

6. Bond Market

The total volume of bond issuance exhibited an uptrend for the year 2020. New issues of bonds reached NT\$3,394.9 billion, rising significantly by NT\$1,586.6 billion or 87.74% over the previous year. At the end of 2020, the total outstanding of bonds issued stood at NT\$14,784.7 billion, an increase of NT\$912.4 billion or 6.58% from the previous year end.

To support debt refinancing operations of the Central Government Debt Service Fund and to raise funds for the central government general budget and special budget, issuance of central government bonds amounted to NT\$535.0 billion for 2020, up by 30.49% from the previous year.

Issuance of corporate bonds for 2020 posted a substantial increase of 109.14% to NT\$842.5 billion. The rise was largely because corporations increased the issuance of new bonds to lock in mid- to long-term funding costs at low levels.

Bank debenture issuance in the year totaled NT\$192.0 billion, growing by 18.36% over the previous year primarily because banks issued new debentures with low yields in order to repay the older ones with higher yields.

For the entire year, NT dollar-denominated foreign bonds issued in Taiwan by foreign institutions registered a year-on-year increase of 22.44% to NT\$21.5 billion.

With regard to foreign currency-denominated international bonds issued in Taiwan by foreign institutions, the volume of issuance totaled NT\$1,763.3 billion, rising markedly by 127.08% compared to the previous year.

In the secondary market, abundant domestic liquidity and the Fed's rate cuts brought down annual average yields on bonds with different maturities in 2020. For 10-year government bonds, the yield slid by 25 basis points from the previous year to 0.483%.

In addition, annual transactions recorded a year-on-year decrease of 9.30% to NT\$52,504.7 billion for the entire year, mainly reflecting a less vibrant bond market because of narrowing profits from spread trading.

Marked Rise in Government Bond Issuance

For the year 2020, central government bond issuance increased significantly by NT\$125.0 billion or 30.49% from the previous year to NT\$535.0 billion. The growth was to support debt refinancing operations of the Central Government Debt Service Fund and to raise funds for the central government general budget and special budget.

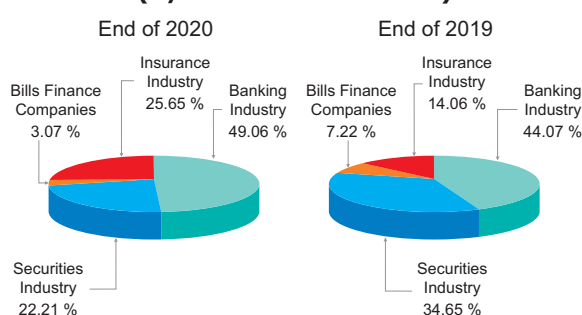
Among the total volume of government bonds issued by the Ministry of Finance, 10-year bonds accounted for the largest share with NT\$175.0 billion, while 5-year bonds came in second with NT\$145.0 billion. 2-year, 20-year, and 30-year government bonds registered issuance of NT\$30.0 billion, NT\$125.0 billion, and NT\$60.0 billion, respectively.

With respect to issuing rates, domestic liquidity remained sufficient and the Fed reduced policy rates twice during the year, leading to a downtrend in the weighted average issuing rates on central government bonds with varying maturities. The issuing rate on 20-year bonds recorded the largest decline of 48.2 basis points, followed by a 47.9 basis point slide in the issuing rate on 30-year bonds.

Broken down by institutional investor, bonds held by the banking industry made up the lion's share at 49.06%, followed by the insurance industry with a share of 25.65%.

As of the end of 2020, the total outstanding of central government bond issuance reached NT \$5,524.5 billion, representing an increase of NT\$41.2 billion or 0.75% from the previous year end.

**Shares of Government Bond Holdings
(by Institutional Investor)**



Source: Department of the Treasury, CBC.

