

## 7. Bond Market

In 2010, Taiwan's capital markets remained buoyant as the domestic and the global economies both recovered. For the year as a whole, new issues of bonds amounted to NT\$1,393.6 billion, an increase of NT\$330.7 billion or 31.11 percent over the previous year.

Issuance of central government bonds increased NT\$140.0 billion or 29.79 percent to NT\$610.0 billion, in order to support fiscal funding needs. Issuance of corporate bonds and bank debentures both grew substantially over a year before, as enterprises increased capital expenditures amid the economic pickup and banks' claims on the private sector also rose. Foreign bond issuance, including bonds issued by the Export-Import Bank of Korea (KEXIM) and Citigroup totaled approximately NT\$19.3 billion as they availed themselves of Taiwan's low funding costs. Asset securitization in Taiwan had seen no new issuance in the past two years following the US subprime mortgage debacle; however, the situation has been turned around by a gradually stabilizing global economy as new issues of asset-backed securities emerged this year.

At the end of 2010, the outstanding amount of bonds issued stood at NT\$6,618.2 billion, an increase of NT\$366.3 billion or 5.86 percent from the previous year-end. In the secondary market, annual transactions totaled NT\$106,318.0 billion, recording limited growth of 8.99 percent over the previous year due to a lack of supply relative to demand for investment vehicles. The net assets of fixed income funds and quasi money market funds combined to reach the amount of NT\$783.4 billion at the end of 2010. Moreover, all quasi money market funds in Taiwan were transformed to money market funds by the end of 2010.

### **Increase in Government Bond Issuance**

The Ministry of Finance issued a total of NT\$610.0 billion in central government bonds in 2010, an increase of NT\$140.0 billion or 29.79 percent from the previous year, with the aim of supporting fiscal funding needs. The amount of issuances of 5-year, 10-year, and 20-year government bonds were NT\$160.0 billion in each type of maturity, besides a 2-year issue worth NT\$40 billion and a 30-year bond issue worth NT\$90 billion to meet market demand. With an abundant supply of funds in the market, the weighted average issuing rates on various maturities were lower than or the same as in the previous year. The rate on 30-year bonds was 2.242 percent, a spread of less than 90 basis points over that on 10-year bonds, as the room for growth was limited by competitive tender bids from insurance companies.

The governments of Kaohsiung special municipality issued NT\$19.3 billion in construction bonds in June and November, in order to repay maturing debts. In sum, government bond issuance amounted to NT\$629.3 billion in 2010, an increase of NT\$133.7 billion or 26.98 percent from the year

## 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
2008	1,346.3	6,166.7	410.0	3,609.7	28.7	126.5	287.5	1,139.0	161.2	896.0	457.6	333.0	1.3	62.5
2009	1,062.9	6,251.9	470.0	3,829.6	25.6	141.4	203.9	1,136.9	98.7	812.5	243.9	264.4	22.8	69.1
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	49.1
2010/1	113.5	6,232.7	70.0	3,829.6	0.0	136.4	22.1	1,141.2	7.2	801.4	14.2	259.0	0.0	65.1
2	134.7	6,308.9	80.0	3,909.6	0.0	136.4	19.3	1,159.9	0.7	778.4	34.7	259.5	0.0	65.1
3	73.5	6,310.6	40.0	3,949.6	0.0	136.4	8.5	1,152.8	8.7	764.7	16.3	254.0	0.0	53.1
4	124.2	6,371.2	70.0	4,019.6	0.0	136.4	27.7	1,157.0	11.6	765.6	14.9	253.0	0.0	39.6
5	112.2	6,417.0	40.0	4,059.6	0.0	136.4	27.3	1,168.7	11.0	760.8	33.9	251.9	0.0	39.6
6	143.3	6,418.3	40.0	4,049.6	10.6	147.0	41.7	1,161.5	28.1	769.3	14.2	242.6	8.7	48.3
7	110.6	6,410.2	40.0	4,019.6	0.0	147.0	42.7	1,177.8	3.6	766.2	13.7	240.7	10.6	58.9
8	123.1	6,474.3	40.0	4,049.6	0.0	146.9	31.5	1,198.6	12.8	774.2	38.8	246.1	0.0	58.9
9	103.4	6,489.5	40.0	4,079.7	0.0	146.9	29.2	1,190.7	20.0	779.7	14.2	240.1	0.0	52.4
10	85.6	6,506.0	40.0	4,119.6	0.0	146.9	23.6	1,172.3	5.7	777.2	16.3	239.6	0.0	50.4
11	115.4	6,564.6	40.0	4,157.6	8.7	155.6	24.0	1,191.8	10.5	781.7	32.2	227.5	0.0	50.4
12	154.0	6,618.2	70.0	4,187.6	0.0	146.7	32.1	1,202.2	38.6	815.8	13.3	216.8	0.0	49.1

