# Financial Developments



# **II. Financial Developments**

# 1. Overview

In 2013, in view of global uncertainties, moderate domestic growth and mild inflationary pressures, the CBC maintained a moderately accommodative policy stance and kept the policy rates unchanged to ensure price and financial stability. Interest rates on deposits and loans also stayed at stable levels. The money market rate exhibited a downward trend owing to ample liquidity, whereas bond yields, affected by the anticipation of US Fed's decision to reduce the pace of its asset purchases (quantitative easing, or QE), exhibited an upward trend. Owing to a gradual recovery in the domestic economy, growth in loans and investments of monetary financial institutions picked up. This, combined with net foreign capital inflows, boosted the growth in M2. With respect to the exchange rate, the NT dollar against the US dollar depreciated, reflecting the influence of the Fed's asset purchase decision. In the stock market, supported by purchases by foreign investors and government measures, market indices swung higher.

#### **Growth in Monetary Aggregates Rose**

The annual growth rate of reserve money rose dramatically in 2013, mainly because stock market rallies induced by net foreign capital inflows boosted demand deposit growth. In addition, the uptrend in growth in currency issued also led to an increase in the growth rate of reserve money. The monetary aggregate M2, measured on a daily average basis, recorded a yearly growth rate of 4.78 percent in 2013, rising from 4.17 percent in 2012, and was still within the CBC's 2.5 percent to 6.5 percent target range for the year. The annual growth rate of M1B, measured on a daily average basis, accelerated to 7.27 percent in 2013 from 3.45 percent in 2012.

#### Average Growth in Bank Loans and Investments Increased

Compared with the end of 2012, the annual growth rate of loans and investments decreased from 5.69 percent to 4.59 percent at the end of 2013. The decrease was mainly because of an investment slowdown under banks' more conservative investment strategies to cope with the effect of Fed's decision to "taper off" its asset purchase program. On the other hand, growth in bank loans accelerated, mainly owing to individuals' growing demand for funds boosted by higher trading activities in the stock market and the real estate market. For the year as a whole, the average annual growth rate of loans and investments of monetary financial institutions increased from 5.08 percent in 2012 to 5.60 percent in 2013. If the loans and investments of life insurance companies, non-accrual loans reclassified, and bad loans written off by monetary financial institutions, as well

as funds raised directly from capital markets, were all taken into account, the total funds raised by the non-financial sector would register an annual growth rate of 4.78 percent at the end of 2013, higher than the 4.55 percent recorded at the end of the previous year.

## Non-performing Loan Ratio Continued to Improve

The asset quality of Taiwan's banks remained sound, mainly owing to their limited exposure to highly uncertain global financial markets. The overall non-performing loan ratio of monetary financial institutions decreased from 0.45 percent at the end of 2012 to 0.41 percent at the end of 2013. However, because the capital increases conducted by some banks in 2013 have not been fully reflected in their profits yet, the average return on equity was 10.04 percent, decreasing from 10.06 percent the year before. The average return on assets was 0.58 percent in 2013, the same level as that in 2012.

## Average Interest Rates on Deposits and Loans Decreased Modestly

The CBC, in view of greater uncertainty surrounding the global economy and mild domestic inflation, has kept policy rates unchanged in 2013 to maintain price and economic stability. As a result, domestic banks kept their posted interest rates on deposits and loans at a steady level throughout 2013. The average fixed rate on one-year time deposits of the five major domestic banks stayed at the same level as that at the end of 2012, while the weighted average rate on their new loans increased slightly because of an upswing in rates on loans for working capital. The weighted average interest rate on deposits decreased slightly, mainly because net foreign capital inflows caused an increase in the weight of demand deposits. The weighted average interest rate on loans also decreased slightly, mainly because the rate on long-term secured loans edged down.

#### Money Market Rates Decreased Slightly; Bond Yields Rose

The CBC has continued to manage market liquidity to maintain excess reserves of banks at an appropriate level. The interbank overnight call loan rate remained at a stable level in 2013. With regard to the bills market, easy funding conditions led the average rate to exhibit a downtrend, which in turn induced an increase in the issuance of commercial paper.

In 2013, the yield on the benchmark 10-year government bond, influenced by the anticipation that the Fed would reduce its asset purchases, recorded an uptrend. The rise in bond yields, likely to push up the funding cost of the national treasury, caused some government bond auctions to be cut off despite falling short of the issue targets. Therefore, the total amount of government bonds issued declined compared to the previous year. Corporate bond yields also exhibited an upward trend, denting corporate bond issues even for key issuers like Taiwan Power Company. The total issue amount of corporate bonds decreased as a result.

#### **Exchange Rate Depreciated**

At the beginning of 2013, the NT dollar against the US dollar appreciated on net foreign capital inflows. The interbank closing exchange rate reached a yearly high of 29.039 on January 11. Afterwards, the NT dollar softened because the market expected that Asian currencies might begin competitive devaluations after the yen weakened further as a result of the BOJ's monetary stimulus expansion. After mid-May, market concerns over possible US QE withdrawal caused the US dollar to appreciate, and thus the NT dollar reached 30.350 on June 24, the lowest rate of 2013. From mid-September, the US dollar turned to depreciate, owing to the US Fed's announcement to maintain its asset purchasing policy. The NT dollar started to appreciate and reached 29.425 on October 23, the highest rate in nine months. In mid-December, after the US Fed announced it would gradually reduce the size of its QE, the US dollar rebounded and the NT dollar depreciated again. At the end of 2013, the NT dollar depreciated against the US dollar by 2.72 percent compared to the end of the previous year. On an annual average basis, the NT dollar depreciated by 0.52 percent in 2013.

#### Stock Indices Edged Up

During the period from January to early March 2013, the domestic stock market's mainboard index, the TAIEX, gradually gained from its yearly low of 7,617 points on January 17, bolstered by the robust performance of international stock markets, as well as progress in cross-strait financial cooperation. Afterwards, the TAIEX took a dip because of heightened tension between North and South Korea and the outbreak of bird flu in China. From mid-April, as the US stock market continued to hit record highs, and the Ministry of Finance released a new version of tax regulations regarding capital gains on securities transactions, foreign investors crowded into the stock market and pushed up the TAIEX to 8,399 points on May 22. However, after the Fed's talk of QE tapering, the TAIEX fell again and reached 7,663 points on June 25. Then, as the Legislative Yuan passed the amended version of the capital gains tax, the US Fed announced that QE would continue, and the Financial Supervisory Commission adopted measures to revitalize the stock market, the TAIEX was boosted to hit its yearly high of 8,623 points on December 30. On a daily average basis, the TAIEX was 8,093 points in 2013, increasing by 8.2 percent from 7,481 points the previous year.

# 2. Monetary Aggregates

The CBC has selected the monetary aggregate M2 as the intermediate target since 1992. For the year 2013, M2 recorded an annual growth rate of 4.78 percent, higher than the previous year's 4.17 percent but still within the CBC's target range of 2.5 percent to 6.5 percent. Compared with GDP growth of 2.11 percent, the money growth indicated there was sufficient liquidity to support economic activity.

The narrow monetary aggregate M1B trended upwards and registered a growth rate of 7.27 percent for the year 2013, higher than the previous year's 3.45 percent. The growth in M1B was mainly attributable to the shift of money from non-transaction deposits to transaction deposits resulting from a rebounding stock market.

#### Steady Growth in Reserve Money

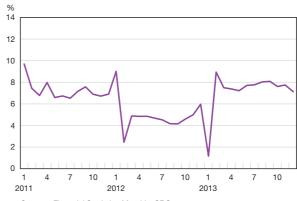
Reserve money growth was up for the year 2013, registering a growth rate of 7.18 percent, and was 2.27 percentage points higher than the previous year's figure. In terms of the monthly movements of reserve money, as the Chinese New Year holidays fell on different months in 2013 and 2012, the annual growth rates of reserve money for January and February were more volatile, yet they combined to average 5.03 percent. In subsequent months, the annual growth rates remained relatively stable and reached a yearly high of 8.09 percent in September and a yearly low of 7.13 percent in December.

On the demand side, currency held by the non-bank public grew slightly faster as the low interest rates paid on bank deposits encouraged the willingness to hold cash. Banks' demand for reserves also rose owing to the shift of money from non-transaction deposits to transaction deposits.

In addition, banks' excess reserves increased as the CBC adjusted its monetary policy operation and fund management in response to an unfavorable economic outlook.

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 and claims on financial institutions, while the decrease resulted largely from the increase in the issuance of certificates

## Annual Growth Rate of Reserve Money



Source: Financial Statistics Monthly, CBC.

of deposit (CDs).

#### Moderate Growth in M2

The monetary aggregate M2 is comprised of currency in circulation, deposits in banks' checking and passbook accounts, and quasimoney. The annual growth rate of M2 in 2013 was 4.78 percent, up 0.61 percentage points from the previous year and slightly higher than the median of the CBC's target range.

The monthly movements of the M2 annual growth rate in 2013 were all within the CBC's target range and generally exhibited an upward

## Annual Growth Rate and Target Range of M2



Source: Financial Statistics Monthly, CBC.

trend. In January, M2 growth fell to its all-year low of 2.99 percent because of a higher base effect resulting from the Chinese New Year holidays. The annual growth rate of M2 declined slightly in April as the Taiwan Insurance Guaranty Fund transferred a deposit to one life insurance company (which is not included in the monetary aggregates). In addition, net foreign capital outflows in August also brought down the pace of monthly M2 growth. For the other months, owing to continued growth in bank loans and investments, net foreign capital inflows and a lower base effect, the annual growth rate of M2 moved upward and recorded an all-year high of 6.05 percent in November.

#### Accelerated Growth in M1B

Despite moderate economic recovery, the stock market showed better performance than the

previous year on account of an upswing in US stocks, easing capital gains tax rules and measures aimed at stimulating stock trading volumes and activity. As a result, transaction deposits increased relative to non-transaction deposits. Coupled with a lower base effect, the average annual growth rate of M1B recorded 7.27 percent, and was 3.82 percentage points higher than the previous year's figure.

As for the monthly movements of M1B, the annual growth rate hit its yearly low of 3.97 percent in January. Later, a transaction deposit transferred by the Taiwan Insurance Guaranty

#### Annual Growth Rate of M1B



Source: Financial Statistics Monthly, CBC.

