7. Bond Market

For the year of 2012, Taiwan's capital market conditions were steady. New issues of bonds amounted to NT\$1,434.6 billion, showing an increase of NT\$40.7 billion or 2.92 percent over the previous year.

Issuance of central government bonds increased by NT\$45.0 billion, or 7.26 percent, to NT\$665.0 billion in order to support fiscal funding needs.

In terms of corporate bonds, for the first half of 2012, with the domestic economic slowdown, corporations' weak demand for funds lowered their willingness to issue bonds. However, entering the second half of the year, their willingness to issue bonds was enhanced following the decline of yields on government bonds. Issuance of corporate bonds for 2012 totaled NT\$482.5 billion, showing an increase of NT\$85.8 billion or 21.63 percent over the previous year.

Regarding bank debentures, banks issued bonds in order to strengthen capital base. For the year as a whole, bank debentures totaled an issuance of NT\$180.4 billion, decreasing by NT\$14.3 billion or 7.34 percent over the previous year.

With respect to 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. Furthermore, one new international bond was issued, whereas foreign bonds recorded no new issues this year.

At the end of 2012, the outstanding amount of bonds issued stood at NT\$7,751.8 billion, an increase of NT\$638.3 billion or 8.97 percent from the previous year end. In the secondary market, annual transactions totaled NT\$86,551.7 billion, contracting by 11.51 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 2012.

Continuous Increase in Government Bond Issuance

In 2012, central government bond issuance in support of fiscal funding needs totaled NT\$665.0 billion, an increase of NT\$45.0 billion or 7.26 percent, compared with the previous year.

Issues of 5-year, 10-year and 20-year government bonds were NT\$140.0 billion, NT\$185.0 billion and NT\$180.0 billion, respectively. In addition, there were also 2-year bond issuances worth NT\$30.0 billion and 30-year bond issuances worth NT\$130.0 billion to meet market demand.

In terms of issuing rates, the weighted average issuing rates on the central government bonds

with maturities above 5 years in 2012 were all lower than the previous year on account of supply/ demand factors and a decline in market interest rates. The weighted average issuing rate on 10year bonds declined to 1.214 percent from the previous year's 1.365 percent, whereas the rate on 2-year bonds rose from the previous year's 0.717 percent to 0.744 percent. Despite the rate hike, market demand for 2-year bonds remained strong.

The government of Kaohsiung Special Municipality issued construction bonds in November and December of 2012 with a combined amount of NT\$23.4 billion to repay maturing debts.

In sum, government bond issuance amounted to NT\$688.4 billion in 2012, an increase of NT\$48.4 billion or 7.56 percent from 2011. The outstanding amount continued to rise to NT\$4,934.4 billion at year end, an increase of NT\$290.0 billion or 6.24 percent from the previous year end.

Continued Growth in Corporate Bond Issuance

During the first half of 2012, with the domestic economic slowdown, corporations' weak demand for funds lowered their willingness to issue bonds. However, entering the second half of the year, their willingness to issue bonds was enhanced because of the decline of yields on government bonds. Issuance of corporate bonds for 2012 totaled NT\$482.5 billion, showing an increase of NT \$85.8 billion or 21.63 percent over the previous year.

Issues and Outstanding Values in Bond Market by Category

Unit: NTS Billion

Year/ Month	Total		Central Government La 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	
2010	1,393.6	6,618.2	610.0	4,187.6	19.3	146.7	329.7	1,202.2	158.5	815.8	256.8	216.8	19.3	53.1	
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	0.0	39.4	
2012	1,434.6	7,751.8	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	
2012/1	121.7	7,103.2	80.0	4,479.6	-	134.8	26.3	1,362.0	14.3	909.0	1.1	178.4	0.0	39.4	
2	103.0	7,129.1	65.0	4,504.6	-	134.8	18.6	1,371.9	2.0	903.1	17.4	175.3	0.0	39.4	
3	118.3	7,148.2	80.0	4,504.6	-	134.8	34.6	1,398.3	2.6	902.0	1.1	169.1	0.0	39.4	
4	118.0	7,246.0	80.0	4,584.6	-	134.8	24.7	1,408.8	12.2	914.1	1.1	164.3	0.0	39.4	
5	128.4	7,329.6	65.0	4,649.6	-	134.7	29.2	1,418.2	16.8	923.4	17.4	164.3	0.0	39.4	
6	155.8	7,440.4	40.0	4,689.6	-	134.7	88.8	1,490.7	25.9	943.6	1.1	150.9	0.0	30.9	
7	66.5	7,418.6	30.0	4,669.6	-	134.7	35.4	1,491.5	0.0	940.6	1.1	151.3	0.0	30.9	
8	175.6	7,564.3	60.0	4,729.6	-	134.7	82.9	1,562.0	15.3	955.8	17.4	151.3	0.0	30.9	
9	108.6	7,622.6	35.0	4,734.6	-	134.7	53.5	1,596.4	19.0	974.6	1.1	151.4	0.0	30.9	
10	73.9	7,659.4	30.0	4,736.4	-	134.7	23.9	1,612.8	12.7	983.9	1.1	154.5	6.2	37.1	
11	131.1	7,743.0	60.0	4,796.3	12.5	147.2	26.9	1,623.7	14.7	995.0	17.0	152.3	0.0	28.5	
12	133.7	7,751.8	40.0	4,776.3	10.9	158.1	37.8	1,619.5	45.0	1,022.1	0.0	148.3	0.0	28.5	

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

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

Sources: 1. Financial Statistics Monthly, CBC.

