

# Annual Report 2021

Central Bank of the Republic of China (Taiwan)

Taipei, Taiwan

Republic of China

# Foreword



Chin-Long Yang, Governor

Entering the year of 2021, progress in vaccination campaigns led many major economies to gradually lift COVID-19 restrictions, helping economic and trade activity to return to a more normal state and galvanizing the global economic recovery. Against this backdrop, Taiwan's exports and private investment were robust and the overall economic growth accelerated from 3.36% the previous year to 6.45%, the fastest in nearly eleven years. Meanwhile, in addition to a lower base effect, the annual growth rate of consumer price index (CPI) was also pushed up by rising raw material prices including crude oil and by weather-induced price hikes in food items such as fruit and vegetables, climbing from a negative 0.23% in 2020 to a positive 1.96% in 2021. Excluding fruit, vegetables, and energy, core CPI inflation remained mild, with the annual growth rate reaching 1.33% compared to the previous year's 0.35%.

Against this backdrop, the Bank continued with efforts to fulfill its legal mandates. When the domestic COVID-19 cases flared up around mid-year, the Bank, supported by a rolling review, made several adjustments to its special accommodation facility to keep credit flowing and make borrowing more affordable for the pandemic-hit small and medium-sized enterprises, including

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extending the applicable duration of preferential interest rates, expanding the size of total accommodation, postponing the application deadline, and allowing a second draw of such a loan. When the banking sector continued racking up real estate loans, the Bank reinforced the selective credit control measures introduced in December 2020 for another three rounds to stem excessive credit flows into the housing market and further rein in credit risk thereof, successfully slowing the growth in construction and house-purchasing loans and bolstering banks' real estate credit quality.

The Bank also continued to flexibly manage market liquidity through open market operations. In 2021, bank loans and investments showed an annual growth rate of 7.65% and the monetary aggregate M2 increased by 8.72% year on year. As both figures were higher than the GDP growth rate of 6.45%, the financial system held ample liquidity, sufficient to support economic activity.

Meanwhile, the Bank stayed committed to the statutory objective of safeguarding the value of the NT dollar. For the first half of 2021, excess supply of the US dollar (USD) in the domestic forex market strengthened the NT dollar (NTD) and amplified exchange rate volatility, whereas more balanced USD supply and demand in the second half of the year kept the NTD-USD exchange rate within a tight range. When the NT dollar exchange rate experienced heightened volatility, the Bank stepped in with smoothing operations as needed to maintain the currency's dynamic stability, with a total of US\$9.1 billion net purchases for the year as a whole. At the end of 2021, the Bank held US\$548.4 billion worth foreign exchange reserves, representing a year-on-year increase of US\$18.5 billion owing mainly to returns from forex reserves management and smoothing operations to address the effect of massive and erratic cross-border capital flows.

The Bank also took note of a marked increase in interbank retail payment transactions and the opening of internet-only banks in Taiwan. In response, the Bank now allowed a higher share – up from 8% to 16% – of banks' required reserves to

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come from the end-of-day balance of their funds deposited in the central bank's Interbank Funds Transfer Guarantee Special Accounts, thereby facilitating banks' liquidity needs for payment settlement. Moreover, we recognized the importance of better interconnectedness for cross-institution flows of data and funds, including the flows among electronic payment (e-payment) institutions and those between them and financial institutions. To that end, the Bank urged the Financial Information Service Co., Ltd. (FISC) to set up the "shared platform for cross-institution electronic payment," which began to provide funds transfer services from October 2021. With the e-payment institutions all joining this platform, payment market efficiency has further improved.

The Bank also carried on with its work to explore a potential central bank digital currency (CBDC). We already found through the first phase research completed in June 2020 on the feasibility of a wholesale CBDC that the distributed ledger technology (DLT) has its downsides, particularly in that the DLT application remains inadequate to satisfy the need for real-time, high-frequency, large-volume payment transactions. Currently, the second phase proof-of-concept study is well underway, with a pilot platform to simulate and test the CBDC's capabilities in retail payment scenarios. The study is expected to conclude in September 2022, and the findings will be disclosed in due course to invite discussion and public comments as part of the Bank's further evaluation for issuing a CBDC.

Another highlight in recent years was enhanced communication with the public via a website revamp in 2020, using the responsive web design technology to provide improved viewer experience across devices and web accessibility. The revamp also ushered in the Monetary and Financial Knowledge Hub (in Chinese Only) to serve as a reliable source of monetary and financial knowledge. In October 2021, the Bank also asked colleges and universities to promote the Hub to broaden its reach.

Looking ahead, uncertainties compounded by global geopolitical tensions,

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recurring pandemic waves induced by new coronavirus variants, worsening climate change, and surging international commodity prices would continue to weigh on the world's economic development and financial stability. The Bank will continue to closely monitor and assess the economic and financial conditions at home and abroad. Based on the assessment and committed to its legal mandates, the Bank will take actions to preserve order in the forex market and dynamic stability of the NT dollar exchange rate, and to adjust monetary and credit policies as needed. The Bank was also mindful of a recent array of regulatory issues around the world resulting from fast-growing digital currencies and crypto-assets and will keep close watch on these developments and their implications for financial stability.

Finally, I would like to thank my colleagues for their hard work in producing this publication, which outlines the Bank's efforts as well as economic and financial overviews for the year of 2021. Going forward, we remain devoted to fulfilling our duties and addressing the challenges.

A handwritten signature in black ink, reading "Chin Long Yang". The signature is fluid and cursive, with the first and last names being more prominent.

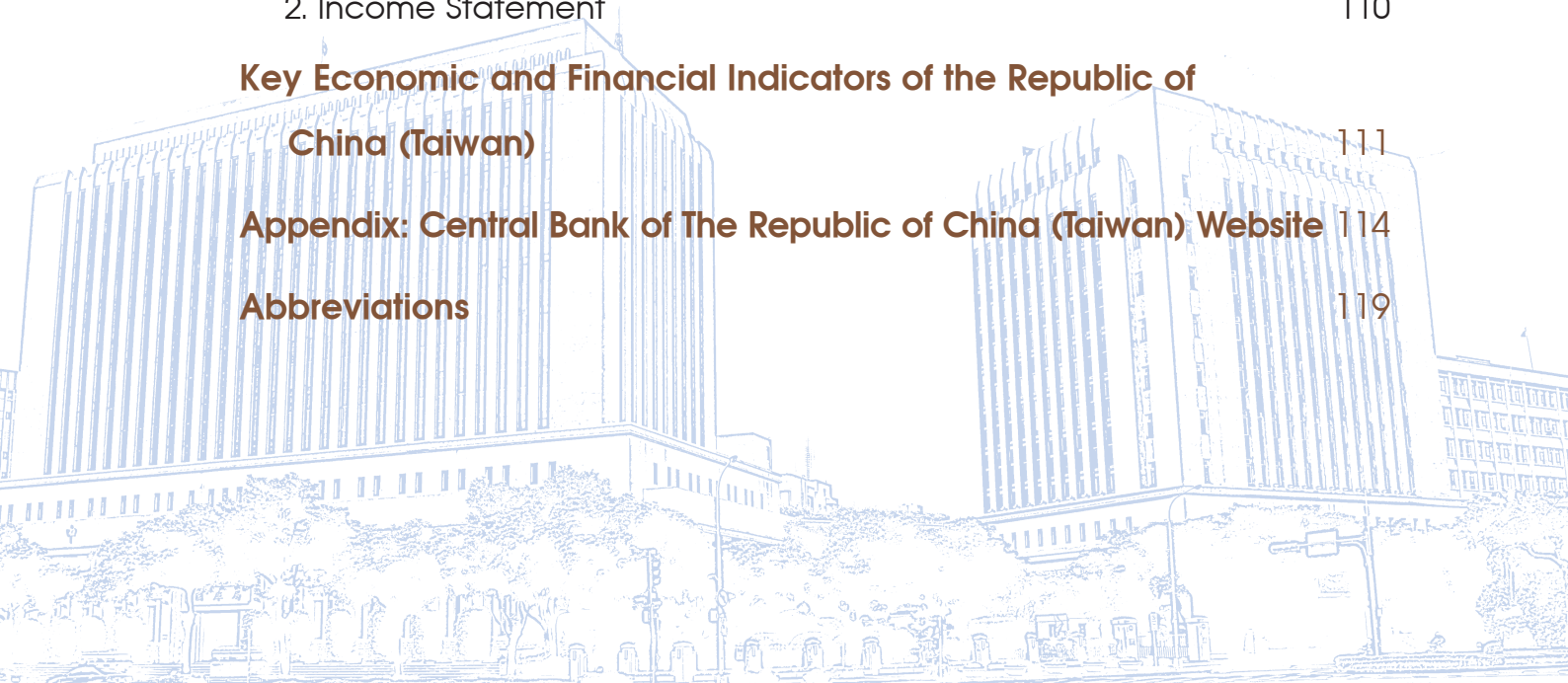
Chin-Long Yang  
Governor  
March 2022

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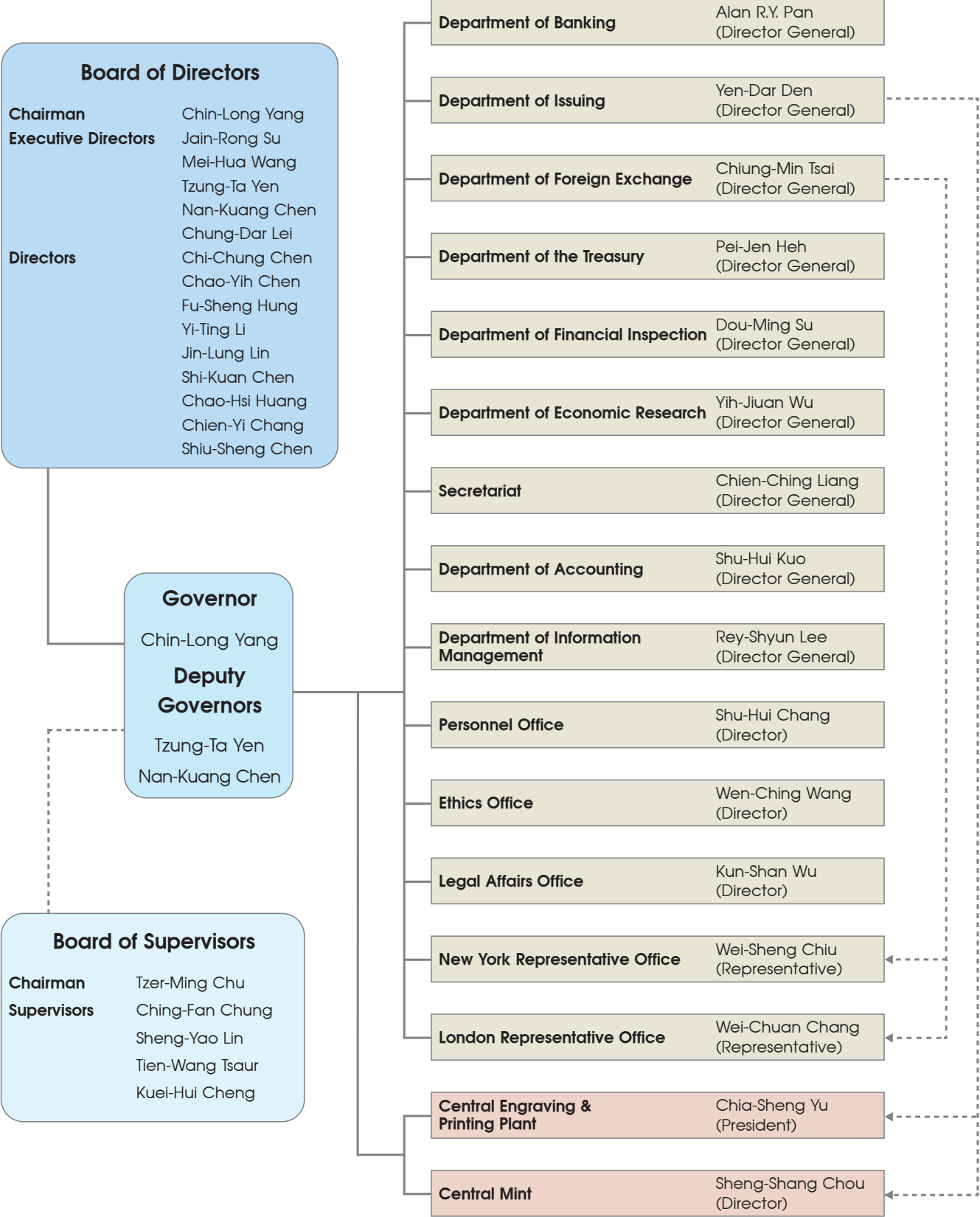
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# Organization and Management of the CBC



As of January 2022





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 Supervisor  
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

2021 marked the year when Taiwan recorded the fastest pace of economic growth since 2011, as robust growth in private investment and exports and a pickup in government spending helped the economy to expand by 6.45% from the 3.36% registered the year before. Meanwhile, 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) rose by 1.96%, the largest annual increase since 2009 owing to higher fuel and lubricant fees shored up by international crude oil price surges, rises in airfares and fruit and vegetable prices, and a lower base effect. The core CPI (excluding fruit, vegetables, and energy) showed a mild increase of 1.33%. The labor market was dampened by a surge in domestic COVID-19 infections around the middle of the year that hit services sector jobs with a tightening of containment measures. The unemployment rate went up to 3.95%, the highest since 2015, whereas non-farm monthly real earnings per worker still posted a 0.96% increase, taking it to a historical high of NT\$53,445.

### **Robust Economic Growth**

In the first quarter of 2021, exports and private investment both gathered steam amid a global economic recovery and strong demand for emerging technology applications, while private consumption rebounded and government spending picked up steadily. Combined, they helped drive the economic growth rate towards an all-year high of 9.20%. In the following two quarters, despite the continued expansion in exports and private investment, a domestic COVID-19 flare-up in mid-May dragged private consumption into negative growth, thus slowing down the economic expansion to a pace of 4.37% for the third quarter. In the fourth quarter, though, private consumption was reinvigorated by the lifting of pandemic restrictions after the outbreak eased and also boosted by the government's consumption stimulus measures. The rebound, along with continued export and private investment growth, brought about a faster economic expansion at 4.86% year on year. For the year as a whole, Taiwan's economy posted an annual growth rate of 6.45%, significantly higher than the previous year's 3.36%.

Among the GDP expenditure components, domestic demand played the key role in driving economic growth in 2021. With a faster pickup in fixed capital formation – fueled by increases in tech giants' capital outlays and continued progress in infrastructure projects to facilitate green energy and 5G network development – and a mild expansion in government spending, domestic demand contributed 4.55 percentage points to the GDP growth, higher than the 0.68 percentage

point contribution the previous year. Regarding external demand, in addition to solid export growth, imports were also spurred markedly by derived demand from exports and investment as well as surging international raw material prices. On balance, the contribution from net foreign demand shrank to 1.90 percentage points from 2.67 percentage points the previous year.

The domestic investment rate (gross domestic investment to GDP) rose from 24.19% a year before to 26.85% in 2021, a record high unseen since 2001, thanks to a significant expansion in private investment. By contrast, a slump in private consumer spending amid domestic COVID-19 outbreaks led the national saving rate (gross national saving to gross national income) to rise from 38.39% a year ago to 42.22%. Overall, with national saving rising faster than domestic investment, the excess saving rate (the difference between saving and investment as a percentage of GDP) went up from 15.31% in 2020 to 16.19% in 2021.

### Healthy BOP Surplus

In 2021, Taiwan continued to record a healthy balance of payments. The current account posted a surplus of US\$116,123 million, the financial account had a net asset increase of US\$104,604 million, and the Bank's reserve assets showed an increase of US\$20,993 million.

On the current account, goods imports and exports both registered strong growth, with exports increasing more than imports. This led the goods trade surplus to rise from the previous year's US\$75,028 million to US\$90,120 million, accounting for the largest contribution to the widening of the current account surplus. The services account surplus climbed to a historical high of US\$12,314 million from the previous year's US\$3,754 million, mainly bolstered by a surge in freight proceeds. The primary income surplus shrank from US\$19,328 million to US\$16,390 million, reflecting a decrease in banks' interest income and an increase in payments for nonresidents' portfolio investment income. The secondary income deficit narrowed from US\$3,154 million to US\$2,701 million. For the year of 2021, the ratio of current account surplus to nominal GDP rose from the 14.2% of the previous year to 15.0%.

On the financial account, portfolio investment recorded a net asset increase of US\$101,281 million. Among the components, residents' portfolio investment abroad increased by a net amount of US\$81,194 million, mainly because domestic insurers and banks stepped up holdings of foreign securities. Inward portfolio investment by nonresidents posted a net decrease of US\$20,087 million, mainly because foreign investors shed their local stock holdings. Direct investment registered a net increase of US\$4,703 million, of which direct investment abroad by residents declined to US\$10,108 million and nonresidents' inward direct investment also dropped to US\$5,405 million. In terms of other investment, it posted a net asset decrease of US\$1,094 million.

## Rising Inflation

Internationally, global demand was boosted by economic reopening in many countries as the vaccination coverage increased, while raw material prices were pushed up by persisting supply chain bottlenecks. These external factors and a lower base effect combined to result in a 9.44% year-on-year rise in Taiwan's wholesale price index (WPI), the largest annual increase since 1981. Of the components, imported goods, domestic sales excluding imports, and exported goods recorded price rises of 10.53%, 12.24%, and 6.54%, respectively.

Meanwhile, the CPI annual growth rate reached 1.96%, a record high since 2009, mainly owing to supply-side factors such as price surges in fuel and lubricants, flight tickets, and fruit and vegetables, as well as a lower base effect. The core inflation was still mild, rising by 1.33% year on year.

## Higher Unemployment Rate and Moderate Wage Growth

In the middle of May 2021, the domestic coronavirus flare-up triggered a level-3 alert with a tightening of containment measures. The labor market took a hit, with the unemployment rate rising from the 3.66% early in the year to 4.80% in June. As the outbreak came under control and the related restrictions were eased, the unemployment rate trended downwards and reached 3.64% in December, bringing the all-year average to 3.95%, albeit still the highest since 2015. The average labor force participation rate slid by 0.12 percentage points to 59.02%, declining for two years in a row.

The average number of employed persons decreased by 57 thousand, or 0.49%, to 11,447 thousand. The services sector suffered the greatest loss owing to the pandemic, losing 32 thousand persons in employment, or 0.47%, compared to the previous year. Employment of the industrial and agricultural sectors decreased by 17 thousand, or 0.43%, and by 6 thousand, or 1.13%, respectively.

In terms of wages, the average non-farm (industrial and services sectors) monthly earnings per employee increased by 2.94% year on year to NT\$55,754, where the industrial sector saw a 5.82% increase and the services sector only recorded a 0.95% rise. Adjusted for inflation, real monthly earnings still climbed to a historical high of NT\$53,445, up by 0.96% from a year ago. Meanwhile, as growth in production far exceeded growth in total working hours, labor productivity indices of the industrial sector and the manufacturing industry exhibited significant year-on-year rises of 11.72% and 12.51%, respectively. Meanwhile, unit labor costs decreased by 5.73% in the industrial sector and 6.26% in the manufacturing sector, reflecting smaller gains in total earnings than those in production.

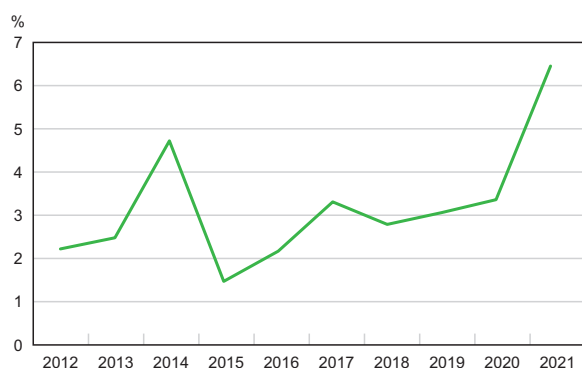
## 2. National Output and Income

In 2021, Taiwan's economy grew at an annual rate of 6.45%, higher than the 3.36% of the previous year. Domestic demand served as the leading force for economic expansion and contributed 4.55 percentage points to real GDP growth. This was in part due to a robust increase in fixed capital formation as well as an expansion in government consumption. In terms of external demand, both exports and imports achieved double-digit growth, and thus net exports grew moderately and contributed 1.90 percentage points to real GDP growth. In the meantime, nominal GNI (gross national income, in US dollars) rose by 14.67% and per capita GNI increased from US\$29,202 to US\$33,638 over the year 2021.

In the first quarter, real GDP recorded the highest level of growth over the year at 9.20%. Private consumption regained its growth momentum, and government consumption grew at a steady pace. A tremendous increase in private investment was driven by expansions in machinery and equipment investment and construction investment. Meanwhile, exports grew robustly owing to emerging technology applications (e.g., 5G telecommunication, high performance computing, and automotive electronics) and business opportunities arising from the stay-at-home economy. In the second quarter, real GDP growth declined slightly to 7.76%. Growth momentum in private consumption retreated as the government raised the COVID-19 alert level to curb the pandemic. Yet, growth in government consumption, private investment, and exports remained strong amid a spike in infections in mid-May.

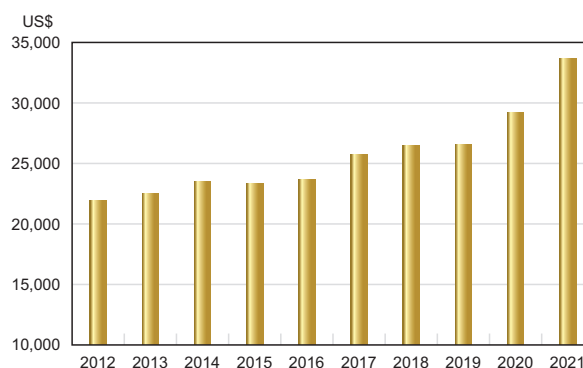
In the third quarter, growth in real GDP declined further to 4.37% while the impact of COVID-19 on private consumption worsened. In response to the pandemic, the government revised up the budget for epidemic prevention, relief, etc. and thereby boosted government consumption.

**Real Growth Rate of GDP**



Source: *Statistical Abstract of National Income*, DGBAS, Executive Yuan, February 2022.

**Per Capita GNI**



Source: *Statistical Abstract of National Income*, DGBAS, Executive Yuan, February 2022.



Benefiting from higher semiconductor capital expenditures and the construction of 5G networks and offshore wind power plants, growth in private investment strengthened further. In the meantime, the global economic recovery and business opportunities arising from emerging technology applications and digital transformation-related products provided favorable conditions for export growth. In the fourth quarter, real GDP growth improved slightly and reached 4.86%. Of note, private consumption resumed positive growth as the pandemic eased off; the growth was partly fueled by the fiscal stimulus program. The combination of production capacity enhancement, green energy investment, and transportation procurement resulted in another quarter of strong growth for private investment. Meanwhile, the holiday shopping season effect in Western countries, together with emerging technology applications and demand for digital transformation, bolstered export growth in the fourth quarter.

### Expenditure Components of GDP

All expenditure components of GDP, except private consumption, recorded positive growth in 2021. Among all the components, exports of goods and services was the primary source of economic growth and contributed 9.89 percentage points to real GDP growth for the year. Gross fixed capital formation and government consumption contributed to real GDP growth by 3.55 and 0.53 percentage points, respectively. Private consumption, on the other hand, was a drag of 0.18 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 66.32%, followed by private consumption at 44.69% and gross fixed capital formation at 26.03%.

### GDP by Expenditure

Unit: %

	2021			2020		
	Share	Real Growth Rate	Contribution to Real Growth Rate of GDP*	Share	Real Growth Rate	Contribution to Real Growth Rate of GDP*
Private Consumption	44.69	-0.38	-0.18	48.49	-2.53	-1.32
Government Consumption	13.52	3.81	0.53	14.00	2.60	0.37
Gross Fixed Capital Formation	26.03	14.68	3.55	24.16	5.91	1.41
Change in Inventory	0.82	-	0.65	0.03	-	0.23
Exports of Goods and Services	66.32	17.04	9.89	58.04	1.22	0.77
(Less: Imports of Goods and Services)	51.38	17.86	7.99	44.72	-3.59	-1.91
Expenditure on GDP	100.00	6.45	6.45	100.00	3.36	3.36

Note: \* Percentage point.

Source: *Statistical Abstract of National Income*, DGBAS, Executive Yuan, February 2022.

#### (1) Sluggish Growth in Private Consumption

Caused by a surge in COVID-19 cases, private consumption fell sharply in the second and

the third quarters and then recovered in the last quarter of 2021. For the year as a whole, private consumption grew at an annual rate of -0.38%, considerably better than the -2.53% of 2020, and contributed -0.18 percentage points to real GDP growth.

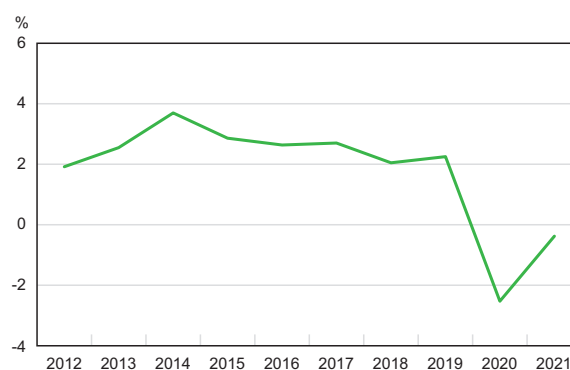
Because of travel restrictions, consumers were induced to reallocate spending away from outbound tourism to domestic consumption, and therefore private consumption grew by 2.66% in the first quarter. However, the domestic pandemic situation took a sharp turn for the worse in May and forced the government to tighten COVID-19 restrictions. As a consequence, consumers cut back spending on domestically-oriented service activity; private consumption then dropped by 0.46% in the second quarter. The pandemic-induced disruptions continued into the second half of the year, and catering, retail, and transportation industries were particularly hard hit. Private consumption declined further by 5.25% in the third quarter. As the pandemic eased off over time, the government gradually loosened epidemic control restrictions and attempted to revitalize the economy with various fiscal stimulus measures. Private consumption therefore increased by 1.57% in the fourth quarter.

## (2) Healthy Expansion in Fixed Capital Formation

Fixed capital formation grew robustly at an annual rate of 14.68% and contributed 3.55 percentage points to real GDP growth. The growth was attributed to higher demand for 5G infrastructure investment, continuing investment in green energy-related projects, and the expansion of production capacity in Taiwan by leading technology firms.

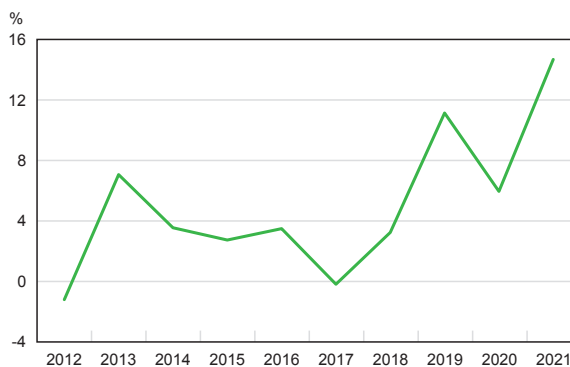
Driven by higher capital expenditures in the technology industry and continuing investments in 5G-infrastructure and green energy-related projects, both machinery and equipment investment and construction investment expanded at a healthy pace in the first half of the year. Gross fixed capital formation increased by 12.13% and 13.33% in the first

**Real Growth Rate  
of Private Consumption Expenditure**



Source: Statistical Abstract of National Income, DGBAS, Executive Yuan, February 2022.

**Real Growth Rate  
of Fixed Capital Formation**



Source: Statistical Abstract of National Income, DGBAS, Executive Yuan, February 2022.

two quarters, respectively. Stable growth in transportation investment, machinery and equipment investment and construction investment continued to push fixed capital formation to a higher level in the second half of the year. The growth rates of fixed capital formation were 21.40% and 11.72% in the last two quarters of the year, respectively.

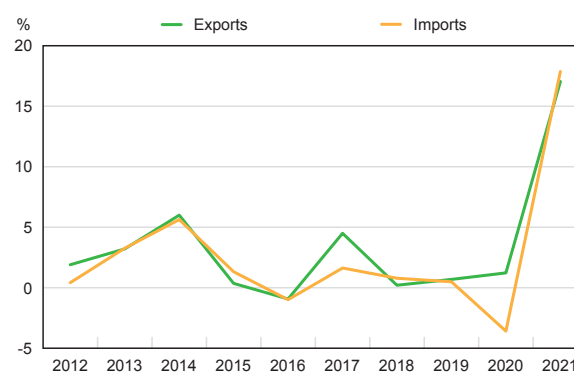
In terms of the type of fixed capital formation, a boom in the technology industry resulted in a high growth rate of 29.26% for machinery and equipment investment, while construction investment grew steadily at an annual rate of 8.33% in 2021. Transportation investment, on the other hand, also achieved a double-digit growth rate of 14.64% owing to the procurement of rail vehicles, vessels, and aircrafts by local carriers. Lastly, investment in intellectual property remained relatively stable and increased by 3.07% for the entire year.

### (3) Significant Growth in Real Exports

In light of the global economic recovery and business opportunities arising from emerging technology applications, exports of goods and services grew notably by 17.04% for the entire year, supported by exports of traditional manufacturing goods and electronic goods. On balance, exports of goods and services contributed 9.89 percentage points to real GDP growth in 2021.

In the first half of the year, emerging technology applications began to prevail, and COVID-19 accelerated the development of digital transformation; at the same time, demand for traditional manufacturing goods gradually recovered. Driven by those positive factors, exports grew by 21.74% and 22.51% in the first two quarters, respectively. In the second half of the year, widespread vaccinations around the world slowly brought global trade activity back to normal, thereby stimulating demand for traditional manufacturing goods. As a result, exports increased by 13.95% in the third quarter. Although the growth momentum remained strong because of technology megatrends and the holiday shopping season effect in Western countries, a higher base effect resulted in a slightly lower growth rate of 11.68% in the fourth quarter.

**Real Growth Rates of Exports and Imports**

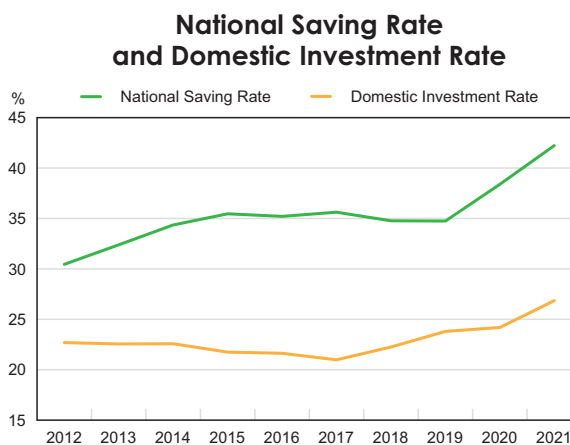


Source: *Statistical Abstract of National Income*, DGBAS, Executive Yuan, February 2022.

Turning to the imports of goods and services, the combination of stronger demand for capital equipment and an increase in export-derived demand caused imports to rise remarkably by 17.86% for the entire year.