In terms of bonds issued by governments of special municipalities, new bonds issued in 2020 were all by the government of Kaohsiung Special Municipality, with a total amount of NT\$40.5 billion. At the end of the year, the outstanding amount of bonds issued by governments of special municipalities stood at NT\$100.0 billion, expanding considerably by NT\$32.3 billion or 47.70% from the previous year end.

Substantial Increase in Corporate Bond Issuance

Corporate bonds refer to NT dollar- or foreign currency-denominated bonds issued in Taiwan by domestic corporations. In 2020, the issuing amount of corporate bonds went up substantially by NT\$439.7 billion or 109.14% to NT\$842.5 billion. The rise was primarily because corporations issued more new bonds to lock in mid- to long-term funding costs at low levels amidst a low interest rate environment.

In respect of bond maturities, 5-year corporate bonds accounted for a dominant share of the issuance at 34.85%, while 7-year bonds came in second with a share of 30.94%.

The six largest corporate bond issuers were Taiwan Semiconductor Manufacturing Company, Ltd., Taiwan Power Company, Fubon Financial Holdings, CTBC Financial Holding Co., Ltd., Hon Hai

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
2018	1,916.5	13,464.3	347.3	5,558.6	14.8	43.9	412.5	2,022.8	228.7	1,317.1	0.0	5.0	7.1	15.1	906.1	4,501.8
2019	1,808.3	13,872.3	410.0	5,483.3	33.8	67.7	402.8	2,113.4	162.2	1,313.7	5.3	8.4	17.5	26.7	776.5	4,859.2
2020	3,394.9	14,784.7	535.0	5,524.5	40.5	100.0	842.5	2,592.8	192.0	1,255.7	0.0	5.3	21.5	44.6	1,763.3	5,261.8
2020/ 1	156.0	13,858.0	65.0	5,498.3	0.0	67.7	29.9	2,110.1	4.0	1,302.7	0.0	8.4	0.0	26.1	57.1	4,844.6
2	386.7	13,877.2	30.0	5,528.3	0.0	67.7	5.5	2,098.8	0.0	1,276.3	0.0	7.7	0.0	26.1	351.2	4,872.3
3	348.3	13,847.6	55.0	5,468.3	0.0	67.7	53.0	2,129.7	57.5	1,289.5	0.0	7.4	0.0	26.1	182.7	4,859.0
4	372.0	14,081.6	30.0	5,464.8	20.0	79.5	115.6	2,228.8	0.0	1,248.2	0.0	7.1	0.0	26.1	206.4	5,027.1
5	386.3	14,278.6	30.0	5,464.8	0.0	79.5	69.0	2,274.5	7.6	1,231.6	0.0	6.9	0.0	26.1	279.7	5,195.3
6	269.5	14,253.3	30.0	5,422.5	0.0	79.5	86.7	2,305.4	18.7	1,227.0	0.0	6.6	0.0	25.9	134.1	5,186.5
7	203.5	14,305.1	25.0	5,447.5	0.0	79.5	69.1	2,330.5	2.6	1,229.6	0.0	6.4	0.0	25.4	106.8	5,186.2
8	244.6	14,311.0	25.0	5,472.5	0.0	79.5	37.6	2,335.0	25.2	1,245.1	0.0	6.3	2.1	26.8	154.7	5,145.8
9	389.0	14,456.9	55.0	5,447.5	0.0	79.5	165.1	2,464.1	7.7	1,243.0	0.0	6.1	2.3	28.1	158.9	5,188.6
10	139.7	14,512.4	30.0	5,442.5	0.0	79.5	40.8	2,482.7	10.4	1,252.5	0.0	5.3	0.6	28.6	57.9	5,221.3
11	200.6	14,552.8	60.0	5,439.5	0.0	79.5	50.6	2,509.2	19.7	1,224.4	0.0	5.3	15.0	43.2	55.3	5,251.7
12	298.5	14,784.7	100.0	5,524.5	20.5	100.0	119.4	2,592.8	38.8	1,255.7	0.0	5.3	1.5	44.6	18.3	5,261.8

Notes: * Referring to bonds issued by governments of special municipalities.

