Annual Report 2023

Central Bank of the Republic of China (Taiwan)

Taipei, Taiwan
Republic of China

Foreword

Chin-Long Yang, Governor

For Taiwan, 2023 was a year marked by robust growth in private consumption on the one hand, thanks to strong post-pandemic appetite for face-to-face consumption, and by contractions in exports and private investment on the other hand, owing to tepid global end-market demand. Overall, the economy expanded at a pace of 1.31% in 2023, slower than the 2.59% registered in 2022. Inflation numbers also saw a divergence, with service prices surging on post-pandemic demand boom for dining and entertainment but commodity inflation slowing amid price declines for imported crude oil and other raw materials. As a result, the annual growth rate of the consumer price index (CPI) came down to 2.49% from 2.95% the previous year, and the annual core CPI growth rate slightly slowed to 2.58% from 2.61% a year ago.

In view of milder inflation relative to those in major economies, the Bank proceeded with a more gradual, moderate approach to monetary tightening throughout 2023, with a March rate hike followed by three rate holds in the remainder of the year. The March hike by 0.125 percentage points was the fifth one in an effort to rein in domestic inflation expectations. In the following months, though, the inflation rate gradually came down, along with a projection for inflation to slow to around 2% in 2024. However, the domestic economic recovery remained susceptible to a myriad of risks facing the global economic outlook, and the domestic output gap was estimated to be negative in both 2023 and 2024. Taking these into consideration, the Bank kept the policy rates steady in the June, September, and December quarterly Board Meetings in order to foster sound economic and financial development.

In addition to rate decisions, the Bank also carried on with the effort of urging banks to enhance real estate credit risk management. In June 2023, the Bank amended its selective credit controls for the fifth time since March 2020 by introducing a new 70% cap on the loan-to-value ratio for a natural person's second outstanding home loan collateralized by property located in the stipulated "specific areas."

The Bank also conducted open market operations, issued certificates of deposit, and took banks' re-deposits to manage liquidity and keep market interest rates at their appropriated levels. For year 2023 as a whole, bank loans and investments recorded an average annual growth rate of 5.92%. The monetary aggregate M2 rose by 6.25% on average for the year, an increase within the Bank's reference range (2.5% - 6.5%).

In the foreign exchange market, the NT dollar exchange rate was affected by massive foreign portfolio capital flows as well as international economic factors, exhibiting volatile swings against the US dollar in 2023. In keeping with its mandate, the Bank stepped into the forex market to maintain the dynamic stability of the NTD exchange rate with net forex sales amounting to

US$2.8 billion. At the end of 2023, the Bank held US$570.6 billion worth foreign exchange reserves, representing a year-on-year increase of US$15.7 billion, or 2.8%, mainly reflecting the returns from forex reserves management.

The Bank is also devoted to continued improvement of the payment systems. In 2023, the Bank instructed the Financial Information Service Co., Ltd. (FISC) to utilize the interbank payment infrastructure to assist in cash disbursements under the government's universal surplus tax rebate project. The FISC was also urged to join with financial institutions in promoting the common QR code payment specification, known as TWQR, and to broaden the scope of services on the Bank-consigned "Common Inter-Institutional Electronic Payment Platform" inaugurated in 2021.

Another key endeavor of the Bank in 2023 was to continue with relevant research work on the central bank digital currency (CBDC), moving on to the phase of opinion surveys, platform technology advancements, and regulation-related discussions. In addition to digital currency studies, a digital exhibition on the Bank's Virtual Money Museum website was launched in 2023. In collaboration with the National Museum of History (NMH), the special exhibition "History of Ancient Coins" showcases 50 items of significance among the NMH's collection spanning several thousand years up to the late Ching Dynasty.

In line with its financial stability mandate, the Bank has strived to strengthen the capabilities and effectiveness of financial stability analysis. The actions taken include continuous improvement to the graphical user interface of credit and market risk models, as well as the development of the Taiwan Financial Vulnerability Index. In addition, the Bank has been studying major global trends and practices in climate change-related risk assessment for the financial sector, with the aim of facilitating future internal model construction for climate risk assessment.

Going forward, the many uncertainties challenging the world economy remain in sight. The Bank will keep a close eye on the implications for the domestic economic and financial conditions arising from such factors as major economies' monetary policy actions, risks associated with China's economic downturn, global economic fragmentation and supply chain restructuring, and geopolitical risks, as well as extreme weather. The Bank will make appropriate monetary policy adjustment as warranted and in a timely manner so as to achieve its statutory objectives of financial stability, price stability, and fostering economic development within the scope of the above objectives.

Finally, I would like to thank my colleagues for their dedicated efforts in the year of 2023 and for bringing forth this Annual Report. As mentioned, this is a challenging time, and the Bank will stay attentive and adaptive so as to fulfill the duties on our shoulders.

Chin-Long Yang

Chin-Long Yang
Governor
March 2024

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CBC Annual Report 2023

Organization and Management of the CBC

Board of Directors

Chairman	Chin-Long Yang
Executive Directors	Tsui-Yun Chuang
	Mei-Hua Wang
	Tzung-Ta Yen
	Mei-Lie Chu
	Chung-Dar Lei
Directors	Chi-Chung Chen
	Ming-Jou Yang
	Fu-Sheng Hung
	Yi-Ting Li
	Jin-Lung Lin
	Shi-Kuan Chen
	Chao-Hsi Huang
	Chien-Yi Chang
	Shiu-Sheng Chen

Governor

Chin-Long Yang

Deputy Governors

Tzung-Ta Yen

Mei-Lie Chu

Board of Supervisors

Chairman	Tzer-Ming Chu
Supervisors	Ching-Fan Chung
	Sheng-Yao Lin
	Tien-Wang Tsaur
	Kuei-Hui Cheng

Department of Banking	Alan R.Y. Pan (Director General)
Department of Issuing	Yen-Dar Den (Director General)
Department of Foreign Exchange	Chiung-Min Tsai (Director General)
Department of the Treasury	Pei-Jen Heh (Director General)
Department of Financial Inspection	Dou-Ming Su (Director General)
Department of Economic Research	Yih-Jiuan Wu (Director General)
Secretariat	Chien-Ching Liang (Director General)
Department of Accounting	Shu-Hui Kuo (Director General)
Department of Information Management	Rey-Shyun Lee (Director General)
Personnel Office	Shu-Hui Chang (Director)
Ethics Office	Yao-Chung Liu (Director)
Legal Affairs Office	Kun-Shan Wu (Director)
New York Representative Office	Wei-Sheng Chiu (Representative)
London Representative Office	Wei-Chuan Chang (Representative)
Central Engraving & Printing Plant	Chia-Sheng Yu (President)
Central Mint	Sheng-Shang Chou (Director)

—— direct reporting - - - - - - supervision

As of January 2024

Chairman
Board of Directors
Governor
Chin-Long Yang

Executive Director
Tsui-Yun Chuang

Executive Director
Mei-Hua Wang

Executive Director
Deputy Governor
Tzung-Ta Yen

Executive Director
Deputy Governor
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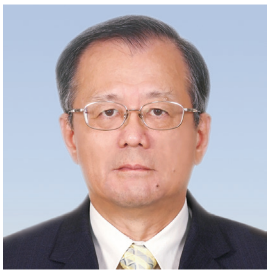
Chien-Yi Chang

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

Throughout 2023, the world economy exhibited tepid recovery momentum, dragging Taiwan's exports and private investment towards negative growth, whereas private consumption became the driving force of economic growth. The GDP growth rate slowed to 1.31% in 2023, the weakest since 2010. The balance of payments maintained a healthy status, with a continued current account surplus and a net asset increase on the financial account. In respect of inflation, domestic services prices surged but commodity prices posted slower rises owing to declining import prices of crude oil and other raw materials. The 2023 CPI annual growth rate was 2.49%, and the annual growth rate of the core CPI, which excludes fruit, vegetables, and energy items, was 2.58%, both coming down from year 2022. In the labor market, reviving domestic demand helped bring down the unemployment rate to a yearly average of 3.48%, the lowest since 2001. Non-farm payroll real monthly earnings, however, shrank by 1.79% year on year to NT$55,369.

Slower Economic Growth

In the first quarter of 2023, private consumption rose steadily, whereas exports and private investment were both dampened by soft global final demand and continuous manufacturing inventory adjustments. The annual GDP growth rate thus decreased to minus 3.49%. In the following months, despite still weak exports and investment, private consumption gained additional momentum from life gradually returning to pre-pandemic normalcy with COVID-related restrictions lifted and the government's one-off universal tax rebate payment of NT$6,000. Consequently, the economic growth rate picked up in the second quarter and further rose to 2.15% in the third quarter. The fourth quarter recorded even faster economic growth at a pace of 4.93% as exports resumed positive growth. For the year as a whole, the GDP growth rate was 1.31%, albeit 1.28 percentage points less than the 2.59% of 2022.

Among the GDP expenditure components, domestic demand contributed 1.03 percentage points to the real GDP growth rate of 1.31% in 2023, reflecting solid private consumption growth despite soft exports and lukewarm private investment. With import-derived demand weakening on anemic export and investment growth, exports and imports both contracted; as a result, net external demand contributed 0.28 percentage points to GDP growth.

Looking at private investment, its growth momentum slackened in 2023 and the domestic investment rate (gross domestic investment to GDP) decreased to 24.82%, lower than 28.15% in 2022.

The national saving rate (gross national saving to gross national income) dropped from 41.53% to 37.75%, reflecting a surge in consumption expenditure in the post-pandemic era. Overall, as the decrease in gross national investment was smaller than that in gross national saving, the excess saving rate (the difference between saving and investment as a percentage of GDP) slightly dropped from 14.66% in 2022 to 14.06% in 2023.

Healthy BOP Surplus

In 2023, Taiwan continued to record a healthy balance of payments. The current account posted a surplus of US$105,329 million, the financial account had a net asset increase of US$84,946 million, and the Bank's reserve assets showed an increase of US$14,342 million.

On the current account, goods imports and exports both shrank in 2023 compared to 2022. As the decrease in imports exceeded that in exports, the goods trade surplus widened from US$68,238 million in 2022 to US$95,859 million in 2023, still the largest contributor to the current account surplus.

The services account recorded a deficit of US$9,969 million in 2023 compared to the US$12,597 million surplus in 2022. This was mainly due to an increase in travel expenditures and a decrease in freight proceeds. The primary income surplus widened from US$23,308 million to US$24,343 million, mainly because the increase in receipts significantly exceeded that in payments. The secondary income deficit expanded from US$3,217 million to US$4,904 million. For year 2023 as a whole, the ratio of the current account surplus to nominal GDP was 13.9%.

On the financial account, portfolio investment recorded a net asset increase of US$62,383 million. Among the components, residents' portfolio investment abroad increased by a net amount of US$69,725 million, mainly because of increases in foreign securities holdings by banks, domestic investment and trust funds, and pension funds. Nonresidents' inward portfolio investment posted a net increase of US$7,342 million, mainly because foreign investors stepped up holdings of Taiwanese stocks. Direct investment recorded a net increase of US$19,014 million, of which direct investment abroad by residents and nonresidents' inward direct investment posted net increases of US$24,714 million and US$5,700 million, respectively. The account of other investment had a net asset increase of US$2,508 million.

Modest Slowdown in Inflation

The easing in global supply chain bottlenecks and in Russia-Ukraine war-related impacts, as well as a slowing global economy owing to the cumulative effects of major central banks' monetary tightening to restrain demand, resulted in a decline in international raw material prices.

Consequently, domestic import prices and producer prices both trended downwards. In NT dollar terms, the import price index and the producer price index dropped by 3.59% and 0.56%, respectively, in 2023 compared to 2022.

Regarding the CPI, domestic services prices rose significantly in 2023, reflecting a post-pandemic demand boom for eating out and face-to-face leisure and entertainment services, which was insufficiently met owing to a labor shortage. On the other hand, domestic commodity prices recorded slower gains as prices of imported crude oil and other raw materials came down. For 2023 as a whole, the CPI annual growth rate decreased from 2.95% in 2022 to 2.49%, and the core CPI annual growth rate was 2.58%, slightly lower than 2.61% in 2022.

Unemployment Rate Dropping to New Record Low Since 2001; Slower Wage Growth

With domestic demand picking up after the pandemic receded, the unemployment rate broadly showed a downtrend in 2023 except in the Feb.-Mar. period (after the Lunar New Year Holidays) and the Jun.-Jul. period (during the summer vacation), reflecting seasonal factors of existing workers switching jobs and newly-graduated students seeking work. After dropping to 3.33% in December, the unemployment rate averaged 3.48% for year 2023 as a whole, hitting a new low since 2001.

The average number of employed persons in 2023 was 11,528 thousand, an increase of 110 thousand or 0.96%. Industrial sector employment increased by a modest two thousand persons or 0.06%, as the increase in the construction works industry offset the decrease in manufacturing. Services employment surged by 128 thousand persons, or 1.87%, whereas the agricultural sector shed 21 thousand employed persons, or 3.92%.

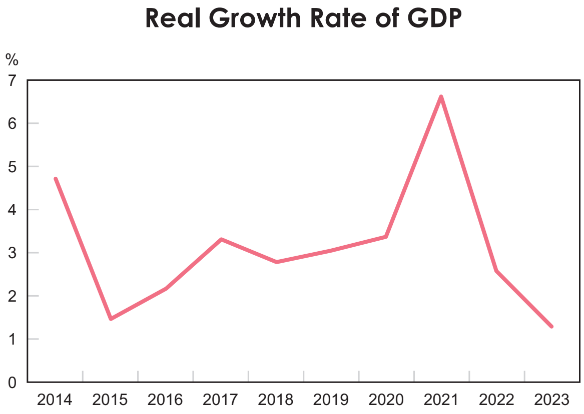
In respect of wage growth, the average non-farm (industrial and services sectors) monthly earnings per employee rose by 0.65% from the previous year to NT$58,420 in 2023, the smallest increase since 2017. Adjusted for inflation, real monthly earnings decreased by 1.79% year on year to NT$55,369. Labor productivity indices of the industrial sector and the manufacturing industry recorded year-on-year declines by 11.08% and 11.78%, respectively, because production output fell and the total hours worked were approximately the same as the previous year. Meanwhile, unit labor costs increased by 11.14% in the industrial sector and 11.96% in the manufacturing sector, with total earnings rising and production dropping.

2. National Output and Income

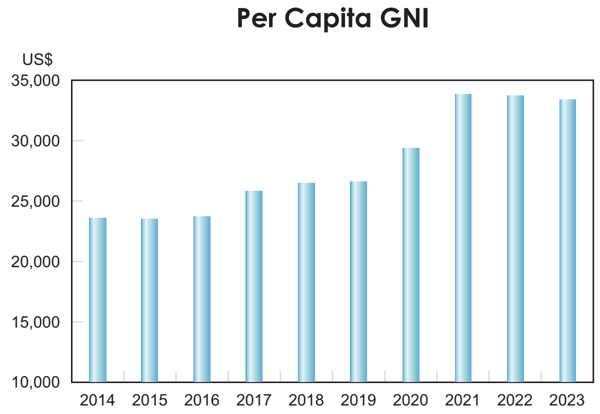
In 2023, Taiwan's economy grew at an annual rate of 1.31%. Domestic demand, driven mainly by private consumption, contributed 1.03 percentage points to real GDP growth. In terms of external demand, lackluster performance in both exports and investment reduced derived demand for imports, and thus, net exports contributed 0.28 percentage points to real GDP growth. In the meantime, nominal GNI (gross national income, in US dollars) fell by 0.78%, and GNI per capita declined from US$33,624 to US$33,299 over the year 2023.

In the first quarter, real GDP contracted by 3.49%. Private consumption expanded robustly because of higher spending on domestic travel and outbound tourism as the government continued to lift COVID-19 pandemic restrictions. Nevertheless, weak global final demand in response to the cumulative effects of monetary policy tightening by major central banks since 2022, coupled with the ongoing inventory adjustments in the manufacturing sector, resulted in lower private investment. In the second quarter, real GDP grew by 1.41%. Private consumption gained growth momentum owing to strong demand for catering, tourism, and entertainment services and the government's one-off universal cash payment of NT$6,000 as part of the post-pandemic special budget. On the contrary, anemic global final demand and the lingering effects of inventory destocking continued dampening growth in private investment and exports.

In the third quarter, real GDP growth rose to 2.15%. Consumer spending and demand for outbound travel stayed elevated, further supported by the peak season for summer travel, sustaining the growth momentum of private consumption. Private investment, on the other hand, remained subdued as firms revised down their capital expenditures under a dismal economic outlook. In the meantime, slower-than-expected global final demand recovery and inventory adjustments further restrained export growth momentum. In the fourth quarter, real GDP expanded by 4.93%. Growth in private consumption was driven by surging demand for outbound travel, a persistent post-pandemic consumption trend, and continued growth of sales in the services industry, such as the accommodation, dining, and retail industries. As for private investment, firms' willingness to invest stayed downbeat because global economic recovery fell short of expectations, and the manufacturing sector kept reducing the levels of production and inventory. However, exports exhibited positive growth owing to a lower base effect, a surge in inbound visitors for tourism and business, and the shipment of emerging technology products, such as artificial intelligence (AI) and high-performance computing (HPC) applications.



Source: *Statistical Abstract of National Income*, DGBAS, Executive Yuan, February 2024.



Source: *Statistical Abstract of National Income*, DGBAS, Executive Yuan, February 2024.

Expenditure Components of GDP

Of all expenditure components of GDP, private consumption was the primary source of economic growth and contributed 3.80 percentage points to real GDP growth for 2023. Government consumption, on the other hand, contributed 0.12 percentage points to real GDP growth. Gross fixed capital formation and exports of goods and services contributed -2.44 percentage points and -3.02 percentage points to real GDP growth, respectively. With respect to shares of GDP, exports of goods and services continued to account for the largest share of GDP at 63.35%, followed by private consumption at 48.65%, and gross fixed capital formation at 25.28%.

GDP by Expenditure

Unit: %

	2023			2022		
	Share	Real Growth Rate	Contribution to Real Growth Rate of GDP*	Share	Real Growth Rate	Contribution to Real Growth Rate of GDP*
Private Consumption	48.65	8.32	3.80	45.69	3.75	1.68
Government Consumption	13.68	0.88	0.12	13.92	4.83	0.66
Gross Fixed Capital Formation	25.28	-8.69	-2.44	28.11	7.78	2.04
Change in Inventory	-0.46	--	-0.45	0.04	--	-0.74
Exports of Goods and Services	63.35	-4.32	-3.02	69.94	1.75	1.14
(Less: Imports of Goods and Services)	50.49	-5.73	-3.30	57.69	4.32	2.18
Expenditure on GDP	100.00	1.31	1.31	100.00	2.59	2.59

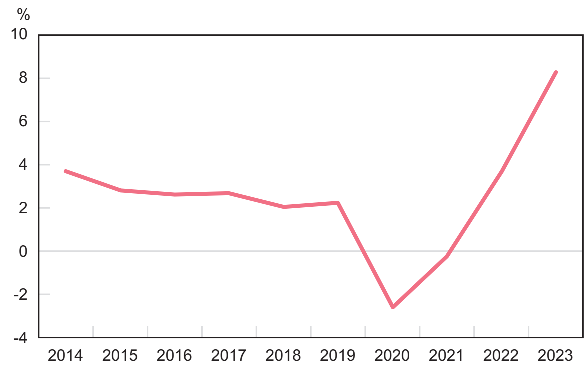
Note: * Percentage point.
Source: *Statistical Abstract of National Income*, DGBAS, Executive Yuan, February 2024.

(1) Robust Growth in Private Consumption

Private consumption picked up as life gradually returned to normal when the government eased domestic pandemic-related restrictions and border controls. In addition, an upward adjustment of the basic living expense per person and the nationwide government distribution of a one-time cash payment propped up disposable income, providing further impetus to private consumption growth. Against this backdrop, private consumption grew at an annual rate of 8.32% and contributed 3.80 percentage points to real GDP growth in 2023.

After the government loosened epidemic control measures, consumer confidence stabilized, and private consumption regained growth momentum, growing by 6.41% in the first quarter. In the second quarter, with a complete phase-out of epidemic control measures and a significant increase in people's willingness to consume and engage in outdoor events, coupled with the nationwide government distribution of a one-time cash payment, private consumption rose by 12.94%. The third quarter coincided with the summer vacation period, witnessing continuous demand for consumption spending and outbound travel. At the same time, the government introduced public transportation subsidies in July to promote the use of public transit, leading to an annual growth rate of 9.28% in private consumption. In the fourth quarter, surging demand for outbound travel, a persistent post-pandemic consumption trend, and a rally in the stock market bolstered private consumption by 5.07%. Overall, private consumption remained strong throughout the entire year.

Real Growth Rate of Private Consumption Expenditure



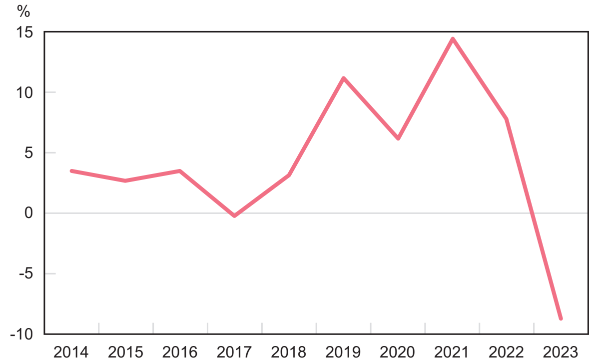
Source: *Statistical Abstract of National Income*, DGBAS, Executive Yuan, February 2024.

(2) Significant Contraction in Fixed Capital Formation

Fixed capital formation contracted significantly by an annual rate of 8.69% and contributed -2.44 percentage points to real GDP growth in 2023. The decline was caused mainly by major technology firms deferring and lowering capital expenditures.

Sluggish export growth and slower-than-expected inventory adjustments prompted businesses to hold back investment, reducing machinery and equipment investment and construction investment in the first half of the year. Gross fixed capital formation decreased by 2.64% and 7.55% in the first two quarters, respectively. The dismal economic outlook further exacerbated the decline in machinery and equipment investment, while construction investment remained subdued in the second half of the year. The fixed capital formation growth rates for the last two quarters of the year were -11.85% and -12.24%, respectively.

Real Growth Rate
of Fixed Capital Formation



Source: *Statistical Abstract of National Income*, DGBAS, Executive Yuan, February 2024.

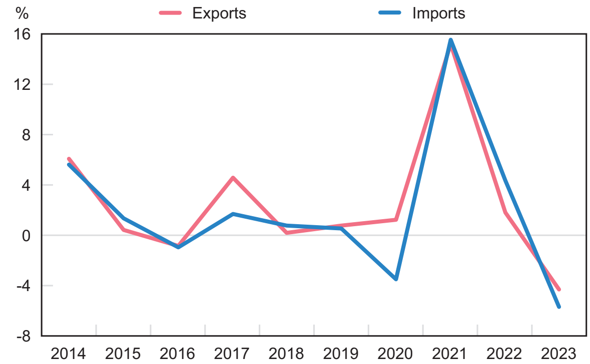
In terms of the type of fixed capital formation, machinery and equipment investment experienced a double-digit decline of 21.88% in 2023, while construction investment contracted moderately by 3.93%. On the other hand, transportation investment increased by 10.67%. Lastly, investment in intellectual property remained relatively stable and expanded by 2.80% for the entire year.

(3) Mild Decline in Real Exports

The cumulative effects of monetary policy tightening by major central banks and the shift in consumer spending towards services led to a slowdown in global demand. As a result, exports of goods and services fell by 4.32% and contributed -3.02 percentage points to real GDP growth in 2023.

From the first to the third quarter of the year, the global economic and trade growth momentum faltered owing to the spillover effects of monetary policy tightening by major central banks and the cumulative effects of interest rate hikes. Taiwan's exports of goods and services, therefore, decreased by 11.86%, 7.75%, and 1.41% in the first three quarters, respectively. However, exports resumed positive growth at 3.72% in the fourth quarter, benefiting from a lower base effect, a wider expansion of applications in emerging technologies (e.g., AI and HPC), favorable driving forces from new consumer electronic products, as well as a continued increase in inbound visitors to Taiwan.

Real Growth Rates of Exports and Imports



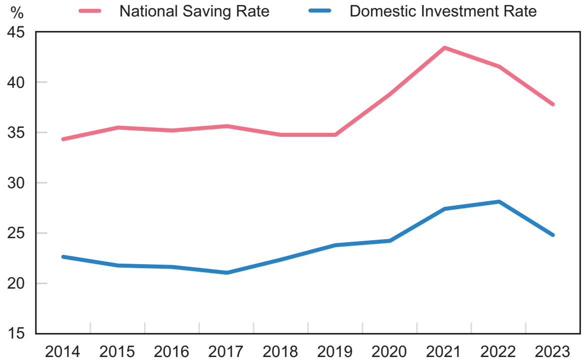
Source: *Statistical Abstract of National Income*, DGBAS, Executive Yuan, February 2024.

Turning to imports of goods and services, the combination of weak demand for capital equipment and a reduction in export-derived demand caused imports to contract by 5.73% for the entire year.

Minor Reductions in National Saving Rate and Domestic Investment Rate

The national saving rate (the ratio of national savings to GNI measured at current prices) declined slightly from 41.53% in 2022 to 37.75% in 2023, reflecting a significant increase in consumption expenditures as life returned to pre-pandemic normalcy. Meanwhile, weak private investment growth caused the domestic investment rate (the ratio of domestic investment to GDP measured at current prices) to fall to 24.82% in 2023, lower than 28.15% of the previous year.

National Saving Rate and Domestic Investment Rate



Source: *Statistical Abstract of National Income,* DGBAS, Executive Yuan, February 2024.

3. Balance of Payments

In 2023, Taiwan's current account registered a surplus of US$105,329 million, which accounted for 13.9% of nominal GDP. The financial account posted a net asset increase of US$84,946 million. Reserve assets increased by US$14,342 million.

Balance of Payments

Unit: US$million

	(1) 2023	(2) 2022	(1)-(2)
A. Current account	105,329	100,926	4,403
Goods: credit (exports)	383,644	427,894	-44,250
Goods: debit (imports)	287,785	359,656	-71,871
Balance on goods	95,859	68,238	27,621
Services: credit (exports)	54,552	57,204	-2,652
Services: debit (imports)	64,521	44,607	19,914
Balance on services	-9,969	12,597	-22,566
Primary income: credit	60,733	51,756	8,977
Primary income: debit	36,390	28,448	7,942
Balance on primary income	24,343	23,308	1,035
Secondary income: credit	8,683	9,376	-693
Secondary income: debit	13,587	12,593	994
Balance on secondary income	-4,904	-3,217	-1,687
B. Capital account	-38	-46	8
C. Financial account	84,946	94,711	-9,765
Direct investment: assets	24,714	15,589	9,125
Equity and investment fund shares	24,956	13,828	11,128
Debt instruments	-242	1,761	-2,003
Direct investment: liabilities	5,700	10,158	-4,458
Equity and investment fund shares	4,785	6,215	-1,430
Debt instruments	915	3,943	-3,028
Portfolio investment: assets	69,725	59,674	10,051
Equity and investment fund shares	14,593	7,756	6,837
Debt securities	55,132	51,918	3,214
Portfolio investment: liabilities	7,342	-45,714	53,056
Equity and investment fund shares	7,182	-44,608	51,790
Debt securities	160	-1,106	1,266
Financial derivatives: assets	-20,225	-21,700	1,475
Financial derivatives: liabilities	-21,266	-26,356	5,090
Other investment: assets	-5,681	-23,226	17,545
Other investment: liabilities	-8,189	-2,462	-5,727
D. Net errors and omissions	-6,003	4,714	-10,717
E. Reserves and related items*	14,342	10,883	3,459

Note: * Excluding valuation changes in exchange rates.
Source: *Balance of Payments Quarterly, Republic of China (Taiwan)*, CBC, February 2024.

