

6. Bond Market

For the year 2017, the total volume of bond issuance showed a decrease. New issues of bonds totaled NT\$2,122.9 billion, contracting by NT\$399.2 billion or 15.83% over the previous year. At the end of 2017, the outstanding amount of bonds issued reached NT\$12,663.3 billion, up by NT\$1,078.8 billion or 9.31% from the previous year end.

Issuance of central government bonds to meet fiscal funding needs for 2017 reached NT\$400.0 billion, decreasing by NT\$163.5 billion or 29.02% from the previous year.

Issuance of corporate bonds for 2017 recorded a significant increase of NT\$100.5 billion or 35.13% to NT\$386.5 billion. The rise primarily reflected that government enterprises issued new bonds to raise funds for investment in factory expansion.

With regard to bank debentures, the main purpose for banks to issue bonds was to strengthen their capital base and meet mid- to long-term operation funding needs. Bank debenture issuance totaled NT\$189.5 billion for the entire year, growing by NT\$49.4 billion or 35.25% over the previous year.

Moreover, foreign institutions issued 118 foreign currency-denominated international bonds in Taiwan amounting to NT\$1,139.2 billion, falling by NT\$385.4 billion or 25.28% over the previous year. Meanwhile, nine NT dollar-denominated foreign bonds were issued by foreign institutions with a total amount of NT\$7.7 billion, up by NT\$4.8 billion or 161.02% compared to the previous year.

In the secondary market, average yields on bonds with different maturities all climbed higher in 2017 driven by the Fed's policy rate increases. Among the components, the average 10-year government bond yield rose by 25 basis points to 1.064%. Demand for bonds softened as investors expected market rates to move up in the future, while the supply of bonds contracted. Therefore, annual transactions amounted to NT\$61,583.5 billion, declining by NT\$5,234.5 billion or 7.83% over the previous year.

Decrease in Government Bond Issuance

In regard to central government bonds, on account of the rise in tax revenues and government bond issuance approaching the ceiling, central government bond issuance for 2017 contracted by NT\$163.5 billion, or 29.02%, to NT\$400.0 billion.

In 2017, among the total volume of government bonds issued by the Ministry of Finance, 10-year bonds made up the lion's share with NT\$155.0 billion, followed by 5-year bonds with NT\$100.0 billion, while 2-year, 20-year, and 30-year government bonds registered issuance of NT\$45 billion,

NT\$50 billion, and NT\$50 billion, respectively.

With respect to issuing rates, as market rates were expected to rise amid the Fed's rate hikes, the weighted average issuing rates in 2017 on central government bonds with different maturities were all higher than the previous year. Among them, the weighted average issuing rate on 20-year bonds recorded the largest rise of 34 basis points. The weighted average issuing rate on 5-year bonds came in second with an increase of 20 basis points.

In terms of bonds issued by governments of special municipalities, new issues were nil in 2017. However, as part of the bonds were redeemed at maturity, the outstanding amount of bonds issued by governments of special municipalities stood at NT\$41.6 billion at the end of the year, decreasing by NT\$21.5 billion or 34.10% from the previous year end.

Rise in Corporate Bond Issuance

Corporate bonds refer to NT dollar or foreign currency-denominated bonds issued in Taiwan by domestic corporations. In 2017, government enterprises issued new bonds with an amount of NT\$72.5 billion to raise funds for plant expansion. As a result, the issuing amount of corporate bonds for the year 2017 expanded substantially by NT\$100.5 billion or 35.13% to NT\$386.5 billion. As for bond maturities, 5-year corporate bonds made up the majority of the issuance with a share of 45.28%,

