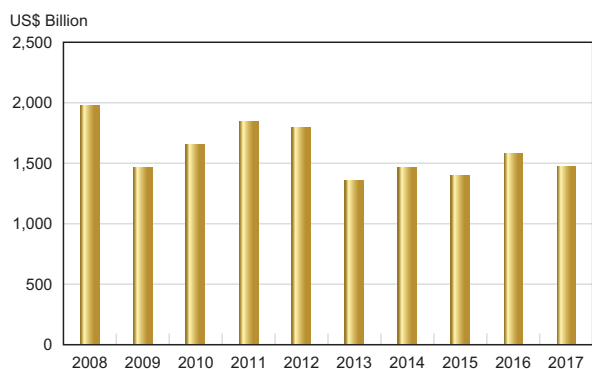
Year	Interest Rate-Related Products					Commodity-Related Products Commodity Options	Stock Index Options	Credit Derivatives	Total
	Forward Rate Agreements	Interest Rate Swaps	Interest Rate Options	Foreign Currency Interest Rate Futures	Subtotal				
2013	523	37,042	3,040	115,636	156,240	5,488	1,758	1,517	165,004
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	0	49,453	11,412	116,911	177,776	2,802	121	857	181,556
2016-2017 Growth Rate (%)	-100.0	17.9	98.7	128.2	79.5	-8.2	-16.5	-8.2	76.0

Source: Department of Foreign Exchange, CBC.

Decrease in Trading in Foreign Currency Call Loan Market

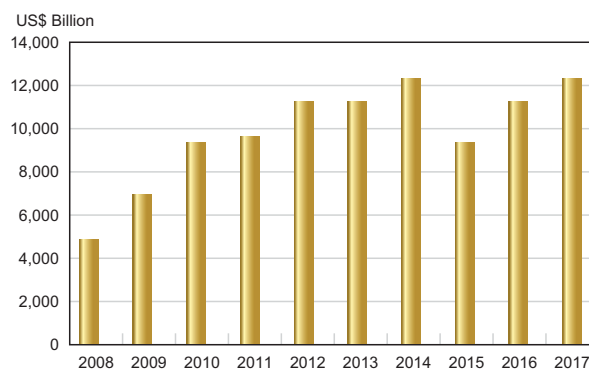
The transaction volume in the foreign currency call loan market in 2017 was US\$1,484.9 billion, a decrease of 6.8% over the previous year. Of this amount, US dollar transactions accounted for a dominant share with US\$1,376.4 billion, making up 92.7% of the total while decreasing by 8.7% from 2016. RMB transactions reached RMB655.0 billion in 2017, a share of 6.6% of the total with a year-on-year increase of 32.3% in volume. Japanese yen transactions reached ¥531.5 billion in 2017, a

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.

small share of 0.3% of the total with a year-on-year rise of 33.5% in volume. The amount of euro transactions amounted to €0.4 billion, a modest share of 0.03%. Other currencies accounted for a combined 0.37% of the total transaction volume. The balance of foreign currency call loan transactions at the end of 2017 was US\$42.4 billion.

The volume of foreign currency-NTD swap transactions reached US\$1,241.4 billion, 9.8% more than 2016, while the balance was US\$237.8 billion at the end of 2017.

Growing Assets of Offshore Banking Units

There were 61 offshore banking units (OBUs) at the end of 2017. Domestic banks operate 38 of these OBUs, while foreign banks run the other 23. The total assets of all OBUs increased to US\$203.0 billion at the end of the year, representing an increase of US\$26.5 billion or 15.0% from the previous year end owing to increasing securities investments. Domestic OBUs made up 88.0% of these combined assets with an amount of US\$178.7 billion, and the OBUs of foreign banks accounted for US\$24.3 billion, a 12.0% share of the total.

In terms of the uses of funds, discounts and loans, at US\$80.7 billion, represented the majority share of 39.8% of total OBU assets. Securities investments came in second place, accounting for 26.6% of total OBU assets. In terms of the destination for funds, Asia accounted for the majority with 54.0%, followed by America at 30.0%.

The OBUs' main source of funds was interbank transactions, making up 45.3% of total liabilities. Furthermore, deposits of non-financial institutions accounted for 38.0% of total liabilities. The main funding origin of OBUs was Asia, accounting for the majority with 65.0%, and America, with a share of 24.0%.