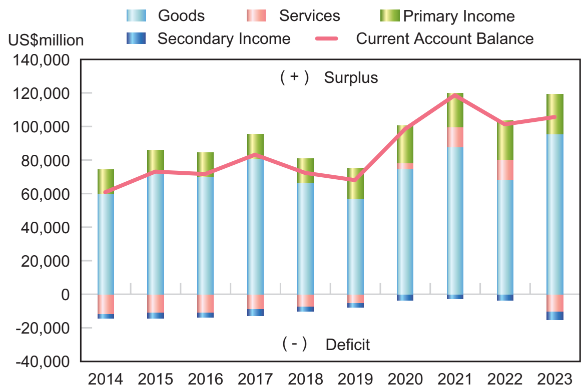
Wider Current Account Surplus

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

(1) Goods

Because of slower global economic growth and lower international raw material prices, Taiwan's external merchandise trade experienced a slowdown in 2023, with the value of exports, on a BOP basis, decreasing by 10.3% from 2022 to US$383,644 million. Among its components, net exports of goods under merchanting decreased by 3.5% to US$14,777 million. The value of imports decreased by 20.0% to US$287,785 million. Overall, as the decrease in imports exceeded that in exports, the trade surplus widened from US$68,238 million in 2022 to US$95,859 million. The top five trading partners of Taiwan in 2023 were Mainland China including Hong Kong (hereafter in this chapter referred to as Mainland China), ASEAN,[1] the US, Europe, and Japan.

Current Account



Source: *Balance of Payments Quartely, Republic of China (Taiwan)*, CBC, February 2024.

In terms of Taiwan's trade with Mainland China, the value of exports amounted to US$152,249 million in 2023, 18.1% lower than the previous year. Among major export products, parts of electronic products contributed the most to this negative growth in Taiwan's exports to Mainland China, causing Mainland China's share of total exports to drop to 35.2%, the lowest in nearly 21 years. As a manufacturing center of the world, Mainland China remained Taiwan's largest trading partner. Imports from Mainland China fell by 16.1% to US$71,699 million in 2023, mainly because import of parts of electronic products declined more markedly as a result of weaker export-derived demand. Nevertheless, Mainland China's share of total imports slightly increased to 20.4%. As the decrease in exports exceeded that in imports, the trade surplus with Mainland China shrank to US$80,550 million in 2023, still the largest source of Taiwan's trade surplus.

Exports to the ASEAN economies increased to US$76,275 million in 2023, down by 5.4% with a weak export performance of mineral products and chemicals. Imports from the ASEAN economies decreased by 24.0% to US$41,017 million, accounting for a declining share of 11.7% of total imports as imports of parts of electronic products and mineral products decreased. Overall, the trade surplus with the ASEAN economies rose to US$35,257 million. Singapore, Vietnam, and the Philippines were the third, fourth, and fifth largest sources of Taiwan's trade surplus, respectively.

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

In 2023, Taiwan's exports to the US grew 1.6% to US$76,241 million, and its share of total exports rose to a record high in nearly 21 years, reaching 17.6%. The increase mainly came from information, communication and audio-video products. As for imports from the US, the amount decreased by 10.9% to US$40,696 million, with its share in total imports increasing to 11.6%. The main contributor to the contraction was parts of electronic products. The trade surplus with the US expanded to US$35,545 million for the year, ranking second among Taiwan's surplus sources.

Exports to Europe increased by 2.9% to US$42,288 million, with its share of total exports rising to 9.8%. The major products contributing to this expansion were information, communication and audio-video products. Imports from Europe decreased by 8.6% to US$46,672 million and the share of total imports increased to 13.3%, with machinery being the main source of this decrease. In all, Taiwan's trade deficit with Europe shrank to US$4,384 million in 2023.

Exports to Japan decreased by 6.5% to US$31,441 million and its share in Taiwan's total exports slightly increased to 7.3%. Of all major products exported to Japan, chemicals and base metals and articles of base metal contributed the most to the decline. Imports from Japan decreased by 18.9% to US$44,319 million and its share of total imports decreased to 12.6%, with machinery and parts of electronic products being the main sources of this decrease. The trade deficit with Japan narrowed to US$12,879 million. Japan remained the largest source of trade deficit in 2023.

Trade in Goods by Country

Unit: %

	2023			2022		
	Amount (US$million)	Share	Annual Change	Amount (US$million)	Share	Annual Change
Exports						
Mainland China (including Hong Kong)	152,249	35.2	-18.1	185,875	38.8	-1.6
ASEAN	76,275	17.6	-5.4	80,609	16.8	14.8
US	76,241	17.6	1.6	75,052	15.7	14.3
Europe	42,288	9.8	2.9	41,099	8.6	6.8
Japan	31,441	7.3	-6.5	33,609	7.0	15.1
Rest of the World	53,976	12.5	-14.6	63,171	13.2	17.2
Total	432,469	100.0	-9.8	479,415	100.0	7.4
Imports						
Mainland China (including Hong Kong)	71,699	20.4	-16.1	85,508	20.0	1.6
Europe	46,672	13.3	-8.6	51,072	11.9	7.9
Japan	44,319	12.6	-18.9	54,626	12.8	-2.7
ASEAN	41,017	11.7	-24.0	53,937	12.6	14.2
US	40,696	11.6	-10.9	45,691	10.7	16.4
Rest of the World	107,479	30.5	-21.7	137,248	32.1	27.3
Total	351,883	100.0	-17.8	428,083	100.0	12.1

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

(2) Services

In 2023, services turned from a surplus to a deficit of US$9,969 million, mainly because of an increase in travel payments and a decrease in transport receipts.

Of the various components of the services account, receipts of manufacturing services on physical inputs owned by others[2] decreased by US$333 million to US$3,993 million in 2023. On the debit side, payments for manufacturing services declined by US$321 million to US$1,610 million. In total, the surplus of manufacturing services on physical inputs owned by others recorded a narrower surplus of US$2,383 million, down from US$2,395 million.

In terms of maintenance and repair services n.i.e. (not included elsewhere), which covers maintenance and repair work by residents on goods that are owned by nonresidents (and vice versa), the receipts rose by US$340 million to US$1,505 million owing to increased receipts from aircraft repair. On the other hand, the payments rose by US$217 million to US$1,467 million, also owing to increased payments from aircraft repair. In all, the repair services account turned from a deficit to a surplus of US$38 million.

Transport receipts decreased by US$10,475 million to US$11,111 million, reflecting a decreases in international freight proceeds. Transport payments rose by US$2,998 million to US$13,080 million as a result of increased passenger fares paid to foreign airlines. Overall, the transport services turned from a surplus to a deficit of US$1,969 million.

Travel receipts increased by US$6,966 million to US$8,748 million mainly because the number of cross-border tourists rose as many countries lifted border controls. Meanwhile, travel payments increased by US$12,991 million to US$15,519 million. In all, the deficit on the travel account widened to US$6,771 million.

In terms of other services, the receipts grew by US$850 million to US$29,195 million, mainly attributable to an increase in receipts from financial services. The payments grew by US$4,029 million to US$32,845 million, owing to increases in payments for financial services and professional and management consulting services. Overall, the deficit on the other services account increased to US$3,650 million.

(3) Primary Income

Primary income consists of compensation of employees, investment income, and other primary income. In 2023, primary income receipts increased by US$8,977 million to US$60,733 million, mainly

[2] 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.

because of an increase in banks' interest receipts. Meanwhile, primary income payments increased to US$36,390 million, US$7,942 million more than the previous year. This was mainly attributable to an increase in banks' interest payments. Consequently, the surplus on the primary income account widened to US$24,343 million.

(4) Secondary Income

For the year of 2023, secondary income receipts amounted to US$8,683 million, reflecting a decrease in gifts and samples. Secondary income payments amounted to US$13,587 million, mainly owing to an increase in outward workers' remittances. As a whole, the deficit on the secondary income account widened to US$4,904 million in 2023.

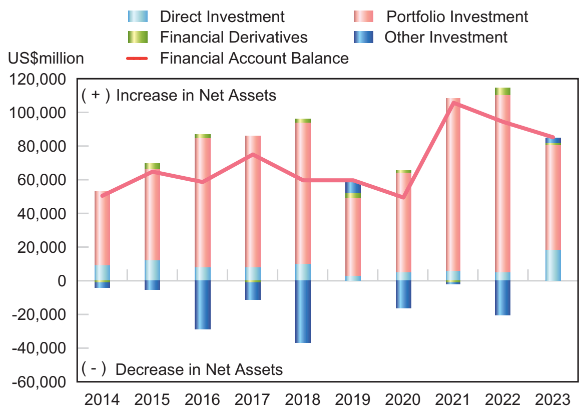
Capital Account Deficit

The capital account includes capital transfers and the acquisition and disposal of non-produced, non-financial assets. In 2023, the capital account deficit decreased to US$38 million.

Net Asset Increase in Financial Account

In 2023, the financial account showed an increase of US$84,946 million in net assets. In terms of sub-categories, direct investment, portfolio investment, financial derivatives and other investment exhibited increases of US$19,014 million, US$62,383 million, US$1,041 million and US$2,508 million in net assets, respectively.

Financial Account



Source: *Balance of Payments Quartely, Republic of China (Taiwan)*, CBC, February 2024.

(1) Direct Investment

Direct investment abroad by residents exhibited an increase of US$24,714 million. Direct investment in Taiwan by nonresidents showed an increase of US$5,700 million.

(2) Portfolio Investment

In 2023, portfolio investment abroad by residents increased by US$69,725 million. Equity and investment fund shares grew by US$14,593 million mainly because pension funds increased holdings of foreign equity securities, and debt securities rose by US$55,132 million mainly because banks and onshore funds increased holdings of foreign debt securities.

On the other hand, local portfolio investment by nonresidents increased by US$7,342 million.

Equity and investment fund shares grew by US$7,182 million as foreign investors increased holdings of Taiwanese stocks. Debt securities rose by US$160 million.

(3) Financial Derivatives

Assets in financial derivatives decreased by US$20,225 million, principally because of gains on transactions of financial derivatives received by other financial corporations.

Liabilities in financial derivatives decreased by US$21,266 million, mainly because of losses on transactions of financial derivatives paid by other financial corporations.

(4) Other Investment

In 2023, other investment abroad by residents decreased by US$5,681 million. Of the components, currency and deposits decreased by US$13,573 million as the private sector withdrew overseas deposits; loans decreased by US$6,226 million because of a decline in overseas interbank loans; trade credit grew by US$9,168 million, owing to an increase in trade credit extended by corporations; other accounts receivable increased by US$4,941 million.

Other inward investment by nonresidents decreased by US$8,189 million. Of the components, currency and deposits declined by US$8,307 million because of declining deposits from overseas branches; loans rose by US$11,377 million due to banks increasing borrowings from overseas banks; trade credit declined by US$10,139 million, owing to a decrease in trade credit received by corporations; other accounts payable decreased by US$1,120 million.

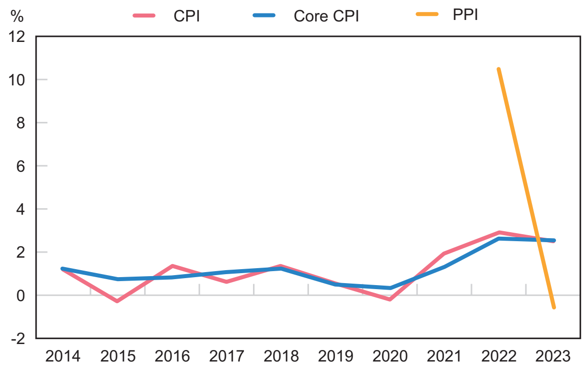
Increase in Foreign Exchange Reserves

The foreign exchange reserve assets held by the Bank increased by US$14,342 million in 2023, mainly owing to returns from foreign exchange reserves management.

4. Prices

For the year 2023, with the easing of global supply chain bottlenecks, the impact from the Russia-Ukraine war waning, and major central banks' monetary tightening continuing to weigh on demand, the global economy experienced slower growth, pushing down import prices of international crude oil and other raw materials. As a result, Taiwan's Producer Price Index (PPI) decreased by 0.56% over the previous year. Headline inflation, measured by the CPI, increased by 2.49%, primarily driven by price rises in food and entertainment services, as well as higher residential rent. The core CPI, which excludes fruit, vegetables, and energy, stood at 2.58%.

Inflation Rates



Note: As the PPI was first compiled in January 2021, the annual PPI growth rate was calculated from January 2022.

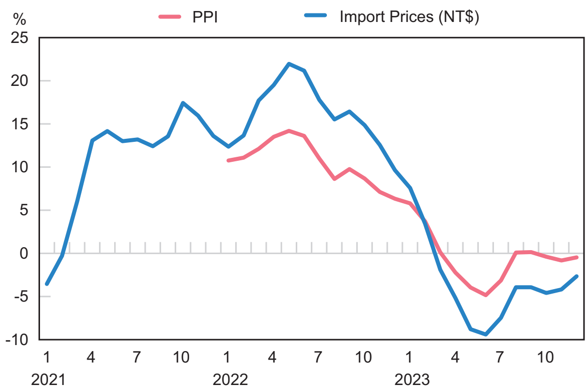
Source: *Price Statistics Monthly* (January 2024), DGBAS, Executive Yuan.

Slight decline in Producer Prices

Taiwan's import prices dropped by 3.59% in 2023, receding from an increase of 16.07% in 2022. In terms of monthly movements, the annual growth rate of import prices in NT dollar terms trended downwards from the beginning of the year on account of international raw material prices coming down and reached an all-year low of -9.40% in June. Later, with increases in prices of transportation equipment and prices of optical, measuring, medical instruments, musical instruments, and parts thereof, the decrease in import prices abated and narrowed to 2.64% in December.

The PPI declined by 0.56% in 2023, down from an increase of 10.51% in 2022, indicating softening pressures of imported inflation. In terms of monthly movements, the annual PPI inflation rate went down from the beginning of the year and fell by 4.84% in June, the lowest level of the year. Subsequently, driven by price rises in parts of electronic products and transportation equipment, the annual PPI inflation rate posted a slower decline of 0.47% in December. Among the components of the

Annual Growth of Import Prices and PPI



Note: As the PPI was first compiled in January 2021, the annual PPI growth rate was calculated from January 2022.

Source: *Price Statistics Monthly* (January 2024), DGBAS, Executive Yuan.

basic groups, prices of manufacturing products declined by 1.54%, contributing 1.38 percentage points to the PPI decrease, mainly attributable to price declines in four categories including chemical material, other chemical products, and pharmaceuticals, petroleum and coal products, base metal products, and fabricated metal products. However, prices of water, electricity, and gas supply, prices of agriculture, forestry, fishing, and animal husbandry products, and prices of quarrying and mining products went up by 10.39%, 4.77%, and 2.19%, respectively.

Broken down by the two major components of the PPI, prices of domestic sales excluding imports and prices of exports slid by 0.25% and 1.90% year on year, respectively, on account of falling prices of international raw materials.

As the downtrend in primary commodity prices amid slowing global demand helped alleviate cost pressures for importers, prices of domestic sales excluding imports slightly dropped by 0.25% in 2023. In terms of the basic groups, prices of manufacturing products declined by 2.34%, reflecting decreases in prices of chemical material, other chemical products, and pharmaceuticals, prices of base metal products, and prices of fabricated metal products. On the other hand, prices of water, electricity, and gas supply and prices of agriculture, forestry, fishing, and animal husbandry products rose by 10.40% and 5.39%, respectively. Prices of quarrying and mining products registered an increase of 2.19%.

Export prices trended down by 6.22% in US dollar terms in 2023. Owing to NT dollar depreciation against the US dollar, the annual change in export prices recorded a smaller decrease of 1.90% in terms of the NT dollar. Among the components of export prices in NT dollar terms, prices of raw materials moved down by 2.42% with a contribution of -2.10 percentage points which primarily reflected lower prices of mineral products, plastics and rubber products, chemical products, as well as base metal products. Prices of consumer goods also decreased by 1.13%. In contrast, prices of capital goods rose by 3.64%.

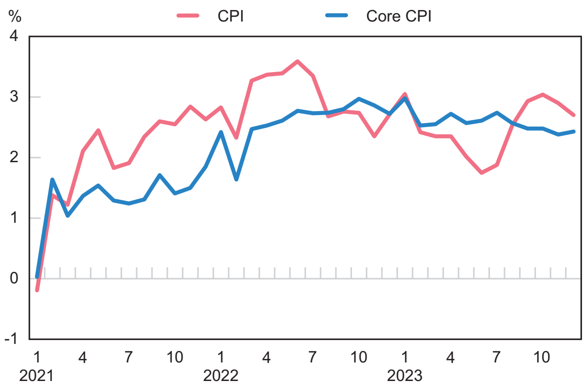
Softer Consumer Prices

The CPI rose by 2.49% in 2023, lower than 2.95% in 2022. From the beginning of the year, the annual CPI inflation rate edged down on account of milder increases in domestic prices of food such as vegetables and fruit and subdued fuel and lubricant fees, and slowed to 1.75% in June. Then, as supply shocks from weather events including successive strikes of typhoons and torrential rain pushed up the prices of vegetables and fruit, causing food inflation to gather steam, the annual CPI inflation rate trended upwards and reached 3.04% in October. Afterwards, the rate went down and posted 2.70% in December, mainly owing to falling prices of vegetables and slower growth in entertainment services prices.

The core CPI grew at an average pace of 2.58% year on year in 2023, slightly lower than 2.61% of the previous year. In terms of monthly movements, as prices of food/beverage and travel/accommodation services were buttressed by booming demand and continued labor shortage in services industries amid the post-pandemic reopening period, the core CPI annual growth rate abated rather slowly and reached 2.74% in July. Later, the annual core CPI inflation rate continued to fall gradually to 2.38% in November, the lowest since March 2022, as prices of entertainment services rose at a softer pace. The rate moved up to 2.43% in December, mainly owing to a larger increase in prices of garments.

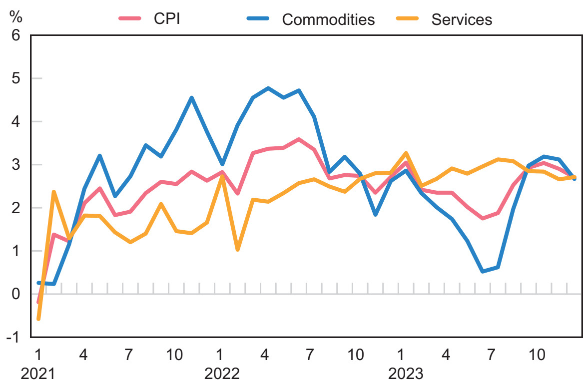
By type of items, the annual growth rate in commodity prices slipped from 3.56% in 2022 to 2.11% in 2023 as prices of crude oil and other raw materials trended below the levels of 2022, bringing down related import prices for Taiwan. However, domestic services prices stayed elevated and went up by 2.87% in 2023, higher than 2.40% in 2022, owing to rising residential rent and demand-driven price rises in entertainment and food services.

Annual CPI Growth Rates



Source: *Price Statistics Monthly* (January 2024), DGBAS, Executive Yuan.

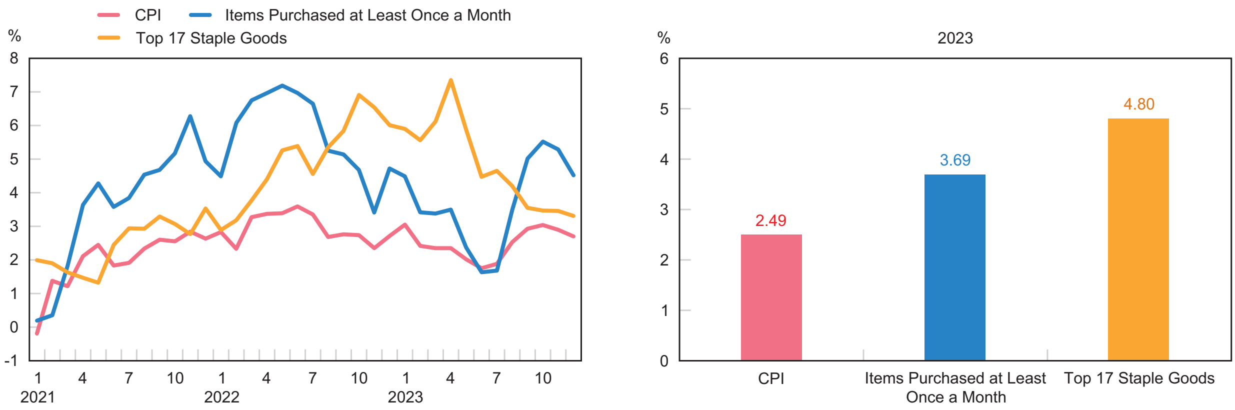
Annual Growth of CPI and Prices of Commodities and Services



Source: *Price Statistics Monthly* (January 2024), DGBAS, Executive Yuan.

As prices of the items purchased at least once a month and of the top 17 staple goods rose by 3.69% and 4.80% in 2023, respectively, with both significantly outpacing the overall CPI inflation of 2.49%, consumers tended to be more conscious of the price uptrends.

Annual Growth of CPI, Prices of the Top 17 Staple Goods, and Prices of the Items Purchased at Least Once a Month



Source: *Price Statistics Monthly* (January 2024), DGBAS, Executive Yuan.

Source: *Price Statistics Monthly* (January 2024), DGBAS, Executive Yuan.

In 2023, Taiwan's CPI increased by 2.49%. Around 66% of this increase came from price rises in food and entertainment services, as well as higher residential rent, with a combined contribution of 1.65 percentage points in the annual CPI inflation rate.

The main factors contributing to the rise of CPI inflation in 2023 were as follows:

(1) Prices of food went up by 4.03% and accounted for 1.05 percentage points in the annual CPI inflation rate. Among the components of the food group, the rise in wages and higher raw food costs brought up prices of food away from home by 4.28%, contributing 0.43 percentage points to CPI inflation. With rising feed and production costs, prices of meats, cereals and cereal products, and eggs rose by 6.12%, 4.04%, and 10.72%, and accounted for 0.15, 0.06, and 0.04 percentage points in CPI inflation, respectively. With supply restrained by unfavorable weather conditions in the second half of the year, prices of vegetables and fruit moved up by 3.90% and 1.22%, respectively, both contributing 0.05 percentage points to CPI inflation.

(2) Reflecting the rise in housing prices, as well as higher prices of maintenance and repair of dwellings, prices of residential rent grew by 2.16%, contributing 0.33 percentage points to CPI inflation.

(3) Increases in accommodation and group travel fees on account of robust post-pandemic demand for travel and entertainment services caused prices of entertainment services to go up further by 7.08%, accounting for 0.27 percentage points in CPI inflation.

(4) As elevated international gold prices brought prices of gold ornaments and jewelry higher, prices of personal effects climbed by 4.45%, contributing 0.10 percentage points to CPI inflation.

(5) Increased prices of vehicle parts and higher wages for vehicle maintenance workers drove up prices of vehicle parts and maintenance by 3.92%, accounting for 0.07 percentage points in CPI inflation.

(6) The caregiver shortage and a resultant rise in their wages pushed up prices of services for nursery and nursing care by 5.19%, accounting for 0.07 percentage points in CPI inflation.

(7) Affected by higher prices of herbal medicines, cold medicines, and other health food, prices of medicines and health food moved up by 2.91% and accounted for 0.05 percentage points in CPI inflation.

(8) Owing to rising prices of cosmetic and hair appliances, bath products, and tooth pastes, prices of cosmetic items increased by 1.78%, contributing 0.05 percentage points to CPI inflation.

Percentage Changes in the Major Components of the CPI in 2023

Item	Annual Rate of Change (%)	Contribution to CPI Inflation Rate (Percentage Point)
CPI	2.49	2.49
Food	4.03	1.05
Food Away from Home	4.28	0.43
Meats	6.12	0.15
Cereals & Cereal Products	4.04	0.06
Vegetables	3.90	0.05
Fruit	1.22	0.05
Cooked Food	5.15	0.05
Eggs	10.72	0.04
Fish & Seafood	3.54	0.04
Residential Rent	2.16	0.33
Entertainment Services	7.08	0.27
Personal Effects	4.45	0.10
Vehicle Parts & Maintenance	3.92	0.07
Services for Nursery & Nursing Care	5.19	0.07
Medicines & Health Food	2.91	0.05
Cosmetic Items	1.78	0.05
Maintenance & Repair of Dwellings	3.20	0.04
Vehicles	0.91	0.04
Medical Care Services	1.98	0.04
Total		2.11
Others		0.38

Source: *Price Statistics Monthly* (January 2024), DGBAS, Executive Yuan.

5. Labor Market

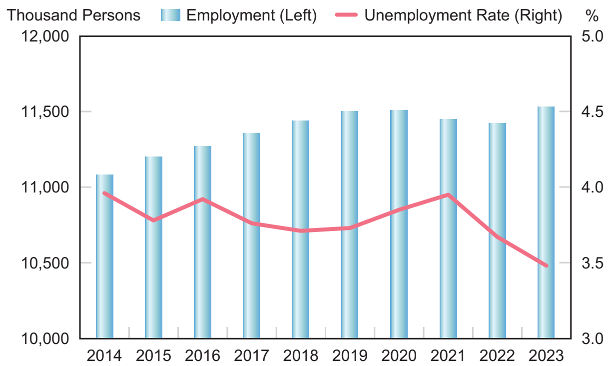
Increase in Employment

Labor market conditions were stable in 2023 amid recovered domestic demand. For the year as a whole, annual average employment was 11.53 million persons, an increase of 110 thousand persons or 0.96% from the previous year.

In terms of employment by sector, the industrial sector saw a slight increase of two thousand persons, or a 0.06% rise, on average throughout the year. Notably, within this sector, the construction sector experienced the most substantial job growth, adding 11 thousand persons. Conversely, the manufacturing sector faced the largest job loss, affecting 11 thousand persons due to a decline in export growth amid a global economic slowdown. Meanwhile, driven by expanding domestic demand, employment in the services sector witnessed a notable upturn in employment with 128 thousand additional persons employed, reflecting a 1.87% increase compared to the previous year. Specifically, the accommodation and food services sector within this category experienced the most significant surge, adding 34 thousand jobs. On the other hand, employment in the agricultural sector declined by 3.92% with a decrease of 21 thousand individuals. Of total employment, the services sector accounted for the major share at 60.5%, up by 0.54 percentage points from the previous year, while the shares of the industrial and the agricultural sectors edged down by 0.32 and 0.22 percentage points to 35.08% and 4.42%, respectively.

In terms of employed persons by occupation, employment of white-collar workers,[3] accounting for 46.38% of total employment, increased by 122 thousand persons or 2.28%. Services and sales employment made up 20.02% of total employment and increased by 33 thousand persons or 1.48%, while the employment of blue-collar workers,[4] accounting for 33.60% of total employment, decreased by 47 thousand persons or 1.21%.

Employment and Unemployment Rate



Source: DGBAS, Executive Yuan.

