

Central Bank Operations



III. Central Bank Operations

1. Overview

In the first half of 2022, the outbreak of the Russia-Ukraine war and further worsening of global supply chain bottlenecks contributed to a surge in global inflation. In the second half of the year, global inflation remained elevated, and major economies such as the US continued to tighten monetary policy, with the world economy experiencing slower growth. Meanwhile, the domestic economic expansion moderated on account of softened global demand. Soaring import costs of energy and food brought the annual CPI growth rate up above 2%. Based on the assessment of economic and financial conditions at home and abroad, the Bank adopted a tight monetary policy stance in 2022 to rein in domestic inflation expectations, maintain price stability, and help foster sound economic and financial development. Therefore, the Bank raised policy rates four times throughout the year by a total of 0.625 percentage points, and increased the reserve requirement ratios on NT dollar demand deposits and time (savings) deposits twice by a total of 0.5 percentage points.

In 2022, the Bank continued to conduct the Special Accommodation Facility to Support Bank Credit to SMEs ("the Facility"). With the pandemic situation broadly stable at home, enterprises' need for such funding assistance waned. The Facility thus expired at the end of June that year as planned. The Facility has been very productive in helping SMEs sustain normal operations, maintaining financial stability, and fostering robust economic growth.

Moreover, the Bank continued implementing the selective credit control measures during the year so as to promote financial stability, rein in financial institutions' credit risk associated with real estate lending, and prevent excessive credit resources from gushing into the real estate sector. To boost the effectiveness of the existing credit controls, the Bank also adopted relevant supporting measures, such as performing on-site financial examinations, holding meetings with banks to understand their current practices, urging financial institutions to comply with relevant laws and regulations as well as credit risk-based interest rate pricing principles, and requesting financial institutions to strengthen the efforts to ensure that land loan borrowers begin construction on the collateralized land lots as per the loan terms. The Bank's tight monetary policy stance in 2022 was also conducive to enhancing the effectiveness of the selective credit controls.

In response to economic and financial conditions, the Bank continued with 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. For the year as a whole, reserve money and the monetary aggregate M2 recorded year-on-year growth of 8.91% and 7.48%,

respectively. Both readings were higher than the GDP growth rate of 2.45% over the same period, indicating sufficient market liquidity to support economic activity.

In terms of the foreign exchange (FX) market, the Fed, in view of soaring global inflation in 2022, adopted substantial rate hikes to curb inflation, triggering fire sales of risky assets worldwide. The resulting flow of capital into US dollar assets for risk aversion purposes led to the strengthening of the USD, and the NTD thus depreciated significantly. In the fourth quarter, abated inflation pressures in the US drove up investors' expectations of slower Fed rate hikes, contributing to a weaker USD, and the NTD against the USD rebounded. When the NTD exchange rate experienced more fluctuations, the Bank, in line with its statutory mandates, stepped into the FX market and conducted two-way smoothing operations as warranted to maintain dynamic stability of the NTD, with a net selling of US\$13 billion for the year. Compared with other major currencies such as the SGD, EUR, KRW, and JPY, the NTD experienced lower volatility in its exchange rate vis-à-vis the USD in 2022. Furthermore, 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 security and efficiency of the functioning of Taiwan's payment and settlement systems, the Bank continued urging financial institutions to strengthen information security of the systems and to perform drills on system backup and contingency procedures in case of emergency. With regard to promoting mobile payment, the Bank required the Financial Information Service Co., Ltd. (FISC) to collaborate with financial institutions in reinforcing mobile payment infrastructure, such as constructing the "shared platform for cross-institution electronic payment" and providing the "mobile number funds transfer" service. On the other hand, in response to emerging innovations in digital payment, the Bank has conducted a two-phase research project on central bank digital currencies (CBDCs). The second phase proof-of-concept study on a general purpose CBDC was completed in June 2022. The experiment results from the second phase will serve as a basis for the Bank's further research on the CBDC.

In the meantime, the issue of climate change has posed new challenges and risks to central banks' statutory mandates of implementing monetary policy and maintaining financial stability. Against such a backdrop, the Bank, in line with the government's goal of achieving a transition to net zero carbon emissions by 2050, released the "CBC Strategic Plan to Address Climate Change Issues" on December 30, 2022. The plan will be carried out with 11 action measures in five aspects, namely monetary policy, monetary policy operation instruments, macro-prudential policy, FX reserve management, and participation in international discussions and activities. Through this plan, the Bank aims to mitigate the impact of climate change-related risks on domestic economic and financial conditions so as to ensure financial stability and facilitate Taiwan's sustainable development.

2. Monetary Management

Tightening Monetary Policy in Response to the Impact of Surging Global Inflation on the Domestic Economy

(1) Raising Policy Rates Four Times

In the first half of 2022, the world economy witnessed a steep rise in inflation amid the outbreak of the Russia-Ukraine war and worsening global supply chain bottlenecks. In the second half of the year, global inflation remained at high levels and major economies such as the US continued with monetary policy tightening, with the global economy experiencing a slowdown. Meanwhile, Taiwan's economy registered slower growth owing to softened global demand, and surging import costs of energy and food pushed the CPI annual growth rate above 2%. Based on the above assessment, the Bank adopted a tight monetary policy stance in 2022 to rein in domestic inflation expectations, maintain price stability, and foster sound economic development. The Bank raised policy rates four times throughout the year by a total of 0.625 percentage points. At the end of 2022, the discount rate, the rate on refinancing of secured loans, and the rate on temporary accommodations were 1.75%, 2.125%, and 4%, respectively.

The Bank's Policy Rate Adjustments

Unit: %

Effective Date	Discount Rate	Rate on Refinancing of Secured loans	Rate on Temporary Accommodations
2022/ Mar.18	1.375	1.750	3.625
Jun.17	1.500	1.875	3.750
Sep.23	1.625	2.000	3.875
Dec.16	1.750	2.125	4.000

Source: *Financial Statistics Monthly* (February 2023), CBC.

(2) Increasing the Reserve Requirement Ratios on NT Dollar Deposits Twice

The Bank raised the reserve requirement ratios on NT dollar demand deposits (excluding passbook deposits from non-resident investors) and time (savings) deposits by 0.25 percentage points twice in a row, effective July 1 and October 1, 2022.

Adjustments to Reserve Requirement Ratios on Deposits

Unit: Percentage of deposits

Effective Date	Checking Accounts	Passbook Deposits	Passbook Deposits from Nonresident Investors		Savings Deposits		Time Deposits
			Amount Below the Outstanding Balance Recorded on Dec. 30, 2010.	Increment Exceeding the Outstanding Balance Recorded on Dec. 30, 2010.	Passbook	Time	
2022/ Jul.1	11.000	10.025	25.000	90.000	5.750	4.250	5.250
Oct.1	11.250	10.275	25.000	90.000	6.000	4.500	5.500

Source: *Financial Statistics Monthly* (February 2023), CBC.

Continuing Open Market Operations to Adjust Market Liquidity

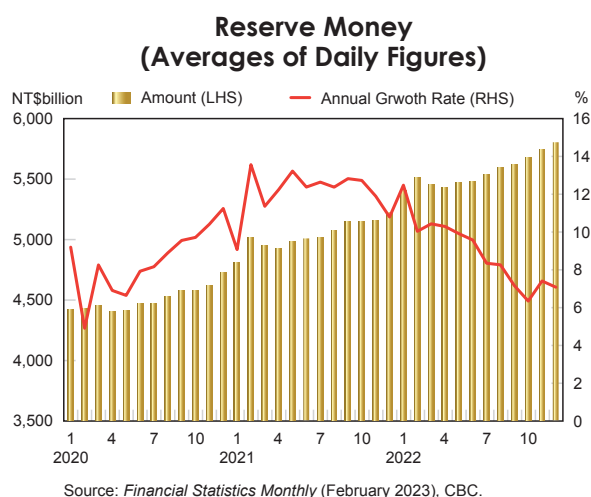
In 2022, the Bank continued to manage market funds through open market operations by issuing CDs in response to domestic economic and financial conditions, which helped to maintain market liquidity and market rates at appropriate levels.