Forex trading turnover of all OBUs dropped by 17.6% to US\$563.4 billion, of which US\$359.7 billion went for spot transactions, US\$79.0 billion for forward transactions and US\$124.7 billion for forex swap transactions. Compared with the previous year, the growth rates of trading of spots, forwards and forex swaps were -24.5%, -22.1%, and 18.0%, respectively.

For OBUs, the total turnover of other derivatives products shrank to US\$278.5 billion, a decrease of 11.2% over the previous year. Of this amount, currency options transactions registered US\$126.9 billion, making up 45.6% of the total.

Balance Sheet of OBUs in Banking System

Unit: US\$ Million

End of Year	Loans to Non-financial Institutions	Portfolio Investment	Claims on Financial Institutions	Other Assets	Total Assets= Total Liabilities & Equity	Deposits of Non-financial Institutions	Due to Financial Institutions	Securities Issued	Other Liabilities & Equity
2013	80,869	22,019	42,853	22,225	167,966	51,191	98,527	351	17,896
2014	87,849	22,066	43,518	26,379	179,811	57,818	97,509	338	24,146
2015	81,198	29,547	43,932	18,388	173,065	66,137	88,228	0	18,700
2016	77,236	42,803	44,929	11,467	176,435	72,245	86,865	0	17,326
2017	81,074	53,819	58,336	9,717	202,946	77,144	106,712	0	19,090
2016-2017 Growth Rate (%)	5.0	25.7	29.8	-15.3	15.0	6.8	22.8	0.0	10.2

Source: Financial Statistics Monthly, CBC.

5. Stock Market

After entering the year of 2017, Taiwan's benchmark stock index, the Taiwan Stock Exchange (TWSE) weighted stock price index (TAIEX), swung up from the yearly low at the beginning of the year to reach the 10,000 mark in May. Thanks to robust trading by domestic individual investors, the rally extended further, reaching an all-year high on November 23, the highest level in 28 years. Then, profit-taking trades, foreign investor net sales, and declines in international stock markets combined to send the TAIEX into a period of downward correction.

At the end of 2017, the TAIEX rose by 15.0% compared to the end of the previous year. All categories except Rubber and Biotechnology & Medical Care enjoyed year-on-year gains. Paper & Pulp stocks benefitted from international pulp price surges and posted the largest annual increase of 61.0%, followed immediately by the 55.4% increase of Glass & Ceramic stocks.

The TAIEX daily average trading value was NT\$97.5 billion, expanding significantly by 41.9% over the previous year. This was mainly because a law amendment halved the day trading transaction tax, pushing the share of day trading in total turnover upwards to 26.3% at the end of 2017 from 8.9% at the end of 2016.

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
2015	8,338.1	82.8	77.6	24,503.6	46.2	-35.1	-56.6
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
2017/ 1	9,448.0	64.6	3.7	27,890.9	46.0	3.0	-4.8
2	9,750.5	98.5	6.2	28,842.6	49.3	-2.1	6.2
3	9,811.5	85.7	6.8	29,057.5	70.4	-3.4	-3.9
4	9,872.0	84.2	5.2	29,246.1	32.1	-5.3	1.3
5	10,040.7	84.1	5.7	29,767.8	49.8	1.0	8.5
6	10,395.1	87.5	6.5	30,841.2	18.7	-8.3	17.0
7	10,427.3	89.7	6.1	30,951.4	-5.2	-8.6	3.0
8	10,585.8	105.1	7.7	31,473.5	-6.4	-1.4	-7.7
9	10,383.9	114.3	8.1	30,942.5	-62.0	-5.5	-8.9
10	10,793.8	113.5	6.7	32,186.0	44.1	1.7	10.9
11	10,560.4	124.0	8.7	31,555.3	-47.5	-4.4	4.0
12	10,642.9	108.8	7.2	31,831.9	-34.0	-0.4	-14.2

Source: Securities and Futures Bureau, FSC.

The Taipei Exchange (TPEX) weighted stock price index for the over-the-counter market rose by 18.6% at the end of 2017, with most categories posting year-on-year gains. The Chemical category gave the best performance with an increase of 50.2% as brighter prospects in electric vehicles generated large profits for suppliers like CoreMax and MECHEMA. Shares in Electronics recorded the second highest annual increase of 32.4% because strong buying from institutional investors drove semiconductor stocks to gain more than 60%. In 2017, the TPEX daily average trading value was NT\$31.2 billion, surging by 50.7% compared to the previous year. This was partly attributable to the day trading tax cut, which led the TPEX turnover of day trading as a percentage of total TPEX turnover to expand markedly to 37.7% at the year end.