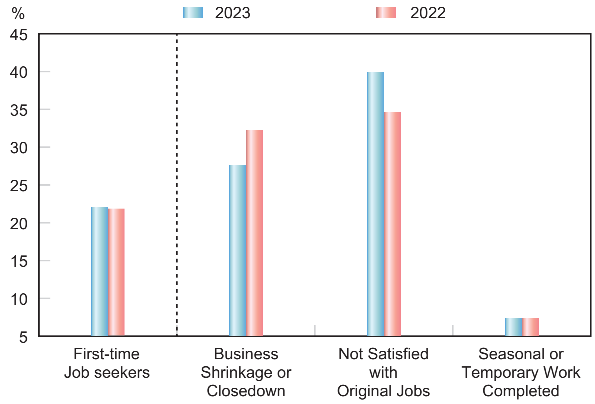
[3] Including legislators, senior officials, managers, professionals, technicians, associate professionals, and clerical support workers.
[4] Including skilled workers in agricultural, forestry, fishing, and animal husbandry industries, and craft and machinery related workers.

Lowest Unemployment Rate Since 2001

Throughout 2023, the unemployment rate generally trended down to 3.33% in December, except for temporary fluctuations due to seasonal factors such as a typical wave of post-Lunar New Year job switching (February to March) and the influx of new graduates entering the job market (June to July). For the year as a whole, the unemployment rate was 3.48%, the lowest since 2001.

Reflecting the improvement in the labor market, unemployment duration ticked down by 0.06 weeks over the previous year to 21.19 weeks. In terms of age groups, unemployment duration of the age group 15-24 decreased the most by 1.30 weeks to 16.33 weeks, followed by 21.72 weeks for the age group 45-64 with a decrease of 1.18 weeks. However, the unemployment duration of the age group 25-44 mildly increased by 0.77 weeks to 23.09 weeks. In addition, the average number of the long-term unemployed[5] was 49 thousand persons, a decrease of nine thousand persons compared to that in the previous year.

Causes of Unemployment

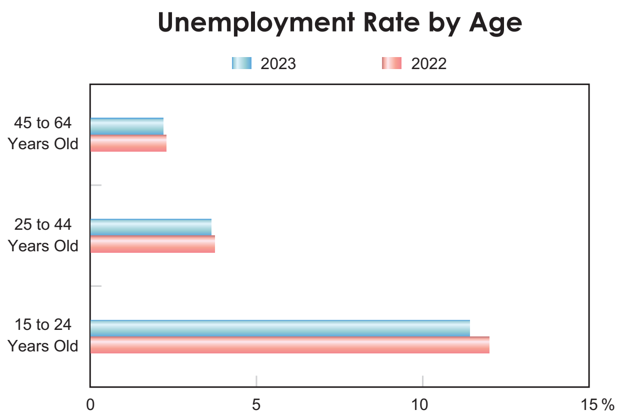


Source: DGBAS, Executive Yuan.

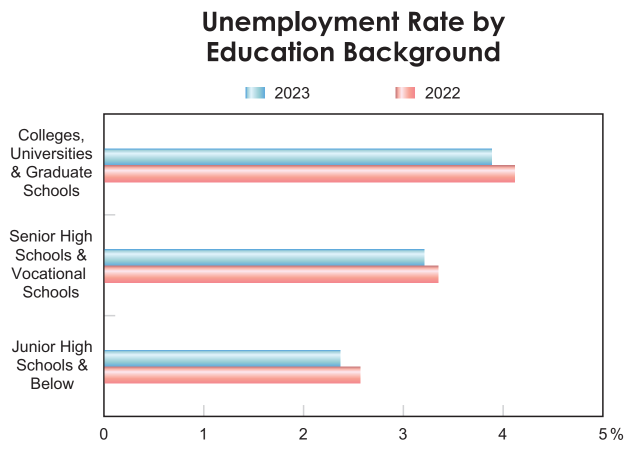
In terms of causes of unemployment, total unemployment in 2023 was 415 thousand persons, decreasing by 19 thousand or 4.38% from the previous year, mainly because unemployment of experienced job seekers, with a share 78.08% of total unemployment, decreased by 16 thousand persons or 4.56%. Among them, unemployment because of shrinkage or closedown of business recorded the largest decline by 26 thousand persons or 18.22%, and its share of total unemployment also decreased from 32.13% the previous year to 27.48%, mainly because of the post-pandemic recovery of domestic demand and a decrease in the number of involuntary unemployment cases. Meanwhile, unemployment because of dissatisfaction with their original jobs surged by 15 thousand persons or 10.3%, with a share 39.82% of total unemployment. Unemployment because of conclusion of seasonal or temporary work decreased by two thousand persons or 4.29%.

In terms of age groups, in the year 2023 the unemployment rates of the age groups 25-44 and 45-64 dropped by 0.11 and 0.09 percentage points from the previous year to 3.61% and 2.17%, respectively. The unemployment rate among the age group 15-24, although still the highest among all age groups, decreased by 0.58 percentage points to 11.39%, marking the most significant decline among these groups.

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

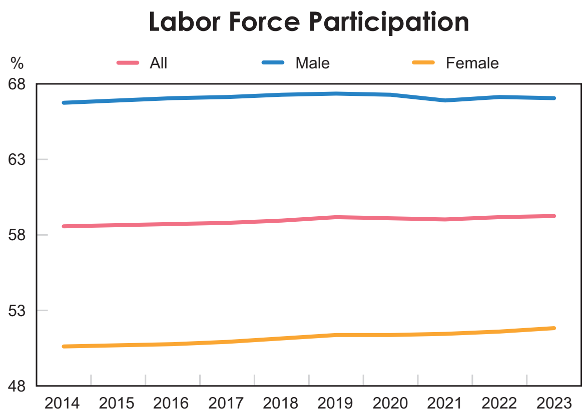


Source: DGBAS, Executive Yuan.



Source: DGBAS, Executive Yuan.

In terms of educational background, the unemployment rates for three groups—those with a junior high school degree or below, a senior high school or vocational school degree, and a college degree or higher—saw declines of 0.20, 0.14, and 0.23 percentage points to 2.36%, 3.20%, and 3.88%, respectively. Younger persons and highly educated people suffered higher unemployment rates in 2023, reflecting a mismatch between skills aquired through tertiary education and demand for skills in the labor market.



Source: DGBAS, Executive Yuan.

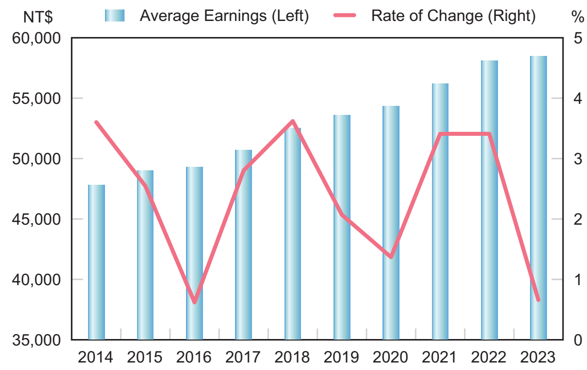
Both Labor Force and Labor Participation Rate Increased

The labor force (employed and unemployed combined) increased by 90 thousand persons, or 0.76%, to 11.94 million persons in 2023, and the non-labor force also increased by 50 thousand persons, or 0.6%, to 8.23 million persons. The average labor force participation rate went up by 0.04 percentage points over the previous year to 59.22% in 2023, the highest since 1993.

In terms of gender, the male labor force participation rate edged down to 67.05%, a decrease of 0.09 percentage points from the previous year, while the female labor force participation rate has continued to grow since 2001 and increased by 0.21 percentage points to 51.82% in 2023, showing that government policies have been effective in promoting gender equality, improving the work environment, and facilitating female employment in recent years.

In terms of age groups, the labor participation rates of the age groups 25-44 and 45-64 increased by 0.28 and 0.86 percentage points to 90.26% and 66.35%, respectively, while that of the age group 16-24 decreased by 0.34 percentage points to 36.39%. Although the labor force participation rate has increased for two consecutive years, it remains lower than those of the United States (62.6%), Japan (62.9%), South Korea (64.3%), and Singapore (68.6%).

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



Source: DGBAS, Executive Yuan.

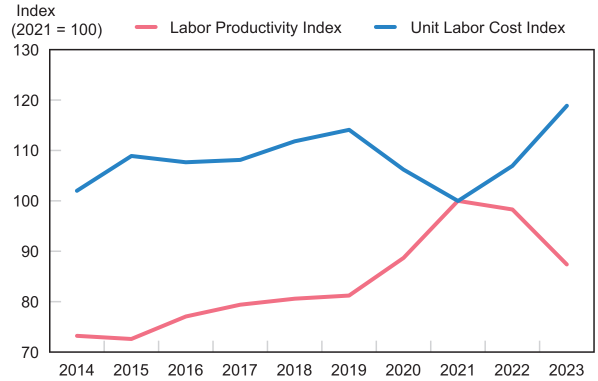
This discrepancy can be attributed to several structural factors, including extended schooling and early retirement. Recently, the government has implemented several measures[6] to address the challenges posed by an aging labor force, and it is anticipated that these efforts will yield positive results in the future.

In terms of education background, the labor force participation rate of workers with a college degree or above rose by 0.66 percentage points to 67.26%, while the participation rates of workers with a junior high school degree or below and those with a senior high school or vocational degree dropped by 1.19 and 0.56 percentage points to 36.37% and 61.66%, respectively.

Lower Wage Growth

For the year 2023, the average monthly earnings per worker of the non-farm sector grew by 0.65% to NT$58,420, the smallest increase since 2017. Accounting for the inflation rate, the average real monthly earnings decreased by 1.79% to NT$55,369.

Labor Productivity and Unit Labor Cost of Industrial Sector



Source: DGBAS, Executive Yuan.

In terms of major sectors, wage growth in the industrial sector hit a 14-year low, primarily attributable to stagnant export growth. Conversely, the services sector saw mild wage growth owing to rising domestic consumer spending and the easing of border controls. The average monthly earnings of the industrial and services sectors grew by -0.94% and 1.93% to

[6] The government launched the "Middle-aged and Elderly Employment Promotion Project" in 2023, aiming to increase the middle-aged and elderly labor force by 100 thousand individuals annually.

NT$60,832 and NT$56,744, and both dropped by 3.34% and 0.54% in real term respectively.

In terms of industrial classification, the finance and insurance sector had the highest average monthly earnings with NT$98,243, and the electricity and gas supply sector came in second with NT$96,596. On the other hand, the education sector[7] and the accommodation and food services sector earned average monthly wages of NT$33,433 and NT$37,662, respectively, the lowest two among all sectors owing to a large number of part-time employees in these sectors. In terms of growth rates, the accommodation and food services sector saw the highest increase of 4.30%, followed by the sector of other service activities at 4.08%.

Declined Labor Productivity and Increased Unit Labor Cost

As total production declined while total working hours remained similar to the previous year, the labor productivity of the industrial and the manufacturing sectors dropped by 11.08% and 11.78%, respectively, compared with the previous year. Within the manufacturing sector, manufacturing of wearing apparel and clothing accessories experienced the most significant decline in labor productivity at 26.02%, followed by manufacturing of textiles at 19.48%. Furthermore, manufacturing of electronic parts and components also dropped by 15.58%.

With an increase in total earnings and a decline in production, unit labor costs of the industrial and the manufacturing sectors increased by 11.14% and 11.96% year on year, respectively. Of all the manufacturing sectors, manufacturing of wearing apparel and clothing accessories registered the largest increase in unit labor cost with 35.96%, followed by other transport equipment and parts at 23.97%.

[7] Excluding schools at all levels within the formal education system (except preschools).

Financial Developments

II. Financial Developments

1. Overview

In 2023, affected by the delayed spillover effects of monetary tightening by major countries in 2022, economic growth in major economies slowed down, and funding demand weakened. Against this backdrop, the annual growth rate of the monetary aggregate M2 exhibited a downtrend. Despite a brief decline back into the reference range in June, the rate exceeded the upper limit of the range again in July and August. Thereafter, net capital outflows led the annual growth rate of M2 to fall back within the reference range in the final four months of the year.

In terms of interest rates, banks' posted interest rates and the weighted average interest rates on deposits and on loans moved upward, reflecting the Bank's five hikes in the policy interest rates and two hikes in the required reserve ratios between March 2022 and March 2023. Owing to tighter liquidity conditions, the interbank overnight call loan rate, bills market rates, and the average 10-year government bond yield increased over the previous year.

In regard to the exchange rate, during the course of the year, the NT dollar against the US dollar broadly depreciated. At the end of 2023, the NT dollar depreciated by 0.1% against the US dollar compared with a year earlier; on a daily average basis, the NT dollar also depreciated by 4.4% compared with the previous year. In the stock market, spurred by the ongoing buzz surrounding artificial intelligence and the US stock market rallies, the Taiwan Stock Exchange (TWSE) Capitalization Weighted Stock Index, the TAIEX, was on the rise, and the daily average trading value increased.

Growth in M2 and Bank Loans and Investments Both Declined

In early 2023, declining exports weakened corporate capital funding demand. However, the introduction of a renewed Preferential Housing Loans for the Youth program in August resulted in an increase in the annual growth rate of housing loans, offsetting the sluggish corporate lending growth. At the end of 2023, the annual growth rate of bank loans and investments stood at 6.58%, slightly higher than the 6.38% at the end of 2022. Nevertheless, the average annual growth rate for the entire year decreased from 7.39% in 2022 to 5.92% in 2023. With slower growth in bank loans and investments reducing the demand for money, the annual growth rate of M2 (measured on a daily average basis) declined to 6.25% in 2023 from the 7.48% registered in 2022, within the Bank's 2.5% to 6.5% reference range for the year.

Both Deposit and Loan Interest Rates Increased

In response to intense inflation pressures and in order to rein in inflation expectations, the Bank raised the policy rates by 0.125 percentage points in the quarterly meeting of March 2023. As a result, the posted interest rates on bank deposits moved upwards. At the end of 2023, the average posted interest rate on one-year time deposits of the five major domestic banks edged up from 1.45% at the end of the previous year to 1.48%, and the weighted average interest rate on their newly-extended loans increased by 0.439 percentage points to 1.885% in 2023.

For domestic banks as a whole, the weighted average interest rate on deposits was 0.94%, increasing by 0.41 percentage points over the previous year. Meanwhile, the weighted average interest rate on loans was 2.33%, increasing by 0.48 percentage points.

Money Market Rates Generally Increased

During 2023, short-term liquidity conditions tightened mainly owing to the spillover effects of major central banks' monetary tightening since 2022, concerns over instability in the US and European banking systems in March 2023, the Bank's interest rate hike in late March, and consecutive net foreign capital outflows for four months starting in July. The weighted average overnight call loan rate generally showed an upward trend in 2023, rising from a low of 0.560% in January to 0.686% in December. The annual average interest rate was 0.646%, increasing by 0.383 percentage points from the previous year.

With regard to the bills market, money market rates broadly increased in 2023, while their yearly average rates were all higher than those of the previous year amid tight market liquidity. The average 1-30 day commercial paper rate in the secondary market was 1.20% in 2023, increasing by 0.51 percentage points over the previous year.

10-Year Government Bond Yield Became Higher than Last Year

In 2023, higher inflation led the yields on US government bonds to increase. Coupled with the Bank's policy rate hikes, the turnover-weighted average of the yield on Taiwan's benchmark 10-year government bond rose by 12 basis points over the previous year to 1.21%.

In terms of issuance, as the Central Government Debt Service Fund renewed maturing government bonds and increased issuance to meet budget needs, the total issuance amount of government bonds decreased by NT$42.1 billion over the previous year.

NT Dollar Against the US Dollar Broadly Depreciated

In 2023, the NT dollar against the US dollar broadly depreciated. At the beginning of the year, inflationary pressures in the United States eased and the US dollar weakened; coupled with foreign capital inflows to Taiwan, the NT dollar appreciated against the US dollar towards a yearly high of 29.700 on February 2. Then, as the Fed raised interest rates by 0.25 percentage points and US economic data was better than expected, the US dollar strengthened and the NT dollar depreciated. After the collapse of Silicon Valley Bank in March, the market reduced expectations of an aggressive Fed interest rate hike, causing the US dollar to fall and the NT dollar to appreciate. Subsequently, amid persisting inflation, the Fed delivered three 0.25 percentage point rate hikes in March, May, and July. Additionally, escalating tensions in the Middle East in October increased market demand for safe-haven assets, also bolstering the US dollar. Furthermore, foreign portfolio investors began to realize profits in Taiwan's stock market from July onwards, resulting in net capital outflows that drove a continuous depreciation of the NT dollar against the US dollar. In November and December, as the Fed kept its policy rate unchanged and US inflation rates were lower than expected, the US dollar weakened and the NT dollar appreciated against the US dollar. At the end of 2023, the NT dollar depreciated by 0.1% against the US dollar compared with the end of the previous year. On a daily average basis, the NT dollar depreciated against the US dollar by 4.4% in 2023.

Stock Index Rose and Trading Value Increased

From the beginning to the middle of 2023, the TAIEX was driven upwards by the easing of inflationary pressures and monetary tightening in the US, increasing demand for AI technologies, and bullish runs of US tech stocks. In the second half of the year, though, the US sovereign debt credit rating downgrade, China's property sector debacles and its central bank's rate cuts, US stock corrections, and foreign investor selloffs of TAIEX shares combined to lead to downward swings through to the end of October. Afterwards, the TAIEX was boosted by market expectation of the end of the Fed's tightening cycle and an anticipated holiday shopping boom, as well as foreign investor net purchases of local stocks. As a result, the TAIEX followed the US stock rebound to rally and closed the year at an all-year high, up by 26.8% over the end of the previous year. The daily average trading value on the TWSE increased by 15.9% from 2022 to NT$264.3 billion in 2023.

2. Banking Sector

Number of Monetary Financial Institutions

At the end of 2023, the number of monetary financial institutions (defined hereafter in this chapter as excluding the central bank) marginally decreased to 405. The number of domestic banks decreased by one as Jih Sun International Bank was merged into Taipei Fubon Commercial Bank Co., Ltd. As for money market mutual funds, the number remained zero after the last remaining fund was liquidated in May 2017. The numbers of the other types of monetary financial institutions all stood unchanged.

In addition to monetary financial institutions, the number of financial holding companies was 15, the same as 2022.

Number of Monetary Financial Institutions by Type

Types of Institutions	End of 2023	End of 2022	Annual Change
Total Number of Main Offices	405	406	-1
Domestic Banks	39	40	-1
Foreign and Mainland Chinese Banks	31	31	0
Credit Cooperatives	23	23	0
Credit Departments of Farmers' and Fishermen's Associations	311	311	0
Chunghwa Post	1	1	0
Total Number of Branches	6,079	6,074	5
Local Branches	5,866	5,863	3
Overseas Branches	154	152	2
Offshore Banking Units	59	59	0

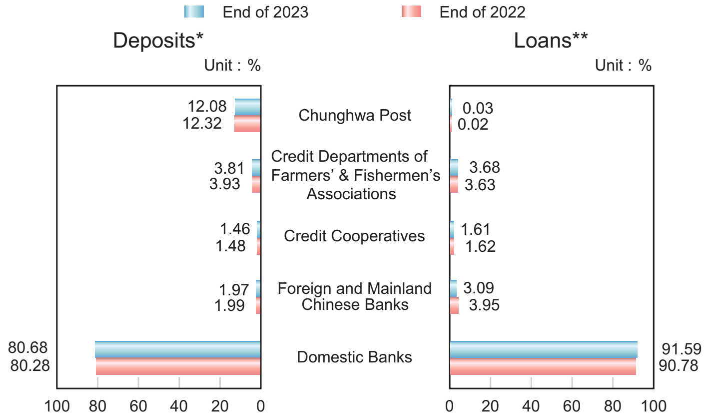
Sources: 1. *Financial Statistics Monthly* (February 2024), CBC.
2. Department of Financial Inspection, CBC.

Market Shares of Deposits and Loans

At the end of 2023, domestic banks maintained a dominant role in the deposit market, with the market share rising to 80.68%. This was primarily due to a more sizeable increase in the deposits of domestic banks, resulting from continued credit growth and ample market liquidity. By contrast, the deposit market shares shrank for the other types of monetary institutions, with the departments of savings and remittances of Chunghwa Post taking up a share of 12.08%, the credit departments of farmers' and fishermen's associations 3.81%, branches of foreign and Mainland Chinese banks 1.97%, and credit cooperatives 1.46%.

In terms of loans, the market share of domestic banks continued to climb to 91.59%, mainly because an increase in house-purchasing loans in the second half of the year offset soft demand for funds by enterprises due to sluggish exports. In contrast, foreign and Mainland Chinese banks' market share slipped to 3.09%. Chunghwa Post's market share slightly rose to 0.03%, reflecting an increase in lending to bills finance companies. As for the other institution types, the market share of credit departments of farmers' and fishermen's associations edged up to 3.68%, whereas that of credit cooperatives continued to fall to 1.61%.

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 2024), CBC.

Main Uses of Funds in Monetary Financial Institutions

At the end of 2023, the total amount of funds in monetary financial institutions was NT$66,276 billion, increasing by NT$3,966 billion compared to the end of 2022. The combined share of transaction and non-transaction deposits was around 87%. The balances of transaction deposits and non-transaction deposits posted annual growth rates of 3.73% and 9.96%, respectively.

In the case of fund uses, bank loans still accounted for over 50% of total uses of funds at the end of 2023. Due to a decrease in growth of loans to the private sector, the annual growth rates of NT dollar loans decreased from 8.92% at the end of the previous year to 6.02%. Net foreign assets accounted for a share of 10.45%, higher than the 9.06% recorded a year ago owing to the increase in investment in foreign securities.

Portfolio investments by monetary financial institutions measured on a cost basis changed from a decline of 0.55% at the end of the previous year to a growth of 12.77%, mainly due to an increase in investment in commercial paper. Banks' purchases of certificates of deposit issued by the central bank accounted for a share of 12.19%, lower than the 13.71% recorded a year ago.

Main Uses of Funds in Monetary Financial Institutions[1]

Unit: NT$billion

	End of 2023			End of 2022			Annual Change	
	Balance	Share (%)	Annual Growth Rate (%)	Balance	Share (%)	Annual Growth Rate (%)	Balance	Share (%)
Funds Balance								
Transaction Deposits [2]	23,711	35.78	3.73	22,858	36.68	2.42	853	-0.90
Nontransaction Deposits [3]	33,922	51.19	9.96	30,850	49.51	5.94	3,072	1.68
NT Dollar Deposits	24,958	37.66	8.41	23,023	36.95	7.11	1,935	0.71
Foreign Currency Deposits [4]	8,964	13.53	14.52	7,828	12.56	2.65	1,136	0.97
Government Deposits	1,494	2.25	4.79	1,426	2.29	10.92	68	-0.04
Other Items	7,149	10.78	-0.37	7,176	11.52	-2.73	-27	-0.74
Total	66,276	100.00	6.36	62,310	100.00	3.67	3,966	0.00
Uses:								
Net Foreign Assets [4]	6,926	10.45	22.68	5,645	9.06	10.40	1,280	1.39
Loans	38,065	57.43	5.54	36,067	57.88	7.59	1,998	-0.45
NT Dollar Loans	37,433	56.48	6.02	35,306	56.66	8.92	2,127	-0.18
Foreign Currency Loans [4]	632	0.95	-17.01	761	1.22	-31.34	-130	-0.27
Portfolio Investments [5]	8,420	12.70	12.77	7,467	11.98	-0.55	954	0.72
Purchases of CDs Issued by CBC	8,079	12.19	-5.44	8,544	13.71	-9.01	-465	-1.52
Deposits with CBC	4,786	7.23	4.35	4,586	7.37	0.45	200	-0.14

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.

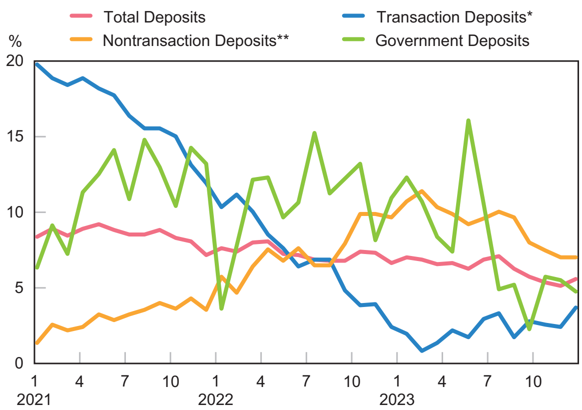
Source: *Financial Statistics Monthly* (February 2024), CBC.

Deposits

Because of net capital outflows and slower growth in loans and investments, the annual growth rate of deposits held by monetary financial institutions decreased to 5.62% by the end of 2023 from 6.63% a year earlier. Regarding the composition of deposits, the drop in the annual growth rate was mainly due to slower growth in nontransaction deposits and government deposits.

In terms of nontransaction deposits, its annual growth rate decreased to 7.02% by the end of 2023 from 9.69% a year earlier due to slower growth in foreign currency deposits.

Annual Growth Rates of Deposits



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

Source: *Financial Statistics Monthly* (February 2024), CBC.

However, its share in total deposits went up to 57.37% by the end of 2023 from 56.62% a year earlier.

The annual growth rate of foreign currency deposits decreased to 3.35% by the end of 2023 from 17.20% a year earlier and its share also shrank to 15.17% from 15.50%. This was primarily owing to weak exports in 2023, which resulted in reduced inward remittances of overseas sales revenues. Moreover, corporate demand for foreign currency softened, as reflected by lower demand for foreign currency borrowing and a shift from foreign currency deposits to NT dollar time deposits. Meanwhile, the increase in net investment in overseas long-term bonds and notes by pension funds further contributed to this trend.

In 2023, the annual growth rate of time deposits (including negotiable certificates of deposit) experienced a drop in May, mainly due to the reinstatement of the deadline for corporate income tax settlement and declaration, which usually is set at the end of May. A resultant wave of more corporate tax payments using time deposits compared to the same month of the previous year caused the annual growth rate of time deposits to drop to a yearly low of 4.32%. However, for all the other months, the annual growth rates of time deposits generally showed an uptrend. This was because some enterprises moved their foreign currency deposits into NT dollar time deposits, and the amount of cash dividends distributed by enterprises decreased compared to the previous year. At the end of 2023, the annual growth rate of time deposits rose to 10.66% from 6.37% a year earlier, with its share rising to 11.77% from 11.23%.

In 2023, the annual growth rate of time savings deposits rose before dropping. The increase in the first half of the year was driven by the impact of rising interest rates. In pursuit of higher returns, some individuals migrated from passbook savings deposits into time savings deposits, and some pension funds allocated more funds to time savings deposits. This led to a peaking in the annual growth rate of time savings deposits, reaching 13.68% in May. However, in the second half of the year, as the AI boom drove stock market rallies and spurred investment enthusiasm, some individuals and pension funds paused migration of passbook savings deposits into time savings deposits, which led to a decrease in the annual growth rate of time savings deposits. Nonetheless, by the end of 2023, the annual growth rate of time savings deposits still increased to 10.84% from 9.83% by the end of 2022, and its share also increased to 18.10% from 17.25%.

Regarding postal savings deposits, the annual growth rate declined from 4.45% by the end of 2022 to 3.50% by the end of 2023, and its share in total deposits decreased from 12.05% to 11.81%.