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: Financial Statistics Monthly, CBC.

Banking Bureau, Financial Supervisory Commission, Executive Yuan.  
Department of Foreign Exchange, CBC.

2009. The outstanding amount continued to climb to NT\$4,334.3 billion at the end of 2010, rising by NT\$363.3 billion or 9.15 percent from the previous year-end.

### Marked Growth in Corporate Bond Issuance

Against a backdrop of a brighter economic outlook and expectations of rate rises in 2010, corporate bond issues grew significantly to reach NT\$329.7 billion, a big increase of NT\$125.8 billion or 61.7 percent from a year before. The state-owned enterprises, including Taiwan Power Company and CPC Corporation, Taiwan, combined to issue NT\$105.2 billion during the year, making up around 34 percent of the total. In the private sector, Formosa Plastics Group, Far Eastern Group and financial holdings companies accounted for the larger share of bond issuance with a combined amount of NT\$101.8 billion, around 33 percent of the total. In terms of different bond types, more than 80 percent of corporate bonds issued in 2010 were non-convertible. Among them, unsecured and secured corporate bonds made up 52.67 percent and 47.33 percent, respectively. Five-year maturity bonds led with a share of 54.17 percent.

Despite rising short-term rates, with ample liquidity in the market and life insurance companies flush with cash, high rating corporate bonds still attracted huge investment. As a result, the issuing rates generally trended downwards when compared to 2009. The weighted rates on 3-year, 5-year, 7-year and 10-year corporate bonds averaged 1.7763 percent, 1.5224 percent, 1.8343 percent, and 1.6755 percent, respectively. As enterprises that issued corporate bonds with 10-year maturities were all state-owned, smaller risk premiums also brought down their weighted average rates by 16 basis

points compared to those with 7-year maturities. At the end of 2010, the outstanding amount of corporate bonds stood at NT\$1,202.2 billion, an increase of NT\$65.3 billion or 5.74 percent from the previous year-end.

### **Surge in Bank Debenture Issuance**

In 2010, 24 financial institutions issued bank debentures, partly to bolster their capital adequacy ratios. Meanwhile, some bank debentures were issued to ensure low funding costs as bank loans grew. For the year as a whole, bank debenture issuance totaled NT\$158.5 billion, a considerable increase of NT\$59.8 billion or 60.59 percent over the previous year, and closer to the pre-crisis level.

More than 90 percent of bank debentures issued in 2010 were subordinated debt securities. Bank debentures of the issuing amount of NT\$5.0 billion and above made up 54 percent of total issuance, while 7-year bank debentures were most popular, with a share of 74.56 percent in total issuance. In terms of rates, 5-year senior debt securities were issued at a weighted average rate of 1.388 percent; 7-year senior and subordinated debt securities were issued with a risk premium of 25 basis points, with rates averaging 1.775 percent and 2.020 percent, respectively. Financial institutions also issued a total amount of NT\$12.0 billion non-cumulative subordinated debts without maturity to strengthen their Tier-1 capital; the weighted average rate on such debt was 3.031 percent, 100 basis points higher than that of 7-year subordinated debt owing to their long maturities. At the end of 2010, the outstanding amount of bank debentures was NT\$815.8 billion, growing by NT\$3.3 billion or 0.41 percent from the previous year-end.