## Rises in National Saving Rate and Domestic Investment Rate

The national saving rate (the ratio of national saving to GNI measured at current prices) increased moderately from 38.39% in 2020 to 42.22% in 2021, reflecting the adverse impact of the pandemic on consumption. Meanwhile, benefiting from spectacular growth in private investment, the domestic investment rate (the ratio of domestic investment to GDP measured at current prices) reached 26.85% in 2021, slightly higher than the 24.19% of the previous year. Overall, the difference between gross national saving and gross domestic investment as a share of GDP rose from 15.31% in 2020 to 16.19% in 2021.



Source: *Statistical Abstract of National Income*, DGBAS, Executive Yuan, February 2022.

### 3. Balance of Payments

In 2021, Taiwan's current account registered a record surplus of US\$116,123 million, which accounted for 15.0% of nominal GDP, up from 14.2% in the previous year. The financial account posted a net asset increase of US\$104,604 million. The reserves and related items recorded a surplus of US\$20,993 million, which was reflected in the increase in foreign reserve assets held by the Bank.

#### Balance of Payments

Unit: US\$million

	(1) 2021	(2) 2020	(1)-(2)
A. Current account	116,123	94,956	21,167
Goods: credit (exports)	459,068	342,489	116,579
Goods: debit (imports)	368,948	267,461	101,487
Balance on goods	90,120	75,028	15,092
Services: credit (exports)	52,012	41,211	10,801
Services: debit (imports)	39,698	37,457	2,241
Balance on services	12,314	3,754	8,560
Primary income: credit	38,364	38,446	-82
Primary income: debit	21,974	19,118	2,856
Balance on primary income	16,390	19,328	-2,938
Secondary income: credit	8,707	7,945	762
Secondary income: debit	11,408	11,099	309
Balance on secondary income	-2,701	-3,154	453
B. Capital account	3	-9	12
C. Financial account	104,604	46,251	58,353
Direct investment: assets	10,108	11,500	-1,392
Equity and investment fund shares	10,007	10,942	-935
Debt instruments	101	558	-457
Direct investment: liabilities	5,405	6,053	-648
Equity and investment fund shares	2,614	5,528	-2,914
Debt instruments	2,791	525	2,266
Portfolio investment: assets	81,194	36,153	45,041
Equity and investment fund shares	19,721	2,003	17,718
Debt securities	61,473	34,150	27,323
Portfolio investment: liabilities	-20,087	-22,881	2,794
Equity and investment fund shares	-21,189	-23,212	2,023
Debt securities	1,102	331	771
Financial derivatives: assets	-21,822	-20,563	-1,259
Financial derivatives: liabilities	-21,536	-20,997	-539
Other investment: assets	18,780	-808	19,588
Other investment: liabilities	19,874	17,856	2,018
D. Net errors and omissions	9,471	-354	9,825
E. Reserves and related items*	20,993	48,342	-27,349

Note: \* Excluding valuation changes in exchange rates.  
Source: *Balance of Payments*, CBC, February 2022.

## Wider Current Account Surplus

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

### (1) Goods

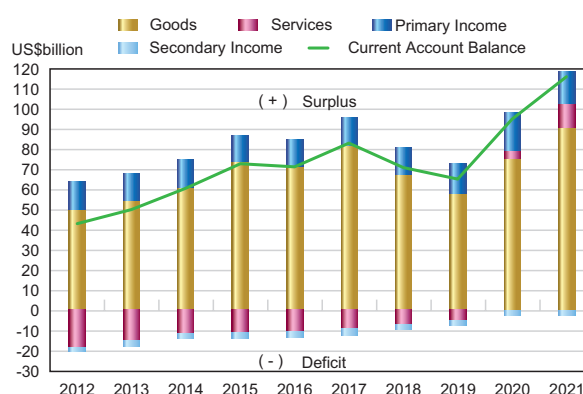
Bolstered by strong demand for emerging technology applications like high performance computing, Taiwan's external merchandise trade continued with substantial growth in 2021, with the value of exports, on a BOP basis, increasing by 34.0% to US\$459,068 million from 2020. Among its components, net exports of goods under merchanting increased by 61.8% to US\$20,867 million. The value of imports increased by 37.9% to US\$368,948 million. Overall, as the increase in exports exceeded that in imports, the trade surplus widened from US\$75,028 million to US\$90,120 million for the year. The top five trading partners of Taiwan in 2021 were Mainland China including Hong Kong (hereafter in this chapter referred to as Mainland China), ASEAN,<sup>1</sup> the US, Europe, and Japan.

In terms of Taiwan's trade with Mainland China, the value of exports amounted to US\$188,905 million in 2021, 24.8% higher than the previous year. As a manufacturing center of the world, Mainland China remained Taiwan's largest trading partner, though its share of total exports dropped to 42.3%. Among major export products, electronic parts and components maintained the leading role, which benefited from increasing use of emerging technologies. Imports from Mainland China grew by 29.9% to US\$84,171 million in 2021, though its share of total imports shrank to 22.1%. 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\$104,734 million in 2021, still the largest source of Taiwan's trade surplus.

Exports to the ASEAN economies increased to US\$70,246 million in 2021, up by 32.0% with a strong export performance of electronic parts and components and mineral products. Imports from the ASEAN economies increased by 31.4% to US\$47,169 million, accounting for 12.4% of total imports, as imports of iron and steel and articles thereof and mineral products rose. Overall, the trade surplus with the ASEAN economies rose to US\$23,076 million. Singapore, Vietnam, and the Philippines were the third, fourth, and fifth largest sources of Taiwan's trade surplus, respectively.

<sup>1</sup> Association of Southeast Asian Nations, including Brunei Darussalam, Cambodia, Indonesia, Laos, Myanmar, Malaysia, the Philippines, Singapore, Thailand, and Vietnam.

## Current Account



Source: Balance of Payments, CBC, February 2022.

In 2021, Taiwan's exports to the US grew 30.0% to US\$65,696 million, comprising a slightly higher share of 14.7% in total exports compared to the year before. The increase mainly came from information, communication and audio-video products. As for imports from the US, the amount increased by 20.2% to US\$39,075 million, with its share in total imports decreasing to 10.3%. The major products contributing to the expansion were mineral products and machinery. The trade surplus with the US expanded to US\$26,621 million for the year, ranking second among Taiwan's surplus sources.

Exports to Europe increased by 36.8% to US\$38,491 million, with its share of total exports increasing to 8.6%. The major products contributing to this expansion were iron and steel and articles thereof, and information, communication and audio-video products. Imports from Europe increased by 28.4% to US\$47,230 million and the share of total imports decreased to 12.4%, with machinery and mineral products being the main sources of this increase. In all, Taiwan's trade deficit with Europe expanded to US\$8,739 million in 2021.

Exports to Japan increased by 6.5% to US\$29,212 million and its share in Taiwan's total exports slightly decreased to 6.5%. Imports from Japan increased by 22.3% to US\$56,146 million as its share of total imports decreased to 14.7%. Both exports to and imports from Japan owed their year-on-year increases to electronic parts and components. The trade deficit with Japan widened to US\$26,934 million. Japan remained Taiwan's second largest source of imports and the largest source of trade deficit in 2021.

### Trade in Goods by Country

Unit: %

	2021			2020		
	Amount (US\$million)	Share	Annual Change	Amount (US\$million)	Share	Annual Change
Exports						
Mainland China (including Hong Kong)	188,905	42.3	24.8	151,381	43.9	14.6
ASEAN	70,246	15.7	32.0	53,215	15.4	-1.3
US	65,696	14.7	30.0	50,550	14.6	9.3
Europe	38,491	8.6	36.8	28,143	8.2	-5.5
Japan	29,212	6.5	24.8	23,398	6.8	0.5
Rest of the World	53,893	12.1	40.2	38,438	11.1	-12.3
Total	446,443	100.0	29.4	345,126	100.0	4.9
Imports						
Mainland China (including Hong Kong)	84,171	22.1	29.9	64,808	22.6	10.9
Japan	56,146	14.7	22.3	45,901	16.0	4.2
US	39,075	10.3	20.2	32,514	11.4	-6.7
Europe	47,230	12.4	28.4	36,797	12.9	0.7
ASEAN	47,169	12.4	31.4	35,901	12.5	2.7
Rest of the World	107,230	28.1	52.7	70,227	24.5	-8.6
Total	381,022	100.0	33.2	286,148	100.0	0.2

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

## (2) Services

In 2021, services registered a record surplus of US\$12,314 million, up from US\$3,754 million in the previous year, mainly because of an increase in freight transport receipts.

Of the various components of the services account, receipts of manufacturing services on physical inputs owned by others<sup>2</sup> increased by US\$509 million to US\$4,313 million in 2021. On the debit side, payments for manufacturing services increased by US\$512 million to US\$2,044 million. In total, net manufacturing receipts decreased from US\$2,272 million to US\$2,269 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\$379 million to US\$901 million owing to decreased receipts from aircraft repairs. On the other hand, the payments increased by US\$145 million to US\$894 million. In all, the surplus on this account narrowed from US\$531 million to US\$7 million.

Transport receipts hit a record high, which increased by US\$8,716 million to US\$19,739 million, reflecting increases in international freight proceeds as active global trade and supply chain bottlenecks led to an increase in freight rates. Transport payments decreased by US\$99 million to US\$9,582 million as a result of declines in passenger fares paid to foreign airlines. Overall, the surplus of transport services in 2021 increased substantially from US\$1,342 million to US\$10,157 million.

Travel receipts decreased by US\$1,015 million to US\$785 million. Meanwhile, travel payments decreased by US\$1,799 million to US\$1,247 million. As many countries kept border controls in place during the pandemic, numbers of inbound visitors and outbound travelers remained low. In all, the deficit on the travel account narrowed to US\$462 million.

In terms of other services, the receipts grew by US\$2,970 million to US\$26,274 million, while the payments grew by US\$3,482 million to US\$25,931 million, both mainly attributable to the increase in professional and management consulting services (which is under other business services). Overall, the surplus of other services narrowed to US\$343 million in 2021.

## (3) Primary Income

Primary income consists of compensation of employees, investment income, and other primary income. In 2021, primary income receipts decreased by US\$82 million to US\$38,364 million, mainly because of a reduction in banks' interest receipts. Meanwhile, primary income payments increased to US\$21,974 million, US\$2,856 million more than the previous year. This was mostly attributable to an increase in portfolio investment income paid to nonresidents. Consequently, the surplus on the

<sup>2</sup> Manufacturing services on physical inputs owned by others includes the processing, assembly, labeling, and packing undertaken by a service provider that does not own the goods; namely a resident's payments to a nonresident for providing these services for the resident who is also the owner of the goods concerned.



primary income account declined to US\$16,390 million for the year of 2021.

#### (4) Secondary Income

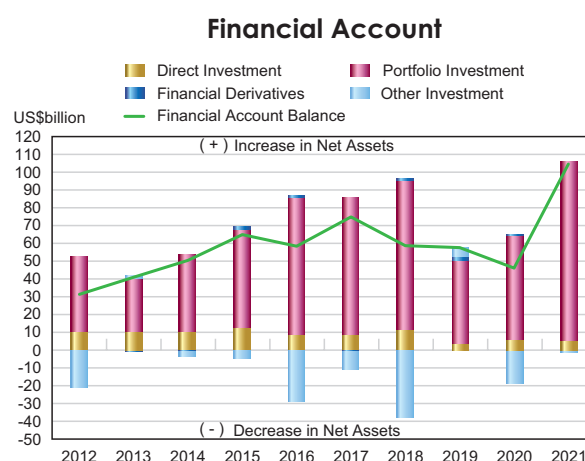
For the year of 2021, secondary income receipts amounted to US\$8,707 million, reflecting increases in gifts and samples. Secondary income payments amounted to US\$11,408 million, mainly owing to increases in outward family support allowances. As a whole, the deficit on the secondary income account narrowed to US\$2,701 million in 2021.

### Capital Account Deficit

The capital account includes capital transfers and the acquisition and disposal of non-produced, non-financial assets. In 2021, the balance of the capital account grew from a deficit to a surplus of US\$3 million.

### Net Asset Increase in Financial Account

In 2021, the financial account showed an increase of US\$104,604 million in net assets. In terms of sub-categories, direct investment and portfolio investment exhibited increases of US\$4,703 million and US\$101,281 million in net assets, respectively. Financial derivatives and other investment exhibited a decrease of US\$286 million and US\$1,094 million in net assets, respectively.



Source: Balance of Payments, CBC, February 2022.

#### (1) Direct Investment

Direct investment abroad by residents exhibited an increase of US\$10,108 million in assets. Direct investment in Taiwan by nonresidents showed an increase of US\$5,405 million.

#### (2) Portfolio Investment

In 2021, portfolio investment abroad by residents increased by US\$81,194 million mainly because insurance companies and banks expanded their investment abroad. Equity and investment fund shares increased by US\$19,721 million while debt securities rose by US\$61,473 million.

On the other hand, local portfolio investment by nonresidents decreased by US\$20,087 million as foreign investors reduced holdings of Taiwanese stocks. Equity and investment fund shares decreased by US\$21,189 million. Debt securities increased by US\$1,102 million.

### (3) Financial Derivatives

Assets in financial derivatives decreased by US\$21,822 million, principally because of gains on transactions of financial derivatives received by other financial corporations.

Liabilities in financial derivatives decreased by US\$21,536 million, mainly because of losses on transactions of financial derivatives paid by other financial corporations.

### (4) Other Investment

In 2021, other investment abroad by residents increased by US\$18,780 million. Of the components, currency and deposits rose by US\$8,953 million mainly because of an increase in foreign deposits of corporations; loans grew by US\$4,685 million because of an increase in interbank loans; other accounts receivable increased by US\$2,625 million as a result of an increase in corporations' accounts receivable from nonresidents; trade credit increased by US\$2,502 million, owing to an upturn in trade credit extended by corporations.

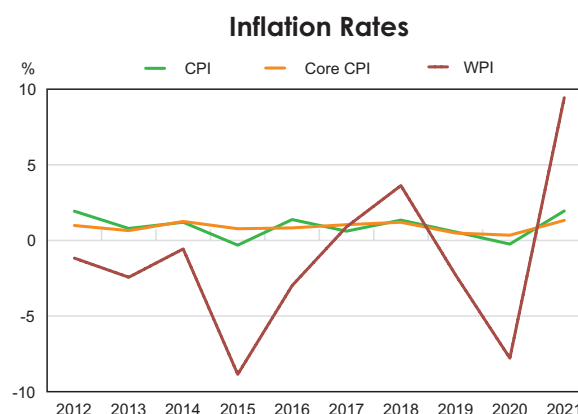
Other inward investment by nonresidents increased by US\$19,874 million. Of the components, currency and deposits rose by US\$21,996 million because of growing deposits from nonresidents and overseas branches; loans increased by US\$7,871 million because of expanded external borrowing by corporations; trade credit dropped by US\$1,239 million, owing to a decrease in trade credit received by corporations; other accounts payable declined by US\$8,754 million, as a result of a decrease in banks' accounts payable to nonresidents.

## **Increase in Foreign Exchange Reserves**

The foreign exchange reserve assets held by the Bank increased by US\$20,993 million in 2021, mainly owing to returns from foreign exchange reserves management.

## 4. Prices

In 2021, Taiwan's WPI rose by 9.44%, mainly attributable to imbalances between demand and supply owing to a strong increase in global demand amid persistent supply chain bottlenecks and a rebound in international crude oil and other raw material prices from pandemic-induced price declines in 2020. Headline inflation, measured by the CPI, increased by 1.96% compared to the previous year's 0.23% decrease, mainly driven by supply side shocks such as rising prices of fuels and lubricants, transportation, and fruit and vegetables, as well as a lower base effect. The core CPI, which excludes fruit, vegetables, and energy, averaged 1.33%, representing a mild price uptrend.



### Marked Increase in Wholesale Prices

The WPI went up by 9.44% in 2021, the highest level since 1981. The marked increase reflected rising global demand owing to a reopening of major economies led by progress on vaccinations against COVID-19, and lingering supply chain bottlenecks pushing up international goods prices, coupled with a lower base effect. In terms of monthly movements, the annual WPI inflation rate trended upwards from the beginning of the year and reached an all-year high of 15.21% in October because of higher import prices. Later, the increase in the annual WPI inflation rate abated and narrowed to 12.46% 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 ran up markedly in 2021 on account of soaring prices of international raw materials.

Import prices, weighted at 34.10% of the WPI, rose by 16.63% in US dollar terms in 2021. As the NT dollar appreciated against the US dollar over 2021, the annual growth rate of import prices eased to a 10.53% increase in NT dollar terms, which mitigated imported inflationary pressures at home. Among the components of import prices in terms of the NT dollar, prices of raw materials went up by 16.20% and accounted for 11.40 percentage points in the import price increase, mainly boosted by rising prices of mineral products, base metal products and chemical products. Nonetheless, prices of capital goods and consumer goods declined by 4.59% and 0.91%, respectively.

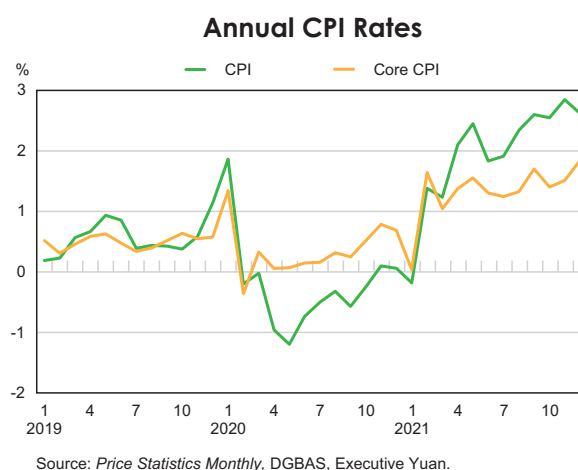
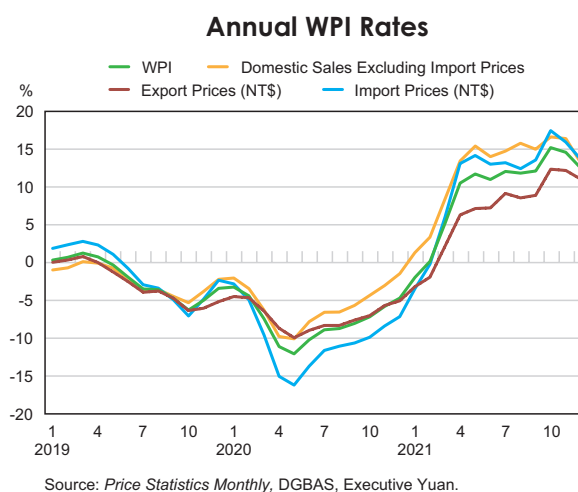
Export prices, weighted at 40.20% of the WPI, advanced by 12.40% in US dollar terms in 2021. Owing to the NT dollar appreciation against the US dollar, the annual change in export prices abated to a 6.54% increase in terms of the NT dollar. Among the components of export prices in NT dollar terms, prices of raw materials moved up by 7.88%, contributing 6.80 percentage points to the export price increase, primarily reflecting higher prices of mineral products, chemical products, as well as base metal products. Prices of consumer goods rose by 1.87%, while prices of capital goods dropped by 3.08%.

Driven by rising import costs of primary commodities, prices of domestic sales excluding imports, weighted at 25.70% of the WPI, increased by 12.24% in 2021. In terms of the basic groups, prices of manufacturing products rose by 14.36%, mainly attributable to surging prices of base metal products and petroleum and coal products. Prices of agriculture, forestry, fishing, and animal husbandry products, and prices of water, electricity, and gas supply went up by 8.32% and 0.43%, respectively. In contrast, prices of quarrying and mining products registered a decrease of 2.59%.

### Uptick in Consumer Prices

Compared with a slight decrease of 0.23% in the previous year, the CPI rose by 1.96% in 2021, the highest increase since 2009. The CPI inflation rate trended up from the beginning of the year and reached 2.62% in December, which marked the fifth consecutive month of an increase above 2%. The uptrend in CPI inflation was associated with an increase in domestic fuel prices amid international oil price upswings since the start of the year, a spike in fruit and vegetables prices caused by a lingering effect from the disruptions of a typhoon and torrential rain in August, and price hikes by some food and beverage service providers during the fourth quarter of the year.

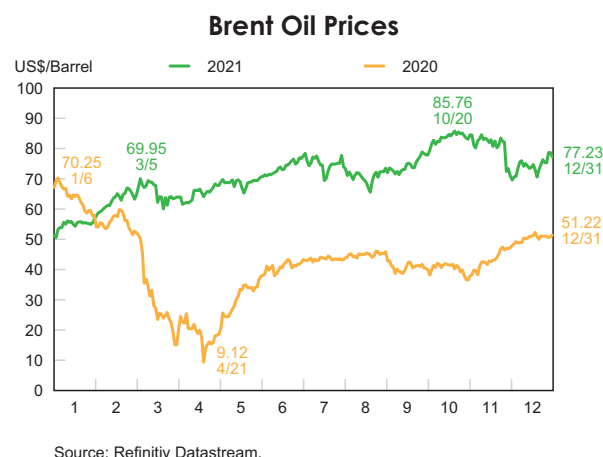
The core CPI inflation rate recorded mild year-on-year growth at an average pace of 1.33% in 2021. With the pandemic situation



under control at home, domestic demand gradually rebounded, leading the core inflation rate to trend up mildly and register 1.84% in December.

The main factors contributing to the rise of CPI inflation in 2021 were as follows:

- (1) For 2021, Brent oil prices averaged US\$70.75 per barrel, increasing by 69.50% from the previous year. As a result, higher import costs of petroleum nudged up domestic fuel and lubricant prices, which climbed by 22.06% and accounted for 0.49 percentage points in the CPI inflation rate.
- (2) As pandemic-related border controls and travel restrictions implemented around the world constrained flight seat capacity and thus sent airfares soaring, transportation fees went up by 11.86%, contributing 0.33 percentage points to CPI inflation.
- (3) Owing to crop damage caused by torrential rain and a typhoon in June and August, prices of vegetables and of fruit moved up by 14.01% and 4.56%, and accounted for 0.19 and 0.09 percentage points in the CPI inflation rate, respectively.
- (4) Prices of residential rent continued a mild uptrend and grew by 0.83%, contributing 0.12 percentage points to CPI inflation.
- (5) With imported beef prices surging because of global supply chain bottlenecks and prices of pork rallying on tighter domestic pig supplies as rising feed costs hit pig farmers' margins, prices of meat rose by 4.05%, contributing 0.09 percentage points to CPI inflation.
- (6) Less discounted clothing drove up prices of garments by 2.54%, accounting for 0.09 percentage points in the CPI inflation rate.
- (7) Price hikes by food and beverage service providers to reflect higher raw food costs pushed up prices of food away from home by 0.87%, contributing 0.09 percentage points to CPI inflation.
- (8) An increase in tour group fees on account of growing demand for travel amid the eased pandemic situation at home, as well as a lower base effect, caused prices of entertainment services to grow by 1.66%, accounting for 0.09 percentage points in the CPI inflation rate.
- (9) Reflecting an upswing in prices of raw material imports, prices of household appliances went up by 1.42%, contributing 0.06 percentage points to CPI inflation.



The main factor contributing to downward pressure on the CPI in 2021 was the decline in prices of communication equipment. Dragged down by discount promotions for mobile phones, prices of communication equipment dropped by 8.25% year on year, subtracting 0.04 percentage points from CPI inflation.

### Percentage Changes in the Major Components of the CPI in 2021

Item	Annual Rate of Change (%)	Contribution to CPI Inflation Rate (Percentage Point)
CPI	1.96	1.96
Fuels & Lubricants	22.06	0.49
Transportation Fees	11.86	0.33
Vegetables	14.01	0.19
Residential Rent	0.83	0.12
Fruit	4.56	0.09
Meats	4.05	0.09
Garments	2.54	0.09
Food Away from Home	0.87	0.09
Entertainment Services	1.66	0.09
Household Appliances	1.42	0.06
Total		1.64
Communication Equipment	-8.25	-0.04
Total		-0.04
Others		0.36

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

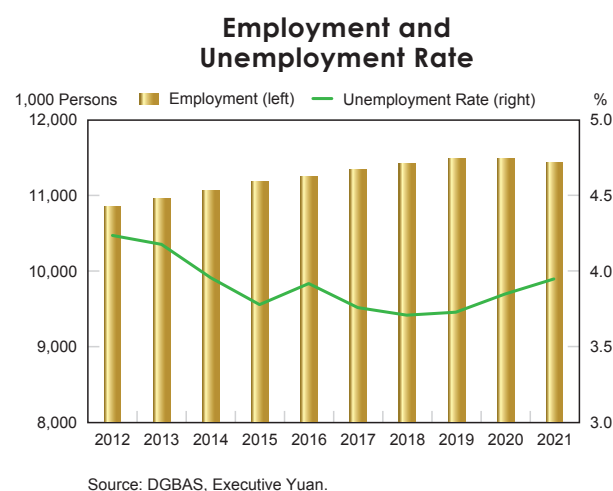
## 5. Labor Market

### Decrease in Employment

As the domestic COVID-19 case spike in mid-May 2021 led to a tightening of containment measures that battered the labor market, employment decreased from 11.53 million persons in the beginning of the year to 11.30 million persons in June. Afterwards, employment gradually picked up month by month along with the easing of restrictions as the domestic outbreak came under control. For the year as a whole, annual average employment was 11.45 million persons, a decrease of 57 thousand persons or 0.49% from the previous year, marking the first year-on-year decline since 2010.

In terms of employment by sector, the services sector was the most severely affected by the tightened containment measures in response to the domestic COVID-19 flare-up, with employment decreasing by 32 thousand persons or 0.47%. Within this sector, sharper declines were recorded in wholesale and retail trade, down by 21 thousand persons, and in accommodation and food service activities, down by 15 thousand persons.

Employment in the industrial sector decreased by 17 thousand persons or 0.43%. Within this sector, employment in manufacturing registered the largest job losses with 21 thousand persons less. Employment in the agricultural sector also went down by six thousand persons or 1.13%. Of total employment, the services sector accounted for the lion's share at 59.81%, up by 0.01 percentage points from the previous year. The share of the industrial sector also ticked up by 0.02 percentage points to 35.45%, while that of the agricultural sector shrank 0.03 percentage points to 4.73%.



In terms of employed persons by occupation, employment of white-collar workers,<sup>3</sup> accounting for 45.35% of total employment, decreased by eight thousand persons or 0.15%. Services and sales employment made up 19.91% of total employment and decreased by eight thousand persons or 0.35%. The employment of blue-collar workers,<sup>4</sup> accounting for 34.74% of total employment, suffered the largest decline of 42 thousand persons or 1.05% owing to the pandemic.

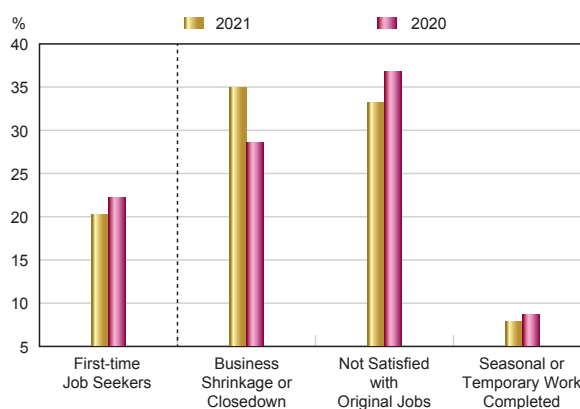
<sup>3</sup> Including legislators, senior officials, managers, professionals, technicians, associate professionals, and clerical support workers.

<sup>4</sup> Including skilled workers in agricultural, forestry, fishing, and animal husbandry industries, and craft and machinery-related workers.

## Rising Unemployment Rate

Affected by a surge in coronavirus caseloads in May 2021, the unemployment rate rose sharply from 3.66% in the beginning of the year to 4.80% in June, the highest since November 1999, and then gradually moved down to 3.64% in December as domestic economic activity recovered amid an improving pandemic situation. For the year as a whole, the unemployment rate was 3.95%, the highest since 2015.

## Causes of Unemployment



Source: DGBAS, Executive Yuan.

With the government's support measures<sup>5</sup> to mitigate the pandemic's impacts on the labor market, unemployment duration decreased by 2.39 weeks over the previous year to 20.24 weeks. In terms of age groups, unemployment duration of the age group 45-64 improved the most and decreased by 4.51 weeks to 19.30 weeks, followed by the 16.99 weeks for the age group 15-24 with a decrease of 1.69 weeks. The unemployment duration of the age group 25-34 decreased by 1.67 weeks to 22.32 weeks. Meanwhile, the average number of the long-term unemployed<sup>6</sup> was 50 thousand persons, a decrease of five thousand persons compared to that in the previous year.

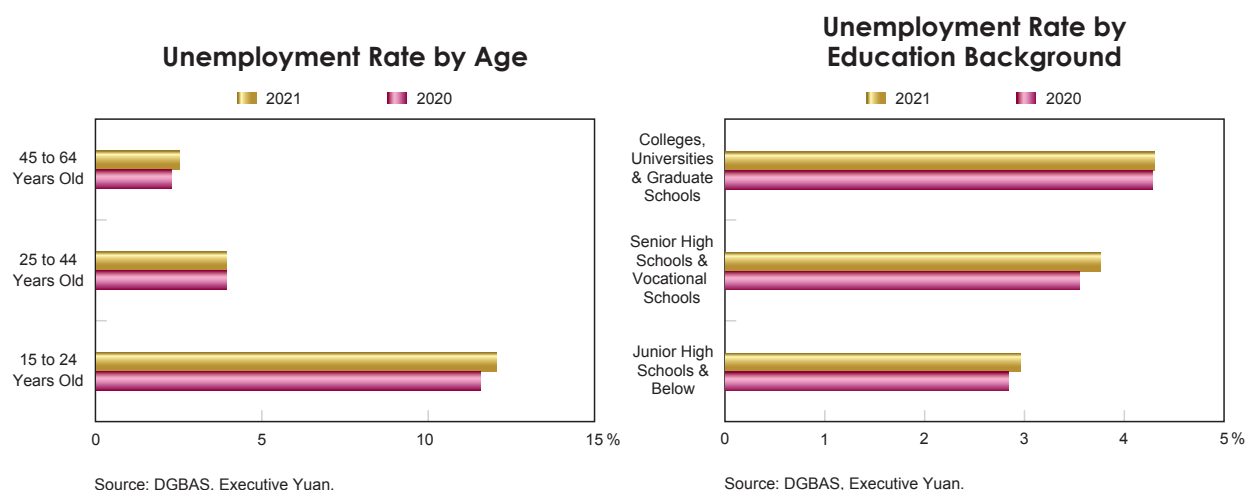
In terms of causes of unemployment, total unemployment in 2021 was 471 thousand persons, increasing by 11 thousand or 2.39% from the previous year, mainly because unemployment of experienced job seekers, with a 79.88% share of total unemployment, increased by 18 thousand persons or 5.03%. Among them, unemployment because of shrinkage or closedown of business recorded the greatest increase by 34 thousand persons or 25.50%, and its share of total unemployment also grew from 28.69% the previous year to 35.16%, reflecting a rise in this type of involuntary unemployment as a result of the impacts of the pandemic. On the other hand, unemployment because of dissatisfaction with their original jobs accounted for the second largest share of total unemployment at 33.38%, dropping by 14 thousand persons or 8.08%. Meanwhile, unemployment because of conclusion of seasonal or temporary work decreased by four thousand persons or 9.21%, with a share of 7.26%.