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 Bonds***		Int'l Bonds****	
	Issues	Outstanding	Issues	Outstanding	Issues	Outstanding	Issues	Outstanding	Issues	Outstanding	Issues	Outstanding	Issues	Outstanding	Issues	Outstanding
2015	2,090.2	10,467.0	605.3	5,478.8	8.2	90.6	268.4	2,004.2	196.3	1,285.9	0.0	94.5	5.5	9.6	1,006.6	1,503.4
2016	2,522.1	11,584.5	563.5	5,542.3	0.0	63.1	286.0	1,897.9	140.1	1,212.5	5.0	97.8	3.0	9.8	1,524.6	2,761.0
2017	2,122.9	12,663.3	400.0	5,594.8	0.0	41.6	386.5	1,938.5	189.5	1,230.3	0.0	95.6	7.7	14.5	1,139.2	3,748.0
2017/ 1	239.3	11,695.3	50.0	5,512.3	0.0	63.1	19.6	1,887.6	22.8	1,229.5	0.0	98.0	1.4	11.2	145.6	2,893.6
2	225.9	11,868.3	25.0	5,504.8	0.0	63.1	0.5	1,876.3	18.3	1,239.1	0.0	98.6	0.0	10.7	182.1	3,075.7
3	302.4	12,038.1	30.0	5,454.8	0.0	63.1	10.9	1,849.1	25.0	1,252.9	0.0	98.7	0.0	10.6	236.5	3,308.9
4	143.3	12,139.0	25.0	5,479.8	0.0	63.1	44.8	1,868.4	48.1	1,284.4	0.0	98.5	0.0	10.6	25.4	3,334.3
5	176.4	12,271.8	50.0	5,529.8	0.0	54.1	70.8	1,917.1	7.4	1,280.0	0.0	97.8	3.3	13.8	44.9	3,379.3
6	166.2	12,357.1	25.0	5,554.8	0.0	54.1	53.4	1,922.8	14.0	1,268.0	0.0	97.6	1.3	14.7	72.5	3,445.2
7	184.3	12,393.2	45.0	5,509.8	0.0	54.1	35.3	1,925.9	4.1	1,267.7	0.0	97.7	0.0	14.5	99.8	3,523.5
8	180.0	12,457.7	25.0	5,534.8	0.0	54.1	24.9	1,917.0	1.1	1,260.3	0.0	97.1	0.0	14.4	129.0	3,580.0
9	161.1	12,482.4	25.0	5,494.8	0.0	54.1	49.8	1,930.8	12.5	1,252.8	0.0	96.7	0.9	15.1	73.0	3,638.1
10	116.4	12,550.8	25.0	5,519.8	0.0	54.1	28.2	1,938.3	5.4	1,249.3	0.0	96.7	0.8	15.6	57.0	3,677.0
11	132.9	12,644.2	50.0	5,569.8	0.0	41.6	16.5	1,935.3	13.8	1,259.6	0.0	96.0	0.0	14.6	52.7	3,727.4
12	94.8	12,663.3	25.0	5,594.8	0.0	41.6	32.0	1,938.5	17.1	1,230.3	0.0	95.6	0.0	14.5	20.7	3,748.0

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.

**** Including 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.

followed by 3-year bonds with a share of 15.65%. At the end of 2017, the outstanding amount of corporate bonds reached NT\$1,938.5 billion, rising by NT\$40.6 billion or 2.14% from the previous year end.

Growth in Bank Debenture Issuance

A total of 20 financial institutions issued bank debentures in 2017 in support of their funding needs, with an issuance amount of NT\$189.5 billion, rising by NT\$49.4 billion or 35.25% over the previous year. The increase was mostly because financial institutions issued new bank debentures to maintain mid- to long-term funding costs at low levels amidst an ongoing low interest rate environment.

Regarding the purpose of issuance, the issuance of NT dollar bank debentures was to bolster capital adequacy and support mid- to long-term operation funding needs. The majority of the issuance went for subordinated debts with a share of 80.48%. With respect to the issuance of foreign currency bank debentures, the main purpose was to meet rising demand for foreign currency loans and support mid- to long-term foreign currency funding needs. Therefore, senior bank debentures with lower issuing rates accounted for the largest share of total issuance.

