

Financial Developments



II. Financial Developments

1. Overview

In 2020, the domestic economy rebounded significantly in the second half of the year and corporate demand for funds strengthened, leading to faster growth in loans and investments of monetary financial institutions. For the year as a whole, the annual growth rate of the monetary aggregate M2 rose from the 3.46% registered in 2019 to 5.84%.

As the Bank cut its policy rates in March in response to the COVID-19 pandemic, deposit rates and the base lending rate offered by banks moved downward, while the weighted average interest rates on deposits and on loans recorded a broad downtrend. After declining in March and April, the weighted average overnight call loan rate stabilized at a low level. Owing to ample market liquidity, bills market rates and the average 10-year government bond yield also declined.

In regard to the exchange rate, after the Fed's announcement of US\$2.3 trillion worth lending facilities at the beginning of April, the NT dollar maintained its strength against the US dollar. At the end of 2020, the NT dollar appreciated against the US dollar compared with a year earlier, and on a daily average basis, the NT dollar also appreciated against the US dollar in 2020 compared with the previous year.

In the stock market, tracking international market trends, the Taiwan Stock Exchange Capitalization Weighted Stock Index, the TAIEX, declined in the first three months of 2020. Afterwards, because many countries implemented easy monetary policies and various financial relief measures, the TAIEX swung up to a historical high at the end of the year. The daily average transaction value also hit a record high in 2020.

M1B and M2 Growth Picked Up

The monetary aggregate M2, measured on a daily average basis, recorded an annual growth rate of 5.84% in 2020. This was higher than the 3.46% registered in 2019 yet remained within the Bank's 2.5% to 6.5% reference range for the year. The increase was attributable to faster growth in bank loans and investments and net capital inflows. The annual growth rate of M1B, measured on a daily average basis, rose to 10.34% in 2020 from 7.15% a year earlier, mainly because of faster growth in transaction deposits. Meanwhile, the annual growth rate of reserve money went up in 2020, also as a result of faster growth in transaction deposits.

Bank Loans and Investments Grew Faster

The annual growth rate of bank loans and investments increased from 4.96% at the end of 2019

to 6.79% at the end of 2020. The increase was due to enterprises' stronger demand for funds resulting from obviously faster economic growth in the second half of the year. If loans and investments of life insurance companies, and non-accrual loans reclassified and bad loans written off by monetary financial institutions were all taken into account, the total outstanding loans and investments of financial institutions would register an annual growth rate of 6.66% at the end of 2020, higher than the 5.56% recorded a year earlier.

Deposit and Loan Rates Both Declined

In view of the impacts of the COVID-19 pandemic, the Bank cut policy rates in March and, as a result, the posted interest rates on deposits of banks dropped. At the end of 2020, the average fixed rate on one-year time deposits of the five major domestic banks was 0.77%, declining by 0.27 percentage points from a year earlier, and their average base lending rate was 2.442%, declining by 0.189 percentage points over the year before. Meanwhile, the weighted average rate on their newly-extended loans was 1.273% in 2020, declining by 0.113 percentage points over the previous year.

For domestic banks as a whole, the weighted average interest rate on deposits was 0.45%, declining by 0.10 percentage points over the previous year owing to a shift of funds from time deposits to demand deposits, which had lower rates, and the Bank's policy rate cut in March. Meanwhile, the weighted average interest rate on loans was 1.68%, declining by 0.19 percentage points owing to a weaker demand for funds amid the COVID-19 pandemic and the effect of the Bank's March rate cut.

Bills Market Rates and the 10-Year Government Bond Yield Dropped

In 2020, as the Bank continued to conduct open market operations to maintain market liquidity at an appropriately easy level, the weighted average overnight call loan rate kept steady at about 0.179% during January and February. It decreased to 0.144% in March as a result of the COVID-19 pandemic and the Bank's policy rate cut. The rate dropped further to 0.079% in April owing to the deferred effect of the Bank's rate cut, and fluctuated between 0.079% and 0.083% during the rest of the year. With regard to the bills market, easy funding conditions led money market rates to exhibit a downtrend. The 1-30 day commercial paper average rate in the secondary market was 0.34% in 2020, declining by 0.17 percentage points over the previous year.

The yield on the benchmark 10-year government bond also trended downward in 2020, mainly because of ample market liquidity and the Fed's rate reductions. In terms of issuance, as the Central Government Debt Service Fund renewed maturing government bonds and acted to meet budget needs, the total amount of government bonds increased by NT\$125.0 billion over the previous year.

NT Dollar Appreciated and Average Exchange Rate Rose

In early 2020, despite rising safe-haven buying of the US dollar amid the COVID-19 pandemic, the NT dollar exchange rate against the US dollar fluctuated within a small range as infections came under control in Taiwan. In March, although the Fed cut the policy rate twice and implemented unlimited quantitative easing (QE), the NT dollar depreciated on a daily average basis against the US dollar owing to continuous net foreign capital outflows. Thereafter, in addition to the Fed's announcement of US\$2.3 trillion worth lending facilities, the US dollar strength was also dampened by investor worries about a slowing US recovery amid renewed waves of COVID-19 infections in the second half of the year, as well as US President Trump's US\$2.3 trillion pandemic-aid and spending package in late December. These factors, combined with net capital inflows and exporters' selling of the US dollar, caused the NT dollar to maintain its strength against the US dollar and appreciate to a yearly high of 28.440 on December 11. At the end of 2020, the NT dollar appreciated by 5.61% year on year against the US dollar. On a daily average basis, the NT dollar appreciated against the US dollar by 4.55% in 2020.

Stock Index Rebounded; Both Index and Turnover Hit Historical Highs

In the beginning of 2020, when the COVID-19 pandemic spread worldwide from China and brought forth economic and financial impacts, along with large net sales in the local stock market by foreign investors, the TAIEX declined and reached a yearly low of 8,681 on March 19. Afterwards, because many countries introduced easy monetary policies and various financial relief measures, and the National Financial Stabilization Fund also stepped in to support the local stock market, the TAIEX bounced back. In the second half of the year, the prices of major technology stocks surged on account of increasing demand for electronics chips bolstered by robust business in 5G applications and remote working-related products during the pandemic lockdowns and strong sales of new iPhones. As a result, the TAIEX swung up successively and rose to a historical high of 14,733 points at the end of the year, increasing by 22.8% compared with a year earlier. The daily average transaction value was NT\$186.3 billion, also hitting a historical high with a significant increase of 70.4% over the previous year.

2. Banking Sector

Number of Monetary Financial Institutions

At the end of 2020, the number of monetary financial institutions (defined hereafter in this chapter as excluding the central bank) increased to 402. The number of domestic banks increased by one with the opening of Rakuten International Commercial Bank Co., Ltd. As for money market mutual funds, the number remained zero after the last remaining fund was liquidated in May 2017. The numbers of the other types of monetary financial institutions all stood unchanged.

In addition to monetary financial institutions, the number of financial holding companies was 16, the same as 2019.

Number of Monetary Financial Institutions by Type

Types of institutions	End of 2019	End of 2018	Annual Change
Total Number of Main Offices	402	401	1
Domestic Banks	38	37	1
Foreign and Mainland Chinese Banks	29	29	0
Credit Cooperatives	23	23	0
Credit Departments of Farmers' and Fishermen's Associations	311	311	0
Chunghwa Post	1	1	0
Total Number of Branches	6,090	6,092	-2
Local Branches	5,885	5,888	-3
Overseas Branches	146	145	1
Offshore Banking Units	59	59	0

Sources: 1. *Financial Statistics Monthly*, CBC.
2. Department of Financial Inspection, CBC.

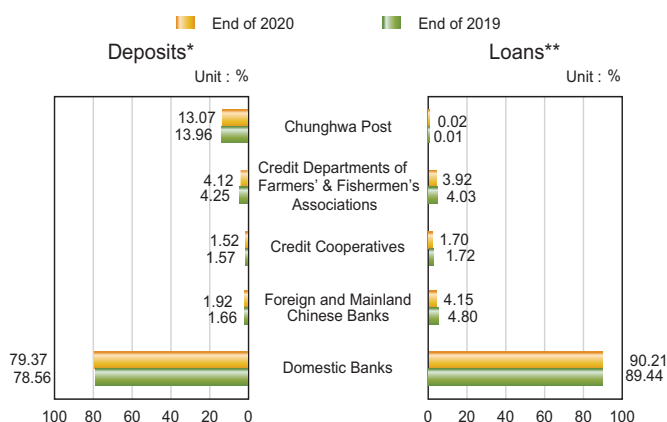
Market Shares of Deposits and Loans

In terms of deposits, the market share of domestic banks grew to 79.37% at the end of 2020, mainly because of an increase in inward remittances of overseas sales revenues owing to export growth in 2020. The market share of foreign and Mainland Chinese banks also rose to 1.92% at the end of 2020.

Although postal savings deposits showed a small increase, Chunghwa Post's market share still declined to 13.07%. The market share of credit departments of farmers' and fishermen's associations declined to 4.12%. The market share of credit cooperatives also dropped to 1.52% at the end of 2020.

In terms of loans, the market share of domestic banks rose to 90.21%, mainly owing to faster growth in loans to small and medium enterprises (SMEs), house-purchasing loans, relief loans for workers, as well as government loans. This rise also reflected banks' supportive programs as part of the government's relief policy measures in response to the COVID-19 pandemic. In contrast, foreign and Mainland Chinese banks' market share declined to 4.15%. For the other institution types, Chunghwa Post's market share edged up to 0.02% as a result of an increase in loans to bills finance companies. For credit departments of farmers' and fishermen's associations and credit cooperatives, which tend to have higher lending rates, their market shares continued to drop to 3.92% and 1.70%, respectively.

Market Shares of Deposits and Loans by Category of Monetary Financial Institutions



Notes: * Excluding the values of the host contracts of structured products issued by banks.

** Including data for securities acquired under reverse repurchase agreements.

Source: *Financial Statistics Monthly*, CBC.

Main Sources and Uses of Funds in Monetary Institutions

At the end of 2020, the total amount of funds in monetary financial institutions was NT\$55,323 billion, increasing by NT\$3,917 billion compared to the end of 2019. The combined share of transaction and non-transaction deposits was around 86%. Against a backdrop of abundant market liquidity, the balances of transaction deposits and non-transaction deposits kept growing, posting annual growth rates of 17.67% and 5.27%, respectively.

