

Financial Developments

II. Financial Developments

1. Overview

In 2016, market interest rates on deposits and loans both moved lower, mainly owing to two policy rate cuts by the CBC in the first half of the year. From January to August, most money market rates and the average 10-year government bond yield generally exhibited a downward trend because of ample liquidity and a sluggish economy. Thereafter, they turned upwards as the CBC held policy rates unchanged in view of a stabilizing economy. Although growth in loans increased, the conservative attitude of commercial banks towards investments dampened growth in loans and investments of monetary financial institutions, which in turn caused growth in M2 to decrease.

With respect to the exchange rate, the NT dollar against the US dollar depreciated at the beginning of 2016, extending the weak trend of the previous year. Afterwards, affected by factors including the Bank of Japan's negative interest rate policy, the Brexit referendum result, the US presidential election, and the Fed's rate hike, the NT dollar against the US dollar swung into depreciation after appreciation in the preceding months. In the stock market, concerns over the Fed's possible rate hike led the domestic stock market indices to swing lower in the first half of the year. Then, owing to favorable factors including net purchases by foreign investors, rallies across international stock markets, and the domestic economic recovery, the local indices trended up in the second half of the year.

Growth in Monetary Aggregates M2 Decelerated

The monetary aggregate M2, measured on a daily average basis, recorded a yearly growth rate of 4.51% in 2016. This was lower than the 6.34% in 2015 and remained within the CBC's 2.5% to 6.5% target range for the year. The drop was mainly due to slower growth in bank loans and investments. The annual growth rate of M1B, measured on a daily average basis, rose to 6.33% in 2016 from 6.10% in 2015, mainly because of higher growth in bank transaction deposits. Meanwhile, the annual growth rate of reserve money increased in 2016 as a result of higher growth in transaction deposits.

Growth in Bank Loans and Investments Slowed

Although loan growth increased owing to the economic recovery and increasing demand for funds by the private sector in the second half of the year, the annual growth rate of loans and investments, compared with that at the end of 2015, decreased from 4.61% to 3.88% at the end of 2016. The decrease was because commercial banks became conservative in investment decisions

on concerns about increasing uncertainty in international financial markets. 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 2.56% at the end of 2016, close to the 2.54% recorded a year earlier.

Bank Asset Quality Slightly Declined

The asset quality of Taiwan's banks slightly declined and the overall non-performing loan ratio of monetary financial institutions slightly increased from 0.25% at the end of 2015 to 0.28% at the end of 2016. In addition, the pre-tax profits of monetary financial institutions decreased mainly owing to growing expenses for bad loans written off. Their average return on assets and return on equity were both lower than those of the previous year, dropping from 0.65% and 10.84% to 0.59% and 9.13%, respectively.

Average Rates on Deposits and Loans Dropped

The CBC cut the policy rate twice in 2016 and, consequently, the posted interest rates on deposits and loans of banks went lower during the year. At the end of 2016, the average fixed rate on one-year time deposits and base lending rates of the five major domestic banks were all lower than those of 2015. Meanwhile, the weighted average rate on their new loans also decreased mainly because of a drop in rates on loans for current operations resulting from increases in low-interest loans of governments and government enterprises.

For domestic banks as a whole, the weighted average interest rate on deposits moved downward, mainly because the CBC lowered the policy rate and the share of time deposits in total deposits shrank from the previous year. Meanwhile, the weighted average interest rate on loans also declined, mainly reflecting lower policy rates and increases in low-interest loans of governments.

Bills Market Rates and 10-Year Government Bond Yields Swung to Increase

Reflecting the CBC's rate cuts, the interbank overnight call loan rate declined during the year of 2016. With regard to the bills market, from January to August, weak demand for funds and easy funding conditions led money market rates to exhibit a downtrend. Thereafter, they trended up because of the economic recovery.

From January to August of 2016, the yield on the benchmark 10-year government bond trended downward, mainly influenced by increased hedging demand for NTD bonds against the slow economic recovery and the CBC's rate cuts. The yield then rose owing to the domestic economic upturn and the Fed's rate hike. 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 over the previous year.

Exchange Rate Rose After a Weak Start, Then Depreciated

At the beginning of 2016, the NT dollar against the US dollar remained weak as in the previous year and reached a yearly low on January 21. Afterwards, the NT dollar appreciated owing to the Bank of Japan's negative interest rate policy and the international capital influx into Asia's emerging economies. As the Fed became wary of lifting rates after the Brexit vote at the end of June, the NT dollar climbed up further against the US dollar to a yearly high on August 10. Thereafter, the US dollar strength was affected by uncertainty surrounding the US presidential election, leading the NT dollar against the US dollar to fluctuate in a narrow range. As the US dollar firmed after Trump's election as the US president in November, and the Fed raised the policy rate in mid-December, the NT dollar generally depreciated in the last two months. At the end of 2016, the NT dollar appreciated against the US dollar by 2.44% compared to that at the end of the previous year. However, the NT dollar against the US dollar depreciated by 1.30% on an annual average basis.

Stock Index Fluctuated, Then Closed Higher

During early 2016, the domestic stock market's mainboard index, the TAIEX, trended up to 8,813 on March 21, mainly driven by net purchases by foreign investors and rises across major international stock markets. Afterwards, the TAIEX declined to 8,054 points on May 13, mainly affected by concerns over a possible Fed rate hike and less-than-expected domestic economic growth. In the following months, although there were uncertainties about Brexit and the US presidential election, the TAIEX swung upwards owing to the domestic economic recovery, net purchases by foreign investors, an international stock market rally and US stocks renewing record highs. The TAIEX closed at 9,254 points at the end of the year, increasing by 10.99% compared with the previous year end.

2. Monetary Aggregates

The CBC has used the monetary aggregate M2 as the intermediate target since 1992. For the year 2016, M2 recorded an annual growth rate of 4.51%, lower than the previous year's 6.34% but still within the CBC's target range of 2.5% to 6.5%. Compared with nominal GDP growth of 2.10%, the money growth indicated there was sufficient liquidity to support economic activity.

The annual growth rate of the narrow monetary aggregate M1B accelerated to 6.33% in 2016 from the previous year's 6.10%. The growth in M1B was mainly attributed to higher growth in transaction deposits.

Steady Growth in Reserve Money

Reserve money showed steady growth for the year 2016, recording a growth rate of 5.92%, and was 0.13 percentage points higher than the previous year's figure. In terms of the monthly movements of reserve money, the annual growth rates of reserve money for January and February gradually trended up because of a stronger demand for funds during the Chinese New Year holidays. The annual growth rate hit a yearly low of 4.62% in March and then moved upward to 6.55% in July. In subsequent months, annual growth rates remained relatively stable.

On the demand side, currency held by the non-bank public grew moderately because the low interest rates paid on bank deposits enhanced the willingness to hold currency in hand. Banks' excess reserves also rose as the CBC adjusted its monetary policy operation in response to a slower economic recovery. Meanwhile, higher growth in transaction deposits led to an increase in banks' demand for reserves.

From the supply side perspective, the balance sheet of the CBC revealed the sources of changes in reserve money. The increase was mostly attributable to the increase in foreign assets held by the CBC, while the decrease resulted largely from the decrease in claims on financial institutions and the increase in the issuance of certificates of deposit (CDs).

Decline in M2 Growth

The monetary aggregate M2 is comprised of currency in circulation, deposits in banks'

Annual Growth Rate of Reserve Money



Source: *Financial Statistics Monthly*, CBC.

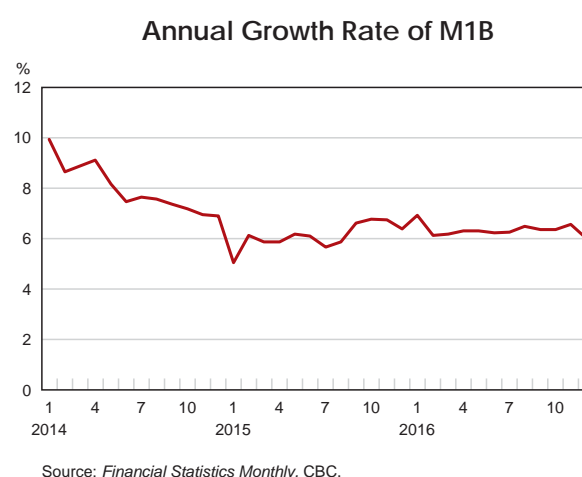
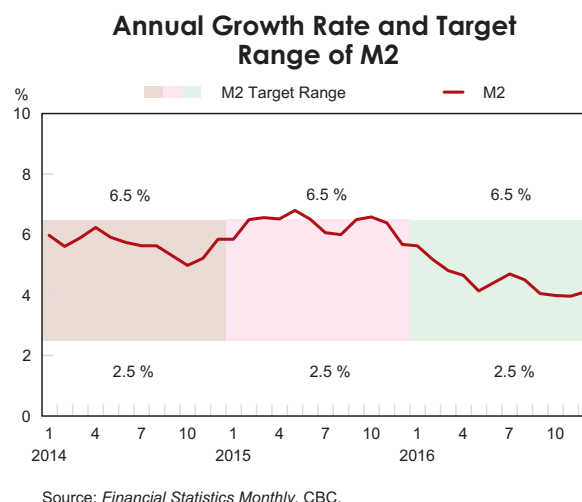
checking and passbook accounts, and quasi-money. The annual growth rate of M2 in 2016 was 4.51%, down by 1.83 percentage points from the previous year and close to the midpoint of the CBC's target range.

In terms of M2's monthly movements in 2016, owing to slowing growth in bank loans and investments and a decrease in net foreign capital inflows, which later turned into net outflows, the M2 growth rate exhibited a downward trend from 5.63% in January to 4.14% in May. The annual growth rate of M2 moved up between June and July on account of higher growth of bank loans and investments and net foreign capital inflows. The M2 growth rate generally trended down in the following months except in December and hit a yearly low of 3.96% in November as a result of lower growth in bank loans and investments and net foreign capital outflows.

Slight Increase in M1B Growth

In 2016, the average annual growth rate of M1B recorded 6.33%, 0.23 percentage points higher than the previous year's figure. The increase mirrored, in large part, the higher growth in transaction deposits.

As for the monthly movements of M1B, the annual growth rate reached its yearly high of 6.92% in January because of a stronger demand for funds prior to the Chinese New Year holidays, and then slid to 6.11% in February. Between March and August, the M1B growth rate broadly trended up as growth in transaction deposits accelerated. In subsequent months, the annual growth rates generally moved downward except in November, which was due to net foreign capital outflows. The M1B growth rate recorded an all-year low of 6.01% in December.



3. Banking Sector

Number of Monetary Financial Institutions

At the end of 2016, the number of monetary financial institutions (defined hereafter in this chapter as excluding the central bank) amounted to 404. The number of foreign and Mainland Chinese banks decreased by one due to the closing of one business. The number of credit departments of farmers' and fishermen's associations increased by two owing to new openings, while the numbers of the other types of institutions all remained unchanged.

Number of Monetary Financial Institutions by Type

Types of institutions	End of 2016	End of 2015	Annual Change
Total Number of Main Offices	404	403	1
Domestic Banks	40	40	0
Foreign and Mainland Chinese Banks	29	30	-1
Credit Cooperatives	23	23	0
Credit Departments of Farmers' and Fishermen's Associations	311	309	2
Chunghwa Post	1	1	0
Total Number of Branches	6,111	6,119	-8
Local Branches	5,908	5,925	-17
Overseas Branches	141	132	9
Offshore Banking Units	62	62	0

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

The number of money market mutual funds and the number of financial holding companies remained at one and 16, respectively, with the former being a fund raised and managed by Yuanta Commercial Bank.