In terms of the volume of issuance, the major types of NT dollar bank debentures issued were 7-year, 10-year, and perpetual debentures, making up shares of 15.30%, 44.21%, and 20.70% in total issuance, respectively. As for foreign currency bank debentures, 30-year bank debentures accounted for the entire share of the bond issuance in 2017. At the end of the year, the outstanding amount of bank debentures was NT\$1,230.3 billion, up by NT\$17.8 billion or 1.47% from the previous year end.

No New Issues in Asset Securitization

New issues of asset securitization products were nil in 2017. However, as some asset securitization products matured and the principal was repaid, the outstanding amount of asset securitization decreased by NT\$2.2 billion or 2.25% from the previous year end to NT\$95.6 billion.

Significant Increase in Foreign Bond Issuance

Foreign bonds refer to NT dollar-denominated corporate bonds issued in Taiwan by foreign institutions. The foreign bonds currently in circulation are corporate bonds issued by offshore companies listed on the Taiwan Stock Exchange or the Taipei Exchange (for over-the-counter trading). For the year 2017, issuance of foreign bonds amounted to NT\$7.7 billion, up by NT\$4.8 billion or 161.02% from a year earlier. At the end of the year, the outstanding amount of foreign bonds reached NT\$14.5 billion, an increase of NT\$4.7 billion or 47.65% over the previous year end.

Contraction in International Bond Issuance

International bonds refer to corporate bonds issued in Taiwan by foreign institutions and are

currently denominated in foreign currencies. The Financial Supervisory Commission (FSC) announced in May 2017 that domestic insurers could only invest in international bonds that have non-callable periods of at least five years from the date of issue in the primary market or at least three years from the date of transaction settlement in the secondary market. These new rules caused the number of issues and issuing amount of international bonds to decline compared to the previous year. As a result, international bond issuance in 2017 fell by NT\$385.4 billion or 25.28% from a year before to NT\$1,139.2 billion.

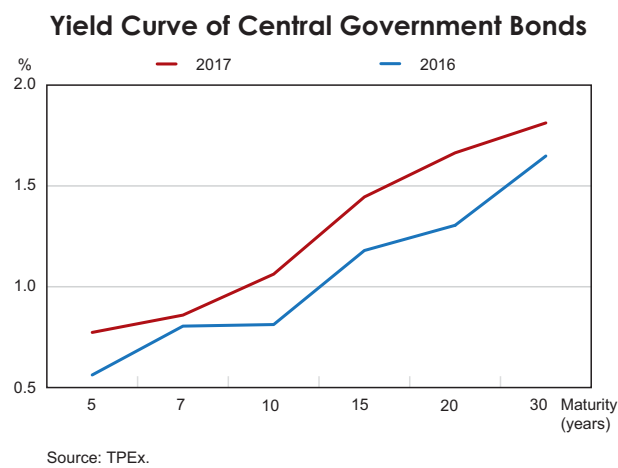
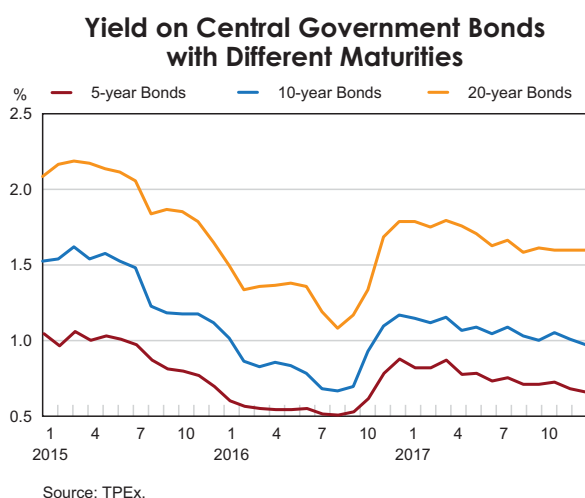
With regard to currency composition, issuance of US dollar-denominated, RMB-denominated, NZD-denominated, and ZAR-denominated bonds in 2017 stood at NT\$1,123.4 billion, NT\$10.8 billion, NT\$4.9 billion, and NT\$0.2 billion, respectively. At the end of the year, the outstanding amount of international bonds was NT\$3,748.0 billion, an increase of NT\$987.0 billion or 35.75% over the previous year end.

