Annual Report 2020

Central Bank of the Republic of China (Taiwan)

Taipei, Taiwan
Republic of China

Foreword

Chin-Long Yang, Governor

Looking back on 2020, it started with an outbreak of the coronavirus COVID-19 that quickly spread out and wreaked havoc on the global economy and world trade. Hampered by the resulting demand weakness both at home and abroad, Taiwan's economic growth slowed to 0.35% in the second quarter, the lowest since the second quarter of 2016. However, the pace picked up further and further in the latter half of the year amid economic reopening overseas and the introduction of consumption stimulus policies domestically. The annual growth rate of GDP reached 5.09% in the fourth quarter, the highest since the second quarter of 2011. For the year as a whole, the economy expanded by 3.11%, also higher than the past two years.

Similarly, domestic inflation was affected by the pandemic as softer international demand for raw materials dragged down energy prices and hospitality services (such as travel and hotels) launched promotional price cuts. The annual growth rate of CPI dropped to -0.23%, the lowest since 2016, while that of the core CPI (excluding fruit, vegetables, and energy) fell to 0.35%, a record low unseen for more than a decade.

Faced with the unusual challenges posed by pandemic-induced impacts on the economy and the labor market, the Bank reduced the policy rates by 25 basis points and rolled out a special accommodation facility worth NT$200 billion to help SMEs obtain funding in March, followed by an expansion of the facility to NT$300 billion in September. The Bank also made amendments to its targeted prudential measures on real estate lending in December in an attempt to attain "efficient allocation and proper use of credit resources" outlined in the government's "Program to Foster a Sound Real Estate Market."

Meanwhile, the Bank continued to manage market liquidity through open market operations. The annual growth rate of bank loans and investments and that of the monetary aggregate M2 were 6.31% and 5.84%, respectively. With both readings outrunning the GDP growth rate of 3.11%, it indicated that the financial system had sufficient liquidity to support economic activity.

The pandemic's influence was felt in the foreign exchange market as well. Continued monetary easing by major central banks had spilled over to other parts of the world, coinciding inadvertently with the significant repatriation of offshore funds by Taiwanese firms. The consequent bouts of increased volatility prompted the Bank to step in to ensure dynamic stability of the NT dollar exchange rate. Overall, net forex purchases in the spot market by the Bank amounted to US$39.1 billion in 2020. At the end of the year, the Bank held US$529.9 billion worth foreign exchange reserves, representing a year-on-year increase of US$51.8 billion owing mainly to returns from forex reserves management and smoothing operations in response to surging capital inflows.

In 2020, the Bank continued with efforts to ensure sound operations of the domestic payment and settlement systems. For instance, given the approach of Taiwan's internet-only banks, we asked the Financial Information Service Co., Ltd. (FISC) to, via active communication and real time monitoring, help ensure that such banks maintain sufficient funds in their accounts with the Bank (i.e., the Interbank Funds Transfer Guarantee Special Accounts at the Department of Banking of the CBC) to facilitate the execution of interbank transactions. Pandemic-related responses were also established to sustain business continuity for payment systems.

In addition, the Bank urged the FISC to continue fostering the development of the digital economy in a safe and secure environment by reinforcing mobile payment infrastructure, building a common platform for electronic payment, and advancing information security to meet international standards. Furthermore, through collaboration with the academia, the Bank completed a technical research on the feasibility of a wholesale central bank digital currency (CBDC) in June and moved on to the second phase with proof-of-concept study on a retail CBDC in September that would run for two years with a rolling review depending on the progress as well as international trends.

The past year has been one of crisis and resilience, and uncertainties from the coronavirus and major economies' policy moves still loom over the world economy and financial markets. The Bank will continue to closely monitor economic and financial developments at home and abroad and to take action in accordance with its statutory mandates, including maintaining an orderly forex market and dynamic stability of the NT dollar, while staying responsive by deploying monetary and credit policies where needed.

Finally, I would like to thank my colleagues for their hard work in producing this publication that reflects the Bank's efforts as well as economic and financial overviews for the year of 2020. Going forward, we remain devoted to fulfilling our duties and addressing the challenges.

Chin-Long Yang

Chin-Long Yang
Governor
March 2021

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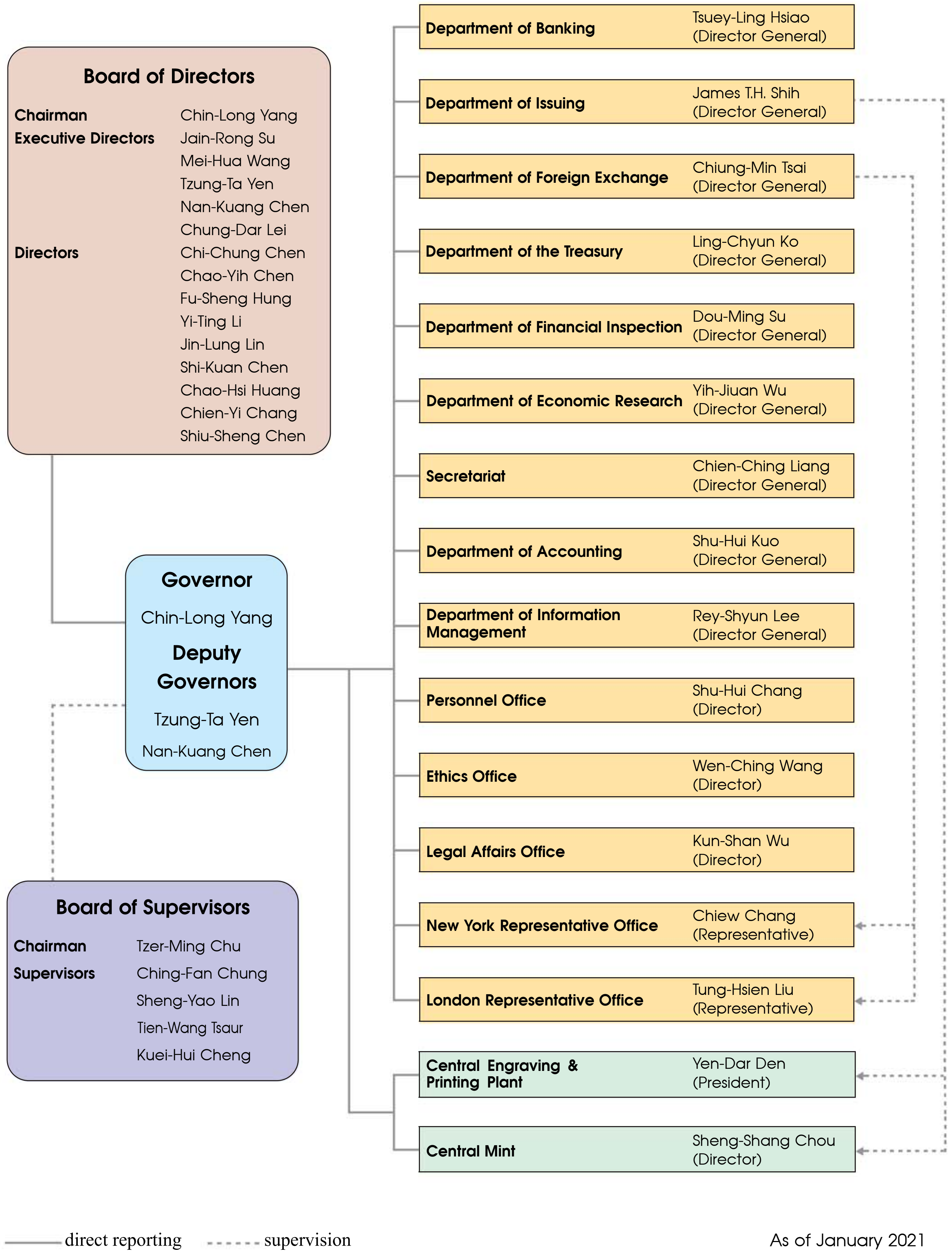


As of January 2021

Chairman
Board of Directors
Governor
Chin-Long Yang

Executive Director
Jain-Rong Su

Executive Director
Mei-Hua Wang

Executive Director
Deputy Governor
Tzung-Ta Yen

Executive Director
Deputy Governor
Nan-Kuang Chen

Executive Director
Chung-Dar Lei

Director
Chi-Chung Chen

Director
Chao-Yih Chen

Director
Fu-Sheng Hung

Director
Yi-Ting Li

Director
Jin-Lung Lin

Director
Shi-Kuan Chen

Director
Chao-Hsi Huang

Director
Chien-Yi Chang

Director
Shiu-Sheng Chen

Chairman
Board of Supervisors
Tzer-Ming Chu

Supervisor
Ching-Fan Chung

Supervisor
Sheng-Yao Lin

Supervisor
Tien-Wang Tsaur

Supervisor
Kuei-Hui Cheng

Developments in the Real Economy

I. Developments in the Real Economy

1. Overview

The world entered the year 2020 faced with a growing threat from the coronavirus (COVID-19) pandemic. As lockdown measures to contain the virus dealt a heavy blow to world trade and economic activity, Taiwan's economy was affected and its pace of growth slowed gradually in the first two quarters of the year. In the second half of 2020, the domestic growth pace picked up quarter after quarter, buoyed by a gradual global reopening and domestic stimulus measures and financial relief packages. For the year as a whole, the economy expanded by 3.11%, outpacing the previous year's 2.96%, with net foreign demand contributing the most to this expansion. Taiwan maintained a healthy balance of payments, including a continued current account surplus and a net asset increase in the financial account. The consumer price index (CPI) dropped by 0.23%, its first decline since 2016, as the pandemic caused an international oil price slump and a domestic promotional race to attract tourists with lower prices. Meanwhile, the average unemployment rate rose to 3.85%, the highest since 2017. Monthly real earnings per non-farm worker increased by 1.47% to NT$53,094, marking an all-time high.

Steady Economic Growth

In the first half of 2020, Taiwan's economic growth moderated because the coronavirus led to contractions in private consumption and exports, with its pace slowing to an annual growth rate of 0.35% in the second quarter. Nevertheless, in the second half of the year, Taiwan's success in reining in the virus outbreak helped to bring private consumption closer to positive territory; export growth also gained support from stronger demand for emerging technology applications (such as 5G networks) and products needed for remote working. In addition, government investment and spending increased steadily, mainly owing to an effort to accelerate progress in infrastructure projects and an increase in coronavirus-related expenditures. As a result, the economy improved in each quarter and reached an annual growth rate of 5.09% in the fourth quarter. For 2020 as a whole, the economy expanded by 3.11% year on year, a faster pace than the previous year's 2.96%.

Among the GDP expenditure components, net foreign demand became the driving force behind the economic growth of 2020, with a significant contribution of 2.73 percentage points. This was mainly due to export growth supported by shipments of advanced semiconductor chips and rising demand for new tech applications and products associated with remote working. Regarding domestic demand, private consumption came under strain because of border controls and international travel bans during the COVID-19 outbreak. On the other hand, fixed capital formation recorded solid growth, because semiconductor firms increased capital outlays for advanced production, the government's major investment incentives went through robust implementation, and public projects gathered steam. In all, domestic demand contributed 0.38 percentage points to GDP growth.

Meanwhile, given a year-on-year rise in the national saving rate and a generally unchanged domestic investment rate, the excess saving ratio climbed from the previous year's 11.70% to 14.87%.

Healthy BOP Surplus

In 2020, Taiwan continued to run a healthy balance of payments. The current account posted a surplus of US$94,276 million, the financial account had a net asset increase of US$50,035 million, and the Bank's reserve assets recorded an increase of US$48,342 million.

In terms of the current account, the goods trade surplus grew to US$74,742 million as exports increased and imports decreased, contributing the most to a wider current account surplus. The services account, which had a deficit the previous year, posted a surplus of US$3,315 million owing to a narrower travel deficit and an increase in freight proceeds amidst the coronavirus pandemic. The primary income surplus rose to US$19,362 million because of inward remittances of income from residents' direct investment abroad taking advantage of incentives to encourage offshore funds repatriation, which then led to smaller declines in receipts than those in payments. Meanwhile, the secondary income deficit increased to US$3,143 million. For the year as a whole, the ratio of current account surplus to nominal GDP rose from the 10.6% of the previous year to 14.1%.

In terms of the financial account, portfolio investment recorded a net asset increase of US$58,543 million. Among the components, portfolio investment abroad by residents rose by a net amount of US$36,122 million, mainly because domestic insurers and banks expanded holdings of foreign securities. Local portfolio investment by nonresidents posted a net decrease of US$22,421 million from a net increase the previous year, mainly because foreign investors cut back their local stock holdings. Direct investment registered a net increase of US$5,466 million, of which direct investment abroad by residents rose to US$14,268 million and nonresidents' inward direct investment went up to the second highest amount on record at US$8,802 million. In terms of other investment, it posted a net asset decrease of US$14,427 million.

Weakened Inflation

As the severe economic impacts from the coronavirus pandemic caused international raw material (including crude oil) prices to slump, Taiwan's wholesale price index dropped by 7.79% over the previous year. Of the components, domestic sales excluding imports, imported goods, and exported goods recorded year-on-year declines of 5.71%, 10.28%, and 7.21%, respectively.

Consumer prices were also affected by the pandemic, mainly reflected in reductions of domestic fuel and gas prices amid an international oil plunge and promotional discounts of local tourism and accommodation services. Consequently, the consumer price index dropped by 0.23% for the year as a whole, the first decline since 2016. The core CPI (excluding fruit, vegetables, and energy items) rose by 0.35%, albeit the most modest increase since 2010.

Rising Unemployment Rate; Slower Wage Growth

The unemployment rate went up at the start of 2020 amid the coronavirus pandemic and reached 4.07% in May, before dropping on account of a domestic economic pickup towards the end of the year and registering 3.68% in December. It averaged 3.85% for the year as a whole, the highest since 2017. The average labor force participation rate edged down by 0.03 percentage points to 59.14%, the first decline since 2010.

The average number of employed persons merely increased by four thousand, or 0.03%, to 11.50 million. The services sector hired 30 thousand more persons, representing a 0.44% increase mainly accounted for by increases in healthcare and social work sectors. On the other hand, employment of the industrial and agricultural sectors decreased by 16 thousand, or 0.39%, and by 11 thousand, or 2.03%, respectively.

In terms of wages, non-farm (industrial and services sectors) monthly earnings per employee averaged NT$54,320 with a smaller year-on-year increase of 1.24%. Nevertheless, real monthly earnings (adjusted for inflation) rose by 1.47% to a historical high of NT$53,094.

Meanwhile, expanded production and fewer total working hours combined to lead to increases in labor productivity indices of the industrial sector and the manufacturing industry by 17.78% and 18.32%, respectively. Unit labor costs decreased by 13.82% in the industrial sector and 14.16% in the manufacturing sector, reflecting smaller gains in total earnings than those in production.

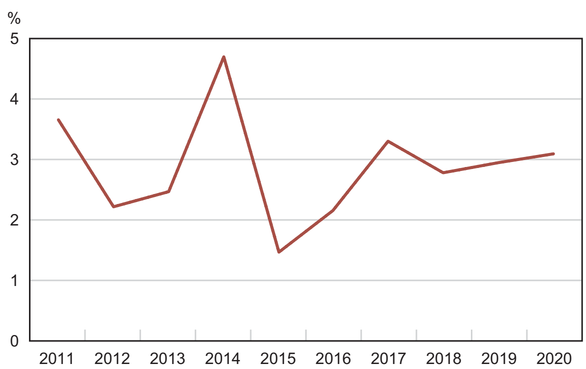
2. National Output and Income

In 2020, Taiwan's economy grew at an annual rate of 3.11%, slightly higher than the 2.96% of the previous year. Strong external demand served as the main engine of growth and exports benefited mostly from booming business opportunities in 5G applications, the stay-at-home economy, and higher demand for advanced semiconductor chips. Net exports contributed 2.73 percentage points to real GDP growth. In terms of domestic demand, fixed capital formation, supported by investment in public infrastructure and advanced semiconductor process technologies, experienced robust growth, while private consumption remained subdued in the light of the COVID-19 pandemic. Overall, domestic demand contributed 0.38 percentage points to real GDP growth. In the meantime, nominal GNI (gross national income, in US dollars) rose by 9.84% and per capita GNI increased from US$26,594 to US$29,230 over the year 2020.

In the first quarter, real GDP increased by 2.51% from the same quarter of the previous year. Government consumption grew moderately, and private investment expanded at a solid pace owing to higher demand for machinery and equipment investment. Private consumption and exports, on the contrary, were adversely affected by the outbreak of COVID-19. In the second quarter, real GDP exhibited the lowest level of growth over the year at 0.35%. Private consumption and exports deteriorated further as epidemic prevention measures, such as border controls and travel restrictions, began to weigh on domestic economic activity. Meanwhile, private investment displayed slower growth because of a decline in transportation investment, and growth in government consumption slipped into negative territory.

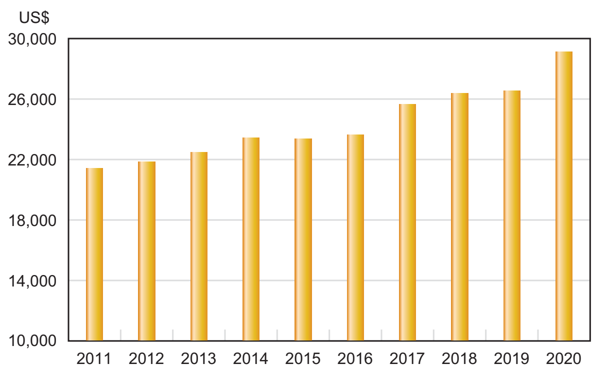
In the third quarter, real GDP expanded at an annual rate of 4.26%. Of note, the declining trend in private consumption eased, supported in part by fiscal stimulus and effective epidemic control

Real Growth Rate of GDP



Source: *Statistical Abstract of National Income,* DGBAS, Executive Yuan, February 2021.

Per Capita GNI



Source: *Statistical Abstract of National Income,* DGBAS, Executive Yuan, February 2021.

measures. Exports were driven by business opportunities arising from 5G applications and the stay-at-home economy, which created strong market demand for ICs and consumer electronics. Government consumption resumed positive growth and private investment enjoyed solid growth as demand for construction and transportation investments picked up. In the fourth quarter, real GDP growth strengthened further and reached the highest level over the year at 5.09%. Against the backdrop of strong economic growth, private consumption fell slightly, whereas private investment showed a modest uptrend because of a higher base effect. In the meantime, exports remained resilient and government consumption and investment were supported by higher spending on epidemic prevention and public infrastructure investment.

Expenditure Components of GDP

All expenditure components of GDP, except private consumption, recorded positive growth in 2020. Among all the components, gross fixed capital formation was the primary source of economic growth and contributed 1.18 percentage points to real GDP growth for the year. Meanwhile, exports of goods and services and government consumption contributed to real GDP growth by 0.67 and 0.37 percentage points, respectively. Private consumption, on the other hand, was a drag of 1.24 percentage points on real GDP growth. With respect to shares of GDP, exports of goods and services remained to account for the largest share of GDP at 58.55%, followed by private consumption at 48.61% and gross fixed capital formation at 23.77%.

GDP by Expenditure

Unit: %

	2020			2019		
	Share	Real Growth Rate	Contribution to Real Growth Rate of GDP*	Share	Real Growth Rate	Contribution to Real Growth Rate of GDP*
Private Consumption	48.61	-2.37	-1.24	52.21	2.26	1.18
Government Consumption	14.03	2.61	0.37	14.03	0.67	0.10
Gross Fixed Capital Formation	23.77	4.96	1.18	23.72	10.17	2.22
Change in Inventory	-0.09	-	0.07	-0.14	-	-0.80
Exports of Goods and Services	58.55	1.06	0.67	63.50	1.31	0.87
(Less : Imports of Goods and Services)	44.87	-3.86	-2.06	53.32	1.09	0.60
Expenditure-based GDP	100.00	3.11	3.11	100.00	2.96	2.96

Note: * Percentage point.
Source: *Statistical Abstract of National Income*, DGBAS, Executive Yuan, February 2021.

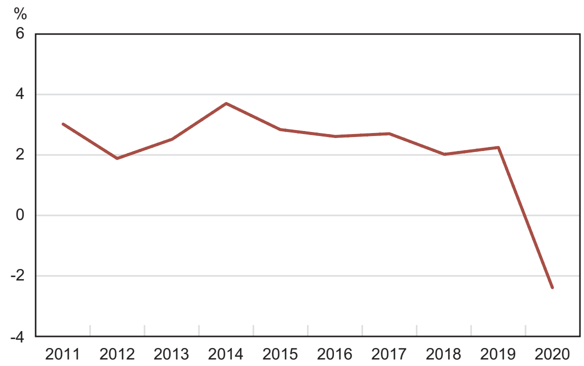
(1) Dismal Growth in Private Consumption

As a result of the economic dislocations caused by the pandemic, private consumption took a downturn in the beginning of the year and then recovered modestly in the second half of 2020.

For the year as a whole, private consumption grew at an annual rate of -2.37%, significantly lower than the 2.26% of 2019, and contributed -1.24 percentage points to real GDP growth.

In the first half of the year, total expenditure on outbound tourism plummeted substantially. Similarly, spending on home appliances and food away from home both fell precipitously as consumers became wary of discretionary spending. Private consumption therefore plunged by 1.74% and 5.21% in the first two quarters, respectively. In the second half of the year, the pandemic became under control and Taiwan's stock price index reached a historical high, alleviating strains in private consumption. The Triple Stimulus Voucher program launched by the government in July, in conjunction with an improvement in the automotive market, propped up sales of retail and food services. In the third and fourth quarters, private consumption declined by smaller magnitudes of 1.55% and 1.07%, respectively.

Real Growth Rate of Private Consumption Expenditure



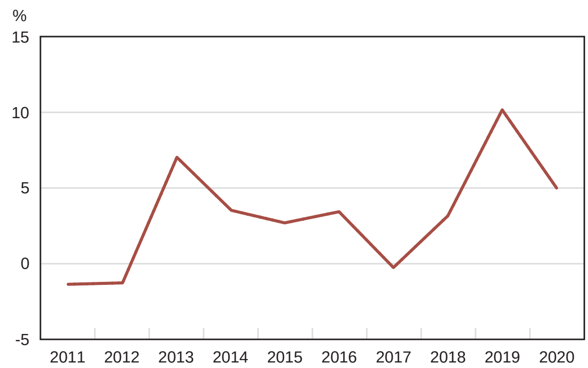
Source: *Statistical Abstract of National Income,* DGBAS, Executive Yuan, February 2021.

(2) Robust Expansion in Fixed Capital Formation

Fixed capital formation grew robustly at an annual rate of 4.96% and contributed 1.18 percentage points to real GDP growth. The expansion was attributed to higher demand for 5G infrastructure investment, continuing investment in semiconductor manufacturing, an improvement in the execution of public infrastructure projects, and the repatriation of offshore funds by overseas Taiwanese companies.