Market Shares of Deposits and Loans

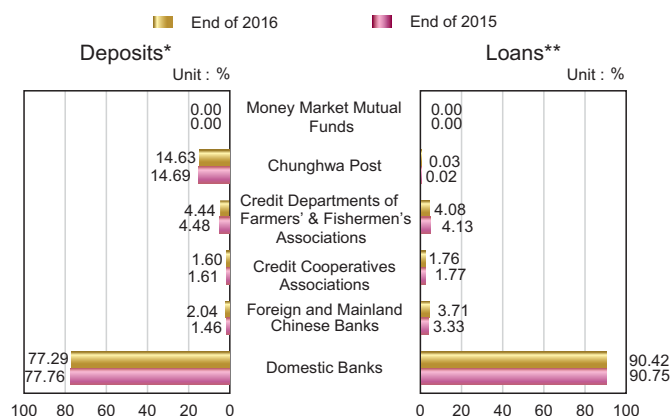
The growth of deposits slowed down in 2016 partly because deposit rates were still low. Moreover, the FSC announcement to lower the interest rates on some insurance policy reserves from 2017 onwards prompted some savers to buy endowment savings policies with the money from their matured CD contracts before the premium of insurance policies rose.

In terms of market shares of deposits, the market share of foreign and Mainland Chinese banks grew considerably to 2.04% because some of these banks offered better rates or appealed to savers with preferential rates or by issuing negotiable certificates of deposit. In contrast, the market

shares of domestic banks, Chunghwa Post, credit departments of farmers' and fishermen's associations, and credit cooperatives declined to 77.29%, 14.63%, 4.44%, and 1.60%, respectively.

In terms of loans, the market share of domestic banks shrank to 90.42%, whereas that of foreign and Mainland Chinese banks went up to 3.71%. As public enterprises enjoyed good profits, they borrowed less from domestic banks, resulting in slower loan growth. Domestic banks also lost some loan customers, including SMEs, to foreign banks whose lending rates were lower. For the other institution types, Chunghwa Post's market share of loans increased modestly to 0.03%. For credit departments of farmers' and fishermen's associations and credit cooperatives, higher lending rates caused their market shares to decrease to 4.08% and 1.76%, respectively.

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



Notes: * The carrying values of the host contracts of structured products issued by banks are excluded.

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

Source: *Financial Statistics Monthly*, CBC.

Sources and Uses of Funds

At the end of 2016, the total amount of funds in monetary financial institutions was NT\$46,436 billion, increasing by NT\$1,653 billion compared to the end of 2015. The combined share of transaction and non-transaction deposits still accounted for 85%, but they both grew at a much slower pace than the previous year. Their declines in growth resulted from some savers switching to insurance products for higher returns in response to low deposit interest rates following the CBC's rate cuts since September 2015. As for foreign currency deposits, market expectation of the Fed's rate hike caused both the balance and the pace of growth of foreign currency deposits to increase compared to the previous year. As for other items, its balance increase largely came from gains in banks' profits.

In the case of fund uses, foreign currency loans by the corporate sector decreased owing to the expectation of USD appreciation, whereas all the other items increased at the end of 2016 compared to the end of 2015. Bank loans accounted for over 50% of total uses of funds. Despite the significantly weaker demand from government and public enterprises, growth of loans still rose from 3.26% to 3.57% thanks to a greater demand from private enterprises amid a recovering economy in the second half of 2016. Furthermore, the balance and the share of net foreign assets both increased over the end of the previous year, largely driven by USD strength.

Because of ample liquidity in the banking system, both portfolio investments and banks' purchases of CDs issued by the CBC rose at the end of 2016 compared to the end of 2015. Growth in portfolio investments by monetary financial institutions slowed, mainly affected by the Fed's policy stance change, the new US administration's policy direction and the impact of Brexit. In addition, both the share and growth of banks' purchases of CDs issued by the CBC declined, continuing the trend of the past few years.

Sources and Uses of Funds in Monetary Financial Institutions¹

Unit: NT\$ Billion

	End of 2016			End of 2015			Annual Change	
	Amount	Share (%)	Annual Growth Rate (%)	Amount	Share (%)	Annual Growth Rate (%)	Amount	Share (%)
Sources:								
Transaction Deposits ²	14,497	31.22	5.61	13,727	30.65	6.83	770	0.57
Non-transaction Deposits ³	25,124	54.10	2.63	24,480	54.67	4.34	645	-0.57
NT Dollar Deposits	20,122	43.33	1.14	19,895	44.43	3.48	227	-1.10
Foreign Currency Deposits	5,002	10.77	9.12	4,584	10.24	8.27	418	0.53
Government Deposits	895	1.93	5.83	846	1.89	9.61	49	0.04
Other Items	5,919	12.75	3.29	5,731	12.79	13.04	189	-0.04
Total	46,436	100.00	3.69	44,784	100.00	6.24	1,653	0.00
Uses:								
Net Foreign Assets ⁴	4,518	9.73	8.99	4,145	9.26	27.70	373	0.47
Loans	25,123	54.10	3.57	24,256	54.16	3.26	866	-0.06
NT Dollar Loans	24,295	52.32	3.78	23,409	52.27	4.03	886	0.05
Foreign Currency Loans ⁴	828	1.78	-2.27	847	1.89	-14.17	-19	-0.11
Portfolio Investments ⁵	5,425	11.68	5.76	5,129	11.45	10.59	295	0.23
Purchases of CDs Issued by CBC	7,487	16.12	1.00	7,412	16.55	5.59	74	-0.43
Deposits with CBC	3,884	8.37	1.15	3,840	8.58	2.20	44	-0.21

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.

Downtrend in Deposit Growth

In 2016, the global economy performed weaker than expected, domestic economic growth slowed down and inflation expectations were mild. The CBC cut interest rates in March and July to ease conditions of market liquidity, which drove down deposit rates. Owing to low deposit rates, some people moved their funds from bank deposits to insurance products, causing the growth rate of deposits to decline to 3.45% at the end of 2016.

In terms of monthly movement, except for June and July, the growth rate of deposits roughly

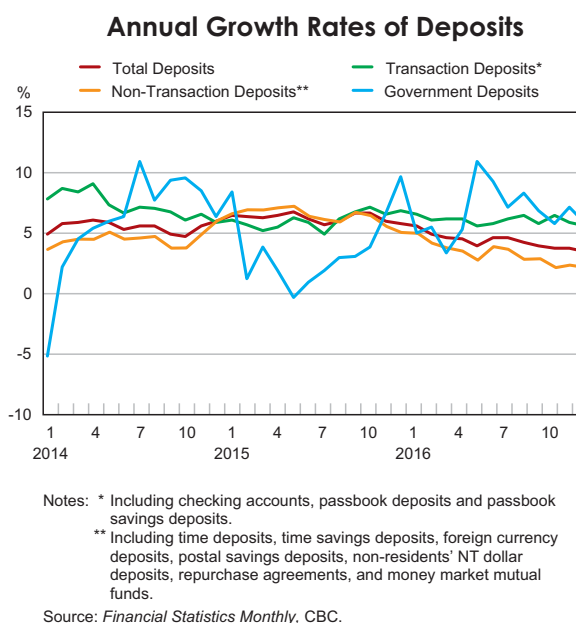
trended downward in 2016, mainly because some deposits were shifted to insurance products. With larger net foreign capital inflows and a buoyant domestic stock market causing foreign currency deposits and passbook savings deposits to both increase, the growth rate of deposits went up in June and July.

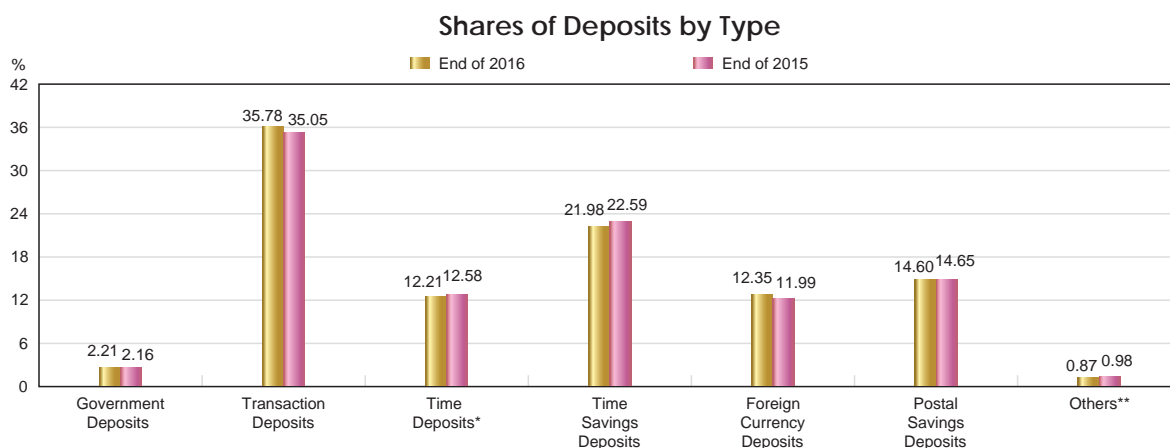
Afterwards, net foreign capital inflows continually decreased and even turned into net foreign capital outflows from October to December. Furthermore, some depositors switched to endowment savings insurance policies before insurance premiums were set to rise once the related FSC announcement became effective in 2017. As a result, the growth rate of deposits dipped through to December.

For transaction deposits, the annual growth rates in January and February declined because of a higher comparison base in the corresponding period of the previous year. The annual growth rate increased to 6.12% in March on account of active trade in the stock market. In April and July, there were both notable rises in checking accounts, so the annual growth rates went up. However, the annual growth rates significantly decreased because enterprises and residents filed tax returns in May and June. Between August and December, the annual growth rates rose first and fell shortly after. This was largely because the deposit balance of securities giro accounts fell after rising as well. At the end of 2016, the annual growth rate of deposits dropped to 5.61% from 6.83% the previous year end.

For the year as a whole, non-transaction deposits posted a decline in annual growth rate from 5.15% in 2015 to 2.17% in 2016 owing to low deposit interest rates and a shift of funds from deposits to insurance products for higher returns. However, the annual growth rate in June significantly increased to 3.90% from 2.78% in May because enterprises preparing to pay dividends parked their funds in time deposits.

By type of non-transaction deposits, the share of foreign currency deposits went up to 12.35%, but its annual growth rate fell from 12.87% in 2015 to 6.52% in 2016 owing to a higher comparison base in the corresponding period of the previous year. The shares and annual growth rates of time savings deposits and postal savings deposits all declined because some people moved their deposits to insurance products.





Notes: * Including NCDs.

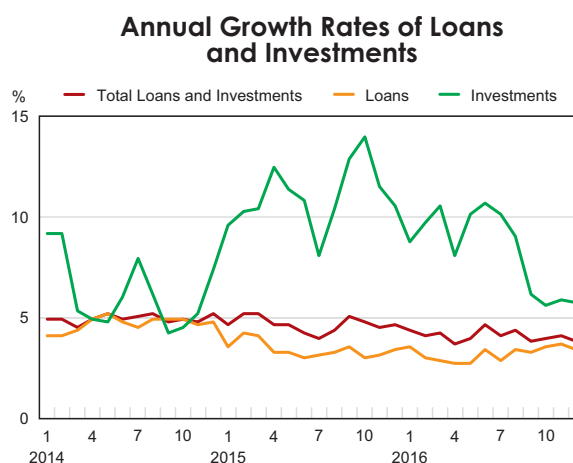
** Including repurchase agreements, non-residents' NTD deposits and money market mutual funds.

Source: *Financial Statistics Monthly*, CBC.

For time deposits, the share and annual growth rate both went down partly because some banks provided preferential interest rates for large-value transaction deposits leading to some funds flowed from time deposits to transaction deposits. In addition, owing to a higher base effect, the annual growth rate of government deposits trended down to 5.82%.

Lower Growth in Bank Loans and Investments

The annual growth rate of loans and investments of monetary financial institutions was 3.88% at the end of 2016, decreasing from 4.61% at the end of 2015. Growth in loans slightly increased to 3.48% at the end of 2016 from 3.43% at the end of the previous year, mainly owing to a greater demand from private enterprises amid a recovering economy. In contrast, growth in portfolio investment decelerated to 5.76% at the end of 2016 from 10.59% a year earlier. Banks became more conservative with their investments in response to the uncertainties over the global economy such as the Brexit effect, the path of the Fed's policy rate and the policy direction under the new US administration. In general, growth in banks' investments in all types of instruments exhibited a downward trend.



Source: *Financial Statistics Monthly*, CBC.