In terms of age groups, the unemployment rates of the age groups 25-44 and 45-64 edged up by 0.02 and 0.22 percentage points from the previous year to 3.96% and 2.52%, respectively. The

<sup>5</sup> Including extending the immediate part-time job program for workers impacted by COVID-19, measures to encourage youth employment and subsidize employers to hire young people, support measures for workers who are self-employed or without definite employers, "Relief Loans for Workers" program, and "the Recharge and Restart Training Program" for furloughed employees, and launching support measures for full-time and part-time employees, etc.

<sup>6</sup> Referring to those who have been unemployed for 53 weeks or more.





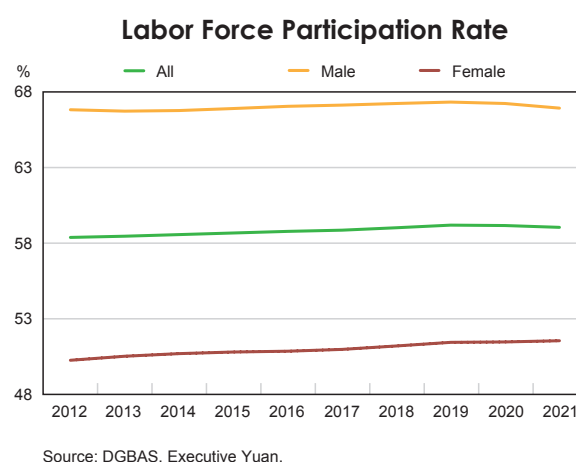
unemployment rate of the age group 15-24 also went up by 0.50 percentage points to 12.11%, the highest among all the age groups.

In terms of educational background, the unemployment rates of people rose for all groups in 2021. For people with a junior high school diploma or below, a senior high school or vocational school diploma, and a college degree or above, the unemployment rates increased by 0.12, 0.21, and 0.02 percentage points to 2.97%, 3.77%, and 4.32%, respectively.

### Decline in Labor Force Participation Rate

Affected by structural demographic change driven by a declining fertility rate and an aging population in Taiwan and hit by the coronavirus pandemic, the labor force (employed and unemployed combined) shrank by 45 thousand persons, or 0.38%, to 11.91 million persons in 2021, the first contraction since records began in 1978. In contrast, the non-labor force grew by seven thousand persons, or 0.09%, to 8.27 million persons. The average labor force participation rate edged down by 0.12 percentage points over the previous year to 59.02% in 2021, recording two consecutive years of decline.

In terms of gender, the male labor force participation rate was 66.93%, a drop of 0.31 percentage points from the year before. The female labor force participation rate has continued to grow since 2001 and increased by 0.08 percentage points to 51.49% in 2021,



reflecting that government policies have been effective in promoting gender equality, improving the work environment, and facilitating female employment in recent years.

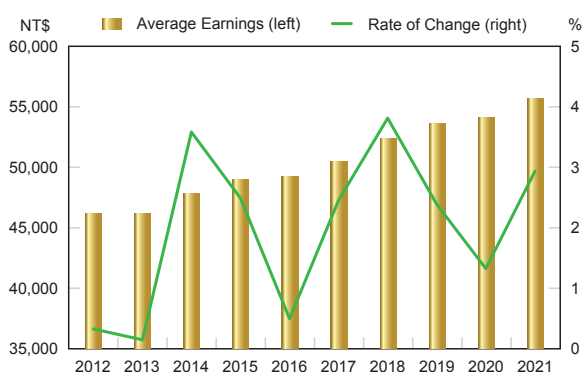
In terms of age groups, the labor participation rate of the age group 25-44 went down by 0.17 percentage points to 89.35%, while those of the age groups 16-24 and 45-64 increased by 0.28 and 0.65 percentage points to 36.81% and 64.65%, respectively. Taiwan's labor force participation rate, in its second year of decline owing to the pandemic, remained lower than those of the United States (61.7%), Japan (62.1%), South Korea (62.8%), and Singapore (70.5%), attributable to structural factors such as the extension of schooling and early retirement.

In terms of education background, the labor force participation rates of workers with a junior high school diploma or below and those with a senior high school or vocational school diploma dropped by 1.46 and 0.32 percentage points to 38.24% and 62.45%, respectively, while that of workers with a college degree or above rose by 0.22 percentage points to 66.22%.

## Modest Wage Growth

For the year 2021, the average monthly earnings per worker of the non-farm sector grew by 2.94% to NT\$55,754, the largest increase over the past three years. The increase was due to higher pay raises in the manufacturing sector benefiting from a steady recovery of the global economy, as well as increased overtime hours in non-farm sectors, which combined to boost regular earnings and irregular earnings such as overtime pay and bonuses. After adjustment for inflation, the average real monthly earnings increased by 0.96% to a historical high at NT\$53,445.

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



Source: DGBAS, Executive Yuan.

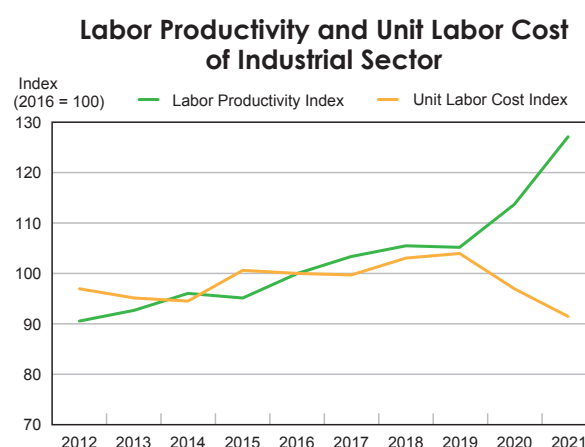
In terms of major sectors, thanks to rising external demand, the industrial sector gained faster wage growth, while the services sector performed worse owing to the domestic COVID-19 flare-up, leading to an uneven recovery between these two sectors. The average monthly earnings of the industrial and services sectors increased by 5.82% and 0.95% to NT\$56,227 and NT\$55,413, respectively, while increasing by 3.78% and decreasing by 1.00%, respectively, in real terms.

In terms of industrial classification, the finance and insurance sector had the highest average monthly earnings with NT\$98,897, the electricity and gas supply sector came in second with

NT\$93,628. On the other hand, the education sector<sup>7</sup> and the accommodation and food service activities earned average monthly wages of NT\$31,386 and NT\$35,057, respectively, the lowest two among all sectors owing to impacts of the pandemic and a large number of part-time employees in these sectors. In terms of growth rates, the manufacturing sector's average monthly earnings witnessed the highest increase of 6.26%, followed by the real estate sector at 6.04%.

### Labor Productivity Significantly Increased While Unit Labor Cost Decreased

As the increase in total production outpaced the increase in total working hours, labor productivity of the industrial and the manufacturing sectors substantially rose by 11.72% and 12.51%, respectively, compared with the previous year. In the manufacturing sector, machinery equipment manufacturing registered the largest growth in labor productivity with 21.01%, boosted by robust demand for semiconductors, infrastructure building for 5G networks, and automation equipment. Wood and bamboo products manufacturing came in second place with an increase of 18.00%.



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 5.73% and 6.26% year on year, respectively. Of all the manufacturing sectors, the leather, fur and related products manufacturing sector experienced the largest decrease in unit labor cost with 20.23%, followed by machinery equipment manufacturing with a decrease of 16.17%.

<sup>7</sup> Excluding schools at all levels within the formal education system (except preschools).

# *Financial Developments*

## II. Financial Developments

### 1. Overview

In 2021, the domestic economy continued to rebound in the first half of the year and corporate demand for funds was strong, leading to faster growth in loans and investments of banks. As a result, for the year as a whole, the annual growth rate of the monetary aggregate M2 rose.

The Bank's policy rates remained unchanged and deposit rates and the base lending rate offered by banks stayed steady, while the weighted average interest rate on deposits and the rate on loans slightly moved downward. Owing to ample market liquidity, the interbank overnight call loan rate remained stable; bills market rates and the average 10-year government bond yield declined over the previous year, albeit with a mid-year rebound.

In regard to the exchange rate, as the Fed maintained an easy monetary policy stance in the first half of the year and Taiwan's exports showed robust growth, the NT dollar largely held strong against the US dollar. At the end of 2021, the NT dollar appreciated against the US dollar compared with a year earlier; on a daily average basis, the NT dollar also appreciated against the US dollar in 2021 compared with the previous year.

In the stock market, the Taiwan Stock Exchange Capitalization Weighted Stock Index, the TAIEX, swung up to a historical high before the end of the year. The daily average transaction value also hit a record high in 2021.

#### **M2 and Bank Loans and Investments Grew Faster**

The annual growth rate of bank loans and investments increased from 6.79% at the end of 2020 to 8.39% at the end of 2021. The increase was due to enterprises' stronger demand for funds as economic growth continued to pick up throughout the year. With faster growth in bank loans and investments boosting demand for money, the monetary aggregate M2 (measured on a daily average basis) recorded an annual growth rate of 8.72% in 2021. This was higher than the 5.84% registered in 2020 while also exceeded the Bank's 2.5% to 6.5% reference range for the year.

#### **Both Deposit and Loan Rates Declined**

The Bank's policy rates remained unchanged and, as a result, the posted interest rates on deposits of banks stayed steady. At the end of 2021, the average fixed rate on one-year time deposits of the five major domestic banks was 0.77%, the same as a year earlier, and their average base lending rate was 2.442%, also the same as the year before. Meanwhile, the weighted average

rate on their newly-extended loans was 1.200% in 2021, declining by 0.073 percentage points over the previous year.

For domestic banks as a whole, the weighted average interest rate on deposits was 0.36%, declining by 0.09 percentage points over the previous year. The reasons for the decline included some funds shifted from higher-rate time deposits to lower-rate demand deposits, lower interest rates were applied to maturing time deposits at renewal, and some banks reduced their posted deposit rates. Meanwhile, the weighted average interest rate on loans was 1.60%, declining by 0.08 percentage points owing to an increase in low-interest loans to local governments and interest rate cuts on loans by some banks to boost lending business.

### **Bills Market Rates Went Up After Declining**

As the Bank continued to conduct open market operations to maintain market liquidity at an appropriate, easy level in 2021, the weighted average overnight call loan rate was steady between 0.079% and 0.082% during the first eight months of the year. It slightly increased to 0.086% in September owing to greater demand for funds during the Mid-Autumn Festival holidays as well as an end-of-quarter effect, and stayed between 0.082% and 0.083% for the rest of the year. With regard to the bills market, money market rates first declined and then went up during the year, while their yearly average rates were all lower than those of the previous year amid ample market liquidity. The average 1-30 day commercial paper rate in the secondary market was 0.22% in 2021, declining by 0.12 percentage points over the previous year.

### **10-Year Government Bond Yield Came Lower than Last Year, Albeit with a Broad Uptrend**

In 2021, higher inflation led the yields on US government bonds to increase, while the yields on Taiwanese government bonds did not rise as sharply thanks to ample market liquidity. The turnover-weighted average of the yield on the benchmark 10-year government bond declined by five basis points over the previous year as transaction in the secondary government bond market showed a downtrend in the recent years. However, government bond yields broadly went up during the year. In terms of issuance, as the Central Government Debt Service Fund renewed maturing government bonds and increased issuance to meet budget needs, the total amount of government bonds increased by NT\$82.0 billion over the previous year.

### **NT Dollar Held Strong and Average Exchange Rate Appreciated**

In 2021, the NT dollar exchange rate against the US dollar broadly appreciated. At the beginning of the year, the NT dollar appreciated against the US dollar on the back of the Fed's continuous easing and Taiwan's robust export growth. In March, the NT dollar weakened against the US dollar following US President Biden's signing of the US\$1.9 trillion relief package and market

optimism of a US economic recovery. In April, the NT dollar appreciated against the US dollar because the Fed reiterated its easy monetary policy stance and continued to dismiss inflation risks as transitory. In the second half of the year, persistently higher inflation led most Fed officials to predict an earlier rate hike, and the Fed decided in late September to begin tapering by the end of the year, bolstering the US dollar and thus weakening the NT dollar. From late October onwards, the NT dollar appreciated against the US dollar owing to continuous net selling of the US dollar by local exporters. At the end of 2021, the NT dollar appreciated by 2.95% year on year against the US dollar. On a daily average basis, the NT dollar appreciated against the US dollar by 5.55% in 2021.

### **Stock Index and Turnover Hit Historical Highs**

In 2021, the TAIEX generally swung upwards. During the months of May, July to August, and September to October, the TAIEX declined significantly owing to domestic COVID-19 outbreaks, deferred policy decision related to the day trading tax cut, the Evergrande default crisis and tighter energy controls in China, and inflation and debt ceiling concerns in the US. For the other months, however, it was supported by factors including domestic infections coming under control, US stock indices renewing record highs, and Taiwan's listed companies reporting good earnings and exports showing strength. Therefore, the TAIEX went on an uptrend from the yearly low at the beginning of the year to an all-time high of 18,248 points on December 29. The TAIEX stood at 18,219 points at the end of the year, increasing by 23.7% compared with a year earlier. The daily average transaction value reached a record amount of NT\$378.2 billion with a significant increase of 103.0% over the previous year.

## 2. Banking Sector

### Number of Monetary Financial Institutions

At the end of 2021, the number of monetary financial institutions (defined hereafter in this chapter as excluding the central bank) increased to 404. The number of domestic banks increased by one with the opening of LINE Bank. The number of foreign and Mainland Chinese banks increased by one as PT Bank Rakyat Indonesia (Persero) Tbk. set up its branch in Taiwan. 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 2020.

### Number of Monetary Financial Institutions by Type

Types of Institutions	End of 2021	End of 2020	Annual Change
Total Number of Main Offices	404	402	2
Domestic Banks	39	38	1
Foreign and Mainland Chinese Banks	30	29	1
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	6,098	6,090	8
Local Branches	5,887	5,885	2
Overseas Branches	152	146	6
Offshore Banking Units	59	59	0

Sources: 1. *Financial Statistics Monthly* (February 2022), CBC.  
2. Department of Financial Inspection, CBC.

### Market Shares of Deposits and Loans

At the end of 2021, domestic banks maintained a dominant role in the deposit market, with the market share rising further to 80.55%. Such a phenomenon was primarily due to a more sizeable increase in the deposits of domestic banks, resulting from continued credit growth and ample market liquidity, as well as inward remittances of firms' overseas sales revenues. By contrast, the deposit market shares shrank for most of the other types of monetary institutions, with the departments of savings and remittances of Chunghwa Post taking up a share of 12.56%, the credit departments of farmers' and fishermen's associations 4.08%, credit cooperatives 1.52%, and branches of foreign and Mainland Chinese banks 1.29%.



In terms of loans, the market share of domestic banks rose to 90.53%, owing to stronger funding needs of enterprises fueled by the global economic recovery and Taiwan's robust exports, along with sustained growth in the housing market. Furthermore, public enterprises increased borrowing from domestic banks to facilitate their efforts in line with the national energy transition plan. In contrast, foreign and Mainland Chinese banks' market share declined to 3.99%. For the other institution types, Chunghwa Post's market share remained at 0.02%. 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 3.80% and 1.66%, respectively.

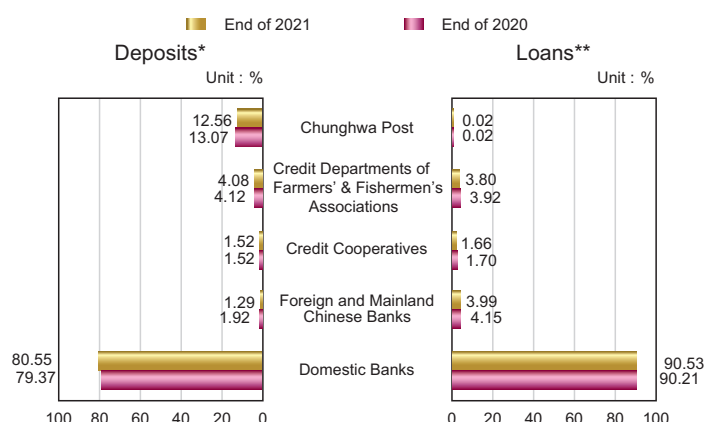
### Main Sources and Uses of Funds in Monetary Financial Institutions

At the end of 2021, the total amount of funds in monetary financial institutions was NT\$60,130 billion, increasing by NT\$3,748 billion compared to the end of 2020. The combined share of transaction and nontransaction deposits was around 85%. Against a backdrop of abundant market liquidity, the balances of transaction deposits and nontransaction deposits kept growing, posting annual growth rates of 11.92% and 4.30%, respectively.

In the case of fund uses, bank loans still accounted for over 50% of total uses of funds at the end of 2021. Owing to strong export growth bolstered by a global economic upturn as well as an increasing funding need among public and private enterprises, the year-end loan balance of monetary financial institutions expanded by 7.99%, or NT\$ 2,479 billion, over the previous year end, picking up to a rate faster than the 7.18% of 2020. As for net foreign assets, owing to active deposit absorption by their overseas branches, the foreign liabilities of monetary financial institutions increased, causing the annual growth rate of net foreign assets to fall sharply from 23.87% at the end of the previous year to 0.96%.

Portfolio investments by monetary financial institutions measured on a cost basis showed an annual growth rate of 10.66% in 2021. As for banks' purchases of certificates of deposit issued by the central bank, its annual growth rate decreased significantly from 16.60% at the end of the previous year to 3.59%, but its share of funds used remained stable at about 16%.

### 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* (February 2022), CBC.

Main Sources and Uses of Funds in Monetary Financial Institutions<sup>1</sup>

Unit: NT\$ billion

	End of 2021			End of 2020			Annual Change	
	Amount	Share (%)	Annual Growth Rate (%)	Amount	Share (%)	Annual Growth Rate (%)	Amount	Share (%)
Sources:								
Transaction Deposits <sup>2</sup>	22,318	37.12	11.92	19,940	35.37	17.67	2,378	1.75
Nontransaction Deposits <sup>3</sup>	28,902	48.07	4.30	27,710	49.14	5.17	1,192	-1.07
NT Dollar Deposits	21,495	35.75	2.29	21,015	37.27	1.05	480	-1.52
Foreign Currency Deposits <sup>4</sup>	7,407	12.32	10.63	6,695	11.87	20.63	712	0.45
Government Deposits	1,285	2.14	13.22	1,135	2.01	6.18	150	0.13
Other Items	7,625	12.67	0.36	7,597	13.48	10.19	28	-0.81
Total	60,130	100.00	6.65	56,382	100.00	10.00	3,748	0.00
Uses:								
Net Foreign Assets <sup>4</sup>	5,174	8.60	0.96	5,125	9.09	23.87	49	-0.49
Loans	33,492	55.70	7.99	31,013	55.00	7.18	2,479	0.70
NT Dollar Loans	32,415	53.91	7.96	30,026	53.25	6.99	2,389	0.66
Foreign Currency Loans <sup>4</sup>	1,077	1.79	9.10	987	1.75	13.23	90	0.04
Portfolio Investments <sup>5</sup>	7,508	12.49	10.66	6,784	12.03	5.81	723	0.46
Purchases of CDs Issued by CBC	9,391	15.62	3.59	9,065	16.08	16.60	326	-0.46
Deposits with CBC	4,565	7.59	3.87	4,395	7.80	9.92	170	-0.21

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 (February 2022), CBC.

## Deposits

Because of the continued growth in domestic credit, an abundance of market capital, and the inward remittances of overseas sales revenues by some companies, as of year-end 2021, the deposit balance of monetary financial institutions was NT\$52.5 trillion, an increase of NT\$3.5 trillion compared with the previous year end. However, because of a year-on-year increase in net resident capital outflow and a higher base effect, the annual growth rate of deposits decreased from 9.22% at year-end 2020 to 7.19% at year-end 2021.

In terms of transaction deposits, its annual growth rate decreased from 17.67% at year-end 2020 to 11.92% at year-end 2021 because of a slowdown in the growth of passbook savings deposits.

The aforementioned slowdown was partly due to a higher comparison base in 2020 as many people opted to keep money in more-liquid forms of accounts such as passbook savings deposits in view of the pandemic's impact. Moreover, in 2021, there was a decrease in the balance of securities giro accounts as Taiwan's stock market was dampened by a domestic COVID-19 flare-up, the Evergrande default crisis and China's energy control tightening, and market fears of elevated

US inflation. These developments combined to slow down the growth in passbook savings deposits.

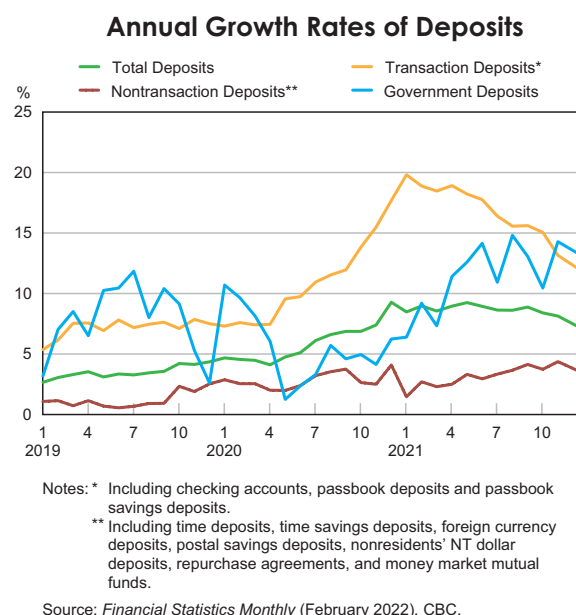
Although the annual growth rate decreased, transaction deposits as a share of total deposits increased to 42.51% at the end of 2021.

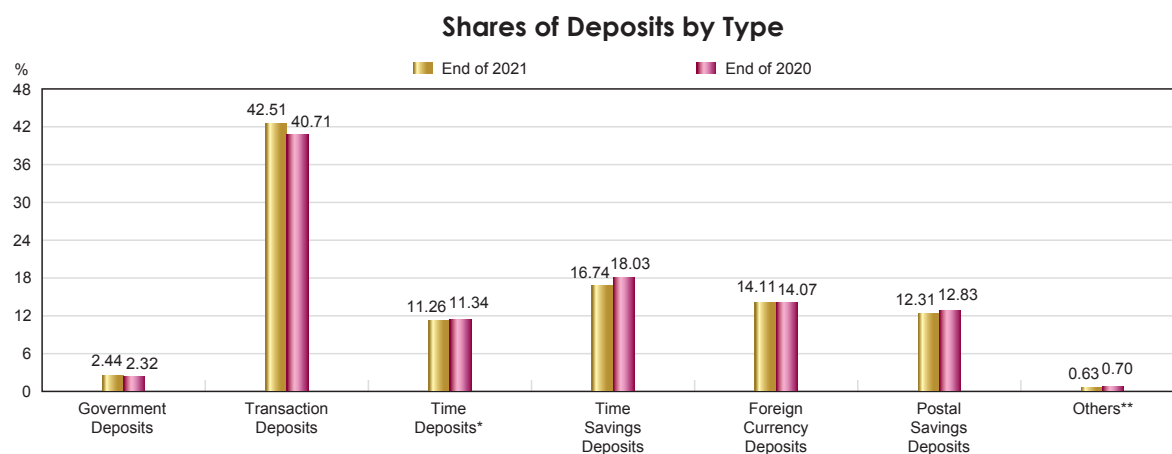
In terms of nontransaction deposits, its annual growth rate decreased from 4.01% at year-end 2020 to 3.56% at year-end 2021 because the growth of foreign currency deposits in 2021 was less than that in 2020. Its share in total deposits also shrank from 56.97% at year-end 2020 to 55.05% at year-end 2021.

The annual growth rate of foreign currency deposits showed a significant decrease in the first half of the year owing to an increase in overseas investment by residents and pension funds, as well as the paying off of foreign loans by some companies. By contrast, the annual growth rate increased slightly in the second half of 2021 owing to an increase in inward remittances of overseas sales revenues. At the end of 2021, the annual growth rate of foreign currency deposits decreased from 14.23% the year before to 7.46%, whereas foreign currency deposits as a share of total deposits grew from 14.07% a year ago to 14.11%.

In 2021, the annual growth rate of time deposits (including negotiable certificates of deposit) increased and then decreased. In the beginning of the year, the amount of pension funds saved as time deposits increased; during mid-2021, many companies delayed cash dividend payments as shareholders' meetings were postponed amid the domestic COVID-19 flare-up and saved the money temporarily as time deposits. As a result, the annual growth rate of time deposits reached a peak of 11.47% in August. Later, as companies began to pay their cash dividends and a financial holding company used the funds in its time deposits to purchase the shares of a life insurance company, the annual growth rate of time deposits slightly decreased. At the end of 2021, time deposits grew faster year-on-year from the previous year's 5.62% to 6.42%, whereas its share in total deposits shrank from 11.34% at year-end 2020 to 11.26% at year-end 2021.

The annual growth rate of time savings deposits continued to decrease in 2021 but at a slower pace. The decrease slowed primarily because of an expansion in 2021 from pension funds moving a part of their money into time savings deposits based on fund scheduling strategies, as well as a lower





Notes: \* Including NCDs.

\*\* Including repurchase agreements, nonresidents' NTD deposits and money market mutual funds.

Source: *Financial Statistics Monthly* (February 2022), CBC.

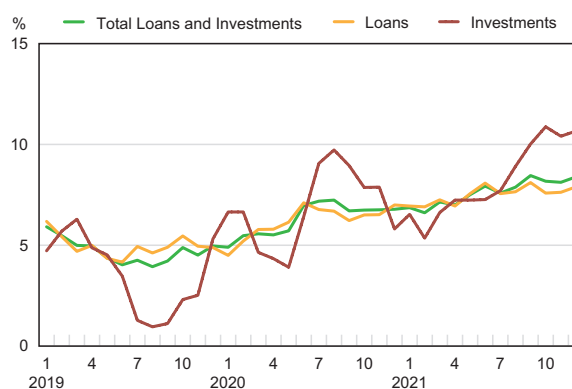
comparison base in 2020 when many savers chose to park their money in highly-liquid passbook savings deposits amid the pandemic as a precaution. Consequently, the annual growth rate of time savings deposits rose from -2.31% the previous year to -0.45%. Regarding postal savings, their annual growth rate increased from 2.00% at year-end 2020 to 2.85% at year-end 2021. At the end of 2021, time savings and postal savings as a share of total deposits decreased from the previous year's 18.03% to 16.74%, and from 12.83% to 12.31%, respectively.

With regard to government deposits, several factors contributed to a broad upswing. Because of an increased public need for relief packages during a domestic pandemic flare-up, the total amount of government bonds issued was higher than that of the previous year. Furthermore, revenue from profit-seeking enterprise income tax and from securities transaction tax both increased significantly, as the provisional tax payment exempted in 2020 as a pandemic relief measure was included by companies in their 2021 payment and transactions in the stock market surged on the back of robust earnings of listed companies. As a result, the annual growth rate of government deposits broadly trended upwards, reaching 13.22% at the end of the year from the 6.18% one year before. Government deposits as a share of total deposits also grew from 2.32% to 2.44%.

## Bank Loans and Investments

The annual growth rate of loans and investments of monetary financial institutions was 8.39% at the end of 2021, up from 6.79% at the end of 2020. Growth in loans increased to an annual pace of 7.89% at the end of

## Annual Growth Rates of Loans and Investments



Source: *Financial Statistics Monthly* (February 2022), CBC.

2021 from 7.00% at the end of the previous year, while growth in portfolio investment accelerated to 10.66% at the end of 2021 from 5.81% a year earlier.

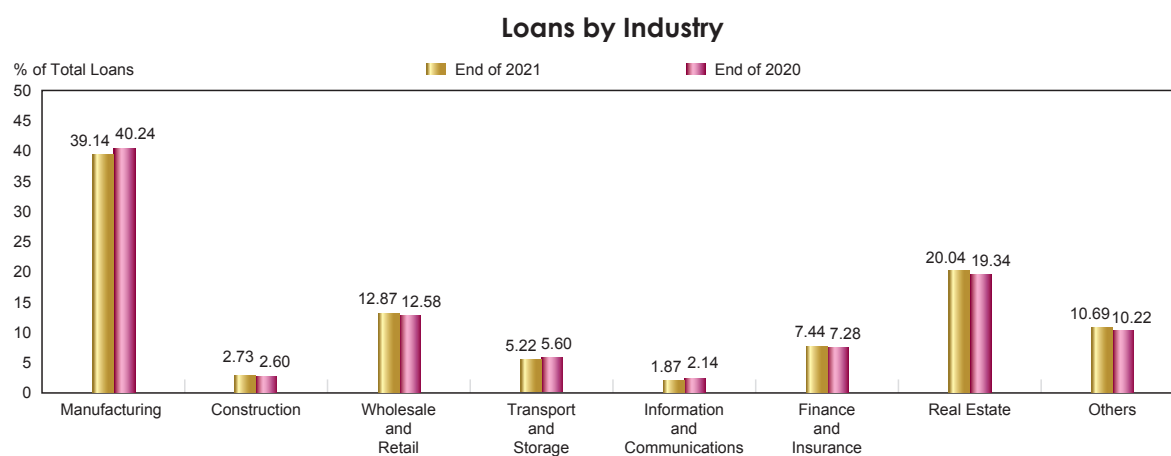
## Loans by Sector

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 8.27% at the end of 2021 from 7.70% a year earlier. The upturn was mainly due to strong exports and sustained growth in housing loans. The annual growth rate of loans to government enterprises recorded a surge of 27.00% at the end of 2021, a sharp upturn from the 22.38% decline at the end of 2020, as Taiwan Power Company and CPC Corporation increased borrowing from banks to finance energy transition. In contrast, the annual growth rate of loans to government agencies slid from 9.94% to 1.92% at the end of 2021, as the government collected more tax revenues and issued more bonds, leading to a reduction in borrowing from banks.

In terms of loan composition, loans extended to the private sector and to government enterprises accounted for 93.90% and 1.68% of total loans at the end of 2021, respectively, higher than the 93.87% and 1.43% recorded at the end of 2020. Loans extended to government agencies accounted for 4.43% at the end of 2021, lower than 4.70% 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 39.14% at the end of 2021 compared to 40.24% at the end of 2020, with its annual growth rate up from 1.18% to 5.52%. This was mainly attributable to an increase in loans extended to computers, electronic and optical products manufacturing spurred by rapid growth of exports in 2021. Meanwhile, the share of loans extended to the construction industry continued to



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* (February 2022), CBC.

rise, with its annual growth rate up from 13.23% to 13.78% at the end of 2021, reflecting solid demand for public infrastructure projects, and construction for residential property and new plants.