The TWSE Market

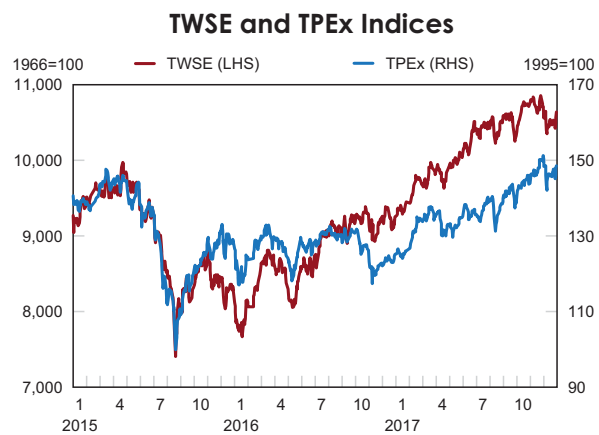
Listings and Capitalization Both Increased

The number of TWSE listings grew by 15 during the year to a total of 907 at the end of 2017. The par value of total shares issued rose by 1.6% to NT\$7.1 trillion. Total market capitalization amounted to NT\$31.8 trillion, increasing by 16.8% year on year. In terms of Taiwan Depository Receipts (TDRs), two existing TDRs were de-listed and no new ones were issued, leading the total number of TDRs on the TWSE to come down to 17 at the end of the year.

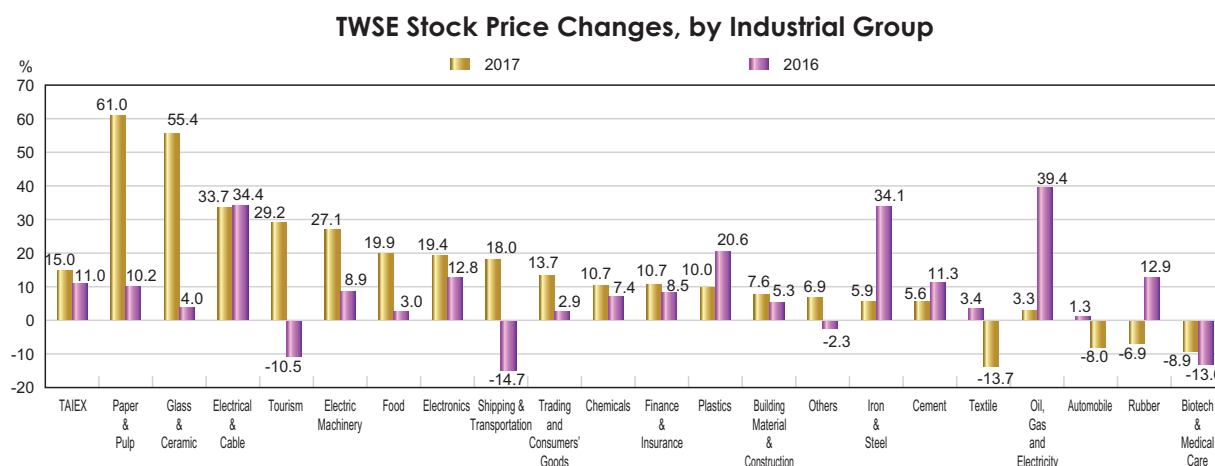
TAIEX Hit Record High in 28 Years

As the US stock market set multiple record highs in the first few months of 2017, along with rising international raw material prices and continued foreign investor buying, the TAIEX trended up and hit 9,972 points on March 21. The mainboard index dipped to 9,633 points on April 20, owing to market declines in the US and Europe and intensified geopolitical risks associated with North Korea and Syria. The TAIEX then followed major foreign stock markets to rally steadily higher, boosted also by strong earnings reports of TWSE-listed firms and active foreign buying of heavyweight stocks, and surpassed the 10,000-point mark in May.