In the case of fund uses, bank loans still accounted for over 50% of total uses of funds at the end of 2020. While domestic economic growth was dampened by the pandemic in the first half of the year, loan growth increased in line with the government's financial relief measures. In the second half of the year, the coronavirus outbreak eased, export growth rebounded, and corporate funding needs grew. As the domestic housing market heated up, house-purchasing loans and construction loans continued to grow. At the end of the year, the loan balance of monetary financial institutions increased by NT\$2,082 billion from the end of the previous year, with an annual growth rate of 7.19%, higher than the 4.78% registered at the end of the previous year. As for net foreign assets, the annual growth rate rose to 23.37%, which was higher than the 18.35% registered at the end of the previous year owing to growing exports and an increase in investment in bonds and bills.

Portfolio investments by monetary financial institutions measured on a cost basis showed an annual growth rate of 5.81% in 2020. As for banks' purchases of certificates of deposit (CDs) issued

Sources and Uses of Funds in Monetary Financial Institutions¹

Unit: NT\$ Billion

	End of 2019			End of 2018			Annual Change	
	Amount	Share (%)	Annual Growth Rate (%)	Amount	Share (%)	Annual Growth Rate (%)	Amount	Share (%)
Sources:								
Transaction Deposits ²	19,940	36.04	17.67	16,946	32.97	7.44	2,994	3.07
Non-transaction Deposits ³	27,908	50.45	5.27	26,511	51.58	1.68	1,397	-1.13
NT Dollar Deposits	21,015	37.99	1.05	20,797	40.46	1.75	218	-2.47
Foreign Currency Deposits ⁴	6,893	12.46	20.63	5,714	11.12	1.44	1,179	1.34
Government Deposits	1,135	2.05	6.18	1,069	2.08	2.53	66	-0.03
Other Items	6,340	11.46	-7.85	6,880	13.37	10.78	-540	-1.91
Total	55,323	100.00	7.62	51,406	100.00	4.70	3,917	0.00
Uses:								
Net Foreign Assets ⁴	5,256	9.50	23.37	4,261	8.29	18.35	996	1.21
Loans	31,042	56.11	7.19	28,961	56.34	4.78	2,082	-0.23
NT Dollar Loans	30,026	54.27	6.99	28,063	54.59	5.24	1,963	-0.32
Foreign Currency Loans ⁴	1,016	1.84	13.21	898	1.75	-7.80	119	0.09
Portfolio Investments ⁵	6,784	12.26	5.81	6,411	12.47	5.32	373	-0.21
Purchases of CDs Issued by CBC	8,244	14.90	6.03	7,775	15.12	0.44	469	-0.22
Deposits with CBC	3,996	7.23	-0.07	3,999	7.78	-0.78	-3	-0.55

Notes: 1. Monetary Financial Institutions include Domestic Banks, Local Branches of Foreign and Mainland Chinese Banks, Credit Cooperatives, Credit Departments of Farmers' and Fishermen's Associations, Chunghwa Post and Money Market Mutual Funds.

2. Including checking accounts, passbook deposits and passbook savings deposits.

3. Including time deposits, time savings deposits, foreign currency deposits, postal savings deposits, non-residents' NT dollar deposits, repurchase agreements, and money market mutual funds.

4. Excluding valuation changes in the exchange rate of the NT dollar against foreign currencies.

5. Measured at original costs.

Source: *Financial Statistics Monthly*, CBC.

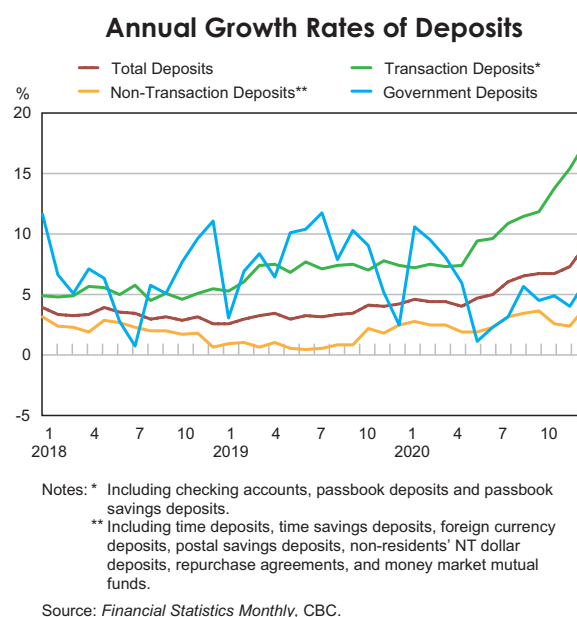
by the central bank, its share of total uses of funds remained broadly the same as in the previous year, and its annual growth rate increased significantly from 0.44% at the end of the previous year to 6.03%, mainly owing to ample funds.

Deposits

In 2020, factors affecting bank deposits included the Bank's March rate cut and loan relief policy to mitigate the pandemic's economic impact, a larger capital outflow compared to 2019, and a wave of repatriation of offshore funds encouraged by tax incentives. Against this backdrop, the annual growth rate of deposits was, by and large, on the rise during the course of the year, climbing significantly to 9.22% at the end of 2020 from 4.28% a year ago.

However, the above-mentioned monthly rises in the annual deposit growth rate was not seen during February to April. The downtrend in that period was mainly due to a significant decrease in the deposit balance of securities giro accounts because of the pandemic-induced stock market decline, along with net foreign capital outflows from February to March and a decrease in inward remittances from firms' overseas sales revenues in April.

For transaction deposits, the annual growth rate in 2020 showed monthly uptrends, except for January and March. At the end of 2020, the annual growth rate increased to 17.67% and its share in total deposits increased to 40.71%, which was mainly due to a year-on-year increase in the deposit balance of securities giro accounts as the stock market rose in the second half of the year, and a partial shift in non-transaction deposits into transaction deposits as the interest rate spread between non-transaction and transaction deposits became smaller following the policy rate cut in March.



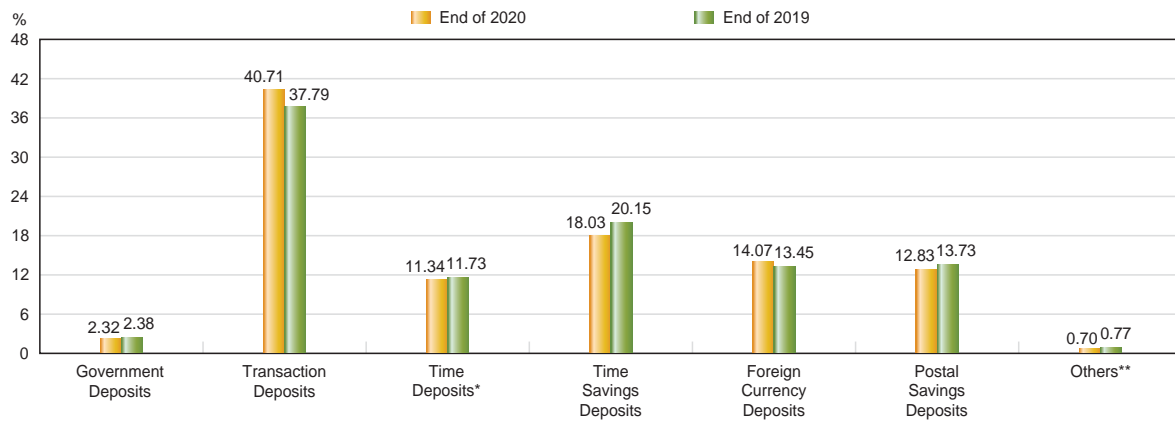
As for the two months showing slower annual growth, in January, the drop was because of the Lunar New Year holiday as firms tended to issue special and yearly bonuses, causing the deposit balance of passbook deposits to drop. In March, stock market weakness led the deposit balance of securities giro accounts to drop.

For non-transaction deposits, the annual growth rate rose to 4.01% at the end of 2020 because of increases in foreign currency deposits and time deposits.

By type of non-transaction deposits, the annual growth rate of foreign currency deposits roughly rose in the first half of the year and then fell in the second half of the year. The share and annual growth rate were 14.07% and 14.23% at the end of 2020, respectively. The uptrend in the first half of the year was mainly because of a decrease in net domestic capital outflows and an increase in inward remittances of overseas sales revenues. The annual growth rate of foreign currency deposits reached its peak at 15.27% in August, and then gradually decreased because the appreciation of the NT dollar against the US dollar caused some firms to convert their funds into NT dollars. By December, the growth rate of foreign currency deposits picked up again because of another increase in inward remittances.

Time deposits saw its annual growth rate rise to 5.62% and its share decline to 11.34% at the end of 2020. The faster growth was because inward remittances of overseas sales revenues increased as some firms expected the appreciation of the NT dollar against the US dollar would continue, thus weakening the incentive to hold foreign currency deposits. Meanwhile, banks implemented preferential interest rate programs to obtain long-term stable time deposits funds.

Shares of Deposits by Type



Notes: * Including NCDs.

** Including repurchase agreements, non-residents' NTD deposits and money market mutual funds.

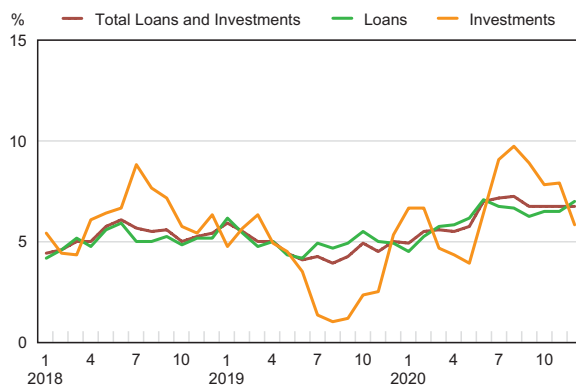
Source: *Financial Statistics Monthly*, CBC.

The annual growth rate of time savings deposits trended down in the year and reached -2.31% at the end of 2020 as savers reduced their time savings deposits owing to lower interest rates, and the market share also decreased to 18.03%. The annual growth rate of postal savings deposits was 2.00%, along with a drop in its share to 12.83%.

Bank Loans and Investments

The annual growth rate of loans and investments of monetary financial institutions was 6.79% at the end of 2020, up from 4.96% at the end of 2019. Growth in loans increased to an annual pace of 7.00% at the end of 2020 from 4.88% at the end of the previous year, owing to faster loan growth in support of the government's relief measures during the pandemic, an increase of house-purchasing loans, and stronger funding needs of enterprises on account of robust exports. Meanwhile, growth in portfolio investment accelerated to 5.81% at the end of 2020 from 5.32% a year earlier, as enterprises issued a significant amount of corporate bonds and commercial paper to lock in mid-to long-term funding costs at low levels, resulting in faster growth in banks' investment in corporate bonds and commercial paper.

