

## 7. Bond Market

During the first half of 2009, Taiwan's capital markets remained overshadowed by the global economic downturn. Issuances of corporate bonds and bank debentures drastically declined from the level a year earlier. In the second half of the year, capital markets regained momentum along with the pace of economic recovery. For the year as a whole, new issues of bonds totaled NT\$1,062.9 billion, a decrease of NT\$283.4 billion or 21.05 percent from the previous year. While issuance of government bonds and foreign bonds increased, issuance of all the other types of bonds decreased. At the end of 2009, the outstanding amount of bonds issued stood at NT\$6,251.9 billion, a slight increase of NT\$85.2 billion or 1.38 percent from the previous year-end. In the secondary market, transactions continued to decline due to a lack of supply relative to demand for investment vehicles. The annual total decreased by NT\$37,962.0 billion or 28.01 percent from the previous year to NT\$97,547.5 billion.

With respect to fixed income and quasi money market funds, net assets decreased by NT\$17.4 billion or 1.85 percent over the year to NT\$925.3 billion at the end of 2009.

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

The Ministry of Finance issued a total of NT\$470.0 billion in central government bonds in 2009, an increase of NT\$60.0 billion or 14.63 percent from the previous year, as tax income was affected by the financial turmoil. Maturities of these issuances included 5 years, 10 years, and 20 years, as well as a 2-year issue worth NT\$40 billion to meet market demand for shorter-term bonds. With an abundant supply of funds in the market, the weighted average issuing rates on various maturities were lower than in the previous year. The rate was 0.349 percent for 2-year bonds, 0.975 percent for 5-year bonds, 1.509 percent for 10-year bonds, and 2.229 percent for 20-year bonds. The largest year-on-year decline in issuing rates was the 134 basis points observed in 5-year bonds. Local governments issued a total of NT\$25.6 billion in bonds, primarily to repay maturing debts.

In sum, government bond issuance amounted to NT\$495.6 billion in 2009, an increase of NT\$56.9 billion or 12.97 percent from the previous year. The outstanding amount continued to climb to NT\$3,971.0 billion at the end of 2009, an increase of NT\$234.8 billion or 6.28 percent from the previous year-end.

### **Decrease in Corporate Bond Issuance**

During the first half of 2009, as an uncertain economic outlook discouraged business

## 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
2007	1,383.6	6,048.2	393.2	3,410.0	9.0	109.8	162.9	1,104.9	192.5	917.4	617.5	426.2	8.5	79.9
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	20.8	67.1
2009/1	59.2	6,163.0	40.0	3,649.7	-	126.4	6.0	1,111.7	3.0	888.5	6.5	320.5	3.7	66.2
2	66.9	6,126.1	30.0	3,639.7	-	126.4	5.0	1,108.9	1.0	872.0	30.9	312.9	-	66.2
3	55.2	6,098.9	40.0	3,679.5	-	124.4	-	1,105.4	0.5	819.2	14.7	308.7	-	61.7
4	81.8	6,144.1	40.0	3,719.5	-	124.4	24.7	1,109.0	8.1	824.2	9.0	305.3	-	61.7
5	82.7	6,124.9	30.0	3,719.5	8.3	132.7	8.0	1,092.3	6.7	820.5	29.7	298.2	-	61.7
6	93.6	6,145.5	40.0	3,759.5	10.0	142.6	4.2	1,062.2	12.1	820.8	18.8	293.7	8.5	66.7
7	68.7	6,092.0	40.0	3,729.5	-	142.1	10.1	1,056.0	4.4	810.2	14.2	287.5	-	66.7
8	93.6	6,093.7	30.0	3,728.6	-	142.1	28.4	1,060.9	1.0	811.2	34.2	284.2	-	66.7
9	81.7	6,128.4	40.0	3,768.6	-	142.1	13.7	1,068.1	9.0	809.8	19.0	273.1	-	66.7
10	157.8	6,239.5	70.0	3,838.6	-	142.1	48.4	1,105.8	24.9	814.2	14.5	272.1	-	66.7
11	101.9	6,246.5	30.0	3,828.6	7.3	149.4	22.2	1,124.2	2.0	805.5	31.8	271.7	8.6	67.1
12	119.8	6,251.9	40.0	3,829.6	-	141.4	33.2	1,136.9	26.0	812.5	20.6	264.4	-	67.1

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, R.O.C.  
Department of Foreign Exchange, CBC.

investment, corporate bond issues amounted to NT\$47.9 billion, only 23.49 percent of the yearly total. In the second half of the year, the economy gradually recovered from the financial turmoil, and market risk premiums narrowed. Both factors prompted businesses to raise funds in the bond market. For the year as a whole, corporate bond issuance totaled NT\$203.9 billion, a decrease of NT\$83.6 billion or 29.08 percent from the previous year. The state-owned Taiwan Power Company and the private Formosa Plastics Group continued to lead the market with a total amount of issuance of NT\$109.2 billion, making up around half of all issues.