Underpinned by a rise in machinery and equipment investment, fixed capital formation increased by 6.95% in the first quarter of 2020. However, uncertainties arising from the pandemic caused the aviation industry to delay its spending on aircraft procurement in the second quarter, thereby hampering transportation investment. Growth in fixed capital formation therefore dropped to 4.11%. Nevertheless, growth rebounded to 6.12% in the third quarter owing to higher growth in construction and transportation investments. Despite continuing

Real Growth Rate of Fixed Capital Formation



Source: *Statistical Abstract of National Income,* DGBAS, Executive Yuan, February 2021.

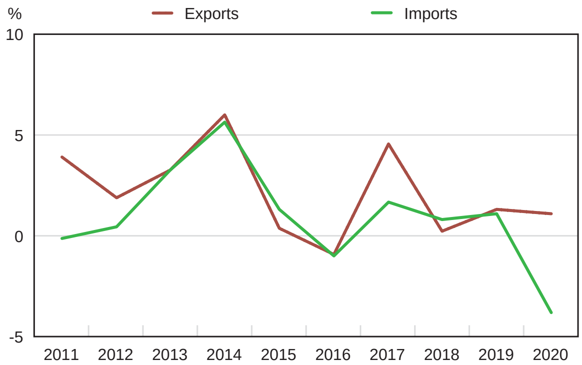
growth in construction and transportation investments, a higher base effect resulted in a lower fixed capital formation growth rate of 2.96% in the fourth quarter, the lowest level over the year.

In terms of the type of capital formation, construction investment grew steadily at an annual rate of 5.90% in 2020. Although transportation investment experienced a sharp decline in the second quarter, its growth momentum recovered quickly in the second half of the year, leading to an annual growth rate of 5.65% for the entire year. In the meantime, investment in machinery and equipment grew by 4.58% owing to semiconductor equipment expenditure, the government's green energy development, and Taiwanese companies returning from overseas. Lastly, investment in intellectual property remained relatively stable and increased by 3.85% for the entire year.

(3) Strong Upturn in Real Exports and Imports

Business opportunities arising from 5G applications and the stay-at-home economy mitigated the impacts of travel restrictions and sluggish global demand on Taiwan's exports. On balance, exports of goods and services increased moderately by 1.06% and contributed 0.67 percentage points to real GDP growth in 2020.

Real Growth Rates of Exports and Imports



Source: *Statistical Abstract of National Income*, DGBAS, Executive Yuan, February 2021.

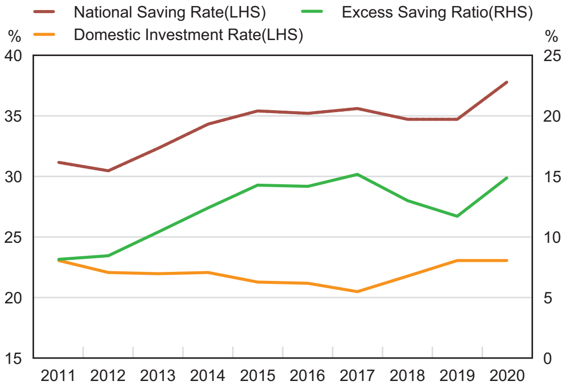
In the first quarter, the emergence of COVID-19 led to disruptions in global supply chains and a reduction in the number of inbound visitors, causing exports to decline by 2.09%. Epidemic containment measures, such as national lockdowns and border controls, exacerbated the slumps in global demand and the number of inbound visitors to Taiwan. Prices of raw materials, on the other hand, fluctuated at a low level. Consequently, exports dropped by 3.44% in the second quarter. In the third quarter, the reopening of economies, continuing growth in intermediary trade, and a surge in demand for ICs and consumer electronics raised exports by 3.33%. As traditional sector exports began to recover in the fourth quarter, export growth reached 5.67%, the highest growth over the year.

Turning to the imports of goods and services, significant reductions in outbound tourism expenditure and agricultural and industrial raw materials imports caused imports of goods and services to contract by 3.86% in 2020.

Rise in Excess Saving Ratio

Domestic investment benefited from a number of positive factors, including the active development of green energy, continuing investment in advanced semiconductor manufacturing, accelerating progress in public infrastructure investment, and higher investment incentivized by the Three Major Programs for Investing in Taiwan. As a result, domestic investment as a share of GNI remained unchanged from the previous year at 23%. Meanwhile, the national saving rate (the ratio of national saving to GNI measured at current prices) increased moderately from 34.70% in 2019 to 37.86% in 2020, reflecting the adverse impact of the pandemic on consumption. Overall, the excess saving ratio, defined as the excess of gross national saving over gross domestic investment to GNI, rose from 11.70% in 2019 to 14.87% in 2020.

National Saving Rate, Domestic Investment Rate, and Excess Saving Ratio



Source: *Statistical Abstract of National Income*, DGBAS, Executive Yuan, February 2021.

3. Balance of Payments

In 2020, Taiwan's current account registered a record surplus of US$94,276 million, which accounted for 14.1% of nominal GDP, up from 10.6% in the previous year. The financial account posted a net asset increase of US$50,035 million. The reserves and related items recorded a surplus of US$48,342 million, which was reflected in the increase in foreign reserve assets held by the Bank.

Balance of Payments

Unit: US$ Million

	(1) 2020	(2) 2019	(1)-(2)
A. Current Account	94,276	65,161	29,115
Goods: credit (exports)	344,838	330,743	14,095
Goods: debit (imports)	270,096	273,072	-2,976
Balance on Goods	74,742	57,671	17,071
Services: credit (exports)	41,170	51,838	-10,668
Services: debit (imports)	37,855	56,905	-19,050
Balance on Services	3,315	-5,067	8,382
Primary income: credit	38,507	39,152	-645
Primary income: debit	19,145	23,756	-4,611
Balance on primary income	19,362	15,396	3,966
Secondary Income: credit	7,958	8,238	-280
Secondary Income: debit	11,101	11,077	24
Balance on secondary income	-3,143	-2,839	-304
B. Capital Account	-9	-3	-6
C. Financial Account	50,035	57,554	-7,519
Direct investment: assets	14,268	11,787	2,481
Equity and investment fund shares	10,972	10,760	212
Debt instruments	3,296	1,027	2,269
Direct investment: liabilities	8,802	8,240	562
Equity and investment fund shares	5,536	8,086	-2,550
Debt instruments	3,266	154	3,112
Portfolio investment: assets	36,122	54,877	-18,755
Equity and investment fund shares	1,974	-2,301	4,275
Debt securities	34,148	57,178	-23,030
Portfolio investment: liabilities	-22,421	8,476	-30,897
Equity and investment fund shares	-23,275	8,110	-31,385
Debt securities	854	366	488
Financial derivatives: assets	-20,563	-15,490	-5,073
Financial derivatives: liabilities	-21,016	-17,991	-3,025
Other investment: assets	2,140	12,112	-9,972
Other investment: liabilities	16,567	7,007	9,560
D. Net Errors and Omissions	4,110	9,054	-4,944
E. Reserves and Related Items*	48,342	16,658	31,684

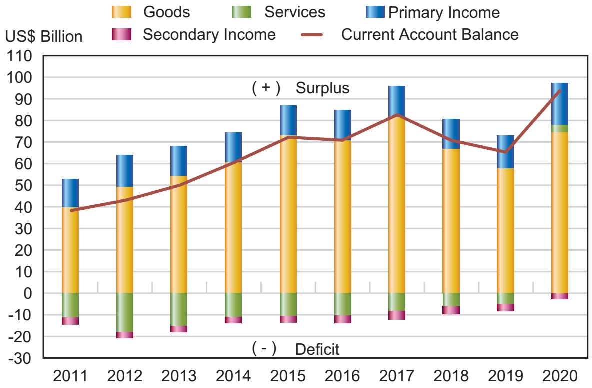
Note: * Excluding valuation changes in exchange rates.
Source: *Balance of Payments*, CBC, February 2021.

Widened Current Account Surplus

The current account consists of four major items, namely goods, services, primary income, and secondary income.

(1) Goods

Current Account



Source: *Balance of Payments*, CBC, February 2021.

Owing to increased use of emerging technologies like 5G communications, Taiwan's external merchandise trade experienced an expansion in 2020, with the value of exports, on a BOP basis, increasing by 4.3% to US$344,838 million from 2019. Among its components, net exports of goods under merchanting increased by 25.0% to US$13,262 million. The value of imports decreased by 1.1% to US$270,096 million. Overall, as a result of increased exports and decreased imports, the trade surplus widened from US$57,671 million to US$74,742 million. The top five trading partners of Taiwan in 2020 were Mainland China including Hong Kong (hereafter in this chapter referred to as Mainland China), ASEAN,[1] the US, Europe, and Japan.

In terms of Taiwan's trade with Mainland China, the value of exports amounted to US$151,450 million in 2020, 14.6% higher than the previous year. As a manufacturing center of the world, Mainland China remained Taiwan's largest export market, and its share of total exports rose to 43.9%. Among major export products, electronic parts and components maintained the leading role, which benefited from increased use of emerging technologies. Imports from Mainland China grew by 10.8% to US$64,779 million in 2020, comprising a larger share of 22.6% in total imports. The increase mainly came from electronic parts and components and information, communication and audio-video products as a result of stronger export-derived demand. As the increase in exports exceeded that in imports, the trade surplus with Mainland China increased to US$86,671 million in 2020, which remained the largest source of Taiwan's trade surplus.

Exports to the ASEAN economies decreased to US$53,240 million in 2020, down by 1.3% with a weak export performance of mineral products and textiles. Imports from the ASEAN economies increased by 2.7% to US$35,903 million, accounting for 12.5% of total imports, mainly owing to increases in imports of electronic parts and components and information, communication and audio-video products. Overall, the trade surplus with the ASEAN economies declined to US$17,338 million. Singapore, Vietnam, and the Philippines were the third, fourth, and fifth largest sources of Taiwan's trade surplus, respectively.

[1] Association of Southeast Asian Nations, including Brunei Darussalam, Cambodia, Indonesia, Laos, Myanmar, Malaysia, the Philippines, Singapore, Thailand, and Vietnam.

In 2020, Taiwan's exports to the US grew 9.3% to US$50,554 million, comprising a larger share of 14.6% in total exports. The increase mainly came from information, communication and audio-video products. As for imports from the US, the value declined by 6.4% to US$32,613 million, with its share in total imports decreasing to 11.4%. The major products contributing to the contraction included mineral products. Overall, the trade surplus with the US expanded to US$17,941 million for the year, ranking second among Taiwan's surplus sources.

Exports to Europe decreased by 5.4% to US$28,169 million, with its share of total exports falling to 8.2%. The two major products contributing to this contraction were iron and steel and articles thereof and machinery. Imports from Europe increased by 0.8% to US$36,834 million, with the share of total imports increasing to 12.9%, mainly because of an increase in imports of mineral products and gold. In all, Taiwan's trade deficit with Europe expanded to US$8,665 million in 2020.

Exports to Japan increased slightly by 0.5% to US$23,402 million but its share in Taiwan's total exports decreased to 6.8%. Imports from Japan increased by 4.2% to US$45,890 million and its share of total imports rose to 16.0%, with electronic parts and components contributing the most to this increase. The trade deficit with Japan widened to US$22,488 million. Japan remained Taiwan's second largest source of imports and the largest source of trade deficit in 2020.

Trade in Goods by Country

Unit: %

	2020			2019		
	Amount (US$ Million)	Share	Annual Change	Amount (US$ Million)	Share	Annual Change
Exports						
Mainland China (including Hong Kong)	151,450	43.9	14.6	132,115	40.1	-4.2
ASEAN	53,240	15.4	-1.3	53,935	16.4	-7.2
US	50,554	14.6	9.3	46,247	14.1	17.1
Europe	28,169	8.2	-5.4	29,770	9.0	-4.8
Japan	23,402	6.8	0.5	23,279	7.1	2.1
Rest of the World	38,458	11.1	-12.2	43,812	13.3	-1.4
Total	345,274	100.0	4.9	329,157	100.0	-1.5
Imports						
Mainland China (including Hong Kong)	64,779	22.6	10.8	58,457	20.5	5.9
Japan	45,890	16.0	4.2	44,052	15.4	-0.2
US	32,613	11.4	-6.4	34,850	12.2	5.3
Europe	36,834	12.9	0.8	36,530	12.8	5.6
ASEAN	35,903	12.5	2.7	34,965	12.2	1.2
Rest of the World	70,462	24.6	-8.2	76,797	26.9	-7.7
Total	286,481	100.0	0.3	285,651	100.0	0.3

Source: *Monthly Statistics of Exports and Imports*, Ministry of Finance, R.O.C. (Taiwan).

(2) Services

In 2020, services turned from a US$5,067 million deficit to a US$3,315 million surplus, mainly because of a smaller travel deficit and increasing freight transport receipts amid the COVID-19 pandemic.

Of the various components of the services account, receipts of manufacturing services on physical inputs owned by others, reflected by the receipts of a resident providing a nonresident with the services of processing, assembly, labeling, or packing of goods owned by the nonresident, increased by US$590 million to US$3,804 million in 2020. On the debit side, payments for manufacturing services, namely a resident's payments to a nonresident for providing these services for the resident who is also the owner of the goods concerned, decreased by US$267 million to US$1,615 million. In total, net manufacturing receipts increased from US$1,332 million to US$2,189 million.

In terms of maintenance and repair services n.i.e. (not included elsewhere), which covers maintenance and repair work for or by nonresidents on ships, aircraft, and other transport equipment, the receipts declined by US$109 million to US$1,280 million owing to decreased receipts from aircraft repairs. On the other hand, the payments thereof declined by US$170 million to US$752 million. In all, the surplus on this account widened to US$528 million.

Transport receipts increased by US$490 million to US$11,012 million, reflecting increases in international freight proceeds owing to the transportation of products related to the pandemic response and stay-at-home economy, as well as cross-border e-commerce transactions. Transport payments declined by US$1,915 million to US$9,904 million as a result of decreases in passenger fares paid to foreign airlines. Overall, net transport services in 2020 turned from a US$1,297 million deficit to a US$1,108 million surplus.

Travel receipts decreased by US$12,565 million to US$1,846 million, and travel payments decreased by US$17,350 million to US$3,150 million. This was because the COVID-19 border control measures across the world led the numbers of inbound visitors and outbound travelers to both shrink. In all, the deficit on the travel account narrowed to US$1,304 million.

Other services receipts grew by US$926 million to US$23,228 million, mainly attributable to increases in receipts from computer and information services and from professional and technical services (under other business services). Other services payments rose by US$652 million to US$22,434 million, owing to increases in charges for the use of intellectual property n.i.e. and payments for computer and information services. Overall, the surplus of other services widened to US$794 million in 2020.

(3) Primary Income

Primary income consists of compensation of employees, investment income, and other primary income. In 2020, primary income receipts decreased by US$645 million to US$38,507 million, mainly because of less interest received by banks. Meanwhile, primary income payments also decreased to US$19,145 million, US$4,611 million less than the previous year. This was mostly attributable to a reduction in interest paid by banks. After the *Management, Utilization, and Taxation of Repatriated Offshore Funds Act* took effect on August 15, 2019, some overseas direct investment income continued to be repatriated in 2020. Consequently, the surplus on the primary income account rose to US$19,362 million.

(4) Secondary Income

For the year of 2020, secondary income receipts amounted to US$7,958 million, reflecting decreases in inward family support allowances. Secondary income payments amounted to US$11,101 million, mainly owing to increases in outward workers' remittances. As a whole, the deficit on secondary income widened to US$3,143 million in 2020.

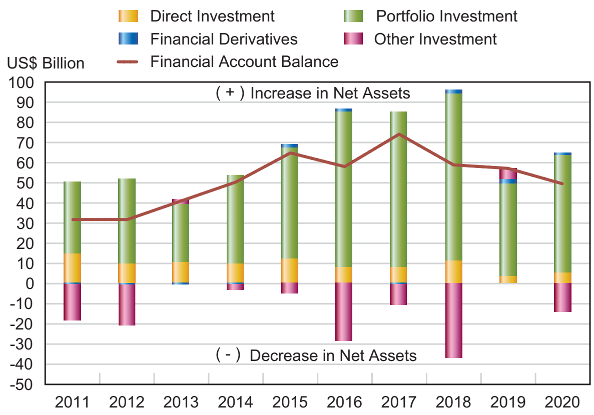
Capital Account Deficit

The capital account includes capital transfers and the acquisition and disposal of non-produced, non-financial assets. In 2020, the deficit on the capital account amounted to US$9 million, increasing by US$6 million.

Net Asset Increase in Financial Account

In 2020, the financial account showed an increase of US$50,035 million in net assets. In terms of sub-categories, direct investment, portfolio investment, and financial derivatives exhibited increases of US$5,466 million, US$58,543 million, and US $453 million in net assets, respectively. Other investment exhibited a decrease of US$14,427 million in net assets.

Financial Account



Source: *Balance of Payments*, CBC, February 2021.

(1) Direct Investment

Direct investment abroad by residents exhibited an increase of US$14,268 million in assets. Direct investment in Taiwan by nonresidents showed an increase of US$8,802 million, the highest on record except for 2016.

(2) Portfolio Investment

In 2020, portfolio investment abroad by residents increased by US$36,122 million mainly because insurance companies and banks expanded their overseas investment. Equity and investment fund shares increased by US$1,974 million, and debt securities by US$34,148 million.

On the other hand, local portfolio investment by nonresidents decreased by US$22,441 million as foreign investors reduced holdings of Taiwanese stocks. Equity and investment fund shares decreased by US$23,275 million, while debt securities increased by US$854 million.

(3) Financial Derivatives

Assets in financial derivatives decreased by US$20,563 million, principally accounted for by gains on transactions of financial derivatives received by other financial corporations.

Liabilities in financial derivatives decreased by US$21,016 million, mainly because of losses on transactions of financial derivatives paid by other financial corporations.

(4) Other Investment

In 2020, other investment abroad by residents increased by US$2,140 million. Of the components, currency and deposits increased by US$9,808 million as a result of growing banks' due from overseas branches; loans exhibited an increase of US$4,034 million because of an increase in interbank loans; trade credit decreased by US$8,598 million, owing to a decrease in trade credit extended by corporations; other accounts receivable decreased by US$3,109 million as a result of a decrease in banks' accounts receivable from nonresidents.

Other inward investment by nonresidents increased by US$16,567 million. Of the components, currency and deposits increased by US$2,126 million because of growing deposits in Offshore Banking Units by nonresidents; loans increased by US$5,447 million because of expanded external borrowing by non-financial corporations; trade credit increased by US$9,116 million, owing to an increase in trade credit received by corporations; other accounts payable decreased by US$122 million.

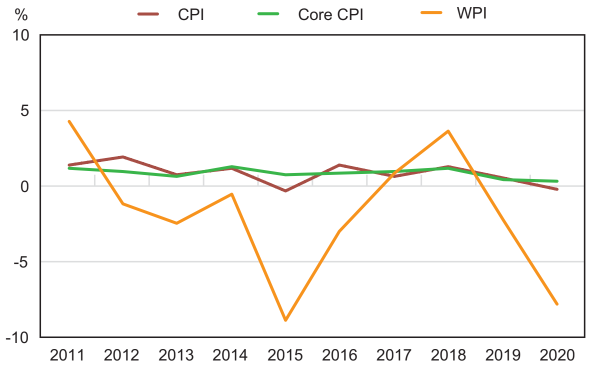
Increase in Foreign Exchange Reserves

The foreign exchange reserve assets held by the Bank increased by US$48,432 million in 2020, mainly owing to returns from foreign exchange reserves management and the Bank's smoothing operations in response to excessive volatility caused by large capital inflows.

4. Prices

In 2020, with the COVID-19 pandemic battering the world economy, steep declines in international crude oil and other raw material prices dragged Taiwan's wholesale price index (WPI) down by 7.79%. Meanwhile, headline inflation, measured by the CPI, fell by 0.23% as the pandemic-induced plunge in international oil prices drove down domestic energy prices, the hospitality industry used discount offers to promote business, and communication fees stayed low. The core CPI, which excludes fruit, vegetables, and energy, increased by 0.35%, the lowest since 2010.

Inflation Rates



Source: *Price Statistics Monthly*, DGBAS, Executive Yuan.

Further Decrease in Wholesale Prices

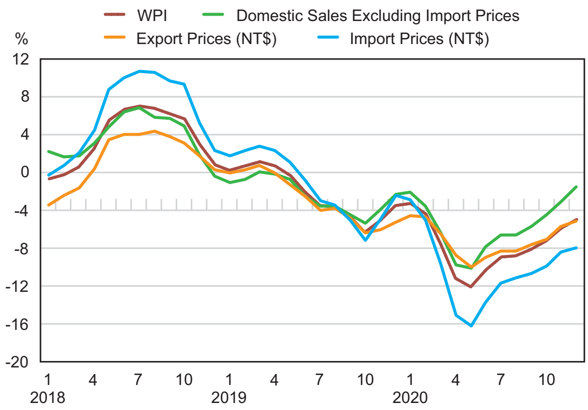
The WPI fell further by 7.79% in 2020, lower than the -2.26% of the previous year. The decrease mainly reflected sharp drops in international raw material prices amid the coronavirus pandemic. In terms of monthly movements, the annual WPI inflation rate gradually trended down from the beginning of the year and hit an all-year low of -12.19% in May because of an international oil price slump. Later, the decline in the annual WPI inflation rate abated owing to a rebound in international oil prices boosted by the resumption of economic activity across the world, and the decrease narrowed to 5.04% in December.

Broken down by the three major components of the WPI, the annual rates of change in prices for imports, domestic sales excluding imports, and exports all declined in 2020 on account of marked drops in raw material prices.

Import prices, weighted at 31.92% of the WPI, decreased by 6.13% in US dollar terms in 2020. As the NT dollar appreciated against the US dollar over 2020, the annual growth rate of import prices posted a larger decrease of 10.28% in NT dollar terms. Among the components of import prices in terms of NT dollars, prices of raw materials moved down by 13.29% and accounted for 9.44 percentage points in the import price decrease, mainly because of falling prices of mineral products and chemical products. Prices of capital goods and consumer goods also declined by 3.76% and 1.89%, respectively.

Export prices, weighted at 40.04% of the WPI, slid by 2.91% in US dollar terms in 2020. Owing to the NT dollar appreciation against the US dollar, the annual change in export prices experienced a 7.21% decline in terms of the NT dollar. Among the components of export prices in NT dollar terms, prices of raw materials went down by 7.48%, contributing 6.06 percentage points to the export price decrease, primarily reflecting lower prices of mining products, chemical products, as well as plastics and rubber products. In addition, prices of capital goods and consumer goods dropped by 3.90% and 7.16%, respectively.

Annual WPI Rates



Source: *Price Statistics Monthly*, DGBAS, Executive Yuan.