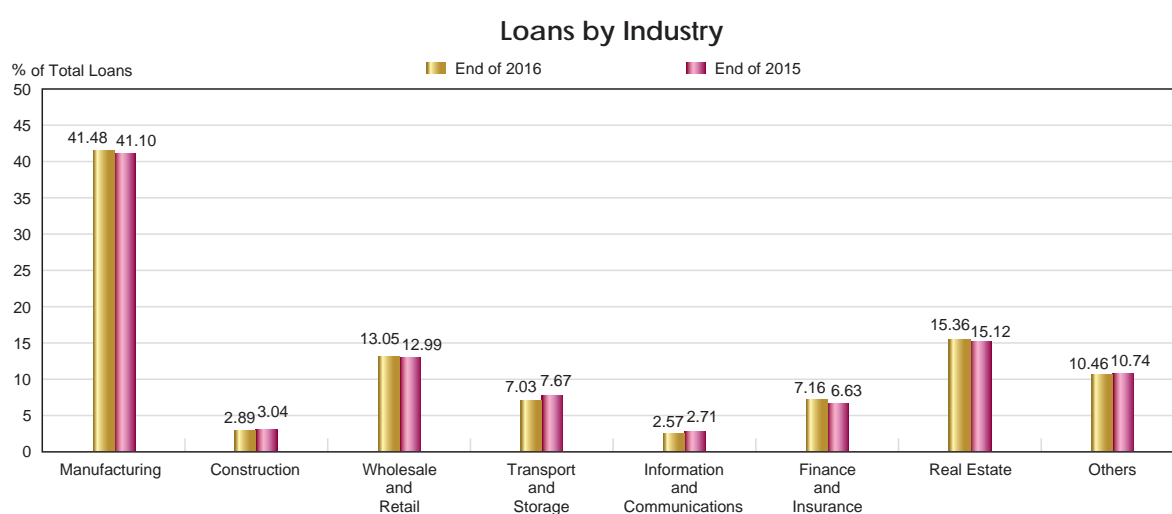
Loans by Sector

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 4.84% at the end of 2016 from 3.80% at the end of 2015. The upturn was mainly due to a stronger demand from private enterprises. The annual growth rate of loans to government enterprises decreased significantly to -15.64% at the end of 2016 from -3.40% at the end of the previous year, mainly because the CPC Corporation, Taiwan, and the Taiwan Power Company reduced their borrowing from banks, largely reflecting their considerable gains in annual profits. Meanwhile, the annual growth rate of loans to government agencies was -3.51% at the end of 2016, mainly on account of increased tax revenues thanks to the economic recovery. Though negative, the growth rate still represented an improvement compared to the -4.56% of the previous year end mainly as a result of a lower base effect.

In terms of loan composition, loans extended to the private sector accounted for 92.15% of total loans at the end of 2016, higher than the 91.22% recorded at the end of 2015. Loans extended to government agencies and public enterprises accounted for 5.65% and 2.20% at the end of 2016, respectively, lower than 6.08% and 2.70% 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 41.48% at the end of 2016, increasing from 41.10% at the end of 2015. This increase was mainly due to faster growth in loans extended to electronic parts and components manufacturing as intelligent technology is increasingly applied to related products. Meanwhile,



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.

compared with the end of 2015, the share of loans extended to the construction industry slightly decreased from 3.04% to 2.89% at the end of 2016, reflecting a cautious outlook for the housing market.

The shares of loans extended to the transport and storage industry and the information and communications industry both shrank. The shares of loans extended to the remaining industries went up. In the finance and insurance industry, for example, as the money market interest rates moved upward in the fourth quarter of 2016, some industries repaid their commercial paper debts with bank loans, which contributed to an increase in loans extended to this industry.

Consumer Loans

The annual growth rate of consumer loans extended by banks decreased from 3.42% at the end of 2015 to 2.86% at the end of 2016. Among them, house-purchasing loans increased NT\$232.9 billion, or 3.80%, in 2016, a slower year-on-year increase mainly because of a higher comparison base as transactions rose in the previous year before the enforcement of the integrated housing and land tax. As for the shares of various consumer loans, house-purchasing loans remained the largest component, with its share rising from 82.32% at the end of 2015 to 83.07% at the end of 2016. Car loans accounted for 1.65%, increasing from 1.60%, mainly because car sales were stimulated by the commodity tax cut for vehicle trade-ins. Meanwhile, house-repairing loans, revolving credit for credit cards and other consumer loans accounted for 1.82%, 1.41% and 11.40%, respectively, all decreasing from the end of the previous year.

Investments

Portfolio investments by monetary financial institutions, measured on a cost basis, showed slower growth with an annual increase of 5.76% in 2016, mainly because banks became more conservative with their investments in response to a number of uncertainties such as the Fed policy rate path, the new US administration's policy direction and the impact of Brexit.

Among the investment instruments, government bonds accounted for the largest share with 63.70%, higher than the 61.46% 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. Meanwhile, banks began to adjust their asset allocation, investing more in commercial paper instead of corporate bonds in view of expectation of rising interest rates. At the end of 2016, commercial paper accounted for a share of 14.46%, larger than a year ago. Corporate bonds accounted for a share of 13.99%, decreasing from the end of 2015.

In terms of valuation changes, portfolio investments by monetary financial institutions, measured at fair value, recorded a year-on-year increase of NT\$293.6 billion, while the increase was larger, at NT\$295.4 billion, when measured on a cost basis.

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. Direct finance and indirect finance combined to increase from the previous year's NT\$1,073.9 billion to NT\$1,130.6 billion in 2016. Direct finance increased NT\$229.5 billion during 2016, higher than the previous year's increase of NT\$64.3 billion. Indirect finance decreased from the previous year's NT\$1,009.6 billion to NT\$901.1 billion, which was mainly due to slower growth in investments by financial institutions.

Based on the outstanding balance, the share of direct finance in total funds raised increased from 20.53% a year ago to 20.63% at the end of 2016, while the share of indirect finance decreased from 79.47% to 79.37%.

Direct Finance vs. Indirect Finance*

Unit: NT\$ Billion

Year	Direct Finance (1)	Indirect Finance (2)			Total Funds Raised (3)=(1)+(2)
		Loans	Investments	Subtotal	
2007	82.7	737.0	228.6	965.6	1,206.4
2008	-316.1	649.2	563.0	1,212.2	1,048.3
2009	142.8	133.0	259.3	392.3	896.1
2010	165.5	1,242.6	433.8	1,676.4	535.1
2011	19.0	1,141.4	642.5	1,783.9	1,841.9
2012	17.0	809.4	880.7	1,690.1	1,802.9
2013	62.6	1,007.2	803.3	1,810.5	1,707.1
2014	234.3	1,248.6	217.8	1,466.4	1,873.1
2015	64.3	865.1	144.5	1,009.6	1,073.9
2016	229.5	909.4	-8.3	901.1	1,130.6

Notes: * Measured in terms of flow data.

(1) 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.

(2) 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.

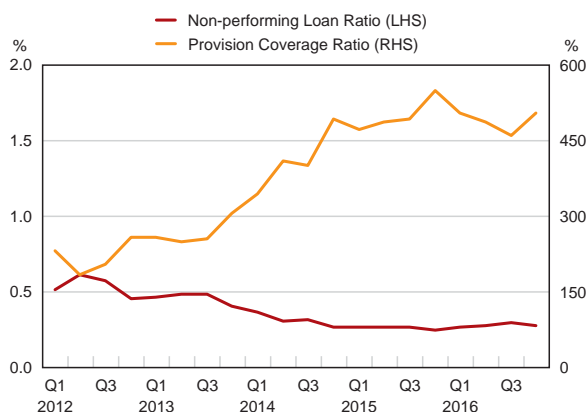
Source: *Financial Statistics Monthly*, CBC

Increase in Non-performing Loan (NPL) Ratio

Because of declined asset quality, non-performing loans of monetary financial institutions as a whole increased by NT\$11.5 billion to NT\$81.9 billion in 2016, and their average NPL ratio also increased to 0.28% at the end of 2016 from the previous year's 0.25%.

Owing to an increase in non-performing loans, the average provision coverage ratio of monetary financial institutions decreased to 503.11% at the end of 2016 from 547.47% the previous year end.

Non-performing Loan Ratio and Provision Coverage Ratio of Monetary Financial Institutions*

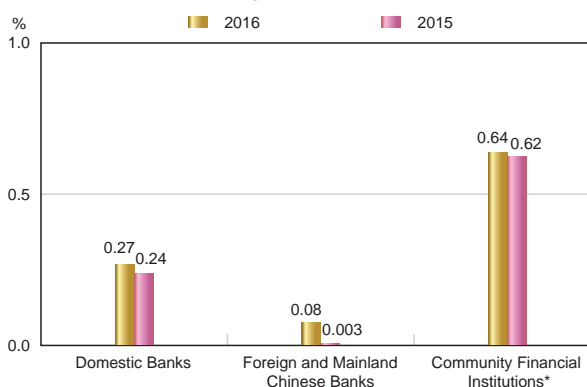


Note: * Including domestic banks, foreign and Mainland Chinese banks, credit cooperatives, credit departments of farmers' and fishermen's associations.

Non-performing Loan Ratio = Non-performing Loans / Total Loans
Provision Coverage Ratio = Loan Loss Provisions / Non-performing Loans

Source: Department of Financial Inspection, CBC.

Non-performing Loan Ratios by Type of Monetary Financial Institutions



Note: * Including credit cooperatives and credit departments of farmers' and fishermen's associations.

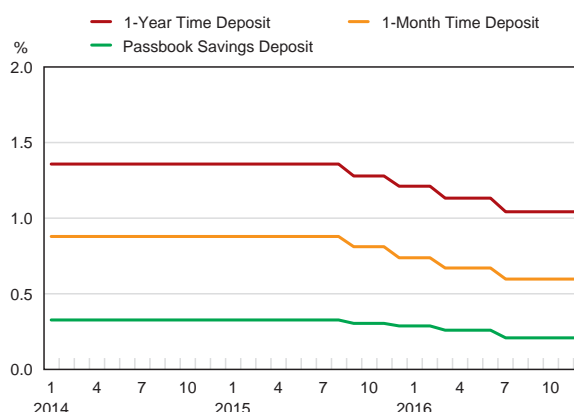
Source: Department of Financial Inspection, CBC.

Decline in Bank Interest Rates

The CBC lowered policy rates twice, effective on March 25 and July 1, respectively, by a total of 25 basis points to stimulate the economy. As a result, bank interest rates on deposits and loans went down. However, in the second half of the year, as the global economy was more clearly on track for a recovery and the domestic economy also stabilized, the CBC 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 decreased to 0.60% and 1.04% at the end of July 2016 from 0.74% and 1.21% at the end of January, respectively, and then remained steady until the end of the year. Moreover, the average base lending rate decreased to 2.63% at the end of 2016 from 2.83% at the previous year-end.

The weighted average rates on deposits and loans of domestic banks showed a

Average Deposit Rates of the Five Major Domestic Banks*



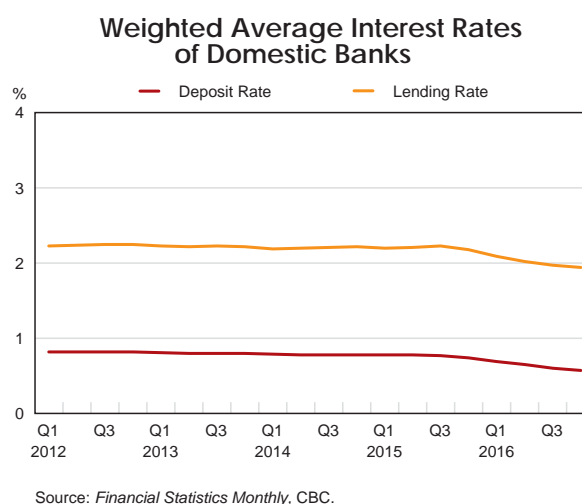
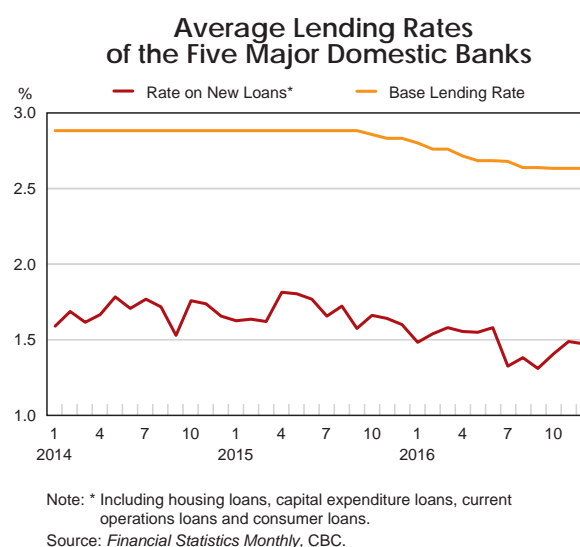
Note: * The five major domestic banks are Bank of Taiwan, Taiwan Cooperative Bank, First Commercial Bank, Hua Nan Commercial Bank and Land Bank of Taiwan.