In terms of different bond types, more than 85 percent of corporate bonds issued in 2009 were non-convertible. Among these, unsecured and secured corporate bonds accounted for 59.68 percent and 40.32 percent, respectively, and the five-year maturity made up a leading share of 56.74 percent.

The outstanding amount of corporate bonds stood at NT\$1,136.9 billion at the end of 2009, a slight decrease of NT\$2.1 billion or 0.18 percent from the previous year-end. With market players competing for a limited supply of bonds, the issuing rates on corporate bonds trended downwards. The rates on 3-year, 5-year and 7-year corporate bonds averaged 2.1771 percent, 1.7080 percent and 2.2616 percent, respectively.

### Marked Decrease in Bank Debenture Issuance

In 2009, an unclear economic situation curtailed corporate demand for funds, while banks

were loaded with liquidity. Bank debentures were issued mostly in the second and fourth quarters to meet capital adequacy requirements. For the year as a whole, bank debenture issuance totaled NT\$98.7 billion, a large decrease of NT\$62.5 billion or 38.77 percent over the previous year. As more than 90 percent of bank debentures issued in 2009 were subordinated debt securities, the issuing rates were 30 to 40 basis points higher than those of corporate bonds of the same maturities. Nevertheless, thanks to ample market liquidity, the average issuing rates on all maturities remained slightly lower or flat compared with the previous year. The outstanding amount of bank debentures was NT\$812.5 billion at the end of 2009, a decrease of NT\$83.5 billion or 9.32 percent from the previous year-end.

### **Decline in Asset Securitization**

Under the impact of the US subprime mortgage crisis, there had been no new issuance of asset securitization in Taiwan since February 2008. For those previous issues, revolving issues of financial asset securitization amounted to NT\$246.3 billion in 2009, mostly in asset-backed commercial paper. In terms of real estate securitization, the total net value of the eight existing real estate investment trust funds decreased by NT\$2.4 billion in the year, reflecting a lack of market confidence. In sum, issuance of asset-backed securities declined radically by NT\$213.7 billion or 46.7 percent over 2009 to NT\$243.9 billion. Their outstanding amount stood at NT\$264.4 billion at the end of 2009, an NT\$68.6 billion or 20.60 percent decrease from the previous year-end.

### **Increase in Foreign Bonds and International Bonds**

In 2009, three foreign financial institutions issued bonds in Taiwan due to the relatively low cost of funds. The Central American Bank for Economic Integration issued NT\$3.7 billion worth of NT dollar-denominated bonds with a maturity of two years and an issuing rate of 2.6 percent in January. Deutsche Bank issued US\$0.26 billion (NT\$8.5 billion) in US dollar-denominated bonds of a 3-year duration with an issuing rate of 3.0 percent in June. BNP Paribas issued AU\$0.29 billion in Australian dollar-denominated bonds (NT\$8.6 billion) with a maturity of three years and an issuing rate of 5.75 percent in November. At the end of 2009, the outstanding amount of foreign bonds stood at NT\$67.1 billion, an increase of NT\$4.6 billion or 7.36 percent from the previous year-end.

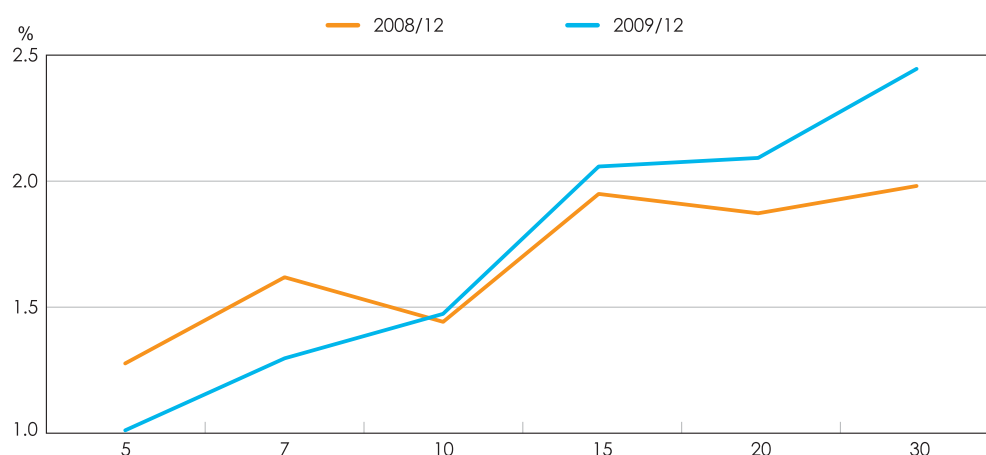
### **Lackluster Transactions in the OTC Market**