3. Department of Foreign Exchange, CBC.

Banking Bureau, Financial Supervisory Commission.

State-owned enterprises issued bonds worth NT\$111.3 billion, making up 20 percent of total corporate bond issuance in 2012. In the private sector, Formosa Plastics Group came in first place with its yearly bond issuance reaching NT\$77.0 billion, while Taiwan Semiconductor Manufacturing Company came in second with yearly bond issuance of NT\$62.0 billion. Additionally, the respective bond issues of shipping firms and financial holdings companies exceeded NT\$30.0 billion.

Owing to the decline of bond yields, weighted average issuing rates on 3-year, 5-year 7-year and 10-year corporate bonds fell from the previous year to 1.4278 percent, 1.3473 percent, 1.5304 percent, and 1.4855 percent, respectively. As of the end of 2012, the outstanding amount of corporate bonds was NT\$1,619.5 billion, rising by NT\$268.5 billion or 19.87 percent from the previous year end.

Slowdown in Bank Debenture Growth

A total of 26 financial institutions issued bank debentures in 2012. For the year as a whole, bank debenture issuance totaled NT\$180.4 billion, which was NT\$14.3 billion or 7.34 percent lower than the previous year. As the domestic economy did not expand as expected, banks tended to adopt cautious capital management. Thus the major issuance went for subordinated debts to bolster capital adequacy. The ratio of subordinated debts issuance to the total issuance of bank debentures rose from 72.60 percent the previous year to 83.38 percent.

In terms of the volume of issuance, long-term interest rates remained at low levels, conducive to the issuance of long-term bank debentures. The major types of bank debentures issued were 7-year and 10-year bank debentures, making up shares of 41.13 percent and 46.66 percent in total issuance, respectively.

However, the unsatisfactory credit ratings of some banks that issued 7-year debt led the weighted rate to average 1.621 percent, slightly higher than the 1.605 percent issuing rate of 10-year debt. At the end of 2012, the outstanding amount of bank debentures was NT\$1,022.1 billion, growing by NT\$121.7 billion or 13.52 percent from the end of the previous year.

Significant Decline in Asset Securitization

As housing prices remained high, enterprises became lukewarm about issuing real estate securitization products. This, combined with banks' reserved attitude toward financial asset securitization, resulted in no new issues of asset securitization products in 2012. Moreover, revolving issuance declined, thus dragging the amount of total issues of asset securitization products lower by NT\$85.6 billion or 52.68 percent from 2011 to NT\$76.9 billion.

The issuance of asset securitization products contracted in 2012. In addition, five real estate securitization products and three financial asset securitization products matured, and the principal



2.5 2.0 1.5

Central Government Bonds Yield with Different Maturities



5-year Bonds 10-year Bonds 20-year Bonds 10 2010 2011 2012 Source: GreTai Securities Market.

was repaid. As a result, at the end of 2012, the outstanding amount of asset securitization decreased by NT\$30.0 billion or 16.83 percent from the previous year end to NT\$148.3 billion.

Higher Foreign Bond Issuance

A 3-year unsecured international bond worth AU\$200 million, equivalent to NT\$6.2 billion, was issued by a foreign bank in 2012. Besides, two more international bonds matured and the prinicipal was repaid. In terms of foreign bonds, new issues were nil and none of the previously issued bonds reached maturity in 2012. At the end of the year, the outstanding amount was NT\$28.5 billion, a decline of NT\$10.9 billion or 27.66 percent over the previous year end.

Decline in Bond Transactions and Yields

The yields on government bonds for the whole year of 2012 went down owing to global economic uncertainties, domestic economic slowdown, and poor performance of the TAIEX.

In the first quarter of 2012, the transaction volume and stock prices of Taiwan's stock market both surged, attracting more funds flowing in for stock investment. However, as the Directorate-General of Budget, Accounting and Statistics (DGBAS) revised down the forecast of 2012 GDP growth, the yield on the benchmark 10-year government bond fluctuated between 1.25 percent and 1.30 percent.

During the second quarter, investors were drawn back to the bond market, owing to the deepening eurozone debt crisis, economic slowdown, and slow trading in the stock market owing to the issue over a capital gains tax on securities income. As a result, the 10-year bond yield declined and ended the month of June at 1.2191 percent.