The share of loans extended to the real estate industry expanded; however, its annual growth rate contracted as a result of soft demand and a higher base effect. In contrast, both the share and the annual growth rate of loans extended to the wholesale and retail industry continued to rise on account of stabilizing consumer demand and robust exports. Meanwhile, the share and the annual growth rate of loans to the finance and insurance industry increased, as a buoyant stock market and rising margin debt drove up demand for bank loans to boost working capital.

### **Consumer loans**

The annual growth rate of consumer loans extended by banks increased from 8.96% at the end of 2020 to 9.00% at the end of 2021. Among them, house-purchasing loans grew by NT\$760.7 billion, or 9.46%, in 2021 mainly because major economies maintained an accommodative monetary policy stance owing to the COVID-19 pandemic and funds repatriation by overseas Taiwanese firms. As for the shares of various types of consumer loans, house-purchasing loans remained the largest component, with its share increasing from 84.13% at the end of 2020 to 84.48% at the end of 2021. Car loans accounted for 1.74%, decreasing from 1.78%, mainly because of the chip and car parts shortage caused by the pandemic. Meanwhile, house-repairing loans, revolving credit for credit cards, employee welfare loans, and other consumer loans accounted for 0.52%, 0.96%, 0.51%, and 11.78%, respectively.

### **Portfolio Investment**

Owing to valuation changes, portfolio investment by monetary financial institutions, measured at fair value, recorded a year-on-year increase of NT\$743.9 billion, while the increase was smaller, at NT\$723.4 billion, when measured on a cost basis.

Portfolio investment by monetary financial institutions, measured on a cost basis, grew at a higher rate of 10.66% in 2021, mainly bolstered by major economies' accommodative monetary policy stances as they were watchful of uncertainties relating to the COVID-19 pandemic and ample liquidity in the domestic financial system.

In terms of tool types, banks and the Department of Savings and Remittances of Chunghwa Post invested more in corporate securities in 2021 as they adjusted their asset allocations, seeking to increase returns on investment amid persistently low interest rates. Government bonds accounted for a share of 51.63%, lower than the 54.96% registered a year ago. At the end of 2021, commercial paper accounted for a share of 20.43%, higher than a year ago. Corporate bonds accounted for a share of 18.76%, increasing from the end of 2020.

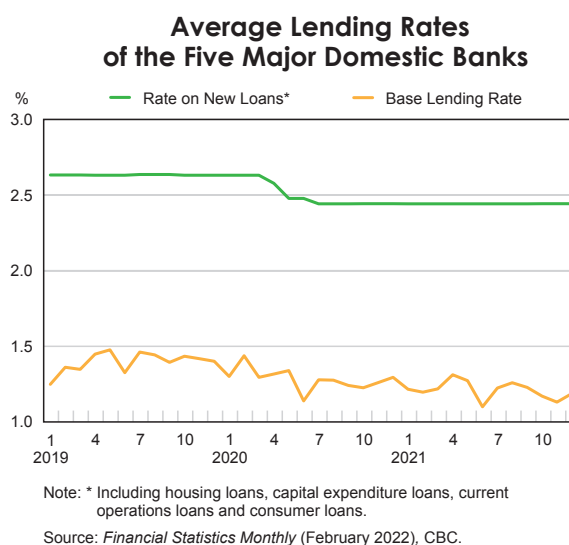
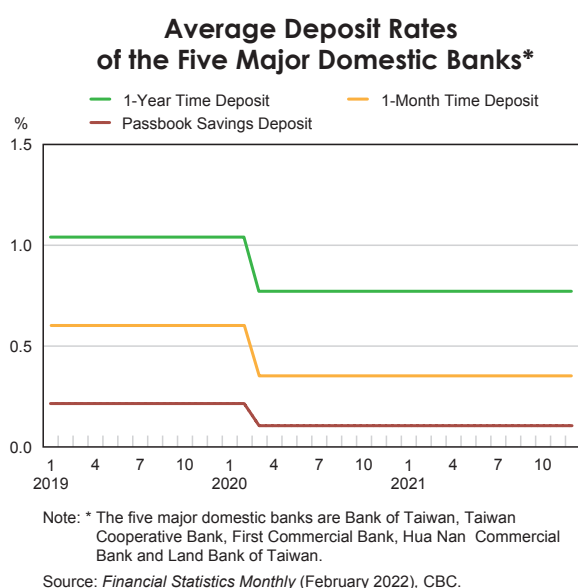
## Bank Interest Rates

As the Bank kept policy rates unchanged in 2021, domestic bank interest rates remained steady. Regarding the interest rates of the five major domestic banks, their average fixed rates on one-month and one-year time deposits, respectively, remained at 0.35% and 0.77% at the end of 2021.

In addition, the Bank announced in the December 2021 Board Meeting that if domestic price inflation remains high, the industries affected by the COVID-19 pandemic have recovered steadily, and interest rates in major economies are rising, the Bank will adjust its monetary policy as necessary to meet its statutory obligations.

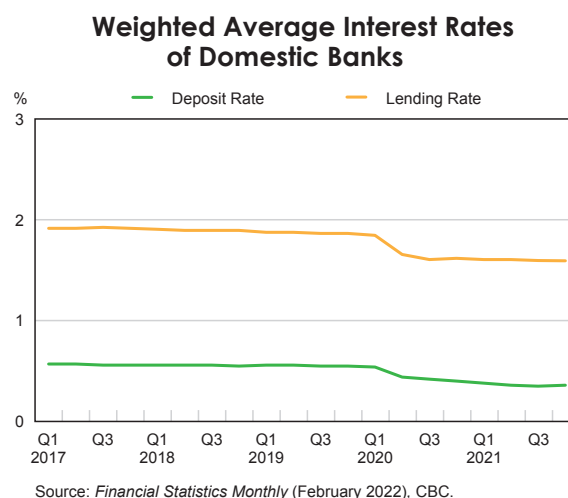
The weighted average rates on deposits and loans of domestic banks generally showed a slightly downward trend in 2021. In the third quarter of 2021, the deposit rate declined to 0.35% from 0.40% in the fourth quarter of the previous year, mainly owing to the increase in the share of transaction deposits in total deposits and the reduction in the posted interest rate on deposits by some banks. In the fourth quarter, the rate rose to 0.36% as some banks offered higher rates to attract savers and some raised the rates for retiree-oriented deposit programs. On the whole, the weighted average interest rate on total deposits of domestic banks was 0.36% in 2021, which was 0.09 percentage points lower than that recorded in the previous year.

As banks' rates on current operations loans declined in 2021, the weighted average interest rate on new loans of the five major domestic banks decreased from 1.273% in the previous year to 1.200% in 2021, down by 0.073 percentage points. Excluding central government loans, the weighted average interest rate on new loans decreased from 1.302% in the previous year to 1.258% in 2021, down by 0.044 percentage points. Meanwhile, the average base lending rate remained at 2.442% at the end of 2021.



In the third quarter of 2021, owing to the increase in lower-rate borrowings from local governments and the introduction of competitive rate loans by some banks to reduce excess funds, the weighted average interest rate on total loans of domestic banks fell from 1.62% in the fourth quarter of the previous year to 1.60%. In the fourth quarter, the share of government borrowings with lower interest rates declined, but several banks also launched low lending rate offers; consequently, the weighted average rate remained unchanged after taking into account the weight of lending size. For the year as a whole, the weighted average interest rate on loans of domestic banks was 1.60%, which was 0.08 percentage points lower than that recorded in the previous year.

Because the decrease in the average deposit rate was more than that in the average lending rate, the average interest rate spread between deposits and loans widened to 1.24 percentage points in 2021, which was 0.01 percentage points more than that recorded in the previous year.





### 3. Money Market

For the year 2021, the total turnover in the interbank call loan market and short-term bills market increased by 12.78% and 1.66%, respectively, over the previous year. With respect to money market rates, as the Bank kept policy rates on hold during the year, the interbank overnight call loan rate fluctuated in a narrow range and bills market rates broadly displayed a downtrend before moving up later in the year.

#### Growth in Interbank Call Loans

With the global economy gradually recovering in 2021, exports registered solid growth and private investment showed robust expansion. Against this backdrop, bank loans and investments continued expanding year on year, leading to stronger demand for interbank call loans. Total annual turnover of interbank call loans stood at NT\$31,684.2 billion, increasing by NT\$3,591.1 billion or 12.78% over the previous year.

In terms of borrowers, domestic banks still made the largest contribution to total transactions with a share of 81.52%, followed by bills finance companies, foreign and Mainland Chinese banks, and Chunghwa Post, with shares of 8.92%, 6.84%, and 2.71%, respectively.

The amount borrowed by domestic banks grew by NT\$3,993.7 billion or 18.29% from the year before. The increase was mainly because banks' demand for interbank borrowing grew as they tried to meet liquidity management needs against a backdrop of uneven distribution of funds despite ample liquidity in the banking system.

On the other hand, as corporations and banks had greater demand for bills, bill transactions increased, thereby reducing bills finance companies' demand for funds. The amount borrowed by bills finance companies recorded a year-on-year decrease of NT\$738.8 billion or 20.72%.

Meanwhile, the amount borrowed by foreign and Mainland Chinese banks dropped by NT\$113.4 billion or 4.97% over the previous year owing to their softer funding needs. The amount borrowed by Chunghwa Post rose substantially by NT\$449.6 billion or 109.51% compared with the previous year because of a lower base effect.

With respect to lenders, domestic banks remained the largest supplier of funds, contributing to 67.19% of total transactions in 2021. Foreign and Mainland Chinese banks came in second with a share of 31.44%, followed by Chunghwa Post and bills finance companies making up 1.25% and 0.13% of total transactions, respectively.

To channel excess available funds at hand resulting from surging deposits boosted by continued growth in exports, domestic banks increased interbank lending by NT\$2,680.5 billion or 14.41% over the previous year.

As foreign and Mainland Chinese banks often carry out the custodian business for foreign investors, the resulting net foreign capital inflows created a sufficient source of funds. Therefore, the amount of call loans made by this group went up by NT\$1,648.4 billion or 19.83% over the previous year.

On the contrary, the amount of call loans made by Chunghwa Post fell by NT\$744.9 billion or 65.36% from a year before. The decrease was primarily because its investments in short-term bills or bonds with higher yields led to less available funds at hand.

As for bills finance companies, the amount lent by this group expanded by NT\$713.6 billion or 21.44% over the previous year on account of sufficient funds at their disposal.

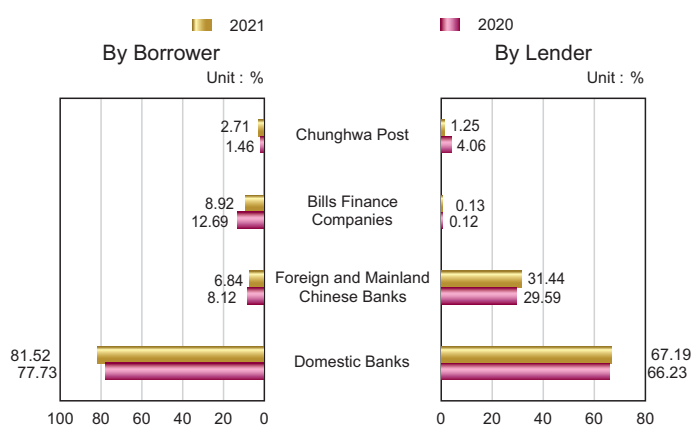
In terms of maturity, interbank overnight call loans remained the most actively traded instrument in the market with a predominant share of 51.82%, up by 11.42 percentage points from that of the previous year. The second were those with a maturity of one week, sliding by 6.02 percentage points to 33.98% over the previous year, while the share of loans with a two-week maturity also slipped by 2.91 percentage points to 10.22%.

### Rise in Short-Term Bill Transactions

For the year 2021, newly issued short-term bills stood at NT\$17,254.0 billion. Commercial paper made up a dominant 93.35% of the new issues, followed by negotiable certificates of deposit (NCDs) with a share of 4.69%.

The growth in the volume of newly issued short-term bills was mainly attributable to increased issuance of commercial paper with an amount of NT\$1,282.8 billion because government

**Composition of Interbank Call Loan Market by Participant**



Source: *Financial Statistics Monthly* (February 2022), CBC.

enterprises and private enterprises issued commercial paper to raise funds amidst a persistently low interest rate environment. The second largest contributor were banker's acceptances with a rise of NT\$4.9 billion over the previous year.

However, issuance of NCDs contracted by NT\$22.2 billion from the previous year. This was because, when part of the NCDs reached maturity, some banks 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 treasury bills shrank by NT\$16.6 billion from a year before, primarily on account of a decrease in issuance to support fiscal funding needs.

Overall, the amount of the total issuance of short-term bills was greater than that of the total repayments for short-term bills. Therefore, the outstanding of short-term bills reached NT\$2,911.2 billion as of the end of 2021, representing an increase of NT\$164.0 billion or 5.97% from that of the previous year end.

### Short-Term Bills Market

Unit: NT\$billion

Year	Total		Treasury Bills		City Treasury Bills		Commercial Paper		Banker's 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
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
2021	17,254.0	2,911.2	320.0	115.0	-	-	16,107.5	2,560.1	17.8	4.5	808.7	231.6

Source: *Financial Statistics Monthly* (February 2022), CBC.

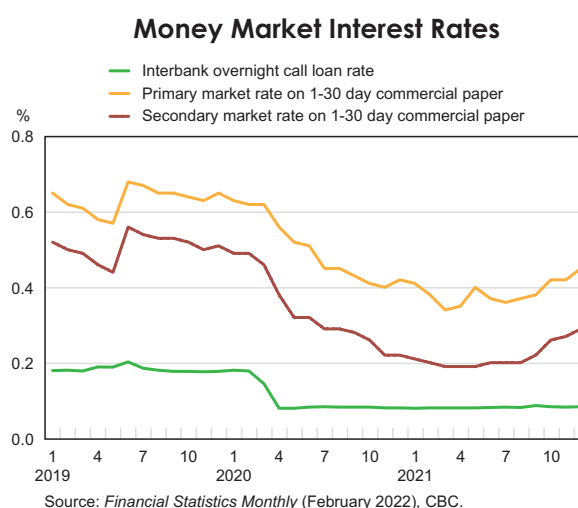
The total turnover of short-term bills in 2021 went up by NT\$731.3 billion or 1.66% to NT\$44,872.2 billion. Of the total transactions, commercial paper still made up the lion's share of 95.81%, up by 0.6 percentage points from a year earlier. The second were NCDs with a share of 3.51%, 0.48 percentage points lower than the previous year. As for market participants, private enterprises were still the largest player in the market with a dominant share of 47.59%, followed by banks and bills finance companies with shares of 28.15% and 14.32%, respectively.

## Slightly Fluctuating in Money Market Rates

In 2021, the weighted average interbank overnight call loan rate remained at low levels, reflecting ample market liquidity. For the first eight months, the rate slightly fluctuated between 0.079% and 0.082%. In September, the Mid-Autumn Festival holidays and the quarter-end effect led to greater market demand for funds. The interbank overnight call loan rate modestly trended up to 0.086%.

From October onwards, the Double Tenth Day holidays and enterprises' dividend payouts pushed up funding needs, yet market liquidity remained sufficient, and foreign investors net bought on the Taiwan Stock Exchange (TWSE) for two consecutive months from November to December, leading to net capital inflows. Therefore, the weighted average interbank overnight call loan rate slightly fluctuated between 0.082% and 0.083% in the fourth quarter.

The primary market rate on commercial paper with a maturity of 1-30 days fell from 0.42% in December 2020 to 0.34% in March 2021, and later rebounded to 0.45% in December 2021. Meanwhile, the secondary market rate on commercial paper with a maturity of 1-30 days also slipped from 0.22% in December 2020 to 0.19% in March 2021, and rose back up to 0.29% in December 2021.



## Slide in Money Market Funds

In the year 2021, the size of money market funds experienced volatile changes. This was because the TAIEX swung up, attracting more capital to flow into the TWSE. As a result, money market funds, where institutional investors used to park short-term capital, recorded a smaller size. At the end of 2021, there were a total of 36 money market funds in Taiwan and the total assets stood at NT\$851.4 billion with a decrease of NT\$169.6 billion or 16.61% from the end of the previous year.

In respect of portfolio composition, the largest use of funds was bank deposits with a share of 51.35% at the end of the year. Following bank deposits were short-term bills and repurchase agreements, accounting for 38.50% and 10.11% 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 (%)
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
2021	851.4	437.2	51.35	327.8	38.50	86.1	10.11	0.4	0.04
2021/ 1	1,081.7	569.5	52.65	386.3	35.71	124.4	11.50	1.5	0.13
2	1,096.9	574.6	52.38	393.2	35.85	127.3	11.60	1.8	0.16
3	1,072.6	574.7	53.59	393.6	36.70	102.7	9.58	1.5	0.14
4	1,089.8	602.1	55.25	383.0	35.14	102.9	9.44	1.9	0.17
5	1,007.2	581.8	57.77	340.8	33.84	82.2	8.17	2.3	0.22
6	957.5	556.6	58.13	318.2	33.23	80.8	8.44	1.9	0.20
7	984.7	551.6	56.02	340.3	34.56	90.9	9.23	1.9	0.19
8	994.5	557.6	56.07	346.8	34.87	89.1	8.96	1.0	0.10
9	920.4	534.4	58.06	316.1	34.35	69.0	7.49	0.9	0.10
10	877.0	499.8	56.99	298.0	33.97	78.9	8.99	0.4	0.04
11	869.7	477.6	54.92	309.4	35.58	82.3	9.46	0.4	0.04
12	851.4	437.2	51.35	327.8	38.50	86.1	10.11	0.4	0.04

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

## 4. Foreign Exchange Market

### The NT Dollar Exchange Rate

On a daily average basis in 2021, the NT dollar depreciated slightly against the renminbi (RMB) but appreciated against the Japanese yen, the US dollar, the Korean won and the euro. The trade-weighted nominal effective exchange rate index of the NT dollar increased by 2.95% 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 broadly. Early in the year, Fed Chairman Powell's remarks of continued commitment to monetary accommodation and Taiwan's strong export performance combined to drive the NT dollar higher against the US dollar. As US President Biden signed the US\$1.9 trillion relief package into law on March 11 and rising market optimism regarding a US economic recovery gave a further boost to the US dollar, the NT dollar depreciated against the US dollar. In April, as the Fed reiterated that it would maintain an easy monetary policy stance with the policy rate near zero and continued to downplay inflation risk, the US dollar thus weakened and the NT dollar appreciated. Entering the second half of the year, rising inflation led most Fed officials to forecast an earlier rate hike, and late in September, the Fed decided to start tapering bond purchases later in 2021; this propelled the US dollar higher and the NT dollar weakened. However, from late October, the NT dollar appreciated against the US dollar as Taiwanese companies net sold US dollars. At the end of 2021, the NT dollar appreciated by 2.95% 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 5.55% in 2021.

Relative to the euro, the NT dollar broadly appreciated during 2021. Early in the year, the COVID-19 pandemic worsened in Europe, which led investors to worry that the pace of the economic recovery would moderate. Therefore, the ECB announced a faster pace of asset purchases under the Pandemic Emergency Purchase Programme in March. In the second half of the year, as economic growth in the euro area was hindered by the spread of new virus variants, the ECB maintained an easy monetary policy stance by keeping its policy rates unchanged in late October, and President Lagarde underscored that the possibility of a rate hike in 2022 was very low. Because the pace of monetary policy normalization was slower than expectation among investors, the euro continued on its downward trend, and the NT dollar appreciated continuously against the euro. Compared with the end of the previous year, the NT dollar appreciated against the euro by 11.86% at the end of 2021. On a daily average basis, the NT dollar appreciated against the euro by 1.93%.

During the course of 2021, the NT dollar appreciated against the yen. In the first half of the year, Japan's government declared a state of emergency several times in response to rising COVID-19 cases, and the BoJ continued to maintain its accommodative monetary policy. From August on, higher commodity prices led to Japan running a trade deficit. Against this backdrop, combined with sluggish consumption, the BoJ pledged to continue an extremely accommodative monetary policy in October, and projected an inflation rate at well below its 2% target for two more years. Late in December, BoJ Governor Kuroda reiterated that it was too early to move toward normalizing monetary policy and maintained that the recent yen depreciation had more positive effects on Japan's economy, thereby leaving the yen under downward pressure, which drove the NT dollar against the yen to a yearly high of 0.2406. In sum, the NT dollar appreciated by 14.94% against the yen at the end of 2021 compared with the previous year end. On a daily average basis, the NT dollar appreciated against the yen by 8.50%.

In 2021, the NT dollar appreciated against the RMB in the first three quarters and depreciated toward the year end. In early January, in an effort to dampen RMB strength, the PBoC raised the upper limit on domestic non-financial firms' overseas lending to encourage capital outflows and lowered the upper limit for non-financial firms' cross-border financing amid efforts to rein in capital inflows. On May 31, the PBoC announced it would raise the reserve requirement ratio on foreign currency deposits by 2 percentage points to manage forex liquidity and ease appreciation pressure on the RMB. Later, China's tightening of pandemic control measures amid a wave of locally transmitted infections and the expanded regulatory crackdown on technology businesses and other sectors combined to weaken the RMB, resulting in the appreciation of the NT dollar against the RMB. Later, the RMB reversed previous losses as China's exports exceeded expectations in October and rebounded further following positive news of the virtual summit between US and China's leaders; therefore, the NT dollar against the RMB veered to depreciation. In December, the PBoC reduced the reserve requirement ratio for banks by 0.5 percentage points and cut its lending benchmark loan prime rate (LPR) as it moved to stimulate a slowing economy that has been weighed down

### Annual Changes of NTD Exchange Rate Against Major Currencies

	NTD/USD	NTD/EUR	NTD/JPY	NTD/CNY	NTD/KRW
Exchange Rate (2021/12/30)	27.690	31.338	0.2406	4.3406	0.0233
Exchange Rate (2020/12/31)	28.508	35.056	0.2765	4.3592	0.0262
Annual Change	2.95%	11.86%	14.94%	0.43%	12.68%
Average Exchange Rate (2021)	28.022	33.143	0.2553	4.3452	0.0245
Average Exchange Rate (2020)	29.578	33.784	0.2770	4.2862	0.0251
Annual Change	5.55%	1.93%	8.50%	-1.36%	2.31%

Source: Department of Economic Research, CBC.

by sluggish consumption recovery and a prolonged property slump. In addition to dovish shifts, the PBoC raised the reserve requirement ratio on foreign currency deposits by 2 percentage points in an effort to stem RMB strength, leading the NT dollar to appreciate against the RMB. Overall, the NT dollar slightly appreciated against the RMB by 0.43% between end-2020 and end-2021. On a daily average basis, the NT dollar depreciated by 1.36% against the RMB when compared with the previous year.

During the course of the year, the NT dollar appreciated against the Korean won. Early in the year, the Korean economic outlook was clouded by a still-high COVID-19 case number. Lingering COVID-related risks also prompted the Bank of Korea (BoK) to stay accommodative, leading the NT dollar to appreciate against the Korean won. In May, the NT dollar continued to appreciate against the won as the Korean currency was weakened by large net foreign equity outflows. In the second half of the year, although two policy rate hikes by the BoK in August and November in order to stem the rapid rise in property prices and household borrowings bolstered the Korean won, supply shortages caused by China's export curbs of urea as well as the rapidly deteriorating local pandemic situation led the Korean won to weaken and maintained the NT dollar strength against the won. Compared with the end of 2020, the NT dollar appreciated by 12.68% against the Korean won at the end of 2021. On a daily average basis, the NT dollar appreciated by 2.31% against the won in 2021.

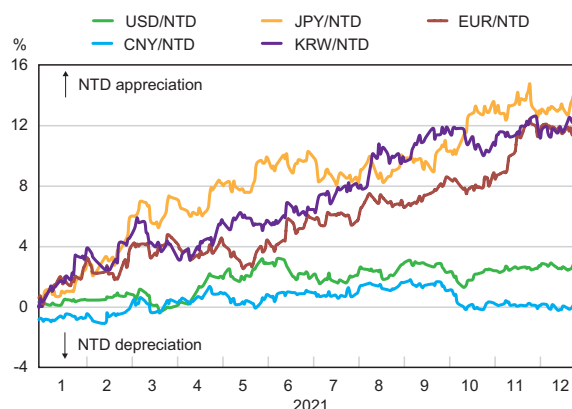
## Foreign Exchange Trading

Trading in the Taipei foreign exchange market decreased in 2021. Total net trading volume for the year was US\$8,188.1 billion, representing a 1.0% year-on-year decrease. The daily average turnover was US\$33.0 billion in 2021.

In terms of trading partners, transactions between banks and non-bank customers accounted for 33.8% of the total turnover, while interbank transactions made up 66.2%, including 21.1% for transactions among local banks and 45.2% for those between local banks and overseas banks.

As far as traded currencies were concerned, NT dollar trading against foreign currencies accounted for 48.8% of the total trading volume, of which trading against the US dollar made up a dominant 47.1%. Transactions in third currencies contributed to 51.2% of the total trading

**Percentage Changes of NT Dollar  
Against Major Currencies**  
( Compared with End-2020 )



Source: Department of Economic Research, CBC.



### Turnover of Major Products in the Taipei Foreign Exchange Market

Unit: US\$million

Year	Spots	Forwards	Forex Swaps	Margin Trading	Options	Cross Currency Swaps	Total
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
2021	3,584,473	507,641	3,839,404	4,733	222,705	29,134	8,188,090
2020-2021 Annual Growth Rate (%)	5.2	0.8	-6.6	-34.9	8.1	-15.5	-1.0

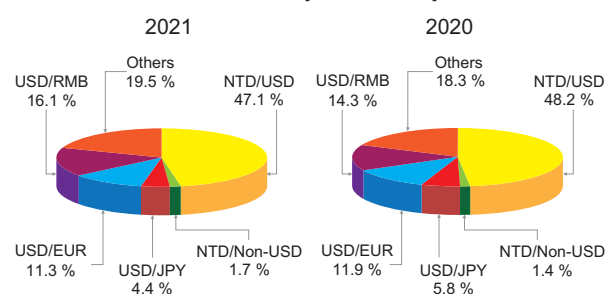
Source: Department of Foreign Exchange, CBC.

volume, with trading in currency pairs of USD-RMB, USD-euro, and USD-yen accounting for respective shares of 16.1%, 11.3%, and 4.4%. Compared with 2020, NT dollar trading against foreign currencies decreased by 2.7% while transactions in third currencies increased by 0.7%.

With respect to types of transactions, the major types were foreign exchange swaps and spots, accounting for 46.9% and 43.8% of total turnover, respectively. Compared with 2020, the trading volume of spots, forwards and options increased, whereas those of the other types decreased.

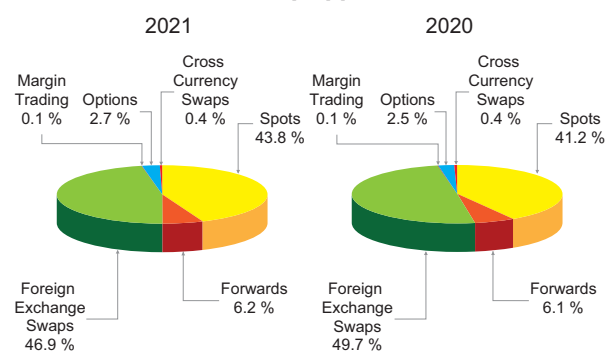
For other foreign currency derivatives, including forwards, swaps, and options based on foreign currency interest rates, stock price indices, commodity prices, and credit derivatives, total turnover amounted to US\$199.2 billion. Of this amount, interest rate-related derivatives accounted for the lion's share at 97.4% with US\$194.0 billion, increasing by 100.9% from the previous year. Interest rate futures accounted for the majority of this increase, up by US\$69.5 billion.

### Composition of Foreign Exchange Transactions by Currency Pair



Source: Department of Foreign Exchange, CBC.

### 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
	Interest Rate Swaps	Interest Rate Options	Foreign Currency Interest Rate Futures	Subtotal	Commodity Options			
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
2021	78,981	10,716	104,342	194,040	4,143	437	618	199,238
2020-2021 Annual Growth Rate (%)	51.6	11.9	199.1	100.9	34.2	198.2	54.9	98.8

Note: "Forward Rate Agreements" is excluded from the table because the turnover has been 0 since 2017.  
Source: Department of Foreign Exchange, CBC.

## Renminbi Business

Renminbi investment tools became even more diversified during 2021. By the end of 2021, there were 65 domestic banking units (DBUs) and 57 offshore banking units (OBUs) engaging in renminbi business. The balance of renminbi deposits amounted to RMB231.9 billion; renminbi remittances totaled RMB1,835.7 billion in 2021; renminbi settlement through the Taipei Branch of the Bank of China totaled RMB5,291.0 billion.

## Renminbi Business Conducted by Financial Institutions

Unit: RMB Billions

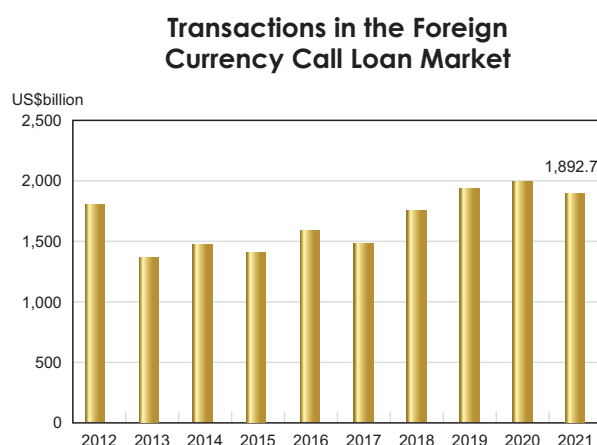
Business Items	Amount
Deposit balance (including NCDs, end of 2021)	231.9
Total remittances (February 2013 to December 2021)	14,838.5
Total settlement through the Taipei Branch of the Bank of China (February 2013 to December 2021)	37,936.0
Total value of 194 RMB-denominated bonds issued (as of the end of 2021)	132.7
Accumulated premium receipts from RMB-denominated investment-linked insurance business (February 2013 to December 2021)	21.2
Accumulated premium receipts from RMB-denominated traditional insurance business (April 2014 to December 2021)	8.4

Source: Department of Foreign Exchange, CBC.

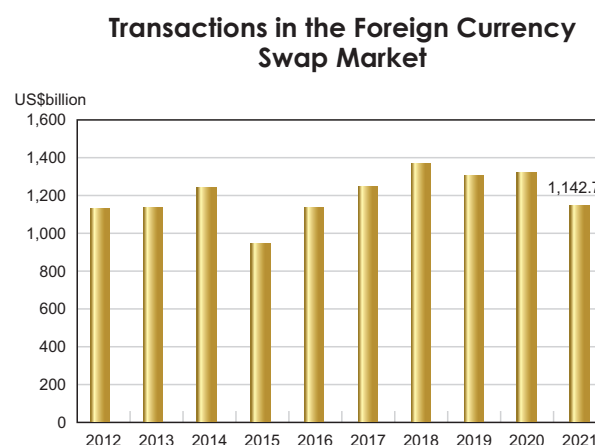
## Foreign Currency Call Loan & Swap Markets

The transaction volume in the foreign currency call loan market in 2021 was US\$1,892.7 billion, a decrease of 5.0% over the previous year. Of this amount, US dollar transactions accounted for a dominant share with US\$1,774.7 billion, making up 93.8% of the total while decreasing by 7.2% from 2020. Renminbi transactions reached RMB561.2 billion in 2021, making up a share of 4.6% of the total and recording a year-on-year rise of 27.3% in volume. Japanese yen transactions reached ¥1,902.6 billion in 2021, representing a small share of 0.9% of the total with a year-on-year increase of 398.6% in volume. The amount of euro transactions amounted to around €1.7 billion, with a modest share of 0.1%. Other currencies accounted for a combined 0.6% of the total transaction volume. The balance of foreign currency call loan transactions at the end of 2021 was US\$60.1 billion.