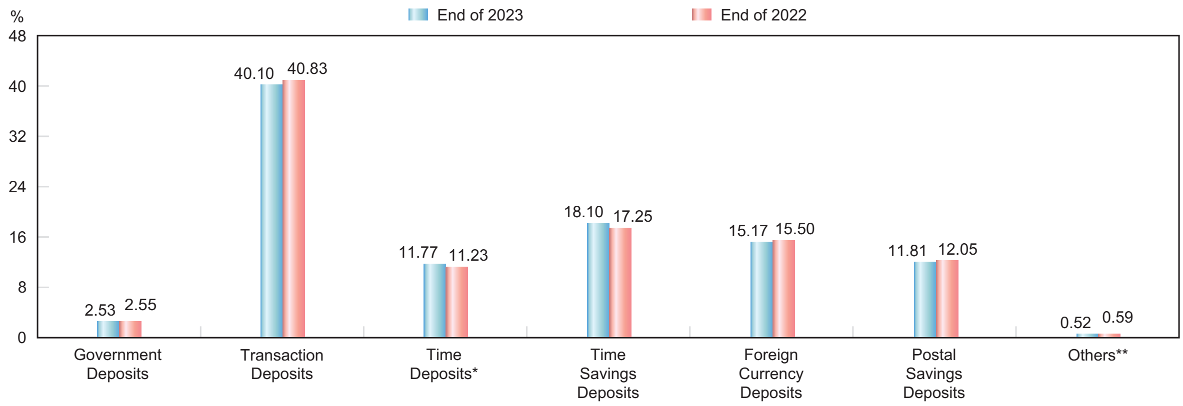
In terms of transaction deposits, its annual growth rate increased to 3.73% by the end of 2023 from 2.42% a year earlier. This increase was because the annual growth rate of passbook savings deposits rose and the annual growth rate of passbook deposits turned positive. However, its share in total deposits shrank to 40.10% by the end of 2023 from 40.83% a year earlier.

In the beginning of 2023, the annual growth rate of passbook savings deposits decreased from 3.80% at the end of the previous year to 3.17% at the end of March, driven by the rise in interest rates. However, later in the year, thanks to the government's one-off universal tax rebate program and the gradual uptick in the stock market, the annual growth rate of balances in securities giro accounts turned positive. Additionally, in the second half year, as the shift of passbook savings deposits into time savings deposits slowed down, the annual growth rate of passbook savings deposits went up to 4.26% by the end of 2023.

The annual growth rate of passbook deposits turned positive by the end of 2023. Although the economic slowdown in 2023 weakened demand for short-term operational funds by enterprises, there was a lower base effect because the funds from property and casualty insurers' passbook deposits shifted to policyholders' passbook savings deposits during the pandemic in 2022. Furthermore, the amount of corporate tax payments using passbook deposits increased less, and the amount of cash dividends distributed by enterprises decreased compared to the previous year, leading the annual growth rate of passbook deposits to turn positive.

With regard to government deposits, the annual growth rate experienced a significant increase in May as the end-of-May deadline for corporate income tax settlement and declaration, which was postponed to the end of June 2023, was reinstated. This change led to a significant surge in tax revenue compared to the same period in the previous year, causing the annual growth rate of government deposits to reach a yearly high at 16.11%. However, for the other months, the annual growth rates of government deposits generally showed a downtrend because of the decline in economic growth momentum in 2023, resulting in a slowdown in government tax revenue growth. Also, the national treasury disbursed relevant funds under the universal tax rebate program as well as post-pandemic recovery plans, leading to a decrease in the annual growth rate of government

Shares of Deposits by Type



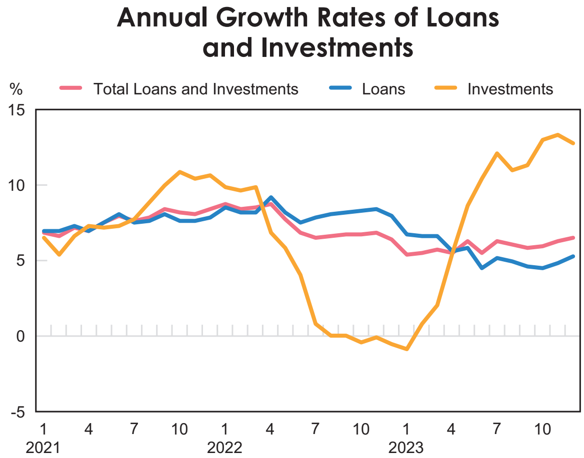
Notes: * Including NCDs.
** Including repurchase agreements, non-residents' NTD deposits and money market mutual funds.

Source: *Financial Statistics Monthly* (February 2024), CBC.

deposits to 4.79% by the end of 2023 from 10.93% a year earlier. Its share in total deposits slightly decreased to 2.53% from 2.55%.

Bank Loans and Investments

The annual growth rate of loans and investments of monetary financial institutions was 6.58% at the end of 2023, up from 6.38% at the end of 2022. Growth in loans slowed to an annual pace of 5.30% at the end of 2023 from 7.94% at the end of the previous year, whereas growth in portfolio investment rose to positive territory at 12.77% at the end of 2023 from -0.55% a year earlier.



Source: *Financial Statistics Monthly* (February 2024), CBC.

Loans by Sector

The annual growth rate of private sector loans extended by banks (defined in the following paragraphs as including domestic banks and local branches of foreign and Mainland Chinese banks) continued to slip to 5.33% at the end of 2023 from 7.46% a year earlier. The fall was largely due to sluggish exports, a moderation in the housing market, and weakening demand for bank borrowing as some investment companies raised funds by issuing bonds and commercial paper. The annual growth rate of loans to government enterprises dropped to 6.98% as of the end of 2023 from 81.52% a year earlier, as Taiwan Power Company and the CPC Corporation met their funding needs by issuing bonds and commercial paper rather than bank borrowing. Meanwhile, the annual growth rate of loans to government agencies declined further from -1.63% to -5.93% at the end of 2023 owing to a larger repayment by the government thanks to increased tax revenues.

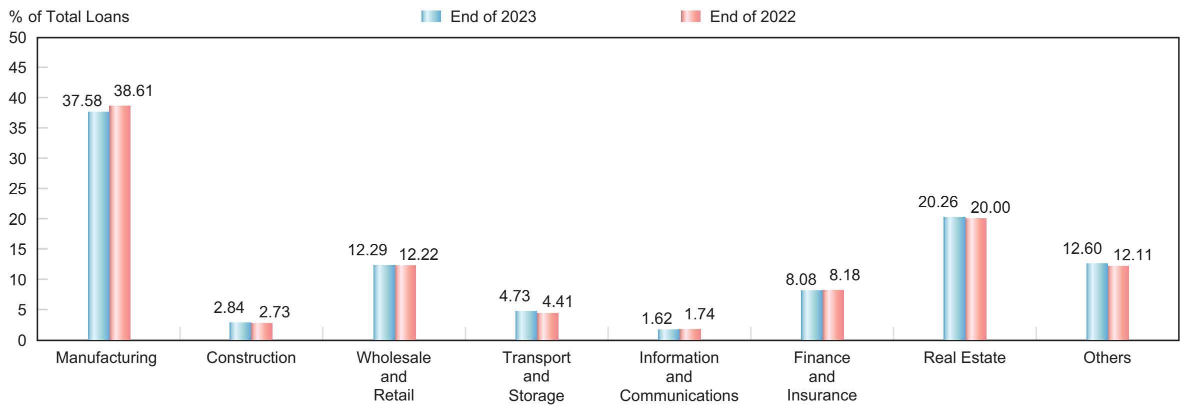
In terms of loan composition, loans extended to the private sector and government enterprises accounted for 93.52% and 2.87% of total loans at the end of 2023, higher than the 93.16% and 2.82% recorded at the end of 2022. Loans extended to government agencies accounted for 3.61% at the end of 2023, lower than 4.02% at the end of 2022.

Loans by Industry

Broken down by industry sector, bank loans to the manufacturing sector continued to account for the largest portion, at 37.58% at the end of 2023 compared to 38.61% at the end of 2022, with its annual growth rate also down from 10.01% to 0.93%. This was mainly attributable to a decrease in loans extended to computers, electronic and optical products manufacturing as export growth declined in 2023. While the share of loans extended to the construction industry increased to 2.84%, its annual growth rate dropped from 11.49% to 7.93% at the end of 2023, reflecting the housing market slowdown.

The share of loans extended to the real estate industry expanded; however, its annual growth rate trended down because of slower growth in construction loans. Meanwhile, the share of loans extended to the wholesale and retail industry climbed up, whereas its annual growth rate continued to decline amid trade headwinds in 2023. Both the share and the annual growth rate of loans to the finance and insurance industry slipped as the industry raised funds by issuing bonds and commercial paper, reducing demand for bank borrowing.

Loans by Industry



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

Source: *Financial Statistics Monthly* (February 2024), CBC.

Consumer loans

The annual growth rate of consumer loans extended by banks increased from 6.16% at the end of 2022 to 6.37% at the end of 2023. Among them, house-purchasing loans increased NT$660.4 billion or 7.04% in 2023, a faster year-on-year increase than 6.52% in 2022 mainly because of an increase in loan origination for newly-built housing units in the latter half of 2023 and the introduction of new Preferential Housing Loans for the Youth in August boosting loan applications. As for the shares of various types of consumer loans, house-purchasing loans remained the largest component, with its share increasing from 84.77% at the end of 2022 to 85.30% at the end of 2023. Car loans accounted for 1.87%, increasing from 1.75%, mainly because the shortage of car parts eased and the delivery volume of imported cars increased. Meanwhile, house-repairing loans, revolving credit for credit cards, employee welfare loans, and other consumer loans accounted for 0.34%, 0.89%, 0.33%, and 11.27%, 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$1,095.5 billion, while the increase was smaller, at NT$953.4 billion, when measured on a cost basis.

Portfolio investment by monetary financial institutions, measured on a cost basis, returned to positive territory, registering 12.77% in 2023 compared to -0.55% in 2022. This was mainly driven by ample liquidity in the banking system, together with a rebound in corporate bonds and commercial paper issuance as market interest rates stabilized when central banks in the US and Europe as well as the Bank kept the policy rates unchanged.

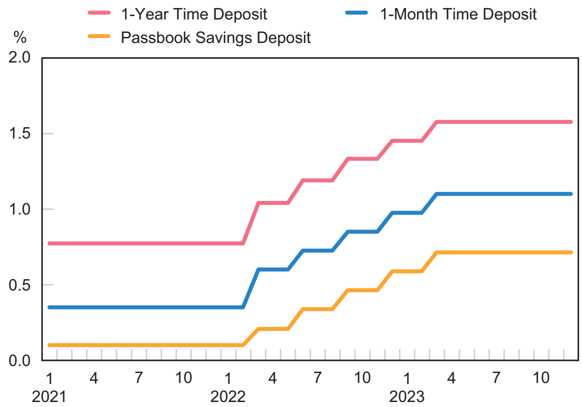
In terms of tool types, government bonds accounted for a share of 51.84%, lower than the 56.12% recorded a year ago because of a year-on-year decrease in net issuance of government bonds. As such, banks increased investment in corporate bonds and commercial paper. At the end of 2023, commercial paper accounted for a share of 21.00%, higher than a year ago. In addition, corporate bonds accounted for a share of 19.52%, edging up from the end of 2022.

Bank Interest Rates

The Bank raised the policy rates by 0.125 percentage points in March 2023, in order to contain domestic inflation expectations. As a result, banks' posted interest rates on deposits and loans trended upward. In the case of the five major domestic banks, the average fixed rates on one-month and one-year time deposits moved upward to 1.10% and 1.58% at the end of March 2023 from 0.98% and 1.45% at the end of February, respectively, while remaining steady for the rest of the year.

In view of the slow decline of domestic inflation and the potential impact of lingering global uncertainties on the strength of the domestic economic recovery, the Bank decided to keep the policy rates on hold in June, September and December in 2023. The Bank also stressed that it would continue to pay attention to the monetary policy trends of major economies, downward risks of Mainland China's economy, as well as changes in international raw material prices, geopolitical risks, extreme weather, etc., and their impact on the domestic economic and financial situation

Average Deposit Rates of the Five Major Domestic Banks*



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

Source: *Financial Statistics Monthly* (February 2024), CBC.

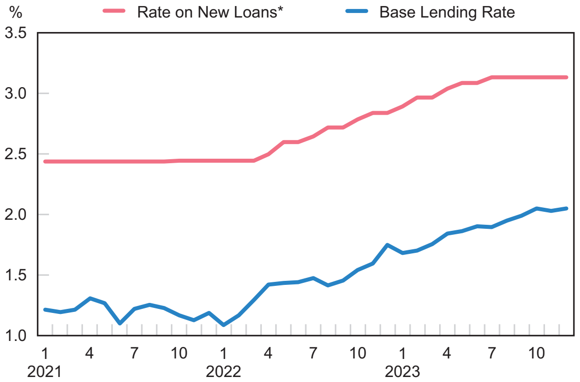
and adjust monetary policy as necessary to maintain price stability and financial stability.

The weighted average rates on deposits and loans of domestic banks generally showed an upward trend in 2023. In terms of deposit interest rates, the Bank's policy rate hikes in December 2022 and March 2023 guided banks' posted interest rates on deposits upward, causing the weighted average interest rate to rise to 0.96% in the second quarter of 2023 from 0.72% in the fourth quarter of the previous year. Then, owing to the increase either in the amount or in the share of time deposits in total deposits, the rate rose further to 0.99% in the fourth quarter of the year. On the whole, the weighted average interest rate on total deposits of domestic banks was 0.94% in 2023, which was 0.41 percentage points more than that recorded in the previous year.

In terms of loan interest rates, after the Bank's March policy rate hike, banks successively increased their base lending rates and the index rates on adjustable-rate mortgages. In addition, there was a decrease in lower-rate borrowings from governments. As a result, the weighted average interest rate on new loans of the five major domestic banks roughly trended upward from 1.679% in January to 2.051% in December. For the year as a whole, the rate increased from 1.446% in the previous year to 1.885%, up by 0.439 percentage points. Excluding central government loans, the weighted average interest rate on new loans increased from 1.483% in the previous year to 1.899% in 2023, up by 0.416 percentage points. Moreover, the average base lending rate increased to 3.133% at the end of 2023 from 2.837% at the previous year-end.

The Bank's policy rate hike led the weighted average loan rate to increase from 2.08% in the fourth quarter of 2022 to 2.34% in the second quarter of 2023. Then, in the third quarter, the weighted average interest rate on loans of domestic banks continued to rise to 2.39% because local governments and government enterprises paid down more loans and some banks successively

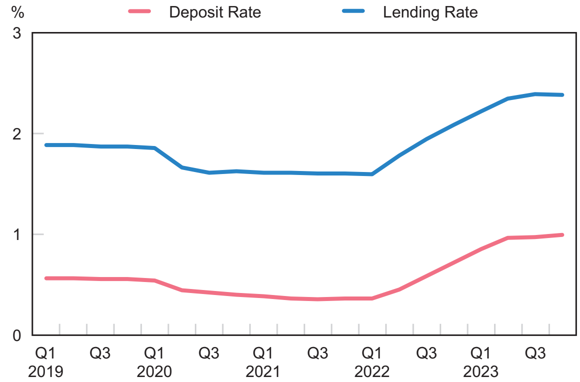
Average Lending Rates of the Five Major Domestic Banks



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

Source: *Financial Statistics Monthly* (February 2024), CBC.

Weighted Average Interest Rates of Domestic Banks



Source: *Financial Statistics Monthly* (February 2024), CBC.

increased their base lending rates. In the fourth quarter, the weighted average loan rate moved downward to 2.38% because of the introduction of competitive loan rate schemes by some banks and repayment of high-interest rate loans by some firms. For the year as a whole, the weighted average interest rate on loans of domestic banks was 2.33%, which was 0.48 percentage points more than that recorded in the previous year.

Because the increase in the average lending rate was more than that in the average deposit rate, the average interest rate spread between deposits and loans widened to 1.39 percentage points in 2023, which was 0.07 percentage points more than that recorded in the previous year.

3. Money Market

From March 2022 to March 2023, the Bank raised policy rates five times, and the interbank overnight call loan rate and bills market rates also swung up. Although the policy rates remained unchanged later in the year, money market rates still fluctuated at high levels. Consequently, financial institutions had weaker demand for interbank call loans, and the total turnover in the interbank call loan market for the year 2023 fell by 10.52% over the previous year. However, the year-end balance for 2023 rose by 14.37%, reflecting a longer duration of the period between the year-ends of the Gregorian and Lunar calendars (from Dec.29, 2023 to Feb.7, 2024, compared to the period from Dec.30, 2022 to Jan.19, 2023) that increased bank willingness to extend interbank loans before the end of 2023.

With regard to the short-term bills market in 2023, the total turnover recorded an increase of 14.50% from a year before. At the end of the year, the total issuance of short-term bills grew by 9.66% to meet corporate funding needs, while the outstanding amount of short-term bills went up by 15.81% compared to the previous year end.

Reduction in Interbank Call Loans

As market interest rates had trended up and demand for interbank call loans had softened amid the Bank's monetary policy tightening since 2022, total annual turnover of interbank call loans reached NT$23,077.2 billion in 2023, decreasing by NT$2,712.8 billion or 10.52% over the previous year.

With respect to borrowers, domestic banks still made the largest contribution to total transactions with a share of 75.92%, followed by bills finance companies, foreign and Mainland Chinese banks, and Chunghwa Post, with shares of 11.40%, 11.32%, and 1.35%, respectively.

The amount borrowed by domestic banks declined by NT$2,103.8 billion or 10.72% from a year earlier. The contraction was primarily because the Bank reduced the issuance of 364-day and 2-year negotiable certificates of deposit (NCDs) to increase market liquidity, and rising tax revenues in the year drove down the government's demand for borrowing from banks, weakening domestic banks' funding needs.

As for foreign and Mainland Chinese banks, they obtained NTD funds through Taiwan's interbank swap markets, leading to reduced demand for borrowing in 2023. Therefore, the amount borrowed by foreign and Mainland Chinese banks registered a year-on-year decrease of NT$417.3 billion or 13.77%.

The amount borrowed by bills finance companies rose by NT$112.1 billion or 4.45% compared with a year ago. The growth was largely because bills finance companies expanded the business of underwriting commercial paper in order to enhance profits from spread trading, resulting in higher funding needs. Meanwhile, the amount borrowed by Chunghwa Post slid by NT$303.8 billion or 49.33% over the previous year.

In terms of lenders, domestic banks remained the largest supplier of funds, making up 60.23% of total transactions in 2023. Foreign and Mainland Chinese banks came in second with a share of 37.29%, followed by Chunghwa Post and bills finance companies making up 2.33% and 0.15% of total transactions, respectively.

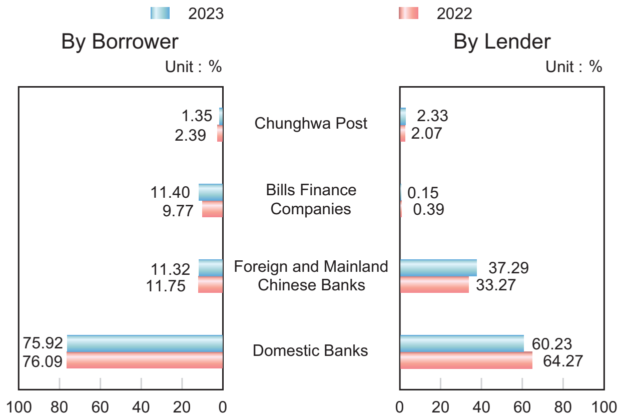
The amount of call loans made by domestic banks dropped by NT$2,676.9 billion or 16.15% compared with the previous year, reflecting less available funds at hand as domestic banks increased investments in enterprises and personal loans showed faster growth in the second half of the year.

Foreign and Mainland Chinese banks slightly increased their interbank lending by NT$27.2 billion or 0.32% over the previous year in order to enhance their profits considering money market rates stayed at relatively high levels in 2023.

On the other hand, in response to tighter funding conditions at the quarter ends, Chunghwa Post provided more interbank lending that crossed quarter ends in support of banks' funding needs. As a result, the amount of call loans made by Chunghwa Post expanded by NT$1.9 billion or 0.35% from a year before.

As for bills finance companies, the amount lent by this group went down by NT$64.9 billion or 65.15% over the previous year because of less available funds at hand.

Composition of Interbank Call Loan Market by Participant



Source: *Financial Statistics Monthly* (February 2024), CBC.

In terms of maturity, interbank overnight call loans remained the most actively traded instrument in the market with a predominant share of 45.55%, down by 0.66 percentage points from that of the previous year. The second were those with a maturity of one week, rising by 0.66 percentage points to 37.55% over the previous year, while the share of loans with a two-week maturity slipped by 1.33 percentage points to 10.13%.

Rise in Short-Term Bill Transactions

For the year 2023, newly issued short-term bills stood at NT$20,478.6 billion. Commercial paper made up a dominant 94.69% of the new issues, followed by NCDs with a share of 3.99%.

Newly issued short-term bills posted a year-on-year increase of NT$1,803.8 billion or 9.66% in 2023. The growth was mainly attributable to commercial paper with an increased issuance of NT$2,093.7 billion to meet corporate funding needs despite an uptick in short-term bills market rates.

In contrast, issuance of NCDs shrank by NT$315.0 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.

Overall, the amount of the total issuance of short-term bills was larger than that of the total repayments for short-term bills. Consequently, the outstanding of short-term bills reached NT$3,348.0 billion as of the end of 2023, representing an increase of NT$457.0 billion or 15.81% 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
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
2022	18,674.8	2,891.0	230.0	30.0	-	-	17,296.9	2,584.8	15.9	2.7	1,131.9	273.5
2023	20,478.6	3,348.0	260.0	30.0	-	-	19,390.6	3,000.9	11.1	2.3	816.9	314.8

Source: *Financial Statistics Monthly* (February 2024), CBC.

The total turnover of short-term bills in 2023 grew by NT$7,016.3 billion or 14.50% to NT$55,416.2 billion. Of the total transactions, commercial paper still made up the lion's share of 96.73%, while NCDs came in with the second largest share of 2.71%.

In respect of market participants, private enterprises were still the largest player in the market with a dominant share of 47.73%, followed by banks and bills finance companies with shares of 26.10% and 14.77%, respectively.

Broad Uptrend in Money Market Rates

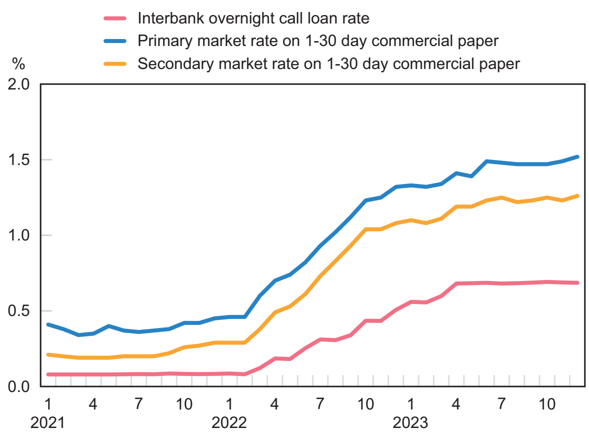
In 2023, the weighted average interbank overnight call loan rate displayed a broad uptrend. With the Bank's policy rate hikes in December 2022 and March 2023, the US and European banking sector turmoil, as well as the end-of-quarter effect, the interbank overnight call loan rate swung up to 0.681% in April 2023 from 0.507% in December 2022.

Later in the year, on account of income tax collections and enterprises' dividend payouts in May, as well as four consecutive months of net foreign capital outflows since July, the interbank overnight call loan rate trended up and recorded an all-year high of 0.691% in October.

In November, net foreign capital outflows turned into net inflows. However, with the year end approaching, considering the need to boost lending before the year end and to meet the regulatory capital adequacy ratio requirements, banks became cautious about fund allocation. Through the Bank's open market operations, the interbank overnight call loan rate modestly went down to 0.686% in December.

The primary market rate on commercial paper with a maturity of 1-30 days moved upwards from 1.33% in January to 1.52% in December. Meanwhile, the secondary market rate on commercial paper with a maturity of 1-30 days also rose from 1.10% in January to 1.26% in December.

Money Market Interest Rates



Source: *Financial Statistics Monthly* (February 2024), CBC.

Growth in Money Market Funds

The Bank's policy rate rises for the past two years have sent the yields of domestic money market funds higher, attracting more investors to make purchases. In addition, with market expectations of the rate hike cycle nearing an end, some banks reduced the issuance of deposits with longer maturities, driving a shift of capital flows into money market funds.

At the end of 2023, there were a total of 36 money market funds in Taiwan and the total assets stood at NT$863.5 billion with an increase of NT$82.1 billion or 10.51% from the previous year end.

With regard to portfolio composition, the largest use of funds was short-term bills with a share of 49.47% at the end of the year. Following short-term bills were bank deposits and repurchase agreements, accounting for 39.89% and 10.02% 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 (%)
2021	851.4	437.2	51.35	327.8	38.50	86.1	10.11	0.4	0.04
2022	781.4	208.4	26.67	474.4	60.71	95.0	12.16	3.6	0.46
2023	863.5	344.5	39.89	427.2	49.47	86.5	10.02	5.4	0.62
2023/ 1	761.8	231.6	30.40	447.4	58.73	80.0	10.50	2.8	0.37
2	778.1	263.8	33.90	430.1	55.28	81.4	10.46	2.8	0.36
3	798.1	266.8	33.43	450.3	56.42	78.3	9.81	2.7	0.34
4	839.1	280.3	33.40	458.0	54.58	98.1	11.69	2.8	0.33
5	805.1	300.4	37.31	438.8	54.50	63.4	7.87	2.5	0.32
6	789.0	290.6	36.83	425.5	53.93	70.3	8.91	2.5	0.33
7	849.3	290.5	34.21	464.7	54.72	91.5	10.77	2.6	0.30
8	836.5	283.1	33.84	470.3	56.22	80.5	9.62	2.5	0.32
9	832.3	302.7	36.37	458.6	55.10	68.5	8.23	2.5	0.30
10	866.2	316.0	36.48	466.1	53.81	80.3	9.27	3.8	0.44
11	843.9	321.9	38.14	445.2	52.75	72.2	8.56	4.6	0.55
12	863.5	344.5	39.89	427.2	49.47	86.5	10.02	5.4	0.62

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

4. Foreign Exchange Market

The NT Dollar Exchange Rate

In 2023, on a daily average basis, the NT dollar appreciated against the Japanese yen and the renminbi (RMB) but depreciated against the euro, the US dollar and the Korean won. The trade-weighted nominal effective exchange rate index of the NT dollar decreased by 2.1% on a daily average basis. The exchange rate movements of the NT dollar vis-à-vis each of the above foreign currencies are as follows.

During the course of the year, the NT dollar against the US dollar depreciated broadly. At the beginning of the year, inflationary pressures in the United States eased amid market expectations that the Fed might slow down its pace of interest rate hikes. As the US dollar weakened, coupled with capital inflows to Taiwan, the NT dollar appreciated against the US dollar towards a yearly high of 29.700 on February 2. Then, the Fed raised interest rates by 0.25 percentage points, with Fed Chair Jerome Powell indicating that maintaining a tight monetary policy stance for a period might be necessary to achieve price stability; as a result, the US dollar strengthened and the NT dollar depreciated. After the collapse of Silicon Valley Bank in March, the market reduced expectations of a strong Fed interest rate hike, causing the US dollar to fall and the NT dollar to appreciate. Subsequently, amid persisting inflation, the Fed raised interest rates by 0.25 percentage points in March, May, and July. Additionally, escalating tensions in the Middle East in October increased market demand for safe-haven assets, also bolstering the US dollar. Furthermore, foreign portfolio investors began to realize profits from July onwards, resulting in net capital outflows that drove a continuous depreciation of the NT dollar against the US dollar. In November and December, as the Fed kept its policy rate unchanged and US inflation rates were lower than expected, the US dollar weakened and the NT dollar appreciated against the US dollar. At the end of 2023, the NT dollar depreciated by 0.1% against the US dollar compared with the end of the previous year. On a daily average basis, the NT dollar depreciated against the US dollar by 4.4% in 2023.