Annual Growth Rates of Loans and Investments



Source: *Financial Statistics Monthly*, CBC.

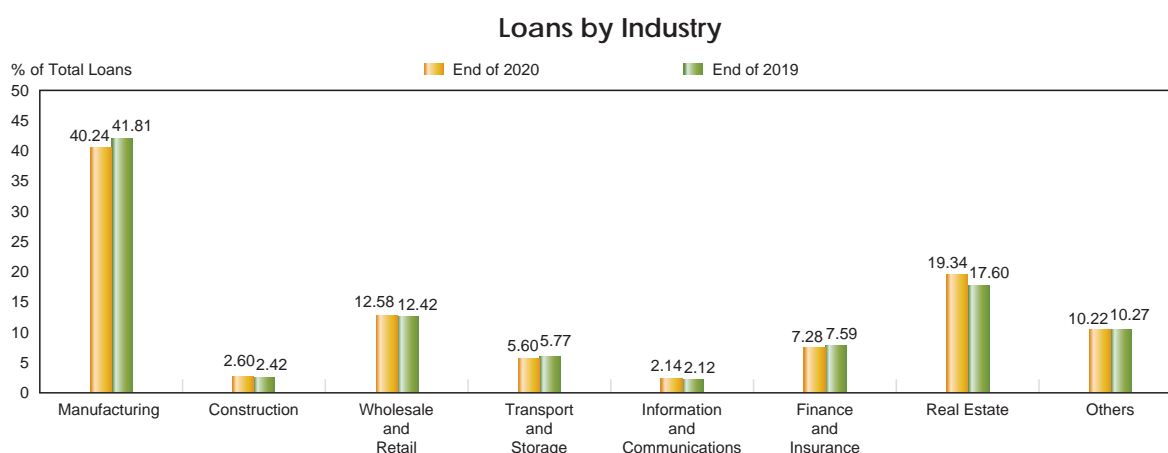
Loans by Sector

The annual growth rate of private sector loans extended by banks (defined in the following paragraphs as including domestic banks and local branches of foreign and Mainland Chinese banks) climbed to 7.70% at the end of 2020 from 5.47% a year earlier. The growth was largely driven by an increase of loans to SMEs, relief loans for workers, and a buoyant housing market that contributed to faster growth in house-purchasing loans and construction loans. The annual growth rate of loans to government enterprises continued to slide, registering -22.38% at the end of 2020 from -3.08% a year earlier, because increased issuance of commercial paper caused a decrease in borrowings from banks. Meanwhile, the annual growth rate of loans to government agencies saw a surge from 0.45% to 9.94% at the end of 2020 given a greater need for funds as a result of the pandemic.

In terms of loans composition, loans extended to the private sector and to government agencies accounted for 93.87% and 4.70% of total loans at the end of 2020, respectively, higher than the 93.44% and 4.58% recorded at the end of 2019. Loans extended to government enterprises accounted for 1.43% at the end of 2020, lower than 1.98% at the end of the previous year.

Loans by Industry

Broken down by industry sector, bank loans to the manufacturing sector continued to account for the largest portion, at 40.24% at the end of 2020 compared to 41.81% at the end of 2019, with its annual growth rate also down from 4.32% to 1.18%. The contraction was mainly due to a decline in loans extended to electronic parts and components manufacturing as some enterprises met their funding needs by issuing bonds and commercial paper rather than borrowing from banks. Meanwhile, the share of loans extended to the construction industry resumed a rise, with its annual



Note: Figures include the data of domestic banks and local branches of foreign and Mainland Chinese banks but exclude their data on securities acquired under reverse repurchase agreements.

Source: *Financial Statistics Monthly*, CBC.

growth rate soaring from 1.05% to 13.23% at the end of 2020, reflecting strong loan demand from this industry amid the housing market boom.

Similarly, the share and the annual growth rate of loans extended to the real estate industry also witnessed an upward trend. Meanwhile, the share and the annual growth rate of loans extended to the wholesale and retail industry rebounded, mostly fueled by a consumption pickup as the pandemic subsided domestically and by strong growth in IC exports. However, the share of loans extended to the finance and insurance industry shrank, brought about by a rise in bonds and commercial paper issuance by this industry, reducing demand for bank loans.

Consumer loans

The annual growth rate of consumer loans extended by banks increased from 5.65% at the end of 2019 to 8.96% at the end of 2020. Among them, house-purchasing loans grew by NT\$629.8 billion, or 8.50%, in 2020 because the housing market rebounded. As for the shares of various consumer loans, house-purchasing loans remained the largest component, with its share slightly decreasing from 84.49% at the end of 2019 to 84.13% at the end of 2020. Car loans accounted for 1.78%, increasing from 1.72% mainly because of the expiration of government tax incentives and car sales promotion strategies. Meanwhile, house-repairing loans, revolving credit for credit cards, employee welfare loans, and other consumer loans accounted for 0.65%, 1.10%, 0.57%, and 11.77%, respectively.

Investments

Owing to valuation changes, portfolio investments by monetary financial institutions, measured at fair value, recorded a year-on-year increase of NT\$408.2 billion, while the increase was smaller, at NT\$372.8 billion, when measured on a cost basis.

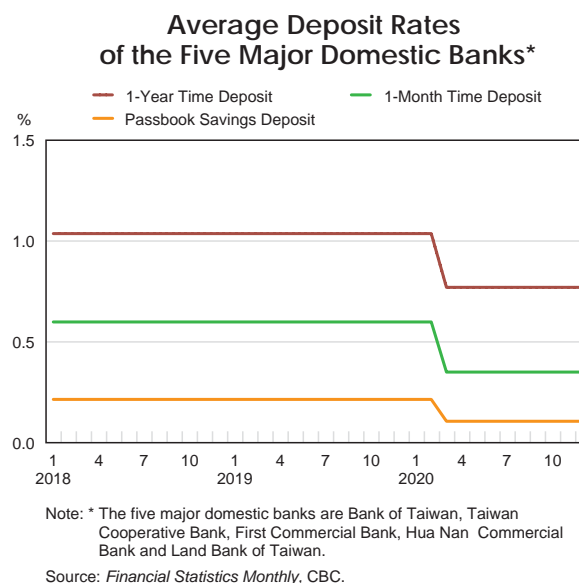
Portfolio investments by monetary financial institutions, measured on a cost basis, grew at a higher rate of 5.81% in 2020, mainly because major economies maintained an accommodative monetary policy stance as they were watchful of uncertainties relating to the COVID-19 pandemic and the implications for economic conditions. Meanwhile, domestic financial system liquidity remained ample. In addition, corporates increased interest-related securities issuance to meet funding needs as interest rates stayed low.

Among the investment instruments, government bonds accounted for the largest share with 54.96%, lower than the 60.39% registered a year ago, mainly because the Bank cut policy rates and market interest rates remained low. Meanwhile, banks and the Department of Savings and Remittances of Chunghwa Post sought to increase their returns on investments by adjusting their asset allocations to invest more in corporate securities. At the end of 2020, commercial paper accounted for a share of 19.84%, higher than a year ago, mainly because banks increased government enterprise

commercial paper positions. Corporate bonds accounted for a share of 17.52%, increasing from the end of 2019 as banks invested more in private enterprise bonds.

Bank Interest Rates

The spread of the COVID-19 pandemic in 2020 has led to a sharp deterioration in the global economic outlook, severe fluctuations in the international financial market, and a slowdown in the domestic economy. The uncertainty surrounding business operations increased, which impacted the job market. Considering the destabilizing effect of large capital movements, and in order to support the continued operation of enterprises, the Bank lowered the policy interest rates by 25 basis points on March 19 to stimulate the economy. As a result, the posted interest rates on deposits of banks went down. In the case of the interest rates of the five major domestic banks, their average fixed rates on one-month and one-year time deposits decreased to 0.35% and 0.77% at the end of March 2020 from 0.60% and 1.04% at the end of February, respectively, while remaining steady for the rest of the year.



The weighted average rates on deposits and loans of domestic banks also generally showed a downward trend in 2020. In the first quarter of 2020, the deposit rate declined to 0.54% from 0.55% in the fourth quarter of the previous year, mainly owing to the increase in the share of transaction deposits in total deposits and the Bank's rate cut in March while some maturing fixed-rate time deposits would begin to use lowered new rates if renewed. In the second quarter, the rate fell sharply to 0.44% and further declined to 0.40% in the fourth quarter. On the whole, the weighted average interest rate on total deposits of domestic banks was 0.45% in 2020, which was 0.10 percentage points lower than that recorded in the previous year.

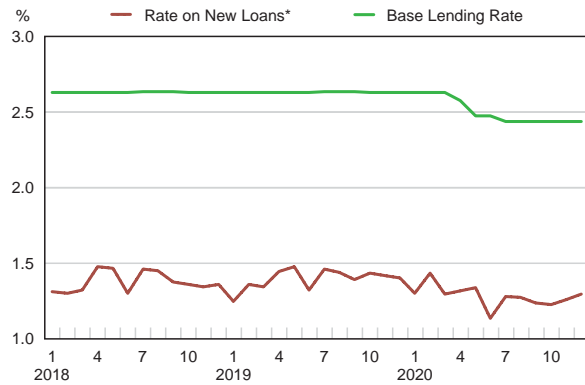
After the Bank's March rate cut, various banks successively lowered their base lending rates and the index rates on adjustable-rate mortgages, as well as further rate reductions for relief loans. As a result, the weighted average interest rate on new loans of the five major domestic banks broadly trended downward to between 1.135% and 1.434%. For the year as a whole, the rate dropped from 1.386% in the previous year to 1.273% in 2020. Excluding central government loans, the weighted average interest rate on new loans decreased from 1.409% in the previous year to

1.302% in 2020, down by 0.107 percentage points. The average base lending rate decreased to 2.442% at the end of 2020 from 2.631% at the previous year-end.

In the first quarter of 2020, owing to the spread of the COVID-19 pandemic, the low demand for funds, the effect of the Bank's interest rate cut, and the additional rate cuts in line with the government's relief loan measures, the weighted average interest rate on total loans of domestic banks slightly fell from 1.87% in the fourth quarter of 2019 to 1.85%, and it dropped further to 1.66% in the second quarter. In the fourth quarter, the expiration of banks' additional lending rate reduction in line with the government's relief efforts caused the rate to rise slightly from 1.61% in the third quarter to 1.62%. For the year as a whole, the weighted average interest rate on loans of domestic banks was 1.68%, which was 0.19 percentage points lower than that recorded in the previous year.