As global demand weakened amid the coronavirus pandemic, pushing down import costs of primary commodities, prices of domestic sales excluding imports, weighted at 28.04% of the WPI, slipped by 5.71% in 2020. In terms of the basic groups, prices of manufacturing products fell by 5.90%, mainly attributable to a larger reduction in prices of petroleum and coal products. Prices of water, electricity, and gas supply went down by 7.15%, while prices of quarrying and mining products dropped by 1.31%. Prices of agriculture, forestry, fishing, and animal husbandry products registered a decrease of 1.28%.

Slight Decrease in Consumer Prices

The CPI slightly fell by 0.23% in 2020, the first yearly decline since 2016. In the first two months of the year, the annual CPI inflation rate fluctuated because of the seasonal factor of the Lunar New Year holidays. From March onwards, as domestic energy prices decreased significantly amid the pandemic-induced slump in international oil prices and hospitality businesses reduced prices to attract customers, the CPI inflation rate stayed negative and slowed to an all-year low of -1.21% in May. Subsequently, the CPI inflation rate climbed back up and registered -0.33% in August, with smaller declines in prices of domestic fuels and entertainment services thanks to the reopening of economic activity around the world. In September, the CPI inflation rate moved down to -0.58% owing to a higher base effect. Afterwards, driven by rises in airfares and vegetables prices, the rate went up and turned to positive 0.09% in November, and posted a smaller increase of 0.06% in December.

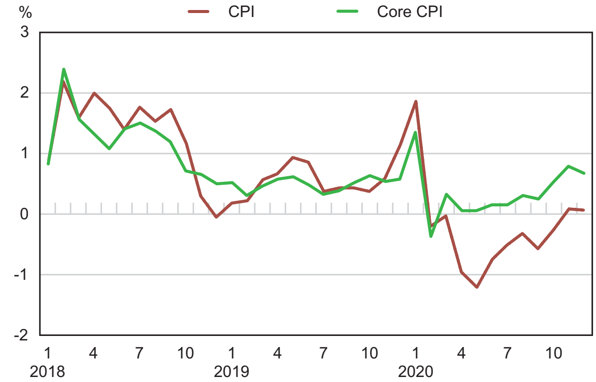
Compared to the slight downtrend in the CPI, the core CPI inflation rate rose mildly by 0.35% in 2020. In the first two months of the year, the rate experienced more fluctuations on account of the seasonal factor of the Lunar New Year holidays. From March onwards, the pace of core CPI growth slackened and slowed to 0.06% in May, mainly owing to weak domestic demand affected by the pandemic. Later, with domestic demand rebounding amid the eased pandemic situation at home, the core inflation rate trended up and recorded 0.68% in December.

The main factors contributing to the decrease of CPI inflation in 2020 were as follows:

(1) For 2020, Brent oil prices averaged US$41.74 per barrel, tumbling by 35.16% from the previous year. As a result, the decline in imported costs of petroleum and natural gas lowered domestic oil and gas prices, which dropped by 17.46% and 16.45% and accounted for 0.48 and 0.07 percentage points in the CPI decrease, respectively.

(2) Discount offers used by hospitality businesses to appeal to customers amid the pandemic pushed down prices of entertainment services by 3.19%, subtracting 0.18 percentage points from CPI inflation.

Annual CPI Rates



Source: *Price Statistics Monthly*, DGBAS, Executive Yuan.

Brent Oil Prices

Source: Refinitiv Datastream.

(3) As domestic communication service providers continued with fee reductions, communication fees slipped by 3.62%, deducting 0.09 percentage points from CPI inflation.

The main upward factors contributing to CPI inflation in 2020 were as follows:

(1) Prices of residential rent continued a mild uptrend and rose by 0.90%, contributing 0.13 percentage points to CPI inflation.

(2) Increased prices of gold ornaments and jewelry led prices of personal effects to grow by 3.89%, accounting for 0.09 percentage points in the CPI inflation rate.

(3) A minimum wage hike pushed up prices of food away from home by 0.95%, contributing 0.09 percentage points to CPI inflation.

(4) Less discount promotions for clothing drove up prices of garments by 1.91%, accounting for 0.06 percentage points in the CPI increase.

Percentage Changes in the Major Components of the CPI in 2020

Item	Annual Rate of Change (%)	Contribution to CPI Inflation Rate (Percentage Point)
CPI	-0.23	-0.23
Residential Rent	0.90	0.13
Personal Effects	3.89	0.09
Food Away from Home	0.95	0.09
Garments	1.91	0.06
Total		0.37
Fuels & Lubricants	-17.46	-0.48
Entertainment Services	-3.19	-0.18
Communication Fees	-3.62	-0.09
Gas	-16.45	-0.07
Total		-0.82
Others		0.22

Source: *Price Statistics Monthly*, DGBAS, Executive Yuan.

5. Labor Market

Slight Increase in Employment

From the beginning of 2020, as the spread of COVID-19 dampened the hiring intentions of firms, employment trended downwards to 11.46 million persons in May. Afterwards, employment gradually picked up along with the economic recovery amid a relatively successful pandemic containment at home. For the year as a whole, annual average employment was 11.50 million persons, a slight increase of four thousand persons, or 0.03%, from the previous year.

In terms of employment by sector, the industrial sector was the most severely hit by the pandemic, with employment decreasing by 16 thousand persons or 0.39%. Within this sector, employment in manufacturing declined by 25 thousand persons or 0.82%. Employment in the agricultural sector also went down by 11 thousand persons or 2.03%. On the other hand, employment in the services sector increased by 30 thousand persons or 0.44%. Within this sector, employment in human health and social work activities grew by 13 thousand persons or 2.71%. Of total employment, the services sector accounted for 59.8%, up by 0.25 percentage points from the previous year, while the shares of the industrial and the agricultural sectors shrank to 35.43% and 4.76%, respectively.

In terms of employed persons by occupation, employment of white collar workers,[2] accounting for 45.19% of total employment, increased by 15 thousand persons or 0.29%. Services and sales employment made up 19.88% of total employment and increased by five thousand persons or 0.22%, while employment of blue collar workers,[3] accounting for 34.93% of total employment, decreased by 16 thousand persons or 0.4%. These figures indicate that employment of blue collar workers was impacted more by the pandemic.

Employment and the Unemployment Rate

Source: DGBAS, Executive Yuan.

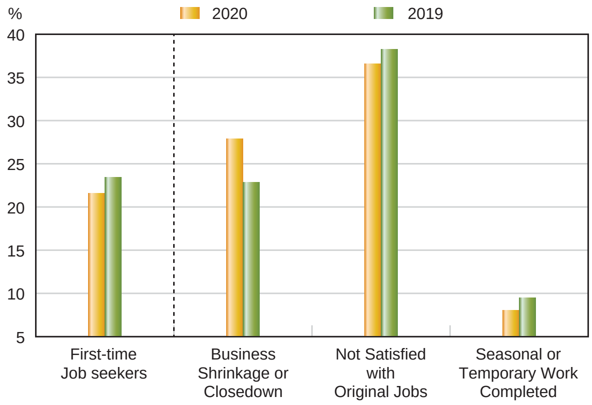
Rising Unemployment Rate

The unemployment rate exhibited an upward trend from the beginning of the year on account of the outbreak of the pandemic. It rose to 4.07% in May 2020, the highest since September 2016, and then gradually declined to 3.68% in December as economic growth regained momentum. For the year as a whole, the unemployment rate was 3.85%, the highest since 2017.

[2] Including legislators, senior officials, managers, professionals, technicians, associate professionals, and clerical support workers.
[3] Including skilled workers in agricultural, forestry, fishing, and animal husbandry industries, and craft and machinery related workers.

With the government's support measures[4] to mitigate the pandemic's impacts on the labor market, unemployment duration decreased marginally by 0.25 weeks to 22.63 weeks over the previous year. In terms of age groups, unemployment duration of the age group 45-64 improved the most and decreased by 0.87 weeks to 23.81 weeks, while those of the age groups 15-24 and 25-44 decreased by 0.36 and 0.15 weeks to 18.68 and 23.99 weeks, respectively. The average number of the long-term unemployed[5] was 55 thousand persons, a decrease of eight thousand persons compared to that in the previous year.

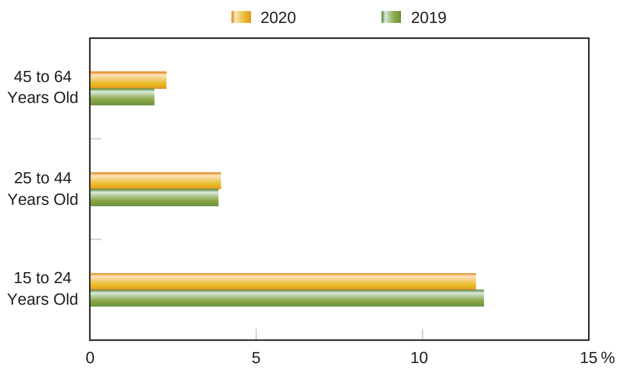
Causes of Unemployment



Source: DGBAS, Executive Yuan.

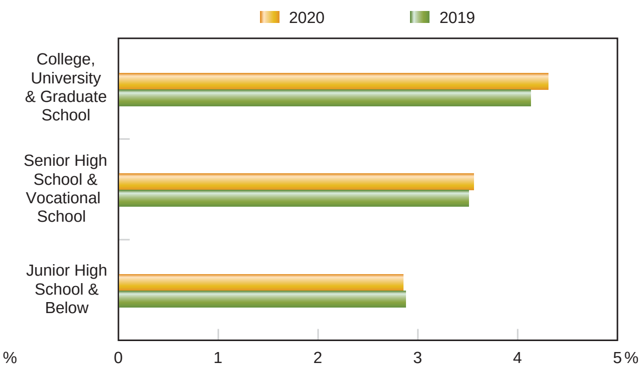
In terms of causes of unemployment, total unemployment in 2020 was 460 thousand persons, increasing by 14 thousand, or 3.28%, from the previous year, mainly because unemployment of experienced job seekers, with a share 77.87% of total unemployment, increased by 19 thousand persons or 5.74%. Among them, unemployment because of shrinkage or closedown of business recorded the greatest increase, by 27 thousand persons or 25.87%, and its share of total unemployment also increased from 23.54% the previous year to 28.69%, reflecting a rise in this type of involuntary unemployment owing to the impacts of the pandemic. By contrast, unemployment because of dissatisfaction with their original jobs still accounted for the largest share of total unemployment, with a share of 37.18%, while falling by three thousand persons or 1.56%. Meanwhile, unemployment

Unemployment Rate by Age



Source: DGBAS, Executive Yuan.

Unemployment Rate by Educational Background



Source: DGBAS, Executive Yuan.

[4] Including an immediate part-time job program for workers impacted by COVID-19, employment support measures for fresh graduates, "relief loans for workers" program, and "the Recharge and Restart Training Program" for furloughed employees.

[5] Referring to those who have been unemployed for 53 weeks or more.

because of conclusion of seasonal or temporary work dropped by five thousand persons, or 12.72%, and made up a smaller share of 8.18%.

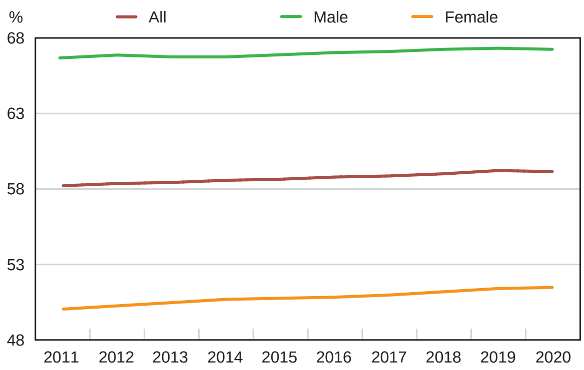
In terms of age groups, in the year 2020 the unemployment rates of the age groups 25-44 and 45-64 edged up by 0.07 and 0.36 percentage points from the previous year to 3.94% and 2.30%, respectively; the unemployment rate of the age group 15-24 fell by 0.27 percentage points to 11.61%, still the highest among all the age groups.

In terms of educational background, the unemployment rate of people with a senior high school or vocational school degree and that of people with a college degree or above increased by 0.05 and 0.17 percentage points to 3.56% and 4.30%, respectively. On the other hand, the unemployment rate of people with a junior high school degree or below decreased by 0.02 percentage points to 2.85%. Younger persons and highly educated people suffered higher unemployment rates in 2020, indicating a mismatch between skill acquired through tertiary education and demand for skills in the labor market.

Labor Force Slightly Increased While Labor Force Participation Rate Edged Down

Affected by falling demand for labor amid the coronavirus pandemic, the labor force (employed and unemployed combined) grew only mildly by 18 thousand persons, or 0.15%, to 11.96 million persons in 2020, while the non-labor force grew by 24 thousand persons, or 0.3%, to 8.27 million persons. The average labor force participation rate inched down by 0.03 percentage points over the previous year to 59.14% in 2020, the first decline since 2010.

Labor Force Participation Rate



Source: DGBAS, Executive Yuan.

In terms of gender, the male labor force participation rate was 67.24%, a drop of 0.10 percentage points from the year before. The female rate has continued to increase since 2001 and reached 51.41% in 2020, reflecting that government policies have been effective in promoting gender equality, improving the work environment, and facilitating female employment in recent years.

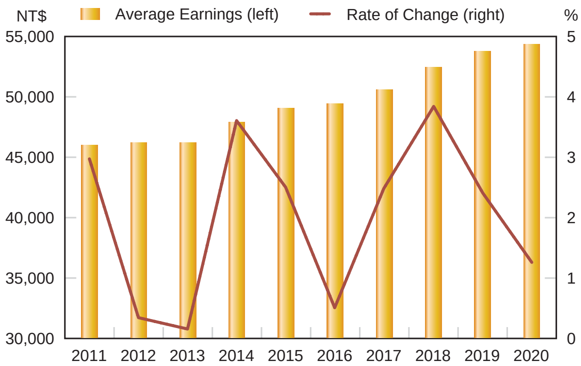
In terms of age groups, the labor participation rates of all age groups went up in 2020, with those of the 16-24, 25-44, and 45-64 age groups increasing by 0.44, 0.02, and 0.51 percentage points to 36.53%, 89.52%, and 64.00%, respectively. Although Taiwan's total labor force participation rate has generally exhibited an upward trend since 2010, it is still lower than those of the United States (61.7%), Japan (62.0%), South Korea (62.5%), and Singapore (68.1%), attributable to the extension of schooling and early retirement. To cope with the challenges arising from an aging population, in recent years the government has actively promoted the employment of the youth population as well as middle-aged workers. Furthermore, the enactment of *Middle-Aged and Elderly Employment Promotion Act* in December 2020, was expected to gradually bear fruit by supporting the re-employment of the elderly and constructing a friendly work environment for the middle-aged and the old.

In terms of education level, the labor force participation rates of workers with a junior high school degree or below and those with a senior high school or vocational degree dropped by 1.17 and 0.11 percentage points to 39.70% and 62.77%, respectively, while the participation rates of workers with a college degree or above rose by 0.17 percentage points to 66.00%.

Slower Wage Growth

For the year 2020, the average monthly earnings per worker of the non-farm sector increased by 1.24% to NT$54,320, the lowest since 2017, mainly resulting from slower pay raises as well as reduced overtime hours caused by the pandemic. However, after adjustment for inflation, the average real monthly earnings increased by 1.47% to a historical high at NT$53,094.

Amount and Rate of Change of Average Earnings of Non-farm Workers



Source: DGBAS, Executive Yuan.

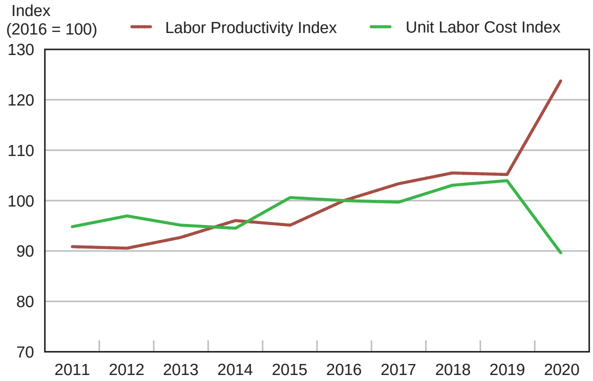
In terms of major sectors, the average monthly earnings of the industrial and services sectors increased by 0.4% and 1.84% to NT$53,078 and NT$55,241, respectively, while increasing by 0.64% and 2.08%, respectively, in real terms.

In terms of industrial classification, the finance and insurance sector had the highest average monthly earnings with NT$94,413, the electricity and gas supply sector came in second with NT$94,363. On the other hand, workers in those education services involving short-term tutoring and driving school and the accommodation and food services sector earned an average monthly wage of NT$27,104 and NT$35,008, respectively, the lowest two among all sectors owing to a large number of part-time employees in these sectors. In terms of growth rates, most sectors witnessed increases in average monthly earnings, with the real estate sector recording the largest increase at 7.36% and the arts, entertainment and recreation sector in second place with an increase of 2.76%.

Labor Productivity Significantly Increased While Unit Labor Cost Decreased

As total production increased while total working hours decreased, labor productivity of the industrial and the manufacturing sectors substantially rose by 17.78% and 18.32%, respectively. In the manufacturing sector, the manufacture of electronic parts and components registered the largest increase in labor productivity with 28.93%, followed by the computers, electronic and optical products manufacturing sector with 19.25%. The marked increase in labor productivity mainly resulted from buoyant demand for semiconductor chips as well as for information and communications products, leading to a substantial expansion in production.

Labor Productivity and Unit Labor Cost of Industrial Sector



Source: DGBAS, Executive Yuan.

Since the increase in total earnings was lower than that in production, unit labor costs of the industrial and the manufacturing sectors decreased by 13.82% and 14.16% year on year, respectively. Of all the manufacturing sectors, the electronic parts and components manufacturing sector experienced the largest decrease in unit labor cost with 20.96%, followed by computers, electronic and optical products manufacturing with a decrease of 19.86%.

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

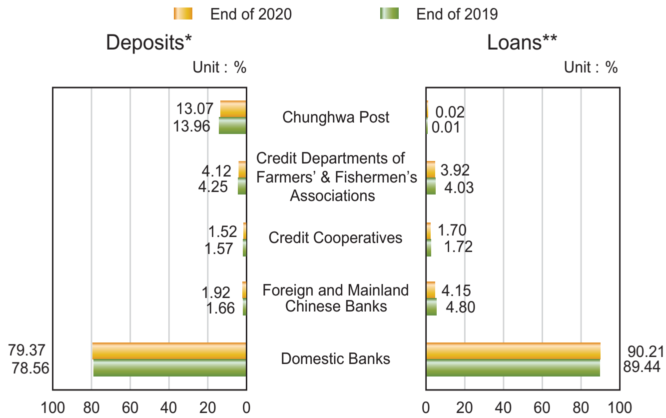
Sources: 1. *Financial Statistics Monthly*, CBC.
2. Department of Financial Inspection, CBC.

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.

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.

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.

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 Institutions[1]

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.

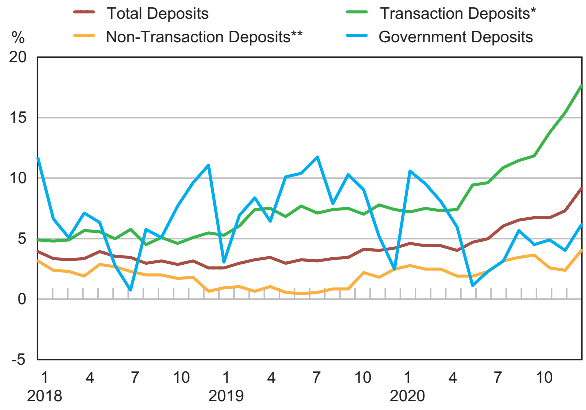
Deposits

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.

Annual Growth Rates of Deposits



Notes: * Including checking accounts, passbook deposits and passbook savings deposits.
** Including time deposits, time savings deposits, foreign currency deposits, postal savings deposits, non-residents' NT dollar deposits, repurchase agreements, and money market mutual funds.

Source: *Financial Statistics Monthly*, CBC.

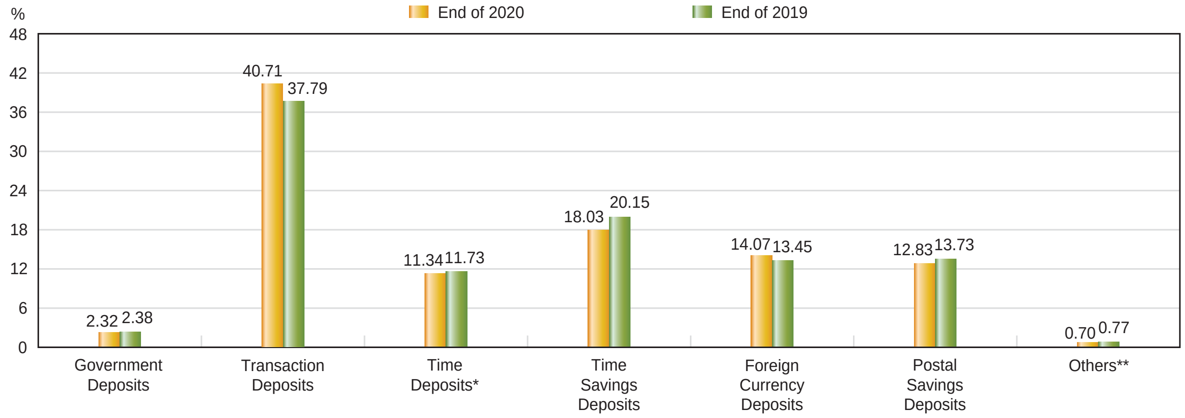
As for the two months showing slower annual growth, in January, the drop was because of the Lunar New Year holiday as firms tended to issue special and yearly bonuses, causing the deposit balance of passbook deposits to drop. In March, stock market weakness led the deposit balance of securities giro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



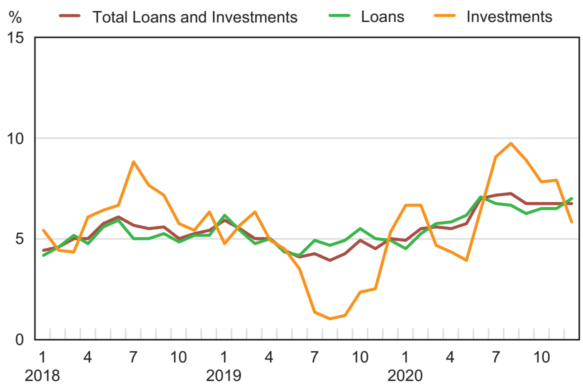
Notes: * Including NCDs.
** Including repurchase agreements, non-residents' NTD deposits and money market mutual funds.
Source: *Financial Statistics Monthly*, CBC.