### **Asset Securitization**

In 2010, issuance of asset-backed securities rose by NT\$12.9 billion or 5.29 percent over 2009 to NT\$256.8 billion. In the aftermath of the US subprime mortgage problem, there had been no new issuance of asset securitization products in Taiwan until August 2010, which witnessed a combined issuance of NT\$5.28 billion. Regarding previous issues, revolving issues of financial asset securitization amounted to NT\$246.6 billion, mostly in asset-backed commercial paper. In terms of real estate securitization, the total net value of the eight existing real estate investment trust (REIT) funds increased by NT\$4.9 billion in the year as the value of trust assets climbed. At the end of 2010, the outstanding amount of asset-backed securities stood at NT\$216.8 billion, a NT\$47.6 billion or 18 percent decrease from the previous year-end.

### **Decline in Foreign Bonds and International Bonds**

Low interest rates and a need to diversify funding channels attracted two foreign financial institutions to issue bonds in Taiwan in 2010. In June, the KEXIM issued NT\$8.7 billion worth of US dollar-denominated bonds with a maturity of 3.5 years and an issuing rate of 2.65 percent. Citigroup issued US\$0.33 billion (NT\$10.6 billion) in US dollar-denominated bonds with a 3-year maturity and an issuing

rate of 2.8 percent in July, which also marked the first issuance of foreign currency bonds in Taiwan by a US financial institution. Since several bonds matured during the year, the outstanding amount of foreign bonds stood at NT\$49.1 billion at end-2010, a decline of NT\$20.0 billion or 28.94 percent from the previous year-end.

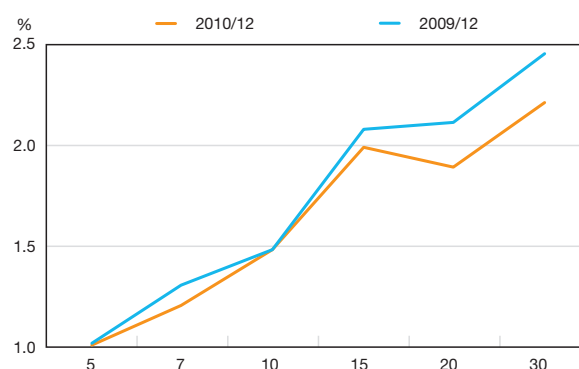
### OTC Market

At the start of 2010, the continued economic recovery resulted in a more bearish bond market. However, the market turned upwards in late January as the local stock markets pulled back due to weak US stock market performance. The yield on benchmark 10-year government bonds trended down to 1.4685 percent at the end of January. As the impact of the European sovereign debt crisis negatively impacted the TAIEX in February, the bond market was only slightly affected thanks to the positive effect of the Chinese New Year.

During March and April, bearish sentiment in international bond markets and the Bank's monetary tightening combined to lead the yield on benchmark 10-year government bonds upward to a high of 1.4536 percent. The domestic bond market experienced a narrow correction beginning in May, where the yield on benchmark 10-year government bonds rose before falling. After mid-May, the yield fell further to close the month at 1.3779 percent, reflecting the trading of 10-year reopened bonds and bullish international bond markets. Though bullish sentiment was prevalent around the world, investors in the local bond market were more reserved, driving up the 10-year benchmark yield. Contributing factors also included underperforming tender results of domestic government bonds, an upswing in the TAIEX, and the Bank's rate rise by 12.5 basis points on June 25.