(1) Appropriately Managing Reserve Money

The Bank continued to conduct open market operations by issuing CDs. At the end of 2022, the total outstanding amount of CDs issued by the Bank was NT\$8,601 billion. In response to banks' demand for asset allocation, from June 2022 onwards, the Bank reduced the monthly bidding amounts for 364-day and 2-year CDs from NT\$170 billion and NT\$60 billion to NT\$140 billion and NT\$25 billion, respectively.

In 2022, reserve money grew at a slower pace, with an annual growth rate of 8.91%, which was 3.18 percentage points lower than the previous year's figure. The annual average excess reserves of financial institutions in the year were NT\$71.8 billion, higher than the previous year's NT\$62.7 billion. In terms of the monthly movements of reserve money, the annual growth rates of reserve money for January and February are often more volatile because of the shift in the exact timing of the Lunar New Year holidays (e.g., the holidays occurred in mid-February in 2021, yet in late January in 2022). For the first two months of the year, reserve money posted an annual growth rate of 11.41%. From March onwards, the annual growth rate of reserve money showed a downtrend and dropped to an all-year low of 6.35% in October. In November, the annual growth rate of reserve money rose to 7.41% owing to net foreign capital inflows and an upswing in both trading value and volume in Taiwan's stock markets, and then fell back to 7.08% in December.

On the demand side, reserve money, measured on a daily average basis, increased by NT\$544 billion over the previous year. Of the components, net currency increased by NT\$315 billion and the annual growth rate rose to 12.40% from 11.99% the previous year; reserves held by financial institutions expanded by NT\$229 billion, with the annual growth rate down to 8.94% from 12.37% the previous year. As the low interest rates paid on bank deposits contributed to a low opportunity cost of holding currency for the private sector, net currency recorded continuous growth during the year.



As for reserves held by financial institutions, although the Bank raised the reserve requirement ratios twice, slower growth in demand deposits resulted in reduced demand from banks to deposit reserves, leading to a smaller increase in reserves held by financial institutions compared to the previous year.

From the supply side perspective, reserve money increased by NT\$579 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 decrease in the outstanding balance of CDs issued by the Bank and the growth in foreign assets held by the Bank, whereas decreases were due to the Bank's reduced claims on financial institutions.

(2) Overnight Call Loan Rate Moving Up with the Bank's Policy Rate Hikes

The Bank raised policy rates four times in 2022 by a total of 0.625 percentage points, bringing the overnight call loan rate up by nearly 0.5 percentage points throughout the year. As of the end of December 2022, the annual average overnight call loan rate was at 0.556%.

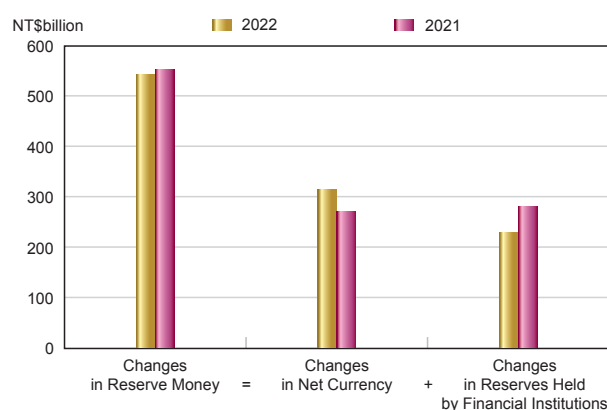
(3) Conducting Regular Small-Scale Repo Operations

The Bank conducted small-scale test repo operations on CDs and government bonds in April and October 2022 to improve operational readiness and ensure resilience of the open market operations.

(4) Continuous Growth in Monetary Aggregates, Albeit with the M2 Growth Rate Gradually Sliding

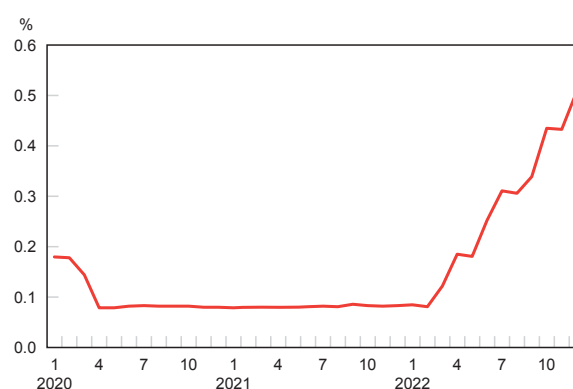
For 2022, the annual growth rate of M2, measured on a daily average basis, was 7.48%, down by 1.24 percentage points from the previous year, mainly reflecting a higher base effect, net foreign capital outflows, and slower growth in bank loans and investments, yet the M2 annual growth rate of each month was still higher than the upper boundary of the reference range at 6.5%.

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



Source: *Financial Statistics Monthly* (February 2023), CBC.

Overnight Call Loan Rate



Source: *Financial Statistics Monthly* (February 2023), CBC.

With regard to the monthly movements in 2022, a slowdown in demand deposit growth in January and weaker expansion in bank loans and investments in February combined to bring down the M2 growth rate to 7.67% in February. Later, an uptick in bank loans and investments from March to April drove up the M2 growth rate to a yearly high of 8.12% in April. In subsequent months, with net foreign capital outflows and decelerated growth in bank loans and investments, the M2 growth rate was dragged down to an all-year low of 6.83% in September.

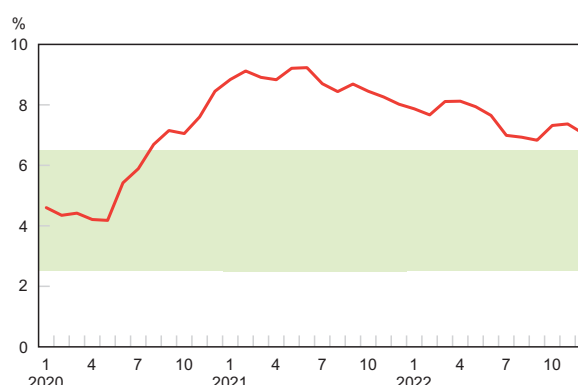
Afterwards, M2 growth trended up to 7.37% in November. This was due to faster growth both in foreign currency deposits and in bank loans and investments during October and November, as well as net foreign capital outflows turning into net inflows in November. The M2 growth rate then slipped again to 7.06% in December on account of net foreign capital outflows and softer expansion in bank loans and investments.

The annual growth rate of the monetary aggregate M1B, measured on a daily average basis, went down by 8.48 percentage points to 7.81% in 2022. The decrease in M1B growth was primarily attributable to a higher base effect, net foreign capital outflows, and weaker growth in demand deposits amid declines in the TAIEX and in trading volume on the TWSE compared to the previous year.

As for the monthly movements, the annual growth rate of M1B recorded a yearly high of 11.49% in January because of greater demand for funds prior to the Lunar New Year holidays and an increase in currency issuance.

From February onwards, except for August when the M1B growth rate rebounded owing to an increase in passbook savings deposits as a result of cash dividend payments by enterprises, the annual growth rate of M1B for the rest of the months exhibited a broad downtrend and fell to an all-year low of 4.14% in December.

Annual Growth Rate of M2



Note: Green area is the reference range for M2 growth (2.5 % to 6.5 %).

Source: *Financial Statistics Monthly* (February 2023), CBC.

Annual Growth Rate of M1B



Source: *Financial Statistics Monthly* (February 2023), CBC.

Continuing the Special Accommodation Facility to Support Bank Credit to SMEs and Conducting Exit Plans

As the pandemic situation was broadly stable at home, the need for such funding assistance waned. Although the Facility's deadline for banks to accept new SME loan applications was set at the end of 2021, SME loans granted by banks under the Facility would continue to enjoy the preferential interest rates until June 30, 2022 in order to continue easing corporate funding burdens. The Bank also designed and implemented proper exit strategies, including repeatedly reminding SMEs to make appropriate financial planning in advance to avoid the impact of interest rate hikes on capital deployment, and urging banks and the Small and Medium Enterprise Credit Guarantee Fund of Taiwan (Taiwan SMEG) to provide continuous assistance.