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

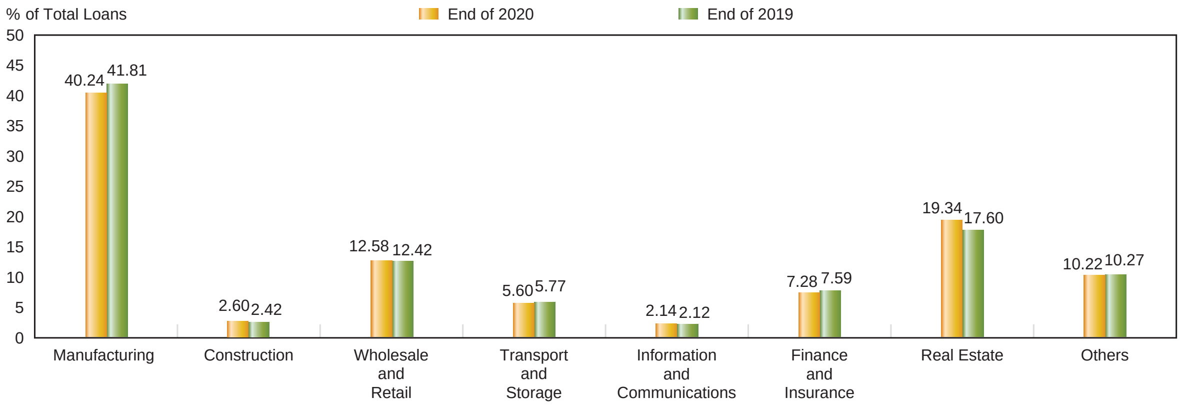
The annual growth rate of private sector loans extended by banks (defined in the following paragraphs as including domestic banks and local branches of foreign and Mainland Chinese banks) climbed to 7.70% at the end of 2020 from 5.47% a year earlier. The growth was largely driven by an increase of loans 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

Loans by Industry



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.

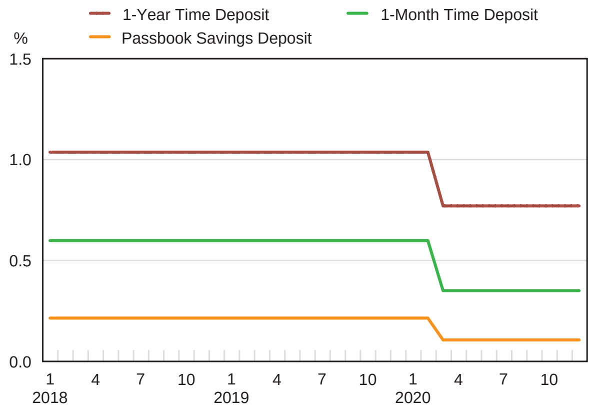
Portfolio investments by monetary financial institutions, measured on a cost basis, grew at a higher rate of 5.81% in 2020, mainly because major economies maintained an accommodative monetary policy stance as they were watchful of uncertainties relating to the COVID-19 pandemic and the implications for 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.

Average Deposit Rates of the Five Major Domestic Banks*



Note: * The five major domestic banks are Bank of Taiwan, Taiwan Cooperative Bank, First Commercial Bank, Hua Nan Commercial Bank and Land Bank of Taiwan.

Source: *Financial Statistics Monthly*, CBC.

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.

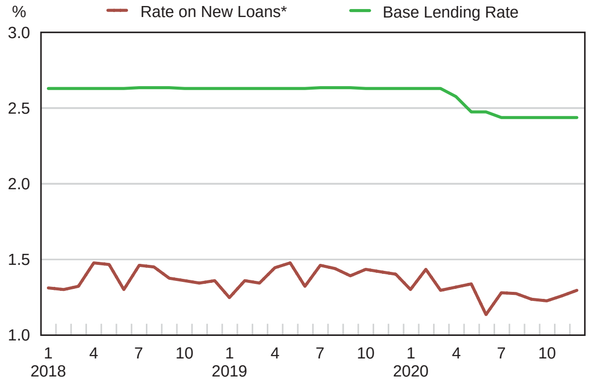
After the Bank's March rate cut, various banks successively lowered their base lending rates and the index rates on adjustable-rate mortgages, as well as further rate reductions for relief loans. As a result, the weighted average interest rate on new loans of the five major domestic banks broadly trended 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.

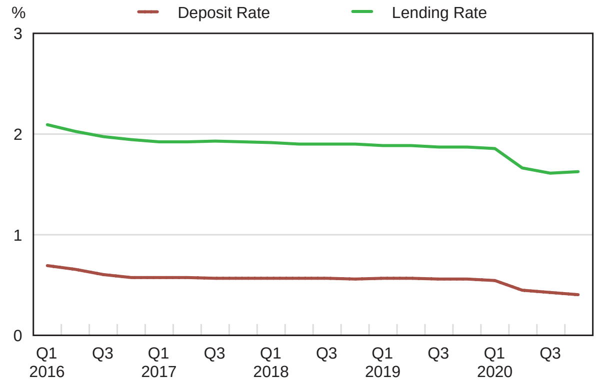
Average Lending Rates of the Five Major Domestic Banks



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.

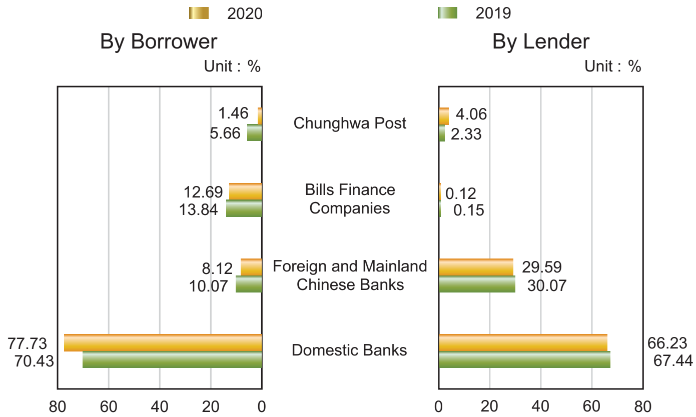
Additionally, the amount borrowed by Chunghwa Post dropped substantially by NT$1,287.8 billion or 75.83% compared with the previous year as its Department of Savings and Remittances managed funds effectively, thus driving down its demand for borrowing.

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.

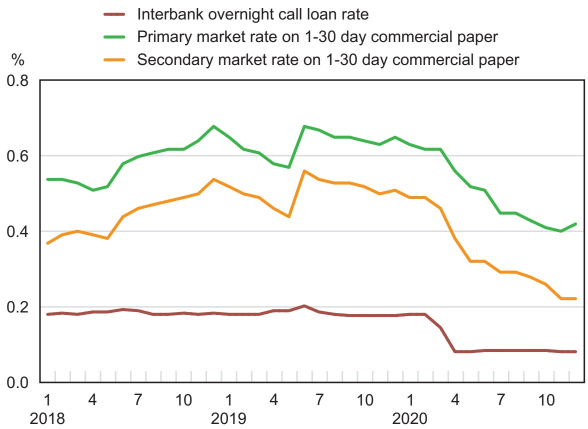
In March, the spread of the coronavirus pandemic and plunging international oil prices led US stocks to tumble, triggering a wave of panic sentiment in financial markets. Continued net sales by foreign investors in the Taiwan Stock Exchange (TWSE) market and the resulting net foreign capital outflows 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



Source: *Financial Statistics Monthly*, CBC.

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.

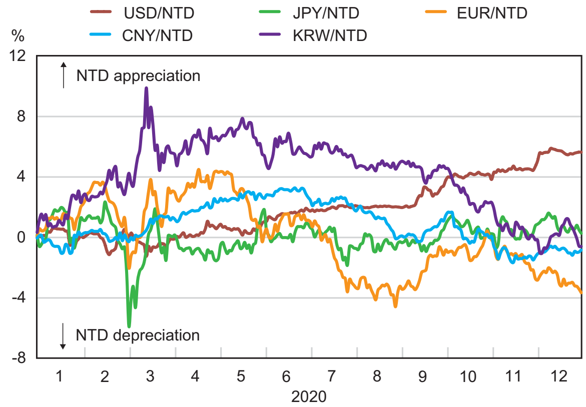
During the course of the year, the NT dollar against the US dollar appreciated slightly. Early in the year, the COVID-19 pandemic impacted the world, which led to an increase in safe-haven demand for US dollars; however, the pandemic in Taiwan was well controlled, resulting in the NT dollar against the 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

Percent Changes of NT Dollar Against Major Currencies
(Compared with End-2019)



Source: Department of Economic Research, CBC.

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.

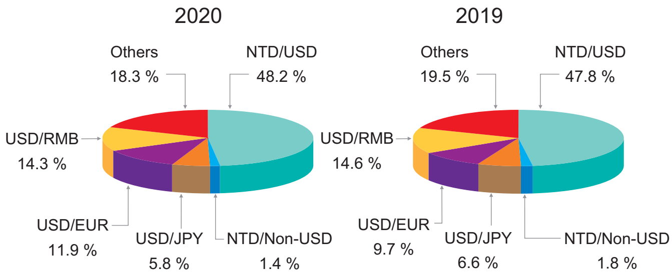
depreciated against the RMB by 0.86% between end-2019 and end-2020. On a daily average basis, the NT dollar appreciated by 4.44% against the RMB when compared with the previous year.

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.

Composition of Foreign Exchange Transactions by Currency Pair



Source: Department of Foreign Exchange, CBC.

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.

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

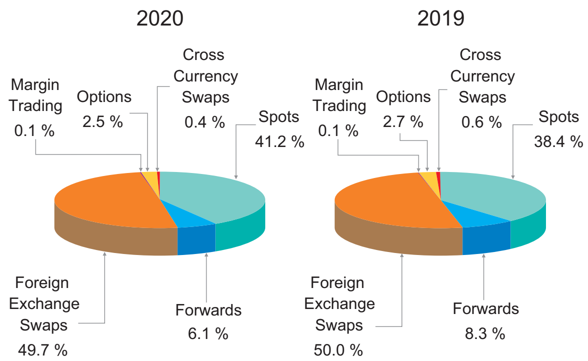
Source: Department of Foreign Exchange, CBC.

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.

Composition of Foreign Exchange Transactions by Type of Product



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

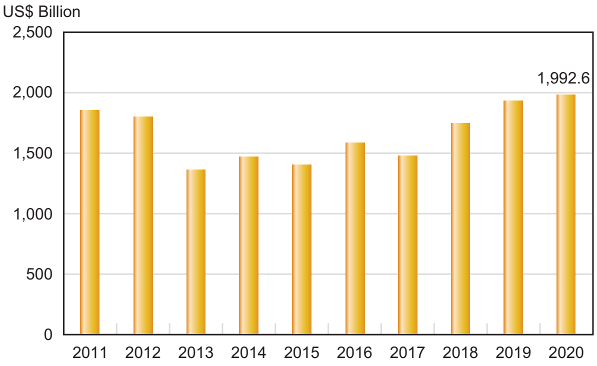
Business Items	Amount
Deposit balance (include NCDs, end of 2020)	244.5
Total remittances (February 2013 to December 2020)	13,002.7
Total settlement through the Taipei Branch of the Bank of China (February 2013 to December 2020)	32,645.0
Total value of 180 RMB-denominated bonds issued (as of the end 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

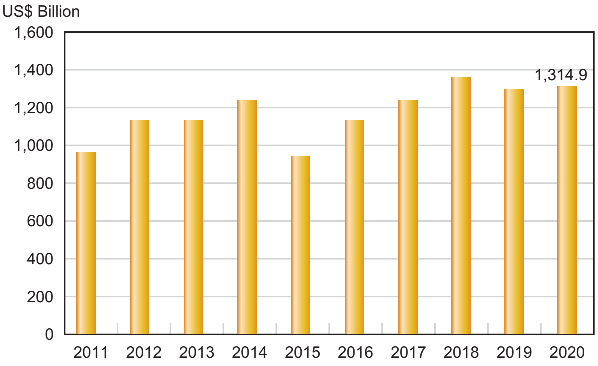
The transaction volume in the foreign currency call loan market in 2020 was US$1,992.6 billion, an increase of 2.8% over the previous year. Of this amount, US dollar transactions accounted for a dominant share with US$1,912.2 billion, making up 96.0% of the total while increasing by 5.3% from

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

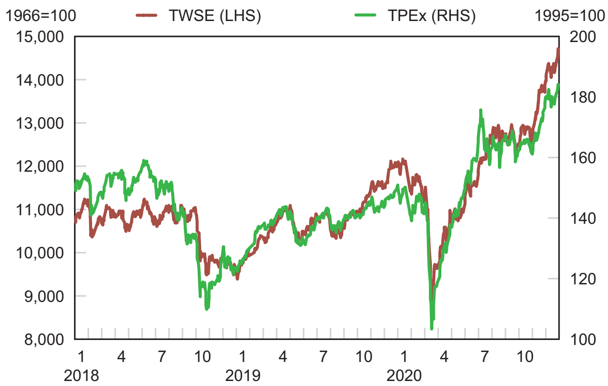
At the end of 2020, the number of TWSE listings increased by 6 to a total of 948. The par value of total shares amounted to NT$7.2 trillion with a 1.2% year-on-year increase. Total market capitalization expanded by 23.3% to NT$44.9 trillion. Meanwhile, the total number of Taiwan depository receipts (TDRs)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

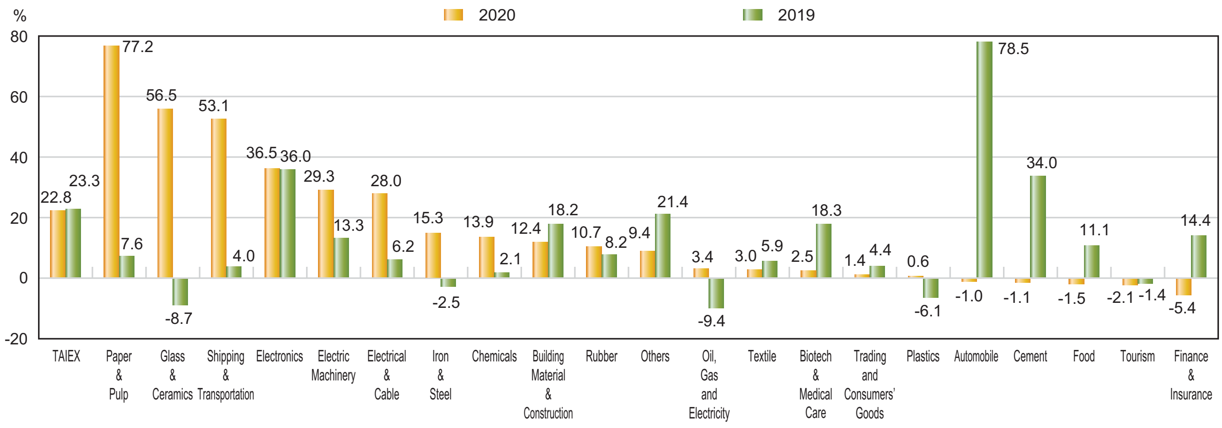
Thereafter, major economies adopted expansionary monetary and fiscal policies, the pandemic itself showed signs of easing, and the domestic National Financial Stabilization Fund stepped in to support the market. These factors combined to provide a boost to the TAIEX, which joined US stock indices in 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

TWSE and TPEx Indices



Sources: 1. TWSE.
2. Taipei Exchange (TPEx).

TWSE Stock Price Changes, by Industrial Group



Source: TWSE.

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 Huawei[7] 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.

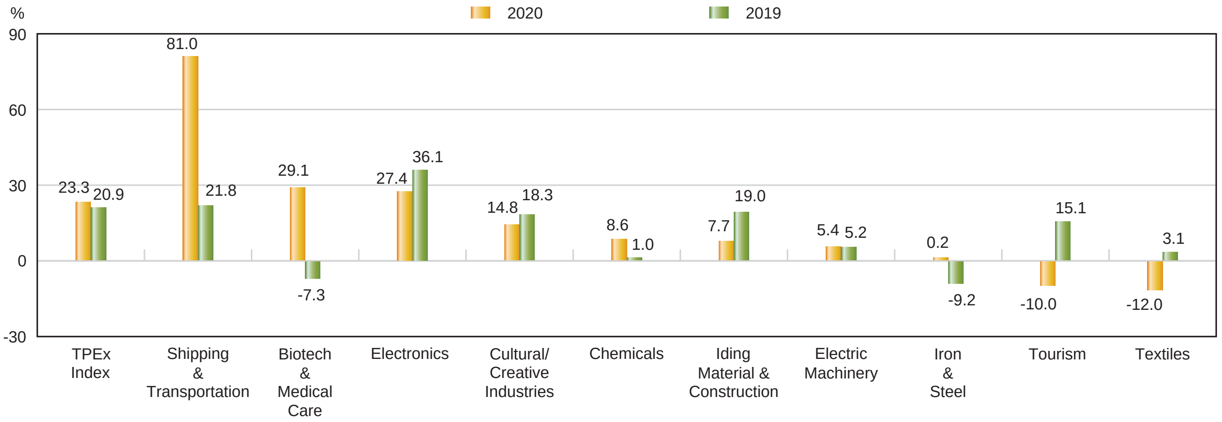
[7] On August 18, 2020, the US banned Huawei and the other 38 affiliates added to the entity list from acquiring foreign and US-made semiconductors produced and developed from US technology and software. As a result, major semiconductor firms including Taiwan Semiconductor Manufacturing Company (TSMC), 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.

TPEx Stock Price Changes, by Industrial Group



Source: TPEx.

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.

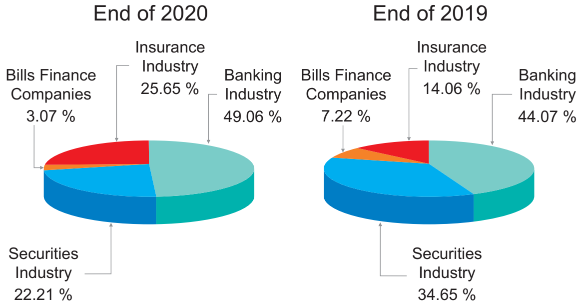
Among the total volume of government bonds issued by the Ministry of Finance, 10-year bonds accounted for the largest share with NT$175.0 billion, while 5-year bonds came in second with NT$145.0 billion. 2-year, 20-year, and 30-year government bonds registered issuance of NT$30.0 billion, NT$125.0 billion,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

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.

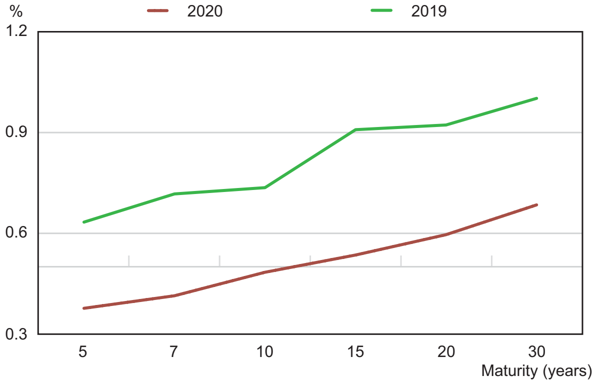
As for currency composition, issuance of US dollar-denominated, RMB-denominated, and ZAR-denominated bonds in 2020 amounted to NT$1,674.0 billion, NT$82.0 billion, and NT$7.4 billion, respectively. At the end of the year, the outstanding amount of international bonds reached NT$5,261.8 billion, a year-on-year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

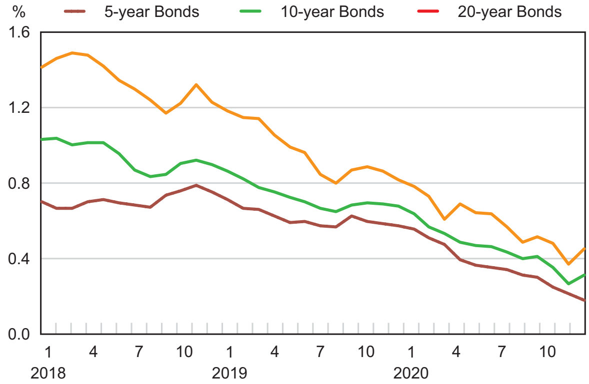
Compared to the previous year, the average yield curve of government bonds shifted downward for the year 2020. The average yield on 15-year bonds recorded the largest decrease of 38 basis points from a year before, while that on 20-year bonds came second with a decline of 33 basis points. Meanwhile,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

Central Bank Operations

III. Central Bank Operations

1. Overview

For the year 2020, the coronavirus pandemic caused the global economy to deteriorate drastically. To mitigate pandemic-induced impacts on domestic economic activity and the labor market and to safeguard against the adverse implications of massive cross-border capital flows for financial stability, the Bank reduced the policy rates by 25 basis points in March.

In addition, to help SMEs to get through financial distress, the Bank rolled out a special accommodation facility to support bank credit to SMEs, effective from April 2020. This special facility aimed to help alleviate financial burdens on SMEs, sustain businesses, retain jobs, and protect paychecks.

In the meantime, in order to promote financial stability and sound banking operations and to preclude an inordinately high flow of bank credit into the real estate sector, the Bank reinforced previous efforts of targeted prudential measures on real estate lending by enacting the amended (and renamed) *Regulations Governing the Extension of Mortgage Loans by Financial Institutions*, which took effect on December 8, 2020. This action served as a part of the policy efforts to promote "efficient allocation and proper use of credit resources" under the government's "Program to Foster a Sound Real Estate Market."

In response to economic and financial conditions, the Bank continued to conduct open market operations by issuing CDs to manage market liquidity, maintain reserve money at appropriate levels, and sustain steady growth in monetary aggregates. For the year as a whole, reserve money and the monetary aggregate M2 posted year-on-year growth of 8.59% and 5.84%, respectively. Both readings were higher than the GDP growth rate of 3.11% over the same period, indicating sufficient market liquidity to support economic activity.

In the foregin exchange (FX) market, developments such as the spread of the coronavirus pandemic, the spillover effects of continued monetary easing by major central banks, and the significant repatriation of offshore funds by Taiwanese firms resulted in greater volatility in the NT dollar exchange rate. The Bank, in line with its statutory mandates, stepped in as warranted to sustain dynamic stability of the NT dollar and conducted symmetrical smoothing operations, with a net buying of US$39.1 billion for the year. In 2020, compared with other major currencies (including the Singapore dollar, the euro, and the Korean won), the NT dollar experienced lower volatility in its exchange rate vis-à-vis the US dollar. Moreover, in addition to approving more bank branches as authorized FX banks, the Bank reviewed the laws and regulations governing FX business as seen fit so as to facilitate authorized FX banks' competitiveness and service quality.

In order to ensure business continuity of the payment and settlement systems and maintain sound operation of domestic financial infrastructure amid the COVID-19 pandemic, the Bank urged financial institutitons to take precautionary measures in case of pandemic-related contingencies. Furthermore, the Bank required the Financial Information Service Co., Ltd. to assist financial institutions in reinforcing mobile payment infrastructure.