As the year 2009 began, the yield on benchmark 10-year government bonds climbed along with bearish sentiment in international bond markets. It started to fall following the Bank's 50 basis points rate cut on January 8, and then fluctuated between 1.4215 percent and 1.5282 percent. From February to April, the yield moved higher as the economic downturn abated

and the Bank kept policy rates unchanged. After mid-May, the yield fell to a range between 1.5739 percent and 1.6123 percent on worries over the H1N1 epidemic and its potential economic impact. In June, the yield rose at first in line with weakening international bond markets and then fell as local stock markets declined, recording an average of 1.6315 percent.

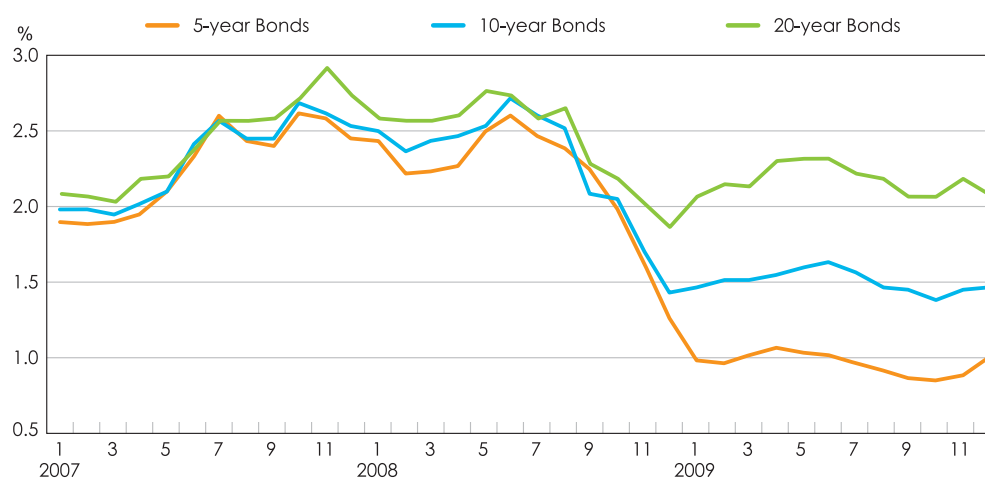
From July to September, despite rising local stock markets, the abundant liquidity and bullish international sentiment led to the yield continually slipping to 1.3963 percent at the end of September. From October onwards, massive foreign buying of local bonds and further rising local stock markets caused the yield to swing between 1.3251 percent and 1.4757 percent. In

### Yield Curve of Central Government Bonds



Source: Department of Economic Research, CBC.

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



Source: Department of Economic Research, CBC.

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

Unit: NT\$ Billion

Year/ Month	Total	Outright Transactions		Repurchase Agreement Transactions	
		Amount	Share (%)	Amount	Share (%)
2007	194,005.5	93,787.6	48.3	100,217.9	51.7
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
2009/1	6,820.1	2,810.9	41.2	4,009.2	58.8
2	8,052.6	3,593.8	44.6	4,458.8	55.4
3	9,740.9	4,546.9	46.7	5,194.0	53.3
4	7,961.8	3,195.8	40.1	4,766.0	59.9
5	7,704.2	3,321.5	43.1	4,382.7	56.9
6	8,530.1	3,571.9	41.9	4,958.2	58.1
7	8,301.7	4,018.7	48.4	4,283.0	51.6
8	7,675.2	3,041.7	39.6	4,633.5	60.4
9	8,702.8	3,499.7	40.2	5,203.1	59.8
10	9,206.9	3,488.7	37.9	5,718.2	62.1
11	7,303.8	2,106.3	28.8	5,197.5	71.2
12	7,547.4	2,208.8	29.3	5,338.6	70.7

Source: Taiwan Securities Exchange & GreTai Securities Market.

mid-December, as the Bank actively mopped up excess liquidity and bond issuing plans for the coming year were announced, the yield rebounded to close the year at 1.5403 percent.

In terms of different maturities, 5-year, 20-year and 30-year government bonds recorded yield spreads of 52, 56 and 90 basis points over 10-year government bonds at the end of 2009, respectively. Compared to the previous year-end, yield spreads between short- and long-term bonds apparently expanded, resulting in a steeper yield curve. The main factors distorting the yield curve included a limited supply of long-term bonds, as well as excess liquidity and hot money vying for short-term bonds due to their lower duration risk.