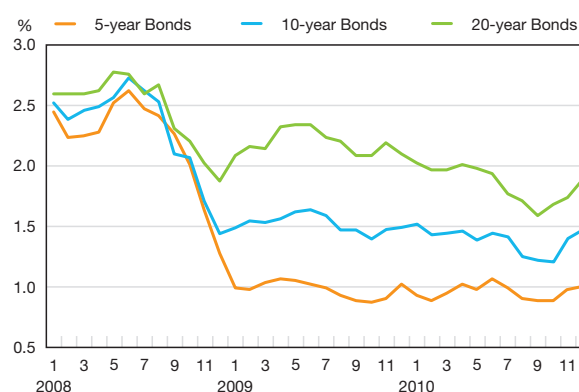
From July to August, the bullish sentiment in the bond market and more-than-abundant liquidity among banks and insurers led the 10-year benchmark yield to slip from 1.4019 percent in early July to 1.1443 percent at the end of August. The yield rebounded in September along with an uptrend in US bond yields and a rally in Taiwan's stock market. However, foreign investors then flooded the market with short-term capital, dragging down the yield to 1.1995 percent at end-September.

### Yield Curve of Central Government Bonds



Source: GreTai Securities Market.

### Yield Structure of Central Government Bonds with Different Maturities



Source: GreTai Securities Market.

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

Unit: NT\$ Billion

Year/ Month	Total	Outright Transactions		Repurchase Agreement Transactions	
		Amount	Share (%)	Amount	Share (%)
2008	135,509.5	59,749.0	44.1	75,760.5	55.9
2009	97,547.5	39,404.7	40.4	58,142.8	59.6
2010	106,318.0	42,651.6	40.1	63,666.4	59.9
2010/1	8,806.3	4,449.0	50.5	4,357.3	49.5
2	4,921.2	1,748.9	35.5	3,172.3	64.5
3	9,152.4	3,672.6	40.1	5,479.8	59.9
4	9,360.4	4,484.2	47.9	4,876.2	52.1
5	10,071.9	4,923.2	48.9	5,148.7	51.1
6	9,044.0	4,010.8	44.3	5,033.2	55.7
7	10,071.8	4,623.1	45.9	5,448.7	54.1
8	10,498.7	4,178.1	39.8	6,320.6	60.2
9	8,451.1	2,902.1	34.3	5,549.0	65.7
10	8,683.5	3,099.4	35.7	5,584.1	64.3
11	9,003.1	2,767.6	30.7	6,235.5	69.3
12	8,253.6	1,792.6	21.7	6,461.0	78.3

Source: Taiwan Securities Exchange &amp; GreTai Securities Market.

Since the Bank's 12.5 basis point rate rise on October 1 (announced on September 30) was generally expected, the bond market was not greatly affected until later when the Bank acted against foreign exchange speculation. At the end of October, the yield went up to 1.2507 percent. In the last two months of the year, the bearish sentiment in international bond markets and the increased issuing of the Ministry of Finance's 30-year government bonds resulted in a hike in the 10-year benchmark yield from 1.2730 percent in early November to 1.5357 percent at the year-end.

Life insurance companies' need for mid- to long-term bonds led to a broad downtrend year on year in average yields on government bonds of all maturities as of December 2010. The long-term

## Turnover in Bond Market by Category

Unit: NT\$ Billion

Year/ Month	Total	TWSE Market Corporate Bonds (Convertible)	GreTai Market						
			Subtotal	Government Bonds	Corporate Bonds		Bank Debentures	Beneficiary Securities	Foreign & int'l bonds
					Nonconvertible	Convertible			
2008	135,509.5	-	135,509.5	133,753.9	502.5	882.9	205.4	81.9	82.9
2009	97,547.5	-	97,547.5	95,993.3	480.4	861.1	152.5	0.1	60.1
2010	106,318.0	-	106,318.0	95,211.4	8,405.5	1,155.6	1,361.8	123.3	60.5
2010/1	8,806.3	-	8,806.3	8,668.0	53.2	79.5	5.5	0.0	0.1
2	4,921.2	-	4,921.2	4,817.9	52.4	45.1	5.5	0.0	0.2
3	9,152.4	-	9,152.4	9,006.7	46.3	81.2	17.6	0.0	0.6
4	9,360.4	-	9,360.4	8,300.4	825.1	79.1	139.7	7.0	9.0
5	10,071.9	-	10,071.9	9,050.6	785.3	75.4	147.1	9.9	3.5
6	9,044.0	-	9,044.0	7,935.0	848.0	77.9	158.3	19.6	5.3
7	10,071.8	-	10,071.8	8,948.1	874.9	103.4	130.0	10.1	5.4
8	10,498.7	-	10,498.7	9,320.8	886.6	117.8	150.9	16.9	5.6
9	8,451.1	-	8,451.1	7,174.9	967.0	140.4	143.0	17.6	8.1
10	8,683.5	-	8,683.5	7,376.5	1,030.2	124.1	130.4	13.8	8.5
11	9,003.1	-	9,003.1	7,699.6	1,024.1	104.1	155.7	12.4	7.2
12	8,253.6	-	8,253.6	6,912.9	1,012.2	127.6	178.0	16.0	6.9