In the first half of 2023, the NT dollar depreciated against the euro, while in the second half, it fluctuated within a certain range. At the beginning of the year, inflationary pressures in the euro area remained high. As the European Central Bank (ECB) raised interest rates by 0.5 percentage points in February and again in March despite the Swiss Credit crisis, the euro strengthened and the NT dollar depreciated against the euro. Then, three more rate hikes by 0.25 percentage points in May, June, and July also sent the euro higher, and the NT dollar against the euro thus weakened. After another rate hike by 0.25 percentage points in September, poor economic data and easing inflation in the euro area led to market expectations that the ECB would soon end its tightening cycle, causing the euro to depreciate. Subsequently, as the ECB kept its policy rates unchanged in both October and December and announced the cessation of reinvestment under the Pandemic Emergency Purchase Programme (PEPP) before 2024, the euro strengthened and the NT dollar depreciated against the euro. Compared with the end of the previous year, the NT dollar depreciated against the euro by 3.8% at the end of 2023. On a daily average basis, the NT dollar depreciated against the euro by 6.9%.

In 2023, the NT dollar generally appreciated against the yen. In the first half of the year, the Bank of Japan (BoJ) maintained an extremely loose monetary policy, keeping the yen under pressure. However, the collapse of the Silicon Valley Bank in March stimulated safe-haven demand, leading the yen to appreciate temporarily. In July, the BoJ raised its economic growth forecast, driving the yen to strengthen, and the NT dollar depreciated against the yen. The BoJ's emphasis on maintaining loose monetary policy and the smaller-than-expected adjustment of the yield curve control (YCC) policy at the end of October weakened the yen, and the NT dollar thus appreciated against the yen. In late November, Japan's core CPI inflation rate turned higher than the previous month, which raised market expectations that the BoJ might end its loose monetary policy earlier. As a result, the yen appreciated and the NT dollar depreciated against the yen. In mid-December, the BoJ kept its policy interest rates unchanged, causing the NT dollar to appreciate against the yen. Compared to the end of 2022, the NT dollar appreciated by 6.9% against the yen by the end of 2023. In terms of average exchange rates, the NT dollar appreciated by 2.1% against the yen compared to the previous year.

In the first half of 2023, the NT dollar initially depreciated against the RMB and then appreciated, while the exchange rate fluctuated within a narrow range in the second half of the year. At the beginning of the year, China reopened its borders and implemented monetary, fiscal, and housing market support policies. Market expectations for its economic recovery were optimistic, supporting the RMB and leading the NT dollar to depreciate against the RMB. Then, tensions escalated between the United States and China, and the RMB depreciated further on an easing of monetary policy by the People's Bank of China (PBoC). Entering the second half of the year, China attempted to stabilize the RMB exchange rate through measures such as adjusting the counter-cyclical factor in the central parity quotation and altering the required reserve ratio for foreign currency deposits, which supported the RMB and led to NTD depreciation against the RMB. In early December, the international credit rating agency Moody's revised down China's sovereign credit outlook, causing the NT dollar to appreciate against the RMB. Compared to the end of 2022, the NT dollar appreciated by 1.9% against the RMB by the end of 2023. In terms of average exchange rates, the

NT dollar also appreciated by 0.5% against the RMB compared to the previous year.

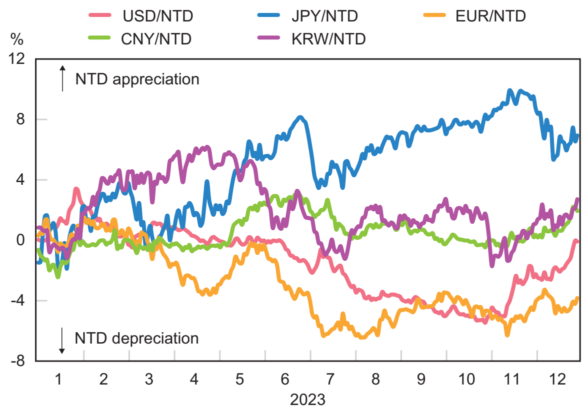
In 2023, the NT dollar first appreciated and then depreciated against the won. At the beginning of the year, the won appreciated due to the Bank of Korea's (BoK's) rate hike. In the following months, the BoK decided to keep the policy rate unchanged, leading to market expectations that South Korea's rate hike cycle was nearing its end. This resulted in an appreciation of the NT dollar against the won. In July, with the BoK indicating potential future rate hikes and a rise in South Korean government bond yields, driving net foreign capital inflows, the won strengthened. In October, though improvements in South Korea's exports and a record low unemployment rate supported the won, the BoK decided to freeze the policy rate, leading to narrow fluctuations of the NT dollar exchange rate against the won. Thereafter, with the BoK maintaining its policy rate and milder-than-expected inflation data released in late December, it raised market expectations for a BoK rate cut, strengthening the NT dollar against the won. Compared with the end of 2022, the NT dollar appreciated by 2.7% against the Korean won at the end of 2023. On a daily average basis, the NT dollar depreciated by 3.4% against the won in 2023.

Annual Changes of NTD Exchange Rate Against Major Currencies

	NTD/USD	NTD/EUR	NTD/JPY	NTD/CNY	NTD/KRW
Exchange Rate (2023/12/29)	30.735	34.011	0.2173	4.3338	0.0237
Exchange Rate (2022/12/30)	30.708	32.709	0.2324	4.4175	0.0244
Annual Change	-0.1%	-3.8%	6.9%	1.9%	2.7%
Average Exchange Rate (2023)	31.150	33.682	0.2217	4.3973	0.0239
Average Exchange Rate (2022)	29.777	31.357	0.2264	4.4198	0.0231
Annual Change	-4.4%	-6.9%	2.1%	0.5%	-3.4%

Source: Department of Economic Research, CBC.

Percentage Changes of NT Dollar Against Major Currencies
(Compared with End-2022)



Source: Department of Economic Research, CBC.

Foreign Exchange Trading

Trading in the Taipei foreign exchange market increased in 2023. Total net trading volume for the year was US$9,341.0 billion, representing an 8.8% year-on-year increase. The daily average turnover was US$37.8 billion in 2023.

In terms of trading partners, transactions between banks and non-bank customers accounted for 30.6% of the total turnover, while interbank transactions made up 69.4%, including 21.7% for transactions among local banks and 47.7% for those between local banks and overseas banks.

As far as traded currencies were concerned, NT dollar trading against foreign currencies accounted for 45.1% of the total trading volume, of which trading against the US dollar made up a dominant 43.5%. Transactions in third currencies contributed to 54.9% of the total trading volume, with trading in currency pairs of USD-RMB, USD-euro, and USD-yen accounting for respective shares of 19.7%, 8.4%, and 8.1%. Compared with 2022, NT dollar trading against foreign currencies increased by 1.2% while transactions in third currencies increased by 16.0%.

With respect to types of transactions, the major types were foreign exchange swaps and spots, accounting for 51.1% and 38.6% of total turnover, respectively. Compared with 2022, the trading volumes of forwards, swaps, options, and cross currency swaps increased, whereas those of spots and margin

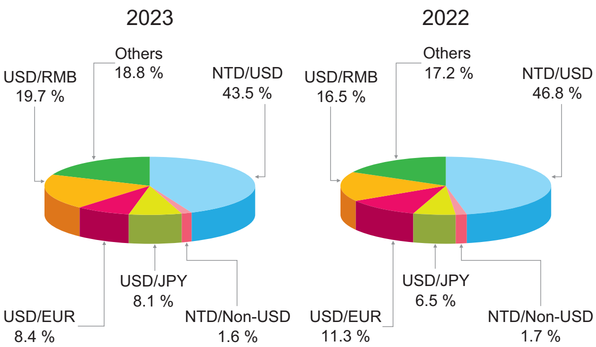
Turnover of Major Products in the Taipei Foreign Exchange Market

Unit: US$billion

Year	Spots	Forwards	Forex Swaps	Margin Trading	Options	Cross Currency Swaps	Total
2019	3,079.5	662.0	4,007.1	6.4	213.7	45.3	8,014.0
2020	3,408.8	503.7	4,110.9	7.3	206.0	34.5	8,271.0
2021	3,584.5	507.6	3,839.4	4.7	222.7	29.1	8,188.1
2022	3,658.9	522.1	4,174.0	6.6	206.0	14.9	8,582.6
2023	3,608.3	681.0	4,773.8	4.2	258.3	15.6	9,341.0
2022-2023 Annual Growth Rate (%)	-1.4	30.4	14.4	-36.4	25.4	4.0	8.8

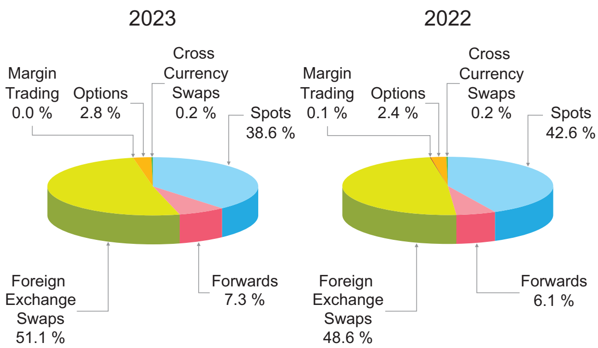
Source: Department of Foreign Exchange, CBC.

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.

trading 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, their combined turnover was US$260.8 billion. Of this amount, interest rate-related derivatives accounted for the lion's share at 98.4% with US$256.6 billion, decreasing by 16.6% from the previous year. Interest rate futures accounted for the majority of this decrease.

Turnover of Other Products in the Taipei Foreign Exchange Market

Unit: US$billion

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			
2019	70.8	12.4	96.8	180.0	3.8	0.4	1.0	185.1
2020	52.1	9.6	34.9	96.6	3.1	0.1	0.4	100.2
2021	79.0	10.7	104.3	194.0	4.1	0.4	0.6	199.2
2022	90.4	14.7	202.6	307.6	2.9	0.3	0.8	311.7
2023	79.8	8.6	168.3	256.6	1.8	1.9	0.5	260.8
2022-2023 Annual Growth Rate (%)	-11.7	-41.4	-16.9	-16.6	-39.5	448.1	-39.9	-16.3

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

Renminbi Business

Renminbi investment tools became even more diversified during 2023. By the end of 2023, there were 65 domestic banking units (DBUs) and 56 offshore banking units (OBUs) engaging in renminbi business. The balance of renminbi deposits amounted to RMB130.8 billion; renminbi remittances totaled RMB2,424.2 billion in 2023; renminbi settlement through the Taipei Branch of the Bank of China totaled RMB5,706.1 billion.

Renminbi Business Conducted by Financial Institutions

Unit: RMB Billions

Business Items	Amount
Deposit balance (including NCDs, end of 2023)	130.8
Total remittances (February 2013 to December 2023)	19,465.2
Total settlement through the Taipei Branch of the Bank of China (February 2013 to December 2023)	49,204.0
Total value of 204 RMB-denominated bonds issued (as of the end of 2023)	135.5
Accumulated premium receipts from RMB-denominated investment-linked insurance business (February 2013 to December 2023)	21.8
Accumulated premium receipts from RMB-denominated traditional insurance business (April 2014 to December 2023)	9.7

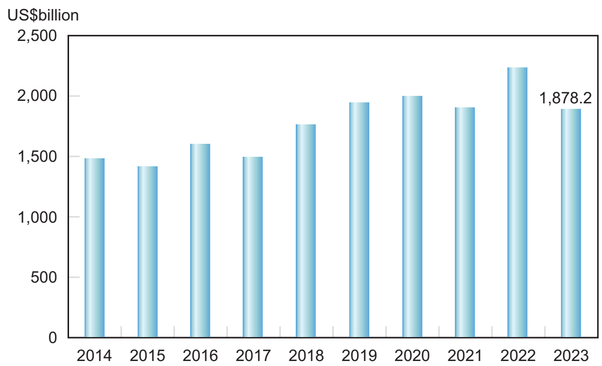
Source: Department of Foreign Exchange, CBC.

Foreign Currency Call Loan & Swap Markets

The transaction volume in the foreign currency call loan market in 2023 was US$1,878.2 billion, a decrease of 15.7% over the previous year. Of this amount, US dollar transactions accounted for a dominant share with US$1,734.9 billion, making up 92.4% of the total while decreasing by 16.2% from 2022. Renminbi transactions reached RMB685.1 billion in 2023, making up a share of 5.2% of the total and recording a year-on-year fall of 19.7% in volume. Japanese yen transactions reached ¥1,452.6 billion in 2023, representing a small share of 0.5% of the total with a year-on-year decrease of 50.8% in volume. The amount of euro transactions amounted to around €2.0 billion, with a modest share of 1.0%. Other currencies accounted for a combined 0.9% of the total transaction volume. The balance of foreign currency call loan transactions stood at US$57.2 billion at the end of 2023.

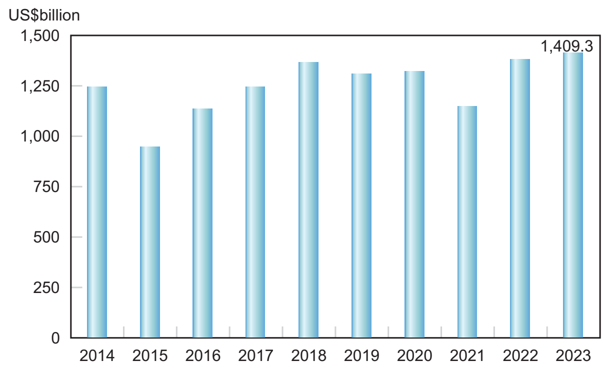
The volume of foreign currency-NTD swap transactions reached US$1,409.3 billion, 2.7% more than 2022, while the balance was US$274.6 billion at the end of 2023.

Transactions in the Foreign Currency Call Loan Market



Source: Department of Foreign Exchange, CBC.

Transactions in the Foreign Currency Swap Market



Source: Department of Foreign Exchange, CBC.

OBU Assets

There were 59 OBUs at the end of 2023, with 35 of them operated by domestic banks and the other 24 by foreign banks. The total assets of all OBUs increased to US$277.3 billion at the end of the year, representing an increase of US$11.2 billion, or 4.2%, from the previous year end owing to increasing portfolio investments. Domestic banks' OBUs made up 89.9% of these combined assets with an amount of US$249.2 billion, and the OBUs of foreign banks accounted for 10.1% of the total with US$28.1 billion.

In terms of the uses of funds, portfolio investments represented the majority share of 44.0% of total OBU assets with an amount of US$122.0 billion. Claims on financial institutions and loans to non-financial institutions came in second and third place, accounting for 28.2% and 25.3% of total OBU assets. In terms of the destinations for funds, Asia accounted for the majority with a share of 46.0%, followed by America at 33.7%.

The OBUs' main source of funds came from due to financial institutions, making up 50.1% of total liabilities and equity. Deposits of non-financial institutions accounted for 40.8% of the total. The main funding origin of OBUs was Asia, accounting for 64.1%, followed by America with a share of 25.4%.

Forex trading turnover of all OBUs increased by 41.7% to US$1,187.9 billion, of which US$610.4 billion went for spot transactions, US$184.1 billion for forward transactions, and US$393.5 billion for forex swap transactions. Compared with the previous year, the growth rates of trading of spots, forwards, and forex swaps were 25.1%, 37.3%, and 82.1%, respectively.

For OBUs, total turnover of other derivatives products decreased by 0.7% to US$433.9 billion over the previous year. Of this amount, options transactions registered a turnover of US$171.4 billion, making up 39.5% of the total.

Balance Sheet of OBUs in Banking System

Unit: US$billion

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
2019/12	80.2	72.2	58.4	11.0	221.9	86.7	110.8	0.0	24.3
2020/12	79.0	86.0	61.9	12.5	239.5	91.1	124.9	0.0	23.5
2021/12	78.5	93.7	68.2	9.5	249.9	104.5	125.1	0.0	20.3
2022/12	76.0	108.2	75.7	6.2	266.1	117.7	128.0	0.0	20.5
2023/12	70.2	122.0	78.3	6.7	277.3	113.3	138.8	0.0	25.2
2022/12-2023/12 Growth Rate (%)	-7.6	12.7	3.4	8.2	4.2	-3.8	8.4	0.0	23.4

Sources: *Financial Statistics Monthly*, CBC; Department of Foreign Exchange, CBC.

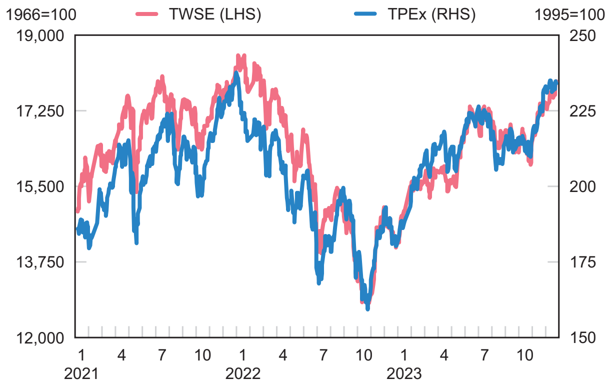
5. Stock Markets

From the beginning to the middle of 2023, the TAIEX was driven upwards by the easing of inflationary pressures and monetary tightening in the US, gradual relaxation of pandemic-containment measures at home, increasing demand for AI technologies, and bullish runs in US tech stocks. In the second half of the year, though, the US sovereign debt credit rating downgrade, China's property developers' financial debacles and its central bank's rate cuts, US stock corrections, and net foreign sales on the TWSE combined to lead to downward swings through to the end of October. Afterwards, the TAIEX was boosted by market expectation of end of the Fed's tightening cycle and an anticipated holiday shopping boom, and foreign investor net purchases of local stocks. As a result, the TAIEX followed the US stock rebound to rally and closed the year at an all-year high, up by 26.8% over the end of the previous year.

Most TWSE stock groups recorded price rises in 2023, except for four groups, namely Plastics, Glass & Ceramics, Shipping & Transportation, and Biotech & Medical Care. Among the top gainers, share prices of Electric Machinery and of Electronics surged by 39.5% and 39.1% on the back of the nascent AI boom as well as US tech stock rallies. Automobile shares also rose significantly by 30.3% amid strong car sales. Chemicals share prices increased by 26.7% on rising demand for carbon reduction solutions. Overall, the daily average trading value on the TWSE amounted to NT$264.3 billion in 2023, gaining by 15.9% over the previous year.

In the over-the-counter stock market, the Taipei Exchange Capitalization Weighted Stock Index (TPEX) rose by 29.8% year on year at the end of 2023, with all categories posting share price rises. Building Material & Construction gained the most with a surge of 44.2%, reflecting solid profits of construction firms as domestic housing prices remained high. Electronics shares saw a rise of 42.8% and Cultural/Creative Industries came in third with a rise of 42.7%. Over all, the daily average trading value on the Taipei Exchange (TPEx) amounted to NT$70.5 billion, up by 16.5% from the previous year.

TWSE and TPEx Indices



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

The TWSE Market

Listings Increased and Capitalization Rose to Record Highs

At the end of 2023, the number of TWSE listings increased by 26 over the previous year to a total of 997. The par value of total shares rose by 1.9% year on year to NT$7.6 trillion, and total market capitalization expanded considerably by 28.4% to a historical record of NT$56.8 trillion amid the year's stock rallies. Meanwhile, the total number of Taiwan depositary receipts (TDRs) remained 10 as of the end of the year.

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
2021	18,218.8	378.2	176.6	56,282.0	-454.1	70.1	-96.4
2022	14,137.7	228.0	115.4	44,266.0	-1,232.7	284.2	-293.8
2023	17,930.8	264.3	121.2	56,842.1	275.4	237.3	-262.0
2023/ 1	15,265.2	178.4	4.9	47,783.7	200.8	12.0	23.8
2	15,503.8	213.2	7.9	48,553.0	25.6	14.6	-22.0
3	15,868.1	221.5	10.2	49,781.6	-2.2	37.8	-24.2
4	15,579.2	218.1	7.6	48,913.3	-53.2	-0.9	-6.6
5	16,579.0	244.5	10.3	52,041.8	176.2	9.5	65.2
6	16,915.5	302.1	11.4	53,113.7	26.9	-3.3	44.5
7	17,145.4	364.9	14.2	53,861.6	-83.9	-17.9	-1.4
8	16,634.5	321.6	13.5	52,292.0	-124.0	56.2	-91.5
9	16,353.7	249.1	9.7	51,467.1	-166.0	63.6	-92.5
10	16,001.3	248.5	9.9	50,464.1	-144.9	40.7	-54.5
11	17,433.9	271.4	10.8	55,123.5	240.0	4.7	-12.5
12	17,930.8	292.0	10.8	56,842.1	180.1	20.2	-90.3

Source: Securities and Futures Bureau, FSC.

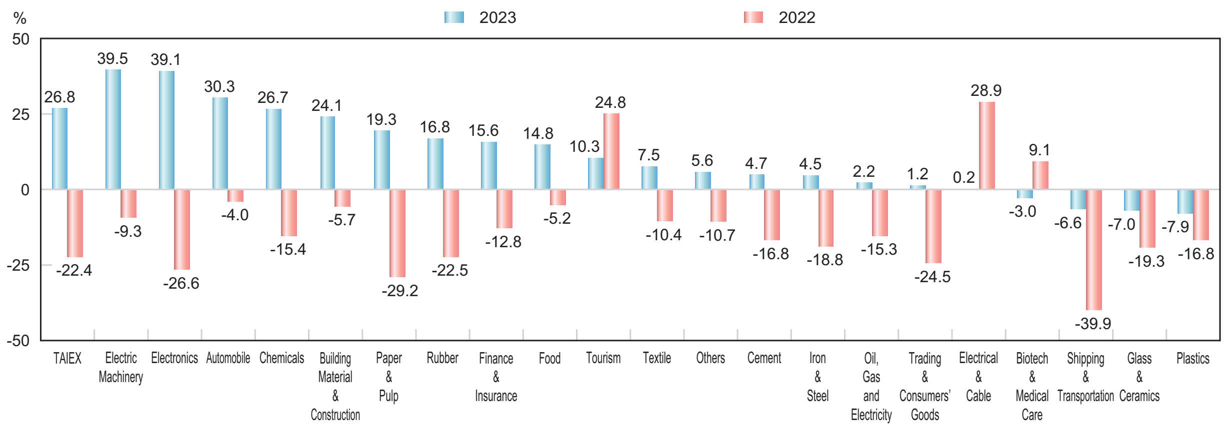
TAIEX Swung Upwards

In the first half of 2023, the TWSE was boosted by a host of favorable developments as pressures of US inflation and monetary tightening abated, pandemic containment measures at home were gradually lifted, global AI products saw rising demand, and US tech stocks surged, leading to upward fluctuations in the TAIEX toward 17,335 points on June 15. However, dampened by China's real estate debt distress and policy rate cuts, US stock market corrections, and net stock selling by foreign investors, the TAIEX trended downwards and reached 16,001 points at the end of October. Thereafter, domestic stocks were buoyed alongside US market rallies owing to market expectations of the Fed to wrap up its monetary tightening cycle and foreign investors' TWSE net buying ahead of the holiday shopping season. The TAIEX climbed upwards in the remaining months to a yearly peak of 17,931 points at year-end, representing an annual increase of 26.8%.

Broken down by subcategory, only four groups, namely Plastics, Glass & Ceramics, Shipping & Transportation, and Biotech & Medical Care, saw price declines. Among the gainers, the best performance was posted by Electric Machinery stocks with a 39.5% gain, followed by the 39.1% rise in Electronics stocks, both benefiting from the AI boom and US tech rallies. Strong car sales boosted Automobile share prices, which gained the third most at 30.3%. Reflecting rising demand for special technologies and applications (such as carbon capture) for energy transition, Chemicals share prices grew by 26.7%. Building Material & Construction stocks also had a 24.1% price gain on the back of strong profits sustained by high housing prices.

Among the declining categories, plastics share prices retreated the most with a fall of 7.9% as soft demand for synthetic resins (generally called plastics) weakened petrochemical raw material prices. Glass & Ceramics was the second worst group, dropping by 7.0% as major firms underperformed in earnings. Shipping & Transportation share prices declined by 6.6% because international container and bulk freight rates continued to be soft. Biotech & Medical Care declined by 3.0%, affected by NASDAQ Biotechnology Index downtrends.

TWSE Stock Price Changes by Industrial Group



Source: TWSE.

Market Turnover Increased

As domestic individual investors were drawn back to the market by the stock rallies, the TWSE daily average trading value was driven up to NT$264.3 billion, increasing by 15.9% from the previous year's NT$228.0 billion. The turnover rate thus went up from 115.4% a year ago to 121.2%.

Foreign Investors Net Bought

In 2023, foreign institutional investors (FINIs) net bought TWSE stocks by an amount of NT$275.4 billion, reversing a three-year streak of net sales. Meanwhile, local securities investment trust companies posted a net purchase of NT$237.3 billion, whereas local securities dealers posted a net sale of NT$262.0 billion.

In the first two months of 2023, FINIs net bought TWSE shares as market sentiment was boosted by US inflation and monetary tightening pressures abating, China's reopening, and a gradual domestic withdrawal from pandemic-related restrictions. In March and April, FINIs turned into net sellers as they adjusted positions on concerns about an uncertain global economic outlook and several bank failures in the US and Europe. The following two months saw FINIs become net buyers again on market optimism amid the AI demand boom and the US debt ceiling deal. Afterwards, the US sovereign credit rating downgrade, China's property sector defaults, escalation of the Israel-Hamas conflicts, and the US expanding semiconductor export bans combined to lead to continuous FINI net sales from July to October. In the final two months, though, FINIs returned to net buying, encouraged by market expectation of the Fed pausing the rate hike cycle, the prospect of year-end holiday shopping, and the US stock rally.

In respect of local securities investment trust companies, they were mostly net buyers except for April, June, and July when they net sold to meet fund redemption demand, to boost financial statements, or to lock in gains from the bull market.

In respect of local securities dealers, who are inclined to conduct short swing trades to buy the rallies and sell the dips, they net bought in January, May, and June in 2023. In the other months of the year, they net sold for portfolio adjustments or profit-taking.

The TPEx Market

Listings and Capitalization Both Increased

At the end of 2023, the number of TPEx listings rose by 8 from the previous year to 816. The total par value increased by 2.1% year on year to NT$757.9 billion. The TPEx market capitalization, buoyed by rising stock valuations, increased by 30.9% year on year to NT$5.79 trillion.