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

Sources: 1. *Financial Statistics Monthly*, CBC.

2. Banking Bureau, Financial Supervisory Commission.

3. Department of Foreign Exchange, CBC.

Technology Group (Foxconn), and Cathay Financial Holdings, with a combined issuance amount of NT\$369.8 billion, accounting for 43.89% of total issuance.

At the end of 2020, the outstanding amount of corporate bonds stood at NT\$2,592.8 billion, a marked increase of NT\$479.5 billion or 22.69% from the previous year end.

Growth in Bank Debenture Issuance

In 2020, a total of 21 domestic banks issued bank debentures in support of their funding needs, with an issuance amount of NT\$192.0 billion, up by NT\$29.8 billion or 18.36% over the previous year. The increase was largely because banks issued new debentures with low yields in order to repay old ones with higher yields amidst a low interest rate environment.

The main purpose for banks to issue bank debentures was to lock in mid- to long-term funding costs at low levels. The majority of the issuance went for senior bank debentures with a share of 51.71%.

In terms of the maturity of new issues, perpetual debentures accounted for the largest share of total issuance at 36.00%, while 10-year, 5-year, and 7-year debentures made up 24.89%, 19.32%, and 14.74%, respectively. Debentures of the other maturity ranges accounted for a combined share of 5.05%.

At the end of the year, the outstanding amount of bank debentures totaled NT\$1,255.7 billion, representing a year-on-year decrease of NT\$58.0 billion or 4.41%.

Slide in Asset Securitization Products

New issues of asset securitization products were nil in 2020. Nevertheless, as some asset securitization products matured and the principal was repaid, the outstanding amount of asset securitization dropped by NT\$3.1 billion or 36.81% from the previous year end to NT\$5.3 billion.

Uptick in Foreign Bond Issuance

Foreign bonds are defined as NT dollar-denominated corporate bonds issued in Taiwan by foreign enterprises. For the year 2020, foreign bond issuance reached NT\$21.5 billion, increasing by NT\$3.9 billion or 22.44% from a year earlier. The rise was mostly attributable to the NT\$15.0 billion worth of green bonds issued in Taiwan by a Danish energy company, Ørsted. At the end of the year, the outstanding amount of foreign bonds reached NT\$44.6 billion, increasing by NT\$17.9 billion or 66.95% over the previous year end.

Significant Expansion in International Bond Issuance

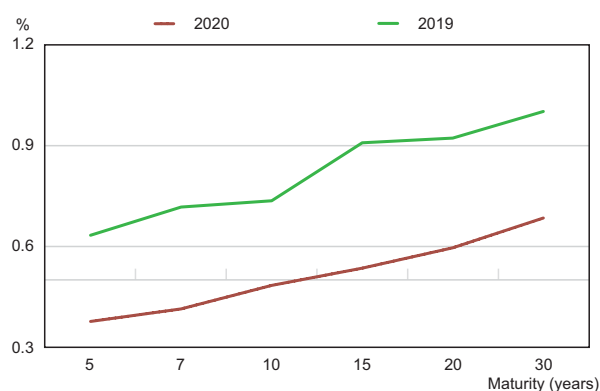
International bonds currently refer to foreign currency-denominated corporate bonds issued in Taiwan by foreign institutions. During 2020, issuance of international bonds went up considerably by NT\$986.8 billion or 127.08% from a year before to NT\$1,763.3 billion. The growth was primarily because some of the foreign institutions issued new bonds with lower yields in exchange of early redemption of old ones with higher yields.

As for currency composition, issuance of US dollar-denominated, RMB-denominated, and ZAR-denominated bonds in 2020 amounted to NT\$1,674.0 billion, NT\$82.0 billion, and NT\$7.4 billion, respectively. At the end of the year, the outstanding amount of international bonds reached NT\$5,261.8 billion, a year-on-year increase of NT\$402.6 billion or 8.29%.