Afterwards, the TAIEX broadly maintained an uptrend, except for a few brief pullbacks: In summer, major international stock indices plunged while Korean Peninsula tensions spiked, leading to net foreign selling in the local market that sent the TAIEX down to 10,225 as of August 14; then, faltering iPhone X expectations also dented the local benchmark index, which stood at to 10,257 points on September 26. In the last quarter



Sources: 1. Securities and Futures Bureau, FSC.
2. Taipei Exchange (TPEX).



Source: TWSE.

of the year, the TAIEX was bolstered by extended rallies in international stock markets, steady domestic economic growth, and excellent corporate earnings reports, and peaked at 10,855 points on November 23, the highest in 28 years. Towards the end of 2017, weaker international stock indices, profit-taking trades, and net foreign selling combined to lead the TAIEX lower. The index finished the year at 10,643 points, rising by 15.0% from the 9,254 points reported one year before.

Broken down by subcategory, all industrial groups posted year-on-year gains except for Rubber and Biotechnology & Medical Care. Paper & Pulp stocks rose by 61.0%, the biggest increase among all groups, thanks to large orders and good profits amid international pulp price surges. The second highest was the 55.4% increase in Glass & Ceramic shares, driven by greater demand for fiberglass cloth and glass. Electrical & Cable shares came in third with an increase of 33.7% on the back of roaring corporate profits as copper and nickel prices went up. Among the categories with year-on-year declines, Biotechnology & Medical Care recorded the largest drop by 8.9% as a result of the US policy of holding down drug costs.

Market Turnover Increased

In 2017, trading heated up owing to the day trading tax cut and the revived participation of large and medium retail investors. As a result, the TWSE market turnover, measured on a daily average basis, grew significantly by 41.9% to NT\$97.5 billion from the NT\$68.7 billion of the previous year. Along with robust trading activity, the turnover rate also rose from the 64.6% of 2016 to 78.4% in 2017.

TWSE Market Recorded Net Foreign Buying

In 2017, foreign investors bought a net NT\$155.2 billion in the TWSE market, lower than the NT\$320.2 billion of the previous year. Local securities investment trust companies net sold TAIEX shares worth NT\$33.5 billion, while securities dealers recorded a net purchase of NT\$11.4 billion.

In the first half of 2017, foreign investors remained net buyers of TAIEX shares for six consecutive months, helping the index reach and stay above the 10,000 point mark. In the latter half of the year, however, foreign buying was only recorded in October, while US monetary policy normalization, Korean Peninsula tensions, and disappointing sales of the iPhone X, as well as profit-taking trades, led to net foreign selling in the other five months.

In terms of local securities investment trust companies, they were net buyers in January, May, and October. In the rest of the year, they became net sellers to ensure gains from price increases in order to meet fund redemption demand, boost their own financial statements, or adjust positions amidst relatively strong rallies.

Local securities dealers, with inclination for short swing trading, net bought in February, April to July, October, and November amid market uptrends. In the other months of the year, they net sold as a result of hedging or profit-taking strategies.

The TPEX Market

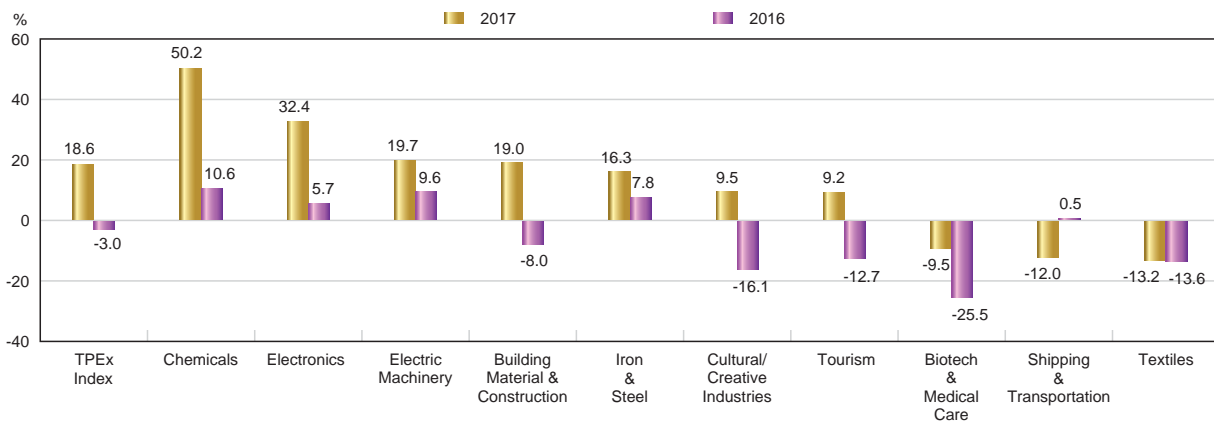
Listings and Capitalization Increased

At the end of 2017, the number of TPEX listings increased by 12 to 744. The total par value amounted to NT\$722.4 billion, up by 1.0% from the previous year. Market capitalization increased by 21.8% to NT\$3.32 trillion.