Because the decrease in the average deposit rate was less than that in the average lending rate, the average interest rate spread between deposits and loans declined to 1.23 percentage points in 2020, which was 0.09 percentage points smaller than that recorded in the previous year.

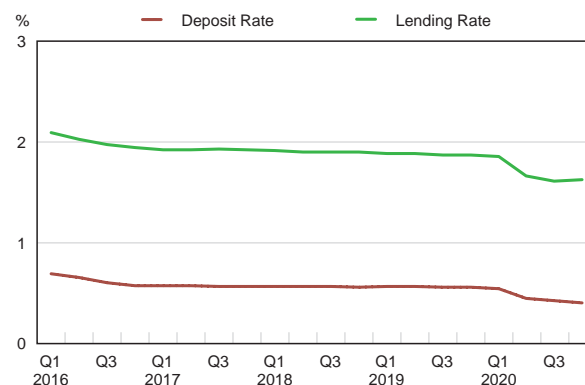
Average Lending Rates of the Five Major Domestic Banks



Note: * Including housing loans, capital expenditure loans, current operations loans and consumer loans.

Source: *Financial Statistics Monthly*, CBC.

Weighted Average Interest Rates of Domestic Banks



Source: *Financial Statistics Monthly*, CBC.

3. Money Market

For the year 2020, the total turnover in the interbank call loan market fell by 6.38% year on year, whereas that in the short-term bills market increased by 8.97%. In terms of money market rates, as the Bank reduced the policy rates by 25 basis points in March in response to the impacts of the COVID-19 pandemic, the interbank overnight call loan rate and bills market rates displayed downtrends. Later in the year, the Bank kept the policy rates on hold amid expectations of a rebound in the domestic economy and a mild inflation outlook. The interbank overnight call loan rate and bills market rates thus fluctuated in a narrow range.

Reduction in Interbank Call Loans

Demand for interbank call loans remained weak in 2020, reflecting ample domestic liquidity and the Bank's continued accommodative monetary policy stance. Total annual turnover of interbank call loans stood at NT\$28,093.1 billion, dropping by NT\$1,913.7 billion or 6.38% over the previous year.

With respect to borrowers, domestic banks still made the largest contribution to total transactions with a share of 77.73%, followed by bills finance companies, foreign and Mainland Chinese banks, and Chunghwa Post, with shares of 12.69%, 8.12%, and 1.46%, respectively.

The amount borrowed by domestic banks went up by NT\$701.5 billion or 3.32% from the year before. The increase was mainly because banks' demand for interbank borrowing mounted up as they tried to meet fund allocation needs against a backdrop of rising debt levels of the national treasury owing to the government's pandemic relief and stimulus measures and the Bank's expanded issuance of CDs to absorb market liquidity.

Meanwhile, increased outright sales in the bills market lowered bills finance companies' demand for funds. The amount borrowed by bills finance companies registered a year-on-year decrease of NT\$586.8 billion or 14.13%.

As some of the foreign and Mainland Chinese banks saw their funding needs soften, and some of them turned to their head offices abroad for foreign currency borrowings and then obtained funds through forex swap transactions conducted by domestic banks, the amount borrowed by foreign and Mainland Chinese banks fell by NT\$740.6 billion or 24.52% over the previous year.

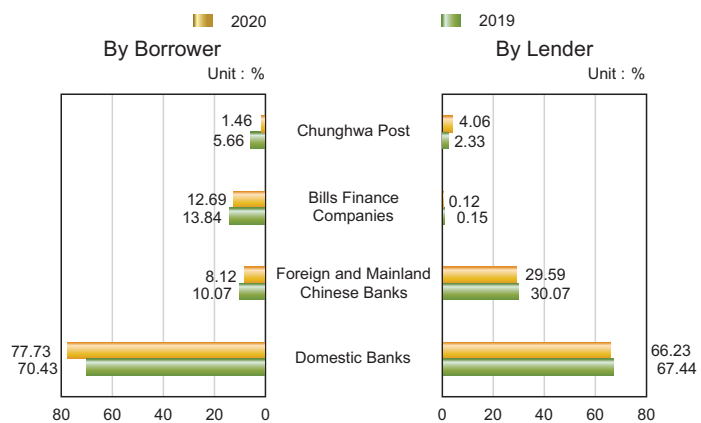
Additionally, the amount borrowed by Chunghwa Post dropped substantially by NT\$1,287.8 billion or 75.83% compared with the previous year as its Department of Savings and Remittances managed funds effectively, thus driving down its demand for borrowing.

In terms of lenders, domestic banks remained the largest supplier of funds, contributing to 66.23% of total transactions in 2020. Foreign and Mainland Chinese banks came second with a share of 29.59%, followed by Chunghwa Post and bills finance companies, making up 4.06% and 0.12% of total transactions, respectively.

With increased lending to meet borrowers' demand resulting in less available funds at hand, the amount of call loans made by domestic banks slid by NT\$1,630.3 billion or 8.06%, compared with the previous year. As for foreign and Mainland Chinese banks, who often carry out the custodian business for foreign investors, massive stock market sell-offs by foreign investors and the consequent capital outflows reduced the source of funds for them, causing the call loans made by this group to decline by NT\$711.4 billion or 7.88% over the previous year.

On the contrary, to channel excess available funds at hand, Chunghwa Post increased its interbank lending by NT\$441.2 billion or 63.15% over the previous year, whereas the amount lent by bills finance companies recorded a year-on-year decrease of NT\$13.1 billion or 28.29% on account of insufficient funds at their disposal.

Composition of Interbank Call Loan Market by Participant



Source: Financial Statistics Monthly, CBC.

In respect to maturity, interbank overnight call loans remained the most actively traded instrument in the market with a predominant share of 40.40%, down by 8.35 percentage points from that of the previous year. The second were those with a maturity of one week, accounting for 40.00%, up by 3.27 percentage points from that of the previous year, while the share of loans with a two-week maturity rose by 2.34 percentage points to 13.13%.

Growth in Short-Term Bill Transactions

For the year 2020, newly issued short-term bills stood at NT\$16,005.2 billion. Commercial paper made up a dominant 92.62% of the new issues, followed by negotiable certificates of deposit (NCDs) with a share of 5.19%.

The rise in the volume of newly issued short-term bills was mainly attributable to increased issuance of commercial paper with an amount of NT\$1,211.1 billion because government enterprises

and private enterprises issued commercial paper to raise funds amidst a persistently low interest rate environment. The second largest contributor were treasury bills with a rise of NT\$22.6 billion over the previous year, primarily on account of an increase in issuance to support fiscal funding needs.

However, issuance of NCDs shrank by NT\$154.8 billion from the previous year. This was because, when part of the NCDs reached maturity, some bank holders did not renew the issuance of NCDs after assessing their own funding conditions or corporate holders did not renew their purchases in order to free up funds for other purposes. Meanwhile, the amount of banker's acceptances went down slightly by NT\$1.0 billion from a year before.

Overall, the increase in the total issuance of short-term bills was greater than that in the total repayments for short-term bills. Therefore, the outstanding of short-term bills stood at NT\$2,747.2 billion as of the end of 2020, showing an increase of NT\$394.0 billion or 16.75% from that of the previous year end.

Short-Term Bills Market

Unit: NT\$ Billion

Year	Total		Treasury Bills		City Treasury Bills		Commercial Paper		Bankers' Acceptances		Negotiable Certificates of Deposit	
	Issues	Year-end Outstanding	Issues	Year-end Outstanding	Issues	Year-end Outstanding	Issues	Year-end Outstanding	Issues	Year-end Outstanding	Issues	Year-end Outstanding
2011	7,424.0	1,192.6	321.2	180.3	-	-	6,270.5	735.2	30.1	5.7	802.2	271.5
2012	8,187.7	1,454.0	265.0	195.0	-	-	7,311.6	1,023.6	24.2	4.3	586.9	231.1
2013	9,809.0	1,650.2	324.6	214.6	-	-	8,827.4	1,199.2	23.5	4.2	633.5	232.3
2014	10,840.6	1,641.2	244.9	130.0	10.0	0.0	9,919.5	1,306.8	24.1	4.3	642.2	200.2
2015	11,512.8	1,677.7	233.7	90.0	-	-	10,426.0	1,346.6	20.8	3.5	832.3	237.6
2016	12,778.5	1,873.5	217.3	90.0	-	-	11,371.3	1,480.1	18.3	4.1	1,171.6	299.4
2017	14,878.5	2,154.5	220.0	25.0	-	-	13,077.8	1,709.0	19.4	4.2	1,561.3	416.4
2018	14,971.9	2,223.1	160.0	30.0	-	-	12,965.0	1,760.6	18.5	4.0	1,828.5	428.5
2019	14,927.3	2,353.2	314.0	65.0	-	-	13,613.6	2,034.1	14.0	2.6	985.7	251.5
2020	16,005.2	2,747.2	336.6	125.0	-	-	14,824.7	2,344.3	13.0	2.8	830.9	275.1

Source: Financial Statistics Monthly, CBC.

The total turnover of short-term bills in 2020 expanded by NT\$3,635.4 billion or 8.97% to NT\$44,140.9 billion. Of the total transactions, commercial paper still accounted for the lion's share of 95.21%, up by 0.58 percentage points from a year earlier. The second were NCDs with a share of 3.99%, 0.73 percentage points lower than the previous year. As for market participants, private enterprises were still the largest player in the market with a share of 47.63%, followed by banks and bills finance companies with shares of 28.41% and 14.61%, respectively.

Downtrend in Money Market Rates

In 2020, the weighted average interbank overnight call loan rate exhibited a broad downtrend. In January, despite sufficient market liquidity, the interbank overnight call loan rate slightly trended up to 0.180% from the previous month's 0.177%, reflecting increased borrowing by the national

treasury, rising issuance of government bonds and treasury bills, and greater currency demand because of the Lunar New Year holidays. The rate went back down to 0.178% in February on account of a reverse flow of currency back to the banking system after the Lunar New Year holidays.