Fund to one life insurance company in April, and net foreign capital outflows in August, as well as a shift of funds from transaction deposits to foreign currency deposits in September, led the growth rate of M1B to decline slightly in these three months. However, for the remaining months, the M1B growth rate mainly trended upward and reached a yearly high of 8.85 percent in November.

# 3. Banking Sector

## **Number of Monetary Financial Institutions**

At the end of 2013, the number of monetary financial institutions (defined hereafter in this chapter as excluding the central bank) amounted to 399. Among them, the number of domestic banks increased by one with the opening of ANZ Bank (Taiwan). The number of foreign and Mainland Chinese banks increased by one as China Construction Bank set up its branch in Taiwan. The number of credit cooperatives remained the same, while the number of credit departments of farmers' and fishermen's associations increased by one owing to a re-opening.

## Number of Monetary Financial Institutions by Category

Types of institutions	End of 2013	End of 2012	Annual Change
Total Number of Main Offices	399	396	3
Domestic Banks	40	39	1
Credit and Mainland Chinese Banks	31	30	1
Credit Cooperatives	24	24	0
Credit Departments of Farmers' and Fishermen's Associations	303	302	1
Chunghwa Post	1	1	0
Total Number of Branches	6,102	6,077	25
Local Branches	5,927	5,905	22
Overseas Branches	112	110	2
Offshore Banking Units	63	62	1

Sources: 1. Financial Statistics Monthly, CBC.

The number of money market mutual funds and the number of financial holding companies remained at 1 and 16, respectively, with the former being a fund raised and managed by Yuanta Commercial Bank.

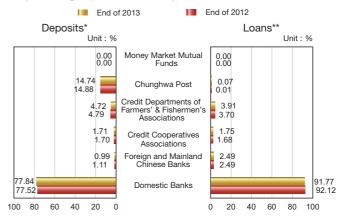
#### Market Shares of Deposits and Loans

In terms of market share of deposits, domestic banks accounted for 77.84 percent at the end of 2013, higher than the previous year, owing to their efforts to solicit renminbi (RMB) deposits following the commencement of RMB business in February of the year. As the RMB deposits flowed into domestic banks, foreign and Mainland Chinese banks, credit departments of farmers' and fishermen's associations, and the Chunghwa Post lost some of their market shares of deposits which slipped to 0.99 percent, 4.72 percent, and 14.74 percent, respectively. The market share of deposits for credit cooperatives slightly increased by 0.01 percentage points.

<sup>2.</sup> Department of Financial Inspection, CBC.

In terms of loans, the market share of domestic banks dropped to 91.77 percent for the year, owing to a greater amount of government repayment, while the share of foreign and Mainland Chinese banks remained at 2.49 percent. The Chunghwa Post's market share of loans edged up to 0.07 percent, reflecting an increase in lending to bills finance companies with its excess cash. As for credit departments of farmers' and fishermen's associations and credit cooperatives, their market shares in loans continued to climb, both attributable to their efforts to expand business.

# 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.

Source: Financial Statistics Monthly, CBC.

# Sources and Uses of Funds in Monetary Financial Institutions

At the end of 2013, the total amount of funds in monetary financial institutions was NT\$39,530 billion, increasing by NT\$2,321 billion compared to the end of 2012. Because of a significant increase in net foreign capital inflows, all the sources of funds except government deposits increased. However, as the stock market rebounded, it attracted a shift of funds from non-transaction deposits to transaction deposits. As a result, the share of non-transaction deposits shrank, while that of transaction deposits rose.

As the RMB deposits business commenced in February 2013, the outstanding balance of foreign currency deposits climbed. Therefore, foreign currency deposits took up a greater share in total non-transaction deposits, while the share of NT dollar deposits decreased, compared to the end of the previous year. Furthermore, the net worth of other items increased, mainly coming from banks' increasing profits and capital increase by cash.

Regarding the uses of funds, all items increased at the end of 2013 compared to the end of 2012. More specifically, a robust real estate market and improving foreign trade pushed up personal and corporate demand for capital, leading the outstanding balance of NT dollar loans to increase. On the other hand, affected by banks' aggressive expansions in overseas loans and the Chinese government's credit tightening, both the claims on banks' OBUs and foreign currency loans increased. They resulted in increasing shares of both net foreign assets and foreign currency loans compared to the end of 2012.

<sup>\*\*</sup> Including data for securities acquired under reverse repurchase agreements.

## Sources and Uses of Funds in Monetary Financial Institutions<sup>1</sup>

Unit: NT\$ Billion

	End c	of 2013	End o	f 2012	Annual	Change
	Amount	Share (%)	Amount	Share (%)	Amount	Share (%)
Sources:						
Transaction Deposits <sup>2</sup>	12,141	30.71	11,215	30.14	926	0.57
Non-transaction Deposits <sup>3</sup>	22,048	55.77	21,156	56.86	892	-1.09
NT Dollar Deposits	18,573	46.98	18,281	49.13	292	-2.15
Foreign Currency Deposits	3,475	8.79	2,875	7.73	600	1.06
Government Deposits	725	1.84	762	2.05	-37	-0.21
Borrowings from CBC	358	0.90	151	0.41	207	0.49
Other Items (Net)	4,258	10.78	3,925	10.54	333	0.24
Total	39,530	100.00	37,209	100.00	2,321	0.00
Uses:						
Net Foreign Assets <sup>4</sup>	2,310	5.84	1,481	3.98	829	1.86
Loans	22,413	56.70	21,650	58.19	763	-1.49
NT Dollar Loans	21,463	54.30	20,828	55.98	635	-1.68
Foreign Currency Loans <sup>4</sup>	950	2.40	822	2.21	127	0.19
Portfolio Investments <sup>5</sup>	4,316	10.92	3,898	10.48	418	0.44
Purchases of CDs Issued by CBC	6,725	17.01	6,514	17.51	211	-0.50
Deposits with CBC	3,767	9.53	3,666	9.84	101	-0.31

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.

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

5. Measured at original costs.

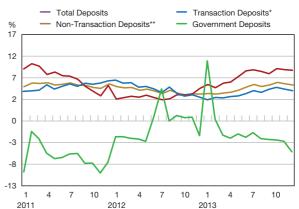
Source: Financial Statistics Monthly, CBC.

The share of portfolio investments rose at the end of 2013 compared to the end of 2012. However, affected by the US Fed's QE tapering in the second half of the year, each month's year-on-year growth rate increased at first and then decreased afterwards. Moreover, the shares of banks' purchases of CDs issued by the CBC and their deposits with the CBC decreased compared to the previous year's end as banks extended their businesses overseas.

#### **Uptrend in Deposit Growth**

At the end of 2013, total deposits of monetary financial institutions registered an annual growth rate of 5.38 percent, higher than last year's 3.15 percent. This was mainly attributable to a net

## **Annual Growth Rates of Deposits**



Notes: \* Including checking accounts, passbook deposits and passbook

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

Source: Financial Statistics Monthly, CBC.

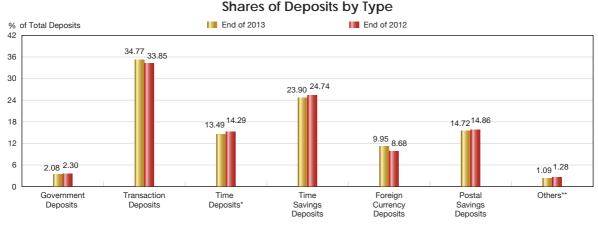
<sup>3.</sup> Including time deposits, time savings deposits, foreign currency deposits, postal savings deposits, non-residents' NT dollar deposits, repurchase agreements and money market mutual funds.

inflow of foreign capital, as well as modest growth in bank loans and investments.

As net foreign capital inflows continued, the annual growth rate of deposits exhibited an upward trend from January to May, except for February when a stronger demand for currency during the Chinese New Year holidays turned the deposit growth slightly down to 3.26 percent. In June, despite the Fed's hint of QE tapering which caused a net outflow of foreign capital, the annual growth rate of deposits stood at 4.87 percent, mostly contributed to by significant redemption of residents' investments in foreign financial products. Then, the annual growth rate of deposits fluctuated along with the movement of foreign capital until October, when the growth rate touched a yearly high of 5.94 percent as a result of a rebound in the stock market. Deposit growth slowed in November because of a decrease in net foreign capital inflows compared to the same period of last year. With a deceleration in the growth of bank loans and investments, the annual growth rate of deposits went further down to 5.38 percent at the end of the year.

Owing to a gradual rebound in the stock market and a net foreign capital inflow for the year, transaction deposits posted an annual growth rate of 8.26 percent at the end of the year, higher than the previous year's 4.59 percent, leading its share in total deposits to rise to 34.77 percent. Meanwhile, given a moderate economic recovery, the annual growth rate of non-transaction deposits also increased from 2.59 percent to 4.22 percent at year end. Its share in total deposits, however, declined to 63.15 percent because of a larger increase in transaction deposits associated with equity investment.

By type of non-transaction deposits, the share of foreign currency deposits rose at year end owing to banks' solicitation of RMB deposits, while the shares of other types of non-transaction deposits declined.



Notes: \* Including NCDs.

\*\* Including repurchase agreements, nonresidents' NTD deposits and money market mutual funds.

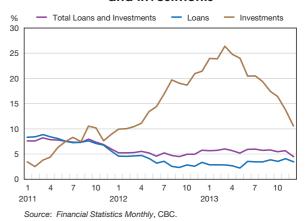
Source: Financial Statistics Monthly, CBC.

Considering a greater repayment of government bonds and increased efficiency of government funds management, which lowered government deposits with monetary financial institutions, the annual growth rate of government deposits dropped from -1.81 percent to -4.79 percent, while its share in total deposits slid to 2.08 percent at the end of the year.

#### Growth in Bank Loans and Investments

The annual growth rate of loans and investments of monetary financial institutions was 4.59 percent at the end of 2013, decreasing from 5.69 percent at the end of 2012. Growth

# Annual Growth Rates of Loans and Investments



in loans accelerated to 3.48 percent at the end of 2013 from 3.29 percent at the end of the previous year, mainly owing to a greater demand from individuals boosted by active trading in the stock market and the real estate market. In contrast, growth in portfolio investment decelerated dramatically to 10.71 percent at the end of 2013 from 21.37 percent at the end of the previous year, mainly owing to the more conservative investment strategies of banks in response to the US Fed's decision to gradually reduce the pace of its asset purchases. Growth in banks' investments in all types of instruments exhibited a downward trend.