The volume of foreign currency-NTD swap transactions reached US\$1,142.7 billion, 13.1% less than 2020, while the balance was US\$301.4 billion at the end of 2021.



Source: Department of Foreign Exchange, CBC.



Source: Department of Foreign Exchange, CBC.

## OBU Assets

There were 59 OBUs at the end of 2021, with 36 of them operated by domestic banks and the other 23 by foreign banks. The total assets of all OBUs increased to US\$249.9 billion at the end of the year, representing an increase of US\$10.5 billion, or 4.4%, from the previous year end owing to increasing portfolio investments and growing claims on financial institutions. Domestic bank OBUs made up 90.8% of these combined assets with an amount of US\$227.0 billion, and the OBUs of foreign banks accounted for 9.2% of the total with US\$22.9 billion.

In terms of the uses of funds, portfolio investments, at US\$93.7 billion, represented the majority share of 37.5% of total OBU assets. Loans to non-financial institutions came in second place,

accounting for 31.4% of total OBU assets. In terms of the destinations for funds, Asia accounted for the majority with a share of 53.3%, followed by America at 30.4%.

The OBUs' main source of funds came from due to financial institutions, making up 50.0% of total liabilities and equity. Deposits of non-financial institutions accounted for 41.8% of the total. The main funding origin of OBUs was Asia, accounting for 64.8%, followed by America with a share of 25.2%.

Forex trading turnover of all OBUs increased by 7.8% to US\$721.0 billion, of which US\$441.3 billion went for spot transactions, US\$130.5 billion for forward transactions, and US\$149.2 billion for forex swap transactions. Compared with the previous year, the growth rates of trading of spots, forwards, and forex swaps were 7.8%, 3.2%, and 2.8%, respectively.

For OBUs, total turnover of other derivatives products increased by 26.4% to US\$310.8 billion over the previous year. Of this amount, options transactions registered a turnover of US\$142.7 billion, making up 45.9% 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
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
2021/12	78,497	93,686	68,244	9,495	249,922	104,518	125,056	0	20,348
2020/12-2021/12 Growth Rate (%)	-0.6	8.9	10.2	-24.2	4.4	14.7	0.1	0.0	-13.3

Sources: 1. *Financial Statistics Monthly* (February 2022), CBC.  
2. Department of Foreign Exchange, CBC.

## 5. Stock Markets

The TAIEX experienced fluctuations around a broad uptrend in 2021. Major downswings were recorded in May, July, August, September, and October, mainly affected by a domestic flare-up in COVID-19 infections, a day-trading tax policy indecision, China's property giant default crisis and government "dual control" energy policy, and US inflation and debt ceiling concerns. In the other months of the year, the TAIEX was bolstered by successful containment of domestic COVID-19 cases, record-breaking US stock bull runs, strong earnings of TWSE-listed companies, and robust export growth, and swung up from a low at the start of the year to an all-year and all-time high of 18,248 points on December 29. The TAIEX closed the year at 18,219 points, rising by 23.7% over the end of the previous year.

Most of the categories saw share price rises. Shipping and Transportation stocks posted the largest gains of 168.6%, led by three major shipping companies whose profits doubled as global freight indices and shipping prices stayed high. The second best performer was the Iron and Steel category with a rise of 46.9% buoyed by international steel price upswings. Trading and Consumers' Goods shares came in third with a 45.5% increase as consumers increased spending amid a boost from the government's stimulus voucher scheme and a boom in online shopping. Overall, the

### 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
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
2021	18,218.8	378.2	176.6	56,282.0	-454.1	70.1	-96.4
2021/ 1	15,138.3	353.8	15.3	46,130.8	-113.1	7.4	-9.7
2	15,953.8	330.1	8.8	48,626.6	-80.1	4.4	-7.1
3	16,431.1	306.7	13.5	50,160.4	-150.9	16.7	-4.8
4	17,566.7	433.9	15.4	53,642.0	57.4	-6.3	8.5
5	17,068.4	507.7	20.5	52,150.2	-59.1	17.8	-28.5
6	17,755.5	470.1	18.2	54,314.2	-51.0	-4.9	29.1
7	17,247.4	549.3	22.9	52,893.6	-122.1	-18.9	-16.3
8	17,490.3	358.0	14.7	53,645.5	7.9	6.2	-13.4
9	16,934.8	289.5	11.1	52,052.8	5.7	9.7	-33.4
10	16,987.4	283.6	10.9	52,279.4	-57.4	17.4	-5.4
11	17,427.8	349.7	14.3	53,669.4	21.8	-0.1	-11.6
12	18,218.8	285.5	11.2	56,282.0	86.7	20.7	-3.7

Source: Securities and Futures Bureau, FSC.

daily average trading value on the TWSE reached a historical high of NT\$378.2 billion in 2021 while surging sharply by 103.0% over the previous year.

Regarding trends in over-the-counter trading of securities, the Taipei Exchange Capitalization Weighted Stock Index (TPEX) rose by 29.0% at the end of 2021, compared to a year ago. Almost all categories posted year-on-year increases, except for Tourism Industry shares with a 3.6% decline. Shipping and Transportation shares gave the best performance with a rally of 66.7%, closely followed by Chemical shares with a 66.0% rise. In 2021, the daily average trading value on the Taipei Exchange (TPEX) amounted to a historical high of NT\$83.1 billion, rising by 68.4% from the previous year.

## The TWSE Market

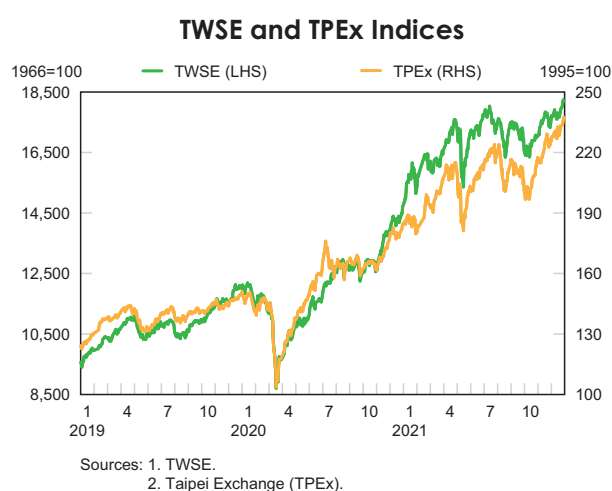
### Listings and Capitalization Both Increased to Record Highs

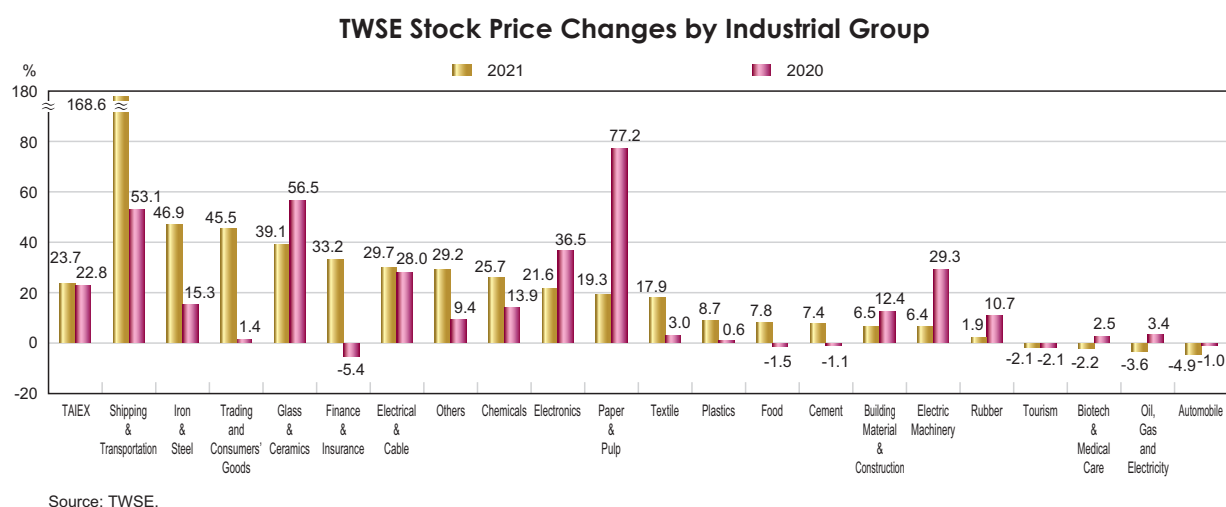
At the end of 2021, the number of TWSE listings increased by 11 over the previous year to a total of 959. The par value of total shares rose by 2.0% year on year to NT\$7.4 trillion, and total market capitalization soared by 25.3% to NT\$56.3 trillion. Meanwhile, the total number of Taiwan depositary receipts (TDRs) decreased to 11 with two delisting during the year.

### TAIEX Reached Historical High in Broad Uptrend

In early 2021, the TAIEX swung upwards as the US stock indices climbed to repeated record highs, vaccination rates increased, TWSE-listed companies posted impressive earnings, and Taiwan's exports expanded strongly, which helped to send the TAIEX to 17,596 points on April 27. However, a surge in domestic COVID-19 infections and net stock selling by foreign investors caused the index to dive to 15,354 points on May 17. Given the support from strong growth in exports and corporate profits, the TAIEX quickly rebounded alongside a US market rally, hitting an intermediate peak at 18,034 on July 15.

Thereafter, the TAIEX faced downward pressures created by surging COVID-19 Delta variant cases, China's Evergrande default crisis and energy policy tightening, US inflation and debt ceiling problems, as well as a delayed decision to continue the day-trading tax incentive for the local stock markets, and swung lower towards an interim trough of 16,342 points on August 20 and another interim





trough of 16,348 points on October 13. However, bullish forces set in as the domestic coronavirus situation remained well under control, US technology stocks hit fresh record highs, Taiwan's statistical body upgraded the domestic GDP growth forecast, and foreign investors returned to the TWSE market with net buying, pushing the TAIEX towards an all-time high of 18,248 points on December 29. The index closed the year (on Dec. 30) at 18,219 points, up by 23.7% compared to 14,733 points at the end of 2020.

Broken down by subcategory, most industrial groups rose from the previous year, except for four categories, namely Automobile, Oil, Gas & Electricity, Biotechnology & Medical Care, and Tourism. Among the gaining groups, Shipping and Transportation increased the most by 168.6%, as the unresolved problems of port congestion and container shortage continued to buoy international freight indices and shipping prices, thereby helping the TWSE's top three shipping heavyweights to record significant growth in profits and witness share price surges. Iron and Steel stocks had the second biggest increase by 46.9%, buttressed by an international steel price upswing. Trading and Consumers' Goods rose by 45.5% as the stimulus voucher scheme and online shopping boom spurred domestic consumption. Glass and Ceramic shares posted an increase of 39.1% with glass prices climbing. Finance and Insurance shares were 33.2% higher than the previous year, benefiting first from domestic banks making handsome profits as the government's SME guarantee fund helped sustained a sound lending business operation amid the pandemic, and also from a net buying by foreign investors.

Among the declining categories, Automobile shares dropped the most by 4.9% because car chip shortages caused new car delays and sales slumps. Oil, Gas and Electricity shares fell by

3.6%, mainly dented by the plunge in Formosa Petrochemical Corporation, one of the category's heavyweight stocks, after foreign investor selloffs. Biotechnology and Medical Care was down by 2.2%, attributable to the weak performance in the NASDAQ Biotechnology Index. In addition, Tourism stocks dropped for a second consecutive year by 2.1% as the pandemic continued to weigh on the industry.

### **Market Turnover Increased Significantly**

Underpinned by ample liquidity and active participation (demonstrated by record high numbers of wholesale and retail investors and new portfolio accounts opened), the TWSE daily average trading value amounted to a historical high of NT\$378.2 billion, increasing by 103.0% from the previous year's NT\$186.3 billion. The turnover rate also rose from 123.3% to a new record high of 176.6%.

### **Foreign Investors Net Sold**

In 2021, foreign investors net sold TWSE stocks by an amount of NT\$454.1 billion. Meanwhile, local securities investment trust companies posted a net purchase of NT\$70.1 billion, whereas local securities dealers posted a net sale of NT\$96.4 billion.

In the first three months into 2021, international stock markets dipped and US government bond yields trended up, leading foreign investors to post monthly net sales of TWSE shares, followed by a net purchase in April on the back of huge capital inflows as US bond yields fell lower. In the months from May to July, foreign investors turned net sellers again owing to a domestic COVID-19 flare-up and profit-taking trades. They net bought financial stocks in August and September, citing robust earnings reports by banks. In October, investor fears of an earlier-than-expected rate hike by the Fed to counter rising inflation pulled foreign capital out of the TWSE. Thereafter, a US tech rally towards new highs prompted foreign investors to also increase holdings of Taiwan's electronics shares, thus posting net purchases in both November and December.

Local securities investment trust companies were net sellers in April, June, and July through November, during which they offloaded shares to secure gains in order to meet fund redemption demand, to boost their financial statements, or to adjust portfolios at higher price levels. In the other months, they posted net purchases.

Local securities dealers, with inclination for short swing trading, net bought in April and June amid market uptrends. In the other months of the year, they net sold as a result of hedging or profit-taking strategies.



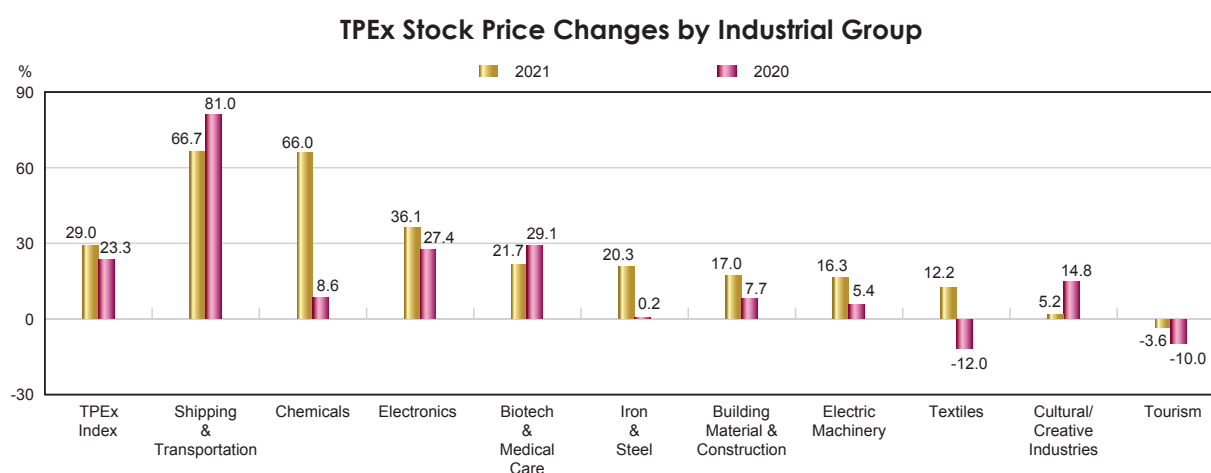
## The TPEX Market

### Listings and Capitalization Both Increased

At the end of 2021, the number of TPEX listings rose by 6 from the previous year to 788. The total par value increased by 2.5% to NT\$760.9 billion. The TPEX market capitalization, buoyed by rising stock valuations, increased to NT\$5.78 trillion with a surge of 32.9%.

### TPEX Index Swung to Record High

In 2021, the TPEX market exhibited trends similar to those in the TWSE market. Except for May and August when the domestic virus flare-up and day-trading policy indecision pummeled the TPEX, the index was broadly on an uptrend from a low at the start of the year to an all-year, all-time high of 237.6 points at the end of 2021, rising by 29.0% from 184.1 points a year ago.



By category, all groups posted year-on-year gains, except for Tourism with a 3.6% drop as the pandemic brought this group another price decline for the second consecutive year. Among the top performers, Shipping and Transportation enjoyed a 66.7% gain thanks to elevated global freight rates and the persistent strength of the three major TWSE-listed shipping heavyweights. Chemical shares followed closely with a 66.0% increase as chemical products were bolstered by the international oil price upswing.

By type of institutional investor, foreign investors and local securities investment trust companies net bought TPEX securities worth NT\$23.5 billion and NT\$31.1 billion, respectively, while local dealers net sold NT\$1.8 billion.

With a record participation of 3.32 million active investor accounts in the year of 2021, the TPEX daily average trading value reached NT\$83.1 billion, a new record in market history while surging by 68.4% from the previous year's NT\$49.3 billion.

## Key Measures for the Stock Markets

Key measures for Taiwan's stock markets in 2021 included the following:

- (1) March 12: The Financial Supervisory Commission (FSC) announced that securities firms would be allowed to provide sub-brokered business services that invest in foreign futures contracts linked to Taiwan's stock index (e.g., SGX FTSE Taiwan Index Futures).
- (2) May 4: The FSC announced that securities firms would be allowed to accept customer orders to trade foreign securities under a systematic investment plan, investing in foreign stocks and in exchange traded funds (ETFs) that do not have a leveraging or shorting effect.
- (3) July 20: The TPEX launched the Pioneer Stock Board (PSB) in the Emerging Stock Market. The PSB, whose trading mechanism is mostly identical to that in the TPEX main board market, is aimed at fostering the development of and facilitating the funding for innovative industries.
- (4) August 19: The Executive Yuan passed the amendment to the *Securities Transaction Tax Act*, extending the tax cut on day-trading transactions to keep the current 1.5‰ tax rate in place through December 31, 2024.
- (5) August 27: The TWSE introduced an alert mechanism to draw investors' attention to stocks involved with massive day trading activity. A security would be noted and announced as an "attention security" if (a) in the most recent six business days, its day trading volume as a percentage of its total trading volume exceeds 60%, and (b) in the current intraday trading session, its day trading volume as a percentage of its total trading volume also exceeds 60%.

## 6. Bond Market

For the year 2021, the total volume of bond issuance registered a marked decrease. New issues of bonds amounted to NT\$2,690.6 billion, decreasing by NT\$704.2 billion or 20.74% over the previous year. At the end of 2021, the total outstanding of bonds issued stood at NT\$15,946.7 billion, rising by NT\$1,162.0 billion or 7.86% 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 reached NT\$617.0 billion for 2021, an increase of 15.33% from the previous year.

Issuance of corporate bonds and bank debentures in the year fell by 14.11% and 29.58% to NT\$723.7 billion and NT\$135.2 billion, respectively. The decreases were mainly because an upswing in benchmark government bond yields amid robust domestic economic growth brought up market rates, leading corporations and banks to reduce the volume of bond issuance.

In 2021, NT dollar-denominated foreign bonds issued in Taiwan by foreign institutions stood at NT\$10.6 billion, representing a substantial decrease of 50.77% over the previous year. As for foreign currency-denominated international bonds issued in Taiwan by foreign institutions, the volume of issuance posted a year-on-year decrease of 35.49% to NT\$1,137.5 billion.

In the secondary market, the yield on 10-year government bonds averaged 0.436% for the entire year, five basis points lower than the previous year. Nevertheless, annual average yields on bonds with different maturities displayed a broad uptrend in 2021, in contrast to the downtrend in the previous year.

In addition, annual transactions totaled NT\$36,138.8 billion, contracting significantly by 31.17% compared to the previous year, mainly reflecting a less vibrant bond market because of narrowing profits from spread trading.

### Rise in Government Bond Issuance

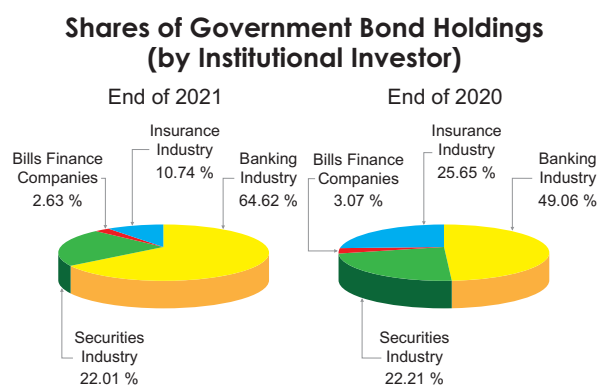
Central government bond issuance recorded a year-on-year increase of NT\$82.0 billion or 15.33% to NT\$617.0 billion in the year 2021. The growth was to support debt refinancing operations of the Central Government Debt Service Fund and to raise funds for the central government general budget and special budget.

Among the total volume of government bonds issued by the Ministry of Finance, 10-year bonds made up the lion's share with NT\$210.0 billion, followed by 5-year bonds with NT\$120.0 billion. 2-year,

7-year, 20-year, and 30-year government bonds recorded issuance of NT\$60.0 billion, NT\$32.0 billion, NT\$130.0 billion, and NT\$65.0 billion, respectively.

Broken down by institutional investor, bonds held by the banking industry (including Chunghwa Post) accounted for the largest share at 64.62% primarily on account of an increase in demand for government bonds by Chunghwa Post. The securities industry came in second with a share of 22.01%, similar to that in the previous year. Meanwhile, the insurance industry made up a share of 10.74%, smaller than the previous year because the insurance industry increased its external investment position owing to a larger yield spread between the US and Taiwan government bonds.

As of the end of 2021, the total outstanding of central government bond issuance stood at NT\$5,674.5 billion, rising by NT\$150.0 billion or 2.72% from the previous year end.



Source: Department of the Treasury, CBC.

With respect to bonds issued by governments of special municipalities, new bonds issued by the government of Taipei Special Municipality and the government of Kaohsiung Special Municipality in 2021 reached NT\$30.0 billion and NT\$36.6 billion, respectively, with a combined amount of NT\$66.6 billion. At the end of the year, the outstanding amount of bonds issued by the governments of all special municipalities stood at NT\$164.9 billion, expanding considerably by NT\$64.9 billion or 64.89% from the previous year end.

## Decrease in Corporate Bond Issuance

Corporate bonds refer to NT dollar- or foreign currency-denominated bonds issued in Taiwan by domestic corporations. In 2021, the issuing amount of corporate bonds stood at NT\$723.7 billion, sliding by NT\$118.8 billion or 14.11%. The decrease was mainly because an uptick in benchmark government bond yields sent market rates higher, thereby slightly reducing corporations' demand for bond issuance.

In terms of bond maturities, 5-year corporate bonds accounted for a dominant share of the issuance at 50.92%, while 7-year bonds came in second with a share of 26.40%. At the end of 2021, the outstanding amount of corporate bonds grew by NT\$390.7 billion or 15.07% to NT\$2,983.5 billion from the previous year end.

## 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
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
2021	2,690.6	15,946.7	617.0	5,674.5	66.6	164.9	723.7	2,983.5	135.2	1,234.0	0.0	5.3	10.6	51.6	1,137.5	5,833.0
2021/ 1	362.0	15,086.7	70.0	5,594.5	10.0	110.0	36.0	2,609.1	3.0	1,243.3	0.0	5.3	0.6	45.0	242.4	5,479.5
2	219.0	15,125.7	65.0	5,599.5	0.0	110.0	1.2	2,606.5	9.3	1,247.6	0.0	5.3	0.0	44.8	143.5	5,512.1
3	138.4	14,999.5	25.0	5,514.5	0.0	110.0	29.6	2,622.0	3.0	1,221.1	0.0	5.3	0.0	44.4	80.9	5,482.2
4	265.6	15,160.1	30.0	5,544.5	22.9	132.9	63.3	2,655.0	7.8	1,209.6	0.0	5.3	0.0	44.3	141.6	5,568.5
5	244.8	15,287.0	60.0	5,574.5	0.0	132.9	91.8	2,723.7	22.4	1,219.5	0.0	5.3	0.5	44.8	70.2	5,586.4
6	249.4	15,338.0	55.0	5,569.5	0.0	132.9	98.4	2,767.6	3.0	1,206.9	0.0	5.3	0.0	44.4	93.1	5,611.5
7	216.6	15,465.4	30.0	5,599.5	0.0	132.9	45.2	2,767.0	2.5	1,206.9	0.0	5.3	0.3	44.6	138.5	5,709.2
8	237.9	15,651.0	97.0	5,696.5	0.0	132.9	99.0	2,839.2	14.1	1,215.3	0.0	5.3	0.0	44.1	27.8	5,717.7
9	224.0	15,699.8	65.0	5,654.5	0.0	132.9	101.4	2,915.2	10.5	1,207.8	0.0	5.3	0.0	43.9	47.2	5,740.2
10	215.4	15,829.5	30.0	5,654.5	20.0	151.2	51.3	2,944.9	14.6	1,215.6	0.0	5.3	2.1	45.7	97.4	5,812.3
11	119.0	15,815.8	30.0	5,614.5	13.7	164.9	27.2	2,942.3	18.3	1,229.2	0.0	5.3	1.1	46.6	28.6	5,813.0
12	198.4	15,946.7	60.0	5,674.5	0.0	164.9	79.4	2,983.5	26.8	1,234.0	0.0	5.3	6.0	51.6	26.3	5,833.0

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

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

Sources: 1. *Financial Statistics Monthly* (February 2022), CBC.

2. Banking Bureau, Financial Supervisory Commission.

3. Department of Foreign Exchange, CBC.

## Reduction in Bank Debenture Issuance

In 2021, domestic banks issued bank debentures in support of their funding needs, with an issuance amount of NT\$135.2 billion, down by NT\$56.8 billion or 29.58% over the previous year. The contraction was largely because market rates went up owing to rising benchmark bond yields, leading to reduced senior bank debenture issuance by banks.

In respect of the maturity of new issues, perpetual debentures made up the largest share of total issuance at 40.47%, while 7-year, 5-year, and 10-year debentures accounted for 20.81%, 19.70%, and 16.47%, respectively. Debentures of the other maturity ranges made up a marginal share of 2.94%.

At the end of the year, the outstanding amount of bank debentures totaled NT\$1,234.0 billion, representing a year-on-year decrease of NT\$21.7 billion or 1.73%.

## Asset Securitization Products Remained Unchanged

New issues of asset securitization products were nil in 2021 and no principal was repaid for existing asset securitization products. The outstanding amount of asset securitization remained at NT\$5.3 billion from the previous year end.

## Slide in Foreign Bond Issuance

Foreign bonds are defined as NT dollar-denominated corporate bonds issued in Taiwan by foreign enterprises. For the year 2021, foreign bond issuance dropped substantially by NT\$10.9 billion or 50.77% from a year before to NT\$10.6 billion. The decrease mostly reflected a higher base effect resulting from the NT\$15.0 billion worth of green bonds issued in Taiwan by a Danish energy company, Ørsted, in the previous year. At the end of the year, the outstanding amount of foreign bonds reached NT\$51.6 billion, increasing by NT\$7.0 billion or 15.64% over the previous year end.

## Drop in International Bond Issuance

International bonds currently refer to foreign currency-denominated corporate bonds issued in Taiwan by foreign institutions. During 2021, issuance of international bonds fell by NT\$625.8 billion or 35.49% from a year before to NT\$1,137.5 billion. The contraction was primarily because a rebound in US Treasury yields led to a decrease in US dollar-denominated bond issuance. At the end of the year, the outstanding amount of international bonds stood at NT\$5,833.0 billion, representing a year-on-year increase of NT\$571.2 billion or 10.86%.

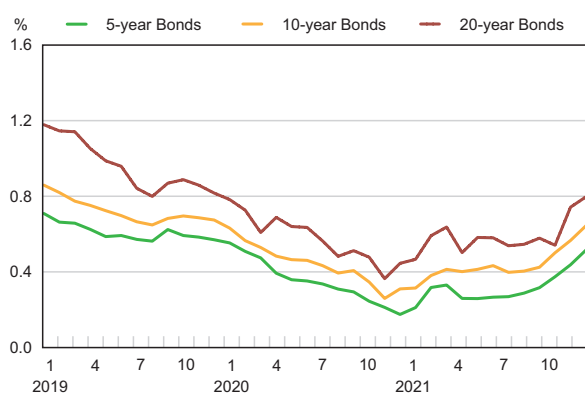
## Uptrend in Average Government Bond Yields and Decline in Transactions

Despite a surge in US inflation bringing up US Treasury yields, Taiwan government bond yields recorded a smaller increase than US bond yields owing to ample domestic liquidity. Government bond yields, in contrast to the downtrend in the previous year, displayed a broad uptrend in 2021, whereas the trading volume of the secondary government bond market for the past two years trended downward. Looking at the volume-weighted average yields, the 10-year government bond yield modestly slid and averaged 0.436%, five basis points lower than the 0.483% of the previous year.

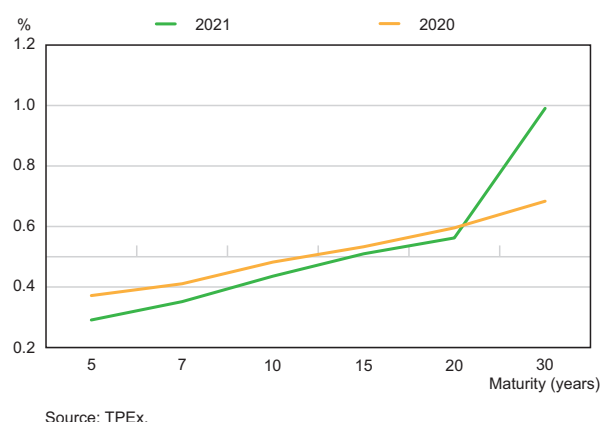
Among government bonds of the other maturity ranges, average yields on 5-year, 7-year, 15-year, and 20-year bonds in the year moved down by eight, six, two, and three basis points, respectively, over the previous year.

On the other hand, the average yield on 30-year bonds in 2021 went up by 31 basis points compared to the previous year. This was because 30-year bonds were mainly issued in the primary market. However, the issuance of 30-year bonds during the year only occurred in February and December. An uptrend in market rates in the year brought the 30-year bond yield of December markedly higher than that of February. In addition, the trading volume of December was also larger than that of February. As a result, when looking at the volume-weighted average yields, the average yield on 30-year bonds in 2021 was higher than the previous year.

**Yields on Central Government Bonds with Different Maturities**



**Yield Curve of Central Government Bonds**



In terms of transaction volume, annual transactions fell by NT\$16,366.0 billion or 31.17% to NT\$36,138.8 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 corporate bonds with a share of 47.47% and an annual trading volume of NT\$17,155.4 billion. The second most actively traded were government bonds, contributing to 43.05% of total transactions with an annual trading volume of NT\$15,557.9 billion. Bank debentures came in third, accounting for a smaller share of 5.60% with an annual trading volume of NT\$2,024.9 billion.