Under the Facility, financial institutions had approved 307 thousand applications with the disbursement totaling NT\$503.6 billion. The Facility not only helped sustain business operations of SMEs, maintain financial stability, and foster robust economic growth, but also helped balance regional development, achieve the goal of financial inclusion, and facilitate banks' expansion in other financial business.

Continuing the Selective Credit Control Measures and Adopting Supporting Measures to Strengthen Their Effectiveness

To facilitate effective allocation and reasonable utilization of credit resources as outlined in the government's Healthy Real Estate Market Plan and to prevent bank credit from flowing towards property and land hoarding, the Bank continued to implement the selective credit control measures. In addition, to strengthen the effectiveness of the control measures, the Bank adopted the following supporting measures in 2022 to enhance financial institutions' real estate-related credit risk management so as to promote financial stability and sound banking operations.

(1) Urging financial institutions to comply with regulations and implement credit risk-based interest rate pricing principles.

A. January 2022: The Bank held the meeting on "Reinforcing Management of Risks Associated with Land Loans" with 36 domestic banks and the National Federation of Credit Cooperatives, R.O.C. (NFCC), and urged banks to set up internal rules to ensure that land loan borrowers begin construction within the promised time frame.

B. July 2022: The Bank called on the NFCC and the Agricultural Bank of Taiwan to require all credit cooperatives and credit departments of farmers' and fishermen's associations to review and improve deficiencies in real estate mortgage loans, to establish internal control and auditing systems, and to strengthen personnel education and training in this regard.

C. November 2022: The Bank held a "Seminar on the Extension of Real Estate Loans," and invited

6 banks with higher outstanding real estate loans to understand current practices of the regulated real estate loans extended by banks as policymaking reference.

(2) Conducting on-site financial examinations: The Bank ran on-site examinations to ensure banks' compliance with relevant regulations and to enhance the effectiveness of the Bank's selective credit control measures. A total of 69 targeted examinations were conducted in 2022.

(3) Strengthening the supervision of construction commencement and accelerating land development and utilization.

A. January 2022: The Bank asked financial institutions to stipulate rules that require land loan borrowers to commit themselves to begin construction within a specific time frame in these institutions' internal rules. This was to strengthen the efforts to urge borrowers to accelerate construction commencement so as to prevent bank credit from flowing towards multiple land hoarding or letting land sitting idle.

B. May 2022: The Bank requested the Joint Credit Information Center to incorporate information on land loans into its information query system. The setup of the function has been completed and become available in January 2023 for financial institutions to search relevant information. This would help prevent borrowers from circumventing the requirement of commencing construction within a specific time frame through transferring loans to another lender.

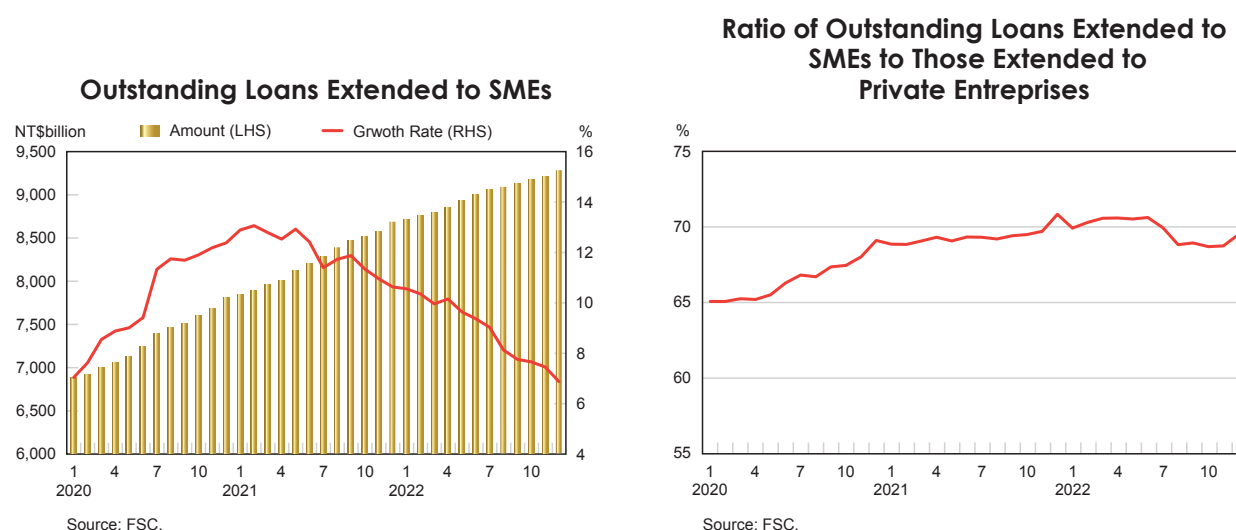
(4) The Bank suggested the FSC enhance control over financial institutions' real estate guarantee business, and such recommendations were adopted by the FSC in December 2021. In addition, in February 2022, the FSC raised risk weights on the regulated mortgage loans extended by banks and reinforced the implementation of targeted examinations toward the regulated mortgage loans, both of which helped prevent excessive inflows of credit to the real estate market.

(5) Compiling statistics: Statistics of the regulated real estate loans granted by banks were regularly released on the Bank's website.

Facilitating SME Funding

To assist SMEs in obtaining necessary funds for their operations, the Bank regularly tracked banks' lending to SMEs and participated in the formulation of the annual lending growth target under the FSC's "Program to Encourage Lending by Domestic Banks to SMEs" to urge banks to enhance their lending to SMEs.

At the end of 2022, the outstanding loans extended to SMEs by domestic banks amounted to NT\$9,283 billion, a year-on-year increase of NT\$594.5 billion that exceeded the annual lending growth target of NT\$350 billion set by the FSC for 2022 under the "Program to Encourage Lending by Domestic Banks to SMEs." However, owing to a higher base effect, the annual growth rate displayed



a downtrend. At the end of 2022, the ratio of SME loans to loans extended to all private enterprises reached 69.48%, slightly lower than the 70.83% recorded at the previous year end.

Raising the Remuneration Rates on Financial Institutions' B Reserve Accounts Four Times

The Bank raised policy rates four times in 2022, and the remuneration rates on financial institutions' B reserve accounts held with the Bank also increased accordingly. Effective December 23, 2022, reserves from demand deposits and time deposits would receive interest at 0.521% and 1.208% per annum, respectively.

Adjustments to the Remuneration Rates on B Reserve Accounts

Unit: %		
Effective Date	Demand Deposits	Time Deposits
2022/ Mar.25	0.144	0.820
Jun.24	0.271	0.955
Sep.30	0.396	1.083
Dec.23	0.521	1.208

Note: From January 2011, a zero remuneration rate has been applied to reserves originating from demand deposits from nonresident investors in financial institutions' B reserve accounts held with the Bank.

Source: Department of Banking, CBC.

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 2022, 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\$132 billion and NT\$236 billion, respectively.

Box

The Bank's Special Accommodation Facility to Help SMEs

As the COVID-19 pandemic quickly spread worldwide at the start of 2020, Taiwan, like many other economies, was hit by the resultant economic and financial impacts. In a bid to help the affected SMEs stay on track, the Bank launched the Special Accommodation Facility to Support Bank Credit to SMEs (hereinafter "the Facility"), under which banks could obtain additional funds to offer concessional loans to those SMEs in distress because of the pandemic.