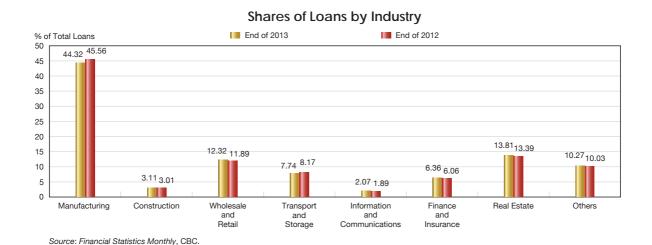
#### Loans by Sector

The annual growth rate of loans extended to the private sector rose to 4.11 percent at the end of 2013 from 3.57 percent at the end of 2012. The upturn was mainly due to an increasing demand from individuals. The annual growth rate of loans to public enterprises increased to 1.51 percent at the end of 2013 from -15.85 percent, mainly because the Taiwan Power Company turned to raise funds via borrowing instead of financing via bond issuance at unfavorably high rates. Meanwhile, the annual growth rate of loans to government agencies decreased to -9.25 percent from 3.95 percent, mainly because the national treasury received the fees from the 4G mobile-phone service license auction amounting to NT\$118.7 billion. Loans extended to the private sector accounted for 89.72 percent of total loans, higher than the 88.74 percent recorded at the end of 2012. Loans extended to government agencies and public enterprises accounted for 6.92 percent and 3.36 percent, respectively, both lower than those recorded at the end of the previous year.

#### Loans by Industry

With regard to loans broken down by industry sector, the manufacturing sector continued to

account for the largest portion of bank loans, at 44.32 percent at the end of 2013, decreasing from 45.56 percent at the end of the previous year. The decrease was mainly due to the effect of a higher base in loans extended to chemical material manufacturers at the end of the previous year. Influenced by a robust real estate market, the share of loans extended to the construction industry exhibited an uptrend as the number of new construction projects in progress soared. The respective shares of loans extended to the wholesale and retail industry, the information and communications industry, the finance and insurance industry, and the real estate industry also increased at the end of 2013.



#### **Consumer Loans**

The annual growth rate of consumer loans extended by banks increased from 0.94 percent at the end of 2012 to 2.36 percent at the end of 2013. Among them, housing loans rose from 2.77 percent to 4.18 percent, mainly owing to an increase in the number of house transactions. As for the shares of various consumer loans, housing loans remained the largest component, rising from 79.20 percent at the end of 2012 to 80.60 percent at the end of 2013. Car loans accounted for 1.49 percent, increasing from 1.24 percent, whereas housing repair loans and revolving credit for credit cards accounted for 4.25 percent and 1.68 percent, respectively, decreasing from the end of the previous year.

#### **Investments**

Portfolio investments by monetary financial institutions, measured on a cost basis, showed slow growth with an annual increase of 10.71 percent in 2013, mainly owing to banks' more conservative investment strategies in response to the Fed's QE tapering.

Among the investment instruments, government bonds accounted for the largest share with 57.88 percent, lower than the 59.30 percent a year ago, mainly because the government decreased its bond issuance for the purpose of lowering interest payments in view of rising long-term interest rates. Meanwhile, banks turned to purchase corporate bonds and commercial paper instead. The corporate bonds and commercial paper accounted for shares of 13.87 and 14.82 percent at the end of 2013, respectively, increasing from the end of the previous year.

When measured at fair value, the annual increase of portfolio investments by monetary financial institutions was NT\$434.0 billion, higher than that measured on a cost basis of NT\$417.6 billion.

#### Indirect Finance and Direct Finance

Financing channels of the non-financial sector comprise direct finance and indirect finance, referring respectively to issuing securities in the markets and borrowing from financial institutions. The total amount of funds raised by the non-financial sector during the year 2013 increased from the previous year's NT\$1,707.1 billion to NT\$1,873.1 billion. Funds raised by issuing securities increased by NT\$62.5 billion, mainly boosted by increased stock issuance by some financial holding companies. Meanwhile, funds raised through borrowing from financial institutions also increased by NT\$120.5 billion, which was mainly due to growth in bank loans.

Based on the outstanding balance, the share of indirect finance in total funds raised increased from 78.90 percent at the end of 2012 to 79.35 percent, while the share of direct finance decreased from 21.10 percent to 20.65 percent.

## Indirect Finance vs. Direct Finance\*

Unit: NT\$ Billion

		Indirect Finance (1)		Direct Finance	Total Funds Raised
Year	Loans	Investments	Subtotal	(2)	(3)=(1)+(2)
2004	1,569.7	246.2	1,815.9	313.4	2,129.3
2005	1,458.5	321.7	1,780.2	181.5	1,961.7
2006	820.6	537.1	1,357.7	-151.3	1,206.4
2007	737.0	228.6	965.6	82.7	1,048.3
2008	649.2	563.0	1,212.2	-316.1	896.1
2009	133.0	259.3	392.3	142.8	535.1
2010	1,242.6	433.8	1,676.4	165.5	1,841.9
2011	1,141.4	642.5	1,783.9	19.0	1,802.9
2012	809.4	880.7	1,690.1	17.0	1,707.1
2013	1,007.2	803.4	1,810.6	62.5	1,873.1

Notes: \* Measured in terms of flow data.

Source: Financial Statistics Monthly, CBC

<sup>(1)</sup> 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.

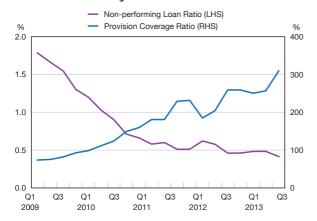
<sup>(2)</sup> Refers to the total amount of new issues of various marketable securities, including government bonds, corporate bonds, listed stocks, offshore bonds, depository receipts, short-term bills and asset-backed securities held by the non-financial sector.

#### Decline in the Non-performing Loan (NPL) Ratio

Owing to the improved asset quality, the average NPL ratio of monetary financial institutions as a whole declined to 0.41 percent at the end of 2013 from the previous year's 0.45 percent. Among the different types of financial institutions, community financial institutions continued to show the biggest improvement of the average NPL ratio during the course of the year.

In addition, as banks reacted to the government's call for setting aside more loan loss provisions, the average provision coverage ratio of monetary financial institutions increased to 306.09 percent at the end of 2013 from 257.22 percent the previous year.

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

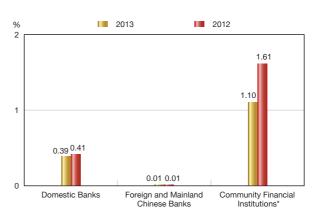


Note: \* Include domestic banks, foreign and Mainland Chinese banks, credit cooperatives, credit departments of farmers' and fishermen's associations

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: \* Include credit cooperatives and credit departments of farmers' and

Source: Department of Financial Inspection, CBC.

#### **Bank Interest Rates Unchanged**

Throughout 2013, the domestic economy experienced a moderate recovery and inflationary pressures subdued. However, global uncertainties led 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 0.88 percent and 1.36 percent at the end of 2013.

Stock market trading activity became more vigorous during the first half of the year and induced a shift of funds from non-transaction deposits to transaction deposits. The weighted average interest rate on total deposits of domestic banks was 0.80 percent in 2013, which was 0.02 percentage points lower than that recorded in the previous year.

# 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

Regarding the loan rate, the average base lending rate remained at 2.88 percent at the end of 2013. As banks' rates on current operations loans climbed in 2013, the weighted average interest rate on new loans of the five major domestic banks edged up from 1.62 percent in 2012 to 1.70 percent in 2013, up by 8 basis points. Excluding central government loans, the weighted average interest rate on new loans increased from 1.68 percent in 2012 to 1.75 percent in 2013, up by 7 basis points.

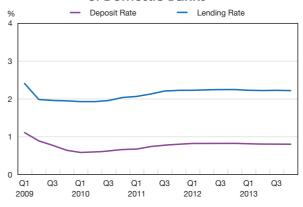
# Average Lending Rates of the Five Major Domestic Banks



Note: \* Including house-purchasing loans, capital expenditure loans, current operations loans and consumer loans.

Source: Financial Statistics Monthly, CBC.

# Weighted Average Interest Rates of Domestic Banks



Source: Financial Statistics Monthly, CBC.

# During the first half of the year, the weighted

average interest rate on total loans of domestic banks moved downward from 2.25 percent in the fourth quarter of 2012 to 2.22 percent in the second quarter of 2013. In the third quarter, owing to an increase in the interest rates of loans for land and construction, the weighted average interest rate moved slightly upward to 2.23 percent. Nevertheless, as some banks lowered their rates on long-term secured loans, the weighted average interest rate on loans declined back to 2.22 percent in the fourth quarter. For the year as a whole, the weighted average interest rate on loans of domestic banks was 2.23 percent, which was 0.01 percentage points lower than that recorded in the previous year.

## **Profits of Monetary Financial Institutions**

Unit: NT\$ Billion

	ı	Pre-tax Pro	ofits	Retur	n on Ass	ets (%)*	Retur	n on Equ	ity (%)**		
	2013	2012	Annual Change	2013	2012	Annual Change	2013	2012	Annual Change		
Domestic Banks	258.2	240.7	17.5	0.65	0.65	0.00	9.82	9.87	-0.05		
Foreign and Mainland Chinese Banks	16.3	13.2	3.1	0.46	0.55	-0.09	22.05	20.01	2.04		
Credit Cooperatives	3.5	2.3	1.2	0.55	0.38	0.17	8.09	5.83	2.26		
Credit Departments of Farmers' and Fishermen's Associations	4.9	4.9	0.0	0.27	0.28	-0.01	4.48	4.70	-0.22		
Chunghwa Post	13.7	13.4	0.3	0.25	0.26	-0.01	13.85	16.76	-2.91		
Total	296.6	274.5	22.1	0.58	0.58	0.00	10.04	10.06	-0.02		

Notes: \* Return on Assets = Pre-tax Profits / Total Assets
\*\* Return on Equity = Pre-tax Profits / Net Worth
Source: Department of Financial Inspection, CBC.

Because the decrease in the deposit rate was more than in the lending rate, the interest rate spread between deposits and loans of domestic banks widened to 1.43 percentage points, slightly higher than the 1.42 percentage points recorded in the previous year.