TPEX Index Swung Higher

During 2017, the TPEX index broadly followed the TWSE index and swung upwards. The index reached the yearly high of 151.3 points on November 29 before closing the year at 148.5 points, which was 18.6% higher than the 125.2 recorded at the end of the previous year.

TPEX Stock Price Changes, by Industrial Group



Source: TPEX.

For the year of 2017, foreign investors made net purchases of NT\$32.7 billion in the TPEX market, while local securities investment trust companies and local dealers recorded net selling positions of NT\$0.4 billion and NT\$6.5 billion, respectively. The daily average turnover in the TPEX market increased markedly by 50.7% from the NT\$20.7 billion registered a year ago to NT\$31.2 billion.

Key Measures for the Stock Markets

Key measures for Taiwan's stock markets in 2017 include the following:

- (1) January 1: Effective from this day to December 31, 2026, bond ETFs, corporate bonds, and bank debentures are exempt from securities transaction tax.
- (2) January 9: The CBC eased the rules to allow securities firms to provide services with NT dollar-denominated forex spots and forex derivatives products.
- (3) January 16: A cash creation/redemption mechanism is adopted for exchange-traded funds (ETFs); in addition, securities firms may offer services for investment in the stocks and ETFs by way of dollar cost averaging.
- (4) April 11: The Legislative Yuan passed the third reading of amendments to the Securities Transaction Tax Act, cutting the securities transaction tax rate by half from 0.3 percent to 0.15 percent for one year, effective from April 28, subject to review of the desirability of the tax cut one year from enforcement.
- (5) May 15: Taiwan Futures Exchange began allowing after-hours trading from the end of regular trading hours until five a.m. the next morning.
- (6) August 3: Securities investment trust enterprises may set up private equity funds through their subsidiaries; one of the objectives of the new policy is to steer the capital of domestic institutional investors, including pension funds, insurers, and banks, into local real industries (e.g., companies engaging in infrastructure building such as power plants and airports).

6. Bond Market

For the year 2017, the total volume of bond issuance showed a decrease. New issues of bonds totaled NT\$2,122.9 billion, contracting by NT\$399.2 billion or 15.83% over the previous year. At the end of 2017, the outstanding amount of bonds issued reached NT\$12,663.3 billion, up by NT\$1,078.8 billion or 9.31% from the previous year end.

Issuance of central government bonds to meet fiscal funding needs for 2017 reached NT\$400.0 billion, decreasing by NT\$163.5 billion or 29.02% from the previous year.

Issuance of corporate bonds for 2017 recorded a significant increase of NT\$100.5 billion or 35.13% to NT\$386.5 billion. The rise primarily reflected that government enterprises issued new bonds to raise funds for investment in factory expansion.

With regard to 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 totaled NT\$189.5 billion for the entire year, growing by NT\$49.4 billion or 35.25% over the previous year.

Moreover, foreign institutions issued 118 foreign currency-denominated international bonds in Taiwan amounting to NT\$1,139.2 billion, falling by NT\$385.4 billion or 25.28% over the previous year. Meanwhile, nine NT dollar-denominated foreign bonds were issued by foreign institutions with a total amount of NT\$7.7 billion, up by NT\$4.8 billion or 161.02% compared to the previous year.

In the secondary market, average yields on bonds with different maturities all climbed higher in 2017 driven by the Fed's policy rate increases. Among the components, the average 10-year government bond yield rose by 25 basis points to 1.064%. Demand for bonds softened as investors expected market rates to move up in the future, while the supply of bonds contracted. Therefore, annual transactions amounted to NT\$61,583.5 billion, declining by NT\$5,234.5 billion or 7.83% over the previous year.

Decrease in Government Bond Issuance

In regard to central government bonds, on account of the rise in tax revenues and government bond issuance approaching the ceiling, central government bond issuance for 2017 contracted by NT\$163.5 billion, or 29.02%, to NT\$400.0 billion.