**Turnover in Bond Market by Category**

Unit: NT\$billion

Year/ Month	Total	Government Bonds	Corporate Bonds		Bank Debentures	Beneficiary Securities	Foreign Bonds	Int'l Bonds
			Nonconvertible	Convertible				
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
2021	36,138.8	15,557.9	15,807.2	1,348.2	2,024.9	0.5	393.0	1,007.0
2021/ 1	3,632.9	1,870.7	1,274.8	103.9	176.1	0.0	29.0	178.4
2	2,562.7	1,227.8	902.5	76.3	141.9	0.0	22.2	191.9
3	3,455.1	1,673.4	1,339.4	112.6	191.9	0.0	31.1	106.8
4	2,834.9	1,215.8	1,216.3	115.9	163.7	0.0	33.5	89.6
5	2,904.0	1,166.7	1,317.8	126.6	185.3	0.0	34.2	73.4
6	2,803.7	1,130.6	1,326.5	101.3	161.0	0.0	25.4	58.9
7	2,791.5	1,122.6	1,311.6	109.4	165.5	0.0	32.1	50.4
8	3,152.2	1,365.6	1,424.0	112.5	167.7	0.0	31.6	50.7
9	3,057.3	1,263.2	1,438.5	105.1	159.0	0.0	31.1	60.4
10	3,014.6	1,302.9	1,345.2	109.7	158.3	0.0	37.0	61.5
11	2,870.9	1,099.9	1,378.1	146.8	176.3	0.0	35.3	34.5
12	3,059.0	1,118.8	1,532.4	128.1	178.2	0.5	50.5	50.4

Source: TPEX.

# *Central Bank Operations*



## III. Central Bank Operations

### 1. Overview

The global economy continued on the path of recovery in the year 2021 amid lingering downside risks. Domestic inflation pressures built up further, whereas overall price trends were still considered manageable. Meanwhile, Taiwan's economy witnessed robust growth, albeit with divergence among different sectors. Against such a backdrop, the Bank held the policy rates unchanged to help safeguard price and financial stability and foster economic growth.

To help small and medium-sized enterprises (SMEs) adversely impacted by the COVID-19 pandemic, the Bank launched the Special Accommodation Facility to Support Bank Credit to SMEs ("the Facility") in April 2020. In mid-2021, with a surge in coronavirus infections at home, in order to enhance funding access for SMEs, the Bank continued its rolling review on the Facility and made relevant adjustments such as raising the total amount available under the Facility. Later, with the domestic coronavirus outbreak largely stable, corporate needs for relief funding declined. Therefore, the deadline for banks to accept new SME loan applications under the Facility remained December 31, 2021, as scheduled. However, to continue helping alleviate corporate financial burdens by supporting low funding costs, SME loans granted by banks under the Facility would remain eligible for the Facility's preferential interest rates until June 30, 2022.

In addition, to promote financial stability, rein in financial institutions' credit risk associated with real estate lending, and curb inordinate flows of credit resources towards the property market, the Bank amended the Regulations Governing the Extension of Mortgage Loans by Financial Institutions in March, September, and December 2021, to adjust its selective credit control measures. In order to reinforce the effectiveness of these control measures, the Bank held meetings twice to urge banks to comply with credit risk-based pricing principles when extending mortgage loans. Moreover, the Bank also adopted relevant supporting measures.

In response to economic and financial conditions, the Bank continued to conduct open market operations by issuing CDs to manage market liquidity and reserve money so as to maintain liquidity in the banking system and market rates at appropriate levels and sustain steady growth in monetary aggregates. For the year as a whole, reserve money and the monetary aggregate M2 registered year-on-year growth of 12.18% and 8.72%, respectively. Both readings were higher than the GDP growth rate of 6.45% over the same period, indicating sufficient market liquidity to support economic activity.

In the foreign exchange (FX) market, bolstered by the US government's US\$1.9 trillion fiscal

stimulus package and solid growth in Taiwan's exports in the first half of 2021, the NT dollar appreciated against the US dollar and exhibited greater volatility. In the second half of the year, the US Fed adopted monetary policy tightening and Taiwan's exports continued to record significant expansion, resulting in the NT dollar against the US dollar fluctuating within a limited range. When the NT dollar exchange rate experienced more fluctuations, the Bank, in line with its statutory mandates, stepped into the FX market through two-way interventions as warranted to maintain dynamic stability of the NT dollar exchange rate, with a net buying of US\$9.1 billion for the year. In 2021, compared with other major currencies (including the Singapore dollar, the euro, the yen, 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 amid the COVID-19 pandemic, the Bank continued urging financial institutions to take precautionary measures in case of pandemic-related contingencies. Furthermore, considering marked growth in interbank retail payment transactions, the Bank raised the ceiling on the amount of financial institutions' end-of-day balance in the Interbank Funds Transfer Guarantee Special Account<sup>8</sup> to be counted as part of the required reserves. The Bank also required the Financial Information Service Co., Ltd. (FISC) to collaborate with financial institutions in reinforcing mobile payment infrastructure, such as constructing an "inter-institutional electronic payment institutions platform" and launching the "mobile number funds transfer" service to promote mobile payment. In the meantime, in response to the evolving trend of the digital economy, the Bank has conducted research on central bank digital currencies (CBDCs) and has moved on to the second phase with a proof-of-concept (PoC) study on a general purpose CBDC, which will be completed in September 2022.

To assist the domestically-oriented services sector battered by the pandemic and boost private consumption, the government rolled out the Quintuple Stimulus Voucher program, effective from October 8, 2021. The Central Engraving and Printing Plant, a subsidiary of the Bank, was instructed by the government to design and print the vouchers from August and later completed the production of 19.5 million sets of paper vouchers in mid-October. Through this program, the Bank joined a concerted effort in helping stimulate domestic consumption.

<sup>8</sup> 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 retail payments.

## 2. Monetary Management

### Holding Policy Rates Steady

The global economy continued to recover amid potential downside risks in the year 2021. Meanwhile, domestic inflation pressures built up further, yet the overall price increase was still viewed as manageable. Taiwan's economy exhibited robust growth, albeit with uneven recovery momentum across sectors. Against this backdrop, the Bank kept policy rates unchanged in 2021. The discount rate, the rate on refinancing of secured loans, and the rate on temporary accommodations remained at 1.125%, 1.5%, and 3.375%, respectively.

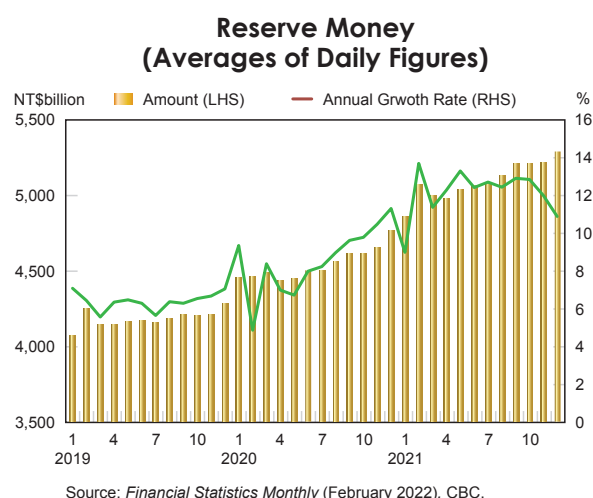
### Continuing to Conduct Open Market Operations to Absorb Excess Liquidity

In 2021, the Bank continued to manage market liquidity through open market operations by issuing CDs in response to domestic economic and financial conditions, which helped to maintain reserve money and market rates at appropriate levels.

#### (1) Appropriately Managing Reserve Money

The Bank continued to conduct open market operations by issuing CDs. At the end of 2021, the total outstanding amount of CDs issued by the Bank was NT\$9,483 billion. Reserve money grew by 12.18% for the year 2021, 3.59 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 2021, reserve money posted an annual growth rate of 11.38% during this period. From March onwards, the annual growth rate remained relatively stable. Later, despite displaying a downtrend from October to December owing to a higher base effect, the annual growth rate of reserve money still remained above 10%.

On the demand side, reserve money, measured on a daily average basis, increased by NT\$554 billion over the previous year. Of the components, net currency increased by NT\$272 billion and the annual growth rate rose to 11.99% from 9.17% the previous year; reserves held by financial institutions expanded by NT\$282 billion, with the annual growth rate trending up to 12.37% from 8.02% the previous



year. Currency held by the non-bank public expanded further on account of an increase in the private sector's demand for currency amid a steady recovery in the domestic economy and the low interest rates paid on bank deposits enhancing the willingness to hold currency in hand. Meanwhile, the overall growth rate of banks' reserves increased compared to the previous year as continuous growth in deposits raised banks' demand for reserves.

From the supply side perspective, reserve money increased by NT\$513 billion at the end of the year. According to the balance sheet of the Bank revealing the sources of changes in reserve money, increases were mostly attributable to the growth in foreign assets held by the Bank and expanded claims on financial institutions, whereas decreases were due to the Bank's issuance of CDs.

## (2) Overnight Call Loan Rate Broadly Stable

In response to the demand for asset allocation of financial institutions, the Bank increased the monthly bidding amount for 2-year CDs from NT\$40 billion to NT\$60 billion from February 2021 and raised it further to NT\$80 billion from April before reducing it to NT\$60 billion from November onwards. The annual average excess reserves of financial institutions in 2021 was NT\$62.7 billion, close to the NT\$62.5 billion of the previous year. The annual average overnight call loan rate fluctuated slightly at around 0.080%.

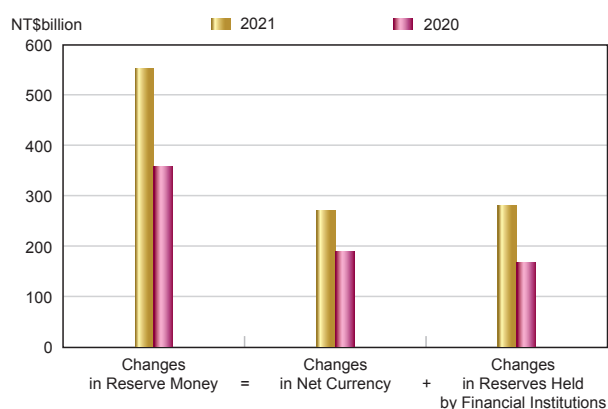
## (3) Conducting Regular Small-Scale Repo Operations

The Bank conducted small-scale test repo operations on CDs and government bonds in April and October 2021, respectively, to improve operational readiness and ensure resilience of the open market operations.

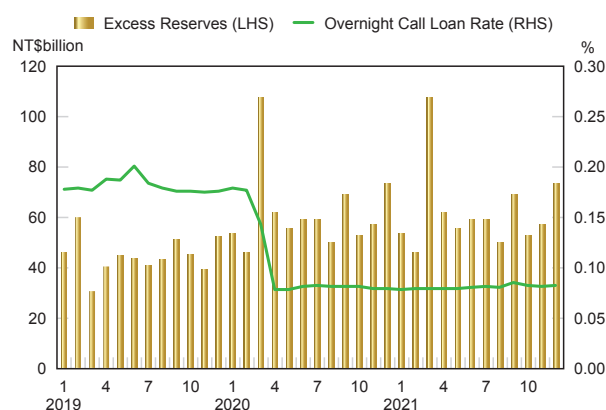
## (4) Continuous Growth in Monetary Aggregates

The government provided relief loans in response to the economic impacts of the pandemic

### Changes in Reserve Money (Averages of Daily Figures)



### Excess Reserves and Overnight Call Loan Rate



in the previous year. Subsequently, marked domestic economic recovery and stronger corporate demand for funds nudged up bank loans and investments. Moreover, as extended export strength continued to buttress an increase in inward remittances of overseas sales revenues, M2 recorded an annual growth rate of 8.45% in December 2020. With continuous growth in bank loans and investments in 2021, the M2 growth rate sustained at a higher level, but broadly moderated from June onwards. The M2 annual growth rate was 8.72% in 2021, higher than the upper boundary of the reference range at 6.5%.

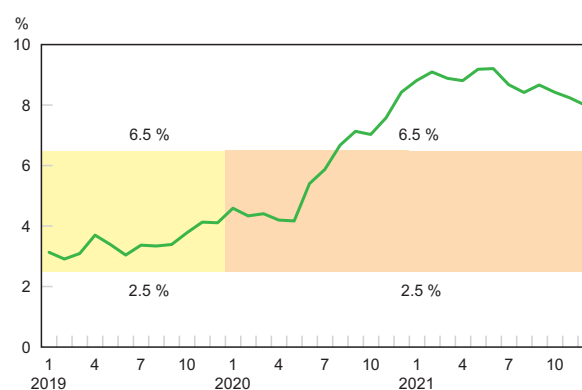
With regard to the monthly movements in 2021, for the first two months of the year, net foreign capital inflows and faster growth in bank loans and investments, as well as stronger demand for funds prior to the Lunar New Year holidays, brought the M2 growth rate up to 9.12% in February. It slipped to 8.83% in April owing to net foreign capital outflows and slower growth in bank loans and investments in March and April. Later, the M2 growth rate returned to an uptrend and hit a yearly high of 9.23% in June, driven by stronger expansion in bank loans and investments.

From July onwards, owing to a higher base effect, the M2 growth rate showed a broad downtrend despite net foreign capital inflows and an increase in bank loans and investments sending the M2 growth rate slightly higher in September. Afterwards, the M2 growth dropped to a yearly low of 8.02% in December.

The annual growth rate of the monetary aggregate M1B, measured on a daily average basis, went up by 5.95 percentage points to 16.29% in 2021. The rise in M1B growth was primarily owing to greater demand for funds amid a steady recovery in the domestic economy, a lower opportunity cost for the public to hold demand deposits, and a booming stock market.

As for the monthly movements, the annual growth rate of M1B registered 17.81% in January, and then rose to the yearly high of 18.57% in February owing to higher demand for funds prior to the Lunar New Year holidays and an increase in currency issuance. Later, bolstered by a gradual domestic economic recovery and a buoyant stock market, M1B

**Annual Growth Rate of M2**



Source: *Financial Statistics Monthly* (February 2022), CBC.

**Annual Growth Rate of M1B**



Source: *Financial Statistics Monthly* (February 2022), CBC.

recorded month-on-month increases from March onwards; however, on account of a higher base effect, the annual growth rate of M1B exhibited a steady downtrend and fell to an all-year low of 12.75% in December.

### Continuing the Special Accommodation Facility to Support Bank Credit to SMEs

Back in April 2020, to help SMEs adversely impacted by the pandemic, the Bank launched the Special Accommodation Facility to Support Bank Credit to SMEs ("the Facility"). With the domestic COVID-19 flare-up in mid-2021, the Bank continued to conduct a rolling review on the Facility and made relevant adjustments in order to enhance funding access for SMEs. Adjustments included stretching the applicable duration of preferential interest rates on newly-approved cases, raising the total amount of the Facility, extending the deadline for SME applications, and allowing increased borrowing within the specified maximum.

As the pandemic situation was broadly stable at home, the need for such funding assistance waned. The deadline for banks to accept new SME loan applications under the Facility remained December 31, 2021, as scheduled. However, to continue offering assistance by easing corporate funding burdens, the Bank extended the applicable duration of preferential interest rates on approved SME loans to June 30, 2022. Under the Facility launched in April 2020 to the end of 2021, financial institutions had approved more than 309 thousand applications with the disbursement totaling NT\$504.9 billion.

### Adjusting the Selective Credit Control Measures

In view of the still fast increase in banks' real estate lending, the Bank adjusted the selective credit control measures three times in the year 2021 to curb inordinate flows of credit resources towards the property market and to further rein in financial institutions' credit risk associated with real estate lending. These measures represented the policy efforts to facilitate effective allocation and reasonable utilization of credit resources as outlined in the government's Healthy Real Estate Market Plan so as to prevent bank credit from flowing towards property and land hoarding.

1. In 2021, the Bank further amended the *Regulations Governing the Extension of Mortgage Loans by Financial Institutions* in March, September, and December to reinforce the selective credit control measures. Major revisions were as follows:

- (1) March 2021: The Bank lowered the LTV ratio caps on housing loans extended to corporate entities and on the third (or more) housing loans and high-value housing loans by natural persons. The Bank also introduced a new LTV ratio ceiling on mortgage loans for idle land in industrial districts.
- (2) September 2021: The Bank removed the grace period for a second home loan taken out by a natural person for housing located in the stipulated specific areas.<sup>9</sup> The Bank lowered the LTV ratio caps on land loans and on mortgage loans for idle land in industrial districts.

<sup>9</sup> Specific areas included Taipei City, New Taipei City, Taoyuan City, Taichung City, Tainan City, Kaohsiung City, Hsinchu County, and Hsinchu City.

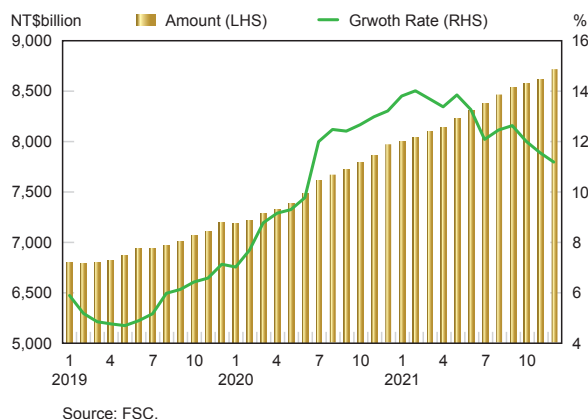
- (3) December 2021: The Bank lowered the LTV ratio caps on high-value housing loans and on the third (or more) housing loans by natural persons, on loans for unsold new housing units, and on mortgage loans for idle land in industrial districts to 40%. The Bank also lowered the LTV ratio cap on land loans to 50% and required that the construction should commence within the promised time frame as formally undertaken by the loans' borrowers.
2. The Bank held meetings twice to improve the effectiveness of the selective credit control measures and urged banks to implement credit risk-based interest rate pricing principles.
- (1) The Bank held the meeting on "Strengthening the Effectiveness of the Implementation of the Bank's Selective Credit Control Measures" in May with 36 domestic banks. Through the meeting, banks were urged to comply with relevant laws and regulations as well as risk-based pricing principles when extending mortgage loans and to avoid a price competition.
- (2) The Bank held the meeting on "Strengthening the Effectiveness of the Implementation of the Bank's Selective Credit Control Measures" again in October with 36 domestic banks and the National Federation of Credit Co-operatives R.O.C. In this meeting, the Bank reiterated that banks should comply with credit risk-based pricing principles and should fully explain the pricing strategies for interest rates to borrowers so as to enable them to make proper financial planning decisions.
3. The Bank adopted the following supporting measures to improve the effectiveness of the implementation of the selective credit control measures.
- (1) Statistics of banks' newly-extended real estate loans were released regularly on the Bank's website.
- (2) 55 on-site financial examinations were conducted in 2021 to ensure banks' compliance with relevant laws and regulations.
- (3) The Bank used moral suasion with banks, urging them to comply with relevant laws and regulations and implement credit risk-based differential pricing principles.
- (4) The Bank suggested the FSC to enhance control over financial institutions' real estate guarantee business.

### **Facilitating SME Funding**

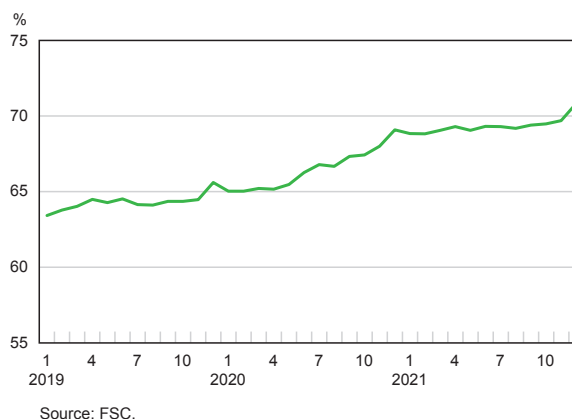
To sufficiently meet the funding needs of SMEs, the FSC continued to encourage lending by domestic banks to SMEs, while the Bank also urged commercial banks to increase lending to SMEs.

At the end of 2021, the outstanding loans extended to SMEs by domestic banks amounted to NT\$8,689 billion, increasing by NT\$876 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 11.22% at the end of 2021, lower than the previous year owing to a higher base effect. Furthermore, the ratio of SME loans to loans extended to all private enterprises rose slightly from 69.08% at the previous year end to 70.83% at the end of 2021.

### Outstanding Loans Extended to SMEs



### Ratio of Outstanding Loans Extended to SMEs to Those Extended to Private Enterprises



## 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 2021, 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

#### Selective Credit Control Measures: Implementation and Results

Pursuant to *The Central Bank of the Republic of China (Taiwan) Act*, the Bank is authorized by law to adopt selective credit control measures in order to foster financial stability. Since the second half of 2020, the domestic housing market had been gathering steam and a decline in mortgage lending standards had also begun to show in some banks.

To promote financial stability and sound banking operations, to urge banks to carefully consider mortgage loan purposes and borrower status as per the directive of "efficient allocation and proper use of credit resources" under the government's Healthy Real Estate Market Plan, and to curb bank credit resources from flooding the real estate market, the Bank implemented selective credit controls on four occasions (December 2020, and March, September, and December 2021) – by amending the *Regulations Governing the Extension of Mortgage Loans by Financial Institutions*. The actions were aimed at strengthening bank management of credit risks associated with real estate lending and preventing credit resources from being used for property hoarding. They have since produced good results, with the LTV ratios significantly brought down for the regulated loan types.



## I. Implementation of the selective credit control measures

### 1. Introduction and amendments

#### (1) December 2020

The Bank noticed that there had been a disproportionate concentration on banks' real estate lending – which could draw investment away from productive economic activities and hamper sound allocation of credit resources – and an uptrend in housing loans and construction loans. In this view, the Bank sought to rein in housing loans extended to natural persons buying multiple homes and those to corporate entity homebuyers, to stop bank credit from being used for hoarding undeveloped land, and to strengthen loan standards for unsold housing units. To that end, the Bank introduced selective credit controls on housing loans to corporate entities, on new housing loans to natural persons already with two or more outstanding housing loans, on land loans, and on loans for unsold housing units, all four of which would also serve as uniform regulations to facilitate compliance among financial institutions.

#### (2) March 2021

While real estate lending continued to exhibit fast growth, corporate entities also showed a more pronounced tendency to buy multiple homes and to flip them for profit within a short time span. Accordingly, the Bank amended the selective credit control measures, including lowering the LTV ratio caps on housing loans taken out by corporate entities and on high-value housing loans, and adjusting LTV ratio caps for natural person homeowners according to the number of outstanding housing loans they already had. In addition, the Bank aimed to promote the development of industrial land lots by introducing new restrictions on loans collateralized against idle land in industrial districts.

#### (3) September 2021

To preempt an inordinate credit flow into the real estate sector for speculation and restrain related credit risk, the Bank took the precaution of adjusting credit controls, including imposing new restrictions on the second (or more) housing loans taken out by natural persons for homes in the designated "specific areas,"<sup>1</sup> to help contain overleverage and strengthen banks' credit risk management. The Bank also lowered the LTV ratio ceiling on land loans to curb them from an excessive surge. In addition, to urge land loan borrowers to begin construction promptly after land acquisition, the Bank thus stipulated that the "specific time frame" condition for idle industrial land mortgage loans to be exempt from the restrictions shall be one year.

#### (4) December 2021

In light of a still marked concentration of real estate lending in banks' loan positions, further amendments were made to ensure bank credit resources were under robust management and

<sup>1</sup> Including Taipei City, New Taipei City, Taoyuan City, Taichung City, Tainan City, Kaohsiung City, Hsinchu County, and Hsinchu City.

### Key Points of the Adjustments of Selective Credit Control Measures

Type of loans		LTV ratio caps and others (date: mm/dd/yyyy)			
		12/08/2020 - 03/18/2021	03/19/2021 - 09/23/2021	09/24/2021 - 12/16/2021	12/17/2021 -
Corporate entity	First housing loan	LTV cap: 60%; No grace period	LTV cap: 40%; No grace period	(unchanged)	(unchanged)
	Second (or more) housing loan(s)	LTV cap: 50%; No grace period			
Natural person	High-value housing loan in addition to two (or less) outstanding housing loans	LTV cap: 60%; No grace period	LTV cap: 55%; No grace period	(unchanged)	LTV cap: 40%; No grace period
	High-value housing loan in addition to three (or more) outstanding housing loans		LTV cap: 40%; No grace period	(unchanged)	(unchanged)
	Second housing loan for a home in one of the "specific areas"	(nil)	(nil)	No grace period	(unchanged)
	Third housing loan	LTV cap: 60%; No grace period	LTV cap: 55%; No grace period	(unchanged)	LTV cap: 40%; No grace period
	Fourth (or more) housing loan(s)		LTV cap: 50%; No grace period	(unchanged)	
Land loans		LTV cap: 65%, with 10% withheld until construction commences	(unchanged)	LTV cap: 60%, with 10% withheld until construction commences;  Borrower required to submit a substantive development plan for the land purchased	LTV cap: 50%, with 10% withheld until construction commences;  Borrower required to submit a substantive development plan and undertake that construction would begin within a specific time frame*
Loans for unsold housing units		LTV cap: 50%	(unchanged)	(unchanged)	LTV cap: 40%
Idle industrial district land mortgage loans		Internal rules of banks	LTV cap: 55%;  Exemption condition: (1) commencement of construction, or (2) submission of a substantive development plan and an affidavit stating that construction would take place within a specific time frame	LTV cap: 50%;  Exemption condition: (1) commencement of construction, or (2) submission of a substantive development plan and an affidavit stating that construction would take place within one year	TV cap: 40%; Exemption conditions unchanged

Note: \* On January 13, 2022, the Bank met with banks on the subject of "reinforcing management of risks associated with land loans," urging them to set up internal rules to ensure that land loan borrowers begin construction on the collateralized land lots as per the loan terms. Particularly, regarding the condition of "specific time frame," banks were asked to exercise prudence in assessing and verifying the actual time needed (up to a maximum of 18 months) for borrowers before commencing construction. Banks should clearly state in the loan contracts that if borrowers fail to begin construction within the agreed time frame, banks shall reclaim the loan amount disbursed in a gradual manner by a reasonable percentage and raise the interest rates on the loans with annual increments.

Source: Department of Banking, CBC.

not used for speculative hoarding of homes and land lots. The key adjustments included lowering the LTV ratio caps on high-value housing loans and the third (or more) housing loans for natural persons, on land loans, on loans for unsold housing units, and on idle industrial district land. Meanwhile, lending standards for land loans were tightened by requiring borrowers to commit in writing to commencing construction within a specific time frame.

## 2. Related actions

To amplify the effects of the selective credit control measures, the Bank followed up with related actions as described below.

- (1) Compiling and disclosing relevant data: Statistical data on those types of real estate lending subject to the Bank's credit controls are published on the Bank's website on a regular basis.
- (2) On-site financial examinations: Beginning from January 2021, the Bank also ran targeted examinations to ensure the banking sector's compliance with the selective credit controls. Within the year of 2021, a total of 55 such examinations were conducted.
- (3) Meeting with financial institutions: The Bank held two meetings with financial institutions in May and October 2021 on the subject of "enhancing the effectiveness of the selective credit control measures," urging banks to ensure compliance, to offer reasonable pricing based on assessments of credit risk and other factors, and to refrain from price wars. The Bank also reminded borrowers to heed their own mortgage interest burdens and be financially prepared for any future changes.
- (4) Strengthening bank risk management in property guarantee business: Acting on the recommendation of the Bank, the FSC adopted several measures to prompt banks to enhance risk management related to real estate guarantee business. These measures included a cap on the ratio of the guarantee balance of bills finance companies for real estate firms and a requirement that banks shall incorporate real estate guarantee business into the scope of their internal control and audit rules in accordance with the relevant regulations stipulated by the Bank.

## II. Implementation results of the Facility

### 1. LTV ratios brought down

Since the first rule tightening in December 2020, those types of loans under restriction have been made by domestic banks in accordance with the relevant rules, and the average LTV ratios have been significantly lower than before implementation.

### LTV Ratios of Real Estate Loans Before and After Rule Tightening

(unit: %)

Type of loans				Before (average; mainly Jan.-Sept. 2020)	After (average; Dec. 2021)	Statutory cap (Dec. 2021)	Current cap (12/17/2021 onwards)
Housing loans	Corporate entity			63.97	39.84	40	40
	Natural person	Third housing loan		63.97	53.18	55	
		Fourth (and more) housing loan(s)		63.97	47.84	50	
		High-value housing	Two (or less) outstanding housing loans	71.00	50.68	55	
			Three (or more) outstanding housing loans	71.00	39.28	40	
Land loans		Loan application made during 12/08/2020-09/23/2021		69.19	63.60	65	50
		Loan application made during 09/24/2021-12/16/2021			58.05	60	
		Loan application made from 12/17/2021 onwards			37.52	50	
Loans for unsold housing units		Loan application made during 12/08/2020-12/16/2021		51.03	33.62	50	40
		Loan application made from 12/17/2021 onwards			28.59	40	
Idle industrial district land mortgage loans				n.a.	49.78 (Oct. 2021)	50	

Notes: 1. The "before" data are based on the information for the Jan.-Sept. 2020 period as reported by the 14 banks when they came to meet with the Bank in November 2020, except for the "before" data on high-value housing loans taken out by natural persons, which were based on data reported by banks before the Bank first imposed credit controls on this type of loan in June 2012.

2. The "after" data were compiled by the Bank based on the reports submitted by 39 domestic banks.

3. "n.a." means there was no statistical compilation.

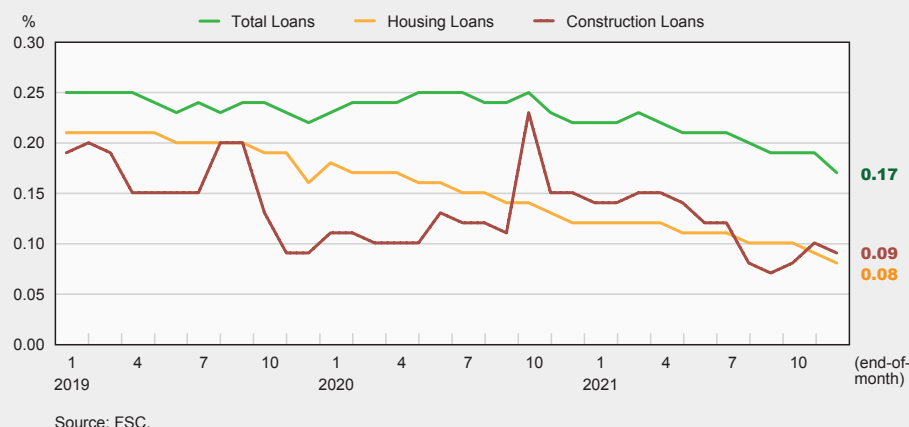
Source: Department of Banking, CBC.

## 2. Banks' real estate lending risk management considered satisfactory

### (1) Non-performing loan ratios comparatively low

As of the end of December 2021, the non-performing loan ratios for housing loans and construction loans extended by domestic banks were 0.08% and 0.09%, respectively. With both ratios lower than the overall non-performing loan ratio, which was 0.17%, domestic banks continued to exhibit good asset quality.