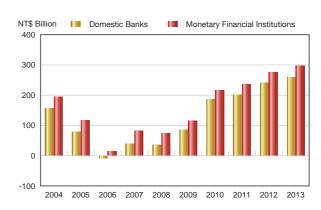
#### Improved Profitability

Supported by a moderate economic recovery, the pre-tax profits<sup>1</sup> of monetary financial institutions increased by NT\$22.1 billion to a historical high of NT\$296.6 billion in 2013. Those of domestic banks increased by NT\$17.5 billion to NT\$258.2 billion, mainly owing to increases in net interest revenues and the fair value of banks' financial assets. The pre-tax profit of Chunghwa Post increased by NT\$0.3 billion to NT\$13.7 billion because its exchange transactions registered large revenues instead of losses as in the previous year.

#### **ROA Flat While ROE Lower**

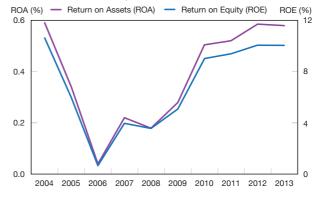
The average return on assets (ROA) of monetary financial institutions in 2013 was 0.58 percent, the same as that of the previous year,

#### **Pre-tax Profits**



Source: Department of Financial Inspection, CBC.

# ROA and ROE of Monetary Financial Institutions



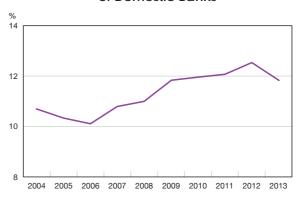
Source: Department of Financial Inspection, CBC.

<sup>&</sup>lt;sup>1</sup> Local banks and Chunghwa Post have adopted International Financial Reporting Standards (IFRS) since the year of 2013.

while their return on equity (ROE) went down to 10.04 percent from 10.06 percent a year earlier, resulting from faster growth in net worth than in pre-tax profits as a result of some banks' cash capital increases. Among monetary financial institutions, domestic banks were the best performers in terms of ROA, and foreign and Mainland Chinese banks performed the best in terms of ROE.

With regard to capital adequacy ratios, the average ratio for domestic banks decreased to 11.83 percent at the end of the year from

# Capital Adequacy Ratio of Domestic Banks



Source: Department of Financial Inspection, CBC.

12.54 percent at the previous year end. The main reasons behind the decrease were the adoption of Basel III standards and IFRS beginning 2013. Basel III standards introduced a new formula approach to capital calculation and an expanded scope of risk-weighted assets, which resulted in a significant increase in the credit risk-weighted assets. Meanwhile, with the adoption of IFRS, banks had to allocate liability reserves for retired employees' preferred deposits, which further impacted the capital adequacy ratio.

# 4. Money Market

Due to a slack recovery of the economy, the demand for funds in the private sector was not strong. The interbank overnight call loan rate remained broadly stable at a low level. As a result, total turnover in both the interbank call loan market and short-term bills market increased for the year.

#### Increase in Interbank Call Loans

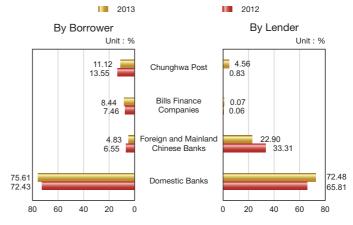
In 2013, total annual turnover of interbank call loans amounted to NT\$39,843.1 billion, showing an increase of 14.24 percent when compared with the previous year. This was mainly because of stronger demand for funds by banks, in response to their uneven fund allocation, and by bills finance companies, to fund increased short-term bills trading at lower rates. The outstanding amount of interbank call loans amounted to NT\$380.7 billion in December 2013, recording a substantial increase of 53.34 percent from the previous year end.

With regard to borrowers, domestic banks were still the largest player during the year, accounting for 75.61 percent of total transactions, followed by the Chunghwa Post, bills finance companies, and foreign and Mainland Chinese banks, with shares of 11.12 percent, 8.44 percent and 4.83 percent, respectively. The amount borrowed by domestic banks increased by NT\$4,862.5 billion or 19.25 percent compared with the previous year because the interbank overnight rates remained broadly stable at a low level. The amount borrowed by bills finance companies increased by NT\$759.4 billion or 29.17 percent during the year because of their stronger demand for funds, which was associated with the transactions in short-term bills. However, the borrowed amount of the

Chunghwa Post and foreign and Mainland Chinese banks decreased by NT\$295.0 billion or 6.24 percent and NT\$360.0 billion or 15.76 percent, respectively.

With respect to lenders, domestic banks continued to be the largest supplier of funds, accounting for 72.48 percent of total transactions in 2013. Those with smaller proportions were foreign and Mainland Chinese banks, the Chunghwa Post and bills finance companies, with respective shares of 22.90 percent, 4.56 percent and 0.07 percent. The amount lent by domestic

# Composition of Interbank Call Loan Market by Participant



Source: Financial Statistics Monthly, CBC.

banks increased by NT\$5,925.7 billion or 25.82 percent compared with the previous year as domestic banks had stable sources of deposits and could provide sufficient funds for lending. Meanwhile, the Chunghwa Post supplied more funds to the interbank call loan market because of statutory restrictions on its lending business. As a result, the amount lent by the Chunghwa Post increased by NT\$1,528.8 billion or 630.03 percent compared with the previous year. In contrast, owing to the transfer of business from the Taipei Branch of ANZ Bank to the newly launched ANZ Bank (Taiwan), the amount lent by foreign and Mainland Chinese banks decreased by NT\$2,492.9 billion or 21.46 percent, with the share declining from 33.31 percent in the previous year to 22.90 percent.

In terms of maturity, interbank overnight call loans remained the most actively traded instrument in the market with a predominant share of 64.07 percent, down by 2.87 percentage points from that of the previous year. Second were those with a maturity of 1 week, accounting for 29.24 percent, down by 0.12 percentage points from that of the previous year. However, the share of loans with a 2-week maturity rose to 5.40 percent from 2.97 percent in the previous year because the interbank overnight call loan rate remained broadly stable. Shares for the trading of interbank call loans with maturities of 3 weeks, 1 month, 2-6 months, and above 6 months were negligible.

#### Increased Transactions in Short-Term Bills

In 2013, newly issued short-term bills totaled NT\$9,809.0 billion. Of the new issues, commercial paper continued to account for the lion's share of 90.0 percent. Second were negotiable certificates of deposit with a share of 6.45 percent, followed by treasury bills with a share of 3.31 percent. Bankers' acceptances made up a marginal share of 0.24 percent. Because market interest rates remained at low levels, private and government enterprises were more willing to issue commercial

## **Short-Term Bills Market**

Unit: NT\$ Billion

Year	Year-end	otal	Treasu	ury Bills	Commercial Paper			nkers' otances	Negotiable Certificates of Deposit		
	Issues	Year-end Outstanding	Issues	Year-end Outstanding	Issues	Year-end Outstanding	Issues	Year-end Outstanding	Issues	Year-end Outstanding	
2004	6,888.8	1,316.5	130.9	130.9	5,642.7	775.6	35.2	7.6	1,080.0	402.4	
2005	7,121.0	1,168.1	115.0	45.0	5,690.4	747.0	31.1	7.7	1,284.5	368.5	
2006	7,004.0	1,092.4	45.0	25.0	5,879.8	717.6	36.1	8.1	1,043.1	341.7	
2007	6,495.1	925.3	88.0	28.0	5,577.2	664.8	38.2	8.4	791.7	224.0	
2008	6,948.6	969.8	240.0	106.8	6,074.7	690.2	33.3	4.9	600.6	167.8	
2009	6,293.4	1,043.1	435.0	215.0	5,397.7	651.3	21.9	4.9	438.8	171.9	
2010	7,140.8	1,167.5	365.0	240.0	5,903.4	686.1	33.1	6.2	839.3	235.2	
2011	7,424.0	1,192.6	321.2	180.3	6,270.5	735.2	30.1	5.7	802.2	271.5	
2012	8,187.7	1,454.0	265.0	195.0	7,311.6	1,023.6	24.2	4.3	586.9	231.1	
2013	9,809.0	1,650.2	324.6	214.6	8,827.4	1,199.2	23.5	4.2	633.5	232.3	
2012-2013 Change	1,621.3	196.2	59.6	19.6	1,515.8	175.6	-0.7	-0.1	46.6	1.2	
Growth Rate (%)	19.8	13.5	22.5	10.0	20.7	17.2	-3.1	-2.0	8.0	0.5	

Source: Financial Statistics Monthly, CBC.

paper instead of borrowing from banks. As a result, compared with the previous year, the amount of commercial paper issued increased by NT\$1,515.8 billion. As of the end of 2013, total outstanding short-term bills amounted to NT\$1,650.2 billion, 13.50 percent more than that of the previous year end.

The total turnover of short-term bills in 2013 decreased by 5.52 percent to NT\$36,554.5 billion. Of the total transactions, commercial paper still made up the largest share of 92.29 percent, representing an increase of 0.66 percentage points compared with the previous year. It was followed by negotiable certificates of deposit with a share of 5.30 percent, representing an increase of 1.04 percentage points over 2012. Treasury bills and bankers' acceptances made up a negligible share of transactions. With respect to market participants, private enterprises were the largest player in the market with a share of 47.54 percent, followed by banks with a share of 23.70 percent.

#### **Stable Money Market Rates**

In 2013, export growth continued to be dampened by weak external demand, and private consumption also showed lackluster growth. The CBC has continued to manage market liquidity

to maintain excess reserves of banks at an appropriate level. The interbank overnight call loan rate remained broadly stable between 0.386 and 0.387 percent each month. It averaged 0.386 percent for the whole year, slightly lower than the 0.428 percent registered in the previous year.

The primary market rate on commercial paper with maturities of 1-30 days moved downward from 0.82 percent in January of 2013 to 0.74 percent in December of the same year. The secondary market rate on commercial paper with maturities of 1-30 days also

# Money Market Interest Rates Interbank overnight call loan rate Primary market rate on 1-30 day commercial paper Secondray market rate on 1-30 day commercial paper 1.0 0.8 0.6 0.4 0.2 0.0 1 4 7 10 1 4 7 10 1 4 7 10 1 4 7 10 2011 2011 Source: Financial Statistics Monthly, CBC.

descended slightly from 0.73 percent to 0.61 percent during the same period.