Source: Financial Statistics Monthly, CBC.

downward trend in 2016 as well. Owing to the CBC's rate cut, the weighted average deposit rate decreased to 0.69% in the first quarter from 0.74% the previous quarter, and declined further to 0.57% in the fourth quarter of the year. On the whole, the weighted average interest rate on deposits of domestic banks was 0.63% in 2016, which was 0.14 percentage points lower than that recorded in the previous year.

With respect to the weighted average interest rate on new loans of the five major domestic banks, it fluctuated within a narrow range between 1.49% and 1.58% during the January to June period. In July, it decreased to 1.33% due to the decreases in base lending rates and the index rates on adjustable-rate mortgages owing to eased funding conditions in the banking system. Then, it declined further to 1.31% in September and moved upward to 1.48% in December. On the whole, the weighted average interest rate on new loans slightly decreased from 1.67% in 2015 to 1.47% in 2016, down by 0.20 percentage points. Excluding central government loans, the weighted average interest rate on new loans decreased from 1.73% in 2015 to 1.56% in 2016, down by 0.17 percentage points.

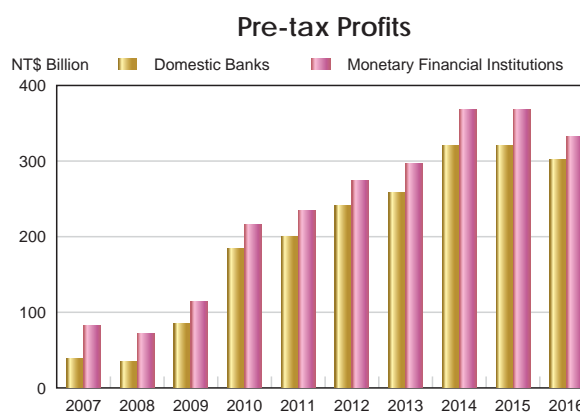
In the first quarter of the year, as a result of the CBC's rate cut, an increase in bank claims on local governments and government enterprises, and repayment of some corporate loans for land and construction, the weighted average interest rate on total loans of domestic banks moved downward from 2.18% in the previous quarter to 2.09%. In the fourth quarter, the weighted average interest rate on loans declined to 1.94% as a result of a delayed effect of the CBC's rate cut and an increase in bank lending for low-interest loans to local governments and government enterprises and for large-value loans to renowned firms. For the year as a whole, the weighted average interest rate on loans of domestic banks was 2.01%, which was 0.19 percentage points lower than that recorded in the previous year.



Because the decrease in average deposit rates was less than that in average lending rates, the average interest rate spread between deposits and loans shrank to 1.38 percentage points in 2016, which was 0.05 percentage points smaller than that recorded in the previous year.

Reduction in Profitability

Affected by the slow economic recovery, the pre-tax profits of monetary financial institutions decreased by NT\$35.5 billion in 2016. Those of domestic banks decreased by NT\$18.7 billion to NT\$301.9 billion mainly owing to increased expenses for bad loans written off. The pre-tax profits of foreign and Mainland Chinese banks decreased by NT\$14.6 billion mainly because their net interest revenues dropped, and the pre-tax profits of Chunghwa Post also decreased by NT\$1.1 billion.



Source: Department of Financial Inspection, CBC.

Profits of Monetary Financial Institutions

Unit: NT\$ Billion

	Pre-tax Profits			Return on Assets (%)*			Return on Equity (%)**		
	2016	2015	Annual Change	2016	2015	Annual Change	2016	2015	Annual Change
Domestic Banks	301.9	320.6	-18.7	0.66	0.73	-0.07	9.23	10.65	-1.42
Foreign and Mainland Chinese Banks	11.2	25.8	-14.6	0.44	0.57	-0.13	12.67	22.45	-9.78
Credit Cooperatives	2.4	2.5	-0.1	0.35	0.37	-0.02	5.28	5.54	-0.26
Credit Departments of Farmers' and Fishermen's Associations	4.8	5.8	-1.0	0.25	0.31	-0.06	3.86	4.90	-1.04
Chunghwa Post	12.4	13.5	-1.1	0.20	0.23	-0.03	10.95	12.46	-1.51
Total	332.7	368.2	-35.5	0.59	0.65	-0.06	9.13	10.84	-1.71

Notes: * Return on Assets = Pre-tax Profits / Average Assets

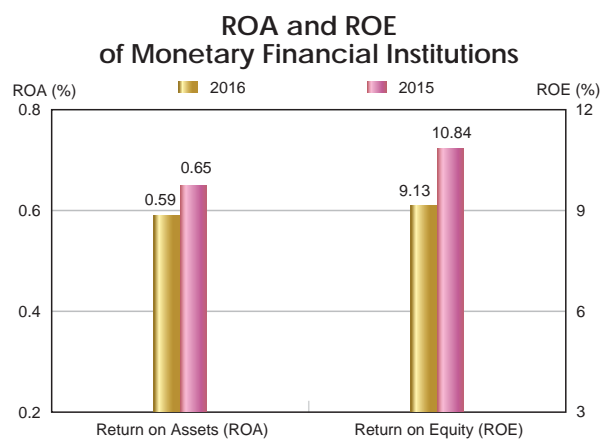
** Return on Equity = Pre-tax Profits / Average Equity

Source: Department of Financial Inspection, CBC.

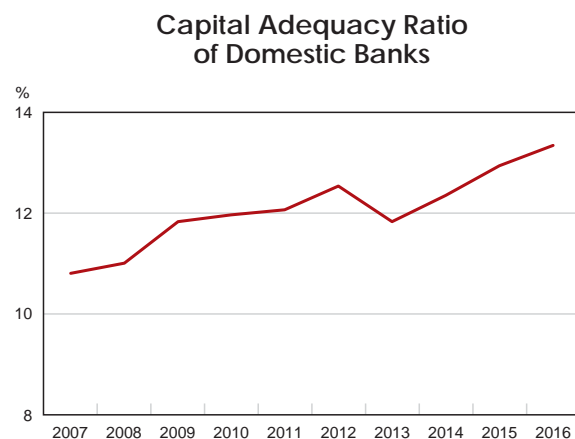
Decreases in ROA and ROE

The average return on assets (ROA) of monetary financial institutions in 2016 decreased to 0.59% from 0.65% the previous year, and their return on equity (ROE) also went down to 9.13% from 10.84% a year earlier. Among monetary financial institutions, domestic banks were the best performers in terms of ROA, and foreign and Mainland Chinese banks posted the highest ROE.

With regard to capital adequacy ratios, the average ratio for domestic banks increased to 13.33% at the end of 2016 from 12.93% a year before, mainly because some domestic banks recorded increases in cumulative earnings and common stock.



Source: Department of Financial Inspection, CBC.



Source: Department of Financial Inspection, CBC.

4. Money Market

In 2016, the total turnover in the interbank call loan market decreased by 9.05%, whereas that in the short-term bills market increased by 6.89%. As the CBC lowered policy rates twice amid domestic growth deceleration and mild inflation, interest rates in both markets exhibited a downward trend in the first half of the year, but then remained broadly stable in the second half of the year.

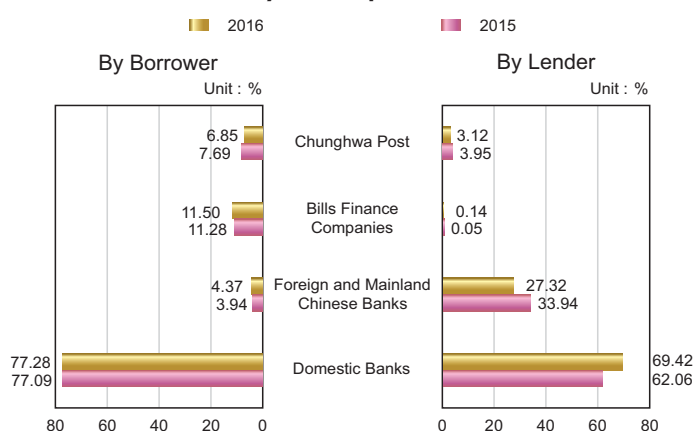
Reduction in Interbank Call Loans

For the year 2016, on account of soft demand for funds from the private sector amid a slow domestic economic recovery, together with easy monetary conditions, banks' demand for call loans continued to slacken. Therefore, total annual turnover of interbank call loans for 2016 declined by NT\$4,406.4 billion, or 9.05%, to NT\$44,290.2 billion.

With regard to borrowers, domestic banks were still the largest player during the year, accounting for 77.28% of total transactions, followed by bills finance companies, Chunghwa Post, and foreign and Mainland Chinese banks, with shares of 11.50%, 6.85% and 4.37%, respectively. The amount borrowed by domestic banks decreased by NT\$3,312.3 billion, or 8.82%, compared with the previous year, mainly because banks had ample liquidity, which reduced their funding needs. On the other hand, the amount borrowed by bills finance companies decreased by NT\$399.5 billion or 7.28% during the year primarily owing to lower demand for funds as bills finance companies gained more funds by selling short-term bills and conducting repurchase agreement transactions. The borrowed amount of Chunghwa Post fell by NT\$711.2 billion or 18.98%, while that of foreign and Mainland Chinese banks grew by NT\$16.6 billion or 0.86%.

With respect to lenders, domestic banks continued to be the largest supplier of funds, accounting for 69.42% of total transactions in 2016. Following domestic banks were foreign and Mainland Chinese banks, Chunghwa Post, and bills finance companies, with respective shares of 27.32%, 3.12%, and 0.14%. The amount lent by domestic banks rose by NT\$524.8 billion, or 1.74%, compared with the previous

Composition of Interbank Call Loan Market by Participant



Source: Financial Statistics Monthly, CBC.

year. In contrast, the amount lent by foreign and Mainland Chinese banks dropped by NT\$4,426.6 billion or 26.79% from a year before as foreign and Mainland Chinese banks continued to reduce the size of lending in order to lower risks. Meanwhile, the amount lent by Chunghwa Post declined by NT\$538.7 billion or 28.03% compared with the previous year as it diverted more funds to purchase government bonds and commercial paper.

In terms of maturity, interbank overnight call loans remained the most actively traded instrument in the market with a predominant share of 54.50%, down by 9.21 percentage points from that of the previous year. Second were those with a maturity of 1 week, accounting for 35.19%, up by 5.57 percentage points from that of the previous year. The share of loans with a 2-week maturity increased by 2.92 percentage points to 8.30%. Shares for the trading of interbank call loans with maturities of 3 weeks, 1 month, 2-6 months, and above 6 months were negligible.

Increase in Short-Term Bill Transactions

In 2016, newly issued short-term bills totaled NT\$12,778.5 billion. Of the new issues, commercial paper continued to account for the lion's share, at 88.99%. Second were negotiable certificates of deposit with a share of 9.17%. As market interest rates remained at relatively low levels, enterprises were more willing to issue commercial paper instead of borrowing from banks. Consequently, compared with the previous year, the amount of commercial paper issued grew by NT\$945.4 billion. Following commercial paper were negotiable certificates of deposit with an increase of NT\$339.2 billion. On the contrary, the Ministry of Finance decreased the issues of treasury bills by NT\$16.4 billion owing to increased tax revenue. Meanwhile, the amount of bankers' acceptances contracted by NT\$2.50 billion over the previous year. As of the end of 2016, total outstanding short-term bills amounted to NT\$1,873.5 billion, 11.67% 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
2007	6,495.1	925.3	88.0	28.0	-	-	5577.2	664.8	38.2	8.4	791.7	224.0
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	10.0	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	0.0	0.0	10426.0	1346.6	20.8	3.5	832.3	237.6
2016	12,778.5	1,873.5	217.3	90.0	0.0	0.0	11371.3	1480.1	18.3	4.1	1171.6	299.4
2016-2015 Change	1,265.7	195.7	-16.4	-0.1	0.0	0.0	945.4	133.4	-2.5	0.6	339.2	61.8

Source: Financial Statistics Monthly, CBC.