In 2017, among the total volume of government bonds issued by the Ministry of Finance, 10-year bonds made up the lion's share with NT\$155.0 billion, followed by 5-year bonds with NT\$100.0 billion, while 2-year, 20-year, and 30-year government bonds registered issuance of NT\$45 billion,

NT\$50 billion, and NT\$50 billion, respectively.

With respect to issuing rates, as market rates were expected to rise amid the Fed's rate hikes, the weighted average issuing rates in 2017 on central government bonds with different maturities were all higher than the previous year. Among them, the weighted average issuing rate on 20-year bonds recorded the largest rise of 34 basis points. The weighted average issuing rate on 5-year bonds came in second with an increase of 20 basis points.

In terms of bonds issued by governments of special municipalities, new issues were nil in 2017. However, as part of the bonds were redeemed at maturity, the outstanding amount of bonds issued by governments of special municipalities stood at NT\$41.6 billion at the end of the year, decreasing by NT\$21.5 billion or 34.10% from the previous year end.

Rise in Corporate Bond Issuance

Corporate bonds refer to NT dollar or foreign currency-denominated bonds issued in Taiwan by domestic corporations. In 2017, government enterprises issued new bonds with an amount of NT\$72.5 billion to raise funds for plant expansion. As a result, the issuing amount of corporate bonds for the year 2017 expanded substantially by NT\$100.5 billion or 35.13% to NT\$386.5 billion. As for bond maturities, 5-year corporate bonds made up the majority of the issuance with a share of 45.28%,

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
2015	2,090.2	10,467.0	605.3	5,478.8	8.2	90.6	268.4	2,004.2	196.3	1,285.9	0.0	94.5	5.5	9.6	1,006.6	1,503.4
2016	2,522.1	11,584.5	563.5	5,542.3	0.0	63.1	286.0	1,897.9	140.1	1,212.5	5.0	97.8	3.0	9.8	1,524.6	2,761.0
2017	2,122.9	12,663.3	400.0	5,594.8	0.0	41.6	386.5	1,938.5	189.5	1,230.3	0.0	95.6	7.7	14.5	1,139.2	3,748.0
2017/ 1	239.3	11,695.3	50.0	5,512.3	0.0	63.1	19.6	1,887.6	22.8	1,229.5	0.0	98.0	1.4	11.2	145.6	2,893.6
2	225.9	11,868.3	25.0	5,504.8	0.0	63.1	0.5	1,876.3	18.3	1,239.1	0.0	98.6	0.0	10.7	182.1	3,075.7
3	302.4	12,038.1	30.0	5,454.8	0.0	63.1	10.9	1,849.1	25.0	1,252.9	0.0	98.7	0.0	10.6	236.5	3,308.9
4	143.3	12,139.0	25.0	5,479.8	0.0	63.1	44.8	1,868.4	48.1	1,284.4	0.0	98.5	0.0	10.6	25.4	3,334.3
5	176.4	12,271.8	50.0	5,529.8	0.0	54.1	70.8	1,917.1	7.4	1,280.0	0.0	97.8	3.3	13.8	44.9	3,379.3
6	166.2	12,357.1	25.0	5,554.8	0.0	54.1	53.4	1,922.8	14.0	1,268.0	0.0	97.6	1.3	14.7	72.5	3,445.2
7	184.3	12,393.2	45.0	5,509.8	0.0	54.1	35.3	1,925.9	4.1	1,267.7	0.0	97.7	0.0	14.5	99.8	3,523.5
8	180.0	12,457.7	25.0	5,534.8	0.0	54.1	24.9	1,917.0	1.1	1,260.3	0.0	97.1	0.0	14.4	129.0	3,580.0
9	161.1	12,482.4	25.0	5,494.8	0.0	54.1	49.8	1,930.8	12.5	1,252.8	0.0	96.7	0.9	15.1	73.0	3,638.1
10	116.4	12,550.8	25.0	5,519.8	0.0	54.1	28.2	1,938.3	5.4	1,249.3	0.0	96.7	0.8	15.6	57.0	3,677.0
11	132.9	12,644.2	50.0	5,569.8	0.0	41.6	16.5	1,935.3	13.8	1,259.6	0.0	96.0	0.0	14.6	52.7	3,727.4
12	94.8	12,663.3	25.0	5,594.8	0.0	41.6	32.0	1,938.5	17.1	1,230.3	0.0	95.6	0.0	14.5	20.7	3,748.0