#### Increase in Money Market Funds

At the end of 2013, there were a total of 47 money market funds in Taiwan with total assets reaching NT\$815.0 billion, an increase of NT\$101.8 billion or 14.27 percent over the previous year. With regard to portfolio composition, the largest use of the funds was bank deposits with a share of 72.64 percent at the end of the year, followed by short-term bills with a share of 13.78 percent, up by 5.28 percentage points over the previous year. This was primarily because the profits from short-term bill transactions increased owing to the decline in short-term bill rates. Meanwhile,

repurchase agreements accounted for 13.54 percent of total money market funds, down from 17.24 percent in the previous year. However, the bond holding ratio of all money market funds was negligible.

# Portfolio Composition of Money Market Funds

Unit: %; NT\$ Billion

Year/Month	Total	Bank D	eposits	Repurchase	Agreements	Short-Te	erm Bills	Bor	nds
End	ioidi	Amount	Share	Amount	Share	Amount	Share	Amount	Share
2011	755.7	501.8	66.41	155.0	20.51	92.2	12.20	6.7	0.89
2012	713.2	527.7	73.98	123.0	17.24	60.6	8.50	1.9	0.27
2013	815.0	592.0	72.64	110.4	13.54	112.3	13.78	0.3	0.04
2013 / 1	768.3	549.8	71.55	156.4	20.36	60.1	7.82	2.0	0.26
2	785.7	559.8	71.24	160.8	20.46	63.4	8.07	1.8	0.23
3	743.0	563.6	75.85	122.7	16.51	55.0	7.40	1.7	0.23
4	810.8	577.1	71.18	145.8	17.98	86.2	10.63	1.7	0.20
5	821.8	594.8	72.37	131.1	15.95	94.6	11.51	1.4	0.16
6	829.8	591.1	71.23	142.3	17.14	95.2	11.47	1.3	0.15
7	850.3	613.8	72.18	130.9	15.40	105.1	12.34	0.5	0.05
8	869.1	612.1	70.42	135.0	15.53	121.5	13.98	0.6	0.07
9	784.2	592.9	75.61	102.9	13.12	87.8	11.20	0.6	0.07
10	823.0	605.2	73.54	119.3	14.49	98.0	11.91	0.5	0.05
11	833.9	588.5	70.57	118.9	14.26	126.2	15.13	0.3	0.04
12	815.0	592.0	72.64	110.4	13.54	112.3	13.78	0.3	0.04

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

# 5. Foreign Exchange Market

## Appreciation of the NT Dollar

In 2013, the NT dollar depreciated against most major international currencies, but significantly appreciated against the yen. As a result, the trade-weighted nominal effective exchange rate index of the NT dollar, on a daily average basis, increased by 2.79 percent. The exchange rate movements of the NT dollar against the US dollar, the euro, the Japanese yen, the renminbi (RMB), and the Korean won are analyzed as follows.

Early in the year, as the US Fed continued with its quantitative easing monetary policy, international capital flowed into emerging market economies in Asia, leading the NT dollar to appreciate, and the NT\$/US\$ exchange rate soared to a yearly high of 29.039 on January 11. Hereafter, international investors expected Asian currencies to weaken in response to the Bank of Japan's aggressive monetary stimulus, dragging the NT dollar down to 30.060 on April 8. In mid-May, US labor market conditions improved and the increased possibility that the Fed may start tapering its stimulus package weakened the NT\$/US\$ exchange rate to a yearly low of 30.350 on June 24. After the Fed announced in September to maintain the pace of its bond-buying program, coupled with an unclear US economic outlook, the NT dollar rebounded to a nine-month high of 29.425 on October 23. In December, the NT dollar weakened as the market reacted to the Fed's decision to scale back its bond-buying program from US\$85 billion to US\$75 billion per month, effective in January 2014. Compared with the end of 2012, the NT dollar depreciated by 2.72 percent against the US dollar at the end of 2013. On a daily average basis, the NT\$/US\$ exchange rate depreciated by 0.52 percent in 2013.

As the euro depreciation continued into 2013, the NT dollar against the euro strengthened to a yearly high of 37.884 on January 4. Soon after the success of Spanish and Italian government bond auctions, low bond yields pushed the euro up, and the NT dollar went down. In February, the

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

	NTD/USD	NTD/EUR	NTD/JPY	NTD/CNY	NTD/KRW
Exchange Rate (2013/12/31)	29.950	41.288	0.2853	4.9472	0.0284
Exchange Rate (2012/12/28)	29.136	38.610	0.3375	4.6741	0.0272
Percentage Change	-2.72%	-6.49%	18.31%	-5.52%	-4.10%
Average Exchange Rate (2013)	29.770	39.527	0.3050	4.8049	0.0272
Average Exchange Rate (2012)	29.614	38.050	0.3711	4.6914	0.0263
Percentage Change	-0.52%	-3.74%	21.67%	-2.36%	-3.32%

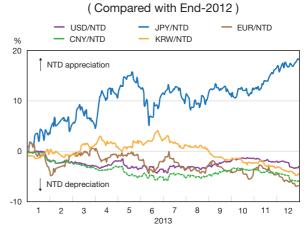
Source: Department of Economic Research, CBC.

European Union (EU) revised down the euro area's economic growth forecast, international investors worried about a relapse of the European debt crisis, dragging the euro down, and the NT dollar rebounded. Afterwards, while the EU extended the maturities of Portugal's and Ireland's loans and agreed to bail out Cyprus with the International Monetary Fund, the NT\$/€ exchange rate fluctuated between 38.277 and 40.253 from March to June. Thereafter, as economic indicators for the euro area improved more than expected, the euro was able to hold its strength, despite renewed tension in the Middle East in September and the effect of the European Central Bank's rate-cut in November. As a result, the NT\$/€ exchange rate edged down to a yearly low of 41.328 on December 27. Compared to the end of the previous year, the NT dollar depreciated against the euro by 6.49 percent. On a daily average basis, the NT dollar depreciated against the euro by 3.74 percent.

The NT dollar appreciated against the yen for the most part of the year. At the beginning of this year, the Bank of Japan (BOJ) announced a massive expansionary monetary policy package in order to resolve its chronic economic stagnation and deflation; in turn, the NT\$/¥ exchange rate soared from a yearly low of 0.334 on January 2 all the way to a period high of 0.291 on May 21. Afterwards, because the BOJ neither released new monetary stimulus measures nor boosted government bond purchases, the yen bounced back, and the NT\$/¥ exchange rate depreciated to 0.320 on June 13. From July onwards, owing to an upturn in Japan's economy, the NT\$/¥ exchange rate hovered between 0.297 and 0.311. On October 1, Japan's Prime Minister Shinzo Abe announced that the consumption tax rate would increase from April 1, 2014, leading the market to expect another BOJ policy expansion to alleviate possible backlash; consequently, the NT dollar rallied, and the NT\$/¥ exchange rate reached a yearly high of 0.285 on December 30. Between end-2012 and end-2013, the NT dollar appreciated by 18.31 percent against the yen. On a daily average basis, the NT\$/¥ exchange rate strengthened by 21.67 percent.

During 2013, the fact that Mainland China's exports and economy grew at a moderate pace, coupled with spillover effects of quantitative easing in major developed countries that induced massive foreign capital inflows, led the RMB up from a yearly low of 6.244 against the US dollar on February 19 to a period high of 6.113 on August 15, following which it fluctuated in a narrow band. In October, owing to Mainland China's widened trade surplus, the RMB further appreciated to an annual high of 6.054 against the US dollar on December 31.

# Percentage Changes of NTD Exchange Rate Against Major Currencies



The NT dollar against the RMB depreciated by 5.52 percent between end-2012 and end-2013. On a daily average basis, the NT dollar depreciated by 2.36 percent against the RMB when compared with the previous year.

In 2013, the NT dollar strengthened against the Korean won in the early half of the year, but dropped toward the year end. At first, in the context of rising tensions on the Korean Peninsula in March and April, the slowdown of South Korea's export growth in May, and a rate cut by the Bank of Korea, the NT dollar soared to a yearly high of 0.026 against the won on June 25. Thereafter, as the tremendous current account surplus and strong fiscal health of South Korea attracted foreign capital inflows, the won surged along with Korean stock indices, and the NT dollar fell to a yearly low of 0.285 against the won on December 28. Compared with the end of 2012, the NT dollar depreciated by 4.10 percent against the won at the end of 2013. On a daily average basis, the NT dollar also depreciated by 3.32 percent against the won in 2013.

## Flourishing Foreign Exchange Market

Trading in the Taipei foreign exchange market expanded in 2013. Total net trading volume for the year reached US\$7,174.1 billion, representing a growth rate of 21.7 percent. The daily average turnover was US\$28.9 billion. The increase in turnover reflects not only Taiwan's sustained growth in external trade but also the rise of hedging demands due to a greater volatility in major foreign currencies.

In terms of trading partners, transactions between banks and non-bank customers accounted for 24.8 percent of the total turnover, while interbank transactions made up 75.2 percent, including 23.7 percent for transactions among local banks and 51.5 percent for those between local banks and overseas banks.

As far as traded currencies were concerned, NT dollar trading against foreign currencies accounted for 41.1 percent of the total trading volume, of which trading against the US dollar (USD)

## 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
2009	1,841,951	283,233	1,627,020	20,809	311,353	26,927	4,111,293
2010	2,192,719	290,075	2,166,897	18,295	423,261	23,848	5,115,095
2011	2,570,319	415,459	2,454,626	19,016	529,351	24,587	6,013,357
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
2012-2013 Growth Rate (%)	19.2	-8.3	16.9	11.9	70.8	6.4	21.7

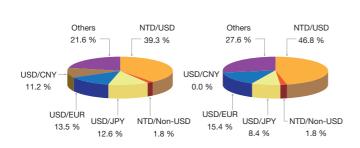
Source: Department of Foreign Exchange, CBC.

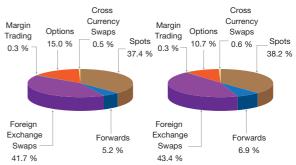
## Composition of Foreign Exchange Transactions by Traded Currency

## Composition of Foreign Exchange Transactions by Product









Source: Department of Foreign Exchange, CBC.

Source: Department of Foreign Exchange, CBC

made up a dominant 39.3 percent. Transactions in third currencies contributed to 58.9 percent of the total trading volume, with trading in currency pairs of USD-euro, USD-yen and USD-RMB accounting for respective shares of 13.5 percent, 12.6 percent and 11.2 percent. Compared with 2012, NT dollar trading against foreign currencies slightly increased by 3.0 percent, and transactions in third currencies tremendously increased by 39.5 percent. The main reasons for the latter increase were domestic banking units (DBUs) began to offer RMB business in February 2013 after the cross-strait currency clearing mechanism was established, and the US and Japan's expansionary monetary policies changed pace relative to the other, leading the US dollar-yen turnover to increase.