In the third quarter, major countries lowered interest rates because of the unresolved European debt crisis. Investors turned to the bond market for safety, sending the 10-year bond yield to descend significantly to 1.1276 percent on July 26. Later, with the rise of the US bond yield and the rally in domestic stock prices, the 10-year bond yield rose rapidly to 1.18 percent in early August. However, dragged down by a decline in the stock market, the yield dropped to 1.1692 percent at the end of September.

As the TAIEX fell in the fourth quarter, investors turned to the bond market, leading the 10-year bond yield to reach a yearly low of 1.1153 percent on November 20. Later, the domestic stock

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 (%)		
2010	106,318.0	42,651.6	40.1	63,666.4	59.9		
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		
2012/1	5,644.8	1,259.4	22.3	4,385.4	77.7		
2	7,301.9	1,836.9	25.2	5,465.0	74.8		
3	8,300.5	1,961.0	23.6	6,339.5	76.4		
4	7,241.6	1,765.3	24.4	5,476.3	75.6		
5	7,772.6	1,560.3	20.1	6,212.3	79.9		
6	8,115.5	1,697.5	20.9	6,418.0	79.1		
7	8,330.7	1,989.2	23.9	6,341.5	76.1		
8	7,451.8	1,338.5	18.0	6,113.3	82.0		
9	6,113.7	1,266.5	20.7	4,847.2	79.3		
10	7,371.0	1,489.0	20.2	5,882.0	79.8		
11	6,979.7	1,387.5	19.9	5,592.2	80.1		
12	5,927.9	884.7	14.9	5,043.2	85.1		

Source: Taiwan Stock Exchange Corperation (TWSE) & GreTai Securities Market.

Turnover in Bond Market by Category

Unit: NT\$ Billion

Vo ar/		TWSE Market	Subtotal	GreTai Market							
Year/ Month	Total	Corporate Bonds		Government Bonds	Corporate	e Bonds	Bank	Beneficiary	Foreign &		
141011111		(Convertible)			Nonconvertible	Convertible	Debentures	Securities	int'l Bonds		
2010	106,318.0	-	106,318.0	95,211.4	8,405.5	1,155.6	1,361.8	123.3	60.5		
2011	97,809.1	-	97,809.1	81,096.0	12,820.8	2,001.5	1,676.8	152.2	61.8		
2012	86,551.7	-	86,551.7	68,974.8	14,442.9	1,150.0	1,859.2	103.4	21.4		
2012 / 1	5,644.8	-	5,644.8	4,451.0	992.5	85.5	104.6	10.0	1.2		
2	7,301.9	-	7,301.9	5,954.2	1,103.5	110.6	122.1	9.3	2.2		
3	8,300.5	-	8,300.5	6,780.7	1,230.2	138.8	132.2	16.9	1.7		
4	7,241.6	-	7,241.6	5,935.4	1,055.8	101.2	139.5	8.0	1.7		
5	7,772.6	-	7,772.6	6,310.8	1,177.0	114.1	161.9	7.0	1.8		
6	8,115.5	-	8,115.5	6,519.2	1,295.3	113.2	171.5	14.6	1.7		
7	8,330.7	-	8,330.7	6,871.6	1,226.2	94.1	131.1	6.0	1.7		
8	7,451.8	-	7,451.8	5,821.8	1,355.4	96.8	169.3	5.9	2.6		
9	6,113.7	-	6,113.7	4,667.0	1,212.0	75.4	148.4	9.3	1.6		
10	7,371.0	-	7,371.0	5,856.6	1,273.1	75.3	159.0	5.0	2.0		
11	6,979.7	-	6,979.7	5,437.0	1,271.5	71.5	192.6	5.5	1.6		
12	5,927.9	-	5,927.9	4,369.5	1,250.4	73.5	227.0	5.9	1.6		

 $\label{total condition} \mbox{Taiwan Stock Exchange Corperation (TWSE) \& GreTai Securities Market.}$

market rebounded, taking the 10-year bond yield up to 1.1673 percent on December 28, 11.83 basis points lower than the 1.2856 percent of the previous year end.

For the year 2012, average yields on government bonds in every maturity range were lower than the previous year. Long-term and short-term yield spreads were approximately similar to the previous year, and the yield curve remained flattened.

In terms of transation volume, government bonds saw a decline in the second half of 2012, mainly because a TAIEX rally diverted bond investment to the stock market and an increasingly lower long-term bond yield turned investor sentiment more cautious. As a result, total bond transactions for 2012 contracted by NT\$11,257.4 billion or 11.50 percent from the previous year to NT\$86,551.7 billion. Of the components, outright transactions decreased by NT\$8,421.0 billion or 31.36 percent over the previous year. Repo transactions fell by NT\$2,836.4 billion or 4.00 percent.

By type of bonds, government bonds accounted for 80 percent of total bond transactions with an annual trading volume of NT\$68,974.8 billion. Corporate bonds came in second at NT\$15,592.8 billion. Bank debentures, asset securitization products, and foreign bonds each made up marginal shares of less than 3 percent in total transactions, with their respective annual trading reaching NT\$1.859.2 billion. NT\$103.4 billion, and NT\$21.4 billion.