Lift in Average Bond Yields yet Decline in Transactions

In 2017, reduced trading volumes resulting from a shrinking supply of bonds led the 10-year government bond yield to trend down from the beginning of the year. Nevertheless, the 10-year government bond yield trended up and averaged 1.064% for the entire year, 25 basis points higher than the 0.818% of the previous year.

Among government bonds of the other maturity ranges, the average yield on 20-year bonds posted the biggest increase of 36 basis points over the previous year. Second was that on 15-year bonds with an increase of 27 basis points. Furthermore, average yields on 5-year, 7-year, and 30-year government bonds for the year 2017 climbed by 21, 6, and 17 basis points, respectively, compared to 2016.

In respect of transaction volume, as investors expected market rates to rise further given the



Fed's gradual rate hike path and domestic bond yields stayed at low levels, demand for bonds softened. This, combined with a slide in bond supply, led total bond transactions to decline by NT\$5,234.5 billion or 7.83% from the previous year to NT\$61,583.5 billion in 2017.

By type of bonds, the majority of total bond transactions went for government bonds with a share of 64.19% and an annual trading volume of NT\$39,532.0 billion. The second most actively traded were corporate bonds, accounting for 29.37% of total transactions with an annual trading volume of NT\$18,089.3 billion. Bank debentures came in third, making up 3.73% of total transactions with an annual trading volume of NT\$2,295.8 billion. Meanwhile, international bonds, foreign bonds, and asset securitization products accounted for marginal shares of 2.58%, 0.09%, and 0.04% in total transactions, with their respective annual trading reaching NT\$1,586.8 billion, NT\$57.9 billion, and NT\$21.7 billion.

Turnover in Bond Market by Category

Unit: NT\$ Billion

Year/ Month	Total	Government Bonds	Corporate Bonds		Bank Debentures	Beneficiary Securities	Foreign Bonds	Int'l Bonds
			Nonconvertible	Convertible				
2015	67,725.7	45,778.7	17,396.9	650.5	2,574.3	34.7	35.3	1,255.4
2016	66,817.9	45,243.5	16,546.7	655.3	2,376.9	19.4	29.4	1,946.8
2017	61,583.5	39,532.0	17,202.1	887.2	2,295.8	21.7	57.9	1,586.8
2017/ 1	4,551.7	2,811.3	1,328.0	74.3	179.9	1.7	1.8	154.7
2	4,758.7	2,928.4	1,276.6	71.9	191.1	1.9	1.5	287.3
3	6,145.7	3,906.0	1,601.8	81.4	248.4	0.8	4.0	303.5
4	4,734.5	3,043.0	1,374.4	58.7	174.6	1.7	3.9	78.3
5	4,936.8	3,120.4	1,466.1	59.1	193.8	2.0	5.1	90.4
6	5,828.1	3,881.2	1,527.8	79.7	205.7	1.8	5.8	126.0
7	4,929.3	3,114.2	1,467.7	63.7	170.0	4.4	5.8	103.5
8	5,580.0	3,663.7	1,501.6	79.3	189.5	1.6	5.3	139.0
9	5,313.5	3,432.0	1,525.3	87.3	187.6	1.5	5.7	73.9
10	4,730.8	3,000.9	1,401.2	74.3	173.4	1.4	7.9	71.6
11	5,272.5	3,479.9	1,413.6	85.7	190.6	1.5	6.1	95.1
12	4,801.8	3,151.0	1,318.0	71.8	191.1	1.4	5.0	63.6

Source: TPEX.