With respect to types of transactions, the major types were foreign exchange swaps and spots, accounting for 41.7 percent and 37.4 percent of total turnover. Compared with 2012, except for a decrease in forwards, the trading volume in the total turnover of all the other types of transactions increased.

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

Unit: US\$ Million

	Of III. 000 William												
		Interest R	ate-Related	Products		Commodity- Related Products	Stock	Credit					
Year	Rate Rate Rate Agreements Swaps Options		Rate Options	Foreign Currency Interest Rate Futures	Subtotal	Commodity Options	Index Options	Derivatives	Total				
2009	5,715	469,003	4,999	208,566	688,283	18,360	51	3,312	710,006				
2010	842	125,541	6,043	392,368	524,794	18,060	105	10,126	553,085				
2011	902	76,153	3,569	254,703	335,327	22,728	421	5,204	363,681				
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				
2012-2013 Growth Rate (%)	-51.1	-28.6	-29.6	-18.7	-21.7	-64.5	84.2	-32.4	-24.4				

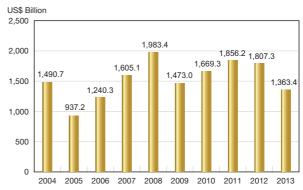
Source: Department of Foreign Exchange, CBC.

In 2013, the total turnover of forwards, swaps, and options based on foreign currency interest rates, stock price indices, commodity prices, and credit derivatives amounted to US\$165.0 billion. Of this amount, interest rate-related derivatives accounted for the lion's share with US\$156.2 billion, or 94.7 percent, with a negative annual growth rate of 21.7 percent. Interest rate futures accounted for the majority of this decline, with a decrease of US\$26.7 billion. The main reason was that most countries maintained a low interest rate environment, causing investor enthusiasm to cool on account of the contracted volatility of market interest rates.

#### Shrunken Trading in Foreign Currency Call Loan Market

The transaction volume in the foreign currency call loan market in 2013 was US\$1,363.4 billion, a decline of 24.6 percent over the previous year. Of this amount, US dollar transactions accounted for a dominant share with US\$1,334.0 billion, making up 97.8 percent of the total while decreasing 25.6 percent from 2012. The decrease was mainly because banks accepted plenty of foreign currency deposits, plus they raised long-term funds in response to Fed's QE tapering, thus reducing their demand for foreign currency call loans. Japanese yen transactions reached ¥1,311.6 billion in 2013, a small share of 1.0

## Transactions in the Taipei Foreign Currency Call Loan Market



Source: Department of Foreign Exchange, CBC.

percent of the total despite an increase of 50.5 percent in the volume compared to the previous year. The amount of euro transactions totaled  $\in$ 0.6 billion, a share of less than 0.1 percent. Other currencies accounted for 1.1 percent of the total transaction volume.

#### Slight Reduction in Assets of Offshore Banking Units

There were 63 offshore banking units (OBUs) at the end of 2013. Domestic banks operate 38 of these OBUs, while foreign banks run the other 25. The total assets of all OBUs decreased to US\$169.6 billion at the end of the year, representing a decrease of US\$1.3 billion or 0.8 percent from the previous year end. Domestic OBUs made up 83.6 percent of these combined assets with an amount of US\$141.8 billion, and the OBUs of foreign banks accounted for US\$27.8 billion, or 16.4 percent of the total.

In terms of the uses of funds, loans to non-financial institutions, at US\$80.0 billion, represented the majority share of 47.2 percent of OBU total assets, mainly because many Taiwanese firms in Mainland China raised funds from the OBUs. Claims on financial institutions came in second place,

accounting for 14.5 percent of total OBU assets. In terms of the destination for funds, Asia accounted for the majority with 60.0 percent, followed by America at 27.0 percent.

The OBUs' main source of funds were interbank transactions, making up 44.5 percent of total liabilities. Furthermore, deposits of non-financial institutions rose sharply, accounting for 30.2 percent of total liabilities. Being the main funding resource of overseas Taiwanese firms, 65.0 percent of the OBUs' funds came from Asia and 21.0 percent from America.

Owing to the increased variety of RMB-related business, forex trading turnover of all OBUs in 2013 rose by 26.6 percent and registered US\$476.2 billion, of which US\$269.7 billion went for spot transactions, US\$118.9 billion for foreign exchange swap transactions and US\$87.6 billion for forward transactions. Compared with the previous year, the growth rates of the trading of spots and foreign exchange swaps were 39.4 percent and 42.7 percent, respectively, while the trading of forwards decreased 11.8 percent.

The total turnover of other derivatives products grew rapidly, amounting to US\$1,233.0 billion, 195.6 percent higher than 2012. Of this amount, currency options and RMB options transactions registered US\$974.1 billion, nearly fourfold the volume of the previous year.

## Consolidated Balance Sheet of Offshore Banking Units 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	Deposits of Non-financial Institutions	Due to Financial Institutions	Securities Issued	Other Liabilities
2009	29,988	13,757	43,954	7,352	95,051	32,493	54,070	352	8,136
2010	40,752	15,952	55,878	10,348	122,930	35,587	75,270	364	11,709
2011	58,976	15,760	56,900	13,465	145,101	37,645	91,662	370	15,424
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
2012-2013 Growth Rate (%)	17.9	20.7	-26.1	-6.3	-0.8	16.1	-0.3	-3.6	-31.3

Source: Financial Statistics Monthly, CBC.

# 6. Stock Market

Taiwan's stock markets generally fluctuated on an uptrend in 2013, underpinned by the US Fed's decision to delay the unwinding of its monetary stimulus, significant increases of share holdings by foreign investors, and new measures introduced by the Financial Supervisory Commission (FSC) to boost the stock markets.

At the end of 2013, the Taiwan Stock Exchange (TWSE) weighted stock price index (TAIEX) registered a gain of 11.8 percent over the previous year end. All industrial groups except shipping & transportation posted year-on-year increases, with textile and financial shares the best performers. The TAIEX daily average trading value was NT\$77.0 billion, a 4.9 percent decrease compared to the previous year.

In Taiwan's over-the-counter market, the weighted stock price index of the GreTai Securities Market (GTSM) closed the year up by 25.4 percent over the previous year end. Among across-theboard stock rises, textile shares registered the highest gain of 130.0 percent. The daily average trading value was NT\$16.4 billion, increasing by 3.9 percent compared to the previous year.

## Major Statistics of the TWSE Market

	Stock Price	Daily Average	Turnover	Market	Net Buying Positions** (NT\$ Billion)					
Year/Month	Index* (1966=100)	Trading Value (NT\$ Billion)	Rate (%)	Capitalization* (NT\$ Billion)	Foreign Investors Net Buy/Sell	Securities Investment Trust Companies Net Buy/Sell	Securities Dealers Net Buy/Sell			
2011	7,072.1	106.1	119.9	19,216	-277.6	9.4	-45.6			
2012	7,699.5	81.0	97.3	21,352	144.2	-16.1	-2.2			
2013	8,611.5	77.0	82.6	24,520	243.0	-76.7	8.5			
2013/ 1	7,850.0	78.0	7.9	21,863	16.3	-7.9	0.6			
2	7,898.0	78.6	4.6	22,027	29.2	-4.6	4.8			
3	7,918.6	76.6	7.3	22,129	-30.9	-10.1	-4.1			
4	8,093.7	73.0	6.5	22,649	29.5	-7.7	4.1			
5	8,254.8	82.8	7.9	23,119	58.3	-16.7	1.4			
6	8,062.2	78.0	6.6	22,608	-117.5	-10.0	-11.7			
7	8,107.9	81.7	8.3	22,728	82.4	-2.5	16.1			
8	8,021.9	74.5	6.9	22,567	-45.7	0.8	-6.9			
9	8,173.9	75.4	6.6	23,037	121.0	-6.0	-2.5			
10	8,450.1	79.4	7.3	23,884	74.6	-5.0	1.0			
11	8,406.8	73.7	6.5	23,876	-21.2	-1.6	4.4			
12	8,611.5	71.9	6.5	24,520	47.0	-5.5	1.4			

Notes: \*Refers to end-of-period data.

\*\*Minus sign "-" indicates net sale positions.
Source: Securities and Futures Bureau, FSC.

#### The TWSE Market

#### Listings and Capitalization Both Increased

At the end of 2013, the total number of TWSE-listed companies amounted to 838, adding 29 new listings to the market. Total market capitalization grew by 14.8 percent year on year to NT\$24.5 trillion.

## **TAIEX Trended Up Gradually**

In the beginning of 2013, strong rallies in international stock markets, progress in cross-strait financial cooperation, and the resulting foreign investor purchases sent the TAIEX on an uptrend. The index reached 8,039 points on

# Stock Price Indices of the TWSE and GTSM Markets



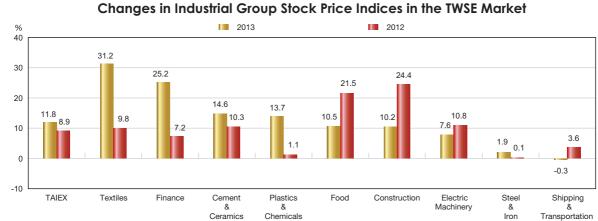
Sources: 1. Securities and Futures Bureau, FSC. 2. GTSM.

March 11, before investor concerns over rising tensions on the Korean Peninsula and an avian flu outbreak in China sapped investor sentiment. As a result, the TAIEX dropped to 7,729 on April 9.

Encouraged by a better-than-expected outlook for the electronics industry, new record highs achieved by the US stock markets, and a possible easing of the rules for the securities capital gains tax, foreign investors began to accumulate net buying positions on the local bourse, helping the TAIEX to bounce back and reach 8,399 on May 22. Following this, market concerns of an imminent Fed QE tapering pushed down share prices and the TAIEX fell to 7,663 points on June 25.

However, the TAIEX rebounded with sustained rallies in the second half of the year, driven by several favorable developments both at home and abroad. Investor sentiment was first brightened by the passing of an eased version of the capital gains tax on stock sales, in which the 8,500-point trigger threshold was removed. Then, the Fed opted to postpone QE tapering, and Taiwan's FSC rolled out several equity market stimulus measures. The TAIEX eventually hit an all-year high of 8,623 on December 30 and dipped only slightly in the final session the next day to close the year at 8,612, an increase of 11.8 percent from 7,700 the previous year end.