I. Introduction to the Facility

The Bank's Facility provided banks with accommodations at low interest rates so that banks would in turn support SMEs by offering concessional loans guaranteed by the government's Small and Medium Enterprise Credit Guarantee Fund of Taiwan (Taiwan SMEG). In addition, different programs were designed featuring various credit lines and rate ranges for firms of different sizes. To better support SME credit needs during the pandemic, the Bank has made 15 adjustments to

SME Relief Lending Under the Bank's Special Accommodation Facility

Loan type	Secured loans to the SMEs affected by the COVID-19 pandemic as assessed by banks receiving applications			
Loan purpose	To meet funding needs of the affected SMEs in order to continue business operations			
Eligible borrowers and loan terms	Program	A	B	C
	Borrower	SME*	SME*	Small-scale business entity**
	Guarantee/ Collateral	At least 90% of guarantees covered by Taiwan SMEG	Other collateral (including at least 80% of guarantees covered by Taiwan SMEG)	100% of guarantees covered by Taiwan SMEG
	Credit line	Up to NT\$4 million	Up to NT\$16 million	Up to NT\$1 million
	Interest rate	Capped at 1%	Capped at 1.5%	Capped at 1%
	Application schedule	2020.4.1 – 2021.12.31		2020.4.20 – 2021.12.31
	<p>* SME: A domestic business entity with proper company registration, business registration, limited partnership registration, or taxation registration, and whose paid-in capital is no more than NT\$100 million or which hires fewer than 200 regular employees may apply for loans under Program A or B.</p> <p>** Small-scale business entity: A business entity with proper taxation registration and whose monthly sales amount (in any month since January 2020) does not reach the threshold for using uniform invoices may apply for loans under Program A, B or C.</p>			
Applicable time frame	April 1, 2020 to June 30, 2022 (*preferential interest rates would be applicable during this period)			
Others	SMEs which take out loans under this Facility could also apply for other credit support measures implemented by the government.			

Source: Department of Banking, CBC.

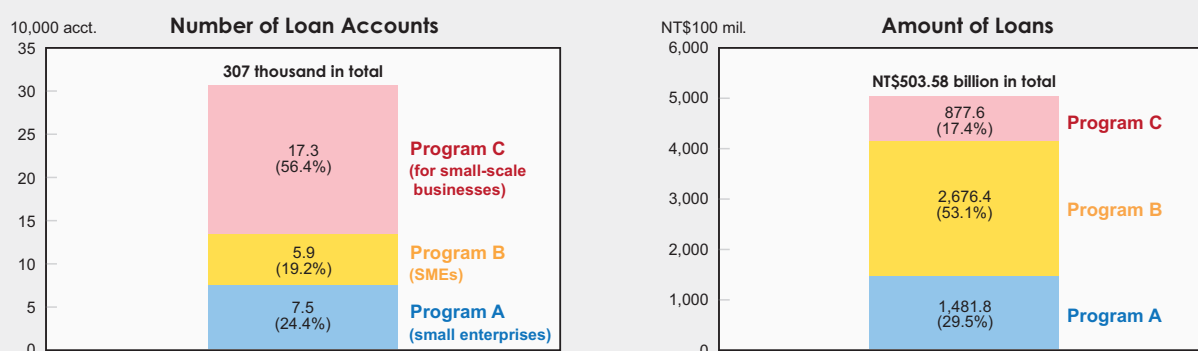
the Facility, including increasing the total amount, lowering the interest rates on accommodations, raising the ceiling for available loans, and extending the Facility's implementation duration.¹

II. Implementation of the Facility

In sum, bank credit extended under the Facility reached 307 thousand loan accounts with a total amount of NT\$503.58 billion.

1. In terms of approved cases, Program C, which had a lower approval threshold, recorded the highest number with 173 thousand loan cases approved (making up 56.4% of the total).
2. In terms of loan amount, Program B had the highest accumulated amount with NT\$267.64 billion (53.1%) given that borrowers under this Program were mostly mid-sized enterprises and thus eligible for larger loans.

Implementation Results of the Facility (2020.4.1 - 2022.6.30)



Source: Department of Banking CBC.

III. Effectiveness of the Facility

1. SME lending expanded markedly, which was seen to have helped the affected SMEs through the pandemic, thereby buttressing employment and economic growth

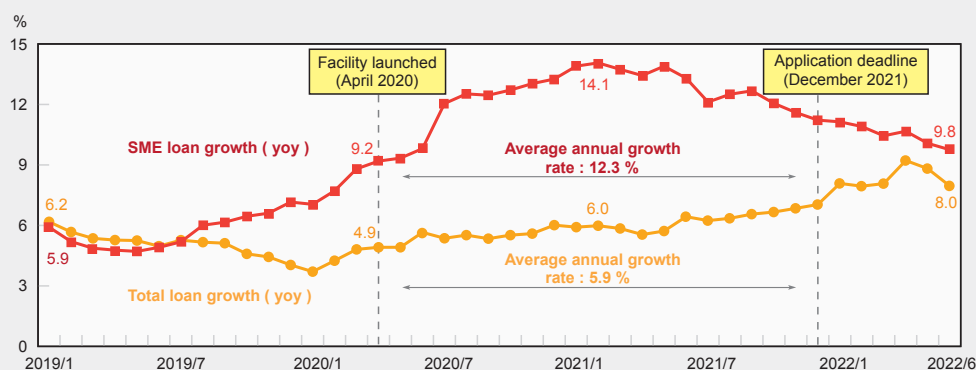
Over the course since the launch of the Facility, SME lending by domestic banks has risen markedly. The combined effect from not only the Bank's Facility but also the government's credit support measures and relief loans initiated by banks themselves helped Taiwan's banking sector to well serve its role of financial intermediation. In addition, by providing the SMEs with funds to stay afloat, the Facility contributed to stabilizing the labor market² and the financial system, as well as keeping the economy on its growth path.³

¹ The total accommodation amount was increased from NT\$200 billion to NT\$400 billion; the Facility's interest rate was cut from 0.25% to 0.1%; and the maximum loan amount allowed per borrower under Programs A, B, and C was raised from NT\$2 million, NT\$6 million, and NT\$0.5 million to NT\$4 million, NT\$16 million, and NT\$1 million, respectively.

² Taiwan's unemployment rate decreased steadily from a peak of 4.8% in June 2021 to 3.61% in January 2022.

³ With an annual GDP growth rate of 3.39% in 2020, Taiwan ranked among the few economies to record positive economic growth that year. Furthermore, the economy expanded remarkably at an 11-year record pace of 6.53% in 2021 and continued to post healthy growth of 3.41% in the first half of 2022.

Total Lending and SME Loans by Domestic Banks (Growth Rates, yoy)

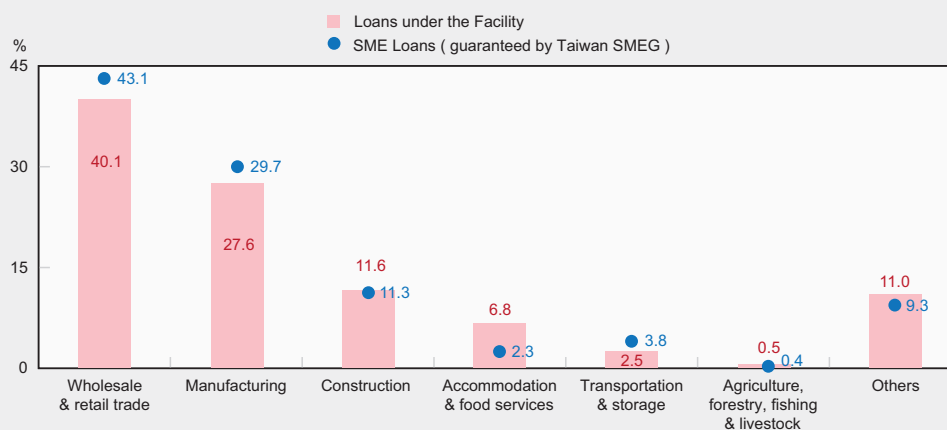


Source: FSC.

2. With credit support tailored to the needs of the affected industries, the Facility was able to help local SMEs obtain crucial financial resources, thereby bridging the rural-urban development divide and promoting financial inclusion

The Facility was aimed at facilitating loans to micro-sized firms or small-scale businesses. As the Facility streamlined underwriting processes such as credit verification and loan approval, banks were more willing to lend, thus fulfilling their role as financial intermediaries while financing the affected industries⁴ for business continuity. In addition, a regional breakdown analysis of domestic banks' SME lending showed that, in central and southern Taiwan and in Hualien, Taitung, and offshore islands, the Facility's SME credit support made up a larger share compared to total SME credit to these areas. This reflected the Facility's effect on such areas, which helped balance credit resource allocation across regions and foster financial inclusion.