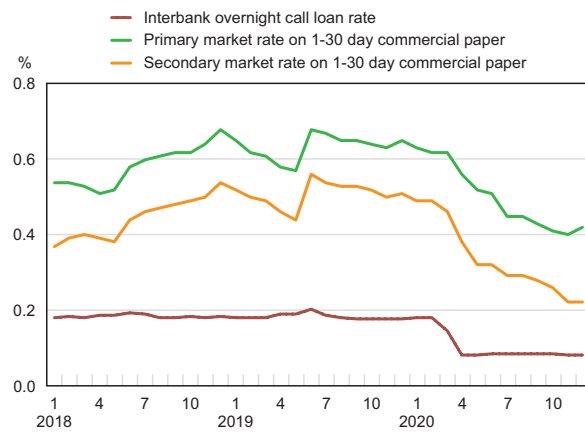
In March, the spread of the coronavirus pandemic and plunging international oil prices led US stocks to tumble, triggering a wave of panic sentiment in financial markets. Continued net sales by foreign investors in the Taiwan Stock Exchange (TWSE) market and the resulting net foreign capital outflows prompted banks to be somewhat cautious about their funding management. These developments, combined with a 25 basis points rate cut by the Bank in late March, sent the interbank overnight call loan rate lower to 0.144%. The rate further slid to 0.079% in April, reflecting the effect of the policy rate reduction.

From June onwards, banks became more cautious about fund allocation given a tighter money market because of the Dragon Boat Festival holidays, payments of the collected income tax revenue to government treasuries, and banks as well as firms preparing for semiannual financial reporting and distributing cash dividends. The interbank overnight call loan rate thus fluctuated in a narrow range.

In the months of October through to December, despite several public holidays and the approach of the year end leading to stronger demand for funds, market liquidity was at a reasonably ample level, alongside net foreign capital inflows for three consecutive months. Therefore, the weighted average interbank overnight call loan rate slightly fluctuated between 0.080% and 0.082%.

The primary market rate on commercial paper with a maturity of 1-30 days dropped to 0.42% in December from 0.65% recorded one year ago, while the secondary market rate on commercial paper with a maturity of 1-30 days significantly slipped to 0.22% in December, far lower than the 0.51% registered a year earlier.

Money Market Interest Rates



Substantial Increase in Money Market Funds

In the year 2020, money market funds were generally seen as an ideal investment option to park short-term capital given the benefits of stable returns, low risk, high liquidity, and better yields than those of the other fixed-income instruments. As a result, the size of money market funds reached

a record high for the past four years. At the end of 2020, there were a total of 41 money market funds in Taiwan and the total assets reached NT\$1,021.0 billion with an increase of NT\$227.3 billion or 28.64% from the end of the previous year.

With regard to portfolio composition, the largest use of funds was bank deposits with a share of 54.47% at the end of the year. Following bank deposits were short-term bills and repurchase agreements, accounting for 33.93% and 11.47% of the total money market funds, respectively.

Portfolio Composition of Money Market Funds

Unit: NT\$ Billion

Year/Month End	Total	Bank Deposits		Short-Term Bills		Repurchase Agreements		Bonds	
		Amount	Share (%)	Amount	Share (%)	Amount	Share (%)	Amount	Share (%)
2018	683.6	455.0	66.56	151.1	22.10	76.9	11.25	0.7	0.10
2019	793.7	457.5	57.64	233.7	29.45	100.6	12.67	1.9	0.24
2020	1,021.0	556.1	54.47	346.4	33.93	117.1	11.47	1.4	0.14
2020/ 1	812.0	472.3	58.17	232.5	28.64	105.7	13.02	1.4	0.17
2	794.7	478.4	60.20	230.2	28.97	84.5	10.63	1.6	0.20
3	769.5	459.9	59.77	226.3	29.41	81.7	10.62	1.6	0.20
4	880.8	460.6	52.30	299.1	33.96	119.5	13.56	1.5	0.17
5	889.3	471.4	53.01	311.7	35.05	104.8	11.78	1.4	0.16
6	887.7	469.9	52.94	310.2	34.95	106.2	11.96	1.4	0.15
7	922.0	503.8	54.64	307.7	33.37	109.1	11.83	1.5	0.16
8	928.8	505.7	54.45	313.5	33.75	108.0	11.63	1.6	0.17
9	966.5	522.2	54.03	324.9	33.61	117.7	12.18	1.8	0.18
10	979.0	533.9	54.54	326.6	33.37	117.1	11.96	1.3	0.14
11	1,000.9	551.6	55.11	331.6	33.13	116.2	11.61	1.4	0.14
12	1,021.0	556.1	54.47	346.4	33.93	117.1	11.47	1.4	0.14

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

4. Foreign Exchange Market

The NT Dollar Exchange Rate

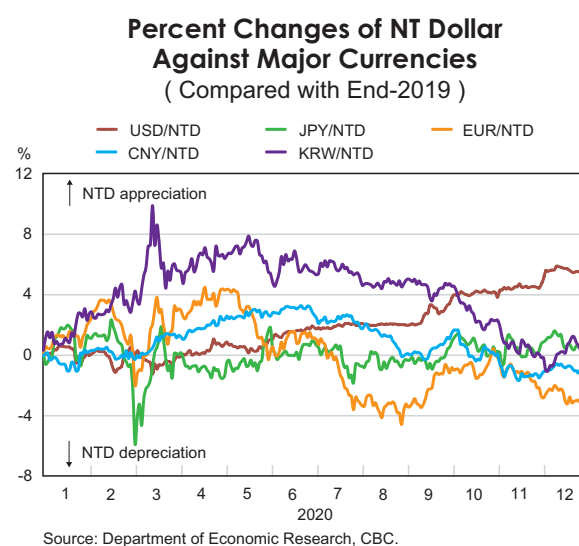
On a daily average basis in 2020, the NT dollar appreciated against the Korean won, the US dollar, the renminbi (RMB), the euro and the Japanese yen. The trade-weighted nominal effective exchange rate index of the NT dollar increased by 4.29% on a daily average basis. The exchange rate movements of the NT dollar vis-à-vis each of the above foreign currencies are analyzed as follows.

During the course of the year, the NT dollar against the US dollar appreciated slightly. Early in the year, the COVID-19 pandemic impacted the world, which led to an increase in safe-haven demand for US dollars; however, the pandemic in Taiwan was well controlled, resulting in the NT dollar against the US dollar fluctuating within a limited range. In March, although the Fed cut interest rates twice and declared it would purchase Treasury securities and agency mortgage-backed securities in the amounts needed, the NT dollar depreciated against the US dollar owing to net foreign capital outflows. Then, as the Fed announced US\$2.3 trillion worth lending facilities in early April and later reiterated its commitment to support the pandemic-hit economy with low interest rates, the NT dollar appreciated against the US dollar. In the second half of 2020, the pandemic worsened in the United States, which led investors to worry that the pace of the economic recovery had moderated, and US President Donald Trump signed into law a US\$2.3 trillion pandemic aid and spending package. Against this backdrop, combined with the repatriation of offshore funds, the NT dollar appreciated continuously against the US dollar. At the end of 2020, the NT dollar appreciated by 5.61% against the US dollar compared with the end of the previous year. On a daily average basis, the NT dollar appreciated against the US dollar by 4.55% in 2020.

In 2020, the NT dollar against the euro appreciated in the first four months and depreciated toward the year end. Early in the year, the COVID-19 pandemic spread in Europe and affected economic activity. In March, the euro weakened on the ECB's announcement of a temporary envelope of additional net asset purchases of €120 billion until the end of the year, leading the NT dollar to appreciate against the euro. In the second quarter, the European Commission (EC) announced a plan to set up a €750 billion recovery fund to boost investor confidence in the euro area's economic outlook, sending the NT dollar against the euro to a yearly low of 35.399 on September 1. Late in September, the NT dollar appreciated against the euro as the euro was constrained by the second wave of COVID-19 in Europe. Later, the NT dollar depreciated against the euro as the euro strengthened on the back of the EC's approval of COVID-19 vaccine use, the ECB's expansion of its emergency bond buying, and a trade deal to avoid post-Brexit chaos. Compared with the end of the previous year, the NT dollar depreciated against the euro by 3.73% at the end of 2020. On a daily average basis, the NT dollar appreciated against the euro by 2.47%.

During the course of the year, the NT dollar against the yen fluctuated narrowly, except for a brief depreciation in March. Early in the year, the COVID-19 pandemic outbreak drove the yen higher on safe-haven demand, sending the NT dollar against the yen to a yearly low of 0.2946 on March 9. Later, because of the escalation of the COVID-19 outbreak in Japan, the NT dollar appreciated against the yen. From April on, the NT dollar against the yen fluctuated in tandem with the developments in the pandemic, US-China relations, prospects of a global economic recovery, the US presidential election, and vaccine progress. In sum, the NT dollar appreciated by 0.23% against the yen at the end of 2020 compared with the previous year end. On a daily average basis, the NT dollar appreciated against the yen by 2.41%.

The NT dollar against the RMB appreciated in the first half of 2020 and depreciated toward the end of the year. Early in the year, because of RMB strength on the signing of the US-China "phase one" economic and trade agreement, the NT dollar depreciated against the RMB. From then through to June, the NT dollar rose on RMB weakness mainly as result of the People's Bank of China's monetary policies to mitigate the impact of a rapid COVID-19 spread, as well as renewed US-China tensions since May; therefore, the NT dollar against the RMB appreciated and reached a yearly high of 4.1857 on June 29. In the second half of 2020, China's better-than-anticipated economic recovery, expectations of improved US-China tensions after the US presidential election in November, and the signing of the Regional Comprehensive Economic Partnership (RCEP) on November 15 combined to result in a depreciation of the NT dollar against the RMB. Overall, the NT dollar



Annual Changes of NTD Exchange Rate Against Major Currencies

	NTD/USD	NTD/EUR	NTD/JPY	NTD/CNY	NTD/KRW
Exchange Rate (2020/12/31)	28.508	35.056	0.2765	4.3592	0.0262
Exchange Rate (2019/12/31)	30.106	33.749	0.2771	4.3217	0.0261
Annual Change	5.61%	-3.73%	0.23%	-0.86%	-0.65%
Average Exchange Rate (2020)	29.578	33.784	0.2770	4.2862	0.0251
Average Exchange Rate (2019)	30.925	34.620	0.2837	4.4765	0.0265
Annual Change	4.55%	2.47%	2.41%	4.44%	5.89%

Source: Department of Economic Research, CBC.

depreciated against the RMB by 0.86% between end-2019 and end-2020. On a daily average basis, the NT dollar appreciated by 4.44% against the RMB when compared with the previous year.