TPEx Index Swung Up; Trading Value Rose

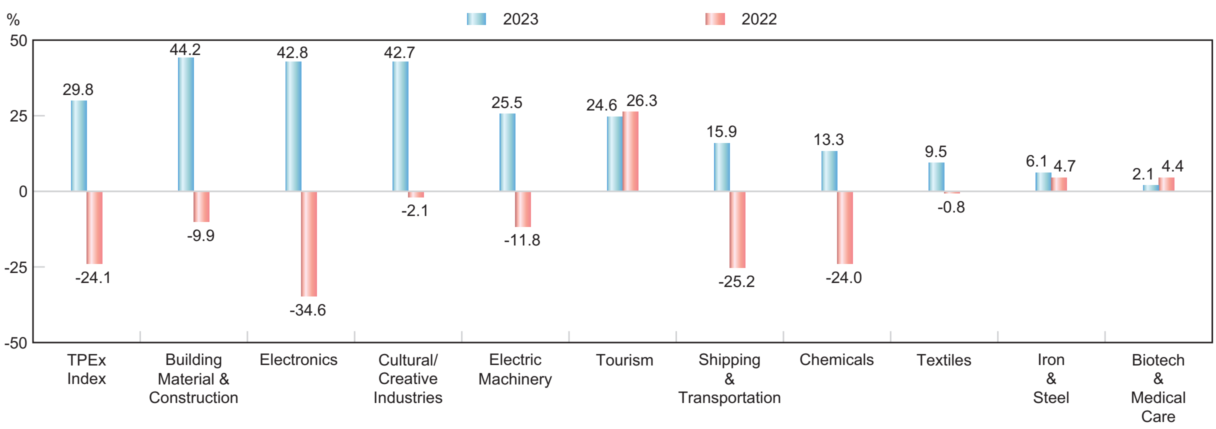
In 2023, the TPEx market moved approximately in line with the TWSE market. The TPEx Index gained momentum from softer US inflationary pressures and less urgency for Fed rate hikes, domestic pandemic containment measures being relaxed, AI-related demand on the rise, and strong US tech stock rallies. The Index swung up to close the year at 234.0 points, increasing by 29.8% from 180.3 points a year ago.

All TPEx stock groups rose from the previous year. By category, the top performers generally benefited from factors similar to those on the TWSE market. Building Material & Construction came in first with a 44.2% surge owing to strong profits amid continuously high housing prices. The second best gainer was Electronics with a 42.8% rise on the AI demand boom and US tech rallies, followed by a 42.7% rise in Cultural/Creative Industries thanks to a thriving video game industry.

By type of institutional investor, foreign investors and local dealers net sold TPEx securities worth NT$81.8 billion and NT$353.6 billion, respectively, while local securities investment trust companies net bought NT$48.5 billion.

Amid a bullish market and increased local investor enthusiasm, the TPEx recorded higher daily average trading value at NT$70.5 billion, up by 16.5% from NT$60.5 billion the previous year.

TPEx Stock Price Changes by Industrial Group



Source: TPEx.

Key Measures for the Stock Markets

Key measures for Taiwan's stock markets in 2023 included the following:

(1) February 24: In view of the stock markets stabilizing, the Financial Supervisory Commission (FSC) announced the withdrawal of the four stimulus measures implemented since October 2022. The changes were: (1) Raising the cap on intraday securities-based lending (SBL) short sales from 10% back to 30%; (2) Lowering the maintenance margin requirement for short trading from 120% to 90%; (3) Removing the measure of relaxing the scope of collateral to cover the margin deficiency; (4) Lifting

the ban on short sales of a stock at prices lower than the previous session's close when that closing price marks a one-day fall of no less than 3.5%.

(2) April 13: The National Stabilization Fund withdrew from the local stock markets on account of an international stock market recovery with global inflation easing and major central banks' rate hike pace slowing. This round of supportive intervention was the longest in history, lasting 275 days. The invested amount and profits were both the third highest on record, at NT$54.5 billion and NT$11.3 billion, respectively.

(3) April 21: The Parliament passed the partial amendments to the *Securities and Exchange Act and the Securities Transaction Tax Act*. Major changes include: (1) Lowering the shareholding disclosure threshold of major shareholders from 10% to 5%; (2) Raising the maximum amount of relevant administrative fines for securities-related enterprises from NT$4.8 million to NT$6 million; (3) Lowering the securities transaction tax rate for sales of shares in the warrant hedge accounts of securities firms from 0.3% to 0.1%, effective November 2023 for five years.

(4) August 7: The Taiwan Carbon Solution Exchange (TCX), jointly invested by the TWSE and the National Development Fund, was inaugurated, with the aim of fostering energy transition through carbon credit trading.

(5) December 22: The TCX began trading and completed the first batch of international carbon credit transactions. Twenty-seven publicly-traded companies collectively purchased carbon credits equivalent to 88.5 thousand metric tons of carbon dioxide emissions, valued at around NT$25 million in total.

6. Bond Market

The total volume of bond issuance recorded a decrease for the year 2023. New issues of bonds stood at NT$1,580.0 billion, dropping by NT$72.7 billion over the previous year. At the end of 2023, the total outstanding bonds issued amounted to NT$16,952.2 billion, an increase of NT$633.1 billion or 3.88% 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, central government bond issuance for 2023 reached NT$478.0 billion, down by NT$42.1 billion over the previous year.

Issuance of corporate bonds in the year totaled NT$773.3 billion, significantly rising by NT$300.2 billion from a year before, primarily resulting from higher corporate funding needs.

Bank debenture issuance amounted to NT$62.7 billion, a substantial decrease of NT$86.2 billion compared to the previous year, largely because banks held sufficient capital and reduced the issuance of subordinated bank debentures.

NT dollar-denominated foreign bonds issued in Taiwan by foreign institutions stood at NT$3.9 billion, slipping by NT$6.9 billion from 2022. Meanwhile, foreign currency-denominated international bonds issued in Taiwan by foreign institutions contracted by NT$251.5 billion over the previous year to NT$242.4 billion.

In the secondary market, the Fed's policy rate hikes drove up US Treasury yields, leading to an upswing in Taiwan government bond yields. The yield on 10-year government bonds averaged 1.21% in 2023, 12 basis points higher than the previous year.

Moreover, annual transactions reached NT$35,406.4 billion, increasing by NT$1.5 billion compared to the previous year.

Slide in Government Bond Issuance

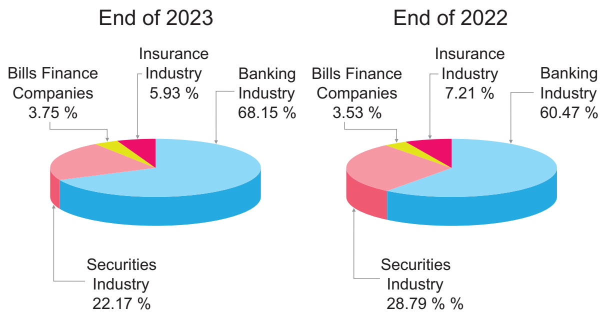
In order to support debt refinancing operations of the Central Government Debt Service Fund and to raise funds for the central government general budget and special budget, central government bond issuance amounted to NT$478.0 billion in 2023, down by NT$42.1 billion from a year ago. Government bonds were available with various maturity periods from 2 years, 5 years, 10 years, 20 years, to 30 years.

Broken down by institutional investor, bonds held by the banking industry made up the lion's share at 68.15%, primarily on account of higher demand for government bonds by Chunghwa Post.

The securities industry came in second with a smaller share than the previous year at 22.17% as profits from spread trading narrowed. Meanwhile, the share of bonds held by the insurance industry decreased to 5.93% mainly because the insurance industry increased their external investment positions, leading to a decline in the share of bond holdings.

As of the end of 2023, the total outstanding amount of central government bond issuance stood at NT$5,912.5 billion, up by NT$113.0 billion or 1.95% compared to 2022.

Shares of Government Bond Holdings (by Institutional Investor)



Source: Department of the Treasury, CBC.

In addition, new bonds issued by the governments of all special municipalities in 2023 reached NT$19.7 billion. At the end of the year, the outstanding amount of bonds issued by the governments of all special municipalities stood at NT$147.6 billion, a decrease of NT$3.1 billion or 2.02% 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
2021	2,690.6	15,947.1	617.0	5,674.5	66.6	164.9	723.7	2,983.9	135.2	1,234.0	0.0	5.3	10.6	51.6	1,137.5	5,833.0
2022	1,652.7	16,319.1	520.1	5,799.5	0.0	150.7	473.1	3,125.2	148.9	1,255.4	5.9	11.2	10.9	55.1	493.9	5,921.9
2023	1,580.0	16,952.2	478.0	5,912.5	19.7	147.6	773.3	3,564.4	62.7	1,221.5	0.0	5.9	3.9	50.0	242.4	6,050.2
2023/ 1	108.4	16,349.2	48.0	5,822.5	0.0	148.7	51.2	3,135.4	4.5	1,252.1	0.0	10.1	0.0	55.0	4.7	5,925.3
2	129.4	16,388.9	65.0	5,822.5	0.0	148.7	0.0	3,126.0	4.3	1,251.9	0.0	9.7	1.6	55.1	58.5	5,975.1
3	121.4	16,383.4	60.0	5,807.5	0.0	148.7	41.1	3,153.6	16.6	1,256.4	0.0	9.2	0.0	54.9	3.7	5,953.1
4	142.7	16,487.1	30.0	5,837.5	11.6	158.3	88.8	3,231.3	6.5	1,246.2	0.0	8.8	0.0	54.9	5.9	5,950.2
5	154.8	16,577.9	55.0	5,892.5	0.0	158.3	68.9	3,249.5	0.0	1,244.0	0.0	8.4	0.0	54.9	30.8	5,970.4
6	181.5	16,701.3	30.0	5,897.5	8.1	166.4	111.2	3,332.8	9.0	1,251.0	0.0	8.1	0.0	54.2	23.2	5,991.3
7	122.7	16,700.5	25.0	5,877.5	0.0	166.4	85.4	3,372.0	1.3	1,245.2	0.0	7.8	0.5	54.5	10.5	5,977.2
8	142.0	16,753.2	30.0	5,872.5	0.0	166.4	92.4	3,441.4	4.3	1,243.6	0.0	7.5	0.2	52.4	15.0	5,969.5
9	140.9	16,775.8	50.0	5,847.5	0.0	166.4	61.8	3,471.0	3.7	1,238.6	0.0	7.2	0.1	52.1	25.2	5,993.0
10	159.9	16,898.7	30.0	5,877.5	0.0	151.3	98.5	3,557.4	5.2	1,241.6	0.0	7.1	0.4	50.5	25.9	6,013.3
11	97.7	16,941.1	25.0	5,882.5	0.0	149.1	32.5	3,561.7	1.2	1,240.3	0.0	6.9	0.2	50.1	38.8	6,050.5
12	78.5	16,952.2	30.0	5,912.5	0.0	147.6	41.5	3,564.4	6.0	1,221.5	0.0	5.9	0.9	50.0	0.0	6,050.2

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 2024), CBC.
2. Banking Bureau, Financial Supervisory Commission.
3. Department of Foreign Exchange, CBC.

Substantial Increase in Corporate Bond Issuance

Corporate bonds refer to NT dollar- or foreign currency-denominated bonds issued in Taiwan by domestic corporations. In 2023, the issuing amount of corporate bonds totaled NT$773.3 billion, increasing by NT$300.2 billion from a year before as a result of higher corporate funding needs.

In terms of bond maturities, 5-year corporate bonds accounted for a dominant share of the issuance at 42.75%, followed by 10-year bonds with a share of 26.93%. At the end of 2023, the outstanding amount of corporate bonds grew by NT$439.2 billion or 14.05% to NT$3,564.4 billion over the previous year.

Decline in Bank Debenture Issuance

In 2023, domestic banks issued bank debentures with an amount of NT$62.7 billion, falling by NT$86.2 billion compared to a year ago, primarily because banks held sufficient capital and reduced the issuance of subordinated bank debentures.

In respect of the maturity of new issues, 5-year debentures made up the largest share of total issuance at 32.98%, while 7-year bonds came in second with a share of 25.01%.

At the end of the year, the outstanding amount of bank debentures stood at NT$1,221.5 billion, a decrease of NT$33.8 billion or 2.70% from a year before.

Contraction in Asset Securitization Products

New issues of asset securitization products were nil in 2023. The outstanding amount of asset securitization slid by NT$5.3 billion or 47.39% from the previous year end to NT$5.9 billion.

Drop in Foreign Bond Issuance

Foreign bonds are defined as NT dollar-denominated corporate bonds issued in Taiwan by foreign institution. The foreign bonds currently in circulation are mostly corporate bonds issued by offshore companies listed on the TWSE or the TPEx (the over-the-counter market).

For the year 2023, foreign bond issuance declined by NT$6.9 billion from a year before to NT$3.9 billion. At the end of the year, the outstanding amount of foreign bonds reached NT$50.0 billion, a decrease of NT$5.1 billion or 9.29% over the previous year end.

Reduction in International Bond Issuance

International bonds currently refer to foreign currency-denominated corporate bonds issued in Taiwan by foreign institutions. During 2023, issuance of international bonds contracted significantly by NT$251.5 billion from a year before to NT$242.4 billion. The decrease reflected that foreign institutions reduced international bond issuance because of an upswing in US dollar-denominated market rates.

With respect to currency composition, the majority of total international bond issuance went for US dollar-denominated bonds with a share of 93.25%, followed by Australian dollar-denominated bonds at 3.10%. At the end of the year, the outstanding amount of international bonds stood at NT$6,050.2 billion, representing a year-on-year increase of NT$128.3 billion or 2.17%.

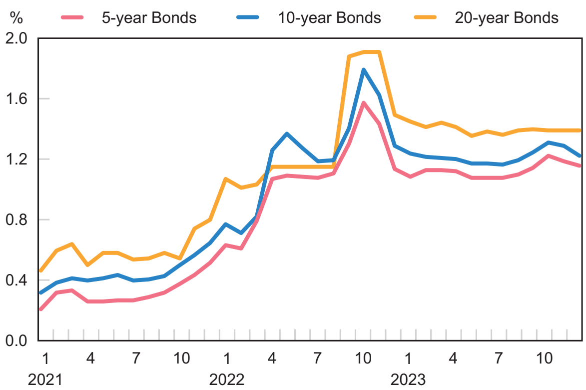
Uptrend in Average Government Bond Yields and Slight Increase in Transactions

For the year 2023, the Fed's policy rate hikes pushing up US Treasury yields, combined with the Bank's policy rate rise in the first quarter, sent Taiwan government bond yields higher. However, Taiwan government bond yields recorded a smaller increase than US bond yields owing to ample domestic liquidity. Looking at the volume-weighted average yields in 2023, the 10-year government bond yield rose to 1.21%, 12 basis points higher than the 1.09% registered in the previous year.

Among government bonds of the other maturity ranges, average yields on 5-year and 20-year bonds went up by 9 and 11 basis points, respectively, over the previous year.

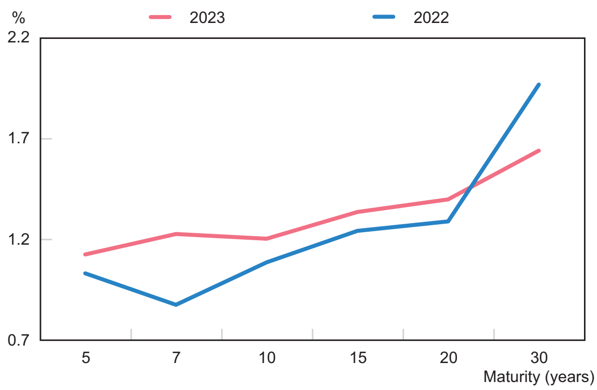
On the other hand, the average yield on 30-year bonds in 2023 moved down by 33 basis points compared to the previous year. This was because 30-year bonds were mainly issued in the primary market. When the issuance of 30-year bonds occurred in November 2022, market rates were at high levels. Later, with market rates experiencing a downtrend, when 30-year bonds were issued in May and November 2023, market rates were relatively lower than November 2022. Therefore, if looking at the volume-weighted average yields, the average 30-year bond yield in 2023 was lower than the previous year.

Yields on Central Government Bonds



Source: TPEx.

Yield Curve of Central Government Bonds



Source: TPEx.

In respect of transaction volume, annual transactions only rose by NT$1.5 billion or 0.004% to NT$35,406.4 billion. Of the components, outright transactions of government bonds fell by NT$167.8 billion or 3.26%, whereas repurchase agreement (repo) transactions of government bonds increased by NT$169.3 billion or 0.56% from a year before.

By type of bonds, the majority of total bond transactions went for corporate bonds with a share of 56.56% and an annual trading volume of NT$20,025.3 billion. The second most actively traded were government bonds, contributing to 36.48% of total transactions with an annual trading volume of NT$12,916.4 billion. Bank debentures came in third, accounting for a share of 3.71% with an annual trading volume of NT$1,312.3 billion.

Meanwhile, foreign bonds, international bonds, and asset securitization products made up marginal shares of 1.63%, 1.61%, and 0.02% in total transactions, with their respective annual trading registering NT$578.5 billion, NT$568.3 billion, and NT$5.5 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				
2021	36,138.8	15,557.9	15,807.2	1,348.2	2,024.9	0.5	393.0	1,007.0
2022	35,404.9	13,137.8	17,473.1	1,502.5	1,980.0	26.7	537.3	747.5
2023	35,406.4	12,916.4	18,011.0	2,014.3	1,312.3	5.5	578.5	568.3
2023/ 1	2,186.2	870.8	1,065.0	91.0	99.8	1.2	30.7	27.6
2	2,735.1	1,119.7	1,284.5	134.9	115.4	0.0	44.8	35.8
3	3,264.8	1,339.3	1,462.4	177.3	167.3	0.8	64.5	53.3
4	2,515.4	892.7	1,303.4	132.3	114.7	1.3	39.3	31.9
5	2,930.1	1,069.4	1,464.3	182.6	119.7	0.8	44.9	48.4
6	3,113.7	1,174.6	1,527.8	199.8	119.3	0.3	43.6	48.3
7	3,004.8	1,036.1	1,579.8	185.8	96.8	0.6	52.3	53.4
8	3,174.8	1,117.0	1,689.3	199.0	82.7	0.0	43.0	43.9
9	3,013.1	1,080.3	1,565.2	168.7	100.4	0.0	43.4	55.2
10	3,057.9	1,083.5	1,617.9	145.6	95.9	0.4	58.3	56.3
11	3,138.3	1,062.7	1,661.6	186.6	97.8	0.1	55.8	73.8
12	3,272.3	1,070.5	1,789.9	210.7	102.5	0.0	58.1	40.6

Source: TPEx.

Central Bank Operations

III. Central Bank Operations

1. Overview

Given that higher-than-usual domestic price gains in recent years could buoy inflation expectations, the Bank raised the policy rates by 0.125 percentage points in March 2023. Later in the year, the domestic inflation rate gradually came down from the levels of 2022 and is expected to decline to around 2% in 2024. In addition, the global economic outlook still faced a myriad of risks that could in turn dampen Taiwan's economic recovery. On the other hand, the Bank estimated that Taiwan would have a negative output gap in both 2023 and 2024. Based on these assessments, the Bank kept the policy rates on hold till the end of 2023, helping foster sound economic and financial development on the whole.

With the aim of promoting financial stability and sound banking operations, implementing the cross-ministry Healthy Real Estate Market Plan initiated by the government, and preventing excessive bank credit resources from gushing into the real estate sector, the Bank continued with the selective credit control measures during 2023. In June, the Bank decided to amend the *Regulations Governing the Extension of Mortgage Loans by Financial Institutions* to introduce a 70% cap on the loan-to-value (LTV) ratio for a second home loan of a natural person for housing in a "specific area," and adopted relevant support measures to further strengthen management of bank credit resources and contain related credit risk.

Furthermore, from March 2022 to March 2023, the Bank implemented policy rate hikes five times and increased the reserve requirement ratios on NT dollar demand deposits and time (savings) deposits twice. These measures were 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 2023, reserve money posted an annual growth rate of 5.55%. Meanwhile, the monetary aggregate M2 grew by 6.25% year on year, falling back to the Bank's M2 growth reference range of 2.5% to 6.5%.

With respect to the foreign exchange (FX) market, in the beginning of 2023, as US stocks rebounded from the previous downturn, the TAIEX also swung back up, resulting in net foreign capital inflows and NT dollar appreciation against the US dollar. Thereafter, despite the TAIEX registering a continuous uptrend, foreign investor net sales on the TWSE for profit-taking induced net foreign capital outflows and NT dollar depreciation against the US dollar. For the second half of the year, a surge in US government bonds yields led to the strengthening of the US dollar, and the NT dollar thus depreciated markedly. Nevertheless, with US Treasury yields trending lower and a weaker US dollar, the NT dollar exchange rate reversed to appreciate in November.

The NT dollar exchange rate fluctuated significantly for the entire year, reflecting substantial foreign investor net sales and purchases of Taiwanese stocks as well as international economic impacts. Consequently, the Bank, in line with its statutory mandates, continued to conduct two-way smoothing operations in the forex market as warranted to maintain dynamic stability of the NT dollar, with a net selling of US$2.8 billion in 2023. Compared with other major currencies such as the SGD, EUR, KRW, and JPY, the NT dollar experienced lower volatility in its exchange rate vis-à-vis the US dollar in 2023.

Meanwhile, 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. Moreover, the Bank continuously required the Financial Information Service Co., Ltd. (FISC) to reinforce mobile payment infrastructure, such as the introduction of the shopping e-payment service on the "Common Inter-Institutional Electronic Payment Platform" in 2023. The Bank also urged the FISC to collaborate with financial institutions and electronic payment institutions to promote the use of TWQR, a common QR code payment specification. It is expected to help address the fragmentation of the domestic retail payment market.

In the meantime, to assist in cash disbursements for the government's "Universal Cash for All" project, the Bank and the Ministry of Finance instructed the FISC to provide, in collaboration with financial institutions, multiple easy and convenient channels for the public to claim their cash payments through the interbank payment infrastructure.

In response to emerging innovations in digital payment, the Bank has conducted research on central bank digital currencies (CBDCs). The Bank completed the study on wholesale CBDC techical feasibility study in 2020 and the project on retail CBDC technology experimentation in 2022. The videos showcasing the results of the retail CBDC technology experimentation have been released in both Chinese and English on the Bank's official website. Currently, the Bank is carrying out the following tasks to reinforce CBDC-related research and preparations: conducting opinion surveys, enhancing platform technology, and deliberating relevant regulations.

2. Monetary Management

Raising Policy Rates to Foster Price Stability

In March 2023, the Bank raised the policy rates by 0.125 percentage points to curb domestic inflation expectations. Therefore, the discount rate, the rate on refinancing of secured loans, and the rate on temporary accommodations were raised to 1.875%, 2.25%, and 4.125%, respectively.

Afterward, the domestic inflation rate gradually declined from the levels of 2022, and was expected to fall back to around 2% in 2024. The global economic outlook was still facing many risks, which could further dampen the domestic economic recovery. In addition, the domestic output gap was estimated to be negative in both 2023 and 2024. Based on these assessments, the Bank kept the policy rates unchanged in June, September, and December 2023, which would help foster sound economic and financial development on the whole.

Continuing Open Market Operations to Adjust Market Liquidity

In 2023, the Bank continued to affect money supply through open market operations by issuing CDs in response to domestic economic and financial conditions, which helped to maintain market liquidity and market interest rates at appropriate levels.

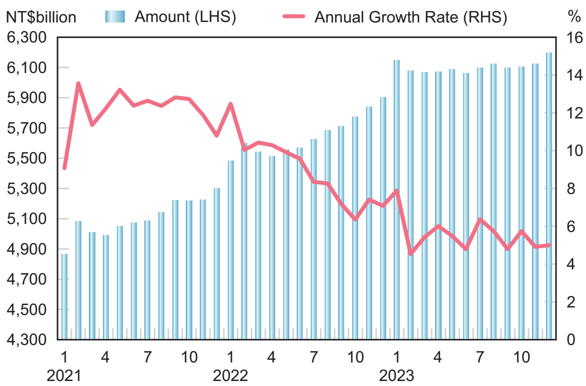
(1) Appropriately Managing Reserve Money

The Bank continued to conduct open market operations by issuing CDs. At the end of 2023, the total outstanding amount of CDs issued by the Bank was NT$8,135.9 billion.

In 2023, reserve money grew at a slower pace at 5.55% year on year, 3.36 percentage points lower than the previous year's figure. The annual average excess reserves of financial institutions were NT$59.8 billion, lower than the previous year's NT$71.8 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 from the end

Reserve Money (Averages of Daily Figures)



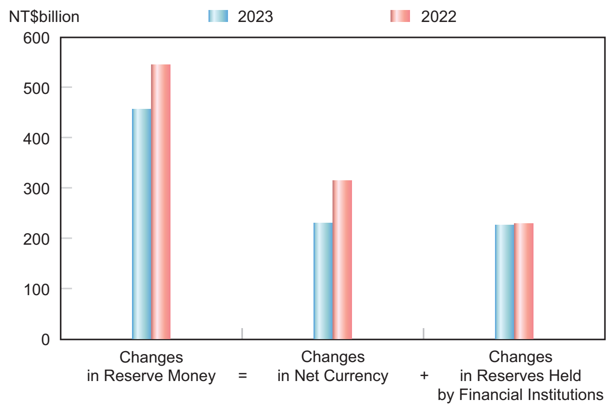
Source: *Financial Statistics Monthly* (February 2024), CBC.

of January to early February in 2022, yet in late January in 2023). For the first two months of 2023, reserve money posted an annual growth rate of 6.20%. From March onwards, the annual growth rate of reserve money was relatively stable.

On the demand side, reserve money, measured on a daily average basis, increased by NT$455.8 billion over the previous year. Of the components, net currency increased by NT$230 billion and the annual growth rate fell to 8.07% from 12.40% the previous year; reserves held by financial institutions expanded by NT$225.8 billion, with the annual growth rate down to 8.08% from 8.94% the previous year.

Owing to a slowdown in global economic growth, shrinking exports, and weaker corporate demand for funds, net currency recorded a smaller increase than the previous year. As for reserves held by financial institutions, slower growth in demand deposits reduced banks' demand to deposit reserves, resulting in a slightly smaller increase in reserves held by financial institutions compared to the previous year.

Changes in Reserve Money (Averages of Daily Figures)



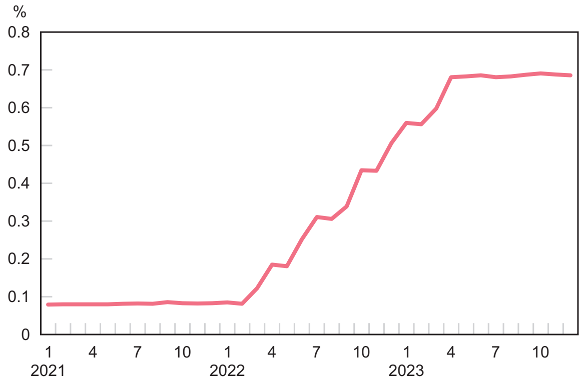
Source: *Financial Statistics Monthly* (February 2024), CBC.

From the supply side perspective, reserve money increased by NT$274.8 billion at the end of 2023. 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 Hike

The Bank's 0.125 percentage point rate increase in March 2023 drove up the overnight call loan rate by nearly 0.125 percentage points throughout the year. As of the end of December 2023, the annual average overnight call loan rate was at 0.692%.

Overnight Call Loan Rate



Source: *Financial Statistics Monthly* (February 2024), CBC.

(3) Conducting Regular Small-Scale Repo Operations

The Bank conducted small-scale test repo operations on CDs and government bonds in April and October 2023 to improve operational readiness and ensure resilience of open market operations. In December 2023, the Bank conducted a new small-scale test repo operation on sustainable bonds issued by banks to help promote the development of sustainable finance.