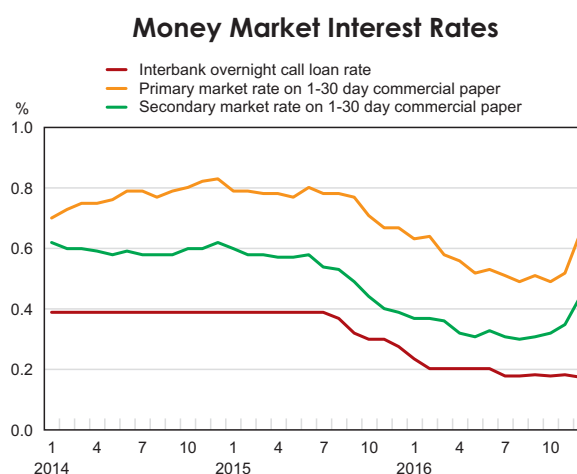
The total turnover of short-term bills in 2016 increased by 6.89% to NT\$35,556.1 billion. Of the total transactions, commercial paper still made up the largest share with 92.24%, representing a decrease of 1.55 percentage points from a year earlier. Negotiable certificates of deposit came in second with a share of 7.23%, showing an increase of 1.82 percentage points over 2015. Treasury bills and bankers' acceptances made up negligible shares of transactions. With respect to market participants, private enterprises were the largest player in the market with a share of 45.98%, followed by banks with a share of 27.87%.

Broad Downtrend in Money Market Rates

In the first half of 2016, as domestic economic growth remained sluggish, demand for funds from private enterprises weakened. Furthermore, the CBC continued to conduct open market operations to manage market liquidity and cut policy rates on March 25 and July 1, respectively, by a total of 25 basis points to foster economic growth. As a result, funding conditions in the money market remained easy. In the second half of the year, as the domestic economy gradually rebounded, the CBC decided to keep policy rates unchanged.

The weighted average interbank overnight call loan rate went down from 0.233% in January of 2016 to 0.178% in August, reflecting the CBC's successive policy rate cuts. Later, heightened volatility in global financial markets driven by the US presidential election led banks to adopt more conservative lending policies, which in turn caused the tightening of market liquidity. Consequently, the weighted average interbank overnight call loan rate moved upward to 0.183% in November. As the CBC injected liquidity through open market operations and maintained accommodative monetary conditions, the weighted average interbank overnight call loan rate dropped again to 0.174% in December of the same year.

The primary market rate on commercial paper with a maturity of 1-30 days trended down from 0.63% in January to 0.49% in August and then slightly moved upward to 0.65% in December of 2016. The secondary market rate on commercial paper with a maturity of 1-30 days also descended from 0.37% in January to 0.30% in August and trended up to 0.44% in December of the same year.



Decrease in Money Market Funds

In recent years, investment trust companies employed a product diversification strategy, affecting their asset allocation. In addition, turmoil in major stock markets around the world in early 2016, the impact of Brexit, and the outcome of the US presidential election, as well as market expectations for a Fed rate hike, caused greater volatility in global financial markets and undermined investors' confidence. The above factors led to a decline in the size of money market funds. At the end of 2016, there were a total of 44 money market funds in Taiwan with total assets reaching NT\$848.3 billion, a decrease of NT\$145.2 billion or 14.61% over the previous year.

With regard to portfolio composition, the largest use of the funds was bank deposits with a share of 64.97% at the end of the year. The second largest was short-term bills with a share of 17.00%. Meanwhile, repurchase agreements decreased to 15.88% of total money market funds.

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 (%)
2014	741.4	512.6	69.14	136.2	18.37	90.4	12.19	2.3	0.30
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
2016/ 1	975.6	647.4	66.36	152.9	15.68	157.9	16.19	17.4	1.78
2	938.0	644.5	68.71	138.4	14.76	135.6	14.45	19.5	2.08
3	926.5	631.1	68.12	146.7	15.84	127.8	13.80	20.8	2.25
4	1,049.9	668.1	63.63	198.3	18.89	160.5	15.29	23.0	2.19
5	1,044.2	681.8	65.29	183.8	17.60	152.8	14.63	25.8	2.47
6	939.4	655.8	69.81	146.2	15.57	113.6	12.10	23.8	2.53
7	931.2	653.9	70.23	132.5	14.23	119.7	12.86	25.0	2.68
8	941.7	654.1	69.46	133.3	14.15	129.9	13.79	24.5	2.60
9	842.7	616.2	73.12	113.3	13.45	91.8	10.90	21.3	2.53
10	873.0	617.8	70.76	121.8	13.95	109.0	12.49	24.4	2.80
11	818.8	576.1	70.36	132.7	16.21	88.5	10.81	21.5	2.62
12	848.3	551.1	64.97	144.2	17.00	134.7	15.88	18.2	2.15

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

5. Foreign Exchange Market

The NT Dollar Exchange Rate

At the end of 2016, the NT dollar appreciated against the US dollar, the euro, the RMB and the Korean won, but slightly depreciated against the Japanese yen when compared with the previous year end. The trade-weighted nominal effective exchange rate index of the NT dollar decreased by 0.69% on a daily average basis. The exchange rate movements of the NT dollar against the US dollar, the euro, the yen, the RMB, and the Korean won are analyzed as follows.

During the course of the year, the NT dollar against the US dollar depreciated briefly and then appreciated before it weakened again in the fourth quarter. In January, the NT dollar depreciated against the US dollar, mainly because of the effect of the Fed's rate hike in December 2015, and the NT dollar hit a yearly low on January 21. As the US dollar was dampened by the less-than-expected US economic performance, combined with the Brexit issue, international capital flowed into emerging Asia including Taiwan, sending the NT dollar to a yearly high against the US dollar on August 10. Later, the US dollar strengthened because market participants expected the new US government under President Donald Trump would enact aggressive fiscal measures and urge firms to bring back manufacturing jobs to the US. The Fed's rate hike on December 14 also led the NT dollar to depreciate against the US dollar. At the end of 2016, the NT dollar appreciated by 2.44% against the US dollar compared with the end of the previous year. On a daily average basis, the NT dollar depreciated against the US dollar by 1.30% in 2016.

The NT dollar against the euro fluctuated in the first half of the year and appreciated steadily in the second half. Early in the year, as the international stock market slump and the Middle East geopolitical crisis led the euro to soar on safe-haven demand, the NT dollar against the euro fell to a yearly low on February 5. Then, anxiety over the Brexit referendum and investor worries about a deflationary risk in the euro area induced by the continued decline in oil prices combined to result in an NT dollar appreciation against the euro. In March, as the ECB cut rates and expanded QE with an indication that interest rates would remain low for some time, euro strength led to NT dollar depreciation against the euro. In the second half of the year, Brexit concerns, the banking crisis and failed referendum on constitutional reforms in Italy, and the ECB's decision to extend QE policy pushed the NT dollar against the euro to a yearly high on December 20. Compared with the end of the previous year, the NT dollar appreciated against the euro by 6.53% at the end of 2016. On a daily average basis, the NT dollar depreciated against the euro by 1.04%.

The NT dollar depreciated against the yen in the first three quarters and appreciated toward

the end of 2016. Early in the year, international stock market declines led the yen to soar on safe-haven demand, but the rally was reversed by the BOJ's announcement of the negative interest rate policy on January 29. The ECB's rate cut amid concerns of deflation, and the UK's decision to leave EU then caused the yen to soar on safe-haven demand again, and the NT dollar against the yen hit a yearly low on July 6. After that, the yen trended down on account of weak economic conditions in Japan. In November, as the BOJ announcement of an unlimited bond buying plan, the NT dollar against the yen continued to appreciate steadily. Late in December, the BOJ's QE remained unchanged and its growth forecasts for Japan were revised up; therefore, the NT dollar depreciated against the yen again. In sum, the NT dollar slightly depreciated by 0.35% against the yen at the end of 2016 compared with the previous year end. On a daily average basis, the NT dollar depreciated against the yen by 11.29%.

The NT dollar against the RMB generally appreciated in 2016 after dipping in January. Early in the year, owing to China's widened trade surplus and the People's Bank of China (PBOC) governor's comment that there was no basis for the persistent RMB depreciation, the NT dollar against the RMB fell to a yearly low on February 22. After that, because of a slowdown in Chinese economic growth, continued easing by the PBOC, and market concerns about China's exports to Europe shrinking after Brexit, the NT dollar appreciated against a softer RMB. After November, Donald Trump's election victory gave rise to market expectations that trade friction between China and the US could intensify, inducing in more capital flight out of China. As a result, the NT dollar against the RMB hit a yearly high on December 16. Afterwards, China tightened capital controls to stem RMB weakness, and the NT dollar against the RMB depreciated. The NT dollar appreciated against the RMB by 9.63% between end-2015 and end-2016. On a daily average basis, the NT dollar appreciated by 5.31% against the RMB when compared with the previous year.

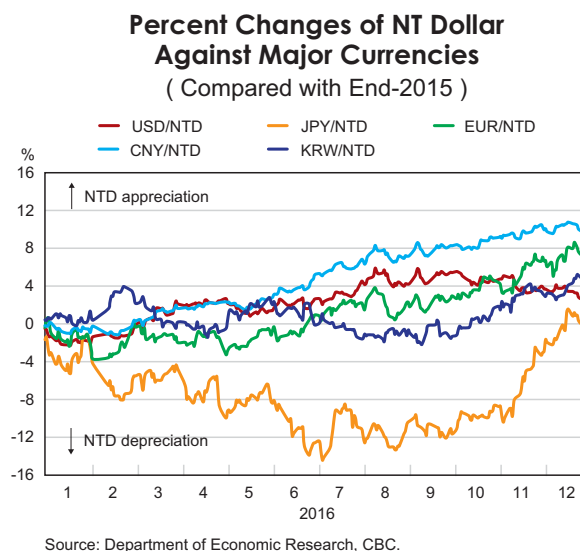
In 2016, the NT dollar appreciated against the Korean won in the first quarter, fluctuated in the second and third quarters, and appreciated in the fourth quarter. Early in the year, slower economic growth in South Korea and rising tensions on the Korean Peninsula led the NT dollar to appreciate

Annual Changes of NTD Exchange Rate Against Major Currencies

	NTD/USD	NTD/EUR	NTD/JPY	NTD/CNY	NTD/KRW
Exchange Rate (2016/12/30)	32.279	33.917	0.2757	4.6448	0.0268
Exchange Rate (2015/12/31)	33.066	36.131	0.2747	5.0921	0.0281
Annual Change	2.44%	6.53%	-0.35%	9.63%	4.81%
Average Exchange Rate (2016)	32.318	35.749	0.2971	4.8639	0.0279
Average Exchange Rate (2015)	31.898	35.377	0.2635	5.1222	0.0282
Annual Change	-1.30%	-1.04%	-11.29%	5.31%	1.24%

Source: Department of Economic Research, CBC.

against the won. During the second quarter, international capital flowed into emerging Asia including Taiwan and South Korea, leading both the NT dollar and the won to rise. The NT dollar against the won fluctuated and reached a yearly low on September 10. In the fourth quarter, as the won was affected by Korea's political scandal and downward revision of economic outlook by the Bank of Korea, the NT dollar against the won hit a yearly high on December 28. Compared with the end of 2015, the NT dollar appreciated by 4.81% against the won at the end of 2016. On a daily average basis, the NT dollar also appreciated by 1.24% against the won in 2016.