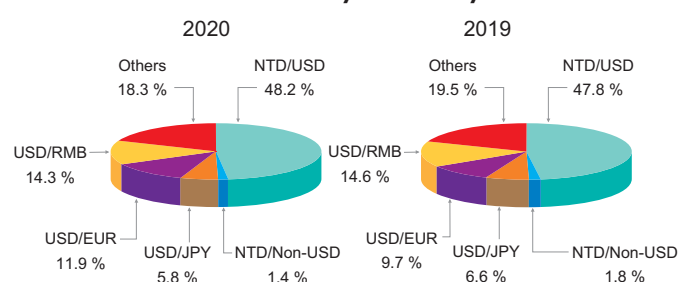
The NT dollar against the Korean won appreciated in the first five months and depreciated broadly in the rest of 2020. Early in the year, two policy rate cuts by the Bank of Korea in March and May in view of weak exports and impacts from sharp increases in COVID-19 cases, as well as rising tensions on the Korean Peninsula, led the won to weaken and the NT dollar against the won to appreciate. In the second half of 2020, the Korean won strengthened on a moderate economic expansion and an upgraded GDP growth forecast for 2020 and the NT dollar depreciated against the won. Compared with the end of 2019, the NT dollar depreciated by 0.65% against the Korean won at the end of 2020. On a daily average basis, the NT dollar appreciated by 5.89% against the won in 2020.

Foreign Exchange Trading

Trading in the Taipei foreign exchange market increased in 2020. Total net trading volume for the year was US\$8,271.0 billion, representing a 3.2% year-on-year increase. The daily average turnover was US\$33.1 billion in 2020.

In terms of trading partners, transactions between banks and non-bank customers accounted for 32.9% of the total turnover, while interbank transactions made up 67.1%, including 23.2% for transactions among local banks and 43.9% for those between local banks and overseas banks.

Composition of Foreign Exchange Transactions by Currency Pair



Source: Department of Foreign Exchange, CBC.

Turnover of Major Products in the Taipei Foreign Exchange Market

Unit: US\$ Million

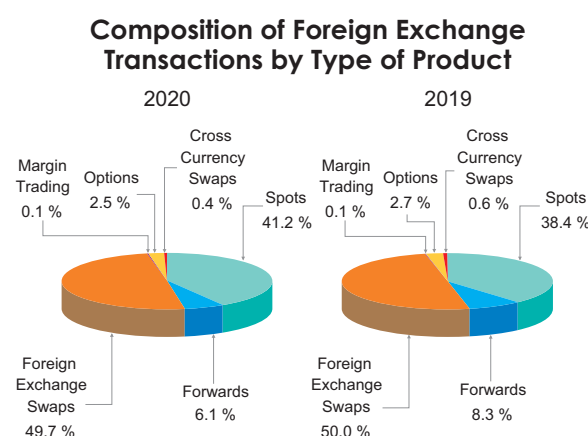
Year	Spots	Forwards	Forex Swaps	Margin Trading	Options	Cross Currency Swaps	Total
2016	2,780,002	477,036	3,430,524	17,437	358,694	50,109	7,113,802
2017	2,826,236	423,119	3,550,558	12,402	242,537	43,934	7,098,786
2018	3,111,414	567,790	3,992,873	7,876	249,254	58,354	7,987,560
2019	3,079,471	661,954	4,007,094	6,430	213,734	45,308	8,013,990
2020	3,408,766	503,730	4,110,852	7,265	205,969	34,458	8,271,041
2019-2020 Annual Growth Rate (%)	10.7	-23.9	2.6	13.0	-3.6	-23.9	3.2

Source: Department of Foreign Exchange, CBC.

As far as traded currencies were concerned, NT dollar trading against foreign currencies accounted for 49.6% of the total trading volume, of which trading against the US dollar (USD) made up a dominant 48.2%. Transactions in third currencies contributed to 50.4% of the total trading volume, with trading in currency pairs of USD-RMB, USD-euro, and USD-yen accounting for respective shares of 14.3%, 11.9%, and 5.8%. Compared with 2019, NT dollar trading against foreign currencies and transactions in third currencies both increased by 3.2%.

With respect to types of transactions, the major types were foreign exchange swaps and spots, accounting for 49.7% and 41.2% of total turnover, respectively. Compared with 2019, the trading volume of spots, foreign exchange swaps and margin trading increased, whereas those of the other types decreased.

For other foreign currency derivatives, including forwards, swaps, and options based on foreign currency interest rates, stock price indices, commodity prices, and credit derivatives, total turnover amounted to US\$100.2 billion. Of this amount, interest rate-related derivatives accounted for the lion's share at 96.4% with US\$96.6 billion, decreasing by 46.3% from the previous year. Interest rate futures accounted for the majority of this decrease, down by US\$61.9 billion.



Source: Department of Foreign Exchange, CBC.

Turnover of Other Products in the Taipei Foreign Exchange Market

Unit: US\$ Million

Year	Interest Rate-Related Products					Commodity-Related Products	Stock Index Options	Credit Derivatives	Total
	Forward Rate Agreements	Interest Rate Swaps	Interest Rate Options	Foreign Currency Interest Rate Futures	Subtotal	Commodity Options			
2016	120	41,952	5,743	51,222	99,037	3,053	145	933	103,168
2017	-	49,453	11,412	116,911	177,776	2,802	121	857	181,556
2018	-	78,848	25,974	149,310	254,132	3,524	403	2,861	260,920
2019	-	70,809	12,429	96,751	179,989	3,771	384	969	185,113
2020	-	52,113	9,580	34,882	96,576	3,087	147	399	100,208
2019-2020 Annual Growth Rate (%)	-	-26.4	-22.9	-63.9	-46.3	-18.1	-61.8	-58.8	-45.9

Source: Department of Foreign Exchange, CBC.

Renminbi Business

Renminbi investment tools became even more diversified during 2020. By the end of 2020, there were 65 domestic banking units (DBUs) and 57 offshore banking units (OBUs) engaging in renminbi business. The balance of renminbi deposits amounted to RMB244.5 billion; renminbi remittances totaled RMB1,615.5 billion in 2020; and renminbi settlement through the Taipei Branch of the Bank of China totaled RMB4,907.2 billion.

Renminbi Business Conducted by Financial Institutions

Unit: RMB Billion

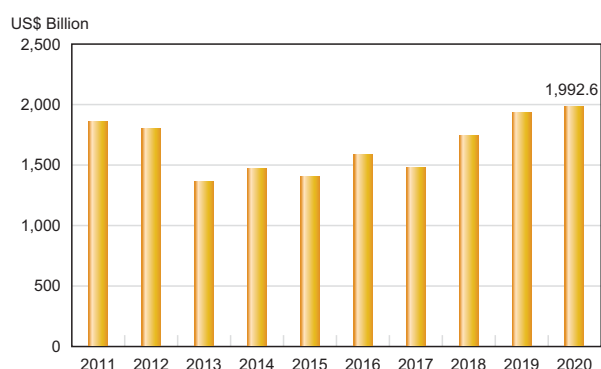
Business Items	Amount
Deposit balance (include NCDs, end of 2020)	244.5
Total remittances (February 2013 to December 2020)	13,002.7
Total settlement through the Taipei Branch of the Bank of China (February 2013 to December 2020)	32,645.0
Total value of 180 RMB-denominated bonds issued (as of the end of 2020)	118.7
Accumulated premium receipts from RMB-denominated investment-linked insurance business (February 2013 to December 2020)	20.5
Accumulated premium receipts from RMB-denominated traditional insurance business (April 2014 to December 2020)	7.2

Source: Department of Foreign Exchange, CBC.

Foreign Currency Call Loan & Swap Market

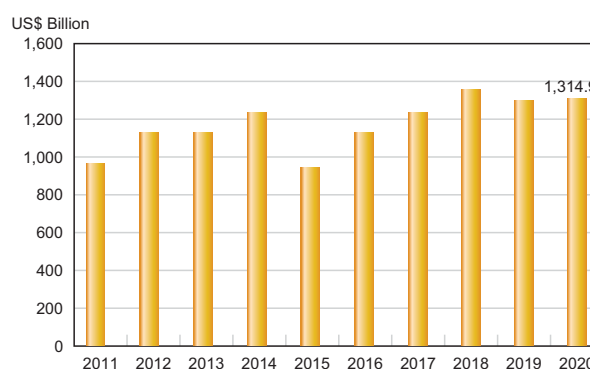
The transaction volume in the foreign currency call loan market in 2020 was US\$1,992.6 billion, an increase of 2.8% over the previous year. Of this amount, US dollar transactions accounted for a dominant share with US\$1,912.2 billion, making up 96.0% of the total while increasing by 5.3% from

Transactions in the Taipei Foreign Currency Call Loan Market



Source: Department of Foreign Exchange, CBC.

Transactions in the Foreign Currency Swap Market



Source: Department of Foreign Exchange, CBC.

2019. Renminbi transactions reached RMB440.7 billion in 2020, making up a share of 3.2% of the total and recording a year-on-year fall of 39.9% in volume. Japanese yen transactions reached ¥381.6 billion in 2020, representing a small share of 0.2% of the total with a year-on-year decrease of 47.4% in volume. The amount of euro transactions amounted to around €2.0 billion, with a modest share of 0.1%. Other currencies accounted for a combined 0.5% of the total transaction volume. The balance of foreign currency call loan transactions at the end of 2020 was US\$52.8 billion.

The volume of foreign currency-NTD swap transactions reached US\$1,314.9 billion, 1.0% more than 2019, while the balance was US\$263.2 billion at the end of 2020.

OBU Assets

There were 59 OBUs at the end of 2020, with 36 of them operated by domestic banks and the other 23 by foreign banks. The total assets of all OBUs increased to US\$239.5 billion at the end of the year, representing an increase of US\$17.6 billion, or 7.9%, from the previous year end owing to increasing portfolio investments. Domestic bank OBUs made up 89.7% of these combined assets with an amount of US\$214.8 billion, and the OBUs of foreign banks accounted for US\$24.6 billion or 10.3% of the total.

In terms of the uses of funds, portfolio investments, at US\$86.0 billion, represented the majority share of 35.9% of total OBU assets. Loans to non-financial institutions came in second place, accounting for 33.0% of total OBU assets. In terms of the destinations for funds, Asia accounted for the majority with a share of 50.8%, followed by America at 31.3%.

The OBUs' main source of funds came from due to financial institutions, making up 52.2% of total liabilities and equity. Deposits of non-financial institutions accounted for 38.0% of the total. The main funding origin of OBUs was Asia, accounting for the majority with 65.4%, followed by America with a share of 23.0%.

Forex trading turnover of all OBUs dropped by 1.2% to US\$668.6 billion, of which US\$427.5 billion went for spot transactions, US\$96.0 billion for forward transactions, and US\$145.1 billion for forex swap transactions. Compared with the previous year, the growth rates of trading of spots, forwards, and forex swaps were 8.3%, -15.7%, and -13.6%, respectively.