(4) Continuous Growth in Monetary Aggregates, with M2 Growth Falling Back to within the Reference Range

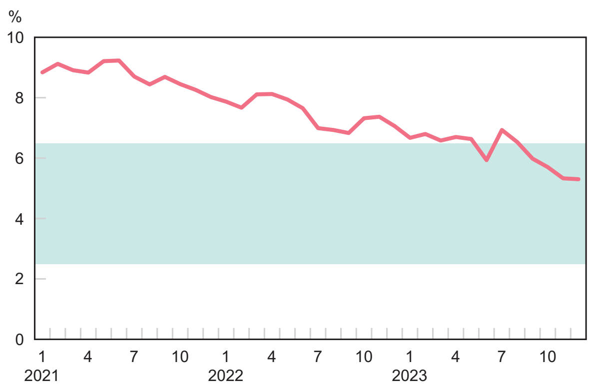
Measured on a daily basis, the annual growth rate of M2 fell by 1.23 percentage points from the previous year to 6.25% in 2023. The slowdown brought it back to the Bank's reference range of 2.5% to 6.5%, mainly reflecting a higher base effect and slower growth in bank loans and investments.

With regard to the monthly movements in 2023, weak corporate funding needs amid a tepid global economy led to a lower annual growth rate of current operations loans, while loans to the real estate sector also declined over the same period in 2022, resulting in a slower pace of year-on-year growth in bank loans and investments. Consequently, the M2 annual growth rate dropped from 7.06% in December 2022 to 6.58% in March 2023.

The M2 annual growth rate rose to over 6.60% in April and May as a result of the government's universal surplus tax rebate program (NT$6,000 per person). With the growth in bank loans and investments registering a downtrend before an uptrend around mid-year, the M2 growth rate declined to 5.93% in June, and then rebounded to an all-year high of 6.93% in July.

Subsequently, net foreign capital outflows brought the M2 annual growth rate down to 5.70% in October. Although net foreign capital outflows turned into inflows in November, the magnitude of inflows was still smaller than that of the same period of the previous year, sending the M2 growth rate further down to 5.33%. Later in December, the M2 annual growth rate fell slightly to an all-year low of 5.30%.

Annual Growth Rate of M2



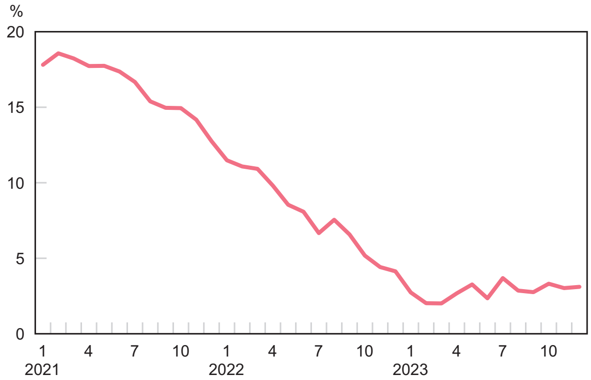
Note: Light blue area is the reference range for M2 growth (2.5% to 6.5%).
Source: *Financial Statistics Monthly* (February 2024), CBC.

The annual growth rate of the monetary aggregate M1B, measured on a daily average basis, went down by 4.99 percentage points to 2.82% in 2023, mainly owing to a higher base effect and weaker growth in demand deposits resulting from decelerated growth in bank loans and investments.

As for the monthly movements in 2023, from January to March, softer expansion in bank loans and investments and a higher base effect led to slower growth in demand deposits. As a result, the M1B annual growth rate showed a downtrend, dropping from 4.14% in December 2022 to an all-year low of 2.01% in March 2023.

In subsequent months, as growth in demand deposits rebounded, the M1B annual growth rate rose to 3.27% in May. Affected by changes in bank loans and investments, the M1B annual growth rate slipped to 2.35% in June but moved back up to a yearly high of 3.69% in July, before staying broadly stable from August onwards.

Annual Growth Rate of M1B



Source: *Financial Statistics Monthly* (February 2024), CBC.

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

To promote financial stability and sound banking operations, to carry on with the Bank's policy efforts under the government's Healthy Real Estate Market Plan, and to prevent bank credit from excessively flowing towards property and land hoarding, the Bank continued to implement the selective credit control measures.

1. Making rolling adjustments to credit control measures

(1) February 2023: The Bank revised the Q&A for the provisions of land loans to include an exemption from the restriction on the commencement of construction within a specific time frame if there are factors that are not attributable to the borrower.

(2) June 2023: The Bank amended the regulations to introduce a 70% loan-to-value (LTV) ratio cap for a second outstanding home loan of a natural person for housing in a "specific area."

(3) July 2023: The Bank added a new Q&A on the regulations for a second outstanding home loan of a natural person for housing in a "specific area," specifying assistance measures provided to second-home buyers whose intentions are to replace their current homes.

2. Adopting supporting measures

(1) Evaluating the effectiveness of the Bank's selective credit control measures on a regular basis to serve as a reference for policymaking.

(2) Inviting banks to participate in seminars and urging them to comply with regulations and implement credit risk-based interest rate pricing principles.

(3) Conducting on-site financial examinations to urge financial institutions to conform to relevant regulations.

(4) Performing monthly reviews on the extension of mortgage loans by financial institutions and changes in credit terms, and releasing related statistics on the Bank's website.

(5) In June and July 2023, the Bank issued press releases stating that the Bank's regulations on a second outstanding home loan of a natural person for housing in a "specific area" had taken into account the interests of second-home buyers replacing current homes, and had provided relevant assistance measures in response.

(6) In November 2023, the Bank called on the National Federation of Credit Cooperatives, R.O.C. (NFCC) and the Agricultural Bank of Taiwan to inform community financial institutions about strengthening the implementation of the regulations.

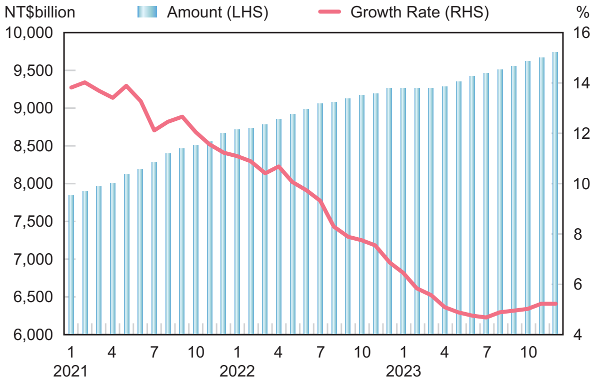
Since the Bank's selective credit controls took effect, real estate lending growth has seen a significant downtrend, which has helped enhance banks' risk management associated with real estate lending, and banks' real estate loans have maintained good credit quality as indicated by the continuously low non-performing loan ratio of this loan bracket. The Bank has continued to closely monitor the possible impacts of real estate-related policies on the housing market, keep watch on banks' real estate lending, review the outcomes of the selective credit controls, and make timely adjustments as needed in order to promote financial stability and sound banking operations.

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.

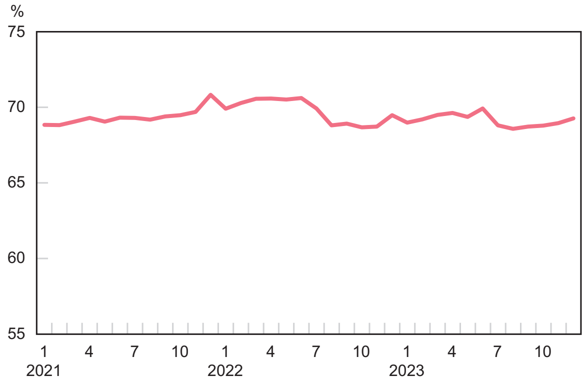
At the end of 2023, the outstanding loans extended to SMEs by domestic banks amounted to NT$9,766.4 billion, an increase of NT$483.1 billion from the end of the previous year to a level that exceeded the annual lending growth target of NT$380 billion set by the FSC for 2023 under the "Program to Encourage Lending by Domestic Banks to SMEs." At the end of 2023, the ratio of SME loans to loans extended to all private enterprises reached 69.26%, slightly lower than the 69.48% recorded at the previous year end.

Outstanding Loans Extended to SMEs



Source: FSC.

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



Source: FSC.

Raising the Remuneration Rates on Financial Institutions' B Reserve Accounts

The Bank raised policy rates in March 2023, and the remuneration rates on financial institutions' B reserve accounts held with the Bank increased accordingly. Effective March 31, 2023, reserves from demand deposits and time deposits would receive interest at 0.646% and 1.334% per annum, respectively.

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 2023, the outstanding redeposits of Chunghwa Post stayed broadly unchanged at NT$1,623.7 billion, while the outstanding redeposits of the Agricultural Bank of Taiwan and of commercial banks were NT$127 billion and NT$235.8 billion, respectively.

Box

Updated Review of the Bank's Selective Credit Control Measures

Beginning in December 2020, the Bank introduced a round of selective credit controls (see Appendix) through amendments to the relevant regulations five times – in December 2020, March, September, and December 2021, and then in June 2023. Judged to be in line with two of the Bank's operational objectives, namely promoting financial stability and sound banking operations, these actions were taken to help curb excessive credit allocation to the real estate market as per the directive of "efficient allocation and proper use of credit resources" under the government's Healthy Real Estate Market Plan. Moreover, the Bank implemented five policy rate hikes and two increases in the required reserve ratios between March 2022 and March 2023. These tightening moves could also strengthen the effectiveness of selective credit control measures.

1. Implementation of the selective credit control measures

The Bank made five adjustments to its selective credit control measures through relevant regulatory amendments since December 2020. The primary considerations and key changes are as follows.

(1) **December 2020:** Strengthening regulation on high-risk real estate borrowers

The Bank noticed several anomalies: Housing loans and construction loans in banks had recorded faster growth; there had been increasing cases of a single natural person taking out multiple housing loans and a rising number of housing loans taken out by corporate entities; bank credit had become a profiting-making tool as some borrowers took out land-collateralized loans to hoard idle land or non-owner occupied housing; banks had been applying overly loose lending standards to loans for unsold housing units of construction firms. In this view, the Bank decided to introduce new selective credit controls, imposing restrictions on housing loans taken out by corporate entities, the third (or more) outstanding housing loan by a natural person, land-collateralized loans and loans for unsold housing units, such as capping the loan-to-value (LTV) ratios and removing grace periods.

(2) **March 2021:** Enhancing regulation on housing loans of corporate entities, third (and more) outstanding housing loans by natural persons, and high-value housing loans; Stipulating new regulations on loans collateralized against idle land in industrial districts

Seeing that banks' real estate lending still posted strong growth and there arose sizable increases in property hoarding and flipping by corporate entities, while also aiming to encourage development of idle land in industrial districts, the Bank implemented the following measures: Lowering the LTV ratio caps on housing loans taken out by corporate entities, adjusting the LTV ratios on natural persons' housing loans according to the number of outstanding ones, lowering the LTV ratio caps on high-value housing loans, and imposing a new LTV ratio cap on loans collateralized against idle land in industrial districts.

(3) **September 2021:** Imposing new restrictions on the second outstanding housing loan(s) taken out by a natural person for homes in the designated "specific areas;"[1] reinforcing restrictions on land loans and loans collateralized against idle land in industrial districts

Against the backdrop of still strong growth in banks' real estate lending, the Bank sought to prevent excessive credit flow from moving into the real estate sector and to encourage borrowers to expedite land development. Therefore, the Bank imposed new restrictions by removing grace periods from the second outstanding housing loans taken out by a natural person for homes in the designated "specific areas," and lowering the LTV ratio caps on land loans and on loans collateralized against idle land in industrial districts.

(4) **December 2021:** Tightening regulation on high-value housing loans, the third (or more) outstanding housing loan(s) of a natural person, land loans, loans collateralized against idle land in industrial districts, and unsold housing units loans

In view of the still large share of real estate lending in banks' total lending, the Bank decided to lower the LTV ratio ceilings for all the abovementioned loan types and to introduce a new regulation that requires borrowers of land loans to commit in writing to commencing construction within a specific time frame (which would be 18 months in maximum according to a later rule stipulated in January 2022).

(5) **June 2023:** Enhancing regulation on the second outstanding housing loan of a natural person for homes in the "specific areas"

In addition to the persistently high concentration of real estate lending in banks' total lending, the number of newly-extended natural persons' second outstanding housing loans increased in the first quarter of 2023 from the previous quarter, while also taking up a larger share. Meanwhile, the average LTV ratio of natural persons' second outstanding housing loans for homes in the "specific areas" remained high and even continued rising. In response, the Bank imposed a new LTV cap on that loan bracket, stipulating that lenders could only grant loans worth no more than 70% of the value of "specific area" homes to natural persons taking out a second outstanding housing loan.

2. These credit controls are non-retrospective, do not affect loan applications by same-household members, and are equipped with separate support measures for homeowners in transition

(1) With no retroactivity, the selective credit controls do not have effect on loan applications

[1] The "specific areas" prescribed herein refer to Taipei City, New Taipei City, Taoyuan City, Taichung City, Tainan City, Kaohsiung City, Hsinchu County, and Hsinchu City.

submitted to and registered by financial institutions prior to the relevant statutory amendments, with their loan conditions still following the applicable rules at the time of loan case registration.

(2) The selective credit controls are applicable to the individual borrower, not the entire household, so they would not hinder the rights of other members in the same household to take out housing loans.

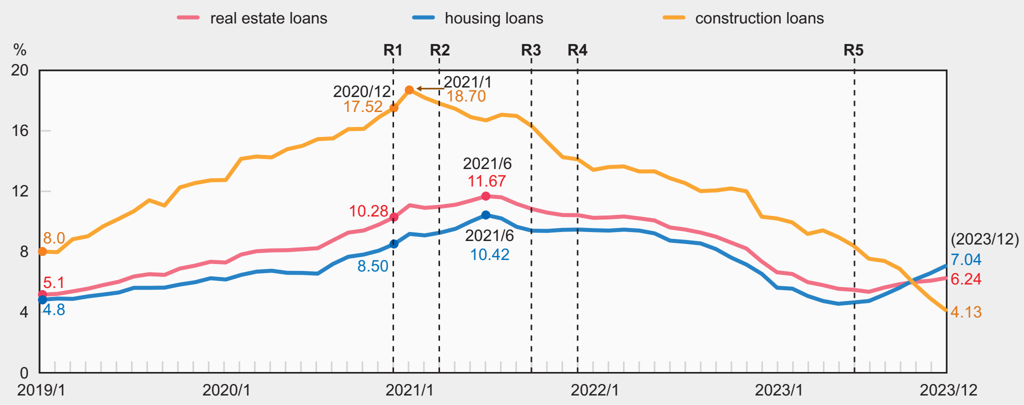
(3) For homeowners in transition between current and new housing, the Bank has provided relevant support measures[2] to help them take out housing loans as needed.

3. Results and effectiveness

(1) Remarkable decline in real estate lending growth rate, slowing the bank credit flow to the real estate market

As of December 2023, the annual growth rates of banks' real estate loans, housing loans, and construction loans were 6.24%, 7.04%, and 4.13%, all lower than the levels prior to December 2020 when the Bank began implementing selective credit controls, with these measures continuing to work and more results expected to show.

Annual Real Estate Loan Growth Rates of All Banks



Notes: 1. Real estate loans = housing loans (house-purchasing loans) + house-repairing loans + construction loans.
2. R1-R5 represent the five amendments to the selective credit controls with R1 referring to the Dec. 2020 amendment.

Source: Department of Economic Research, CBC.

(2) LTV ratios came down, related loans posted low non-performing loan (NPL) ratios, and banks exhibited good real estate credit risk management

A. The LTV ratios of the loans under restriction all came lower.

[2] According to the Q&As compiled by the Bank in July 2023 on natural persons' second housing loans for "specific area" homes, if borrowers do have actual needs in the home-transition period to take out a new loan before full repayment of the outstanding one, they need to, through Affidavit of Undertaking, promise to sell and complete ownership transfer of the collateralized property of the existing loan (along with debt and lien cancellation) within one year, with the result that the borrowers may be exempt from the relevant 70% LTV ratio cap.

LTV Ratios of Real Estate Loans Before and After Rule Tightening (Domestic Banks)

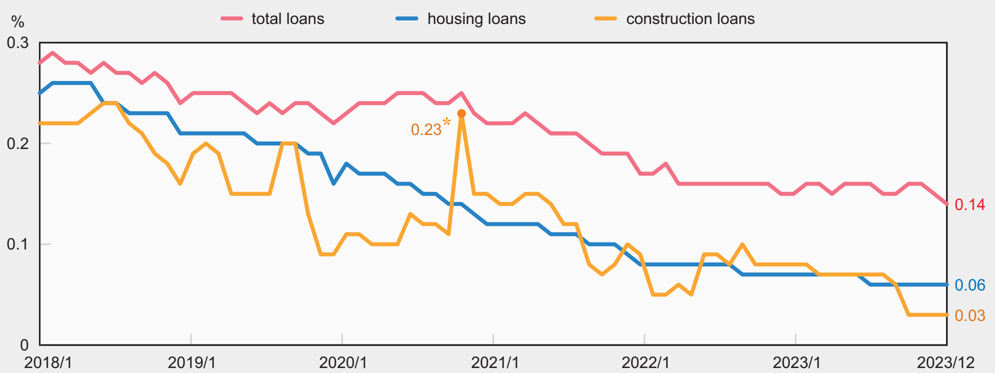
(unit: %)

Type of loans			Before (average; mainly Jan.-Sept. 2020)	After (average; Dec. 2023)	Current cap (Jun. 16, 2023 onwards)
Housing loans	Corporate entity (regardless of the number of outstanding housing loans)		63.97	39.28	40
	Natural person	2nd outstanding housing loan, specific areas	77.16	68.05	70
		3rd (and more) outstanding housing loan	63.97	39.46	40
		High-value housing	71.00	39.09	40
Land loans			69.19	48.79	50
Loans for unsold housing units			51.03	38.67	40
Loans collateralized against idle industrial district land			n.a.	49.78 (Oct. 2021)	40

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; the "before" data on high-value housing loans taken out by natural persons are based on data reported by banks before the Bank first imposed credit controls on this type of loan in June 2012; the "before" data on the second housing loans of "specific area" homes of natural persons are based on data reported during Jan.-May 2023.
2. The "after" data are compiled by the Bank based on the reports submitted by 37 domestic banks. For data on loans collateralized against idle industrial district land, the latest available data was October 2021 (when the LTV ratio cap was still 50%).
3. "n.a." there was no statistical compilation.
Source: Department of Banking, CBC.

B. The NPL ratios of domestic banks' real estate-related loans all remained low, and below the NPL ratio of total loans, indicating good credit quality that is conducive to the management of banks' real estate credit risk.

Non-performing Loan Ratios of Domestic Banks



Note: The NPL ratio of construction loans reached 0.23% in October 2020; this was caused by a surge in one bank's single month non-performing construction loan ratio, attributable to one corporate borrower.
Source: Department of Financial Inspection, CBC.

4. Promoting awareness of the control measures and their effectiveness

The Bank has continued to enhance policy promotion and public communication through various channels, in order to encourage understanding of the execution and results of the abovementioned selective credit control measures.

(1) Whenever the selective credit control measures were adjusted, they were accompanied by a press release and presentation materials for the press conference post the Bank's quarterly Board Meeting, explaining the considerations behind the policy adjustment, changes made, and future outlook. Supplementary materials for the post-meeting press conference were also provided to give more details on the status and results of the previously-enforced credit controls.

(2) On several occasions the Bank issued press releases to urge banks to comply with the control measures and the principle of credit risk-based interest rate pricing, to formulate internal rules, to actively require borrowers to fulfill the promise on construction work commencement, to provide homeowners in the midst of home transition with the Bank's relevant support measures, etc.

(3) The Bank has since made several reports to the Parliament[3] on the implementation and related issues of the selective credit control measures.

(4) Governor Yang, at the invitation of a seminar, gave an account of the related issues of the housing market and the Bank's selective credit control measures undertaken in accordance with the government's Healthy Real Estate Market Plan.

(5) On multiple occasions the Bank responded to the suggestions of private sector groups (such as the real estate development associations of various municipalities) and released related information on social media platforms (such as the Bank's Facebook page) to strengthen policy communication.

(6) The Bank set up a dedicated page on its official website about the Bank's efforts under the government's Healthy Real Estate Market Plan, providing details on the regulations, frequently asked questions and answers, and related press releases, as well as a regular update on data regarding domestic banks underwriting the regulated types of real estate loans.

[3] Including the Apr. 19, 2021 report on the implementation status of the Bank's selective credit control measures; the Nov. 22, 2021 report on how to prevent bank and non-bank credit from being used to fuel property speculation; the May 12, 2022 report on a review of whether to tighten further amid major central banks' tightening moves and to adjust the selective credit control measures; the Mar. 30, 2023 report related to the government's social housing projects and relevant measures under the government's newly-amended tax measures to rein in high housing prices.

5. Conclusion

To foster financial stability and sound banking operations, and to attain the goal of "efficient allocation and proper use of credit resources" as per the government's Healthy Real Estate Market Plan, the Bank launched a series of efforts with five amendments to the selective credit controls beginning December 2020. With these measures, the real estate loan growth rates have declined and their NPL ratios have stayed low, pointing to good credit quality. The data have demonstrated how the Bank's housing credit policy measures have helped reinforce banks' credit risk management associated with the real estate sector and kept bank credit resources from flowing unreasonably to the real estate market.

In implementing the selective credit controls, the Bank paid attention not to affect existing loan applicants or other homebuying household members of the borrowers whose housing loans come under restriction. The Bank also made a point of ensuring the rights of housing loan borrowers in transition between current and future owner-occupied homes.

In the process, the Bank continued to strengthen communication through various channels to promote public understanding of how these measures were conducted and how much they had achieved. Going forward, the Bank will continue with a rolling review across financial institutions regarding the underwriting of real estate loans and the execution of the selective credit controls and will adjust the measures as needed to promote sound banking operations and foster financial stability.

Appendix: Key Points of the Adjustments to Selective Credit Control Measures

<table>
<tr><th colspan="2" rowspan="2">Type of loans</th><th colspan="5">LTV ratio caps and others (date: mm/dd/yyyy)</th></tr>
<tr><th>12/08/2020 - 03/18/2021</th><th>03/19/2021 - 09/23/2021</th><th>09/24/2021 - 12/16/2021</th><th>12/17/2021 - 06/15/2023</th><th>06/16/2023 -</th></tr>
<tr><td rowspan="2">Corporate entity</td><td>First housing loan</td><td>LTV cap: 60%; No grace period</td><td rowspan="2">LTV cap: 40%; No grace period</td><td rowspan="2">(unchanged)</td><td rowspan="2">(unchanged)</td><td rowspan="2">(unchanged)</td></tr>
<tr><td>Second (or more) housing loan(s)</td><td>LTV cap: 50%; No grace period</td></tr>
<tr><td rowspan="5">Natural person</td><td>High-value housing loan in addition to two (or less) housing loans</td><td rowspan="2">LTV cap: 60%; No grace period</td><td>LTV cap: 55%; No grace period</td><td>(unchanged)</td><td>LTV cap: 40%; No grace period</td><td>(unchanged)</td></tr>
<tr><td>High-value housing loan in addition to three (or more) housing loans</td><td>LTV cap: 40%; No grace period</td><td>(unchanged)</td><td>(unchanged)</td><td>(unchanged)</td></tr>
<tr><td>Second housing loans for a home in one of the "specific areas"</td><td>(nil)</td><td>(nil)</td><td>No grace period</td><td>(unchanged)</td><td>LTV cap: 70%; No grace period</td></tr>
<tr><td>Third housing loan</td><td rowspan="2">LTV cap: 60%; No grace period</td><td>LTV cap: 55%; No grace period</td><td>(unchanged)</td><td rowspan="2">LTV cap: 40%; No grace period</td><td>(unchanged)</td></tr>
<tr><td>Fourth (or more) housing loans(s)</td><td>LTV cap: 50%; No grace period</td><td>(unchanged)</td><td>(unchanged)</td></tr>
<tr><td colspan="2">Land loans</td><td>LTV cap: 65%, with 10% withheld for disbursement until construction commences;

Borrower required to submit a substantive development plan for the land purchased</td><td>(unchanged)</td><td>LTV cap: 60%, with 10% withheld for disbursement until construction commences;

Borrower required to submit a substantive development plan for the land purchased</td><td>LTV cap: 50%, with 10% withheld for disbursement until construction commences;

Borrower required to submit a substantive development plan and undertake that construction would begin within a specific time frame</td><td>(unchanged)</td></tr>
<tr><td colspan="2">Loans for unsold housing units</td><td>LTV cap: 50%</td><td>(unchanged)</td><td>(unchanged)</td><td>LTV cap: 40%</td><td>(unchanged)</td></tr>
<tr><td colspan="2">Idle industrial district land mortgage loans</td><td>Internal rules of banks</td><td>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</td><td>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</td><td>LTV cap: 40%; Exemption conditions unchanged</td><td>(unchanged)</td></tr>
</table>

Note: This is a translated, simplified table. In the event of any inconsistency or ambiguity, the official Chinese version of relevant regulations shall prevail.
Source: Department of Banking, CBC.

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.

As Taiwan's stock market was buoyed by the US stock rally amid easing inflation and slower Fed rate hikes, foreign portfolio capital inflows thus drove the NTD up against the USD in early 2023. The AI boom and the Fed's pause in interest rate hikes from June onwards pushed global and Taiwan stock market indices up, but the resultant profit-taking trades by foreign investors and outward remittances of the gains led to NTD depreciation.

The NTD depreciated significantly in the second half of 2023 because the US 10 year treasury yield jumped and the USD strengthened. As the Fed became somewhat dovish in November because of a sharp tightening in US financial conditions and the easing of labor market and inflation pressures, a consequent decrease in US treasury yields and the USD caused the NTD to rebound and appreciate.

Overall, in 2023, the NTD exchange rate fluctuated significantly, reflecting not only foreign portfolio investment flows but also 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$2.8 billion. NTD exchange rate volatility was lower compared to the SGD, EUR, KRW, and JPY in 2023.

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

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 2023, Taiwan's total foreign exchange reserves stood at US$570.6 billion, an increase of US$15.7 billion or 2.8% compared to the end of 2022 mainly attributable to returns from foreign exchange reserve investments. Combining the reserves held in gold valued at US$5.0 billion, the Bank's reserve assets totaled US$575.6 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$86.8 billion, US$28.8 billion, and US$7.8 billion, respectively, at the end of 2023.

In terms of foreign currency liquidity, the total amount (including foreign currency claims and gold) reached US$704.3 billion at the end of 2023.

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. 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 2023 included:

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

Cases of fund-raising by domestic and foreign institutions through securities issuance, approved by or filed for record to the Bank in 2023, 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	14	NTD 11.4 billion
	NTD convertible bonds	8	NTD 2.45 billion
	Foreign currency-denominated bonds	59	USD 6.77 billion
		1	RMB 0.29 billion
		8	AUD 0.31 billion
		1	ZAR 0.82 billion
	Overseas depositary receipts	2	USD 0.69 billion
	Overseas convertible bonds	1	USD 0.40 billion
Domestic companies (and domestic branches)	Overseas depositary receipts	3	USD 1.35 billion
	Overseas convertible bonds	2	USD 0.80 billion

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

(2) Approving Residents' Investments in Foreign Securities

Institution	Method/Instrument	Amount
Securities investment trust companies (SITEs)	36 domestic SITE funds (including 27 NTD-foreign multiple currency SITE funds)	NTD 647 billion (including 470 billion in multiple currency funds)
Life insurance companies	Non-discretionary money trusts managed by financial institutions	USD 0.34 billion
	Investment in their own accounts	USD 0.23 billion
Five major government pension funds and employment insurance funds	Investment in their own accounts	USD 6.55 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 2023, 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.