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

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

*** Including NT dollar and foreign currency-denominated bonds issued in Taiwan by international financial institutions.

**** Including foreign currency-denominated bonds issued in Taiwan by international financial institutions.

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

2. Banking Bureau, Financial Supervisory Commission.

3. Department of Foreign Exchange, CBC.

followed by 3-year bonds with a share of 15.65%. At the end of 2017, the outstanding amount of corporate bonds reached NT\$1,938.5 billion, rising by NT\$40.6 billion or 2.14% from the previous year end.

Growth in Bank Debenture Issuance

A total of 20 financial institutions issued bank debentures in 2017 in support of their funding needs, with an issuance amount of NT\$189.5 billion, rising by NT\$49.4 billion or 35.25% over the previous year. The increase was mostly because financial institutions issued new bank debentures to maintain mid- to long-term funding costs at low levels amidst an ongoing low interest rate environment.

Regarding the purpose of issuance, the issuance of NT dollar bank debentures was to bolster capital adequacy and support mid- to long-term operation funding needs. The majority of the issuance went for subordinated debts with a share of 80.48%. With respect to the issuance of foreign currency bank debentures, the main purpose was to meet rising demand for foreign currency loans and support mid- to long-term foreign currency funding needs. Therefore, senior bank debentures with lower issuing rates accounted for the largest share of total issuance.

In terms of the volume of issuance, the major types of NT dollar bank debentures issued were 7-year, 10-year, and perpetual debentures, making up shares of 15.30%, 44.21%, and 20.70% in total issuance, respectively. As for foreign currency bank debentures, 30-year bank debentures accounted for the entire share of the bond issuance in 2017. At the end of the year, the outstanding amount of bank debentures was NT\$1,230.3 billion, up by NT\$17.8 billion or 1.47% from the previous year end.

No New Issues in Asset Securitization

New issues of asset securitization products were nil in 2017. However, as some asset securitization products matured and the principal was repaid, the outstanding amount of asset securitization decreased by NT\$2.2 billion or 2.25% from the previous year end to NT\$95.6 billion.

Significant Increase in Foreign Bond Issuance

Foreign bonds refer to NT dollar-denominated corporate bonds issued in Taiwan by foreign institutions. The foreign bonds currently in circulation are corporate bonds issued by offshore companies listed on the Taiwan Stock Exchange or the Taipei Exchange (for over-the-counter trading). For the year 2017, issuance of foreign bonds amounted to NT\$7.7 billion, up by NT\$4.8 billion or 161.02% from a year earlier. At the end of the year, the outstanding amount of foreign bonds reached NT\$14.5 billion, an increase of NT\$4.7 billion or 47.65% 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. The Financial Supervisory Commission (FSC) announced in May 2017 that domestic insurers could only invest in international bonds that have non-callable periods of at least five years from the date of issue in the primary market or at least three years from the date of transaction settlement in the secondary market. These new rules caused the number of issues and issuing amount of international bonds to decline compared to the previous year. As a result, international bond issuance in 2017 fell by NT\$385.4 billion or 25.28% from a year before to NT\$1,139.2 billion.