Broken down by subcategory, almost all industrial groups recorded positive annual growth in share prices owing to substantial net buying from foreign investors, with shipping & transportation shares and their marginal year-on-year price fall the only exception. Textile stocks outperformed other groups with a 31.2 percent rise, thanks to new clothing technology that increases functionality and boosts demand. Financial stocks reaped the second largest gain of 25.2 percent, benefiting mainly from increased cross-strait financial cooperation.



# Note: Year-on-year changes; end of year figures. Source: TWSE.

#### **Market Turnover Decreased**

In 2013, TWSE market turnover, measured on a daily average basis, declined to NT\$77.0 billion from the NT\$81.0 billion registered the previous year. The 4.9 percent drop was mainly due to less-than-satisfactory domestic recovery and heightened investor concern over QE tapering.

# Foreign Investors and Local Dealers Net Bought, While Local Securities Investment Trust Companies Net Sold

In 2013, foreign investors bought a net NT\$243.0 billion in the TWSE market. Local securities dealers also net bought shares totaling NT\$8.5 billion, while local securities investment trust companies net sold NT\$76.7 billion.

Foreign investors were net sellers in the months of March, June, August, and November, during which market sentiment was clouded by renewed European debt woes, the Fed's QE taper talk, and Taiwan's own food safety issues. In all the other months of 2013, foreign investors were net buyers of the TAIEX shares, encouraged by significant earnings growth among Taiwan's listed companies and the Fed's decision to hold off QE tapering.

In terms of local securities investment trust companies, a net purchase position of NT\$0.8 billion was recorded only in August as a result of bargain hunting after the market slumped. In the other months, strong demand for fund redemption led to net sales by local securities investment trust companies.

Local securities dealers, with inclinations for short swing trading, net sold on downtrends in March, June, August, and September, and net bought amid market rallies in the other months of 2013.

#### The GTSM Market

## Listings and Capitalization Both Increased

The number of GTSM listings increased by 20 during the year, amounting to 658 at the end of 2013. Market capitalization grew considerably by 33.8 percent, standing at NT\$2.32 trillion at the year end.

#### **Share Prices Rose Significantly**

Similar to the TWSE market, stock prices in the GTSM market generally trended up in 2013. The index hit a yearly high of 129.6 points on the year's final day of trading, a remarkable increase of 25.4 percent compared to the 103.3 points recorded at the end of 2012.

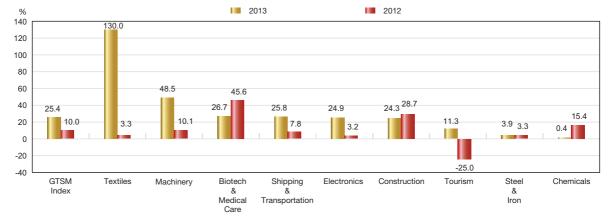
All three types of institutional investors finished the year with net buying positions. Foreign investors, local securities investment trust companies, and local dealers net bought NT\$26.9 million, NT\$9.0 billion, and NT\$3.0 billion, respectively. The daily average turnover in the GT\$M market was NT\$16.4 billion, increasing by 39.0 percent from NT\$11.8 billion the previous year.

#### Key Measures for the Stock Markets

Key measures for Taiwan's stock markets in 2013 were as follows:

1. March 1: The Executive Yuan approved the "Stock Market Revitalization Program," aiming to foster steady growth of the stock market by (1) increasing diversification of quality financial products, (2) invigorating stock market activity, (3) expanding the scope of Taiwan's capital market, and (4) promoting international visibility of Taiwan's stock market and enhancing corporate governance.





Note: Year-on-year changes; end of year figures. Source: GTSM.

- 2. April 1: To attract more investors into the futures market, the levy on futures transactions was lowered from 0.004 percent to 0.002 percent.
- 3. June 25: The amended version of the capital gains tax on securities trading passed the third reading in the legislature. The revision includes (1) canceling the 8,500-point trigger threshold, (2) exempting small investors from the tax, and (3) levying only the additional sales by large investors who have sold over NT \$1 billion in shares within one year.
- 4. July 1: In an effort to increase the efficiency of trading and information disclosure, the TWSE shortened the matching time for stock trading to 15 seconds from 20 seconds; information disclosure during the closing session was also adjusted to be at an interval of every 15 seconds.
- 5. September 3: The FSC announced three measures to stimulate stock market activity, including (1) allowing investors to conduct buy-then-sell day trading, (2) exempting more stocks from the price constraint on SBL (securities borrowing and lending) short sales, and (3) removing the ban on trading at the daily price ceiling/floor by securities dealers, effective for a trial period.
- 6. September 23: The shares of 1,200 TWSE and GTSM listed companies were exempted from the restriction of no short sales below their last closing prices.

# 7. Bond Market

For the year of 2013, the total volume of bond issuance slightly decreased. New issues of bonds amounted to NT\$1,264.4 billion, contracting by NT\$170.2 billion or 11.86 percent over the previous year. At the end of 2013, the outstanding amount of bonds issued stood at NT\$8,284.1 billion, an increase of NT\$531.3 billion or 6.85 percent from the previous year end. As the Taiwan offshore renminbi(RMB) market gradually developed, banks and firms commenced issuing RMB-denominated bonds, so-called Formosa bonds, in March 2013. The RMB-denominated bond issuance amounted to RMB10.6 billion at the end of 2013.

Owing to rising long-term bond yields, the amount of central government bonds with certain maturities issued were less than the amount open for bid. As a result, issuance of central government bonds decreased by NT\$23.1 billion, or 3.47 percent, to NT\$641.9 billion.

Regarding corporate bonds, the rise in long-term bond yields lowered corporations' willingness to issue bonds. Issuance of corporate bonds for 2013 totaled NT\$466.0 billion, showing a decrease of NT\$16.5 billion or 3.42 percent over the previous year.

With respect to bank debentures, the main purpose for banks to issue bonds was to strengthen their capital base. For the year as a whole, bank debenture issuance totaled NT\$110.3 billion, decreasing by NT\$70.1 billion or 38.86 percent over the previous year.

In terms of asset securitization, several products matured during the year, while the volume of products on a revolving issuance basis declined from the previous year. As a result, the outstanding balance of asset securitization products decreased.

Moreover, nine new RMB-denominated international bonds were issued, whereas foreign bonds recorded no new issues during the year.

In the secondary market, government bond yields showed minor fluctuations for the first half of 2013. Entering the second half of the year, yields on bonds with different maturities trended upward amid concerns over an early tapering of the Fed's asset purchases. After mid-September, bond yields fluctuated slightly below their yearly highs. Of the components, 10-year bond yield reached 1.6797 percent at the end of 2013, up by 51.24 basis points from 1.1673 percent at the previous year end. Affected by investors' wait and watch attitude in the second half of the year, annual transactions totaled NT\$69,226.1 billion, contracting by 20.02 percent over the previous year. In addition, only one fixed income fund remained in the market with a volume of NT\$3.2 billion at the end of 2013.

#### **Decline in Government Bond Issuance**

Affected by the rise in long-term bond yields, the amount of central government bonds with certain maturities issued was less than the amount open for bid. As a result, central government bond issuance for 2013 totaled NT\$641.9 billion, a decrease of NT\$23.1 billion or 3.47 percent, compared with the previous year.

Issues of 5-year, 10-year, 15-year and 20-year government bonds were NT\$110.0 billion, NT\$150.0 billion, NT\$40.0 billion and NT\$151.7 billion, respectively. Furthermore, there were also 2-year bond issuances worth NT\$70.0 billion and 30-year bond issuances worth NT\$120.2 billion to meet market demand.

In regard to issuing rates, the weighted average issuing rates on the central government bonds with maturities above 5 years in 2013 were all higher than the previous year on account of an increase in long-term bond yields resulting from concerns over a possible early tapering of the Fed's asset purchases. The weighted average issuing rate on 10-year bonds rose to 1.535 percent from the previous year's 1.214 percent. However, higher liquidity of short-term bonds led to stronger market demand. Therefore, the rate on 2-year bonds fell from the previous year's 0.780 percent to 0.727 percent.

In terms of bonds issued by governments of special municipalities, new issues were nil in 2013.

In sum, government bond issuance amounted to NT\$641.9 billion in 2013, a decrease of NT\$23.1 billion or 3.47 percent from 2012. The outstanding amount continued to rise to NT\$5,209.5 billion at year end, an increase of NT\$275.1 billion or 5.58 percent from the previous year end.

#### Slowdown in Corporate Bond Issuance

For the year of 2013, rising long-term bond yields, caused by concerns over a possible early reduction of the pace of the Fed's asset purchases, increased the cost of issuing coporate bonds and thus weakened the willingness of companies to issue bonds. The issuing amount of corporate bonds for 2013 totaled NT\$466.0 billion, showing a decrease of NT\$16.5 billion or 3.42 percent over the previous year. Among the total issuance, renminbi corporate bonds worth RMB0.8 billion issued by two domestic companies were also included.

State-owned enterprises issued bonds worth NT\$88.5 billion, making up 20 percent of total corporate bond issuance in 2013. In the private sector, Taiwan Semiconductor Manufacturing Company (TSMC) topped the list with its yearly bond issuance reaching NT\$86.2 billion, while Formosa Plastics Group accounted for the second largest share of bond issuance with an amount of NT\$81.0 billion. Additionally, the combined bond issues of shipping firms and airlines exceeded NT\$30.0 billion.