SME Loans, by Industry

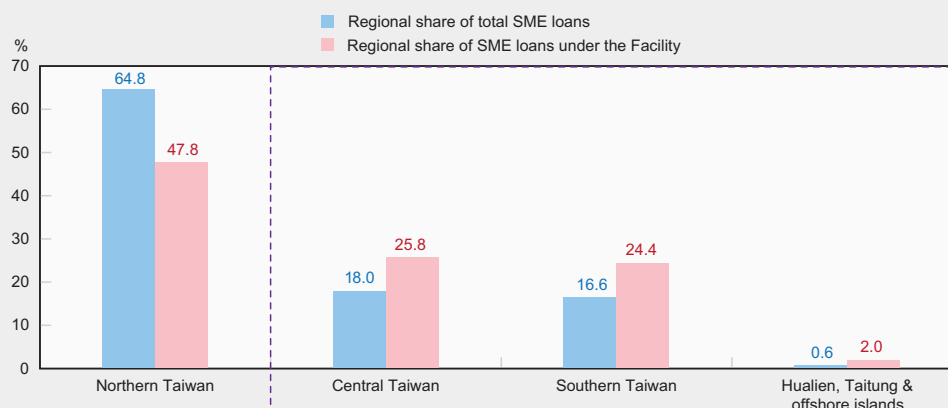


Note: SME loans refer to those underwritten by financial institutions and covered by Taiwan SMEG guarantees.

Source: Taiwan SMEG, respective lenders, and Department of Banking, CBC.

⁴ Industries hit hardest by the pandemic included wholesale and retail trade, accommodation and food services, and transportation and storage.

Facility's SME Loans and All SME Loans, by Region (of Domestic Banks)



Note: Shares of total SME loans by domestic banks are calculated using FSC statistics as of end-June 2022; shares of the Facility's SME loans are calculated using the accumulated amount of the Facility since implementation.

Source: Respective lenders, FSC, and Department of banking, CBC.

IV. Conclusion

After implementation, the Facility effectively boosted banks' willingness to underwrite SME loans as it provided banks with additional funds at very low interest rates, while also bolstering SME credit worthiness via the guarantee mechanism of Taiwan SMEG. Furthermore, the Bank conducted a rolling review to make timely adjustments as warranted and incorporated community financial institutions as part of the lenders, so as to reflect the actual lending practice and answer the needs of the pandemic-hit SMEs. Overall, the Facility brought about satisfactory outcomes, including helping SMEs ride out the storm of the pandemic, and, as a result, sustaining stable employment, fostering steady economic growth, balancing regional development, and promoting financial inclusion.

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

As Taiwan is a small open economy with high dependence on foreign trade, the Bank suitably adopts a managed float exchange rate regime to contain sharp exchange rate fluctuations. Under this regime, the NT dollar exchange rate is in principle determined by market forces. However, in the event of disorderly movements (such as mass inflows and outflows of short-term capital) and seasonal factors, the Bank would conduct appropriate smoothing operations to stave off adverse effects for economic and financial stability and to maintain an orderly foreign exchange market.

In recent years, massive and frequent movement of international short-term capital has become the main driving force of exchange rate changes. 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. The dynamic stability of the NT dollar exchange rate is viewed as conducive to long-term economic stability and sound development.

In 2022, the Russia-Ukraine war and China's strict epidemic prevention measures pushed up commodity and energy prices, causing global inflation to go up sharply. As the Fed's aggressive rate hikes to combat high inflation triggered fire sales of risky assets worldwide, a consequent capital flight to US dollar assets boosted USD strength and the NTD thus depreciated before rebounding in the fourth quarter as softer inflation pressures bolstered expectations of slower Fed rate hikes and weakened the USD.

The NTD exchange rate fluctuated significantly because of selling from foreign institutional investors as well as international economic impacts. To maintain the 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 sales by the Bank amounted to US\$13 billion. NTD exchange rate volatility was lower compared to the SGD, EUR, KRW, and JPY in 2022.

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

In 2022, the Bank carried out appropriate measures to effectively manage the foreign exchange market. These measures included:

- A. Implementing the Real-Time Reporting System for Large-Amount Foreign Exchange Transactions.
- B. Strengthening off-site monitoring management to ensure that forward transactions were based on real transactions to curb foreign exchange speculation.
- C. Urging authorized banks to enhance their exchange rate risk management in order to reduce market exposure of individual banks and to contain systemic risks.
- D. Strengthening targeted examinations 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 2022, Taiwan's total foreign exchange reserves stood at US\$554.9 billion with an increase of US\$6.5 billion or 1.2% compared to the end of 2021, mainly attributable to returns from foreign exchange reserve investments. Combining the reserves held in gold valued at US\$5.0 billion, the Bank's reserves assets totaled US\$560 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 with and loans to domestic banks, which amounted to US\$85.0 billion, US\$34.8 billion, and US\$7.7 billion, respectively, at the end of 2022.

In terms of foreign currency liquidity, the total amount (including foreign currency claims and gold) reached US\$690 billion at the end of 2022.

Capital Flow Management

In line with the 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 2022, 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. The amount of accumulated 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. For a nonresident, each transaction 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 2022 included:

(1) In line with the amendment to the *Civil Code* to lower the age of majority from 20 to 18, effective January 1, 2023, and to make clear the reporting procedures for companies and limited partnerships, the Bank amended the *Regulations Governing the Declaration of Foreign Exchange Receipts and Disbursements or Transactions*. Meanwhile, to accommodate the aforementioned amendment and to further simplify the procedures, the Bank amended the *Directions for Banking Enterprises While Assisting Customers to Declare Foreign Exchange Receipts and Disbursements or Transactions* and the *Directions for Domestic Security Firm Approved to Conduct Foreign Exchange Business While Assisting Customers to Declare Foreign Exchange Receipts and Disbursements or Transactions*. The above-mentioned amendments were effective January 1, 2023.

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

In 2022, 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	10	NTD 6.3 billion
	NTD convertible bonds	8	NTD 4.17 billion
	NTD denominated bonds	1	NTD 6.03 billion
	Foreign currency-denominated bonds	123	USD 16.53 billion
		9	RMB 2.53 billion
		9	AUD 0.59 billion
	Overseas depositary receipts	1	USD 0.39 billion
Domestic companies (and domestic branches)	Overseas depositary receipts	4	USD 1.42 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)	64 domestic SITE funds (including 44 NTD-foreign multiple currency SITE funds)	NTD 1,150.4 billion (including 822 billion in multiple currency funds)
	2 SITE private funds	NTD 26 billion
Life insurance companies	Non-discretionary money trusts managed by financial institutions	USD 0.43 billion
	Investment in their own accounts	USD 0.17 billion
Five major government pension funds and employment insurance funds	Investment in their own accounts	USD 20.81 billion

Source: Department of Foreign Exchange, CBC.

Management of Foreign Exchange Business of Financial Institutions

(1) Authorized foreign exchange banks

Under *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 2022, 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 2022 were as follows.

- A. At the end of 2022, there were 3,453 authorized foreign exchange banks in total, which included 37 head offices and 3,376 branches of domestic banks, 37 branches of foreign banks, three branches of Mainland Chinese banks, as well as 4,614 authorized money exchangers, post offices, and financial institutions authorized to engage in basic foreign exchange business.
- B. The Bank amended the *Directions Governing Banking Enterprises for Operating Foreign Exchange Business* on January 19, 2022, to loosen counterparty restrictions for authorized banks engaging in digital foreign currency deposit accounts and to increase acceptable documents for authorized banks engaging in foreign currency loan business.
- C. In order to enhance the efforts in anti-money laundering and countering the financing of terrorism, the Bank amended the *Regulations Governing the Establishment and Administration of Foreign Currency Exchange Counters*, including lowering the cap on each foreign currency exchange transaction for each customer from US\$10,000 or its equivalent to US\$3,000 or its equivalent and conducting enhanced due diligence on customers, effective January 28, 2022.