Meanwhile, in response to the evolving trend of digital payment innovations, the Bank's task force on central bank digital currencies (CBDCs) continued its efforts and completed technical research on the feasibility of a wholesale CBDC in June 2020. Later, the Bank moved on to the second phase with a proof-of-concept study on a general purpose CBDC in September that would run for two years with a rolling review depending on the progress and international trends.

To assist domestically-oriented service industries to weather the pandemic and encourage consumption, the government rolled out the Triple Stimulus Voucher program, effective from July 15, 2020. The Central Engraving and Printing Plant, a subsidiary of the Bank, was instructed by the government to design the vouchers in mid-May and later completed the production of 22 million sets of paper vouchers in late July. Through this program, the Bank made a concerted effort in helping stimulate domestic consumption.

2. Monetary Management

Lowering Policy Rates to Bolster Economic Growth

For the year 2020, the spread of the COVID-19 pandemic plunged the global economy into a severe contraction. To mitigate pandemic-induced impacts on the domestic economy and on employment, and to preempt the adverse implications of massive cross-border capital flows for financial stability, the Bank announced a policy rate cut in March. The discount rate, the rate on refinancing of secured loans, and the rate on temporary accommodations were reduced by 0.25 percentage points to 1.125%, 1.5%, and 3.375%, respectively, effective March 20, 2020.

Conducting Open Market Operations to Ensure Stable Growth of Monetary Aggregates

In 2020, the Bank managed market liquidity through open market operations by issuing CDs in response to domestic economic and financial conditions, which helped maintain reserve money, monetary aggregates, and the overnight call loan rate at appropriate levels.

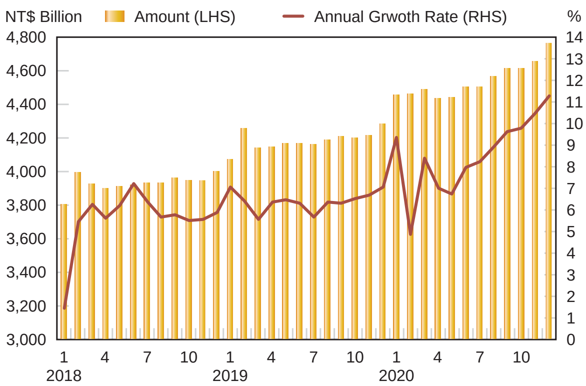
(1) Managing Market Liquidity

The Bank continued to conduct open market operations by issuing CDs. At the end of the year, the total outstanding amount of CDs issued by the Bank was NT$9,168 billion.

(2) Higher Growth in Reserve Money

Reserve money grew at a faster pace of 8.59% for the year 2020, 2.17 percentage points higher than the previous year's figure. In terms of the monthly movements of reserve money, the annual growth rates of reserve money for January and February are often more volatile as the exact timing of the Lunar New Year holidays shifts on the Gregorian calendar each year. In 2020, reserve money posted an annual growth rate of 7.08% during this period. Afterwards, the annual growth rate hit a yearly low of 6.75% in May, mainly because of net foreign capital outflows. Demand for funds increased with a domestic economic recovery from June onwards, and banks' demand for reserves rose with net foreign capital inflows from October. The annual growth rates of reserve money continued to rise in subsequent months and reached a yearly high of 11.34% in December.

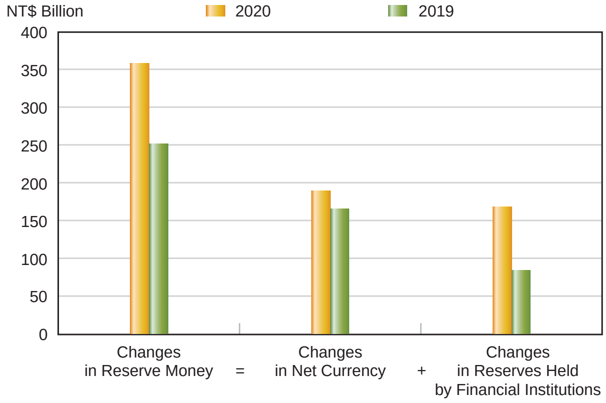
Reserve Money (Averages of Daily Figures)



Source: *Financial Statistics Monthly*, CBC.

On the demand side, reserve money, measured on a daily average basis, increased by NT$360 billion over the previous year. Of the components, net currency increased by NT$190 billion and the annual growth rate rose to 9.17% from 8.77% the previous year; reserves held by financial institutions expanded by NT$170 billion, with the annual growth rate trending up to 8.02% from 4.02% the previous year. Currency held by the non-bank public grew moderately because the Bank's policy rate cut in March led the interest rates paid on bank deposits lower, enhancing the willingness to hold currency in hand. Meanwhile, the overall growth rate of banks' reserves increased compared to the previous year as higher growth in transaction deposits raised banks' demand for reserves.

Changes in Reserve Money (Averages of Daily Figures)

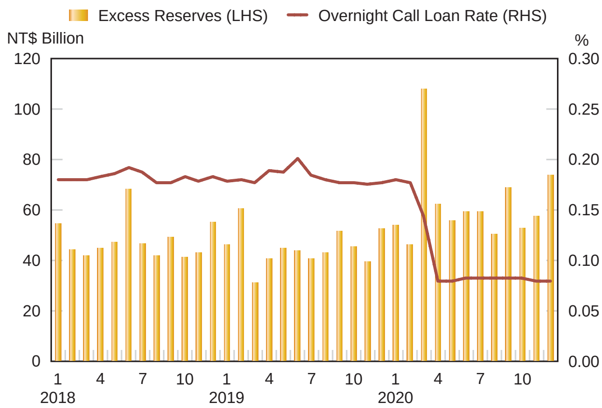


Source: *Financial Statistics Monthly*, CBC.

From the supply side perspective, reserve money increased by NT$538 billion at the end of the year. According to the balance sheet of the Bank, which revealed the sources of changes in reserve money, the increase was mostly attributable to the growth in foreign assets held by the Bank and expanded claims on financial institutions, whereas the decrease was due to the Bank's issuance of CDs.

(3) Overnight Call Loan Rate Broadly Stable

Excess Reserves and Overnight Call Loan Rate



Source: *Financial Statistics Monthly*, CBC.

In 2020, the Bank continued to conduct open market operations to maintain excess reserves and the overnight call loan rate at appropriate levels in the midst of the COVID-19 pandemic. In response to the pandemic, the Bank adjusted the issuance frequency of 7-day, 91-day, and 182-day NCDs and ceased to issue 14-day NCDs from April onwards to strengthen the effect of the NCD rates on the market rates. The annual average excess reserves of financial institutions reached NT$63 billion, higher than the NT$45 billion of the previous year. The annual average overnight call loan rate was at 0.180% before the policy rate cut in March, after which the overnight call loan rate stayed broadly stable at around 0.080%.

(4) Conducting Regular Small-Scale Repo Operations

To improve operational readiness and ensure resilience of the open market operations, the Bank started conducting small-scale test repo operations with the counterparties from April onwards.

(5) Continuous Growth in Monetary Aggregates

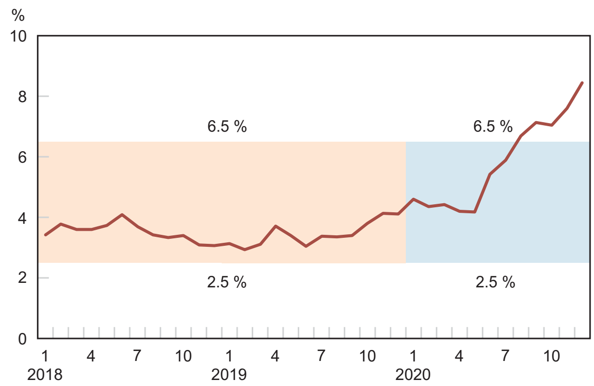
The M2 growth reference range for 2020 was set at 2.5% to 6.5%. For the year as a whole, M2 registered an annual growth rate of 5.84%, up by 2.38 percentage points from the previous year.

With regard to the monthly movements in 2020, net foreign capital inflows brought the M2 growth rate up to 4.60% in January. Later, it slipped to 4.35% in February owing to net foreign capital outflows. In March, despite an increase in net foreign capital outflows, faster growth in bank loans and investments brought the M2 growth rate up to 4.42%. Afterwards, continuous net foreign capital outflows dragged M2 growth down to its yearly low of 4.18% in May.

From June onwards, despite slower growth in foreign currency deposits sending the M2 growth rate down in October, net foreign capital inflows and stronger expansion in bank loans and investments led the M2 growth rate to display a steady uptrend and reached a yearly high of 8.45% in December.

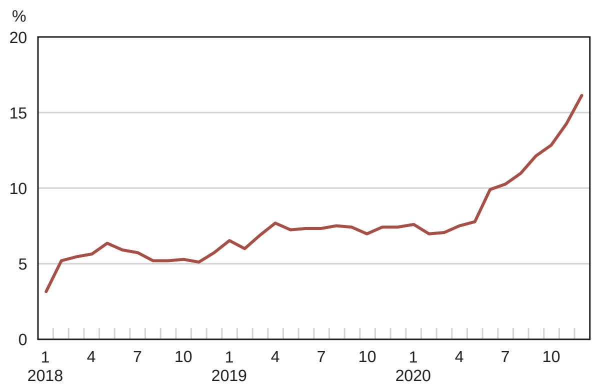
The annual growth rate of the monetary aggregate M1B, measured on a daily average basis, went up by 3.19 percentage points to 10.34% in 2020. The rise in M1B growth was primarily due to greater demand for funds amid a steady recovery in the domestic economy in the second half of the year, and an increase in transaction deposits accompanied by a booming stock market.

Annual Growth Rate of M2



Source: *Financial Statistics Monthly*, CBC.

Annual Growth Rate of M1B



Source: *Financial Statistics Monthly*, CBC.

As for the monthly movements, the annual growth rate of M1B registered 7.61% in January, and then was dragged down to the yearly low of 7.00% in February owing to a higher base effect with the Lunar New Year holidays falling in February 2019 and net foreign capital outflows. Driven by mild growth in bank loans and investments, the M1B growth rate slightly rose to 7.02% in March. Afterwards, with lower interest rates on time deposits leading to a buoyant stock market and an increase in transaction deposits, the M1B growth rate trended up steadily and reached an all-year high of 16.17% in December.

Launching a Special Accommodation Facility to Support Bank Credit to SMEs

In view of the economic impacts of the pandemic, the government introduced relief loan programs both for enterprises and for workers. The Bank also launched a special accommodation facility in March in order to enhance funding access for the SMEs. At the end of 2020, banks had received 195,075 applications with the amount totaling NT$248.8 billion. As a result, the annual growth rate of SME loans extended by domestic banks rose considerably to 13.26% at the end of December.

Amending Targeted Macroprudential Measures Governing Real Estate Loans

For the year 2020, to promote financial stability and sound banking operations by precluding an excessive flow of bank credit into the real estate market, the Bank adopted the following macroprudential policies:

(1) In November, the Bank used moral suasion at meetings with major mortgage lenders and carried out on-site inspections. Meanwhile, the Bank issued official letters to financial institutions, requiring them to enhance risk management of housing loans and cautioning them against channeling excessive credit into the real estate sector.

(2) The Bank made several amendments to the *Regulations Governing the Extension of Mortgage Loans by Financial Institutions*, effective December 8, 2020. In addition to keeping the loan-to-value (LTV) ratio capped at 60% on high-value housing loans, the Bank introduced additional LTV ratio caps on housing loans taken out by corporate entities, on the third (or more) housing loans by natural persons, on land loans, and on loans for unsold newly-built homes.

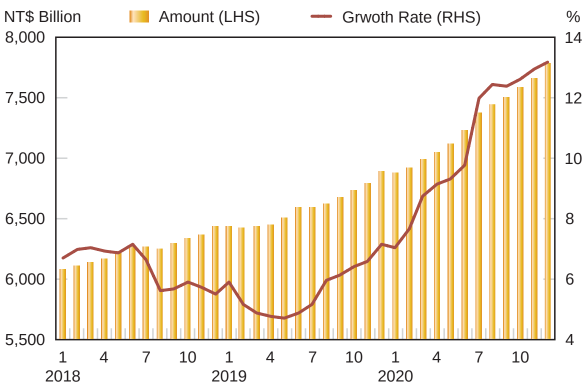
(3) The Bank held meetings twice with major mortgage lenders in December, advising them to exercise caution in granting loans against land in industrial areas and to continuously practice self-discipline so as to prevent credit resources from being used for land hoarding or speculation in these areas.

Facilitating SME Funding

To sufficiently meet the funding needs of SMEs, the FSC continued to encourage lending by domestic banks to SMEs, while the Bank also urged commercial banks to increase lending to SMEs.

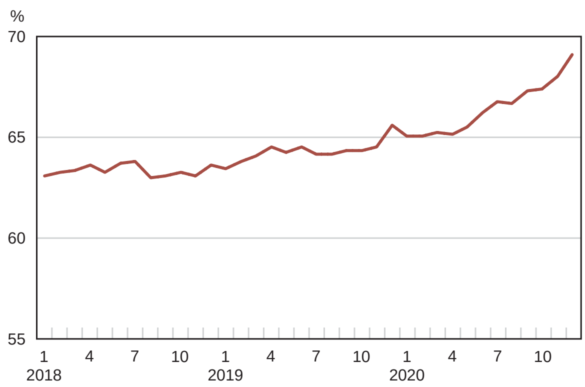
At the end of 2020, the outstanding loans extended to SMEs by domestic banks amounted to NT$7,812 billion, increasing by NT$915 billion from the end of the previous year and far exceeding the annual target of increased lending of NT$300 billion set by the competent authorities. Outstanding SME loans recorded an annual growth rate of 13.26% at the end of 2020, higher than the 7.14% at the end of 2019. Furthermore, the ratio of SME loans to loans extended to all private enterprises rose slightly from 65.61% at the previous year end to 69.08% at the end of 2020.

Outstanding Loans Extended to SMEs



Source: FSC.

Ratio of Outstanding Loans Extended to SMEs to Those Extended to Private Entreprises



Source: FSC.

Accepting Redeposits from Financial Institutions

Accepting redeposits from Chunghwa Post, the Agricultural Bank of Taiwan, and commercial banks is another instrument for the Bank to influence banks' reserve positions in order to promote financial stability. At the end of 2020, the outstanding redeposits of Chunghwa Post stayed broadly unchanged at NT$1,624 billion, while the outstanding redeposits of the Agricultural Bank of Taiwan and of commercial banks were NT$165 billion and NT$354 billion, respectively.

Box

The Bank's Special Accommodation Facility to Help SMEs Affected by the Pandemic

As the COVID-19 outbreak quickly spread worldwide in the first few months of 2020 and battered the global economy, some industry sectors in Taiwan also took a hit from the impact. Given the importance of SMEs, which made up 98% of enterprises nationwide and 80% of the employed population,[1] their financial distress could have had adverse implications for the domestic economy and the labor market.

In order to help them stay afloat, the Bank implemented the Special Accommodation Facility to Support Bank Credit to SMEs ("the Facility"), effective April 1, 2020. The Facility would provide banks with additional funds so that they may, via secured loans backed by the government's Small and Medium Enterprise Credit Guarantee Fund of Taiwan (Taiwan SMEG), support the credit needs of the SMEs.

I. Introduction to the Facility

1. The legal foundation

(1) Pursuant to Article 19 of *The Central Bank of the Republic of China (Taiwan) Act*, the Bank may provide accommodations to banks. Accordingly, the *Directions for the Central Bank of the Republic of China (Taiwan) Accommodations to Banks* (hereinafter the *Directions*) were promulgated.

(2) With the aim of mitigating the pandemic-induced impacts on the macro-economy, the Bank considered it an imperative to help the SMEs through the difficulties by facilitating their access to funds under more preferential terms. Therefore, the *Directions* were also amended as follows, effective April 1:

A. Regarding Direction 14: The scope of the Bank's refinancing of secured loans for banks is expanded;

B. Regarding Direction 15: A set of operating rules are formulated in regard to banks' applications for the Bank's refinancing of secured loans;

C. Regarding Direction 17: The Facility's interest rate may be marked down from the Bank's interest rate on secured loan refinancing.

2. Key points of the Facility

The Bank's Facility provides banks with low-interest accommodations charged at 0.1% to help them offer SMEs loans under preferential terms. Then, based on the classes of collateral

[1] Small and Medium Enterprise Administration, Ministry of Economic Affairs, R.O.C. (2019), *White Paper on Small and Medium Enterprises in Taiwan, 2019.*

and types of applicants, the Facility offers three programs of different credit lines and durations for loans extended by financial institutions to applicable businesses.

The Bank's Special Accommodation Facility to Support Bank Credit to SMEs

<table>
<tr><td>Interest rate</td><td>The Bank's rate on refinancing of secured loans (1.5%) minus 1.4 percentage points; currently at 0.1%</td></tr>
<tr><td>Total amount</td><td>NT$300 billion</td></tr>
<tr><td rowspan="3">Expiry date
(with duration up to 360 days)</td><td>For applications prior to Aug. 9, 2020: until Mar. 27, 2021</td></tr>
<tr><td>For applications between Aug. 10, 2020 and January 4, 2021: until June 30, 2021</td></tr>
<tr><td>For applications after January 5, 2021: until Dec. 30, 2021</td></tr>
</table>

Source: Department of Banking, CBC.

SME Relief Lending under the Bank's Special Accommodation Facility

<table>
<tr><td>Loan type</td><td>Secured loans to the SMEs affected by the COVID-19 pandemic as assessed by banks receiving applications</td></tr>
<tr><td>Loan purpose</td><td>To support business operations of the SMEs affected by the pandemic</td></tr>
<tr><td>Eligible borrowers and loan terms</td><td>
<table>
<tr><td>Program</td><td>A</td><td>B</td><td>C</td></tr>
<tr><td>Borrower</td><td>SME*</td><td>SME*</td><td>Small-scale business entity**</td></tr>
<tr><td>Guarantee/ Collateral</td><td>At least 90% guarantees covered by Taiwan SMEG</td><td>Other collateral (including at least 80% guarantees covered by Taiwan SMEG)</td><td>100% guarantees covered by Taiwan SMEG</td></tr>
<tr><td>Amount</td><td>Up to NT$4 million</td><td>Up to NT$16 million</td><td>Up to NT$0.5 million</td></tr>
<tr><td>Interest rate</td><td>Capped at 1%</td><td>Capped at 1.5%</td><td>Capped at 1%</td></tr>
<tr><td>Application time frame</td><td>2020.4.1-2021.6.30</td><td>2020.4.1-2021.6.30</td><td>2020.4.20-2021.6.30</td></tr>
</table>
*SME: A domestic business entity with proper company registration, business registration, limited partnership registration, or taxation registration, and whose paid-in capital is no more than NT$100 million or which hires fewer than 200 regular employees may apply for loans under Program A or B.
**Small-scale business entity: A business entity with proper taxation registration and whose monthly sales amount (in any month since from January 2020) does not reach the threshold for using uniform invoices may apply for loans under Program A, B or C.
</td></tr>
<tr><td>Others</td><td>SMEs which take out loans under this Facility could also apply for other credit support measures implemented by the government.</td></tr>
</table>

Source: Department of Banking, CBC.

II. Implementation of the Facility

1. Number and loan amount of applications

Between April 1, 2020 and December 31, 2020, banks have received more than 190 thousand applications, with 97.5% of them approved, and the total amount of applications exceeded

NT$240 billion, with 95.8% of them granted, representing an effective effort to help the affected SMEs obtain the needed working capital.

Implementation of the Special Accommodation Facility (As of Dec. 31, 2020)

		Program A	Program B	Program C	Total
Applications	Number of cases	42,592	29,745	122,738	**195,075**
	Amount (NT$ billion)	75.1	115.1	58.6	**248.8**
Cases approved	Number of cases	41,493	28,887	119,883	**190,263**
	Amount (NT$ billion)	72.3	109.3	56.7	**238.3**

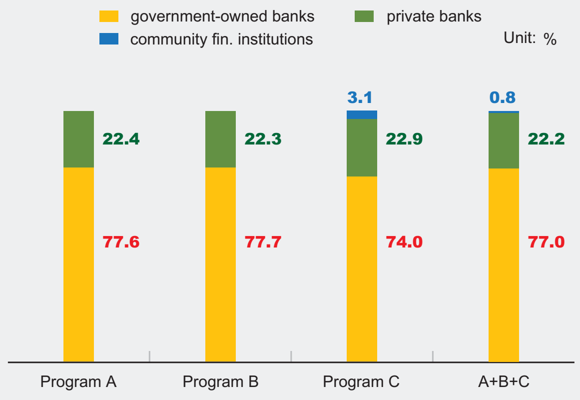
Source: Department of Banking, CBC.

2. Implementation by type of financial institution

Among the applications, 77% of the amount went to government-owned banks[2] and 22.2% to private banks, while community financial institutions, extending such loans only via program C, made up a relatively small share of 0.8%.

Facility Implementation by type of financial institution (as of 2020/12/31)

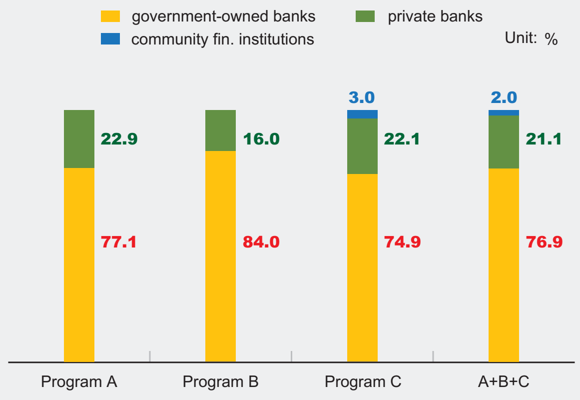
Amount of loan applications



Note: The respective shares represent the amount of applications received by that type of financial institutions as a percentage of the total amount of applications to all financial institutions.

Source: Department of Banking, CBC.

Number of applications



Note: The respective shares represent the number of applications received by that type of financial institutions as a percentage of the total number of applications to all financial institutions.

Source: Department of Banking, CBC.