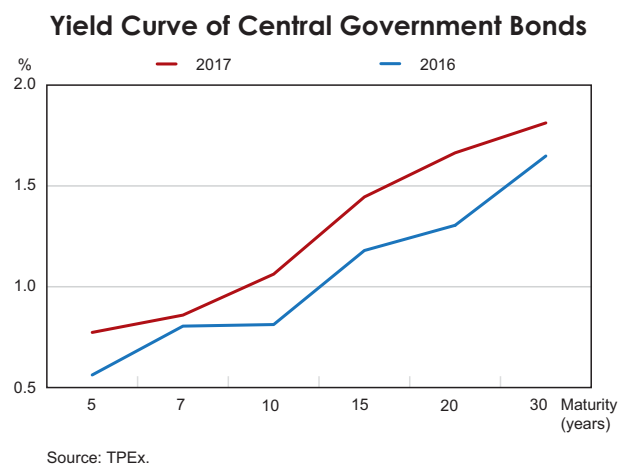
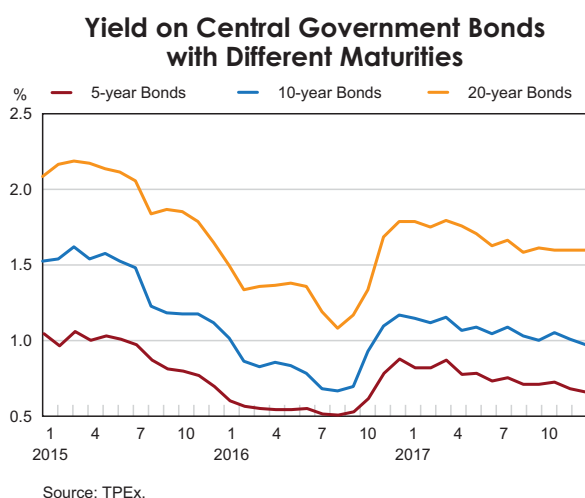
With regard to currency composition, issuance of US dollar-denominated, RMB-denominated, NZD-denominated, and ZAR-denominated bonds in 2017 stood at NT\$1,123.4 billion, NT\$10.8 billion, NT\$4.9 billion, and NT\$0.2 billion, respectively. At the end of the year, the outstanding amount of international bonds was NT\$3,748.0 billion, an increase of NT\$987.0 billion or 35.75% over the previous year end.

Lift in Average Bond Yields yet Decline in Transactions

In 2017, reduced trading volumes resulting from a shrinking supply of bonds led the 10-year government bond yield to trend down from the beginning of the year. Nevertheless, the 10-year government bond yield trended up and averaged 1.064% for the entire year, 25 basis points higher than the 0.818% of the previous year.

Among government bonds of the other maturity ranges, the average yield on 20-year bonds posted the biggest increase of 36 basis points over the previous year. Second was that on 15-year bonds with an increase of 27 basis points. Furthermore, average yields on 5-year, 7-year, and 30-year government bonds for the year 2017 climbed by 21, 6, and 17 basis points, respectively, compared to 2016.

In respect of transaction volume, as investors expected market rates to rise further given the



Fed's gradual rate hike path and domestic bond yields stayed at low levels, demand for bonds softened. This, combined with a slide in bond supply, led total bond transactions to decline by NT\$5,234.5 billion or 7.83% from the previous year to NT\$61,583.5 billion in 2017.

By type of bonds, the majority of total bond transactions went for government bonds with a share of 64.19% and an annual trading volume of NT\$39,532.0 billion. The second most actively traded were corporate bonds, accounting for 29.37% of total transactions with an annual trading volume of NT\$18,089.3 billion. Bank debentures came in third, making up 3.73% of total transactions with an annual trading volume of NT\$2,295.8 billion. Meanwhile, international bonds, foreign bonds, and asset securitization products accounted for marginal shares of 2.58%, 0.09%, and 0.04% in total transactions, with their respective annual trading reaching NT\$1,586.8 billion, NT\$57.9 billion, and NT\$21.7 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				
2015	67,725.7	45,778.7	17,396.9	650.5	2,574.3	34.7	35.3	1,255.4
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
2017/ 1	4,551.7	2,811.3	1,328.0	74.3	179.9	1.7	1.8	154.7
2	4,758.7	2,928.4	1,276.6	71.9	191.1	1.9	1.5	287.3
3	6,145.7	3,906.0	1,601.8	81.4	248.4	0.8	4.0	303.5
4	4,734.5	3,043.0	1,374.4	58.7	174.6	1.7	3.9	78.3
5	4,936.8	3,120.4	1,466.1	59.1	193.8	2.0	5.1	90.4
6	5,828.1	3,881.2	1,527.8	79.7	205.7	1.8	5.8	126.0
7	4,929.3	3,114.2	1,467.7	63.7	170.0	4.4	5.8	103.5
8	5,580.0	3,663.7	1,501.6	79.3	189.5	1.6	5.3	139.0
9	5,313.5	3,432.0	1,525.3	87.3	187.6	1.5	5.7	73.9
10	4,730.8	3,000.9	1,401.2	74.3	173.4	1.4	7.9	71.6
11	5,272.5	3,479.9	1,413.6	85.7	190.6	1.5	6.1	95.1
12	4,801.8	3,151.0	1,318.0	71.8	191.1	1.4	5.0	63.6

Source: TPEx.