(2) Insurance Companies

As of the end of 2022, 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 decreased by US\$10.25 billion, or 27.0%, from the previous year to US\$27.71 billion in 2022.

(3) Securities Firms and Bills Finance Companies

Approved cases for securities firms and bills finance companies to conduct foreign exchange business in 2022 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 funds nor for hedging needs	1
	Accepting orders to trade foreign securities	1
	Foreign bond trading agency business	1
	Issuance of exchange traded notes tracking foreign indices	1

Source: Department of Foreign Exchange, CBC.

(4) Investment Trust/Consulting Firms and Futures Firms

The approved cases granted by the Bank for investment trust and investment consulting firms and futures firms (concurrently operating as a leverage transaction merchant) to conduct foreign exchange business as of 2022 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	2
	Conducting public offers or private placement of foreign currency-denominated funds	3
Futures firms (concurrently operating as a leverage transaction merchant)	Contracts for differences linked to gold or oil prices	1
	Contracts for differences linked to foreign stock market indices	1

Source: Department of Foreign Exchange, CBC.

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 2022

Currency	Domestic Participating Units	Settlements in 2022	
		Number of Transactions	Amount
US dollar	71	1,319,175	USD 2,104.7 billion
Renminbi	61	271,706	RMB 583.5 billion
Yen	39	35,534	JPY 1,414.3 billion
Euro	40	19,923	EUR 8.2 billion
Australian dollar	30	26,417	AUD 1.3 billion

Source: Department of Foreign Exchange, CBC.

Offshore Banking

(1) In order to illustrate the conditions under which a securities firm will be considered as severely violating the law, the Bank collaborated with the Financial Supervisory Commission to amend Article 2 of *Regulations Governing the Establishment of and Compliance Matters for Offshore Securities Branches*, which were issued on June 22, 2022.

(2) Financial Status

A. Offshore Banking Units (OBUs)

At the end of 2022, the number of OBUs came to 59, and total OBU assets increased by US\$16.21 billion, or 6.5%, over the previous year to US\$266.13 billion. The net income after tax of all OBUs amounted to US\$2.35 billion, decreasing by US\$0.87 billion, or 27.0%, from a year before.

B. Offshore Securities Units (OSUs)

At the end of 2022, the number of OSUs stood at 19, and total OSU assets reached US\$4.54 billion, the same as the previous year. The net income after tax of the business also decreased by US\$80.0 million, or 150.9%, to negative US\$27.0 million for 2022.

C. Offshore Insurance Units (OIUs)

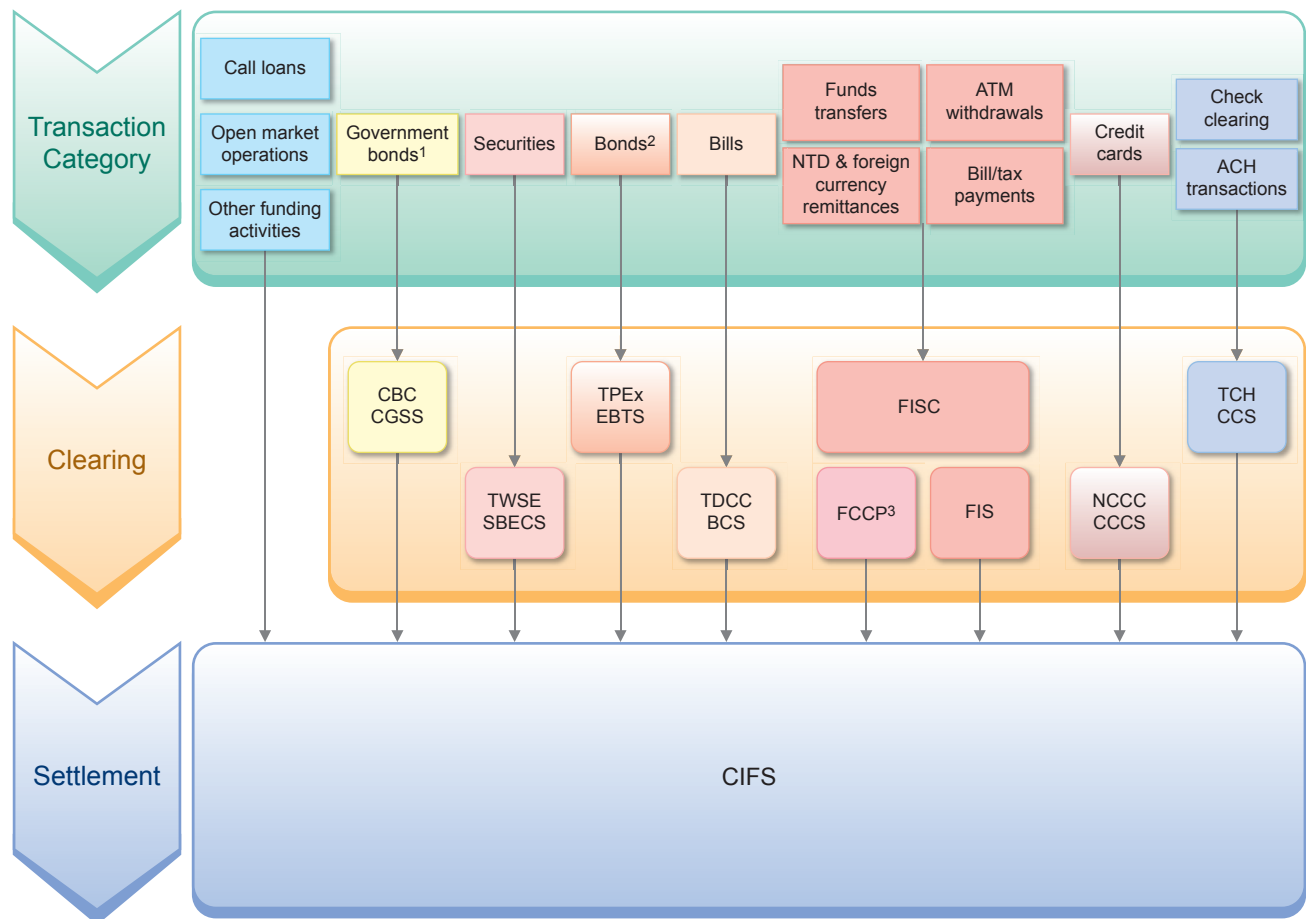
As of the end of 2022, the number of OIUs was 20, with a total amount of assets of US\$0.99 billion, which was US\$0.01 billion or 1.0% less than the previous year end. The net income after tax of all OIUs increased to US\$29.9 million, an increase of US\$48.2 million from the previous year.

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.

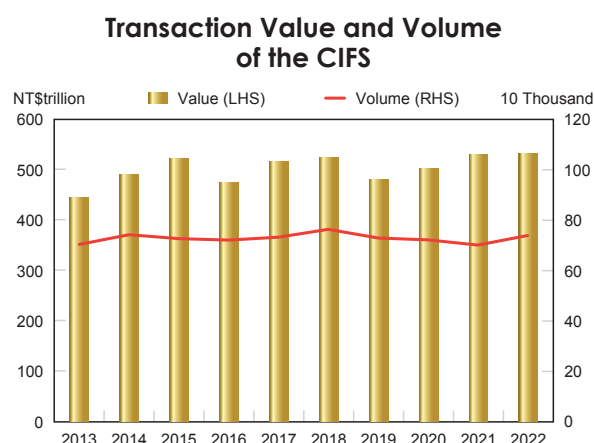
In addition, the Bank monitors major payment systems based on the *Principles for Financial Market Infrastructures* released by the Bank for International Settlements (BIS) to ensure sound operation of these systems and to promote stability of the financial system.

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 2022, two more banks joined the CIFS. At the end of the year, there were 86 participants of the CIFS, including 71 banks, eight bills finance companies, Chunghwa Post, and six clearing institutions, namely the FISC, the TCH, the TWSE, the TPEx, the TDCC, and the NCCC. In 2022, the number of transactions via the CIFS was 741,636, and the amount of funds transferred totaled NT\$535 trillion. Meanwhile, the daily average number of transactions via the CIFS was 2,978, increasing by 5.31% over the previous year, and the daily average amount of funds transferred was NT\$2.1 trillion, rising by 0.35% from a year before.