Source: Taiwan Securities Exchange &amp; GreTai Securities Market.

and short-term spreads between bonds of other maturities and 5-year bonds also narrowed by 10 to 20 basis points. In general, the yield curve was flatter in comparison with the previous year.

In 2010, total bond transactions in the OTC market grew by NT\$8,770.5 billion or 8.99 percent from the previous year to NT\$106,318.0 billion. Of the components, outright transactions increased by NT\$3,246.9 billion or 8.24 percent from the previous year. Repo transactions also increased by NT\$5,523.6 billion or 9.50 percent. By type of bonds, government bonds accounted for an annual amount of trading of NT\$95,211.4 billion, nearly 90 percent of total bond transactions. The second most actively traded were corporate bonds at NT\$9,561.1 billion. Bank debentures, asset-backed securities, and foreign bonds each made up shares as modest as less than 2 percent of total transactions, with their respective annual trading amounting to NT\$1,361.8 billion, NT\$123.3 billion, and NT\$60.5 billion.

### Decrease in Fixed Income and Quasi Money Market Funds

At the end of 2010, there were a total of 50 bond funds in Taiwan with total assets reaching NT\$783.4 billion, a decrease of NT\$141.9 billion or 15.34 percent over the level a year ago. Among them, 48 quasi money market funds were all converted into money market funds; and, at NT\$779.1 billion, their combined assets made up a dominant 99 percent share of total bond funds in Taiwan. In addition, the bond holding ratio of all bond funds has gradually declined from 38.1 percent in 2005 (at the inception of the re-categorization of bond funds) to the current 4.1 percent.

### Portfolio Composition of Fixed Income and Quasi Money Market Funds

Unit: % : NT\$ Billion

Year / Month End	Total	Outright Purchases		Repurchase Agreements		Bank Deposits		Short-term Securities	
		Amount	Share	Amount	Share	Amount	Share	Amount	Share
2008	942.7	101.3	10.8	374.1	39.7	448.4	47.6	18.9	2.0
2009	925.3	72.6	7.8	245.5	26.5	531.7	57.5	75.5	8.2
2010	783.4	32.5	4.1	172.1	22.0	495.6	63.3	83.2	10.6
2010/ 1	933.5	95.7	10.3	246.9	26.5	533.5	57.1	57.4	6.2
2	901.1	69.3	7.7	228.7	25.4	518.5	57.5	84.7	9.4
3	885.9	66.7	7.5	201.0	22.7	530.7	59.9	87.5	9.9
4	844.4	64.6	7.6	179.5	21.3	516.5	61.2	83.8	9.9
5	845.9	58.5	6.9	186.4	22.0	525.8	62.2	75.3	8.9
6	825.5	53.2	6.5	177.9	21.5	526.2	63.7	68.2	8.3
7	821.9	46.0	5.6	157.4	19.2	507.3	61.7	111.2	13.5
8	779.9	43.7	5.6	152.5	19.6	519.7	66.6	64.0	8.2
9	750.1	39.0	5.2	151.6	20.2	495.1	66.0	64.5	8.6
10	775.4	30.6	3.9	173.1	22.3	514.7	66.4	57.1	7.4
11	777.1	33.6	4.3	158.8	20.4	503.3	64.8	81.3	10.5
12	783.4	32.5	4.1	172.1	22.0	495.6	63.3	83.2	10.6

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