2 Referring to domestic banks with full or partial government ownership.

III. The Bank conducts a rolling review of the Facility as warranted by pandemic developments and corporate needs

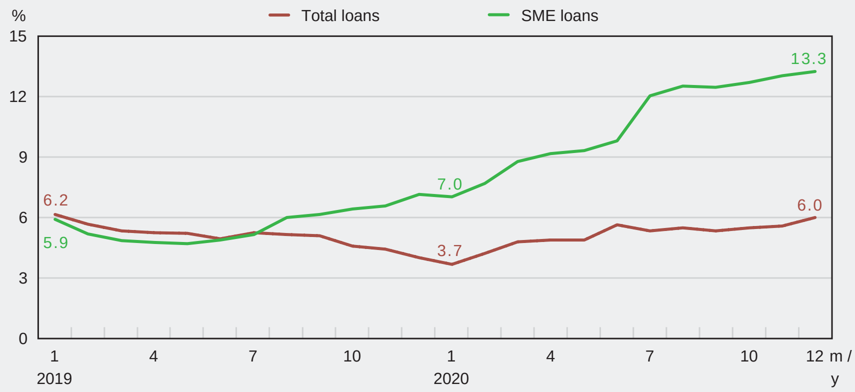
When carrying out the Facility, the Bank has kept a close watch on the pandemic and the funding needs of SMEs. With a rolling review, the Bank made the following adjustments to the Facility: the amount of the Facility's accommodations was expanded from a total of NT$200 billion to NT$300 billion; the deadline for SMEs to apply for credit support was extended from Dec. 31, 2020 to June 30, 2021, and such loans that lenders approved on or after January 5, 2021 would continue to enjoy the facility's preferential interest rates until December 31, 2021. A longer duration for SMEs in need of assistance to enjoy the Facility's preferential interest rates would help lower the funding cost and support them in overcoming financial difficulties.

IV. Effective implementation of the Facility has helped ease the pandemic's economic impact and stabilize the financial system

1. SME lending rose markedly

As of the end of December 2020, domestic banks' lending to SMEs increased by 13.3% year on year, higher than the 6.0% annual increase of total lending. The Bank continued urging banks to reinforce their SME support under the Facility, thus effectively reducing the pandemic's impact on employment and the economy.

Annual growth rates of loans extended by domestic banks



Source: Financial Supervisory Commission.

2. SMEG guarantee supported banks' role as financial intermediaries and buttressed asset quality

Loans extended by banks under the Facility are backed by the government's Taiwan SMEG. This not only boosts banks' confidence and interest in lending to SMEs but also could mitigate credit risk to banks. As of the end of December 2020, the non-performing ratio of SME loans extended by domestic banks stood at 0.34%, lower than the average ratio of 0.41% of the previous year.

3. By incorporating community financial institutions, the Facility is able to increase its reach and help more businesses

Some small businesses mostly go to credit cooperatives or credit departments of farmers' and fishermen's associations for banking services. By incorporating these community financial institutions, the Facility could also provide working capital assistance to this swath of business entities affected by the pandemic, helping 3,818 of them via this channel and a total of more than 190 thousand small-scale business entities through Program C, as of December 31, 2020.

3. Foreign Exchange Management

Taiwan is a small open economy which adopts a managed float exchange rate regime. Under the regime, the NT dollar exchange rate is in principle determined by market forces. In the event of excessive exchange rate volatility, the Bank would conduct "leaning against the wind" operations to stave off adverse implications for economic and financial stability. The Bank continues employing a flexible exchange rate policy and maintaining the dynamic stability of the NT dollar exchange rate. The Bank is also committed to facilitating the order and development of the foreign exchange market.

Promoting the Sound Development of the Foreign Exchange Market

Owing to the global coronavirus pandemic in 2020, major central banks conducted expansionary monetary policies, creating huge spillover effects. Coupled with repatriation of offshore funds by overseas Taiwanese firms, there were huge fluctuations of the NT dollar exchange rate vis-à-vis the US dollar. The Bank therefore stepped into the foreign exchange market through two-way interventions to maintain dynamic stability of the NT dollar exchange rate. For the year as a whole, net purchases of foreign exchange by the Bank amounted to US$39.1 billion. The NT dollar exchange rate against the US dollar remained more stable than the Singapore dollar, the euro, the Japanese yen, and the Korean won.

In 2020, the Bank continued to implement the Real-Time Reporting System for Large-Amount Foreign Exchange Transactions to maintain an orderly market. Moreover, reinforced examination efforts were made to ensure that forward transactions were based only on actual transactions. The Bank also urged authorized banks to enhance their exchange rate risk management in order to reduce market exposure of individual banks and to contain systemic risk. The Bank continued to strengthen targeted examination on foreign exchange business to help ensure a sound foreign exchange market.

Foreign Currency Call Loan and Swap Market Management

In order to provide the financial system with sufficient foreign currency liquidity to meet funding needs, including those for corporations to venture into overseas markets, the Bank appropriated seed capital for the Taipei Foreign Currency Call Loan Market, including US$20 billion, €1 billion and ¥80 billion.

Furthermore, through foreign currency call loans and swaps conducted by authorized foreign exchange banks, the Bank continued to support corporations and insurance companies by meeting the needs for foreign currency liquidity and exchange rate hedging.

Foreign Exchange Reserve Management and Foreign Currency Liquidity of the Bank

The Bank manages its foreign exchange reserves based on the considerations of liquidity, safety, and profitability. The Bank keeps watch on the global economic and financial situation and adjusts foreign exchange reserves as warranted. Currently, US dollar assets make up a larger share in Taiwan's foreign exchange reserves than the COFER (Currency Composition of Official Foreign exchange Reserves) average published by the IMF. As of the end of 2020, Taiwan's total foreign exchange reserves stood at US$529.9 billion with an increase of US$51.8 billion or 10.8% compared to the end of 2019, mainly attributable to returns from foreign exchange reserve investments. Combining the reserves held in gold valued at US$5.4 billion, the Bank's reserves assets totaled US$535.3 billion at the end of the year.

While foreign exchange reserves are the Bank's foreign currency claims on nonresidents, such claims on residents consist of US dollars held under swap agreements, foreign currency deposits with and loans to domestic banks, which amounted to US$94.5 billion, US$41.3 billion, and US$7.5 billion, respectively, at the end of 2020.

In terms of foreign currency liquidity, the total amount, including foreign currency claims and gold, reached US$685.7 billion at the end of 2020.

Capital Flow Management

In line with its efforts to promote financial liberalization and internationalization, the Bank's foreign exchange management mainly relies on the market mechanism and capital can, in principle, flow freely in and out of Taiwan. As of 2020, financial capital flows not involving NT dollar conversion have been able to flow freely. Additionally, there are no restrictions on financial flows involving NT dollar conversion for goods and service trade, nor for direct and securities investments approved by the competent authorities.

Regulation only exists for short-term remittances. Annual remittances for an individual resident within US$5 million and for a juridical person within US$50 million can be settled by banks directly, while annual remittances above the aforementioned amounts require the approval of the Bank. Each transaction for a nonresident within US$0.1 million can be settled by banks directly, whereas any transaction amount above that threshold requires the approval of the Bank. Measures with regard to the management of capital flows in 2020 included:

(1) Promoting the Internationalization of Taiwan's Capital Market

In 2020, cases of fund-raising by domestic and foreign institutions through bond issuance, approved by or filed for record to the Bank, are shown in the following table.

Fund-Raising by Domestic and Foreign Institutions in 2020

Institution	Method	Number	Amount
Foreign companies	IPO on TWSE & TPEx and registration on the Emerging Stock Board	17	NTD 25.63 billion
	NTD convertible bonds	17	NTD 8.85 billion
	Foreign currency-denominated bonds	48 11 5	USD 55.7 billion RMB 17.11 billion ZAR 4.09 billion
	NTD-denominated bonds	1	NTD 15 billion
	Overseas convertible bonds	1	USD 0.5 billion
Domestic companies (and domestic branches)	Overseas convertible bonds	4	USD 1.16 billion

Note: TWSE stands for the Taiwan Stock Exchange; TPEx stands for the Taipei Exchange.
Source: Department of Foreign Exchange, CBC.

(2) Approving Residents' Investments in Foreign Securities

CBC-Approved Residents' investments in Foreign Securities in 2020

Institution	Method/Instrument	Amount
Securities investment trust companies (SITEs)	86 domestic SITE funds (including 56 NTD-foreign multiple currency SITE funds)	NTD 1,714.3 billion (including multiple currency funds 1,185.5 billion)
	3 SITE private funds	NTD 4.2 billion
	5 domestic futures trust funds for unspecified persons	NTD 100 billion
Life insurance companies	Non-discretionary money trusts managed by financial institutions	USD 0.65 billion
	Investment for their own accounts	USD 0.52 billion
Five major government pension funds and employment insurance funds	Investment for their own accounts	USD 3.74 billion

Source: Department of Foreign Exchange, CBC.

Management of Foreign Exchange Business of Financial Institutions

(1) Authorized foreign exchange banks

Pursuant to *The Central Bank of the Republic of China (Taiwan) Act* and the *Foreign Exchange Regulation Act*, the Bank reviews, authorizes and supervises banks to conduct foreign exchange business accordingly. In 2020, the Bank continued to approve bank branches as authorized foreign exchange banks and loosened restrictions on foreign exchange derivative product business in order to facilitate authorized foreign exchange banks' competitiveness and service quality. Major developments in 2020 were as follows.

At the end of 2020, there were 3,465 authorized foreign exchange banks in total, which included 37 head offices and 3,390 branches of domestic banks, 35 branches of foreign banks, 3 branches of Mainland Chinese banks, as well as 4,651 authorized money exchangers, post offices, and financial institutions authorized to engage in basic foreign exchange business.

The Bank announced on December 28, 2020, that it would amend the *Regulations Governing Foreign Exchange Business of Banking Enterprises* to simplify procedures and qualifications for commercial banks to apply to become authorized foreign exchange banks. Restrictions were relaxed for authorized banks to issue foreign currency bank debentures linked to derivatives or structured notes.

(2) Insurance Companies

As of the end of 2020, the numbers of insurance companies allowed to engage in traditional and in investment-linked foreign currency insurance business were both 21. The foreign currency premium revenue increased by US$2.47 billion, or 7.7%, from the previous year to US$34.41 billion in 2020.

(3) Securities Firms

In 2020, approved cases for securities firms to conduct foreign exchange business were as follows.

Approved Cases for Securities Firms to Conduct Foreign Exchange Business in 2020

Foreign Exchange Business	Number
Agents for foreign bond trading	1
Proprietary foreign securities trading neither belonging to investment with their own funds nor for hedging needs	1
Foreign currency spot exchange transactions	1
Accepting orders to trade foreign securities	1
Structured notes linked to foreign financial products	1
Issuance of exchange trade notes tracking underlying foreign indices	1

Source: Department of Foreign Exchange, CBC.

(4) Investment Trust/Consulting Firms, and Futures Firms

The approved cases granted by the Bank for investment trust and investment consulting firms and futures firms to conduct foreign exchange business as of 2020 are shown in the following table.

Approved Cases for Investment Trust/Consulting Firms and Futures Firms to Conduct Foreign Exchange Business in 2020

Institution	Foreign Exchange Business	Number
Investment trust and investment consulting firms	Serving as mandated institutions of private offshore funds	4
	Foreign currency discretionary investments in foreign securities	4
Futures and leveraged dealers	Foreign exchange margin trading	1
	Business engaged in gold or crude oil contracts for difference trading	3

Source: Department of Foreign Exchange, CBC.

Foreign Currency Clearing Platform

Taiwan's foreign currency clearing platform was consigned by the Bank and established by the Financial Information Service Co. The platform offers services for domestic and cross-border (including cross-strait) remittances of the renminbi and the Japanese yen, and domestic remittances of the US dollar, the euro, and the Australian dollar. The platform adopts a payment-versus-payment (PVP) mechanism among banks, a liquidity-saving mechanism for foreign currency remittances, and a delivery-versus-payment (DVP) mechanism for foreign currency bonds and bills. It has continued to function smoothly since its inauguration in 2013.

Domestic Development of Foreign Currency Settlement Business in 2020

Currency	Domestic Participating Units	Settlements in 2020	
		Transactions	Amount
US dollar	69	1,185,559	USD2,002.3 billion
Renminbi	61	300,719	RMB 504.2 billion
Yen	39	29,922	JPY 997 billion
Euro	39	18,225	EUR 4.8 billion
Australian dollar	29	21,439	AUD 1.2 billion

Source: Department of Foreign Exchange, CBC.

Offshore Banking

In line with the measures and policies adopted by the Financial Supervisory Commission, the Bank allowed OBUs to accept domestic juridical persons' opening of foreign currency credit accounts for international fund transfer. The Bank also relaxed regulations on OBUs and offshore securities units (OSUs), allowing them to provide more diversified financial services and products to high-net-wealth customers so as to further promote the quality of wealth management services.

(1) OBUs

At the end of 2020, the number of OBUs came to 59, and total OBU assets increased by US$17.6 billion, or 7.9%, over the previous year to US$239.46 billion. The net income after tax of all OBUs amounted to US$3.53 billion, increasing by US$0.32 billion, or 9.9%, from a year before.

(2) OSUs

At the end of 2020, the number of OSUs stood at 19, and total OSU assets reached US$5.81 billion, a decrease of US$0.36 billion or 5.8%. Nevertheless, the net income after tax of the business increased by US$33.7 million, or 22.5%, to US$183.9 million for 2020.

(3) Offshore Insurance Units (OIUs)

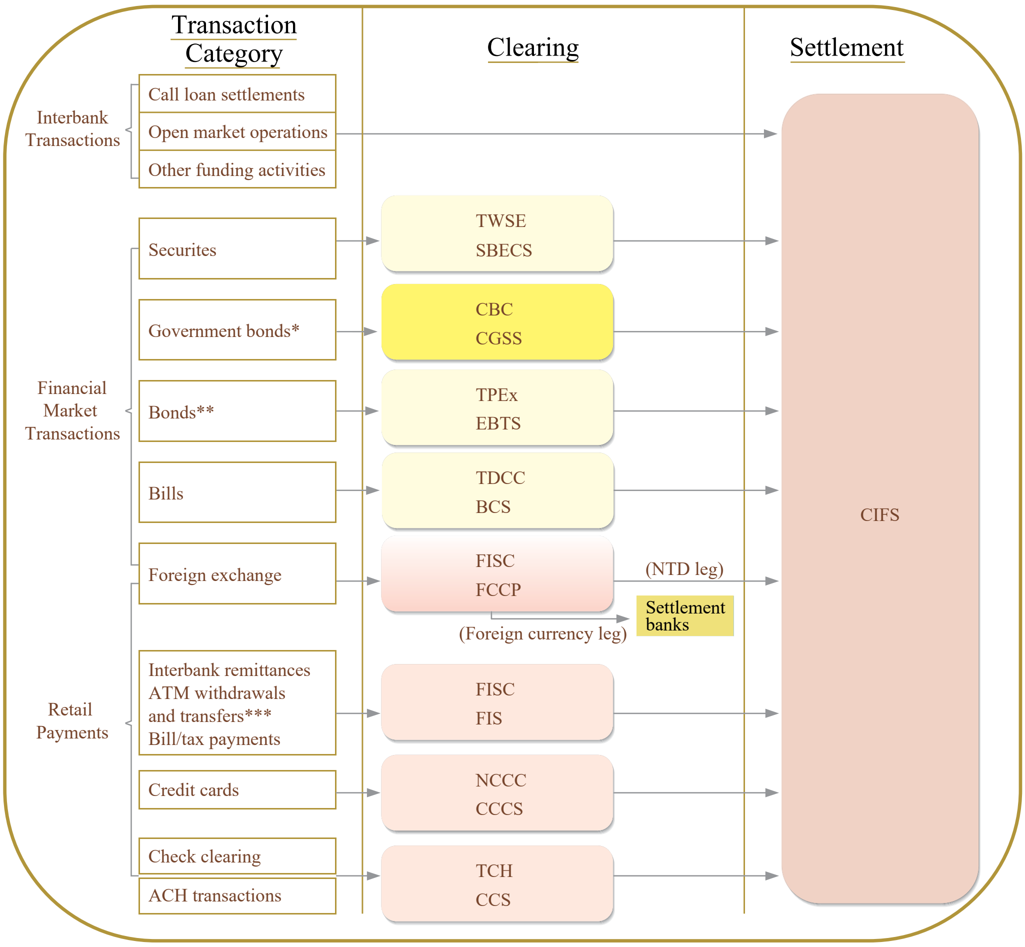
As of the end of 2020, the number of OIUs was 20, with a total amount of assets of US$0.99 billion, which was US$47 million or 5.0% more than the previous year end. The net income after tax of all OIUs was US$2.4 million, an increase by US$2.60 million from 2019.

4. Payment and Settlement Systems

The Bank plays a crucial role in the functioning of Taiwan's payment and settlement systems, and operates the CBC Interbank Funds Transfer System (CIFS) and the Central Government Securities Settlement System (CGSS).

The CIFS serves as the hub of Taiwan's payment and settlement systems, linking the interbank clearing systems operated by the Financial Information Service Co., Ltd. (FISC), the Taiwan Clearing House (TCH), the National Credit Card Center of R.O.C. (NCCC), the Taiwan Depository and Clearing Corporation (TDCC), the TPEx, and the TWSE, as well as the CGSS, together to construct a comprehensive system.

CIFS Settlement Services



Notes: * Including DVP settlements for interbank transactions of central government bonds and treasury bills.
** Including netting settlements for outright trades of government bonds, corporate bonds, and bank debentures.
*** Including those through online and mobile banking.
Source: CBC.

In addition, the Bank monitors major payment systems based on the *Principles for Financial Market Infrastructures* released by the Bank for International Settlements (BIS) to ensure sound operation of these systems and to promote stability of the financial system.

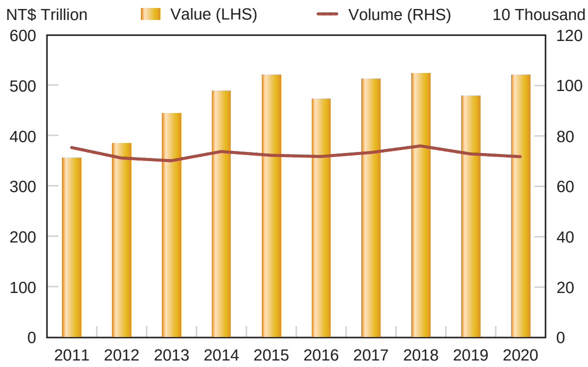
Operation of Payment and Settlement Systems

(1) Funds Transfers via the CIFS

As a large-value electronic funds transfer system, the CIFS not only deals with interbank funding, open market operations, and funds settlements in financial markets, but also provides interbank final settlement services for each clearing institution.

At the end of 2020, there were 82 participants of the CIFS, including 67 banks, eight bills finance companies, Chunghwa Post, and six clearing institutions, namely the FISC, the TCH, the TDCC, the TWSE, the TPEx, and the NCCC. In the year 2020, the number of transactions via the CIFS was 724,189, and the amount of funds transferred totaled NT$505 trillion. Meanwhile, the daily average number of transactions via the CIFS was 2,897, decreasing by 2.26% over the previous year, whereas the daily average amount of funds transferred was NT$2,019 billion, increasing by 3.36% from a year before[8].

Transaction Value and Volume of the CIFS

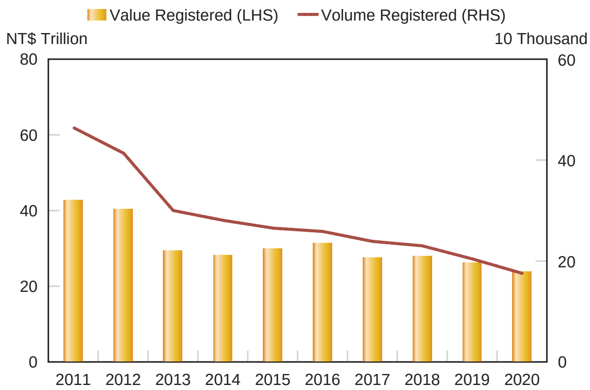


Source: Department of Banking, CBC.

(2) Transactions via the CGSS

Established in September 1997, the CGSS is a system for issuance, transfer, redemption, and interest payment of book-entry central government securities. Since its inception, central government bonds have been issued in book-entry form. In October 2001, treasury bills were included in this system and have been issued in book-entry form ever since.

Transaction Value and Volume of the CGSS



Source: Department of Treasury, CBC.

[8] The average transaction volume decreased primarily owing to declines in call loan market transactions and securities market transactions. On the other hand, the average transaction value increased largely because of rises in interbank funds transfers and transactions in certificates of deposit.

Since April 2008, when the CGSS linked up with the CIFS, fund settlements, principal redemptions, and interest payments have been handled through the CIFS using a DVP mode. The DVP mode, promoted by the BIS, is an arrangement in a securities settlement system to ensure that securities delivery occurs at the same time as the funds transfer, effectively eliminating potential principal risk during the transaction process.

As of the end of 2020, there were 18 clearing banks with 1,676 branches that handled the registration of central government securities transfers. In 2020, this system processed 174,757 transfers with a total amount of NT$23.7 trillion.

Oversight of Payment and Settlement Systems

To ensure sound operation of domestic payment and settlement systems and maintain their safety and efficiency, the Bank conducted the following oversight activities in 2020:

(1) Monitoring the Operation of the Large-Value Payment Systems

In 2020, the Bank continued to monitor the operation of the large-value payment systems. During the year, 16 applications for CIFS operation time extensions were filed by participating institutions because of system malfunctions or other contingencies. The Bank required these institutions to submit improvement reports.

(2) Requiring Payment Institutions to Submit Information on Electronic Payment Business

Payment system operators and electronic payment service providers were required by the Bank to submit information about their operations and activities with regard to electronic payments on a regular basis. Furthermore, the Bank kept close watch on the development of financial technology (fintech) and innovations in the payment industry.

(3) Supervising Contingency Drills Performed by Clearing Institutions

During 2020, the Bank supervised clearing institutions conducting testing of business continuity plans and remote backup operations in case of emergency. In November 2020, the Bank, in collaboration with participants of the CIFS, performed system-wide testing of the operating procedures in response to disruptions to system network connectivity.

(4) Performing Backup Drills with Clearing Banks

Since 2019, the Bank has supervised all clearing banks performing backup drills in the event of malfunction or line interruption of a CGSS participant's mainframe system annually. In December 2020, this drill was conducted successfully with 18 clearing banks.

(5) Organizing Conferences to Enhance Payment System Operation

The Bank invited the FSC and clearing institutions to jointly hold two conferences on "Promoting Sound Operation of the Payment Systems." The conferences were convened separately by type of clearing institution. The May conference held for securities clearing institutions including the TDCC, the TPEx, and the TWSE was suspended because of the COVID-19 pandemic and replaced with report submission by the aforesaid institutions. The other meeting was held as scheduled in November and attended by payment clearing institutions including the FISC, the TCH, and the NCCC. The Bank urged clearing institutions to enhance business continuity planning, backup drills, and contingency reporting in response to the pandemic.

(6) Strengthening Liquidity Management of Internet-Only Banks

With the launch of internet-only banking, the Bank asked the FISC to help ensure the smooth operation of interbank settlements by urging internet-only banks to maintain sufficient funds in the Interbank Funds Transfer Guarantee Special Account[9] opened with the Bank and by monitoring in real time the liquidity conditions in the Special Account.