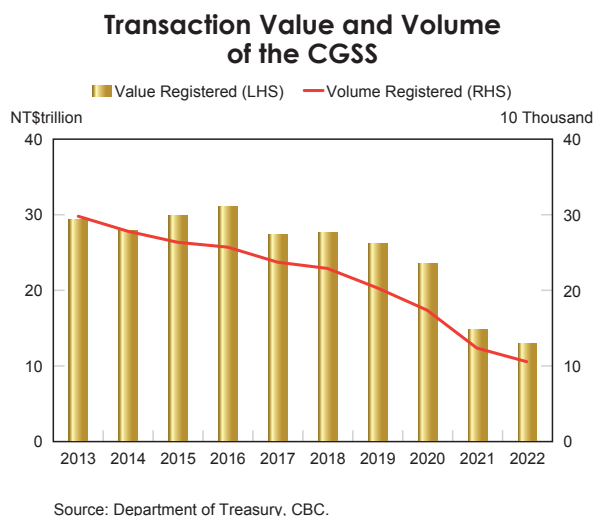
Source: Department of Banking, CBC.

(2) Transactions via the CGSS

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

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

As of the end of 2022, there were 19 clearing banks with 1,678 branches that handled the registration of central government securities transfers. During the year, as the Fed and the Bank announced policy rate hikes successively, leading to a surge in central government bond yields, dealers became more cautious about bond transactions in consideration of interest rate risk. As a result, transaction value and volume of the CGSS in 2022 continued the downtrend, falling to NT\$13.0 trillion and 106,218 transfers, respectively.



Oversight of Payment and Settlement Systems

To ensure sound operation of domestic payment and settlement systems, the Bank conducted the following oversight activities in 2022:

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

The Bank continued to monitor the operation of the large-value payment systems in 2022, and requested participating institutions which applied for the CIFS operation time extensions because of system malfunctions or other contingencies to improve the time extension issue.

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

Payment system operators and electronic payment institutions were required by the Bank to submit reports on their operations and activities with regard to electronic payments on a regular basis. In 2022, the reports required to be submitted to the Bank was revised in accordance with the amendment to *The Act Governing Electronic Payment Institutions*.

(3) 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. Furthermore, 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 that relevant personnel would be familiar with contingency procedures in response to disruptions to the system network.

(4) Performing Backup Drills with Clearing Banks

Since 2019, the Bank has supervised all clearing banks performing backup drills annually in the event of malfunction or line interruption of a CGSS participant's mainframe system. In October 2022, this drill was conducted successfully with 19 clearing banks.

(5) 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, in the first half of 2022, 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. In the second half of the year, the conference was held as scheduled and attended by payment clearing institutions including the FISC, the TCH, and the NCCC. The Bank urged clearing institutions to enhance risk management, ensure resilience of core business operating systems, and strengthen contingency planning.

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 a "shared platform for cross-institution electronic payment," which was launched in October 2021, to provide the funds transfer service. The platform started to offer tax and bill payment services in 2022 and is expected to provide a payment service for shopping in 2023. In addition, to improve the convenience of interbank funds transfer, the FISC continued to promote the "mobile number funds transfer" service to allow users to transfer funds by linking mobile phone numbers to bank accounts.

Proceeding with the CBDC Research Project

The Bank has conducted a two-phase CBDC research project since 2019 to explore the applicability of the underlying technologies regarding a wholesale CBDC and a general purpose CBDC. The second phase proof-of-concept study on a general purpose CBDC was completed in June 2022, which simulated CBDC retail payment scenarios in a closed environment. The experiment results were showcased through a physical presence, allowing participants to experience various payment functions of CBDC.

The Bank plans to solicit public comments on the simulation results of the second phase study and to take the following actions in order to proceed with the CBDC research project with thorough and comprehensive preparations: (1) enhancing communication to gain public support, (2) refining platform design and adopting technologies that are more robust and mature, and (3) drafting a solid legal framework and formulating relevant regulations.

5. Currency Issuance

For the year 2022, the Bank, as the sole agency with the authority to issue banknotes and coins, continued to conduct currency issuance with a focus on maintaining an adequate supply of currency to meet public demand, which is dependent on domestic economic conditions, seasonal factors, and the development of noncash payment instruments. The Bank also issued a commemorative coin set featuring the Chinese zodiac of the year.

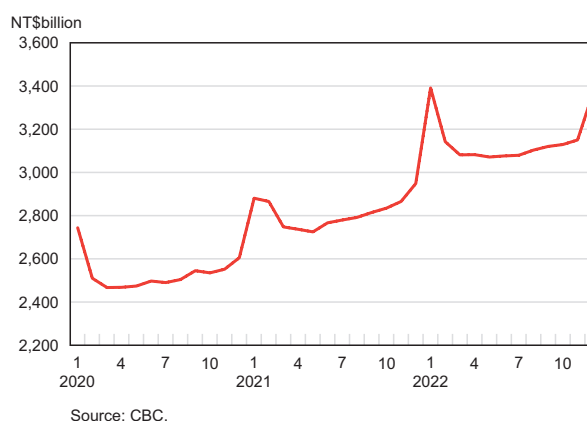
Furthermore, the Bank continued to promote public awareness of counterfeit deterrence and encourage the use of circulating currency through various channels. Meanwhile, the Bank developed an easy-to-use assistive device to aid the visually impaired in identifying NT dollar banknotes.

Currency Issuance Increased to Meet Currency Demand

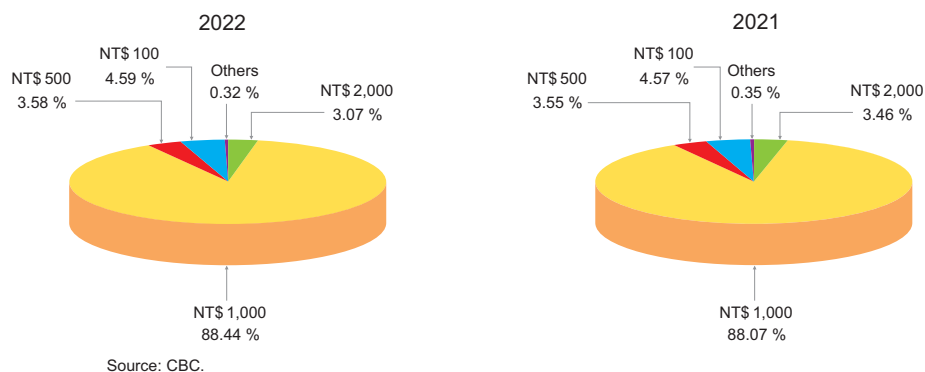
In 2022, the Bank provided an adequate amount of currency in response to currency demand. The currency issued peaked at NT\$3,390.1 billion on January 28, the last business day before the Lunar New Year holidays, reflecting a temporary seasonal surge in cash demand. At the year end, the outstanding amount of currency issued was NT\$3,356.8 billion, rising by NT\$408.4 billion or 13.85% over the previous year end.

By denomination, the composition of NT dollar banknotes in circulation at the end of 2022 was similar to the end of 2021.

Currency Issued



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

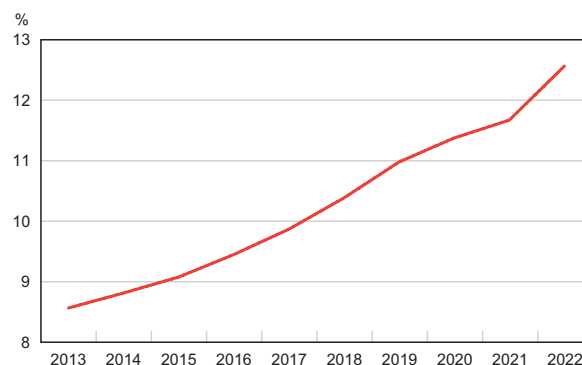


The majority of circulating banknotes went for the NT\$1,000 note with a share of 88.44%, followed by the NT\$100 and NT\$500 notes with shares of 4.59% and 3.58%, respectively.