For OBUs, total turnover of other derivatives products decreased by 27.2% to US\$246.0 billion over the previous year. Of this amount, options transactions registered a turnover of US\$135.8 billion, making up 55.2% of the total.

Balance Sheet of OBUs in Banking System

Unit: US\$ Million

Year/month (End of Month)	Loans to Non-financial Institutions	Portfolio Investment	Claims on Financial Institutions	Other Assets	Total Assets= Total Liabilities & Equity	Deposits of Non-financial Institutions	Due to Financial Institutions	Securities Issued	Other Liabilities & Equity
2016/12	77,236	42,803	44,929	11,467	176,435	72,245	86,865	0	17,326
2017/12	81,074	53,819	58,336	9,717	202,946	77,144	106,712	0	19,090
2018/12	82,161	59,180	48,552	11,074	200,968	78,704	96,622	0	25,641
2019/12	80,227	72,195	58,407	11,026	221,855	86,680	110,843	0	24,332
2020/12	78,995	86,016	61,925	12,524	239,459	91,094	124,885	0	23,480
2019/12-2020/12 Growth Rate (%)	-1.5	19.1	6.0	13.6	7.9	5.1	12.7	0.0	-3.5

Source: *Financial Statistics Monthly*, CBC.

5. Stock Markets

The COVID-19 epidemic broke out in China and quickly spread worldwide in the early months of 2020, taking a heavy toll on the economy and stock markets of many countries. Massive selloffs by foreign investors on the TWSE dragged the TAIEX, Taiwan's benchmark stock index, downwards to a trough in mid-March. The TAIEX bounced back afterwards, bolstered by an improved outlook thanks to international fiscal and monetary stimulus and relief efforts as well as the support from the National Financial Stabilization Fund. In the second half of the year, blue chip technology stocks soared on the back of surging demand for chips as 5G products boosted semiconductor supply chains and pandemic lockdowns spurred remote work-related purchases, as well as strong iPhone sales. As a result, the TAIEX continued its upswing and reached a historical high at the end of the year, rising by 22.8% over the end of the previous year.

By category, the best performer – gaining by 77.2% year on year – belonged to Paper & Pulp, as greater use of protective masks and more packaging demand amid an online shopping boom markedly raised papermakers' profits. Glass & Ceramic stocks came next with a 56.5% rally, thanks to impressive earnings with inventory replenishment for resumed production lines pushing up glass prices. The third top gainer was Shipping & Transportation's 53.1% as a pandemic-triggered container

Major Statistics of the TWSE Market

Year/Month	Stock Price Index (end of period)	Daily Average Trading Value (NT\$ Billion)	Turnover Rate (%)	Market Capitalization (NT\$ Billion)	Net Buying Positions (NT\$ Billion)		
					Foreign Investors Net Buy/Sell	Securities Investment Trust Companies Net Buy/Sell	Securities Dealers Net Buy/Sell
2018	9,727.4	119.9	92.6	29,318.5	-355.1	-1.5	-99.4
2019	11,997.1	109.4	80.4	36,413.5	244.2	11.3	52.5
2020	14,732.5	186.3	123.3	44,903.8	-539.5	42.7	-169.6
2020/ 1	11,495.1	144.8	6.2	34,903.3	-42.6	-3.6	-13.6
2	11,292.2	131.8	7.3	34,302.3	-130.0	-6.5	-16.0
3	9,708.1	167.8	12.5	29,516.7	-359.1	5.2	-56.3
4	10,992.1	150.9	9.0	33,428.4	20.8	24.2	-8.6
5	10,942.2	166.8	10.0	33,289.7	-151.7	9.1	-8.1
6	11,621.2	183.9	10.4	35,382.7	84.1	10.4	10.4
7	12,664.8	214.8	12.8	38,521.5	5.7	10.8	-9.0
8	12,591.5	218.5	12.0	38,308.7	-62.6	2.6	-17.1
9	12,515.6	185.0	10.7	38,112.9	-55.1	-5.5	-42.5
10	12,546.3	166.7	8.3	38,246.4	-14.3	-3.7	-12.2
11	13,722.9	216.3	10.9	41,811.9	109.0	-4.5	21.6
12	14,732.5	258.5	13.2	44,903.8	56.4	4.1	-18.3

Source: Securities and Futures Bureau, FSC.

shortage and port delays sent international shipping indices and freight chargers higher. Overall, the TAIEX daily average trading value amounted to NT\$186.3 billion in 2020, achieving a record increase of 70.4% over the previous year.

The Taipei Exchange (TPEX) weighted stock price index of the over-the-counter market closed the year of 2020 with a 23.3% gain from 2019; only two categories, Tourism Industry and Textile, posted year-on-year declines. Shipping & Transportation stocks soared by 81.0%, led by the rally of TWSE-listed stocks of the same category. Biotechnology & Medical Care stocks rose by 29.1%, owing to a brighter business outlook given greater demand for pandemic-related tests, vaccines, and treatment. Overall, the TPEX daily average trading value came to NT\$49.3 billion in 2020 with a record increase of 57.0% over 2019.

The TWSE Market

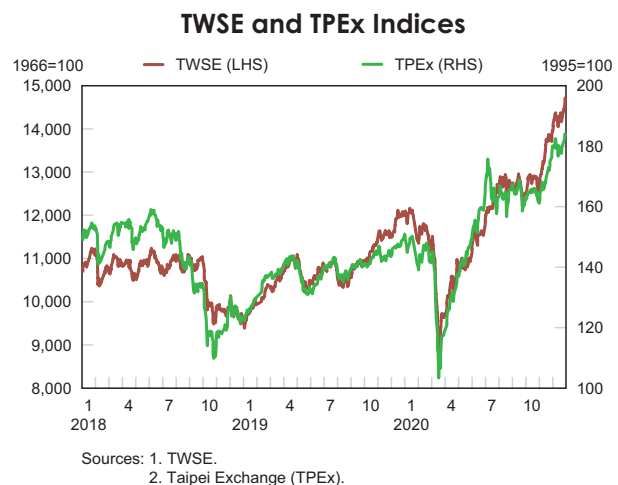
Listings and Capitalization Both Increased to Record Highs

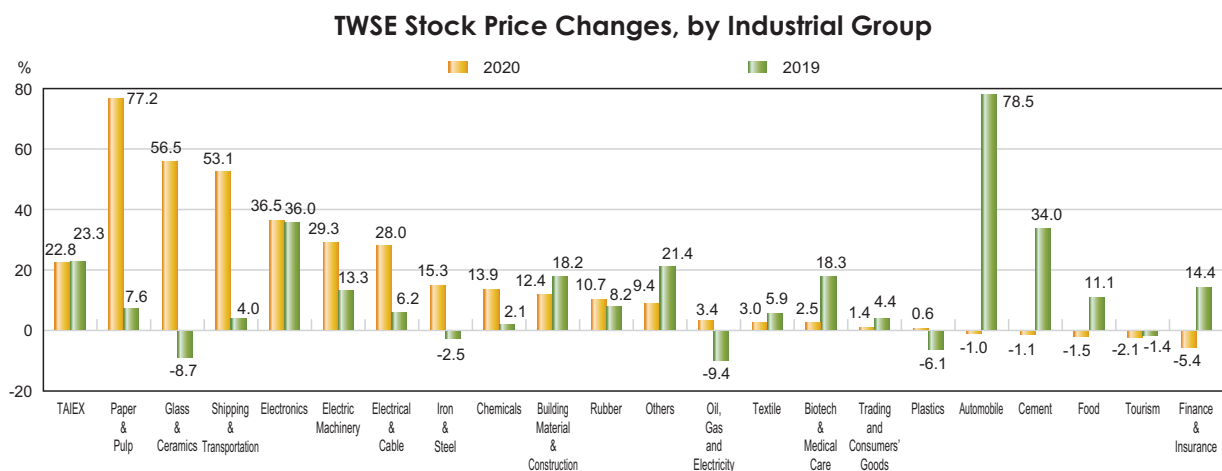
At the end of 2020, the number of TWSE listings increased by 6 to a total of 948. The par value of total shares amounted to NT\$7.2 trillion with a 1.2% year-on-year increase. Total market capitalization expanded by 23.3% to NT\$44.9 trillion. Meanwhile, the total number of Taiwan depository receipts (TDRs) stood at 13 with one delisting during the year.

TAIEX Rebounded to Record High

In January 2020, the coronavirus epidemic arose in China and soon spread out to the world. With cities locked down, operations suspended, and borders nearly closed, output and demand growth both stalled, hurting global economic and trade activity and crushing international stock markets. Against this background, barrages of selloffs by foreign institutional investors led the TAIEX to plunge by 3,419 points, from 12,100 points at the start of the year to an all-year low of 8,681 points on March 19.

Thereafter, major economies adopted expansionary monetary and fiscal policies, the pandemic itself showed signs of easing, and the domestic National Financial Stabilization Fund stepped in to support the market. These factors combined to provide a boost to the TAIEX, which joined US stock indices in rebounding to new highs. Particularly in the second half of the year, vaccine prospects, investor enthusiasm for 5G technology, and robust sales of the latest iPhone model all helped fuel a tech stock rally (notably





led by heavyweight chipmakers). As a result, the TAIEX climbed by 22.8% from 11,997 a year ago to a historical 14,733-point peak.

Broken down by subcategory, most industrial groups recorded year-on-year rises, except for five categories, namely Finance & Insurance, Tourism, Food, Cement, and Automobile. Paper & Pulp stocks posted the largest gain among all categories with a rise of 77.2%, reflecting papermakers' strong earnings as pandemic-related demand (e.g., protective masks, e-shopping goods packaging, etc.) pushed up paper prices. Glass & Ceramic stocks rallied by 56.5%, as earnings were lifted by inventory replenishment for reopened production lines amid an easing pandemic. Shipment & Transportation shares followed closely with a 53.1% rise, as container shortages and port delays pushed up international shipping indices and freight charges. Meanwhile, the emergence of the stay-at-home economy and remote working owing to pandemic lockdowns, as well as promising advancement in artificial intelligence and 5G network technologies, boosted related product (e.g., home gaming consoles) demand and in turn raised semiconductor capacity, leading to a 36.5% year-on-year price gain in the Electronics category.

Among the categories posting declines, Finance & Insurance dropped by 5.4%, owing to underperforming profits in the current low interest rate environment and heavy selloffs by foreign investors. Tourism share prices declined by 2.1%, affected by the pandemic as countries closed borders and cities locked down. Food stocks fell by 1.5%, owing to health risk concerns over planned imports of US pork products containing a controversial feed additive.