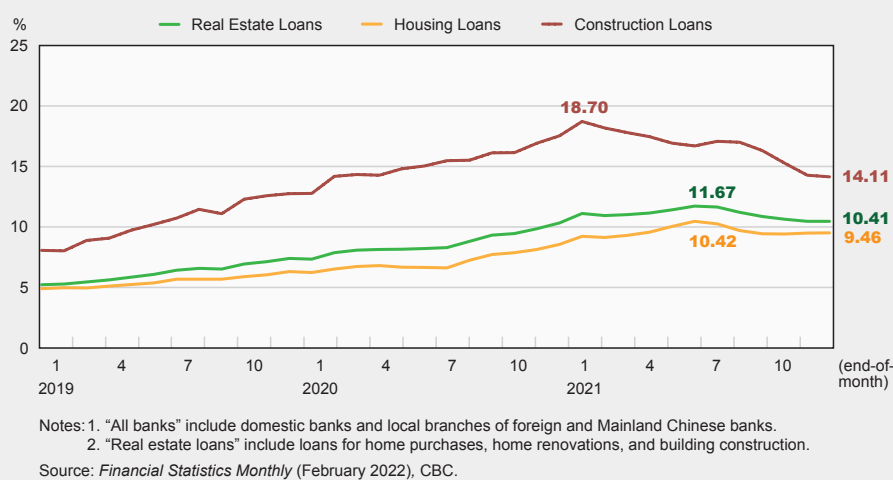
### Non-performing Loan Ratios of Domestic Banks



#### (2) Growth in real estate lending broadly slowed

At the end of December 2021, the annual growth rate of real estate lending by all banks slowed to 10.41% from the 11.67% registered at the end of June 2021. Of the components, the annual growth rate of construction loans dropped markedly to 14.11% from the 18.70% of end-January 2021, while that of housing loans dropped to 9.46% from the 10.42% of end-June 2021.

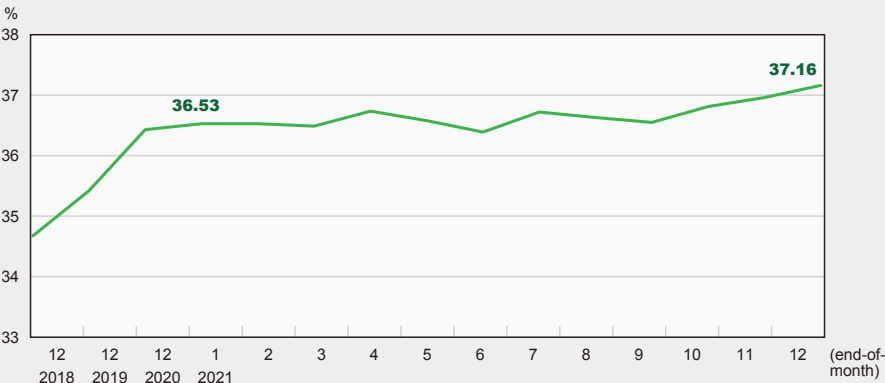
### Annual Growth Rates of Real Estate Loans (All Banks)



#### (3) Real estate loan concentration largely steady

From the beginning of 2021, the share of real estate lending in total lending by all banks stayed largely steady. The share was 37.16% at the end of December 2021, still lower than the historical high of 37.90% recorded at the end of October 2009.

Real Estate Loan Concentration (All Banks)



Notes: 1. "All banks" include domestic banks and local branches of foreign and Mainland Chinese banks.  
2. "Real estate loans" include loans for home purchases, home renovations, and building construction.  
Source: *Financial Statistics Monthly* (February 2022), CBC.

III. Conclusion: The Bank will run a rolling review and act as needed to sustain financial stability

A healthy real estate market requires coordinated efforts from all relevant government agencies to address issues from the various aspects of demand, supply, and the system. Looking ahead, the Bank will stay attentive to the developments in banks' real estate lending and in the housing market, conduct a rolling review of the selective credit control measures, and act as needed to promote sound banking operations and foster financial stability.

### 3. Foreign Exchange Management

#### Promoting the Sound Development of the Foreign Exchange Market

(1) Flexible foreign exchange rate management to maintain dynamic stability of the NT dollar exchange rate

Taiwan is a small open economy with high dependence on foreign trade and susceptible to potential impacts from sharp exchange rate fluctuations. Therefore, Taiwan adopts a managed float exchange rate regime. Under this regime, the NT dollar exchange rate is in principle determined by market forces. However, in the event of excessive exchange rate volatility, the Bank would conduct appropriate smoothing operations to stave off adverse effects for economic and financial stability and to facilitate an orderly foreign exchange market.

In recent years, massive and frequent movement of international short-term capital has become the driving force of exchange rate changes. So as to mitigate excessive exchange rate volatility and to improve market efficiency, the Bank has adopted "leaning against the wind" operations to prevent erratic flows from disrupting the foreign exchange market. A stable foreign exchange market is conducive to long-term economic stability and development.

In the first half of the year 2021, even though Taiwan was faced with a domestic flare-up of COVID-19 infections, its own outstanding export performance and the US\$1.9 trillion American Rescue Plan drove the NT dollar to appreciate against the US dollar, and created wider fluctuations of the NTD exchange rate. In the second half of the year, against the backdrop of the spread of coronavirus variants all over the world, the Fed's monetary policy tightening to combat inflation, an easing of Taiwan's pandemic outbreak, and continuous double-digit export growth, the NTD exchange rate fluctuated in a relatively narrow range. To maintain dynamic stability of the NT dollar exchange rate, the Bank continued to conduct two-way smoothing operations in the forex market. For the year as a whole, net purchases by the Bank amounted to US\$9.1 billion, and variability in the NT dollar exchange vis-à-vis the US dollar was smaller than that of major currencies such as the Singapore dollar, the Japanese yen, and the euro.

(2) Maintaining an orderly forex market and promoting sound market development

In 2021, the Bank carried on with a variety of policies to effectively manage the foreign exchange market:

- a. The Bank continued to implement the Real-Time Reporting System for Large-Amount Foreign Exchange Transactions.
- b. The Bank continued to strengthen management to ensure that forward transactions were based on real transactions.
- c. The Bank urged authorized banks to enhance their exchange rate risk management in order to reduce market exposure of individual banks and to contain systemic risk.
- d. 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**

- (1) 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.
- (2) 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 a close watch on the global economic and financial situation and adjusts the portfolio of foreign exchange reserves accordingly. Currently, financial assets denominated in US dollars 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 2021, Taiwan's total foreign exchange reserves stood at US\$548.4 billion with an increase of US\$18.5 billion or 3.5% compared to the end of 2020, mainly attributable to returns from foreign exchange reserve investments and smoothing operations. Combining the reserves held in gold valued at US\$5.6 billion, the Bank's reserves assets totaled US\$554.0 billion at the end of the year.

Foreign exchange reserves are the Bank's foreign currency claims on nonresidents. On the other hand, foreign currency claims on residents consist of US dollars held under swap agreements and foreign currency deposits and loans to domestic banks, which amounted to US\$91.9 billion, US\$43.4 billion, and US\$7.2 billion, respectively, at the end of 2021.

In terms of foreign currency liquidity, the total amount, including foreign currency claims and



gold, reached US\$700.5 billion at the end of 2021.

## Capital Flow Management

In line with its efforts to promote financial liberalization and internationalization, the Bank's foreign exchange management has mainly been focusing on maintaining the market mechanism, and financial capital can, in principle, flow freely in and out of Taiwan. As of 2021, 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 2021 included:

(1) As the Financial Supervisory Commission amended *The Act Governing Electronic Payment Institutions*, which allows electronic payment institutions and foreign migrant worker remittance institutions to undertake small amount remittance business, the Bank therefore amended both the *Regulations Governing the Declaration of Foreign Exchange Receipts and Disbursements or Transactions* and the *Directions for Banking Enterprises While Assisting Customers to Declare Foreign Exchange Receipts and Disbursements or Transactions* accordingly, effective July 1, 2021.

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

In 2021, cases of fund-raising by domestic and foreign institutions through securities issuance, approved by or filed for record to the Bank, are shown in the following table.

Institution	Fund-Raising Method	Number	Amount
Foreign Companies	IPO on TWSE & TPEx and registration on the Emerging Stock Board	15	NTD 21.48 billion
	NTD convertible bonds	9	NTD 10.37 billion
	Foreign currency-denominated bonds	48	USD 38.28 billion
		11	RMB 14.02 billion
		9	AUD 1.14 billion
		6	ZAR 4.45 billion
	Overseas convertible bonds	1	USD 0.13 billion
	Overseas depositary receipts	1	USD 0.1 billion
Domestic companies (and domestic branches)	Overseas convertible bonds	5	USD 2.97 billion
	Overseas depositary receipts	3	USD 0.52 billion

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

## (3) Approving Residents' Investments in Foreign Securities

Institution	Method/Instrument	Amount
Securities investment trust companies (SITEs)	63 domestic SITE funds (including 47 NTD-foreign multiple currency SITE funds)	NTD 1,300.8 billion (including 853.5 billion multiple currency funds)
	4 SITE private funds	NTD 4.8 billion
Life insurance companies	Non-discretionary money trusts managed by financial institutions	USD 0.6 billion
	Investment for their own accounts	USD 0.02 billion
Five major government pension funds and employment insurance funds	Investment for their own accounts	USD 7.57 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 2021, 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 2021 were as follows.

- a. At the end of 2021, 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, three branches of Mainland Chinese banks, as well as 4,647 authorized money exchangers, post offices, and financial institutions authorized to engage in basic foreign exchange business.
- b. The Bank amended the *Regulations Governing Foreign Exchange Business of Banking Enterprises* on January 28, 2021 to simplify procedures and qualifications for commercial banks to apply to become authorized foreign exchange banks. Restrictions were also relaxed for authorized banks to issue foreign currency bank debentures linked to derivatives or structured notes.
- c. The Bank amended the *Directions Governing Authorized Banks for Operating Foreign Exchange Businesses Through Electronic or Communications Equipment* on December 30, 2021. Authorized banks can undertake customers' foreign exchange business through electronic or communications equipment without making a prior application as long as such business does not involve NT dollar conversion.

## (2) Insurance Companies

As of the end of 2021, 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\$3.55 billion, or 10.3%, from the previous year to US\$37.96 billion in 2021.

## (3) Securities Firms and Bills Finance Companies

a. The Bank amended the regulations on limits on foreign currency bills and bonds as well as foreign currency borrowings and loans by bills finance companies and broadened the scope of counterparties on October 20, 2021.

b. Approved cases for securities firms and bills finance companies to conduct foreign exchange business in 2021 are listed in the following table.

Institutions	Foreign Exchange Business	Number
Securities Firms	Underwriting of international bonds denominated in foreign currency	1
	Proprietary foreign securities trading neither belonging to investment with their own funds nor for hedging needs	3
	Spot exchange transactions between NT dollar and foreign currencies	1
	Foreign currency spot exchange transactions	1
	Trading and exchanging beneficial certificates of funds	1
	Accepting orders to trade onshore and offshore funds	1
	Structured notes linked to foreign financial products	3
	Issuance of exchange traded notes tracking underlying foreign indices	1
Bills Finance companies	Auditing, underwriting, brokering, proprietary trading business of foreign currency bills	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 (concurrently operating as a leverage transaction merchant) to conduct foreign exchange business as of 2021 are shown in the following table.

Institutions	Foreign Exchange Business	Number
Investment trust and investment consulting firms	Serving as mandated institutions of private offshore funds	4
	Conducting public offer or private placement of foreign currency-denominated funds	1
Futures firms (concurrently operating as a leverage transaction merchant)	Foreign currency margin trading	1
	Contracts for difference linked to silver, foreign equities or ETFs, or foreign stock market indices	3

Source: Department of Foreign Exchange, CBC.

## (5) Foreign Exchange Brokers

To diversify equity ownership and to improve management on foreign exchange brokers, the Bank amended the *Regulations Governing Foreign Exchange Brokers* on September 14, 2021. The amendments included broadening the scope of related parties, applying the investment cap to the combined amount of investments by stipulating different investment caps according to the type of financial institution to which their related parties belong and adding in required qualifications for promoters, directors and supervisors, and responsible persons of foreign exchange brokers.

## Foreign Currency Clearing Platform

(1) 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 Chinese 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.

## (2) Domestic Development of Foreign Currency Settlement Business in 2021

Currency	Domestic Participating Units	Settlements in 2021	
		Number of Transactions	Amount
US dollar	69	1,317,040	USD 1,783.1 billion
Renminbi	60	319,596	RMB 606.6 billion
Yen	39	31,636	JPY 1,131.9 billion
Euro	39	18,034	EUR 6.2 billion
Australian dollar	30	27,175	AUD 1.3 billion

Source: Department of Foreign Exchange, CBC.

## Offshore Banking

(1) The Bank collaborated with the Financial Supervisory Commission in its amendment to the *Regulations Governing Domestic Juridical Persons Opening Accounts for the Purpose of Handling Loan-related Receipts and Disbursements in Offshore Banking Units*, including relaxing the restriction on transaction counterparties of the loan-related accounts to meet the practical need for credit business. The amended draft entered the preview process on December 8, 2021.

## (2) Financial Status

### a. Offshore Banking Units (OBUs)

At the end of 2021, the number of OBUs came to 59, and total OBU assets increased by US\$10.46 billion, or 4.4%, over the previous year to US\$249.92 billion. The net income after tax of all OBUs amounted to US\$3.22 billion, decreasing by US\$0.31 billion, or 8.8%, from a year before.

### b. Offshore Securities Units (OSUs)

At the end of 2021, the number of OSUs stood at 19, and total OSU assets reached US\$4.54 billion, a decrease of US\$1.27 billion or 21.9%. The net income after tax of the business also decreased by US\$130.9 million, or 71.2%, to US\$53.0 million for 2021.

### c. Offshore Insurance Units (OIUs)

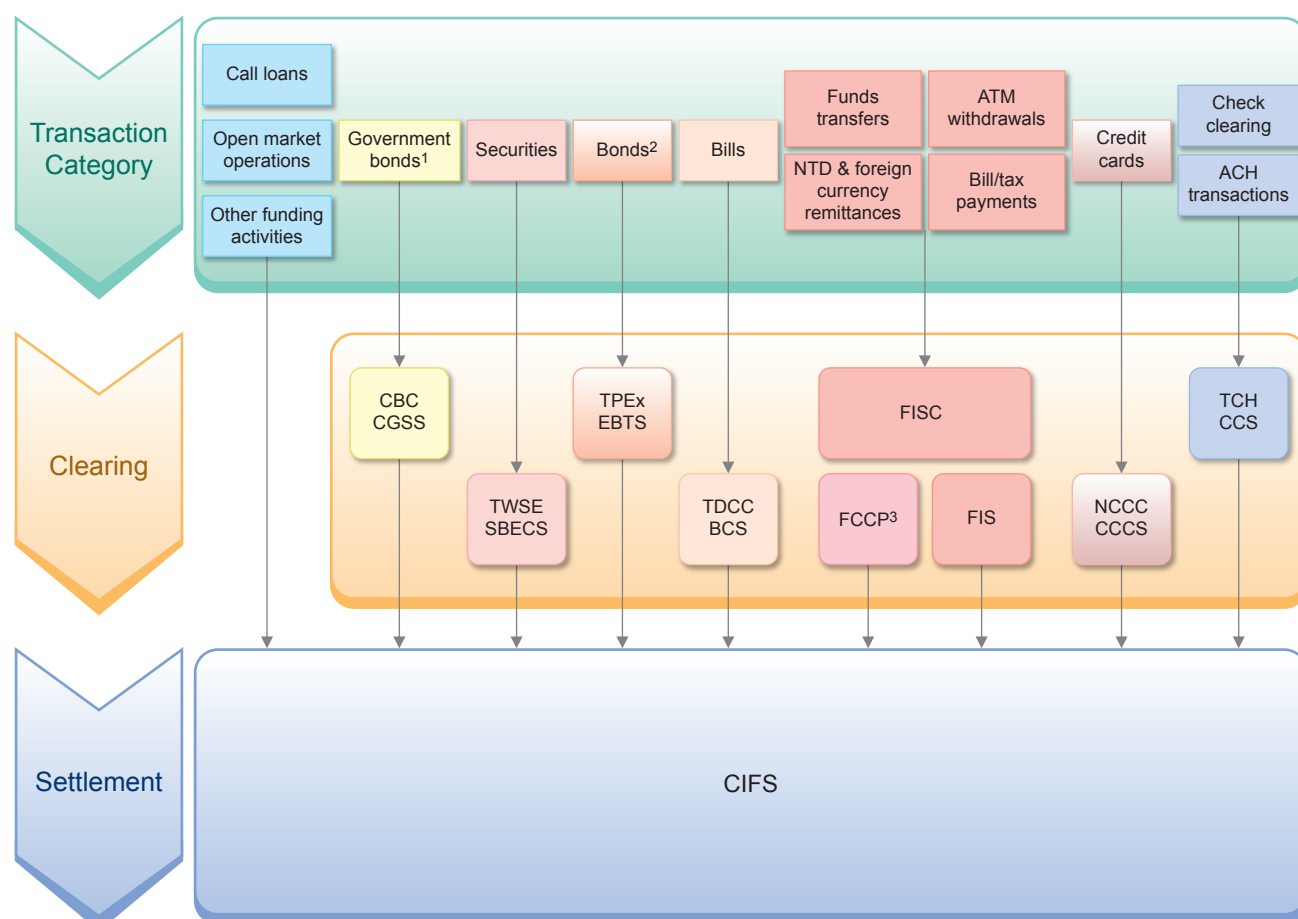
As of the end of 2021, the number of OIUs was 20, with a total amount of assets of US\$1 billion, which was US\$0.01 billion or 1.0% more than the previous year end. The net income after tax of all OIUs decreased to US\$18.3 million, a decline of US\$20.7 million or 862.5% from 2021.

## 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 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: 1. Including DVP settlements for interbank transactions of central government bonds and treasury bills.

2. Including netting settlements for outright trades of government bonds, corporate bonds, and bank debentures.

3. The CIFS is only responsible for settlements involving NT dollars, while settlements involving foreign currencies are performed by designated commercial banks.

Source: Department of Banking, 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.

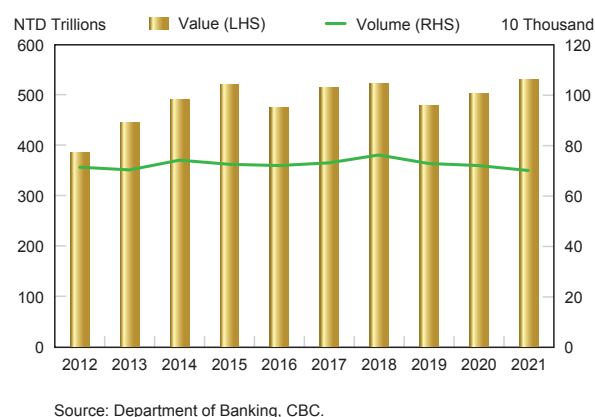
## Operation of Payment and Settlement Systems

### (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.

In 2021, two more banks joined the CIFS. At the end of 2021, there were 84 participants of the CIFS, including 69 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 2021, the number of transactions via the CIFS was 704,219, and the amount of funds transferred totaled NT\$533 trillion. Meanwhile, the daily average number of transactions via the CIFS was 2,840, decreasing by 1.97% over the previous year, whereas the daily average amount of funds transferred was NT\$2,147 billion, increasing by 6.35% from a year before.<sup>10</sup>

**Transaction Value and Volume of the CIFS**



### (2) Transactions via the CGSS

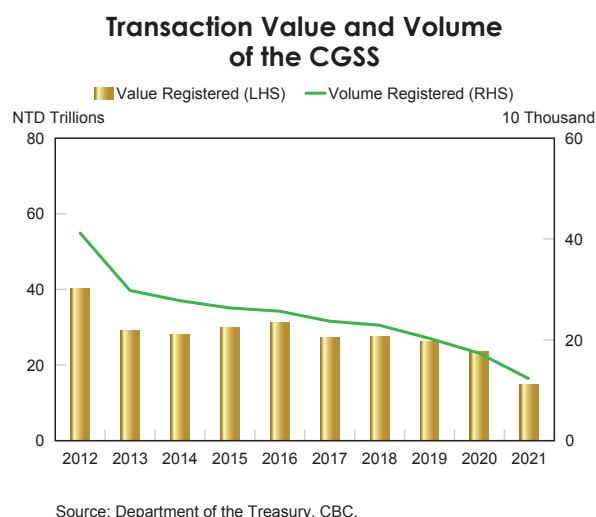
Established in September 1997, the CGSS is a system for issuance, transfer, redemption, and interest payment of book-entry central government securities. Since its inception, central government bonds have been issued in book-entry form. Treasury bills were included in this system in October 2001 and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

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 delivery-versus-payment (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

<sup>10</sup> The average transaction volume decreased primarily owing to declines in primary and secondary market transactions in central government bonds and interbank foreign exchange market transactions. On the other hand, the average transaction value increased mainly because of rises in transactions in certificates of deposit and interbank call loans.

funds transfer, effectively eliminating potential principal risk during the transaction process.

As of the end of 2021, there were 19 clearing banks with 1,678 branches that handled the registration of central government securities transfers. In 2021, this system processed 124,202 transfers with a total amount of NT\$14.9 trillion. The declines in transaction value and volume of the CGSS in 2021 were mainly caused by the impact of the domestic COVID-19 flare-up as well as market expectations of the Fed tapering faster and raising rates at the end of the year, dimming the outlook for bond markets and thus decreasing bond trading incentives.



## 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 2021:

### (1) Making Amendments to Relevant Regulations

In February 2021, the Bank amended the *Directions for the Central Bank of the Republic of China (Taiwan) to Govern Electronic Interbank Funds Transfer and Settlement* after thoroughly examining the relevant directions on payment and settlement risk management.

### (2) Monitoring the Operation of the Large-Value Payment Systems

The Bank continued to monitor the operation of the large-value payment systems in 2021. During the year, 22 applications for the CIFS operation time extensions were filed by participating institutions because of system malfunctions or other contingencies. The Bank required these institutions to improve the time extension issue.

### (3) 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 to assist in providing sound retail payment infrastructure.



#### (4) Supervising Contingency Drills Performed by Clearing Institutions

To ensure business continuity of payment and settlement systems, the Bank supervised clearing institutions conducting testing of business continuity plans and remote backup operations in case of emergency. In December 2021, the Bank, together with participants of the CIFS, performed system-wide testing of the operating procedures to ensure that the backup systems would operate smoothly when an emergency occurs and relevant personnel would be familiar with contingency procedures in response to disruptions to the system network.

#### (5) Performing Backup Drills with Clearing Banks

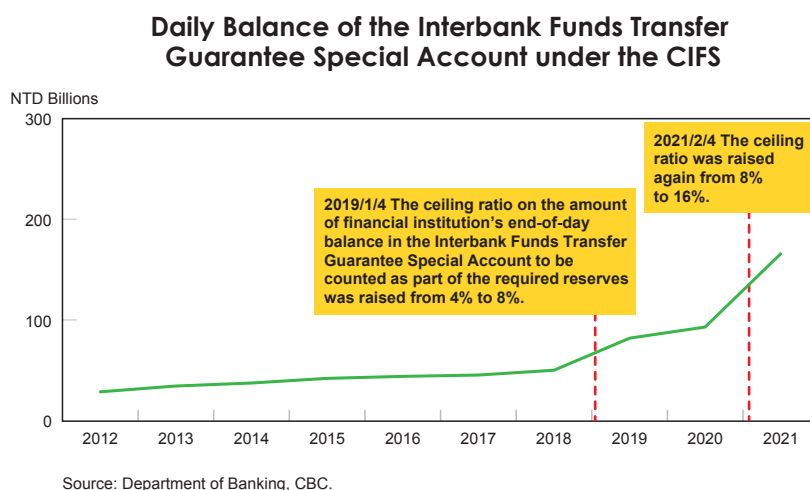
Since 2019, the Bank has supervised all clearing banks performing backup drills in the event of malfunction or line interruption of a CGSS participant's mainframe system annually. In November 2021, this drill was conducted successfully with 19 clearing banks.

#### (6) Organizing Conferences to Enhance Payment System Operation

The Bank invites the FSC and clearing institutions to jointly hold two conferences on "Promoting Sound Operation of the Payment Systems" every year. However, owing to the COVID-19 pandemic, the conference held for securities clearing institutions including the TDCC, the TPEX, and the TWSE was suspended and replaced with report submission by the aforesaid institutions. The November meeting was held as scheduled and attended by payment clearing institutions including the FISC, the TCH, and the NCCC. The Bank urged clearing institutions to strengthen business continuity planning, enhance backup drills, and allocate appropriate operational staff to maintain business continuity in response to the pandemic or other emergencies.

#### (7) Strengthening Liquidity Management of the Interbank Funds Transfer Guarantee Special Account under the CIFS

In light of significant growth in interbank retail payment transactions and the commencement of internet-only banks, the Bank raised the ceiling on the amount of financial institutions' end-of-day balance in the Interbank Funds Transfer Guarantee Special Account to be counted as part of the required reserves from 8% to 16%, effective from February 2021. In 2021, the daily average balance of the Special Account as guarantee funds to ensure the smooth functioning of the interbank retail payment system on a 24/7 basis was approximately NT\$167 billion.



## Ensuring Business Continuity of Payment and Settlement Services During the Pandemic Period

To ensure business continuity of payment and settlement systems during the pandemic, CIFS participating institutions were requested to continue complying with the guidance promulgated by the Bank. For example, participating institutions should deploy appropriate operational staff depending on the pandemic situation and take the following measures when necessary, such as implementing remote backup systems and operational measures, entrusting other participating institutions to assist with transfer or payment of funds, and transferring funds using physical checks.

Furthermore, in May 2021, the Bank reiterated the pandemic precautions for the CGSS operations which were stipulated in 2020 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.

## Continuing to Urge the FISC to Assist in Providing Sound Mobile Payment Infrastructure for Financial Institutions

To enhance information transmission and to facilitate transfer of funds between electronic payment institutions and between electronic payment institutions and financial institutions, the Bank required the FISC to construct an "inter-institutional electronic payment institutions platform," which was launched in October 2021, to provide the funds transfer service. The platform would also be expected to offer tax and bill payment services in 2022.

In addition, to improve the convenience of interbank funds transfer, the FISC launched the

"mobile number funds transfer" service in September 2020 to allow users to transfer funds by linking one mobile phone number to one bank account as a payee account. Later, the service was expanded for users to designate one mobile number to multiple bank accounts in September 2021. As of the end of 2021, 29 financial institutions provided the service of mobile number funds transfer. Among them, eight financial institutions offered users the option to link multiple bank account with one mobile number.

### **Extending the PoC Project to a General Purpose CBDC**

The Bank completed the first phase of the CBDC research, which was a technical study on the feasibility of a wholesale CBDC in June 2020. The results showed the limitations of applying distributed ledger technology (DLT) to CBDCs because the DLT's performance could not meet the needs for real-time, high-frequency, and large-scale payment transactions. The ongoing second phase is a proof-of-concept (PoC) study on a general purpose CBDC, which already entered the technical experimentation stage. A prototype for a CBDC platform was established to simulate the CBDC in retail payment use cases, and the study is expected to be completed in September 2022. The experiment results will be disclosed at an appropriate time and serve as a basis for public discussion, which the Bank plans to use to broadly solicit stakeholders' opinions to assess the possibility of CBDC issuance.

## 5. Currency Issuance

As the sole agency with the authority to issue banknotes and coins, the Bank continued in 2021 to ensure a stable currency supply to meet public demand, which is subject to domestic economic conditions, seasonal factors, and the development of noncash payment instruments. The Bank also issued commemorative coin sets featuring the Chinese zodiac of the year and national parks of Taiwan.

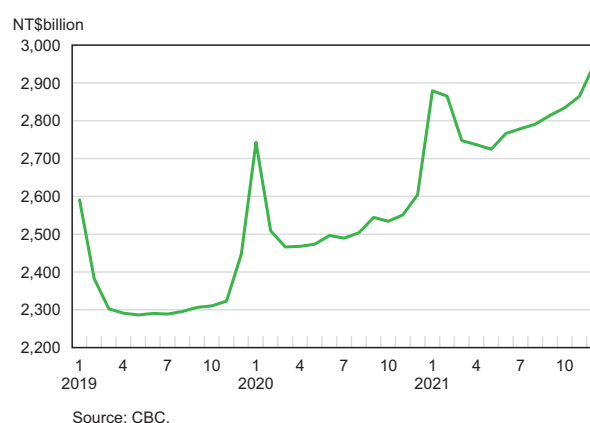
Furthermore, to mitigate the impact of the coronavirus pandemic, the Bank was instructed to design and print the Quintuple Stimulus Vouchers as part of government efforts to stimulate and revive the economy. Meanwhile, the Bank continued to promote public awareness of counterfeit deterrence and encourage the use of circulating currency through various channels. The Bank also developed easy-to-use assistive devices to aid the visually impaired in identifying NT dollar banknotes.

### Currency Issuance Increased to Meet Currency Demand

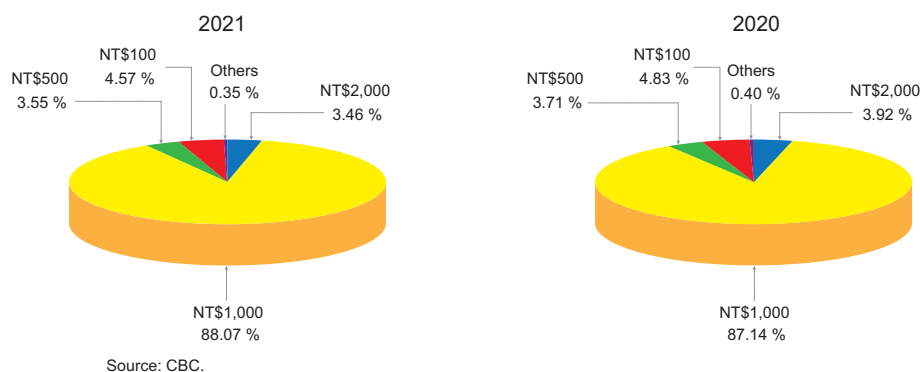
In 2021, the Bank provided an adequate amount of currency in response to currency demand. The currency issued peaked at NT\$3,065.0 billion on February 9, the last business day before the Lunar New Year holidays, reflecting a temporary seasonal surge in cash demand. At the year end, the outstanding amount of currency issued was NT\$2,948.4 billion, rising by NT\$343.9 billion or 13.21% over the previous year end.

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

Currency Issued



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

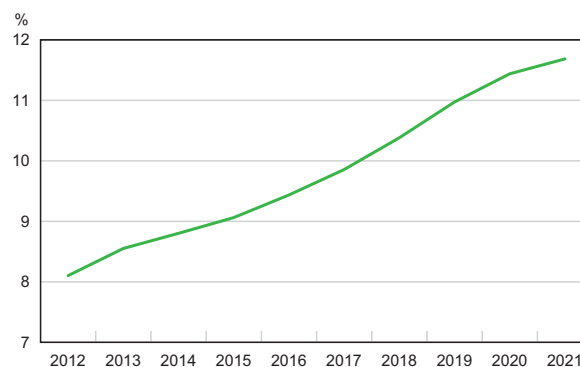


of 2021 was similar to the end of 2020. The majority of circulating banknotes went for the NT\$1,000 note with a share of 88.07%, followed by the NT\$100 and NT\$500 notes with shares of 4.57% and 3.55%, respectively.