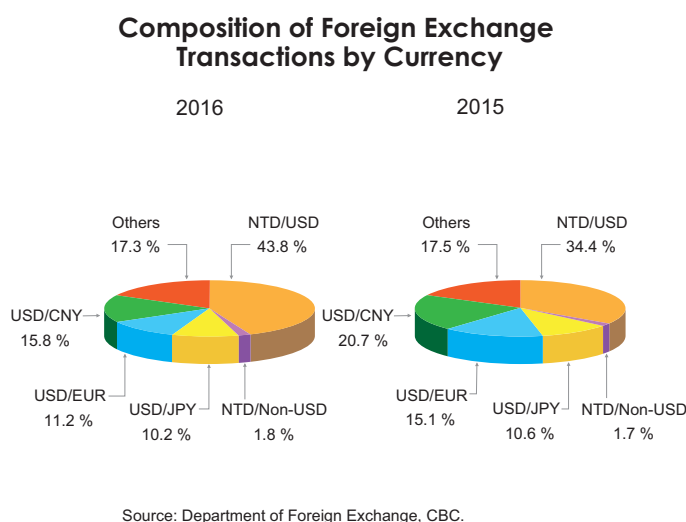


Lower Turnover in Foreign Exchange Market

Trading in the Taipei foreign exchange market decreased in 2016. Total net trading volume for the year was US\$7,113.8 billion, representing a year-on-year growth rate of -13.3%. This was due to a higher base in 2015 when major foreign currencies fluctuated wildly and the turnover was thus higher than usual. The daily average turnover was US\$28.9 billion in 2016.

In terms of trading partners, transactions between banks and non-bank customers accounted for 28.8% of the total turnover, while interbank transactions made up 71.2%, including 23.7% for transactions among local banks and 47.5% for those between local banks and overseas banks.

As far as traded currencies were concerned, NT dollar trading against foreign currencies accounted for 45.6% of the total trading volume, of which trading against the US dollar (USD) made up a dominant 43.8%. Transactions in third currencies contributed to 54.4% of

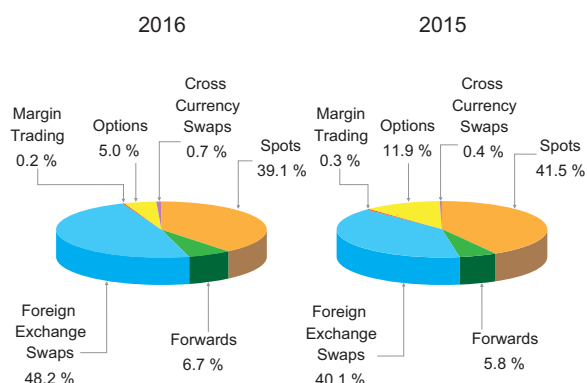


the total trading volume, with trading in currency pairs of USD-RMB, USD-euro and USD-yen accounting for respective shares of 15.8%, 11.2% and 10.2%. Compared with 2015, NT dollar trading against foreign currencies increased by 9.7%. Transactions in third currencies decreased by 26.3%.

With respect to types of transactions, the major types were foreign exchange swaps and spots, accounting for 48.2% and 39.1% of total turnover, respectively. Compared with 2015, the trading volumes

of forwards, foreign exchange swaps and cross currency swaps increased, whereas the other types decreased.

Composition of Foreign Exchange Transactions by Product



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
2012	2,249,684	406,831	2,558,288	19,419	627,958	30,993	5,893,172
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
2015-2016 Growth Rate (%)	-18.4	0.3	4.2	-30.4	-63.1	51.7	-13.3

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			
2012	1,069	51,887	4,320	142,310	199,586	15,440	955	2,243	218,223
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
2015-2016 Growth Rate (%)	-97.6	-1.9	166.9	-8.7	-6.5	-24.8	-70.2	-16.8	-7.6

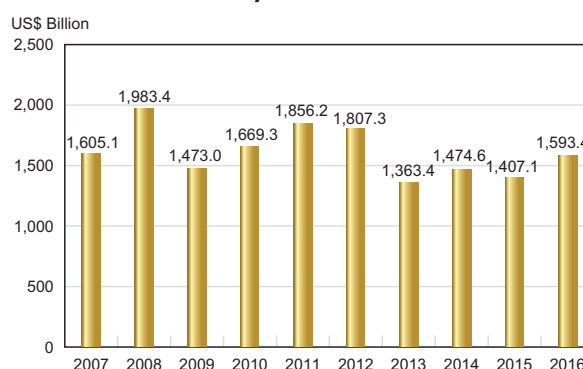
Source: Department of Foreign Exchange, CBC.

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\$103.2 billion. Of this amount, interest rate-related derivatives accounted for the lion's share with US\$99.0 billion, or 96.0%, with its turnover down by 6.5% from the previous year. Interest rate futures accounted for the majority of this decrease, down by US\$4.9 billion.

Increase in Trading in Foreign Currency Call Loan Market

The transaction volume in the foreign currency call loan market in 2016 was US\$1,593.4 billion, an increase of 13.2% over the previous year. Of this amount, US dollar transactions accounted for a dominant share with US\$1,507.2 billion, making up 94.6% of the total while increasing 13.7% from 2015. The increase was because some banks conducted more currency lending trades in response to flush foreign currency funds from growth in deposits.

Transactions in the Taipei Foreign Currency Call Loan Market



Source: Department of Foreign Exchange, CBC.

Japanese yen transactions reached ¥398.4 billion in 2016, a small share of 0.2% of the total with a year-on-year decline of 50.0% in volume. The amount of euro transactions amounted to €0.5 billion, a low share of 0.04%. Other currencies accounted for a combined 5.1% of the total transaction volume.

Growing Assets of Offshore Banking Units

There were 62 offshore banking units (OBUs) at the end of 2016. Domestic banks operate 38 of these OBUs, while foreign banks run the other 24. The total assets of all OBUs increased to US\$186.0 billion at the end of the year, representing an increase of US\$4.1 billion or 2.2% from the previous year end owing to increasing securities investments. Domestic OBUs made up 88.1% of these combined assets with an amount of US\$164.0 billion, and the OBUs of foreign banks accounted for US\$22.1 billion, a 11.9% share of the total.

In terms of the uses of funds, discounts and loans, at US\$77.0 billion, represented the majority share of 41.4% of total OBU assets. Securities investments came in second place, accounting for 23.0% 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 interbank transactions, making up 41.1% of total liabilities.

Furthermore, deposits of non-financial institutions accounted for 38.8% of total liabilities. The main funding origins of OBUs were Asia, accounting for the majority with 59.0%, and America, with a share of 30.0%.

Forex trading turnover of all OBUs dropped by 36.0% to US\$683.5 billion, of which US\$476.3 billion went for spot transactions, US\$101.4 billion for forward transactions and US\$105.7 billion for forex swap transactions. Compared with the previous year, the growth rates of trading of spots, forwards and forex swaps were -36.8%, -19.4%, and -43.7%, respectively.

For OBUs, the total turnover of other derivatives products shrank to US\$313.6 billion, a decrease of 59.2% over the previous year. Of this amount, currency options transactions registered US\$207.2 billion, making up 66.1% 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
2012	67,811	18,240	60,200	24,655	170,906	44,102	100,389	364	26,051
2013	79,981	22,019	44,459	23,113	169,572	51,191	100,133	351	17,896
2014	87,849	22,066	47,681	26,379	183,974	57,818	101,671	338	24,146
2015	81,198	29,547	52,790	18,388	181,924	66,137	97,087	0	18,700
2016	77,236	42,803	54,519	11,467	186,025	72,245	96,454	0	17,326
2015-2016 Growth Rate (%)	-4.9	44.9	3.3	-37.6	2.3	9.2	-0.7	0.0	-7.3

Source: *Financial Statistics Monthly*, CBC.

6. Stock Markets

Taiwan's benchmark stock index, the Taiwan Stock Exchange (TWSE) weighted stock price index (TAIEX), trended up in the first few months of 2016 as the world's major stock markets rallied and international oil and raw material prices rebounded. Local shares retreated in the following two months to reach a yearly low in May, owing to concerns over the US Fed's possible rate hike, downward corrections in major world stock indices, and a still weak domestic economy. Towards the second half of the year, the TAIEX shrugged off events like Brexit and uncertainty surrounding the US presidential election and swung upward to hit an annual high on December 9 on the back of several positive factors at home and abroad, including international stock market rallies and stronger domestic economic and export growth.

At the end of 2016, the TAIEX rose by 11.0% compared to the end of the previous year. Most categories enjoyed year-on-year gains, except for shares in Shipping & Transportation, Textile, Biotechnology & Medical Care, Tourism, and Automobile. Oil, Gas & Electricity stocks posted the largest increase by 39.4%, followed by Electrical & Cable and Iron & Steel at 34.4% and 34.1%, respectively. The TAIEX daily average trading value was NT\$68.7 billion, a 17.0% decline from the previous year.

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
2014	9,307.3	88.3	84.6	26,891.5	354.6	-38.1	-0.4
2015	8,338.1	82.8	77.5	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
2016/ 1	8,145.2	71.6	6.3	23,964.0	-59.5	-1.1	-13.2
2	8,411.2	73.4	3.9	24,758.0	50.6	-1.7	-9.9
3	8,744.8	81.5	7.3	25,727.2	160.1	-6.9	-18.2
4	8,377.9	68.7	5.3	24,628.6	15.8	-5.4	-5.0
5	8,535.6	66.7	5.6	25,141.2	-73.9	1.8	12.9
6	8,666.6	65.1	5.4	25,528.4	82.1	-2.3	-20.1
7	8,984.4	77.3	5.8	26,475.9	167.7	0.1	-9.4
8	9,068.9	69.5	6.0	26,736.9	71.0	-5.8	-12.8
9	9,166.9	68.4	4.8	27,045.7	2.5	-0.4	-17.4
10	9,290.1	60.3	4.4	27,466.8	-1.9	0.3	2.5
11	9,240.7	67.1	5.4	27,354.2	-96.2	1.5	9.0
12	9,253.5	56.5	4.6	27,247.9	1.9	0.0	-5.1

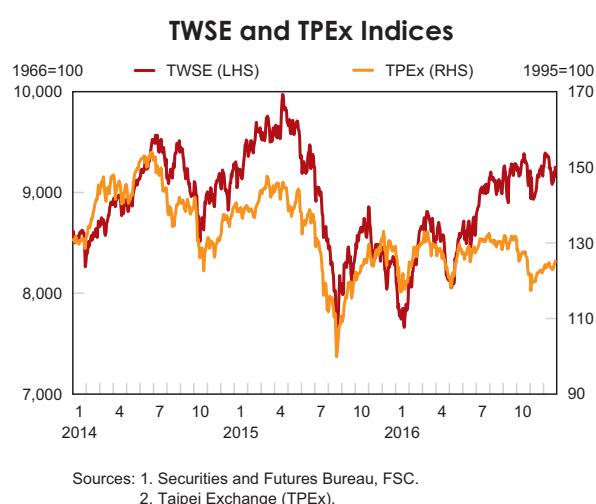
Source: Securities and Futures Bureau, FSC.

In Taiwan's over-the-counter market, the weighted stock price index of the Taipei Exchange (TPEX) closed the year down by 3.0% over the previous year end. The TPEX-listed categories posted mixed performances. Biotechnology & Medical Care shares were dragged down by a biotech company scandal and fell by 25.5% over the previous year, the largest decline among all categories. Cultural & Creative shares posted the second largest fall of 16.1% mainly owing to the failed acquisition of XPEC Entertainment. In 2016, the TPEX daily average trading value was NT\$20.7 billion, decreasing by 11.2% compared to the previous year.

The TWSE Market

Listings and Capitalization Both Grew

At the end of 2016, the number of TWSE listings grew by 18 during the year to a total of 892. The par value of total shares issued amounted to NT\$7.0 trillion, increasing by 1.0% from the end of the previous year. Total market capitalization reached NT\$27.2 trillion, a year-on-year increase of 11.2%. In terms of Taiwan Depository Receipts (TDRs), three existing TDRs were de-listed and no new ones were issued. The number of total TDRs on the TWSE decreased to 19 at the end of 2016.