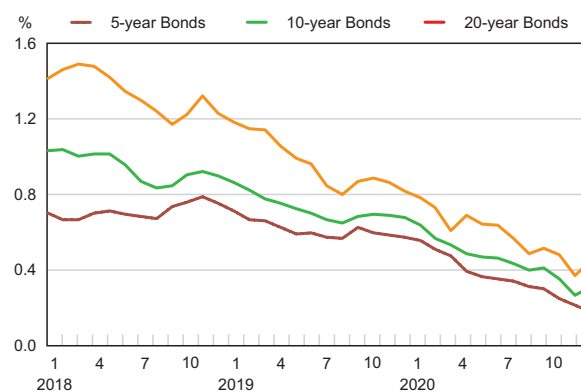
Downtrend in Average Government Bond Yields and Drop in Transactions

Government bond yields in 2020 were brought down by ample domestic liquidity and the Fed's rate reductions. The yield on 10-year government bonds slid and averaged 0.483% for the entire year, 25 basis points lower than the 0.736% of the previous year.

Compared to the previous year, the average yield curve of government bonds shifted downward for the year 2020. The average yield on 15-year bonds recorded the largest decrease of 38 basis points from a year before, while that on 20-year bonds came second with a decline of 33 basis points. Meanwhile, average yields on 5-year, 7-year, and 30-year bonds in the year moved down by 26, 30, and 32 basis points, respectively, over the previous year.

Yield Curve of Central Government Bonds

Source: Taipei Exchange (TPEX).

Yield on Central Government Bonds with Different Maturities

Source: TPEX.

In terms of transaction volume, annual transactions fell by NT\$5,383.8 billion or 9.30% to NT\$52,504.7 billion for the entire year as narrower yield spreads led to a less vibrant domestic bond market.

By type of bonds, the majority of total bond transactions went for government bonds with a share of 54.81% and an annual trading volume of NT\$28,776.6 billion. The second most actively traded were corporate bonds, contributing to 35.33% of total transactions with an annual trading

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				
2018	64,822.1	42,369.8	17,553.2	983.1	2,665.3	12.5	88.5	1,149.7
2019	57,888.5	35,896.7	17,103.2	1,051.9	2,713.1	17.7	168.4	937.5
2020	52,504.7	28,776.6	17,254.7	1,297.6	2,891.9	2.1	434.9	1,846.9
2020/ 1	3,884.9	2,338.4	1,154.2	66.4	186.6	0.3	25.1	114.0
2	4,912.3	3,049.3	1,247.8	93.2	203.2	0.7	29.4	288.8
3	6,086.9	3,763.7	1,550.1	126.4	332.0	0.3	45.8	268.6
4	4,934.8	2,786.3	1,580.2	86.7	261.1	0.5	41.0	179.0
5	4,307.9	2,294.7	1,435.5	105.8	221.7	0.3	31.6	218.3
6	4,234.4	2,200.7	1,524.7	100.0	246.3	0.1	32.2	130.5
7	4,584.6	2,408.3	1,636.0	114.6	263.8	0.0	36.6	125.3
8	4,232.0	2,274.1	1,390.9	114.0	268.7	0.0	39.8	144.4
9	4,419.8	2,180.5	1,722.4	118.9	223.2	0.0	43.6	131.1
10	3,686.1	1,930.4	1,310.7	107.5	213.6	0.0	30.7	93.2
11	3,531.3	1,753.8	1,284.1	116.8	227.7	0.0	45.4	103.5
12	3,689.8	1,796.4	1,418.1	147.3	244.0	0.0	33.8	50.2

Source: TPEX.

volume of NT\$18,552.3 billion. Bank debentures came in third, accounting for a smaller share of 5.51% with an annual trading volume of NT\$2,891.9 billion.

Meanwhile, international bonds, foreign bonds, and asset securitization products made up marginal shares of 3.52%, 0.83%, and 0.004% in total transactions, with their respective annual trading registering NT\$1,846.9 billion, NT\$434.9 billion, and NT\$2.1 billion.