Owing to the rise in long-term bond yields, weighted average issuing rates on 5-year, 7-year, and 10-year corporate bonds for 2013 reached 1.3720 percent, 1.5030 percent, and 1.6889 percent, respectively, all higher than those in the previous year. At the end of the year, the outstanding

## Issues and Outstanding Values in Bond Market by Category

Unit: NTS Billion

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Year/ Month	To	otal		Government Bonds		Government Bonds*	Corpo	orate Bonds	Bank Debentures		Beneficiary Securities**		Foreign & Int'l Bonds***	
WOITH	Issues	Outstanding	Issues	Outstanding	Issues	Outstanding	Issues	Outstanding	Issues	Outstanding	Issues	Outstanding	Issues	Outstanding
2011	1,393.9	7,113.5	620.0	4,509.6	20.0	134.8	396.7	1,351.0	194.7	900.4	162.5	178.3	-	39.4
2012	1,434.6	7,752.8	665.0	4,776.3	23.4	158.1	482.5	1,619.5	180.4	1,022.1	76.9	148.3	6.2	28.5
2013	1,264.4	8,284.1	641.9	5,068.2	0.0	141.3	466.0	1,865.3	110.3	1,029.8	8.0	135.1	38.2	44.4
2013/1	185.4	7,841.5	120.0	4,821.3	-	158.0	65.4	1,675.0	0.0	1,012.1	0.0	147.6	-	27.5
2	122.2	7,865.6	75.0	4,826.3	-	158.0	30.2	1,695.3	15.0	1,027.1	2.0	133.4	-	25.5
3	121.2	7,907.2	80.0	4,836.3	-	158.0	23.9	1,713.3	17.3	1,039.4	0.0	134.7	-	25.5
4	88.2	7,942.1	70.0	4,906.3	-	151.3	6.7	1,698.3	11.5	1,025.9	0.0	134.8	-	25.5
5	70.9	7,986.5	28.9	4,935.2	-	151.3	30.5	1,712.3	9.5	1,027.1	2.0	135.1	-	25.5
6	95.6	8,059.4	35.0	4,970.2	-	151.3	52.7	1,750.5	2.5	1,022.1	-	134.4	5.4	30.9
7	110.8	8,071.6	42.0	4,952.2	-	151.3	68.8	1,797.6	-	1,015.8	-	134.4	-	20.3
8	76.5	8,127.8	26.3	4,978.5	-	151.3	39.9	1,824.7	8.3	1,018.1	2.0	134.9	-	20.3
9	65.8	8,119.6	40.0	4,978.5	-	141.3	23.6	1,832.2	2.2	1,013.0	0.0	134.3	-	20.3
10	90.6	8,193.8	59.7	5,038.2	-	141.3	30.9	1,845.5	-	1,012.3	0.0	136.2	-	20.3
11	76.8	8,223.2	30.0	5,068.2	-	141.3	34.8	1,847.9	10.0	1,010.0	2.0	135.5	-	20.3
12	160.4	8,284.1	35.0	5,068.2	-	141.3	58.6	1,865.3	34.0	1,029.8	0.0	135.1	32.8	44.4

- 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.

Sources: 1. Financial Statistics Monthly, CBC

- 2. Banking Bureau, Financial Supervisory Commission.
- Department of Foreign Exchange, CBC

amount of corporate bonds was NT\$1,865.3 billion, rising by NT\$245.8 billion or 15.18 percent from the previous year end.

#### Significant Decrease in Bank Debenture Growth

A total of 26 financial institutions issued bank debentures in 2013. For the year as a whole, bank debenture issuance, including renminbi bank debentures worth RMB2.0 billion issued by two domestic financial institutions, totaled NT\$110.3 billion, shrinking by NT\$70.1 billion or 38.36 percent over the previous year. The majority of the issuance, or 75.33 percent, went for subordinated debts to bolster capital adequacy.

In terms of the volume of issuance, the major types of bank debentures issued were 7-year and 10-year bank debentures, making up shares of 44.48 percent and 33.56 percent in total issuance, respectively. The weighted average issuing rate on 7-year bank debenture was higher than the previous year, whereas the issuing rate on 10-year bank debenture was lower as the credit ratings of the banks that issued 10-year debt in 2013 were better than those in 2012. At the end of the year, the outstanding amount of bank debentures was NT\$1,029.8 billion, growing by NT\$7.7 billion or 0.75 percent from the previous year end.

#### Contraction in Asset Securitization

As housing prices remained high, enterprises became lukewarm about issuing real estate securitization products, and banks turned cautious toward financial asset securitization. As a result, revolving issuance accounted for the only source of asset securitization product issuance. The total amount of issues of asset securitization products contracted by NT\$68.8 billion or 89.53 percent from 2012 to NT\$8.0 billion. Furthermore, six financial asset securitization products matured, and the principal was repaid. As a result, at the end of 2013, the outstanding amount of asset securitization decreased by NT\$13.2 billion or 8.90 percent from the previous year end to NT\$135.1 billion.

#### Marked Growth in Foreign Bond Issuance

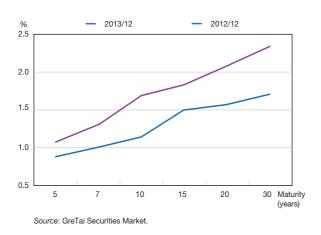
With the development of the Taiwan offshore RMB market, five foreign banks commenced to issue RMB-denominated international bonds totaling RMB7.8 billion in 2013. Moreover, two international bonds matured and the prinicipal was repaid. With regard to foreign bonds, new issues were nil and none of the previously issued bonds reached maturity in 2013. As a result, at the end of the year, the outstanding amount of international bonds and foreign bonds was NT\$44.4 billion, an increase of NT\$15.9 billion or 55.79 percent over the previous year end.

#### Rise in Bond Yields and Decline in Transactions

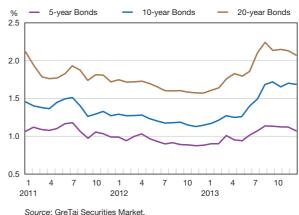
For the first half of 2013, government bond yields showed minor fluctuations. However, yields on bonds with different maturities exhibited a marked upward trend from May amid concerns over an early tapering of the Fed's asset purchases. After mid-September, bond yields fell and fluctuated in a narrow band.

With increased stock market trading activities in early 2013 and a surge in US bond yields in March, the yield on the benchmark 10-year government bond rose to 1.3588 percent on March 12. However, the quantitative easing policies implemented by the US and Japan gave a boost to the bond market, leading the 10-year bond yield to decline with the US bond yield and hit a yearly low of 1.1695 percent on May 3. From May onwards, affected by the Fed's hint of a possible reduction

#### **Yield Curve of Central Government Bonds**



# Central Government Bonds Yield with Different Maturities



of the pace of asset purchases in the near future, the 10-year bond yield trended up to a yearly high of 1.7917 percent on September 14. Later, owing to different market expectations regarding the timing of the Fed's tapering, the 10-year bond yield dropped and mainly fluctuated between 1.60 percent and 1.74 percent. The yield finally ended 2013 at 1.6797 percent, 51.24 basis points higher than the 1.1673 percent of the previous year end.

For the year 2013, average yields on government bonds in every maturity range were higher than the previous year. Affected by the rise in long-term interest rates, the yield spread between long-term and short-term rates was wider and the yield curve was steeper than the previous year.

In terms of transaction volume, government bonds saw a decline in 2013, mainly because investors worried that the Fed may cut back its asset purchases earlier than expected, and an increasingly higher long-term bond yield turned investor sentiment to become more cautious. As a result, total bond transactions for 2013 decreased by NT\$17,325.6 billion or 20.02 percent from the previous year to NT\$69,226.1 billion. Of the components, outright transactions shrank by NT\$4,740.5 billion or 25.71 percent over the previous year. Repo transactions fell by NT\$12,585.1 billion or 18.48 percent.

#### Bond Transactions in the Over-the-Counter Market

Unit: NT\$ Billion

Year/	Total	Outright Tr	ansactions	Repurchase Agreement Transactions		
Month	loidi	Amount	Share (%)	Amount	Share (%)	
2011	97,809.1	26,856.8	27.5	70,952.3	72.5	
2012	86,551.7	18,435.8	21.3	68,115.9	78.7	
2013	69,226.1	13,695.3	19.8	55,530.8	80.2	
2013/1	7,634.7	1,712.5	22.4	5,922.2	77.6	
2	4,283.9	738.0	17.2	3,545.9	82.8	
3	6,421.1	1,312.5	20.4	5,108.6	79.6	
4	6,462.9	1,534.5	23.7	4,928.4	76.3	
5	6,838.1	1,782.2	26.1	5,055.9	73.9	
6	5,440.6	1,103.1	20.3	4,337.5	79.7	
7	5,921.5	1,084.3	18.3	4,837.2	81.7	
8	5,302.0	742.3	14.0	4,559.7	86.0	
9	4,890.6	897.5	18.4	3,993.1	81.6	
10	5,629.5	1,100.0	19.5	4,529.5	80.5	
11	5,481.8	1,107.6	20.2	4,374.2	79.8	
12	4,919.4	580.8	11.8	4,338.6	88.2	

Source: GreTai Securities Market.

By type of bonds, government bonds accounted for 74 percent of total bond transactions with an annual trading volume of NT\$51,490.5 billion. Corporate bonds came in second, accounting for 23 percent of total transcactions with an annual trading volume of NT\$15,666.9 billion. Bank debentures, asset securitization products, and international and foreign bonds each made up marginal shares of less than 3 percent in total transactions, with their respective annual trading reaching NT\$1,941.4 billion, NT\$76.4 billion, and NT\$50.9 billion.

# Turnover in Bond Market by Category

Unit: NT\$ Billion

							OHII: NIŞ BIIION
Year/ Month	Total	Govemment Bonds	Corporate Bonds		Bank Debentures	Beneficiary Securities	Foreign & int'l Bonds
			Nonconvertible	Convertible	50501114100		
2011	97,809.1	81,096.0	12,820.8	2,001.5	1,676.8	152.2	61.8
2012	86,551.7	68,974.8	14,442.9	1,150.0	1,859.2	103.4	21.4
2013	69,226.1	51,490.5	14,860.0	806.9	1,941.4	76.4	50.9
2013/ 1	7,634.7	5,834.9	1,495.4	79.1	216.7	5.0	3.6
2	4,283.9	3,163.2	938.4	40.6	133.9	5.7	2.1
3	6,421.1	4,870.2	1,298.9	67.0	177.5	5.1	2.4
4	6,462.9	4,877.3	1,346.9	59.7	174.6	2.1	2.3
5	6,838.1	5,283.0	1,303.0	69.3	175.9	4.3	2.6
6	5,440.6	3,953.0	1,252.3	67.4	155.6	9.3	3.0
7	5,921.5	4,239.9	1,434.3	72.2	166.3	2.8	6.0
8	5,302.0	3,751.9	1,311.8	67.0	161.5	6.8	3.0
9	4,890.6	3,523.3	1,157.9	70.4	127.4	8.0	3.6
10	5,629.5	4,247.1	1,168.2	78.1	122.1	9.1	4.9
11	5,481.8	4,194.9	1,058.0	62.0	151.3	10.1	5.5
12	4,919.4	3,551.8	1,094.9	74.1	178.6	8.1	11.9

Source: GreTai Securities Market.