Ratio of 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 in recent years and reached 12.56% in 2022, 0.89 percentage points higher than the 11.67% of the previous year.

The Ratio of Currency Held by the Public to GDP



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

One Commemorative Coin Set Was Issued

In addition to currency issuance, the Bank may 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 2022, the Bank issued a casting set of coins for the Chinese Zodiac Year of the Tiger.

Commemorative Coin Set for the Chinese Zodiac Year of the Tiger



Source: CBC.

Efforts to Encourage the Use of Circulating Currency and Raise Public Awareness of Counterfeit Money Continued in 2022

With the aim of deterring and preventing counterfeiting, reducing currency issuing costs, and protecting the environment by maximizing existing resources, the Bank launched several advertising campaigns during 2022 to enhance public understanding on the security features of NT dollar notes and coins and to promote the use of circulating currency.

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 Continued to Promote the Visually Impaired-Friendly NT Dollar Banknote Identification Service

To help visually impaired people to better identify banknotes, the Bank has made multifaceted efforts from 2020 onwards, such as producing video material to introduce how to identify banknotes and distinguish the different denominations. The video was available on the Bank's website and

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



Source: CBC.

local visually impaired support groups were encouraged to download it for educational purposes. Meanwhile, the Bank developed the NT dollar banknote gauge card and instructed the Central Engraving and Printing Plant to conduct mass production. The Bank also sent relevant personnel to local support groups to promote the use of the card and to distribute it for free to the visually impaired.

A Virtual Banknote Exhibition was Held on the Theme of Natural Resource

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 into various themes. During 2022, the Bank held an annual exhibition titled "The Fertile Land."

Annual Exhibition 2022 Titled "The Fertile Land" on the Virtual Money Museum Website



Source: CBC.

6. Fiscal Agency Functions

As banker to the central government, the Bank fulfills its responsibilities by managing the treasury deposit account (TDA), handling 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 366 branches, including three overseas branches located in New York, Los Angeles, and Paris. In addition, there are another 4,744 national tax collection agencies set in financial institutions. In 2022, the Bank received a total of NT\$4,636.8 billion in treasury deposits, an increase of NT\$438.9 billion or 10.46% over the previous year. Payments made on behalf of the national treasury were NT\$4,560.4 billion, increasing by NT\$376.9 billion or 9.01% from 2021. At the end of 2022, the TDA balance was NT\$144.1 billion, an increase of NT\$76.4 billion or 112.85% from the end of 2021.

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 2022, the balance of central government agencies' deposits with the Bank amounted to NT\$198.9 billion, an increase of NT\$14.7 billion or 7.98% over 2021. Deposits with other delegated banks were NT\$763.4 billion at the end of 2022, increasing by NT\$105.9 billion or 16.11%.

Introducing Electronic Operations Regarding Treasury Funds

In order to improve efficiency of handling treasury funds and to reduce operational risks, the Bank and the Ministry of Finance jointly designed and introduced electronic operations regarding loan disbursement and repayment collection for the TDA and central government agency deposit accounts. By connecting the National Treasury Services Operational System with the CIFS, this mechanism, effective from July 1, 2022, allows disbursing loans and collecting repayments for the national treasury online to replace the issuing and delivering of physical checks. This mechanism not only reduces manual work and processing time but also helps enhance the efficiency of the deployment of treasury funds.

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 56 domestic dealers qualified to directly participate in the auctions, including 23 banks, 18 securities companies, eight bills finance companies, six insurance companies, and Chunghwa Post.

In 2022, the Bank conducted 19 issues of central government bonds in book-entry form worth NT\$520.1 billion. Of this amount, 10-year bonds accounted for the lion's share of 38.07%, worth NT\$198.0 billion, followed by 5-year bonds, representing a share of 30.76% with an amount of NT\$160.0 billion.

In addition, the Bank paid NT\$395.0 billion in principal and NT\$80.2 billion in interest for central government bonds. At the end of 2022, the outstanding amount of central government bonds was NT\$5,799.5 billion, an increase of NT\$125.0 billion or 2.20% 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 2022, the Bank conducted seven issues of book-entry treasury bills with a total amount of NT\$230.0 billion. The majority of the issuance went for 91-day bills with a value of NT\$135.0 billion, or a share of 58.70%. At the end of 2022, the outstanding amount of treasury bills was NT\$30.0 billion, a decrease of NT\$85.0 billion or 73.91% from the end of 2021.

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 2022.

Targeted Examination

Targeted examinations in 2022 were conducted on real estate mortgage loans, related fund flows, and loan pricing policies thereof, inward and outward foreign exchange remittances, derivatives transactions involving the NTD exchange rate, procedures for handling counterfeit notes denominated in NTD and foreign currencies, etc.

Follow-up on Examination Findings

To ensure the effectiveness of the Bank's policy implementation, 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 FSC's financial examinations related to the Bank's operations or regulations. The financial institutions violating the *Regulations Governing the Extension of Mortgage Loans by Financial Institutions* were subjected to 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 2022 included the following:

- (1) Parts of the analytical indicators and assessment criteria of the related report auditing system for bills finance companies, local branches of foreign and Mainland Chinese banks, and credit departments of farmers' associations were revised.
- (2) In accordance with the modifications to the reporting forms for life insurance companies, the related analytical indicators, weights, and assessment criteria were amended.
- (3) To improve the efficacy of data processing and analysis, visualization tools were used to conduct a multi-dimensional and interactive statistical analysis of the operating conditions of domestic banks' overseas business units.

Improving Information Transparency of Financial Institution Operations

The Bank regularly compiles and publishes statistics on financial institutions, 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.

In line with the government's open data policy, the financial and operational performance datasets of financial institutions were also regularly uploaded to the designated open government data platform.

Financial Stability Assessment

The Bank regularly conducts an analysis of financial institutions' 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, in 2022 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. The Bank also compiled the financial vulnerability index to capture the vulnerability of the banking system so as to take preemptive measures as needed.

In addition, climate change-related issues have posed new challenges and risks to central banks' monetary policy and financial stability mandates. In this view, the Bank released strategic plans for addressing climate change issues, comprising 11 policy measures in five strategic aspects, with the aim of mitigating the impacts on domestic economic and financial systems, thereby maintaining financial stability and fostering sustainable economic development.

International Cooperation in Financial Supervision

In 2022, the Bank continued to actively engage in international cooperation related to financial supervision, such as participating in the 13th SEACEN Meeting of Deputy Governors in Charge of Financial Stability and Banking Supervision, the 24th SEACEN-FSI Conference of the Directors of Supervision of Asia-Pacific Economies, and the 35th Meeting of Directors of Supervision of SEACEN Members (all held in virtual format). The Bank also received senior officials from the National Financial Supervisory Commission (NFSC) of Vietnam in 2022.

8. Participation in International Activities

The Bank continued its efforts in engaging in international activities during 2022. 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. Moreover, the Bank is committed to promoting ties with related international forums and institutions such as the Asia-Pacific Economic Cooperation (APEC) and the Bank for International Settlements (BIS) and maintaining close relationships with other central banks through sharing opinions and policy experience on current financial and economic issues.

In 2022, the Bank attended the 58th SEACEN Governor's Conference on December 5. At this conference, the Bank and other member banks acknowledged the profound economic and financial impacts of the pandemic, as well as the scarring effects that may linger over the medium term. The Bank also reaffirmed its commitment to continuously support the economic recovery through policy responses on macroeconomic and financial fronts.

In addition, the Bank attended the 13th SEACEN Online High-Level Seminar and Meeting of Deputy Governors of Financial Stability and Supervision during August 17 to 18.

The Bank also participated in the meetings held by other international organizations, such as the APEC Finance and Central Bank Deputies' Meeting held virtually during March 16 to 17, the BIS' 92nd Annual General Meeting in Basel, Switzerland, on June 25 and 26, the CABEI's 62nd Ordinary Meeting of the Board of Governors in Mérida, Mexico, on September 23, and the ADB's 55th Annual Meeting of the Board of Governors in Manila, the Philippines, during September 26 to 30.