Establishing Precautionary Measures for the Pandemic to Ensure Continuity of Payment and Settlement Services

To cope with the impacts of the COVID-19 pandemic, the Bank promulgated guidance for participating institutions of the CIFS and of the online network system for the Bank's open market operations in March 2020. The guidance included deploying key operational staff to work at a second (or more) office and strengthening remote backup systems and operational measures. Meanwhile, the Bank stipulated precautions for the CGSS operations, which were provided as guidance to ensure that all CGSS participants maintain business continuity by means of off-site working and other measures. As a whole, the domestic payment and settlement systems operated smoothly throughout the year without being disrupted by the pandemic.

Assisting in Providing Sound Mobile Payment Infrastructure for Financial Institutions

To foster the development of the digital economy, the Bank required the FISC to reinforce mobile payment infrastructure and advance information security to be in line with international standards and rules. To enhance user experience in mobile payments, the FISC collaborated with banks to introduce a new funds transfer service in September 2020, allowing users to transfer funds based on a payee's registered mobile phone number instead of a bank account number. As of the end of 2020, 13 banks had launched the service, and other banks may follow suit subsequently.

[9] Authorized financial institutions may jointly open an Interbank Funds Transfer Guarantee Special Account with the Bank. The funds in the Special Account serve as guarantee for clearing individual interbank payments.

Initiating Research on a Retail CBDC

To explore the practicability of using distributed ledger technology (DLT) for the issuance of a CBDC, the Bank's CBDC research team cooperated with academia and completed a technical research report on the feasibility of a wholesale CBDC in June 2020. The results showed that DLT does not offer a better option than current centralized systems in terms of privacy protection, security, and performance of transaction processing. The Bank then moved on to the second phase with a proof-of-concept study on a general purpose CBDC in September that would run for two years with a rolling review depending on the progress and international trends.

5. Currency Issuance

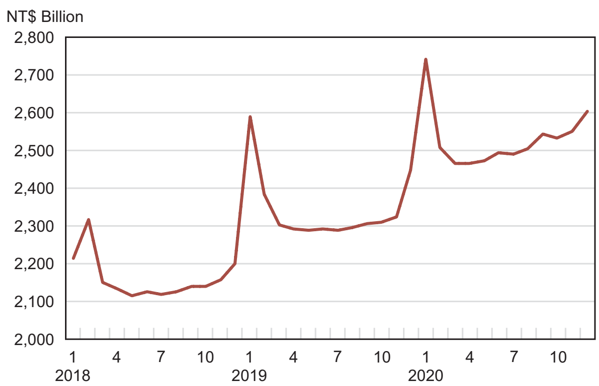
For the year 2020, the Bank conducted currency issuance with a focus on maintaining an adequate supply of currency to meet public demand, which is dependent on domestic economic conditions, seasonal factors, and the development of noncash payment instruments. The Bank also issued commemorative coin sets to mark national events.

Furthermore, to mitigate the impact of the coronavirus pandemic, the Bank was instructed to design and print the Triple Stimulus Vouchers as part of government efforts to stimulate and revive the economy. Meanwhile, the Bank continued to promote public awareness of counterfeit deterrence and encourage the use of circulating currency through various channels.

Currency Issuance Increased to Meet Currency Demand

In 2020, the Bank provided an adequate amount of currency in response to currency demand. The currency issued peaked at NT$2,793.2 billion on January 22, the last business day before the Lunar New Year holidays, reflecting a temporary seasonal surge in cash demand. At the year end, the outstanding amount of currency issued was NT$2,604.5 billion, rising by NT$157.2 billion or 6.42% over the previous year end.

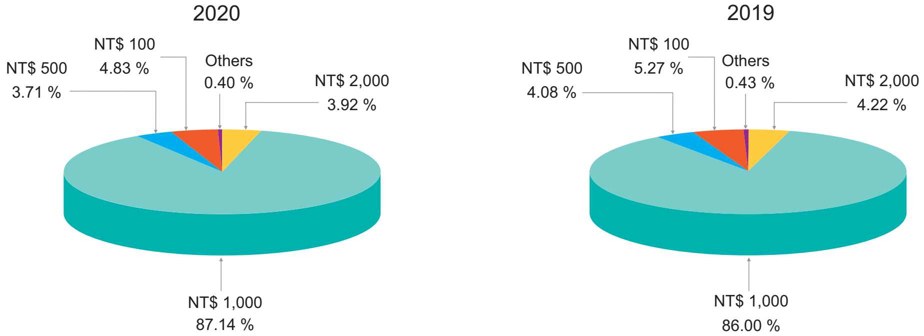
Currency Issued



Source: CBC.

By denomination, the composition of NT dollar banknotes in circulation at the end

Composition of NT Dollar Banknotes Issued
(Year-End Figures)



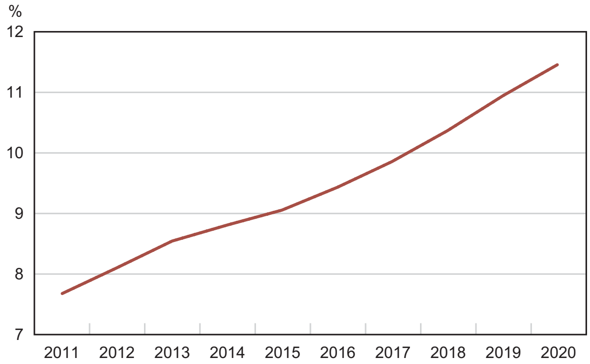
Source: CBC.

of 2020 was similar to the end of 2019. The majority of circulating banknotes went for the NT$1,000 note with a share of 87.14%, followed by the NT$100 and NT$2,000 notes with shares of 4.83% and 3.92%, respectively.

Currency in Circulation to GDP Rose Steadily

As domestic interest rates stayed at relatively low levels and cash was still frequently used for small-value transactions, the public's demand for currency remained high. The ratio of currency in circulation to GDP has continued to rise steadily since 2011 and reached 11.45% in 2020, 0.49 percentage points higher than the 10.96% of the previous year.

The Ratio of Currency Held by the Public to GDP



Sources: 1. CBC.
2. DGBAS, Executive Yuan.

Three Commemorative Coin Sets Were Issued

The Bank may also issue gold and silver coins and commemorative notes and coins from time to time, such as for important ceremonies, national holidays, major international events or other significant national events. During 2020, the Bank issued a casting set of coins for the Chinese Zodiac Year of the Rat, the commemorative gold and silver coins for the inauguration of the Fifteenth President and Vice President of the Republic of China (Taiwan), and the ninth coin set of the National Parks of Taiwan series – South Penghu Marine National Park.

Commemorative Coin Set for the Chinese Zodiac Year of the Rat

Commemorative Coins for the Inauguration of the Fifteenth President and Vice President of the Republic of China (Taiwan)

National Parks of Taiwan Series IX - South Penghu Marine National Park

Source: CBC.

The Bank was Instructed to Print Triple Stimulus Vouchers to Assist Reviving Consumption

During 2020, in order to assist domestically-oriented service industries to weather the COVID-19 pandemic and encourage consumption, the government rolled out the Triple Stimulus Voucher program,[10] effective from July 15. The Central Engraving and Printing Plant, a subsidiary of the Bank, was instructed by the government to design the vouchers with anti-counterfeiting techniques in mid-May, and later completed the production of 22 million sets of paper vouchers (each set containing four NT$500 vouchers and five NT$200 vouchers) on July 26.

Proof Copies of Triple Stimulus Vouchers

Source: CBC.

The Bank Continued to Encourage the Use of Circulating Currency and Raise Public Awareness of Counterfeit Money

In order to deter and prevent counterfeiting, reduce currency issuing costs, and protect the environment by maximizing existing resources, the Bank launched several advertising campaigns during the year to enhance public understanding on the security features of NT dollar notes and coins and to promote the use of circulating currency.

Meanwhile, the Bank strove to improve the cleanliness of currency by inspecting returned banknotes and destroying damaged ones. Efforts to urge the public to help maintain the cleanliness of circulating notes and coins continued in 2020.

Educational materials for these campaigns were provided through multiple channels. For example, relevant videos were broadcasted on media such as the Bank's website, the Virtual Money Museum, YouTube, and the Bank's official mobile app. Information was also posted on the Bank's Facebook fan page and displayed on public transportation. Leaflets were distributed to the public and relevant institutions.

[10] Under the voucher program, consumers could purchase NT$3,000 worth of vouchers for the price of NT$1,000, with the government making up the NT$2,000 difference. The vouchers were available to all 23 million Taiwanese nationals and approximately 150 thousand foreign spouses with residency permits in both physical and digital forms. Consumers could use the stimulus vouchers for dining, travel, leisure, or shopping expenses from July 15 through the end of 2020.

The Virtual Money Museum Website Was Upgraded

The Bank's Virtual Money Museum has been running smoothly since it came on line in June 2013. In response to increased use of mobile technologies and the needs of various platforms and devices, the Bank revamped the Virtual Money Museum website with "responsive web design" technique, and the updated version was launched in August 2020. This technique helped optimize the layout of the Virtual Money Museum and users' viewing experience across devices, from mobile phones to computers.

6. Fiscal Agency Functions

The Bank, as the fiscal agent of the government, provides services for the national treasury, including handling the treasury deposit account (TDA), managing central government agency deposit accounts, and undertaking the issuance, transfer and registration, redemption, and interest payment of central government bonds and treasury bills.

Managing the Treasury Deposit Account

The Bank manages the TDA on behalf of the Ministry of Finance, processing receipts and disbursements of the central government. In order to offer convenient services for government agencies and the general public, the Bank delegates the handling of treasury business to 14 financial institutions and their 367 branches, including three overseas branches located in New York, Los Angeles, and Paris. In addition, there are another 4,740 national tax collection agencies set in financial institutions. In 2020, the Bank received a total of NT$3,933.2 billion in treasury deposits, increasing by NT$398.7 billion or 11.28% from 2019. Payments made on behalf of the national treasury were NT$3,937.8 billion, an increase of NT$441.7 billion or 12.63% over the previous year. At the end of 2020, the TDA balance was NT$53.4 billion, a decline of NT$4.6 billion or 7.93% from the end of 2019.

Handling Central Government Agency Deposits

Central government agencies are required to make their deposits with the Bank or other delegated banks. At the end of 2020, the balance of central government agencies' deposits with the Bank amounted to NT$183.4 billion, increasing by NT$2.0 billion or 1.10% over the previous year. Deposits with other delegated banks were NT$618.6 billion at the end of 2020, an increase of NT$32.7 billion or 5.58%.

Increasing a Service Option to Deposit Bid Bonds into the TDA Online

To facilitate tenderers' depositing of bid bonds for central government procurement projects, the Bank, in cooperation with the Public Construction Commission of the Executive Yuan, the Ministry of Finance, and the Bank of Taiwan, established a mechanism to allow tenderers to deposit bid bonds into the TDA online. In this mechanism, the Bank's TDA was added to the options of receiving accounts for the online bid bonds payment service on the Government e-Procurement System. Central government agencies could make use of this mechanism as a convenient payment channel for tenderers when collecting bid bonds through designated accounts of which disbursements are made centrally from the TDA.

Managing Central Government Bonds

As a fiscal agent, the Bank provides services related to the issuance, transfer and registration, redemption, and interest payment of central government bonds. The Bank also conducts the auctions of central government bonds. There are 57 domestic dealers qualified to directly participate in the auctions, including 23 banks, 19 securities companies, eight bills finance companies, six insurance companies, and Chunghwa Post.

In 2020, the Bank conducted 18 issues of central government bonds in book-entry form worth NT$535.0 billion. Of this amount, 10-year bonds accounted for the lion's share of 32.71%, with NT$175.0 billion, followed by 5-year bonds, representing 27.10% with an amount of NT$145.0 billion.

In addition, the Bank paid NT$493.8 billion in principal and NT$97.6 billion in interest for central government bonds. At the end of 2020, the outstanding amount of central government bonds was NT$5,524.5 billion, an increase of NT$41.2 billion or 0.75% from the end of 2019.

Managing Treasury Bills

The Bank also handles the auctions of treasury bills. Currently, direct bidders include banks, insurance companies, securities companies, bills finance companies, and Chunghwa Post.

In 2020, the Bank conducted 11 issues of book-entry treasury bills with a total amount of NT$336.6 billion. The majority of the issuance went for 91-day bills with NT$150.0 billion, or a share of 44.56%. At the end of 2020, the outstanding amount of treasury bills was NT$125.0 billion, increasing by NT$60.0 billion or 92.31% from the previous year end.

7. Financial Inspection

Pursuant to the objectives and duties stipulated in *The Central Bank of the Republic of China (Taiwan) Act*, the Bank conducts targeted examinations to ensure that monetary, credit, and foreign exchange policies are implemented effectively. The Bank has also established a report auditing system and a financial stability assessment framework to systematically monitor and assess possible sources of potential risks. The Bank then adopts appropriate policies in a timely manner to achieve the operational goal of financial stability. The following are the main tasks conducted in 2020.

On-Site Examination

Targeted examinations in 2020 were conducted on high-priced housing loans, disclosure of information on housing loans and interest rate bulletins, auditing liquidity of financial institutions, foreign exchange trading, foreign exchange remittances, financial institutions' counterfeit money processing (either in terms of the NT dollar or foreign currency), and foreign currency exchange counters' business.

Follow-up on Examination Findings

To ensure the effectiveness of the Bank's policies, the Bank continued to track whether the financial institutions under inspection had improved their operations, based on the findings from the Bank's targeted examinations as well as the results of the Financial Supervisory Commission's financial examinations related to the Bank's operations or regulations. A particular focus was on violations of the *Regulations Governing High-Priced Housing Loans Extended by Financial Institutions*, punishable by the Bank or the Financial Supervisory Commission.

Strengthening Off-Site Monitoring

In view of changes in financial conditions and amendments to financial regulations, the Bank constantly reviews and revises all relevant reporting forms and contents of statistical data submitted by financial institutions. Developments related to off-site monitoring in 2020 included the following:

(1) To reflect the changes in business scopes and risks of the bills finance industry and the credit departments of farmers' and fishermen's associations, the analytical items and principles of the report auditing system CARSEL were reviewed and modified.

(2) In accordance with the *Regulations Governing the Capital Adequacy and Capital Category of Banks*, as well as other applicable laws, relevant reports and their analytical categories of financial institutions were modified.

(3) In accordance with the revised *Reporting Guidelines for the BIS International Banking Statistics*, and considering the operation practices of our country's banking sector, the Bank amended the guide for completing and submitting the *Country Exposure Report* by domestic banks and local branches or subsidiaries of foreign/Mainland Chinese banks, as well as the relevant declaration forms.

Improving Information Transparency of Financial Institution Operations

The Bank regularly compiles and publishes financial institution statistics, such as *Condition and Performance of Domestic Banks (Quarterly)*, *Business Overview of Financial Institutions (Yearly)* and *Major Business Statistics of Financial Institutions*. All related information is disclosed on the Bank's website to strengthen information transparency of financial institutions' operations and to reinforce self-discipline of the market.

Financial Stability Assessment

The Bank regularly conducts analysis on commercial banks' business operations and their risk exposure so as to understand potential impacts on stability of the overall financial system. It also compiles financial soundness indicators and publishes the *Financial Stability Report* to keep the public updated on the state of the domestic financial system and sources of potential risks and to aid cross-border communication and information sharing.

In accordance with the IMF *2019 Financial Soundness Indicators Compilation Guide*, the Bank amended its Financial Soundness Indicators (FSIs), effective from the first quarter of 2020. The new FSIs increased the number of items from 42 to 58 and covered six categories, including domestic banks, life insurance companies, bills finance companies, the real estate market, the corporate sector, and the household sector.

To enhance analytical effectiveness regarding financial stability, the Bank continued to improve the graphical user interface of credit and market risk models, estimated domestic banks' unexpected losses from credit risks, and undertook a visualized analysis. In addition, the Bank inquired into several important financial issues, including the current situations and challenges concerning the development of sustainable finance.

International Cooperation in Financial Supervision

In 2020, the Bank continued to actively engage in international cooperation related to financial supervision, such as attending the 11th SEACEN Meeting of Deputy Governors in Charge of Financial Stability and Banking Supervision, the 22nd SEACEN-FSI Conference of the Directors of Supervision of Asia-Pacific Economies, and the 33rd Meeting of Directors of Supervision of SEACEN Members (all held in virtual format). The Bank also received the director and senior officers from the German Federal Financial Supervisory Authority (BaFin) in February 2020.

8. Participation in International Activities

The Bank continued its efforts in contributing to international activities during 2020. As a member, the Bank hosts conferences, provides training courses, and attends numerous forums, including the annual meetings organized by the Asian Development Bank (ADB), the Central American Bank for Economic Integration (CABEI), and the South East Asian Central Banks (SEACEN) group. Furthermore, the Bank strengthens its ties with other central banks and related institutions to exchange views and share policy experience on current financial and economic issues.

In 2020, the Bank attended the 56th annual conference of governors held virtually by SEACEN on December 1. At this conference, the Bank shared views with other member banks on a number of issues, including the traumatic effects of the COVID-19 pandemic on the global economy, the policy responses on macroeconomic, fiscal, financial, and structural fronts to mitigate the pandemic's impact, and the accelerated development of digital currency amid the pandemic.

Moreover, the Bank attended the 11th SEACEN Online High-Level Seminar and Meeting of Deputy Governors of Financial Stability and Supervision during October 27 to 28.

In the meantime, the Bank participated in the meetings held virtually by other international organizations, such as the CABEI's Ordinary Meeting of the Board of Governors on September 3, and the ADB's third Asian Development Fund 13 Replenishment Meeting on September 16.

Chronology of Events of the CBC in 2020

Chronology of Events of the Central Bank of the Republic of China (Taiwan)[1] in 2020

Date	Event
Jan. 8	The CBC upgraded its official website with more visually appealing features to further enhance monetary policy communication.
14	The CBC issued a commemorative coin set for 2020, the Geng Zi Year of the Rat.
Feb. 5	The CBC requested the Taiwan Clearing House to offer a six-month moratorium on deferred repayments to support financially-distressed industries owing to the COVID-19 pandemic.
25	The CBC and the Financial Supervisory Commission issued a joint statement to urge financial institutions to address potential risks arising from LIBOR discontinuation at the end of 2021.
Mar. 19	The CBC's Board decided on the following measures: 1. Cutting the discount rate, the rate on refinancing of secured loans, and the rate on temporary accommodations by 0.25 percentage points each to 1.125%, 1.5%, and 3.375%, respectively, effective from March 20, 2020.[2] 2. Establishing the Special Accommodation Facility to Support Bank Credit to Small and Medium-Sized Enterprises to provide banks with additional funding of a total amount of NT$200 billion at a rate of 0.25%, 1.25 percentage points lower than the policy rate on refinancing of secured loans.
20	In response to the amendment to the minimum capital requirement for banks, the CBC amended the *Directions Governing Designated Dealers for Open Market Operations*.
23	The CBC would, starting from April 2020, undertake repurchase agreements small value exercises on a regular basis to enhance completeness of open market operation instruments.

[1] Herein referred to as the CBC.
[2] To be more closely in line with the relevant regulations, the rate on accommodations with collateral and the rate on accommodations without collateral are now referred to as the rate on refinancing of secured loans and the rate on temporary accommodations, respectively.

Date	Event
Mar. 27	The CBC lowered the remuneration rates on banks' B reserve accounts with the CBC. Reserves from demand deposits would receive interest at 0.068% per annum, while those from time deposits would receive interest at 0.56% per annum.
31	The CBC amended the *Directions for the Central Bank of the Republic of China (Taiwan) Accommodations to Banks and promulgated the Regulations for the CBC's Handling of the Special Accommodation Facility to Support Bank Credit to SMEs Affected by the Coronavirus Disease (COVID-19)* (hereinafter the Special Facility Regulations), effective from April 1, 2020. The expiry date of the facility would be March 27, 2021.
Apr. 1	The CBC adjusted the issuance frequency of 7-day, 91-day and 182-day CDs and stopped issuing 14-day CDs.
17	The CBC amended the Special Facility Regulations to include support measures for small-scale business entities, effective from April 20, 2020.
20	The CBC reappointed Mega International Commercial Bank as the clearing bank for the US dollar on the foreign currency clearing platform.
24	The CBC amended the Special Facility Regulations to lower the facility's interest rate from 0.25% to 0.1%, 1.4 percentage points lower than the policy rate on refinancing of secured loans, effective from April 27, 2020.
May 4	The CBC allowed community financial institutions to engage in relief lending to small-scale business entities under the Special Accommodation Facility to Support Bank Credit to SMEs.
20	The CBC issued the Commemorative Coins for the Inauguration of the Fifteenth President and Vice President of the Republic of China (Taiwan).
Jun. 18	The CBC's Board decided to leave the discount rate, the rate on refinancing of secured loans, and the rate on temporary accommodations unchanged at 1.125%, 1.5%, and 3.375%, respectively.

Date	Event
Jun. 30	The CBC, in collaboration with academia, completed the first phase proof-of-concept study for a wholesale CBDC.
Jul. 23	The CBC amended the Special Facility Regulations to raise borrowers' maximum credit lines under the facility, effective from July 24, 2020.
Aug. 5	The CBC upgraded the CBC Virtual Money Museum to enhance responsive and mobile-friendly design.
10	The CBC amended the Special Facility Regulations to extend the deadline for new applicants enjoying the facility's preferential interest rates to June 30, 2021.
28	The CBC extended the scope of foreign currency investment-linked insurance discretionary investment business, allowing securities investment trust enterprises and securities investment consulting enterprises to invest in the foreign currency classes of multi-currency Taiwan domestic equity funds, where an account's investments in such funds shall not exceed 5% of its total net asset value.
Sep. 17	The CBC's Board decided to leave the discount rate, the rate on refinancing of secured loans, and the rate on temporary accommodations unchanged at 1.125%, 1.5%, and 3.375%, respectively.
22	The CBC amended the Special Facility Regulations to expand the facility from a scope of NT$200 billion to NT$300 billion.
Nov. 12	The CBC issued the New Taiwan dollar uncirculated coin set of the National Parks of Taiwan Series - South Penghu Marine National Park.
13	The CBC met with six major mortgage lenders to urge them to strengthen risk management of real estate lending.
19	The CBC met with another eight banks with larger mortgage portfolios to urge them to fulfil their social responsibilities by helping to preclude an inordinately high flow of bank credit into the real estate sector.
Dec. 7	The CBC's Executive Directors Meeting decided to amend (and rename)

Date	Event
	the *Regulations Governing the Extension of Mortgage Loans by Financial Institutions* to introduce a loan-to-value ratio ceiling on housing loans for corporate entities, natural persons' third (or more) housing loans, land loans, and unsold housing unit loans, effective from December 8, 2020.
Dec. 10	The CBC amended the Special Facility Regulations to extend the deadline for SMEs to apply for credit support to June 30, 2021; such loans that lenders approved on or after Jan. 5, 2021 would continue to enjoy the facility's preferential interest rates until Dec. 31, 2021.
17	The CBC's Board decided to leave the discount rate, the rate on refinancing of secured loans, and the rate on temporary accommodations unchanged at 1.125%, 1.5%, and 3.375%, respectively.
29	The CBC met with eight government-owned banks to urge them to reinforce the risk management and continue to abide by internal rules established from 2015 on industrial land mortgage loans.
31	The CBC met with major private banks, life insurance companies, and bills finance companies to urge stronger risk management of industrial land collateralized loans.