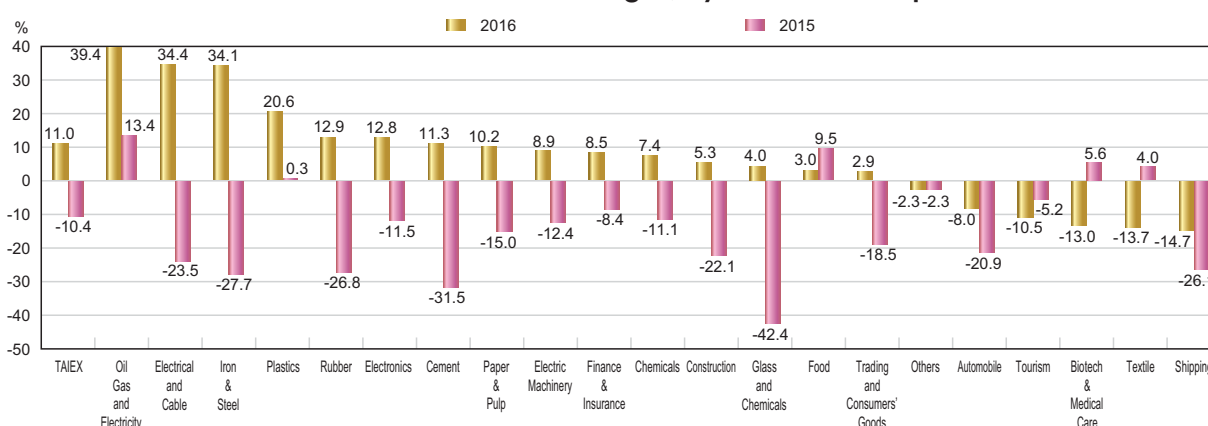


TAIEX Started Higher Before Dipping but Rallied in H2

In the beginning months of 2016, the TAIEX was boosted by major international stock market rallies and rising oil and raw material prices, as well as net foreign buying of TAIEX shares. As a result, the index rose to a high of 8,813 points on March 21. However, renewed market concern over the possible Fed rate hike, consolidations in major international stock indices, and a still weak domestic economy combined to drag down the TAIEX, which dipped to a low of 8,054 points on May 13.

Then, despite disruptions from uncertainty surrounding the Brexit vote and the US presidential election, the TAIEX climbed higher because international stock markets rallied, new iPhones sold better than expected, the NASDAQ hit multiple record highs, Taiwan's economy and exports both picked up, and foreign investors net-bought TWSE-listed shares. The TAIEX swung to an all-year high of 9,393 on December 9 and trended down on profit-taking trades and thinner foreign buying around the Christmas holidays. The TAIEX closed the year at 9,254, rising by 11.0% from the 8,338 points at the end of the previous year.

TWSE Stock Price Changes, by Industrial Group



Source: TWSE.

Broken down by subcategory, only five industrial groups, namely Shipping & Transportation, Textile, Biotechnology & Medical Care, Tourism, and Automobile, recorded year-on-year declines. Shipping & Transportation suffered the most with a 14.7% drop, because demand for shipping by air and by sea was dampened by weak global trade and some shipping companies taking heavy losses. On the other hand, boosted by international oil price rises, Oil, Gas & Electricity shares climbed 39.4%, the largest increase among all industrial groups. The second-best performance was the 34.4% rise of Electrical & Cable shares, thanks to increased demand for electric appliances and better corporate profits as copper and nickel prices went up. Iron & Steel shares also surged 34.1% owing to higher demand for steel and rising steel prices.

Market Turnover Decreased

In 2016, turnover in the TWSE market measured on a daily average basis, decreased by 17.0% to NT\$68.7 billion from the NT\$82.8 billion of the previous year. The decline was mainly because a lock-in effect had led to slower trading despite price rises domestically as investors held on to stocks with high dividend yields in a low-interest global environment. Moreover, subdued trading activity also resulted in a lower turnover rate, which dropped from 77.6% the previous year to 64.6%.

Net Foreign Buying Increased

In 2016, foreign investors bought a net NT\$320.2 billion in the TWSE market, a significant increase from the NT\$46.2 billion of 2015. Local securities investment trust companies and securities dealers net sold TAIEX shares valued at NT\$19.9 billion and NT\$86.6 billion, respectively.

Looking at foreign buying in 2016, foreign investors net-sold TAIEX shares in January amid international stock market crashes and geopolitical tensions. They became net buyers between February and April, encouraged by a global market rally and international oil and raw material

price rebounds. Although market concern of a possible Fed rate hike and a looming Brexit vote turned foreign investors into net-sellers in the TWSE mainboard in May, net-buying was recorded in June through to September albeit dwindling month by month. In both October and November, the TWSE market saw renewed net-sales by foreign investors because uncertainty surrounding the US presidential election and a possible Fed rate hike drained capital out of Asian stock markets including Taiwan. However, in December, the TAIEX's annual high record also brought about a modest net foreign buying position.

Local securities investment trust companies net bought in May, July, October, and November. In the rest of the year, net selling positions were recorded because some of these investors held off buying in a heated market and some increased selling to meet fund redemption demand or to boost their own financial statements.

Local securities dealers, with an inclination for short swing trading, net bought in May, October, and November when the TAIEX trended up or reached a period high. They net sold in the rest of the year when the TAIEX weakened or for the purposes of position adjustment or profit taking.

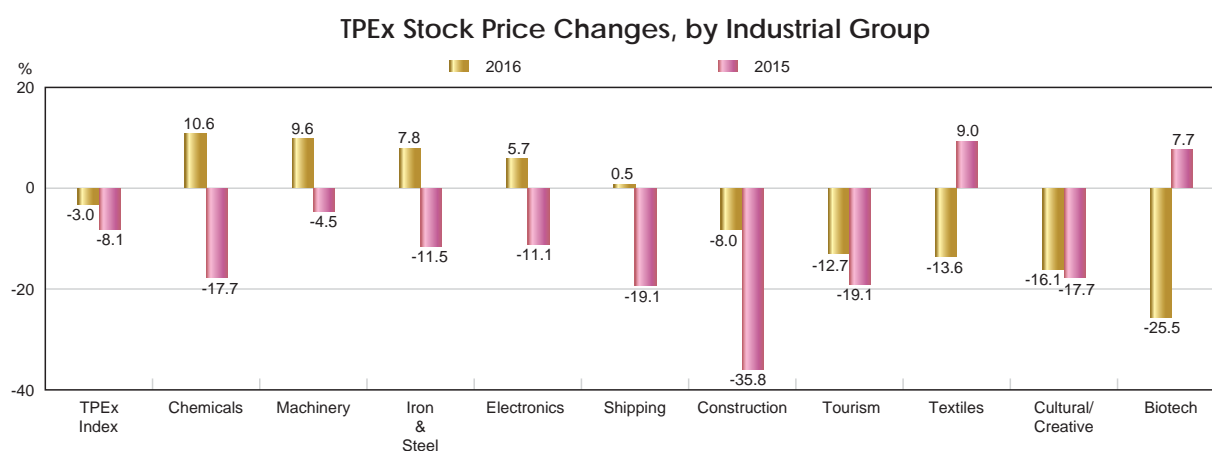
The TPEX Market

Listings Increased, Capitalization Shrank Slightly

At the end of 2016, the number of TPEX listings increased by 20 to a total of 732. The total par value amounted to NT\$715.3 billion, up by 1.3% from the previous year. Market capitalization decreased slightly by 0.3% to NT\$2.72 trillion.

TPEX Index Swung Lower

In 2016, stock prices in the TPEX market moved in a trading range between 117.09 and 132.91 as volume and prices were both depressed by less participation of retail investors in this mid- and small-cap market. At the end of the year, the TPEX closed at 125.2 points, 3.0% lower compared to



Source: TPEX.

the 129.1 points at the previous year end.

For the year of 2016, foreign investors made net purchases of NT\$31.7 billion in the TPEX market, while local securities investment trust companies and local dealers recorded net selling positions of NT\$13.5 billion and NT\$0.5 billion, respectively. The daily average turnover in the TPEX market fell to NT\$20.7 billion, a 11.2% decrease from the NT\$23.3 billion of the previous year.

Key Measures for the Stock Markets

Key measures for Taiwan's stock markets in 2016 included the following:

- (1) January 1: Effective from this day, initial public offerings (IPOs) shall be conducted via bidding auction, except for those IPO companies raising capital of an amount less than NT\$0.4 billion or Cultural & Creative listings.
- (2) February 1: The FSC expanded the scope of securities eligible for day trading from 377 to 1,432 stocks.
- (3) April 12: The National Financial Stabilization Fund announced that it would stop its market-stabilizing buying actions, which had already lasted longer than ever before (from August 25, 2015 to April 12, 2016, totaling 232 days).
- (4) August 2: The FSC eased rules governing risk-based capital ratios of insurance companies, in hopes of stimulating the local equities markets by boosting insurers' investment in local stocks as well as exchange-traded funds (ETFs).
- (5) October 19: The TPEX gave the greenlight for securities firms to conduct over-the-counter trading of foreign-currency denominated structured notes with professional institutional investors and high-net-worth corporate investors.

7. Bond Market

The total volume of bond issuance rose significantly for the year 2016. New issues of bonds amounted to NT\$2,522.1 billion, an increase of NT\$431.9 billion or 20.66% over the previous year. At the end of 2016, the total outstanding of bonds issued reached NT\$11,584.5 billion, up by NT\$1,117.5 billion or 10.68% from the previous year end.

To support fiscal funding needs, issuance of central government bonds for 2016 was NT\$563.5 billion, falling by NT\$41.8 billion or 6.91% from the previous year.

Issuance of corporate bonds exhibited an uptrend in 2016. This was largely due to declining market rates leading corporations to issue new bonds in order to repay old ones with higher yields. Issuance of corporate bonds for 2016 grew by NT\$17.7 billion, or 6.58%, to NT\$286.0 billion.

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\$140.1 billion for the entire year, dropping by NT\$56.2 billion or 28.61% over the previous year.

In terms of asset securitization, corporations issued asset securitization products worth NT\$5 billion in 2016.

In addition, foreign institutions issued 165 foreign currency-denominated international bonds in Taiwan amounting to NT\$1,524.6 billion, increasing substantially by NT\$518.0 billion or 51.46% over the previous year. Meanwhile, seven NT dollar-denominated foreign bonds were issued by foreign institutions with a total amount of NT\$3.0 billion, down by NT\$2.5 billion or 45.87% compared to the previous year.

In the secondary market, yields on bonds with different maturities all displayed a downtrend in 2016 in reflection of the CBC's policy rate cuts. Among the components, the average 10-year government bond yield moved down by 54 basis points from 1.352% in the previous year to 0.818% in 2016. Owing to soft demand for bonds amid market expectations of yields remaining at low levels, annual transactions totaled NT\$66,817.9 billion, contracting by NT\$907.8 billion or 1.34% over the previous year.

Reduction in Government Bond Issuance

With respect to central government bonds, on account of the rise in tax revenues and government bond issuance approaching the ceiling, central government bond issuance for 2016 declined by NT\$41.8 billion, or 6.91%, to NT\$563.5 billion.

In 2016, the Ministry of Finance issued 2-year, 3-year, 5-year, 10-year, 20-year, and 30-year government bonds with respective amounts of NT\$53.5 billion, NT\$35.0 billion, NT\$120.0 billion, NT\$180.0 billion, NT\$90.0 billion, and NT\$85.0 billion.

In regard to issuing rates, affected by a slowing domestic economy and successive policy rate cuts in the first half of the year, the weighted average issuing rates in 2016 on central government bonds with different maturities were all lower than the previous year. The weighted average issuing rates on 2-year, 3-year, 5-year, 10-year, 20-year, and 30-year bonds dropped by 22, 33, 39, 49, 68, and 70 basis points, respectively, compared to the previous year.

Broken down by institutional investors, bonds held by the banking industry made up the largest share at 31.74% in 2016, an increase of 4.84 percentage points over the previous year. The insurance industry and Chunghwa Post came in second and third with shares of bond holdings at 31.22% and 30.55%, contracting by 5.43 percentage points and 0.05 percentage points, respectively. Meanwhile, the share of bonds held by bills finance companies went up by 1.09 percentage points to 3.76% from a year before. The insurance industry's share of bond holdings shrank chiefly because funds flowed to high-yield international bonds. As of the end of 2016, the total outstanding of central government bond issuance was NT\$5,542.3 billion, expanding by NT\$63.5 billion or 1.16% from the previous year end.