## Turnover in Bond Market by Category

Unit: NT\$ Billion

Year/ Month	Total	TSE Market Corporate Bonds (Convertible)	GreTai Market						
			Subtotal	Government Bonds	Corporate Bonds		Bank Debentures	Beneficiary Securities	Foreign & intl bonds
					Nonconvertible	Convertible			
2007	194,005.5	-	194,005.5	192,241.6	412.1	932.7	170.9	162.2	86.0
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	95,993.2	480.4	861.2	152.5	0.0	60.2
2009/1	6,820.1	-	6,820.1	6,725.0	35.3	48.3	6.2	-	5.3
2	8,052.6	-	8,052.6	7,926.6	50.9	62.6	6.8	-	5.7
3	9,740.9	-	9,740.9	9,617.5	40.9	77.5	1.5	0.0	3.5
4	7,961.8	-	7,961.8	7,823.0	50.6	74.8	10.0	-	3.4
5	7,704.2	-	7,704.2	7,590.2	27.1	72.9	10.6	-	3.4
6	8,530.0	-	8,530.0	8,395.0	27.7	69.5	31.9	-	5.9
7	8,301.7	-	8,301.7	8,188.2	25.0	69.9	11.6	-	7.0
8	7,675.2	-	7,675.2	7,557.4	43.7	66.5	4.3	0.0	3.3
9	8,702.8	-	8,702.8	8,581.6	24.8	75.9	17.0	0.0	3.5
10	9,206.9	-	9,206.9	9,057.2	54.9	71.5	18.0	0.0	5.3
11	7,303.8	-	7,303.8	7,168.0	45.3	62.9	14.2	0.0	13.4
12	7,547.5	-	7,547.5	7,363.5	54.2	108.9	20.4	-	0.5

Source: Taiwan Securities Exchange & GreTai Securities Market.

In 2009, total bond transactions in the OCT market contracted by NT\$37,962.0 billion or 28.01 percent from the previous year to NT\$97,547.5 billion. Of the components, outright transactions decreased by NT\$20,344.3 billion or 34.05 percent from the previous year. Repo transactions decreased by NT\$17,617.7 billion or 23.25 percent. Regarding the different bond types, government bonds continued to be the most actively traded, with NT\$95,993.2 billion or over 98 percent of total bond transactions. However, compared with the previous year, government bond transactions shrank by NT\$37,760.7 billion or 28.23 percent, mainly due to a lack of supply relative to demand. The second most actively traded were corporate bonds. Their total transactions decreased by NT\$43.8 billion or 3.16 percent from the previous year to NT\$1,341.6 billion. Bank debenture transactions fell by NT\$52.9 billion or 25.75 percent over the year to NT\$152.5 billion. In addition, transactions of foreign bonds totaled NT\$60.2 billion, a decrease of NT\$22.7 billion or 27.38 percent from the previous year.

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

At the end of 2009, there were two fixed income funds and 48 quasi money market funds with total assets amounting to NT\$925.3 billion, a decrease of NT\$17.4 billion or 1.85 percent over the level a year ago. At the end of 2009, fixed income funds fell to about NT\$4.8 billion, less than 1 percent of total bond fund assets.

### 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
2007	797.9	150.0	18.8	410.2	51.4	216.5	27.1	21.3	2.7
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
2009/ 1	1,080.3	99.2	9.2	408.8	37.8	512.3	47.4	60.0	5.6
2	1,157.0	97.2	8.4	385.8	33.3	563.1	48.7	110.9	9.6
3	1,172.2	93.1	7.9	373.6	31.9	571.1	48.7	134.5	11.5
4	1,189.9	90.8	7.6	376.7	31.7	581.2	48.8	141.1	11.9
5	1,129.6	86.7	7.7	357.2	31.6	554.0	49.0	131.8	11.7
6	1,073.5	86.0	8.0	309.7	28.8	539.5	50.3	138.3	12.9
7	1,053.8	82.0	7.8	279.8	26.5	570.8	54.2	121.2	11.5
8	1,003.3	79.2	7.9	253.3	25.2	558.7	55.7	112.1	11.2
9	971.8	77.0	7.9	249.1	25.6	540.1	55.6	105.6	10.9
10	979.4	76.6	7.8	250.9	25.6	541.3	55.3	110.6	11.3
11	966.0	75.5	7.8	248.8	25.8	543.4	56.2	98.4	10.2
12	925.3	72.6	7.8	245.5	26.5	531.7	57.5	75.5	8.2

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