### 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 2012 and reached 11.68% in 2021, 0.24 percentage points higher than the 11.44% of the previous year.

**The Ratio of Currency Held by the Public to GDP**



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

### Two Commemorative Coin Sets Were Issued

The Bank may also issue gold and silver coins and commemorative coins from time to time, such as for important ceremonies, national holidays, major international events, or other significant national events. During 2021, the Bank issued a casting set of coins for the Chinese Zodiac Year of the Ox and the tenth coin set of the National Parks of Taiwan series – Shoushan National Nature Park.



Source: CBC.

## The Bank was Instructed to Print Quintuple Stimulus Vouchers to Assist Reviving Consumption

During 2021, in order to assist domestically-oriented service industries to weather a midyear domestic COVID-19 flare-up and encourage consumption, the government rolled out the Quintuple Stimulus Voucher program,<sup>11</sup> effective from October 8. The Central Engraving and Printing Plant, a subsidiary of the Bank, conducted the design of the vouchers with anti-counterfeiting techniques in August, and later completed the production of 19.5 million sets of paper vouchers (each set containing three NT\$1,000 vouchers, two NT\$500 vouchers and five NT\$200 vouchers) on October 13.

### Proof Copies of Quintuple 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 2021 to enhance public understanding on the security features of NT dollar notes and coins and to promote the use of circulating currency.

<sup>11</sup> Under the voucher program, any citizen born before April 30, 2022, foreign spouse, permanent foreign resident, or accredited diplomat can register to receive the Quintuple Stimulus Vouchers in digital or paper form. These vouchers are worth NT\$5,000 and will be free of charge. Consumers could use the stimulus vouchers for dining, travel, leisure, or shopping expenses from October 8, 2021 to April 30, 2022.



While striving to improve the cleanliness of currency by inspecting returned banknotes and destroying damaged ones, the Bank also continued to urge the public to help maintain the cleanliness of circulating notes and coins.

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.

### The Bank Was Devoted to Providing the Visually Impaired with Barrier-free Access to Currency

Since 2020, the Bank has carried out a program to promote the "visually impaired-friendly NT dollar banknote identification service." The Bank made multifaceted efforts to improve the ability of visually impaired people to recognize banknotes by producing audio materials and entrusting local visually impaired support groups to assist in education, and by developing easy-to-use assistive devices such as the NT dollar banknote gauge card, which have been distributed for free to the visually impaired.

#### Raised-Dot Tactile Feature of NTD Banknotes (Left) and NTD Banknote Gauge Card (Right) for the Visually Impaired



Source: CBC.

## 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 launched the upgraded version of the Virtual Money Museum website in August 2020. For instance, the Virtual Exhibition Hall of the above website allowed viewers to browse banknotes from around the world classified in various themes.

## Annual Exhibition 2021 Titled "Human Rights Fighters" on the Virtual Money Museum Website



Source: CBC.



## 6. Fiscal Agency Functions

The Bank, as the fiscal agent of the government, offers services for the national treasury, such as 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 provide 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 4,746 national tax collection agencies set in financial institutions. In 2021, the Bank received a total of NT\$4,197.9 billion in treasury deposits, an increase of NT\$264.7 billion or 6.73% over the previous year. Payments made on behalf of the national treasury were NT\$4,183.5 billion, increasing by NT\$245.7 billion or 6.24% from 2020. At the end of 2021, the TDA balance was NT\$67.7 billion, an increase of NT\$14.3 billion or 26.78% from the end of 2020.

### 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 2021, the balance of central government agencies' deposits with the Bank amounted to NT\$184.2 billion, a slight increase of NT\$0.8 billion or 0.44% over 2020. Deposits with other delegated banks were NT\$657.5 billion at the end of 2021, increasing by NT\$38.9 billion or 6.29%.

### 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 2021, the Bank conducted 20 issues of central government bonds in book-entry form worth

NT\$617.0 billion. Of this amount, 10-year bonds accounted for the lion's share of 34.04%, with NT\$210.0 billion, followed by 20-year bonds, representing a share of 21.07% with an amount of NT\$130.0 billion.

In addition, the Bank paid NT\$467.0 billion in principal and NT\$88.1 billion in interest for central government bonds. At the end of 2021, the outstanding amount of central government bonds was NT\$5,674.5 billion, an increase of NT\$150.0 billion or 2.72% from the previous year end.

### **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 2021, the Bank conducted 10 issues of book-entry treasury bills with a total amount of NT\$320.0 billion. The majority of the issuance went for 91-day bills with NT\$165.0 billion, or a share of 51.56%. At the end of 2021, the outstanding amount of treasury bills was NT\$115.0 billion, a decrease of NT\$10.0 billion or 8.00% from the end of 2020.

## 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 adopts appropriate policies accordingly, in a timely manner to achieve the operational goal of financial stability. The following are the main tasks conducted in 2021.

### On-Site Examination

Targeted examinations in 2021 were conducted on real estate mortgage loans and related fund flows, loan pricing policies, foreign exchange inward and outward remittances, customers' foreign exchange settlement of loans from abroad, derivatives transactions involving NTD exchange rates, deficiency corrections for forward exchange transactions, and counterfeit money processing of NTD and foreign currencies, etc.

### 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 in 2021 was on violations of the *Regulations Governing the Extension of Mortgage Loans by Financial Institutions*, followed up by administrative actions by the Bank.

### 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 2021 included the following:

- (1) To strengthen its effectiveness of off-site monitoring of domestic banks, the analytical items and principles of the report auditing system CARSEL were reviewed and modified.
- (2) Relevant reports and their analytical categories of financial institutions were modified in accordance with the amendments to "the Methods for Calculating Bank's Regulatory Capital and Risk-Weighted Assets" and the *Regulations Governing Foreign Bank Branches and Representative Offices*, as well

as the announcements and modifications of related regulations and administrative orders including the *Regulations Governing Domestic Juridical Persons Opening Accounts for the Purpose of Handling Loan-Related Receipts and Disbursements in Offshore Banking Units*.

- (3) In accordance with the revisions to the *Country Exposure Report* and its related analytical programs, banks were required to submit the completed Reports through the Bank's Financial Information Online Reporting System.

### **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)* and *Business Overview of Financial Institutions (Yearly)*. All related information is disclosed on the Bank's website and available for inquiry and download, with the aim of strengthening information transparency of financial institutions' operations and to reinforce market discipline.

### **Financial Stability Assessment**

The Bank regularly conducts analysis on commercial banks' business operations and their risk exposure so as to identify potential risks to the 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.

To enhance analytical effectiveness regarding financial stability, the Bank continued to improve the graphical user interface (GUI) of credit and market risk models and estimated domestic banks' value at risk (VaR) and unexpected losses from related risks, so as to capture the vulnerability of the banking system and to take preemptive measures.

In addition, climate change-related issues, which have increasingly drawn supervisory authorities' attention, have created new challenges and risks to central banks' conduct of monetary policy and the statutory mandate to maintain financial stability. In this view, the Bank devised strategies for addressing climate change issues, aiming to mitigate the impacts of related risks on domestic economic and financial systems so as to maintain financial stability and foster sustainable development of Taiwan's economy.

### **International Cooperation in Financial Supervision**

In 2021, the Bank continued to actively engage in international cooperation related to financial supervision, such as attending the 12<sup>th</sup> SEACEN Meeting of Deputy Governors in Charge of Financial

Stability and Banking Supervision, the 23<sup>rd</sup> SEACEN-FSI Conference of the Directors of Supervision of Asia-Pacific Economies, and the 34<sup>th</sup> Meeting of Directors of Supervision of SEACEN Members (all held in virtual format). The Bank's delegates also attended international teleconferences, online courses, and webinars on financial supervision and financial stability.

## 8. Participation in International Activities

The Bank's endeavors to take part in international activities continued in 2021. 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 2021, the Bank attended the 57<sup>th</sup> SEACEN Governor's Conference held virtually on December 6. At this conference, the Bank exchanged views with other member banks on the deep economic and financial impact of the COVID-19 pandemic on the global economy, and reaffirmed its commitment to help mitigate the pandemic's impact through policy responses on macroeconomic and financial fronts.

The Bank also attended the 12<sup>th</sup> SEACEN Online High-Level Seminar and Meeting of Deputy Governors of Financial Stability and Supervision during August 18 to 19.

In the meantime, the Bank participated in the meetings held virtually by other international organizations, such as the CABEI's 61<sup>st</sup> Ordinary Meeting of the Board of Governors on September 3, and the BIS' 91<sup>st</sup> Annual General Meeting on June 28 and 29.



# *Chronology of Events of the CBC in 2021*



## Chronology of Events of the Central Bank of the Republic of China (Taiwan)<sup>1</sup> in 2021

Date	Event
Jan. 21	The CBC issued a commemorative coin set for the Xin Chou Year of the Ox (2021).
25	The CBC raised the ceiling ratio for the daily balance of the "interbank funds transfer guarantee special accounts" of financial institutions to be counted as part of the required reserves from 8% to 16%, effective from February 4, 2021.
28	The CBC amended the <i>Regulations Governing Foreign Exchange Business of Banking Enterprises</i> to simplify procedures and qualifications for commercial banks to apply to become authorized foreign exchange banks and to relax relevant restrictions so as to allow authorized banks to issue foreign currency bank debentures linked to derivatives or structured notes, effective from January 30, 2021.
Feb. 5	The CBC imposed punitive sanctions on four branches or subsidiaries of foreign banks for violating the CBC's regulations when conducting NTD forward exchange transactions, effective from February 8, 2021.
18	The CBC increased the monthly bidding amount for 2-year certificates of deposit from NT\$40 billion to NT\$60 billion from February 2021 onwards.
Mar. 18	<p>The CBC's Board decided to adopt the following measures:</p> <ol style="list-style-type: none"> <li>1. Keeping 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.</li> <li>2. Amending the <i>Regulations Governing the Extension of Mortgage Loans by Financial Institutions</i>, including lowering the LTV ratio caps on housing loans extended to corporate entities and on high-value housing loans and the third (or more) housing loans taken out by natural persons, and introducing a new LTV ratio ceiling on mortgage loans for idle land in industrial districts, effective from March 19, 2021.</li> </ol>

<sup>1</sup> Herein referred to as the CBC.

Date	Event
Mar. 19	The CBC amended the " <i>Regulations for the Central Bank of the Republic of China (Taiwan)'s Handling of the Special Accommodation Facility to Support Bank Credit to SMEs Affected by the Coronavirus Disease (COVID-19)</i> " (hereinafter the Special Facility Regulations) to extend the expiry date of the facility to December 31, 2021.
Apr. 15	The CBC increased the monthly bidding amount for 2-year certificates of deposit from NT\$60 billion to NT\$80 billion from April 2021 onwards.
27	The CBC reappointed Mega International Commercial Bank as the clearing bank for foreign currencies other than the US dollar, the RMB, the Japanese yen, and the euro settled on the foreign currency clearing platform.
May 7	The CBC met with 36 domestic banks to urge them to reinforce risk management associated with real estate loans subject to the CBC's selective credit controls and to comply with the relevant regulations and the risk-based pricing rule.
Jun. 3	The CBC amended the Special Facility Regulations, including expanding the size of the facility to NT\$400 billion, extending the deadline for SME applications to December 31, 2021, and stretching the applicable duration of preferential interest rates on newly-approved cases through to June 30, 2022. Those amendments were effective from June 4, 2021.
17	<p>The CBC's Board decided to keep 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.</p> <p>The CBC amended the name and the content of the <i>Regulations Governing the Establishment and Audit of Reserves on Stored Value Funds Received by Specialized Electronic Payment Institutions</i>, including broadening the scope of specialized electronic payment institutions and modifying the calculation method of reserve requirements on stored value funds, effective from July 1, 2021.</p>
23	The CBC amended the Special Facility Regulations to increase the maximum

Date	Event
	loan amount for each small-scale business entity from NT\$0.5 million to NT\$1 million, effective from June 24, 2021.
Jun. 29	To simplify administrative procedures and to conform with the amendment to <i>The Act Governing Electronic Payment Institutions</i> , which allows electronic payment institutions and foreign migrant worker remittance institutions to engage in domestic and foreign small-amount remittances business, the CBC amended the <i>Regulations Governing the Declaration of Foreign Exchange Receipts and Disbursements or Transactions</i> and the <i>Directions for Banking Enterprises While Assisting Customers to Declare Foreign Exchange Receipts and Disbursements or Transactions</i> , effective from July 1, 2021.
Aug. 24	The CBC signed an agreement of cooperation with the Central Bank of Paraguay.
Sep. 14	The CBC amended the <i>Regulations Governing Foreign Exchange Brokers</i> , strengthening the management of foreign exchange brokers while upholding the principle of dispersion of share ownership by imposing shareholding limits on the combined amount invested by both the investor and the investor's related parties, effective from September 16, 2021.
23	<p>The CBC's Board decided to adopt the following measures:</p> <ol style="list-style-type: none"> <li>1. Keeping 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.</li> <li>2. Amending the <i>Regulations Governing the Extension of Mortgage Loans by Financial Institutions</i>, including removing the grace period for a second home loan taken out by a natural person for housing located in the stipulated specific areas, and lowering the LTV ratio caps on land loans and mortgage loans for idle land in industrial districts, effective from September 24, 2021.</li> </ol>
Oct. 1	The CBC met with 36 domestic banks and the National Federation of Credit Cooperatives, R.O.C., to urge stronger risk management of real estate loans in accordance with the CBC's selective credit controls and reiterated the

Date	Event
	importance of observing the risk-based pricing rule.
Oct. 29	To continue helping pandemic-hit SMEs through the special accommodation facility, the CBC announced that financial institutions having received applications before the deadline of December 31, 2021 would remain eligible for the special facility's accommodations.
Nov. 11	The CBC issued the New Taiwan dollar uncirculated coin set of the National Parks of Taiwan Series - Shoushan National Nature Park.
15	The CBC reduced the monthly bidding amount for 2-year certificates of deposit from NT\$80 billion to NT\$60 billion from November 2021 onwards.
Dec. 16	<p>The CBC's Board decided to adopt the following measures:</p> <ol style="list-style-type: none"> <li>1. Keeping 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.</li> <li>2. Amending the <i>Regulations Governing the Extension of Mortgage Loans by Financial Institutions</i>, including lowering the LTV ratio caps on high-value housing loans and third (or more) housing loans taken by natural persons, land loans, loans for unsold new housing units, and mortgage loans for idle land in industrial districts, effective from December 17, 2021.</li> </ol> <p>The CBC amended the Special Facility Regulations, effective from December 16, 2021. For the facility's accommodations to banks, those due for repayment by December 31, 2021 would be rolled over to June 30, 2022.</p>
30	The CBC amended the <i>Directions Governing Authorized Banks for Operating Foreign Exchange Businesses Through Electronic or Communications Equipment</i> , removing the requirement of prior approval for authorized banks to engage in foreign exchange business through electronic or communications equipment that do not involve foreign exchange settlement against the New Taiwan dollar, effective from December 30, 2021.

# Financial Statements of the CBC

## 1. Balance Sheet

Unit: NTD Millions

	December 31 2021	December 31 2020	Change	
			Amount	%
<b>Assets</b>				
Foreign Assets	15,338,720	15,261,054	77,666	0.51
Due from Domestic Banks	1,216,264	1,191,798	24,466	2.05
Loans and Accommodations to Financial Institutions	630,665	444,367	186,298	41.92
Other Assets	1,663,710	1,121,045	542,665	48.41
<b>Total Assets</b>	<b>18,849,359</b>	<b>18,018,264</b>	<b>831,095</b>	<b>4.61</b>
<b>Liabilities</b>				
Currency Issued	2,948,411	2,604,479	343,932	13.21
Deposits of Financial Institutions	2,412,509	2,243,078	169,431	7.55
Certificates of Deposit Issued	9,482,650	9,168,090	314,560	3.43
Redeposits of Financial Institutions	2,152,960	2,152,262	698	0.03
Government Deposits	252,394	236,888	15,506	6.55
Other Liabilities	398,448	454,586	-56,138	-12.35
<b>Total Liabilities</b>	<b>17,647,372</b>	<b>16,859,383</b>	<b>787,989</b>	<b>4.67</b>
<b>Equity</b>	<b>1,201,987</b>	<b>1,158,881</b>	<b>43,106</b>	<b>3.72</b>
<b>Total Liabilities and Equity</b>	<b>18,849,359</b>	<b>18,018,264</b>	<b>831,095</b>	<b>4.61</b>

Note: Figures for 2021 are unaudited. Figures for 2020 are audited by the National Audit Office.

## 2. Income Statement

Unit: NTD Millions

	2021	2020
<b>Income</b>		
Interest Income	290,943	322,914
Fee Income	111	107
Foreign Exchange Gains	12,412	45,423
Revenue from Trust Investment	6,732	15,101
Subsidiaries' Investment Income	1,945	1,908
Others	437	631
<b>Total Income</b>	<b>312,580</b>	<b>386,084</b>
<b>Expenses</b>		
Interest Expenses	48,355	57,577
Fee Expenses	221	221
Expenses for Coin Issuance	1,385	1,269
Expenses for Banknote Issuance	4,088	2,946
Allowances	48,568	104,797
Operating Expenses	1,459	1,463
Administrative Expenses	523	522
Others	1,325	1,040
<b>Total Expenses</b>	<b>105,924</b>	<b>169,835</b>
<b>Net Income</b>	<b>206,656</b>	<b>216,249</b>

Note: Figures for 2021 are unaudited. Figures for 2020 are 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 <sup>(1)</sup> Total Score of Monitoring Indicators  (Average)	TIER <sup>(2)</sup> Business Composite Index (2006=100) (Average)		Economic Growth Rate  (%)	Per Capita GNI  (US\$)	Unemploy- ment Rate  (%)	Manufacturing Sector			Annual Rate of Change in Industrial Production Indices	
		Manufacturing Sector	Services Sector				Labor Productivity Index (2016=100)	Average Monthly Earnings (Per Employee) (NT\$)	Unit Labor Cost Index Growth Rate (%)	General (%)	Manufacturing (%)
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	3.06	26,561	3.73	105.80	53,776	0.95	-0.35	-0.45
2020	24	94.11	91.64	3.36	29,202	3.85	114.86	54,004	-7.11	7.08	7.56
2021	37	104.20	96.97	6.45	33,638	3.95	129.23	57,385	-6.26	13.42	14.26

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 / GDP	External Trade of Goods on Customs Basis (in US Dollars)									
		Capital Formation	Private Sector			Annual Rate of Change in Total Exports					Annual Rate of		Trade Balance	Annual Rate of Change	
						Change in Total Imports	Capital Equipment	Change in Total Imports	Capital Equipment	Balance	of Change				
(%)	(%)	(%)	(%)	(%)	(%)	(%)	China and H. K. (%)	U. S. (%)	Japan (%)	Europe (%)	ASEAN <sup>(3)</sup> (%)	(%)	(%)	(US\$m)	(%)
2012	1.92	-1.28	1.38	30.45	22.69	-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	22.54	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	22.56	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	21.73	-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	21.63	-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	20.97	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	22.24	5.9	6.1	7.4	10.8	8.7	-0.7	10.7	3.2	49,216	3.9
2019	2.25	11.12	12.03	34.74	23.80	-1.5	-4.2	17.1	2.1	-4.8	-7.2	0.3	21.2	43,506	-5.3
2020	-2.53	5.91	4.53	38.39	24.19	4.9	14.6	9.3	0.5	-5.5	-1.3	0.2	3.7	58,978	10.1
2021	-0.38	14.68	19.05	42.22	26.85	29.4	24.8	30.0	24.8	36.8	32.0	33.2	31.0	65,421	26.3

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 <sup>(4)</sup>	Wholesale Price	Import Price	Export Price	Amount	Annual Growth Rate <sup>(5)</sup>	Amount	Annual Growth Rate	Amount	Annual Growth Rate
				(in NT Dollars)		(NT\$bn)	(%)	(NT\$bn)	(%)	(NT\$bn)	(%)
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	-7.77	-10.23	-7.21	4,547.3	8.59	20,340.8	10.34	47,803.2	5.84
2021	1.96	1.33	9.44	10.53	6.54	5,101.3	12.18	23,654.1	16.29	51,970.7	8.72

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 both in required reserve ratios (on Jan. 1, 2011), and in the share of required reserves deposited with the Bank's B account (Nov. 2001).

deposited with the banks's account (Nov. 2007).

Year	IV. Money, Banking and Finance										
	Monetary Financial Institutions (End of Period)				Non-performing Loan Ratio of Domestic Banks <sup>(6)</sup>  (End of Period)  (%)	Interest Rates (%)					
	Deposits		Loans & Investments			CBC's Discount Rate  (End of Period)	Interbank  Call Loan  Rate	31-90 Days CP Rate in Secondary Market	10-year Gov't Bond Rate in Secondary Market	Five Major Domestic Banks <sup>(7)</sup>	
	Amount  (NT\$bn)	Annual Rate of Change  (%)	Amount  (NT\$bn)	Annual Rate of Change  (%)						1-year Deposit Rate (End of Period)	New Loan Rate  (Average)
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
2021	52,757.0	7.19	40,999.6	8.39	0.17	1.125	0.081	0.26	0.44	0.82	1.20

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 Cooperative Bank, First Commercial Bank, Hua Nan Commercial Bank and Land Bank of Taiwan. The deposit/loan interest is based on a floating basis of 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 <sup>(8)</sup> 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\$bn)	Outstanding  (End of Period)  (NT\$bn)	Total Trading Value		Current Account	Capital Account	Financial Account	Changes in Reserve Assets			
					Share of Outright Transactions (%)					(US\$mn)	(End of Period) (US\$bn)	(End of Period) (NT\$/US\$)
2012	7,481	20,238.2	7,575.1	86,551.7	21.30	42,925	-24	31,465	15,484	403.17	29.136	23.39
2013	8,093	18,940.9	8,104.6	69,226.1	19.78	49,937	67	41,053	11,318	416.81	29.950	28.93
2014	8,992	21,898.5	8,726.8	68,032.4	21.62	60,607	-8	50,531	13,015	418.98	31.718	31.29
2015	8,959	20,191.5	8,859.5	67,725.7	22.76	72,730	-5	64,972	15,011	426.03	33.066	33.35
2016	8,763	16,771.1	8,720.0	66,817.9	21.81	71,222	-9	58,490	10,663	426.03	32.279	28.92
2017	10,208	23,972.2	8,801.5	61,583.5	20.36	83,053	-12	74,992	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	58,810	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	57,659	16,658	478.13	30.106	32.45
2020	12,075	45,654.3	9,473.0	52,504.7	21.01	94,956	-9	46,251	48,342	529.91	28.508	33.08
2021	16,938	92,290.0	10,056.8	36,138.8	19.68	116,123	3	104,604	20,993	548.41	27.690	33.02

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. *Statistical Abstract of National Income*, DGBAS, Executive Yuan, February 2022.

5. *Monthly Statistics of Exports and Imports*, Ministry of Finance, February 2022.

6. Banking Bureau, Financial Supervisory Commission.

7. *Financial Statistics Monthly*, CBC, February 2022.

8. *Balance of Payments*, CBC, February 2022.

9. Taiwan Stock Exchange Corporation.

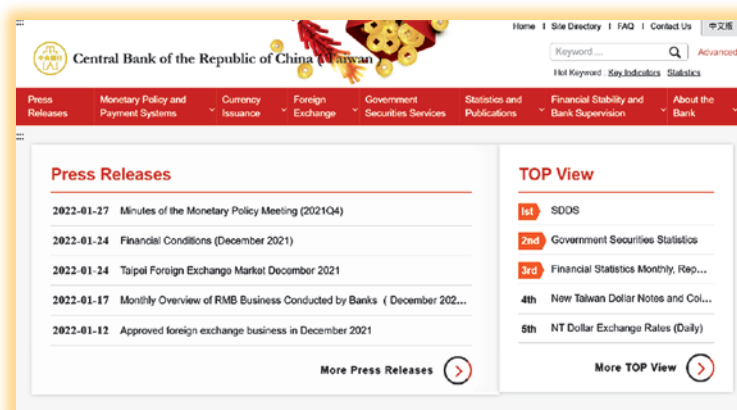


## APPENDIX: CENTRAL BANK OF THE REPUBLIC OF CHINA (TAIWAN) WEBSITE

### I. The Bank's Homepage

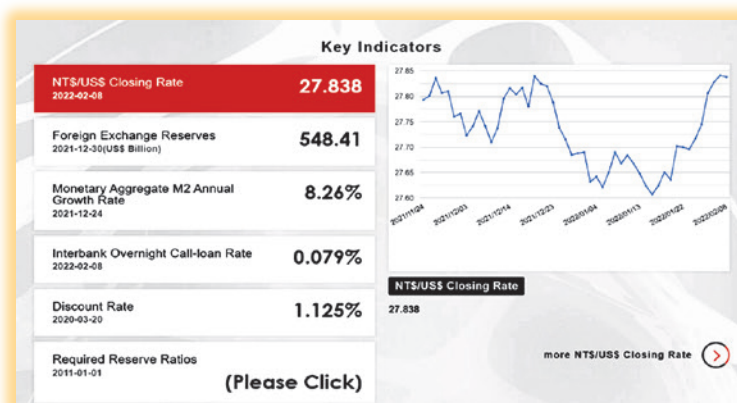
 <https://www.cbc.gov.tw/en/mp-2.html>

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

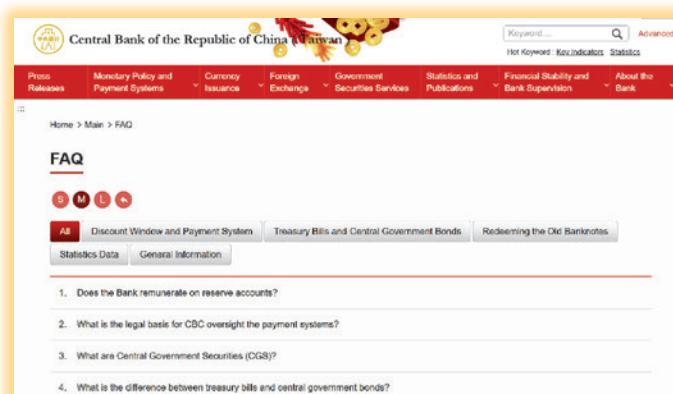
Displays data charts of the Bank's key indicators that are periodically updated, such as the NT\$/US\$ closing rate, foreign exchange reserves, the monetary aggregate M2 annual growth rate, and interest rates.



## ▼ 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 is updated as needed.

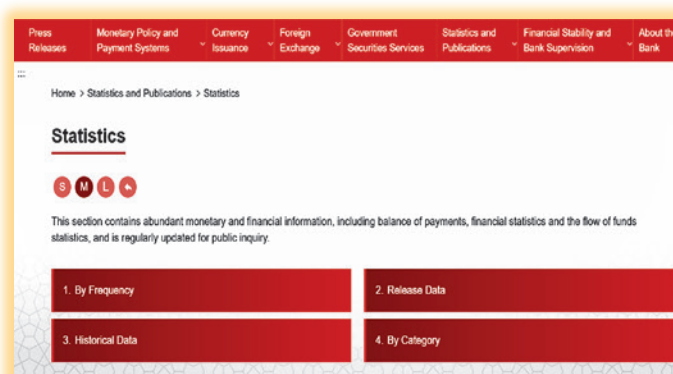


## II. Statistics and Publications

## ▼ 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 here 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.



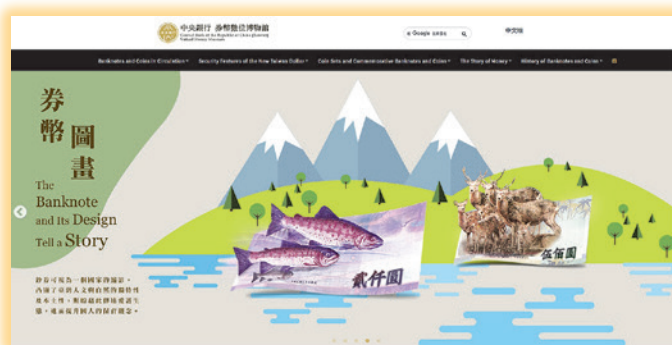
## IV. Virtual Money Museum and Virtual Exhibition Hall

### ▼ 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 has been 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>

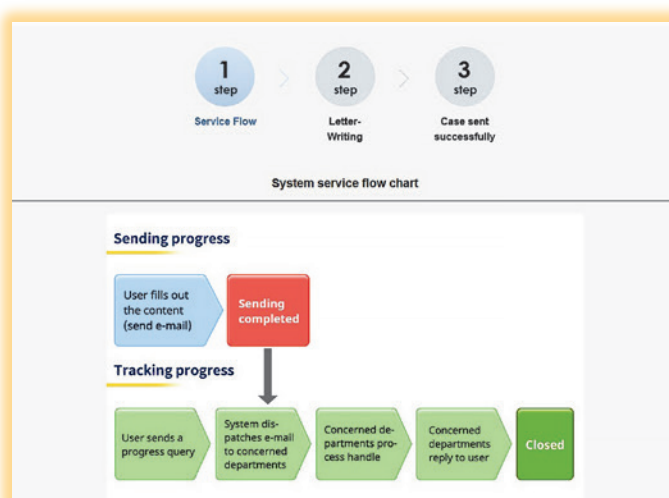
Allows viewers to browse banknotes featured in various themes.



## 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	<a href="https://www.facebook.com/cbc.gov.tw/">https://www.facebook.com/cbc.gov.tw/</a>
YouTube	<a href="https://www.youtube.com/user/TheCBCTube">https://www.youtube.com/user/TheCBCTube</a>
Flickr	<a href="http://www.flickr.com/photos/cbcbank">http://www.flickr.com/photos/cbcbank</a>
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iOS App	<a href="https://appsto.re/tw/LyAH6.i">https://appsto.re/tw/LyAH6.i</a>

## Abbreviations

BIS	Bank for International Settlements
BoJ	Bank of Japan
BoK	Bank of Korea
BOP	Balance of payments
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
ECB	European Central Bank
ETF	Exchange traded fund
Fed	Federal Reserve (System)
Fintech	Financial technology
FISC	Financial Information Service Co., Ltd.
FSC	Financial Supervisory Commission
FX	Foreign exchange
GDP	Gross domestic product
GNI	Gross national income
IMF	International Monetary Fund
LPR	Loan prime 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
PBoC	People's Bank of China
PSB	Pioneer Stock Board
PoC	Proof of concept
PVP	Payment-versus-payment
ROC	Republic of China
SEACEN	South East Asian Central Banks
SITE	Securities investment trust enterprise
SME	Small and medium-sized enterprise
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
VaR	Value at risk
WPI	Wholesale price index

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