In terms of bonds issued by governments of special municipalities, new issues were nil in 2016. At the end of the year, the outstanding amount of bonds issued by governments of special municipalities stood at NT\$63.1 billion, down by NT\$27.6 billion or 30.41% 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. In 2016, life insurance companies issued perpetual bonds to expand their capital base, while corporations issued new bonds to repay old ones with higher yields amid expectations that rates might have already hit relatively low levels. As a result, the issuing amount of corporate bonds for the year 2016 rose by NT\$17.7 billion or 6.58% to NT\$286.0 billion.

As for bond maturities, the majority of the issuance went for 5-year corporate bonds with a share of 42.22%, followed by perpetual bonds with 27.81%. On account of the CBC's successive rate cuts in 2016, the weighted average coupon rates on 2-year, 5-year, 7-year, and 10-year corporate bonds slid by 21, 41, 59, and 62 basis points from a year earlier to 0.734%, 0.963%, 1.046%, and 1.200%, respectively. Meanwhile, the weighted average coupon rate on perpetual bonds was 3.510%. At the end of 2016, the outstanding amount of corporate bonds stood at NT\$1,897.9 billion, falling by NT\$106.3 billion or 5.30% from the previous year end.

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
2014	1,974.1	9,425.3	675.3	5,338.5	0.0	101.7	360.4	2,013.0	397.5	1,273.6	8.5	118.7	6.0	9.3	526.4	570.5
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
2016/ 1	177.4	10,475.0	65.0	5,428.8	0.0	90.6	14.1	1,984.7	25.7	1,290.8	0.0	94.6	0.0	9.3	72.7	1,576.1
2	212.7	10,652.6	29.9	5,458.7	0.0	90.6	0.9	1,954.5	6.5	1,295.1	0.0	93.5	0.0	8.6	175.4	1,751.5
3	199.0	10,645.1	60.0	5,388.7	0.0	80.6	6.7	1,917.6	5.2	1,280.7	0.0	93.7	0.5	8.9	126.6	1,874.9
4	138.5	10,767.9	30.0	5,418.7	0.0	80.6	18.4	1,927.8	0.0	1,274.8	0.0	93.3	0.0	8.9	90.2	1,963.8
5	255.9	10,961.9	60.0	5,478.7	0.0	80.6	28.3	1,927.3	7.2	1,262.9	0.0	92.2	0.7	9.6	159.7	2,110.7
6	290.7	11,179.5	60.0	5,538.7	0.0	70.6	50.0	1,935.5	9.6	1,265.5	0.0	92.1	0.0	9.3	171.1	2,267.7
7	152.4	11,208.4	60.0	5,528.7	0.0	70.6	4.4	1,916.0	0.0	1,261.7	0.0	92.2	0.0	8.8	88.1	2,330.4
8	241.9	11,323.1	30.0	5,508.7	0.0	70.6	20.4	1,910.8	2.2	1,255.0	5.0	97.3	0.0	8.3	184.3	2,472.4
9	313.7	11,415.9	30.0	5,453.7	0.0	70.6	21.8	1,905.9	26.3	1,271.7	0.0	97.4	0.7	9.0	234.9	2,607.8
10	199.4	11,482.6	53.6	5,457.3	0.0	70.6	18.0	1,887.3	5.7	1,253.1	0.0	97.9	0.0	8.9	122.1	2,707.5
11	172.5	11,517.5	55.0	5,512.3	0.0	70.6	27.1	1,861.7	29.2	1,219.0	0.0	97.7	0.8	9.6	60.4	2,746.5
12	168.1	11,584.5	30.0	5,542.3	0.0	63.1	76.2	1,897.9	22.5	1,212.5	0.0	97.8	0.3	9.8	39.1	2,761.0

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.

Marked Decline in Bank Debenture Issuance

A total of 21 financial institutions issued bank debentures in 2016 in support of their funding needs, with an issuance amount of NT\$140.1 billion, showing a decrease of NT\$56.2 billion or 28.61% over the previous year. The reduction was mostly because banks had exceeded the minimum capital adequacy ratio required by law, thereby weakening demand for NT dollar-denominated subordinated debt issuance.

In respect 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 26.05%, 24.40%, and 32.65% in total issuance, respectively. As for foreign currency bank debentures, 30-year bank debentures accounted for the lion's share with 41.24%. At the end of 2016, the outstanding amount of bank debentures was NT\$1,212.5 billion, declining by NT\$73.3 billion or 5.70% from the previous year end.

New Issues in Asset Securitization

New issues of asset securitization products amounted to NT\$5.0 billion for the entire year. The outstanding amount of asset securitization expanded by NT\$3.4 billion or 3.57% from the previous year end to NT\$97.8 billion.

Large Decrease 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 convertible corporate bonds issued by offshore companies listed on the Taiwan Stock Exchange or Taipei Exchange (TPEX). For the year 2016, issuance of foreign bonds reached NT\$3.0 billion, a decrease of NT\$2.5 billion or 45.87% from a year earlier. At the end of the year, the outstanding amount of foreign bonds was NT\$9.8 billion, increasing by NT\$0.2 billion or 1.57% over the previous year end.

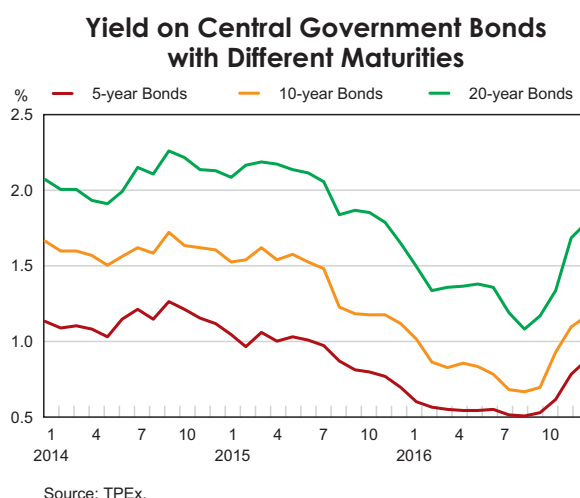
Substantial Increase in International Bond Issuance

International bonds refer to corporate bonds issued in Taiwan by foreign institutions and are currently denominated in foreign currencies. Issuance of international bonds in 2016 grew by NT\$518.0 billion or 45.87% from the previous year to NT\$1,524.6 billion. The increase was mostly driven by enhanced willingness for US dollar-denominated bond issuance stemming from market expectations of further rate hikes by the Fed since the beginning of the year.

With regard to currency composition, issuance of US dollar-denominated, RMB-denominated, AUD-denominated, NZD-denominated, and ZAR-denominated bonds in 2016 amounted to NT\$1,478.0 billion, NT\$39.9 billion, NT\$4.3 billion, NT\$1.3 billion, and NT\$1.0 billion, respectively. At the end of the year, the outstanding amount of international bonds was NT\$2,761.0 billion, an increase of NT\$1,257.7 billion or 83.65% over the previous year end.

Downtrend in Bond Yields and Decline in Transactions

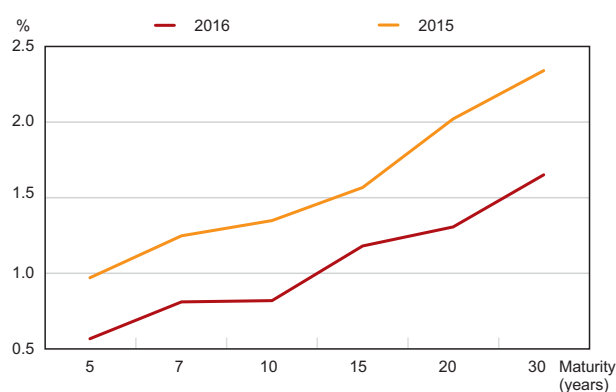
In 2016, sluggish domestic economic growth and the CBC's successive policy rate cuts in the first half of the year led the 10-year government bond yield to decline, which reached 0.630% on August 19. Subsequently, as funds flowed to the stock market from the bond market on the back of a domestic stock market rally, along with market expectations of the Fed lifting interest rates, the 10-year government bond yield trended upward and ended 2016 at 1.204%, 19 basis points higher than the 1.015% of the previous year end. The average yield on 10-year government bonds for the year was 0.818%, down by 53 basis points from 1.352% over the previous year.



Moreover, average yields on 5-year, 7-year, 10-year, 15-year, 20-year, and 30-year government bonds for the year 2016 slid by 40, 44, 53, 39, 72, and 70 basis points, respectively, compared to the previous year.

In terms of transaction volume, with market rates staying at relatively low levels in the second half of the year, as well as expectations of the Fed's rate increases, demand for bonds softened. Consequently, total bond transactions for 2016 contracted by NT\$907.8 billion or 1.34% from the previous year to NT\$66,817.9 billion.

Yield Curve of Central Government Bonds



Source: TPEx.

By type of bonds, government bonds accounted for 67.71% of total bond transactions with an annual trading volume of NT\$45,243.5 billion. Corporate bonds came in second, making up 25.74% of total transactions with an annual trading volume of NT\$17,202.0 billion. The third most actively traded were bank debentures, accounting for 3.56% of total transactions with an annual trading volume of NT\$2,376.9 billion. International bonds, foreign bonds, and asset securitization products made up marginal shares of 2.91%, 0.04%, and 0.03% in total transactions, with their respective annual trading reaching NT\$1,946.8 billion, NT\$29.4 billion, and NT\$34.7 billion.

Bond Transactions in the Taipei Exchange

Unit: NT\$ Billion

Year/ Month	Total	Outright Transactions		Repurchase Agreement Transactions	
		Amount	Share(%)	Amount	Share(%)
2014	68,032.4	14,706.0	21.6	53,326.4	78.4
2015	67,725.7	15,414.3	22.8	52,311.4	77.2
2016	66,817.9	14,573.7	21.8	52,244.3	78.2
2016/ 1	6,273.7	1,782.9	28.4	4,490.9	71.6
2	3,822.7	911.7	23.9	2,911.0	76.1
3	6,173.8	1,508.0	24.4	4,665.8	75.6
4	4,808.9	848.1	17.6	3,960.8	82.4
5	5,622.4	1,388.0	24.7	4,234.3	75.3
6	5,707.5	1,434.1	25.1	4,273.5	74.9
7	5,732.8	1,263.6	22.0	4,469.2	78.0
8	6,482.2	1,397.3	21.6	5,084.9	78.4
9	5,619.7	1,043.2	18.6	4,576.5	81.4
10	5,425.2	1,137.0	21.0	4,288.2	79.0
11	5,822.7	1,075.6	18.5	4,747.1	81.5
12	5,326.2	784.1	14.7	4,542.1	85.3

Source: TPEx.

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				
2014	68,032.4	49,776.5	14,296.9	753.9	2,483.3	89.5	33.2	599.2
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
2016/ 1	6,273.7	4,451.1	1,376.4	56.2	225.8	1.2	3.2	159.8
2	3,822.7	2,434.6	975.9	35.4	174.3	1.2	3.1	198.2
3	6,173.8	4,362.7	1,368.2	71.1	226.8	2.5	2.5	140.1
4	4,808.9	3,224.6	1,211.6	52.2	200.6	0.7	2.3	117.0
5	5,622.4	3,799.4	1,323.0	45.6	219.9	0.6	2.7	231.2
6	5,707.5	3,803.1	1,447.3	48.3	194.8	1.7	2.4	209.9
7	5,732.8	4,044.4	1,309.6	57.7	174.5	0.4	2.1	144.1
8	6,482.2	4,471.6	1,521.0	61.5	178.5	4.9	2.3	242.4
9	5,619.7	3,793.4	1,373.9	48.7	200.5	0.9	3.1	199.2
10	5,425.2	3,732.7	1,364.2	45.5	181.2	1.7	1.9	98.0
11	5,822.7	3,878.8	1,577.4	64.5	182.8	1.6	1.5	116.1
12	5,326.2	3,246.9	1,698.4	68.6	217.1	2.1	2.3	90.8

Source: TPEx.