

## 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 corporate 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: NT\$ Billion

Year/ Month	Total		Central Government Bonds		Local Government Bonds*		Corporate Bonds		Bank Debentures		Beneficiary Securities**		Foreign & Int'l Bonds***	
	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.

3. 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

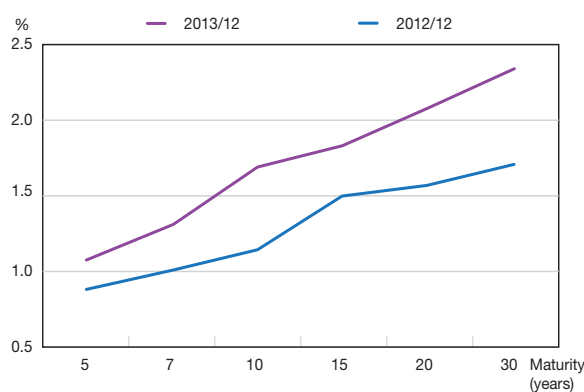
With the development of the Taiwan offshore RMB market, five foreign banks commenced to issue RMB-denominated international bonds totaling RMB7.8 billion in 2013. Moreover, two international bonds matured and the principal was repaid. With regard to foreign bonds, new issues were nil and none of the 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

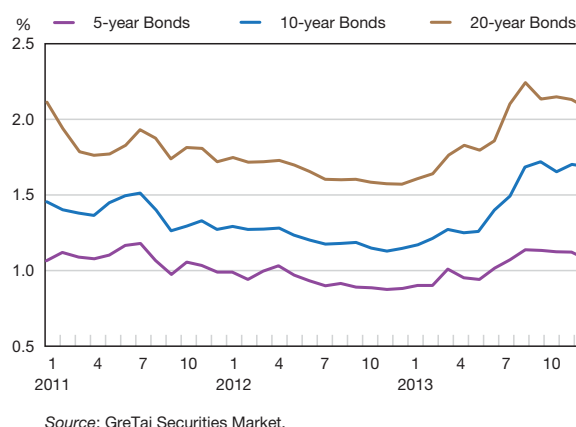
For the first half of 2013, government bond yields showed minor fluctuations. However, yields on bonds with different maturities exhibited a marked upward trend from May amid concerns over an early tapering of the Fed's asset purchases. After mid-September, bond yields fell and fluctuated in a narrow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

Year/ Month	Total	Government Bonds	Corporate Bonds		Bank Debentures	Beneficiary Securities	Foreign & int'l Bonds
			Nonconvertible	Convertible			
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.