Financial Statements of the CBC

1. Balance Sheet

Unit: NT$million

	December 31 2020	December 31 2019	Change	
			Amount	%
Assets				
Foreign Assets	15,260,031	14,498,156	761,875	5.25
Due from Domestic Banks	1,191,798	979,664	212,134	21.65
Loans and Accommodations to Financial Institutions	444,367	224,790	219,577	97.68
Other Assets	1,122,016	456,992	665,024	145.52
Total Assets	**18,018,212**	**16,159,602**	**1,858,610**	**11.50**
Liabilities				
Currency Issued	2,604,479	2,447,251	157,228	6.42
Deposits of Financial Institutions	2,243,078	1,861,049	382,029	20.53
Certificates of Deposit Issued	9,168,090	7,857,930	1,310,160	16.67
Redeposits of Financial Institutions	2,152,262	2,137,493	14,769	0.69
Government Deposits	236,888	239,683	-2,795	-1.17
Other Liabilities	454,560	493,390	-38,830	-7.87
Total Liabilities	**16,859,357**	**15,036,796**	**1,822,561**	**12.12**
Equity	**1,158,855**	**1,122,806**	**36,049**	**3.21**
Total Liabilities and Equity	**18,018,212**	**16,159,602**	**1,858,610**	**11.50**

Note: Figures for 2020 are unaudited. Figures for 2019 have been audited by the National Audit Office.

2. Income Statement

Unit: NT$million

	2020	2019
Income		
Interest Income	322,914	398,244
Fee Income	107	95
Foreign Exchange Gains	45,423	75,402
Income from Trust Investments	14,520	12,656
Subsidiaries' Investment Income	1,880	1,912
Others	630	1,343
Total Income	**385,474**	**489,652**
Expenses		
Interest Expenses	57,577	81,952
Fee Expenses	221	218
Expenses for Coin Issuance	1,269	1,452
Expenses for Banknote Issuance	2,949	3,497
Allowances	104,212	174,260
Operating Expenses	1,463	1,513
Administrative Expenses	522	511
Others	1,038	785
Total Expenses	**169,251**	**264,188**
Net Income	**216,223**	**225,464**

Note: Figures for 2020 are unaudited. Figures for 2019 have been audited by the National Audit Office.

Key Economic and Financial Indicators of the Republic of China (Taiwan)

Year	I. Business Indicators			II. National Income and Aggregate Demand							
	NDC(1) Total Score of Monitoring Indicators	TIER(2) Business Composite Index (2006=100) (Average)		Economic Growth Rate	Per Capita GNI	Unemployment Rate	Manufacturing Sector			Annual Rate of Change in Industrial Production Indices	
		Manufacturing Sector	Services Sector				Labor Productivity Index	Average Monthly Earnings (Per Employee)	Unit Labor Cost Index Growth Rate	General	Manufacturing
	(Average)			(%)	(US$)	(%)	(2016=100)	(NT$)	(%)	(%)	(%)
2011	24	95.29	99.43	3.67	21,410	4.39	90.01	44,603	4.09	2.61	2.74
2012	17	91.72	90.66	2.22	21,922	4.24	89.98	45,238	2.16	0.50	0.56
2013	20	98.07	94.54	2.48	22,552	4.18	92.20	45,448	-1.98	3.21	3.40
2014	25	100.59	98.45	4.72	23,492	3.96	95.82	47,018	-0.93	6.41	6.83
2015	17	93.91	89.36	1.47	23,367	3.78	95.00	48,713	6.31	-1.28	-1.16
2016	21	97.13	87.05	2.17	23,684	3.92	100.00	49,162	-0.44	1.97	1.91
2017	24	98.96	92.56	3.31	25,704	3.76	103.53	50,678	-0.65	5.00	5.27
2018	23	95.99	94.93	2.79	26,421	3.71	105.97	52,948	3.23	3.65	3.93
2019	21	93.86	92.27	2.96	26,594	3.73	105.81	53,776	0.95	-0.35	-0.45
2020	24	94.11	91.64	3.11	29,230	3.85	125.19	53,940	-14.16	7.08	7.56

Notes: (1) NDC : National Development Council.
(2) TIER : Taiwan Institute of Economic Research.

Year	II. National Income and Aggregate Demand														
	Annual Rate of Change in Private Consumption Expenditure	Annual Rate of Change in Gross Fixed		Gross National Savings / GNI	Gross Domestic Investment / GNI	External Trade of Goods on Customs Basis (in US Dollars)									
						Annual Rate of Change in Total Exports						Annual Rate of Change in Total Imports	Annual Rate of Change in Capital Equipment	Trade Balance	Annual Rate of Change in Export Orders
		Capital Formation	Private Sector				China and H. K.	U. S.	Japan	Europe	ASEAN(3)				
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(US$ Million)	(%)
2011	3.03	-1.41	0.82	31.16	23.01	12.6	8.3	15.5	3.7	6.3	23.1	12.3	-4.8	24,866	7.2
2012	1.92	-1.28	1.38	30.45	22.04	-2.2	-3.8	-9.1	2.1	-7.9	9.6	-3.8	-7.3	28,848	1.1
2013	2.55	7.03	9.16	32.39	21.96	1.8	3.5	-1.5	-0.6	-3.3	3.8	0.3	6.0	33,481	0.4
2014	3.70	3.50	5.48	34.35	21.97	2.7	2.5	7.4	3.8	4.2	1.5	1.3	4.6	38,318	6.7
2015	2.86	2.68	4.28	35.46	21.18	-11.0	-12.5	-1.7	-2.8	-11.0	-14.1	-15.9	-1.5	48,053	-4.4
2016	2.64	3.44	4.08	35.21	21.09	-1.8	-0.4	-3.1	-0.4	1.0	-0.7	-3.0	10.5	49,975	-1.6
2017	2.70	-0.26	-1.16	35.61	20.46	13.0	16.0	10.1	5.7	10.2	14.2	12.2	-1.3	58,287	10.9
2018	2.05	3.19	2.45	34.77	21.75	5.9	6.1	7.4	10.8	8.7	-0.7	10.7	3.2	49,216	3.9
2019	2.26	10.17	11.00	34.70	23.00	-1.5	-4.2	17.1	2.1	-4.8	-7.2	0.3	21.2	43,506	-5.3
2020	-2.37	4.96	3.23	37.86	23.00	4.9	14.6	9.3	0.5	-5.4	-1.3	0.3	3.5	58,793	10.1

Note: (3) ASEAN: The Association of Southeast Asian Nations.

Key Economic and Financial Indicators of the Republic of China (Taiwan) Cont.

Year	III. Prices					IV. Money, Banking and Finance					
	Annual Rate of Change of Price Indices (%)					Reserve Money (Daily Average)		Monetary Aggregates (Daily Average)			
								M1B		M2	
	CPI	Core CPI[4]	Wholesale Price	Import Price (in NT Dollars)	Export Price (in NT Dollars)	Amount (NT$ Billion)	Annual Growth Rate[5] (%)	Amount (NT$ Billion)	Annual Growth Rate (%)	Amount (NT$ Billion)	Annual Growth Rate (%)
2011	1.42	1.25	4.32	7.65	0.09	2,632.3	7.24	11,547.8	7.16	31,713.9	5.83
2012	1.93	0.99	-1.16	-1.28	-1.62	2,761.6	4.91	11,946.7	3.45	33,037.6	4.17
2013	0.79	0.66	-2.43	-4.45	-2.06	2,959.9	7.18	12,815.8	7.27	34,616.7	4.78
2014	1.20	1.27	-0.56	-2.09	0.10	3,165.4	6.94	13,836.1	7.96	36,576.7	5.66
2015	-0.30	0.78	-8.85	-12.94	-4.67	3,348.8	5.79	14,680.0	6.10	38,894.1	6.34
2016	1.39	0.84	-2.98	-3.08	-2.70	3,547.2	5.92	15,609.8	6.33	40,646.9	4.51
2017	0.62	1.04	0.90	1.36	-1.46	3,725.9	5.04	16,336.3	4.65	42,170.8	3.75
2018	1.35	1.21	3.63	6.13	1.45	3,934.9	5.61	17,205.3	5.32	43,653.4	3.52
2019	0.56	0.49	-2.26	-1.47	-2.82	4,187.7	6.42	18,435.5	7.15	45,163.7	3.46
2020	-0.23	0.35	-7.79	-10.28	-7.21	4,547.3	8.59	20,340.8	10.34	47,803.2	5.84

Notes: (4) Core CPI refers to CPI excluding the categories of fruit, vegetables and energy.
(5) The annual growth rates are adjusted for most recent changes in required reserve ratios on Jan. 1, 2011, and in the share of required reserves deposited with the Bank's B account in Nov. 2001.

Year	IV. Money, Banking and Finance										
	Monetary Financial Institutions (End of Period)				Non-performing Loan Ratio of Domestic Banks[6] (End of Period) (%)	Interest Rates (%)					
	Deposits		Loans & Investments			CBC's Discount Rate (End of Period)	Interbank Call Loan Rate (Average)	31-90 Days CP Rate In Secondary Market (Average)	10-year Gov't Bond Rate in Secondary Market (Average)	Five Major Domestic Banks[7]	
	Amount (NT$ Billion)	Annual Rate of Change (%)	Amount (NT$ Billion)	Annual Rate of Change (%)						1-year Deposit Rate (End of Period)	New Loan Rate (Average)
2011	32,302.2	4.18	24,172.9	6.00	0.43	1.875	0.341	0.70	1.38	1.35	1.54
2012	33,300.4	3.09	25,548.8	5.69	0.40	1.875	0.428	0.79	1.21	1.35	1.61
2013	35,062.4	5.29	26,720.6	4.59	0.38	1.875	0.386	0.69	1.46	1.35	1.70
2014	37,133.9	5.91	28,110.6	5.20	0.25	1.875	0.387	0.62	1.60	1.35	1.68
2015	39,355.8	5.98	29,406.3	4.61	0.23	1.625	0.353	0.58	1.39	1.21	1.67
2016	40,717.4	3.46	30,549.2	3.89	0.27	1.375	0.193	0.39	0.82	1.07	1.47
2017	42,094.0	3.38	32,022.7	4.82	0.28	1.375	0.178	0.44	1.06	1.07	1.41
2018	43,195.8	2.62	33,747.5	5.39	0.24	1.375	0.183	0.49	0.94	1.07	1.37
2019	45,086.1	4.38	35,422.4	4.96	0.21	1.375	0.182	0.55	0.74	1.07	1.39
2020	49,219.7	9.17	37,826.6	6.79	0.22	1.125	0.102	0.39	0.48	0.82	1.27

Notes: (6) The data are based on the new NPL definition released by the Financial Supervisory Commission in Dec. 2001, which include loans under surveillance.
(7) The five major domestic banks are Bank of Taiwan, Taiwan Coorperative Bank, First Commercial Bank, Hua Nan Commercial Bank and Land Bank of Taiwan. The deposit/loan interest based on a floating basis on the interest rate.

Key Economic and Financial Indicators of the Republic of China (Taiwan) Cont.

Year	V. Securities Market					VI. Balance of Payments and Foreign Exchange Market						
	TWSE[8] Stock Market		Bond Market			Balance of Payments				Foreign Exchange Reserves	Exchange Rate	Daily Average Value in Foreign Exchange Transactions
	Stock Price Index (1966=100) (Average)	Total Trading Value (NT$ Billion)	Outstanding (End of Period)	Total Trading Value	Share of Outright Transactions (%)	Current Account	Capital Account	Financial Account	Changes in Reserve Assets	(End of Period) (US$ Billion)	(End of Period) (NT$/US$)	(US$ Billion)
			(NT$ Billion)			(US$ Million)						
2011	8,156	26,197.4	6,897.6	97,809.1	27.46	37,914	-36	32,027	6,239	385.55	30.290	24.17
2012	7,481	20,238.2	7,530.3	86,551.7	21.30	42,925	-24	31,465	15,484	403.17	29.136	23.41
2013	8,093	18,940.9	8,020.7	69,226.1	19.78	49,937	67	41,053	11,318	416.81	29.950	28.93
2014	8,992	21,898.5	8,639.1	68,032.4	21.62	60,607	-8	50,531	13,015	418.98	31.718	31.29
2015	8,959	20,191.5	8,778.1	67,725.7	22.76	72,730	-5	64,972	15,011	426.03	33.066	33.35
2016	8,763	16,771.1	8,712.7	66,817.9	21.81	71,222	-9	58,490	10,663	434.20	32.279	28.92
2017	10,208	23,972.2	8,801.5	61,583.5	20.36	83,053	-12	75,007	12,467	451.50	29.848	28.62
2018	10,620	29,608.9	8,942.4	64,822.1	17.79	70,843	63	58,900	12,499	461.78	30.733	32.08
2019	10,790	26,464.6	8,978.0	57,888.5	18.47	65,161	-3	57,554	16,658	478.13	30.106	32.54
2020	12,075	45,654.3	9,473.0	52,504.7	21.01	94,276	-9	50,035	48,342	529.91	28.508	33.13

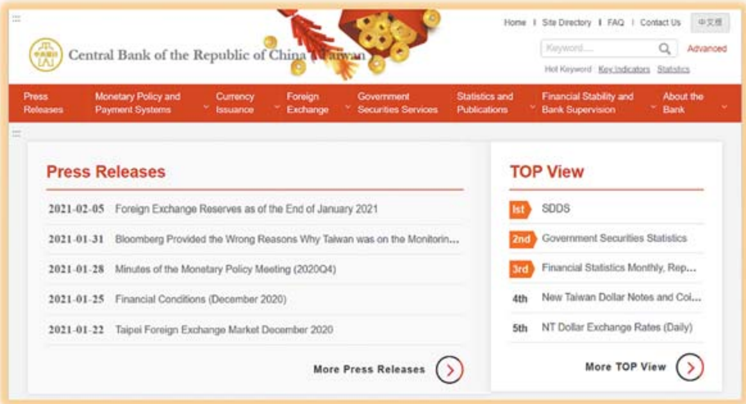
Note: (8)TWSE: Taiwan Stock Exchange Corporation.
Sources: 1. National Development Council.
2. Taiwan Institute of Economic Research.
3. Department of Statistics, Ministry of Economic Affairs.
4. DGBAS, Executive Yuan, February 2021.
5. Department of Statistics, Ministry of Finance, February 2021.
6. Banking Bureau, Financial Supervisory Commission.
7. *Financial Statistics Monthly*, CBC, February 2021.
8. *Balance of Payments*, CBC, February 2021.
9. Taiwan Stock Exchange Corporation.

APPENDIX: CENTRAL BANK OF THE REPUBLIC OF CHINA (TAIWAN) WEBSITE

I. The Bank's Homepage

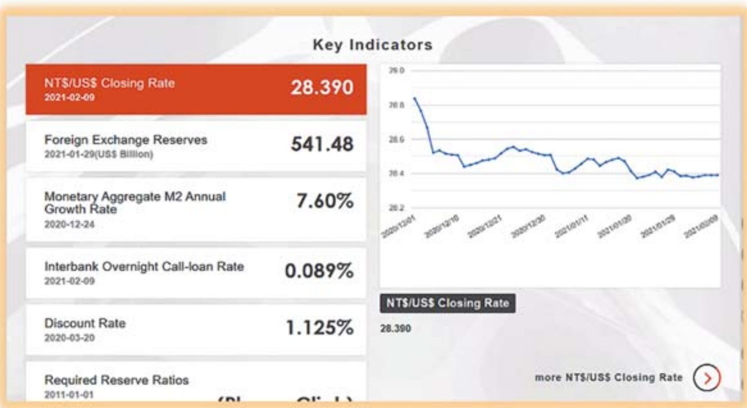
https://www.cbc.gov.tw/en/mp-2.html

Introduces the Bank's operations regarding monetary policy and payment systems, currency issuance, foreign exchange, government securities services, and financial stability and bank supervision, and contains other crucial information such as press releases, statistics and publications, and general information about the Bank.



Key Indicators

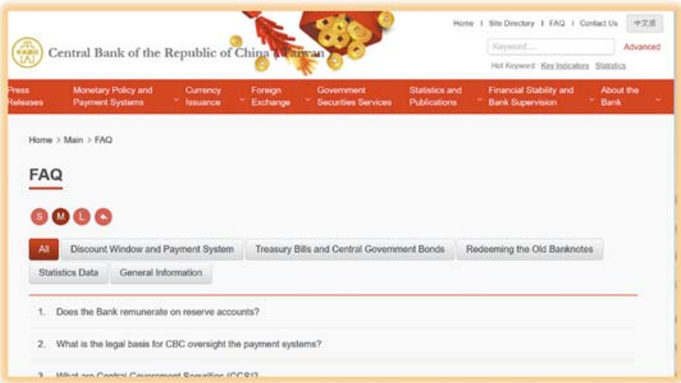
Displays data charts of the Bank's key indicators that are periodically updated, such as the NT$/US$ closing rate, foreign exchange reserves, the monetary aggregate M2 annual growth rate, and interest rates.



▼ FAQ

https://www.cbc.gov.tw/en/lp-2168-2.html

Provides a list of frequently asked questions and answers regarding the Bank's operations and policy-related issues. Information here would be updated as needed.

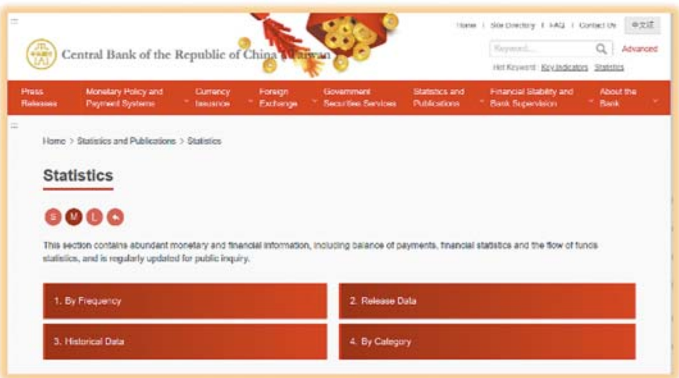


II. Statistics and Publications

▼ Statistics

https://www.cbc.gov.tw/en/np-507-2.html

Presents statistical data released by the Bank for browsing, querying, and downloading.



▼ Publications

https://www.cbc.gov.tw/en/lp-535-2.html

➢ Provides access to periodical publications, including statistical publications (e.g., financial statistics, balance of payments, and condition and performance of domestic banks), financial stability reports, and annual reports.

➢ Offers occasional notes or reports on topics related to the Bank's operations or international and domestic economic and financial conditions.

III. Monetary and Financial Knowledge Hub (in Chinese Only)

https://knowledge.cbc.gov.tw/front/index

Introduces various kinds of monetary and financial knowledge with interesting, simply-explained, and easy-to-understand contents to facilitate public understanding of the Bank's policies and operations. Information covers a wide range including short reports on special topics such as fintech and CBDC, the latest news on central banks worldwide, major events in monetary and financial history, and current issues in finance.

IV. Virtual Money Museum and Virtual Exhibition Hall

▼ Virtual Money Museum

https://museum.cbc.gov.tw/web/en-us

Presents information about currency issuance including the history of banknotes and coins, banknotes and coins in circulation, coin sets and commemorative banknotes and coins, and security features of the New Taiwan Dollar.

The webpage was revamped with the "responsive web design" technique, making it more convenient for users to navigate via computers and mobile devices.

▼ Virtual Exhibition Hall (in Chinese Only)

https://museum.cbc.gov.tw/museum

Allows viewers to browse banknotes categorized in various themes.

V. Contacting the Bank

https://www.cbc.gov.tw/en/sp-opma-form-2.html

For questions or suggestions, please contact the Bank through the following steps. We will reply to you within 7 working days.

VI. Official Social Media Channels and Mobile Apps (in Chinese Only)

The Bank also provides the latest news and announcements on social networking sites and our official mobile apps. Stay up-to-date and communicate with us by following the Bank's social media accounts as below and/or downloading our mobile apps on iOS or Android devices.

Facebook	https://www.facebook.com/cbc.gov.tw/
YouTube	https://www.youtube.com/user/TheCBCTube
Flickr	http://www.flickr.com/photos/cbcbank
Android App	https://play.google.com/store/apps/details?id=hyweb.mobilegip.gip_cbc
iOS App	https://appsto.re/tw/LyAH6.i

Abbreviations

ADB	Asian Development Bank
ASEAN	Association of Southeast Asian Nations
BaFin	German Federal Financial Supervisory Authority
BIS	Bank for International Settlements
BOP	Balance of payments
Brexit	British exit (from the European Union)
CABEI	Central American Bank for Economic Integration
CBC	Central Bank of the Republic of China (Taiwan)
CBDC	Central bank digital currency
CD	Certificate of deposit
CGSS	Central Government Securities Settlement System
CIFS	CBC Interbank Funds Transfer System
COFER	Currency Composition of Official Foreign Exchange Reserves
COVID-19	Coronavirus disease
CP	Commercial paper
CPI	Consumer price index
DBU	Domestic banking unit
DGBAS	Directorate-General of Budget, Accounting and Statistics
DLT	Distributed ledger technology
DVP	Delivery-versus-payment
EC	European Commission
ECB	European Central Bank
Fed	Federal Reserve (System)
Fintech	Financial technology
FISC	Financial Information Service Co., Ltd.
FSC	Financial Supervisory Commission
FSI	Financial Soundness Indicator
FX	Foreign exchange
GDP	Gross domestic product
GNI	Gross national income
IMF	International Monetary Fund

LIBOR	London Interbank Offered Rate
LTV	Loan-to-value
NCCC	National Credit Card Center of R.O.C.
NCD	Negotiable certificate of deposit
NDC	National Development Council
n.i.e.	not included elsewhere
NPL	Non-performing loan
NTD	New Taiwan dollar
OBU	Offshore banking unit
OIU	Offshore insurance unit
OSU	Offshore securities unit
PVP	Payment-versus-payment
QE	Quantitative easing
RCEP	Regional Comprehensive Economic Partnership
RMB	Renminbi
ROC	Republic of China
SBL	Securities-based lending
SEACEN	South East Asian Central Banks
SITE	Securities investment trust enterprise
SME	Small and medium enterprise
SMEG	Small and Medium Enterprise Credit Guarantee Fund
TAIEX	Taiwan Stock Exchange Capitalization Weighted Stock Index
TCH	Taiwan Clearing House
TDA	Treasury deposit account
TDCC	Taiwan Depository and Clearing Corporation
TDR	Taiwan depository receipt
TIER	Taiwan Institute of Economic Research
TPEx	Taipei Exchange
TWSE	Taiwan Stock Exchange Corporation
WPI	Wholesale price index

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