Market Turnover Increased Significantly

In 2020, ample liquidity and robust market participation (reflected in the record high numbers of wholesale and retail investors and newly-opened securities trading accounts) helped the TWSE

market turnover expand to a historical record. Measured on a daily average basis, the market turnover reached NT\$186.3 billion on a daily average basis, increasing by 70.4% from the previous year's NT\$109.4 billion. Meanwhile, the turnover rate also soared markedly to a decade high of 123.3% from 80.4% a year ago.

Net Selling by Foreign Investors Hit Record High

Among the three types of institutional investors, foreign investors net sold NT\$539.5 billion on the TWSE in 2020. Local securities investment trust companies and local securities dealers registered net purchases of NT\$42.7 billion and net sales of NT\$169.6 billion, respectively.

Regarding monthly developments, in the first three months of the year, foreign investors increasingly stepped up selloffs as the coronavirus plagued the world, dragging the TAIEX down to an all-year low in March. Though they net bought in April on account of an easing pandemic and major central banks' monetary stimulus, a net sale was recorded in May after the US government broadened its ban on Huawei.⁶ In the following two months, products related to the stay-at-home economy and remote working became in high demand amid pandemic lockdowns, attracting foreign investor net buying of related stocks (in particular, heavyweight tech stocks) and driving the TAIEX higher. Then, an expanded US ban on Huawei⁷ and a renewed surge in coronavirus infections pulled international capital out of the TWSE and foreign investors recorded consecutive net sales during the Aug.-Oct. period. In the last two months of the year, the TAIEX hit a record high as foreign investors, encouraged by solid sales of new iPhones and a bright semiconductor outlook, turned into net buyers.

In 2020, local securities investment trust companies were net sellers in January, February, and in September through November, during which they offloaded shares to take profits in order to meet fund redemption demand, to boost their financial statements, or to adjust portfolios at higher price levels. In the other months, net purchases were recorded.

Local securities dealers, with inclination for short swing trading, net bought in June and November and net sold in the other months of the year as a result of portfolio adjustment or profit taking.

The TPEX Market

Listings and Capitalization Increased

At the end of 2020, the number of TPEX listings increased by 7 to 782. The total par value decreased slightly by 0.6% year on year to NT\$742.2 billion mainly because the par values of new

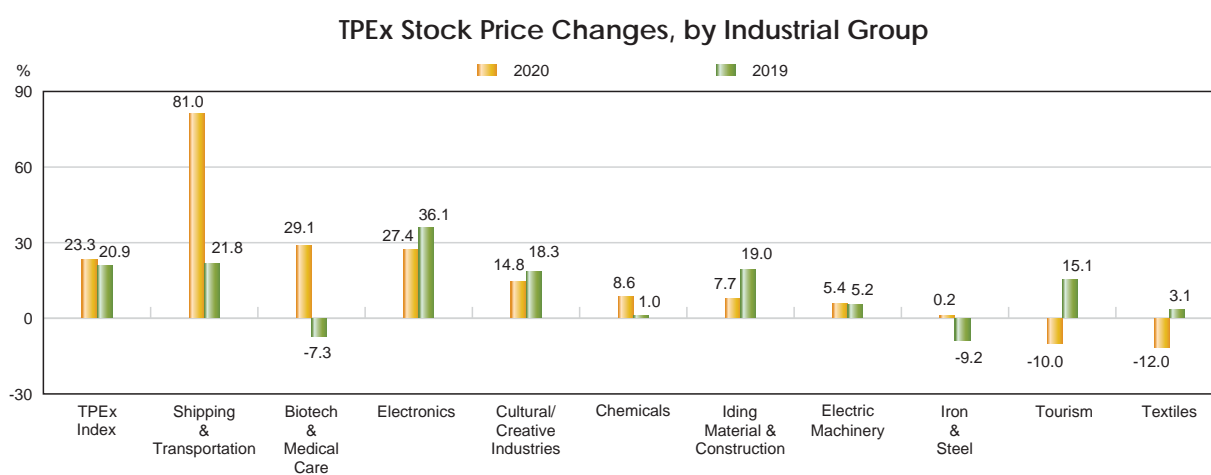
⁶ The US announced on May 15, 2020 that, effective September 15, non-US semiconductor firms need to obtain licenses before supplying US equipment and technology to Huawei.

⁷ On August 18, 2020, the US banned Huawei and the other 38 affiliates added to the entity list from acquiring foreign and US-made semiconductors produced and developed from US technology and software. As a result, major semiconductor firms including Taiwan Semiconductor Manufacturing Company (TSMC), MediaTek, Qualcomm, Samsung, and Micron ceased to be Huawei suppliers after the ban took effect on Sept. 15, 2020.

listings were much lower than those of the delisted companies. Meanwhile, the TPEX market capitalization rose by 26.8% over the previous year to NT\$4.35 trillion.

TPEX Index Swung Higher

In 2020, the TPEX shares broadly tracked the TAIEX movements. The index opened the year at 150.9 points, before tumbling to an all-year low of 103.3 points on March 19. Afterwards, accommodative financial conditions, net foreign purchases, and rallies led by heavyweight stocks all combined to support multiple upswings similar to those on the TWSE. As a result, the index closed the year by peaking at 184.1 points, marking a historical high after rising by 23.3% from the previous year-end's 149.4 points.



By category, most industrial groups posted gains in the year, except for Textile and Tourism. The largest increase was Shipping & Transportation's 81.0%, while Electronics shares came in third with a rise of 27.4%, both bolstered by the same favorable factors behind the TAIEX rallies. Biotech & Medical Care shares posted the second largest gain by 29.1% as the pandemic drove up demand for tests, vaccines, and treatments.

By type of institutional investor, foreign investors and local securities investment trust companies net bought TPEX securities worth NT\$96.3 billion and NT\$2.8 billion, respectively, while local dealers posted a net sale of NT\$20.0 billion.

For the year of 2020, the TPEX market benefited from a record increase of active investor accounts to a number of over 2.45 million, sending the daily average turnover in the TPEX market to NT\$49.3 billion after a surge of 57.0% from the previous year's NT\$31.4 billion.

Key Measures for the Stock Markets

Key measures for Taiwan's stock markets in 2020 included the following:

- (1) March 19: The Financial Supervisory Commission (FSC) announced three measures to stabilize the stock markets, effective immediately: (1) banning short sales of stocks at prices lower than the previous session's close if the closing prices mark a one-day fall of no less than 3.5%; (2) lowering the cap on the daily volume of short sales of securities-based lending (SBL); (3) relaxing the scope of collateral posted by investors to cover margin deficiency.
- (2) March 23: To improve efficiency and transparency, and to stay connected with international practices and market trends, the TWSE launched a new stock trading mechanism to allow continuous trading for intraday sessions (9:00 a.m. to 1:25 p.m.), while orders remain to be matched by call auction at the end of the opening sessions and during closing sessions.
- (3) June 9: With financial markets at home and abroad stabilizing and Taiwan's pandemic situation under good control, the FSC removed the three measures introduced on March 9, effective June 10.
- (4) October 12: The National Financial Stabilization Fund ended the second longest streak of supportive market intervention that lasted 207 days from March 20, 2020.
- (5) October 26: The TWSE launched the intraday odd lot trading system for trades between 9:00 a.m. and 1:30 p.m. The first call auction would be executed at 9:10 a.m., followed by periodic call auctions in three-minute intervals. The quote range and price fluctuation limits are the same as regular trading.

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

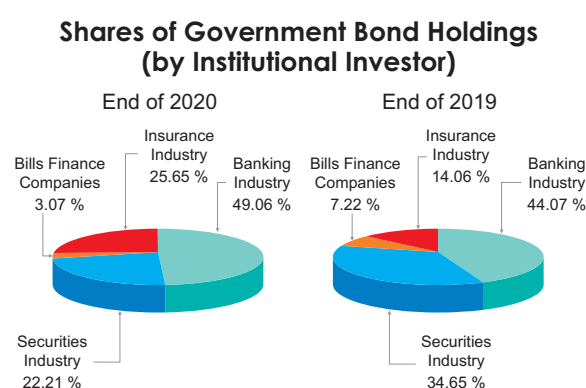
For the year 2020, central government bond issuance increased significantly by NT\$125.0 billion or 30.49% from the previous year to NT\$535.0 billion. The growth was to support debt refinancing operations of the Central Government Debt Service Fund and to raise funds for the central government general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



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.

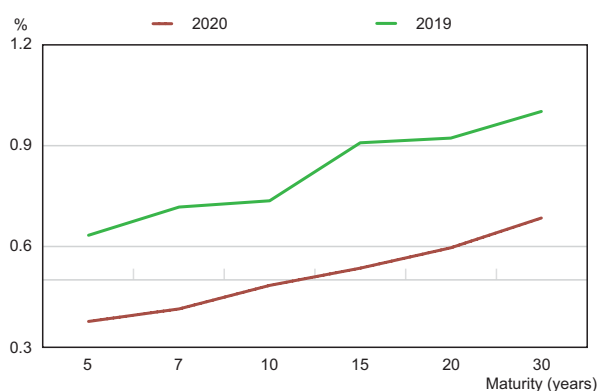
As for currency composition, issuance of US dollar-denominated, RMB-denominated, and ZAR-denominated bonds in 2020 amounted to NT\$1,674.0 billion, NT\$82.0 billion, and NT\$7.4 billion, respectively. At the end of the year, the outstanding amount of international bonds reached NT\$5,261.8 billion, a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

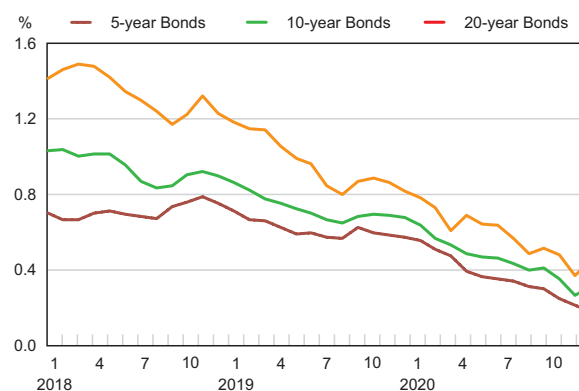
Compared to the previous year, the average yield curve of government bonds shifted downward for the year 2020. The average yield on 15-year bonds recorded the largest decrease of 38 basis points from a year before, while that on 20-year bonds came second with a decline of 33 basis points. Meanwhile, 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.