At the end of 2023, there were 3,468 authorized foreign exchange banks in total, which included 36 head offices and 3,392 branches of domestic banks, 37 branches of foreign banks, three branches of Mainland Chinese banks, as well as 4,622 authorized money exchangers, post offices, and financial institutions authorized to engage in basic foreign exchange business.

(2) Insurance Companies

As of the end of 2023, 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$4.98 billion, or 18.0%, from the previous year to US$22.73 billion in 2023.

(3) Securities Firms

The approved cases for securities firms to conduct foreign exchange business in 2023 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
	NTD and foreign currency spot exchange rate	1
	Accepting orders to trade foreign securities	1
	Foreign bond trading agency business	1
	Structured products	3

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 2023 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
	Serving as master agents of offshore funds	1
	foreign currency discretionary investment business	2
	Conducting public offers or private placement of foreign currency-denominated funds	2
Futures firms (concurrently operating as a leverage transaction merchant)	Contracts for differences linked to foreign stocks or ETFs	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.

(2) Domestic Development of Foreign Currency Settlement Business in 2023

Currency	Domestic Participating Units	Settlements in 2023	
		Number of Transactions	Amount
US dollar	71	1,340,787	USD 1,983.2 billion
Renminbi	60	281,680	RMB 574 billion
Yen	38	42,782	JPY 1,471.7 billion
Euro	39	21,058	EUR 8.1 billion
Australian dollar	29	27,230	AUD 1.8 billion

Source: Department of Foreign Exchange, CBC.

Offshore Banking

(1) Regulatory amendments

A. In order to enhance banks' competitiveness in wealth management business, the Bank collaborated with the FSC to amend the renamed *Directions Governing the Custody and Disposal of Clients' Equity-Type Foreign Securities Obtained Through Physical Delivery of Domestic and Offshore Structured Products or Structured Notes by Banks (Including OBUs)*. The amendment relaxed the range of eligible products and participants, effective August 9, 2023.

B. In order to facilitate compliance of securities firms, the Bank collaborated with the FSC to amend the rules regarding the financial standards for a securities firm applying to establish an offshore securities unit (OSU) by lifting the upper limit of its total debts, so as to be consistent with the limit in Article 13 of the *Regulations Governing Securities Firms*. The amendment was effective November 1, 2023.

(2) Financial Status

A. Offshore Banking Units (OBUs)

At the end of 2023, the number of OBUs came to 59, and total OBU assets increased by US$11.16 billion, or 4.2%, over the previous year to US$277.29 billion. The net income after tax of all OBUs amounted to US$1.8 billion, decreasing by US$0.54 billion or 23.1% from a year before.

B. Offshore Securities Units (OSUs)

At the end of 2023, the number of OSUs stood at 18, and total OSU assets increased by US$1.75 billion, or 38.5%, over the previous year to US$6.28 billion. The net income after tax of the business also decreased by US$11.2 million, or 41.4%, to minus US$38.1 million for 2023.

C. Offshore Insurance Units (OIUs)

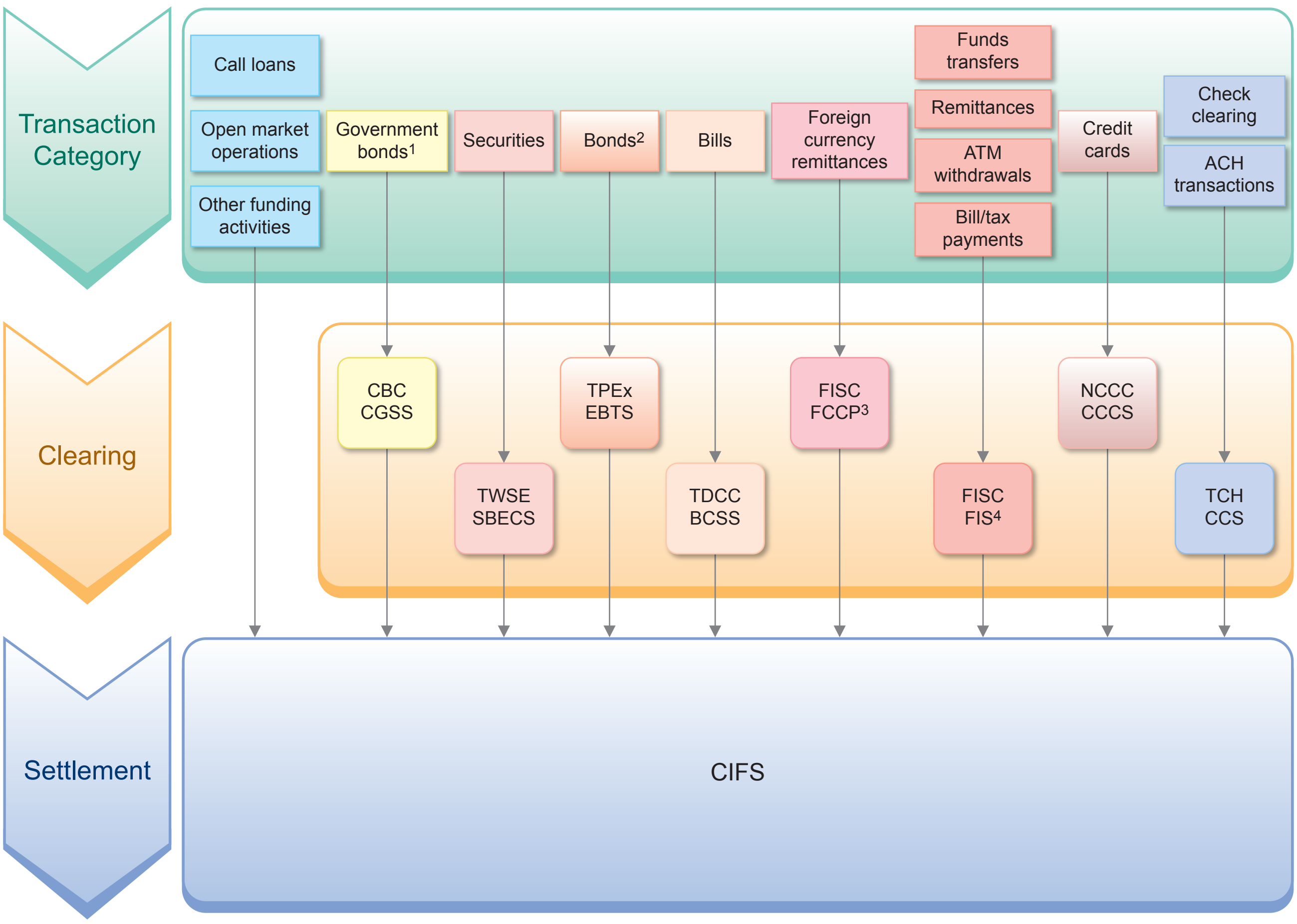
As of the end of 2023, the number of OIUs was 20, with a total amount of assets of US$0.88 billion, which was US$0.1 billion or 10.2% less than the previous year end. The net income after tax of all OIUs decreased by US$23.9 million, or 80%, to US$6 million from the previous year.

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.

Payment and Settlement System Infrastructure



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 responsible for settlements involving NT dollars, while settlements involving foreign currencies are performed by designated commercial banks.
4. The FISC's Financial Information System (FIS) provides fast payment service on a 24/7 basis.

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.

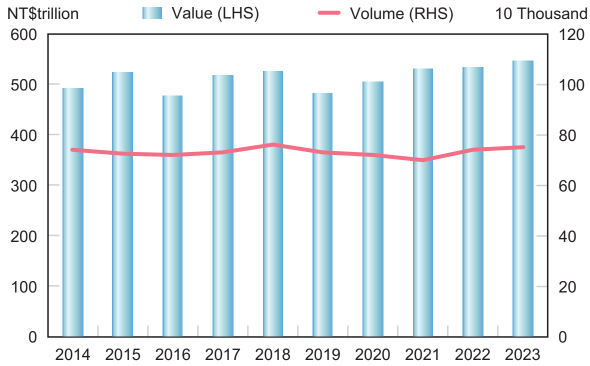
Operation of Payment and Settlement Systems

(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.

At the end of 2023, there were 85 participants of the CIFS, which included 70 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 2023, the number of transactions via the CIFS was 753,017, and the amount of funds transferred totaled NT$547 trillion. Meanwhile, the daily average number of transactions via the CIFS was 3,049 and the daily average amount of funds transferred was NT$2.2 trillion, increasing by 2.36% and 3.1% from a year before, respectively.

Transaction Value and Volume of the CIFS



Source: Department of Banking, CBC.

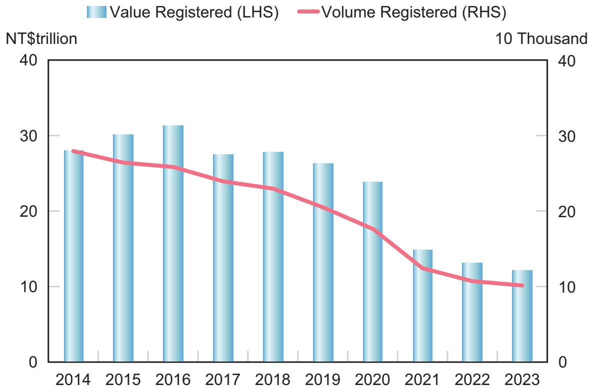
(2) Transactions via the CGSS

Established in September 1997, the CGSS is a system for issuance, transfer, redemption, and interest payment of book-entry central government securities. Since its inception, central government bonds have been issued in book-entry form. 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 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 2023, there were 19 clearing banks with 1,679 branches that handled the registration of central government securities transfers. During the year, market expectations of the policy rate hike cycle nearing an end led central government bond yields to fluctuate within a narrow range, weighing on dealers' willingness for bond transactions. As a result, transaction value and volume of the CGSS in 2023 continued the downtrend, falling to NT$12.1 trillion and 101 thousand transfers, respectively.

Transaction Value and Volume of the CGSS



Source: Department of Treasury, CBC.

Oversight of Payment and Settlement Systems

To ensure sound operation of domestic payment and settlement systems, the Bank conducted the following oversight activities in 2023:

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

The Bank continued to monitor the operation of the large-value payment systems in 2023, and required 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 Payment Business

Clearing institutions and electronic payment institutions were required by the Bank to submit information about their operations and activities on a regular basis. The Bank also kept close watch on the development of innovations in the payment industry, and assisted in providing sound retail payment infrastructure.

(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 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 in the event of malfunction or line interruption of a CGSS participant's mainframe system. In September 2023, 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. The conferences are convened separately by type of clearing institution. For instance, the May conference was held for securities clearing institutions such as the TDCC, the TPEx, and the TWSE, while the one in November was attended by payment clearing institutions including the FISC, the TCH, and the NCCC. During the conferences, the Bank urged the clearing institutions to reinforce the resilience of payment systems, strengthen business contingency planning, and adopt financial technology to enhance operational efficiency and risk management.

Continuing to Urge the FISC to Provide Sound Mobile Payment Infrastructure

To foster the development of mobile payment and electronic payment, the Bank instructed the FISC to reinforce mobile payment infrastructure and assist payment service providers in promoting new payment methods through the following actions:

(1) To enhance information transmission and to facilitate transfer of funds between electronic payment institutions and between e-payment institutions and financial institutions, the Bank consigned the FISC to establish a "Common Inter-Institutional Electronic Payment Platform," inaugurated in October 2021. Later, the shopping e-payment service was introduced on the platform in October 2023. Therefore, the platform has now facilitated services in four areas including funds transfer, tax and bill e-payment, and shopping e-payment,[8] and is expected to offer a cross-border QR Code payment service.

(2) The Bank urged the FISC to develop a common QR code payment specification, named as TWQR and launched on the "Common Inter-Institutional Electronic Payment Platform." With TWQR, merchants and consumers could complete shopping payment by using one common QR code. This could help address the fragmentation of the domestic retail payment market.

Assisting in Cash Disbursements for the Government's "Tax Rebate Universal Cash for All" Project

The government rolled out the "Tax Rebate Universal Cash for All" project in 2023, sending out a one-off NT$6,000 cash handout to every citizen from surplus tax revenue. In order to assist in cash

[8] The 37 participating financial institutions have provided all four services, whereas electronic payment institutions provide the type(s) of services they see fit. At the end of 2023, there were 4 electronic payment institutions providing shopping e-payment service, while the remaining electronic payment institutions were in the preparation stage to launch the service.

disbursements for this project, the Bank instructed the FISC to offer multiple distribution channels through the interbank payment infrastructure, comprising the CIFS, the FISC's Financial Information System, and financial institutions. This enabled 23.55 million recipients to obtain their payments in easy and convenient ways, and the overall operation of the universal cash handout has run smoothly.

Proceeding with the CBDC Research Project

The Bank completed "wholesale CBDC technical feasibility study" in 2020 and the "retail CBDC technology experimentation" in 2022. The videos showcasing the results of the retail CBDC technology experimentation[9] have been released on the Bank's official website.[10]

The Bank is currently conducting opinion surveys, enhancing platform technology, and deliberating regulations.

(1) Conducting opinion surveys: To understand public demand for CBDC and their thoughts on relevant design, a professional research institution has been commissioned to conduct opinion surveys on various aspects of CBDC with participants including end-users, government agencies, industries, and academia. Subsequently, based on the survey results, extensive communication will be conducted through forums and in other forms.

(2) Strengthening platform technology: Continuously adjusting and refining platform design to enhance processing capacity,[11] and conducting research on offline payments and cross-border payments.

(3) Regulatory deliberation: Continuously gathering information on the regulatory trends of CBDC in major countries, deliberating on Taiwan's legal framework in a timely manner, and taking stock of relevant regulations that may need to be stipulated or revised to facilitate the issuance of CBDC.

[9] The experimentation simulated various retail payment scenarios in a closed environment, which included funding and defunding, conducting transfers and purchases, and utilizing digital vouchers.
[10] The videos are available at https://www.cbc.gov.tw/en/cp-448-164955-c745e-2.html.
[11] The transaction processing capacity of the CBDC prototype platform has increased to 20,000 transactions per second.

5. Currency Issuance

For the year 2023, 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.

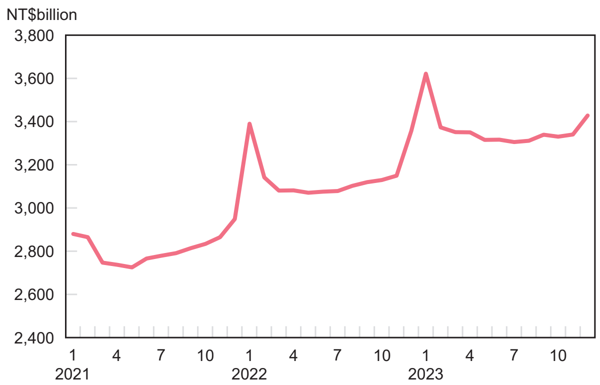
Furthermore, the Bank continued to promote public awareness of counterfeit deterrence and encourage the use of circulating currency through various channels.

Currency Issuance Increased to Meet Currency Demand

In 2023, the Bank provided an adequate amount of currency in response to currency demand. The currency issued peaked at NT$3,687.3 billion on January 19, 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$3,428.4 billion, rising by NT$71.5 billion or 2.13% over the previous year end.

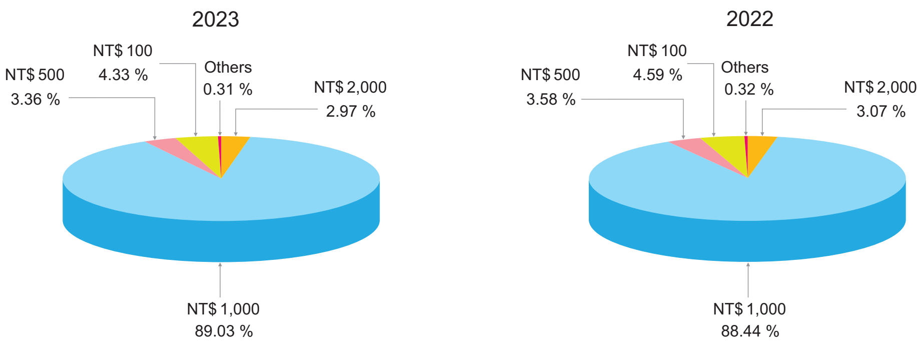
By denomination, the composition of NT dollar banknotes in circulation at the end of 2023 was similar to the end of 2022. The majority of circulating banknotes went for the

Currency Issued



Source: CBC.

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



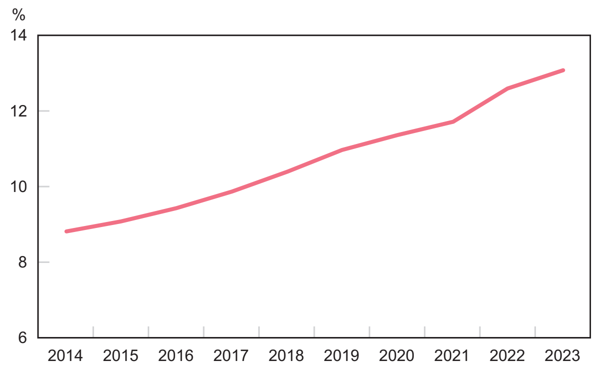
Source: CBC.

NT$1,000 note with a share of 89.03%, followed by the NT$100 and NT$500 notes with shares of 4.33% and 3.36%, 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 13.08% in 2023, 0.51 percentage points higher than 12.57% 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 2023, the Bank issued a

Commemorative Coin Set for the Chinese Zodiac Year of the Rabbit

Source: CBC.

casting set of coins for the Chinese Zodiac Year of the Rabbit.

Efforts to Encourage the Use of Circulating Currency and Raise Public Awareness of Counterfeit Money Continued in 2023

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 2023 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 ins pecting 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 page and displayed on public transportation. Leaflets were distributed to the public and relevant institutions.

A Virtual Exhibition was Held on the Theme of Ancient Currency

The Bank's Virtual Money Museum has been running smoothly since it came online in June 2013.

Annual Exhibition 2023 Titled "History of Ancient Coins" on the Virtual MoneyMuseum Website

Source: CBC.

In response to increased use of mobile technologies and with the aim of providing optimal viewing experiences across 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 2023, the Bank held an annual exhibition titled "History of Ancient Coins."

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 is available on the Bank's website and local visually impaired support groups are encouraged to download it for educational purposes. Meanwhile, the Bank has developed the NT dollar banknote gauge card and instructed the Central Engraving and Printing Plant to conduct mass production. The Bank has 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.

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

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 365 branches, including three overseas branches located in New York, Los Angeles, and Paris. In addition, there are another 4,703 national tax collection agencies set in financial institutions. In 2023, the Bank received a total of NT$4,745.0 billion in treasury deposits, increasing by NT$108.2 billion or 2.33% from 2022. Payments made on behalf of the national treasury were NT$4,828.5 billion, an increase of NT$268.1 billion or 5.88% over the previous year. At the end of 2023, the TDA balance was NT$60.5 billion, decreasing by NT$83.6 billion or 58.02% from the end of 2022.

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 2023, the balance of central government agencies' deposits with the Bank amounted to NT$232.3 billion, an increase of NT$33.4 billion or 16.79% over 2022. Deposits with other delegated banks were NT$793.6 billion at the end of 2023, increasing by NT$30.2 billion or 3.96%.

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 2023, the Bank conducted 17 issues of central government bonds in book-entry form worth NT$478.0 billion in total. Of this amount, 10-year bonds accounted for the lion's share of 41.42%, worth NT$198.0 billion, followed by 5-year bonds, representing a share of 30.33% with an amount of

NT$145.0 billion.

In addition, the Bank paid NT$365.0 billion in principal and NT$80.2 billion in interest for central government bonds. At the end of 2023, the outstanding amount of central government bonds was NT$5,912.5 billion, an increase of NT$113.0 billion or 1.95% from the end of 2022.

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 2023, the Bank conducted eight issues of book-entry treasury bills with a total amount of NT$260.0 billion. The majority of the issuance went for 91-day and 182-day bills, each with a value of NT$100.0 billion and accounting for a respective share of 38.46%. At the end of 2023, the outstanding amount of treasury bills was NT$30.0 billion, the same as the previous year end.

7. Financial Inspection

Pursuant to the objectives and duties stipulated in *The Central Bank of the Republic of China (Taiwan) Act*, the Bank conducts targeted examinations to ensure the effective implementation of monetary, credit, and foreign exchange policies. 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 2023.

Targeted Examination

Targeted examinations in 2023 were conducted on real estate mortgage loans and related fund flows and loan concentration, foreign exchange derivatives business involving the NTD exchange rate, inward and outward foreign exchange remittances, operations of foreign currency exchange counters, 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

The report auditing system was utilized to evaluate financial performance, business status and legal compliance of individual financial institutions as a reference for the supervision and inspection by the Bank and relevant authorities. Moreover, to reflect changes in the evolving financial environment and recent regulatory amendments, the Bank reviewed and modified relevant content requirements for the report auditing. The Bank also leveraged visualization tools to improve the efficacy of data processing and analysis.

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 are 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 exposures 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 2023 the Bank continued to improve the graphical user interface 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 Taiwan Financial Vulnerability Index to identify vulnerabilities in the financial system. Moreover, the Bank collected and studied the methodologies of major central banks in assessing climate change-related risks of the financial industry, using them as a basis for developing an in-house model for climate risk assessment in the future.

International Cooperation in Financial Supervision

In 2023, the Bank continued to actively engage in international cooperation related to financial supervision, such as participating in the 14th SEACEN Meeting of Deputy Governors in Charge of Financial Stability and Banking Supervision, the 25th SEACEN-FSI Conference of the Directors of Supervision of Asia-Pacific Economies, and the 36th Meeting of Directors of Supervision of SEACEN Members.

8. Participation in International Activities

The Bank is committed to engaging in international activities and continues to enhance collaboration with international financial organizations and other central banks. The Bank is a member of 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 continually strengthens its ties with international forums and institutions such as the Asia-Pacific Economic Cooperation (APEC) and the Bank for International Settlements (BIS). Through participation in international conferences, training courses, and forums, the Bank endeavors to maintain close relationships with other central banks by exchanging views and sharing policy experience on current financial and economic issues.

The Bank continued its efforts in taking part in international activities during 2023. The Bank attended the 22^{nd} SEACEN Executive Committee Meeting in Siem Reap, Cambodia, during September 18 to 19. This two-day event included a high-level seminar focusing on monetary tightening and financial sector stability implications in Asia. The Bank and other member banks also discussed how Asia and the Pacific was vulnerable to the effects of monetary tightening in advanced countries and to geopolitical risks.

In addition, the Bank attended the 14^{th} SEACEN High-Level Seminar and Meeting of Deputy Governors of Financial Stability, Supervision, and Payments in Kuala Lumpur, Malaysia, during August 23 to 24.

The Bank also participated in the meetings held by other international organizations, such as the ADB's 56^{th} Annual Meeting of the Board of Governors in Incheon, South Korea, during May 2 to 5, the CABEI's 63^{rd} Ordinary Meeting of the Board of Governors in Punta Cana, the Dominican Republic, on May 12, the BIS' 93^{rd} Annual General Meeting in Basel, Switzerland, on June 24 and 25, and the APEC Finance Ministers' Meeting in San Francisco, the US, during November 10 to 13.

Chronology of Events of the CBC in 2023

Chronology of Events of the Central Bank of the Republic of China (Taiwan)[1] in 2023

Date	Event
Jan. 4	The CBC issued a commemorative coin set for the Kui Mao Year of the Rabbit (2023).
Mar. 23	The CBC's Board decided to raise the discount rate, the rate on refinancing of secured loans, and the rate on temporary accommodations by 0.125 percentage points each to 1.875%, 2.25%, and 4.125%, respectively, effective from March 24, 2023.
31	The CBC increased the remuneration rates on banks' B reserve accounts with the CBC. Reserves from demand deposits would receive interest at 0.646% per annum, while those from time deposits would receive interest at 1.334% per annum.
Jun. 15	The CBC's Board decided on the following measures: 1. Keeping the discount rate, the rate on refinancing of secured loans, and the rate on temporary accommodations unchanged at 1.875%, 2.25%, and 4.125%, respectively. 2. Amending the *Regulations Governing the Extension of Mortgage Loans by Financial Institutions* to introduce a new loan-to-value ratio ceiling on mortgage loans for a second home loan taken out by a natural person for housing located in the stipulated specific areas, effective from June 16, 2023.
Sep. 21	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 1.875%, 2.25%, and 4.125%, respectively.

[1] Herein referred to as the CBC.

Date	Event
Nov. 10	The CBC requested, via notification letter, the National Federation of Credit Co-operatives R.O.C and the Agricultural Bank of Taiwan to inform community financial institutions to enhance compliance with the *Regulations Governing the Extension of Mortgage Loans by Financial Institutions*.
Dec. 14	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 1.875%, 2.25%, and 4.125%, respectively.

Financial Statements of the CBC

1. Balance Sheet

Unit: NTD Millions

	December 31 2023	December 31 2022	Change	
			Amount	%
Assets				
Foreign Assets	17,708,238	17,210,151	498,087	2.89
Due from Domestic Banks	903,526	1,087,899	-184,373	-16.95
Loans and Accommodations to Financial Institutions	288,731	529,912	-241,181	-45.51
Other Assets	636,767	614,994	21,773	3.54
Total Assets	**19,537,262**	**19,442,956**	**94,306**	**0.49**
Liabilities				
Currency Issued	3,428,365	3,356,829	71,536	2.13
Deposits of Financial Institutions	2,788,740	2,584,886	203,854	7.89
Certificates of Deposit Issued	8,135,935	8,601,355	-465,420	-5.41
Redeposits of Financial Institutions	1,997,049	2,001,171	-4,122	-0.21
Government Deposits	293,028	343,338	-50,310	-14.65
Other Liabilities	1,592,021	1,309,322	282,699	21.59
Total Liabilities	**18,235,138**	**18,196,901**	**38,237**	**0.21**
Equity	**1,302,124**	**1,246,055**	**56,069**	**4.50**
Total Liabilities and Equity	**19,537,262**	**19,442,956**	**94,306**	**0.49**

Note: Figures for 2023 are unaudited. Figures for 2022 are audited by the National Audit Office.

2. Income Statement

Unit: NTD Millions

	2023	2022
Income		
Interest Income	435,695	342,610
Fee Income	94	95
Foreign Exchange Gains	111,487	37,827
Revenue from Trust Investment	9,630	7,073
Subsidiaries' Investment Income	2,379	1,996
Others	5,638	3,248
Total Income	**564,923**	**392,849**
Expenses		
Interest Expenses	148,491	85,540
Fee Expenses	226	218
Expenses for Coin Issuance	1,476	1,354
Expenses for Banknote Issuance	2,508	4,221
Allowances	172,480	80,981
Operating Expenses	1,591	1,540
Administrative Expenses	547	533
Others	994	293
Total Expenses	**328,313**	**174,680**
Net Income	**236,610**	**218,169**

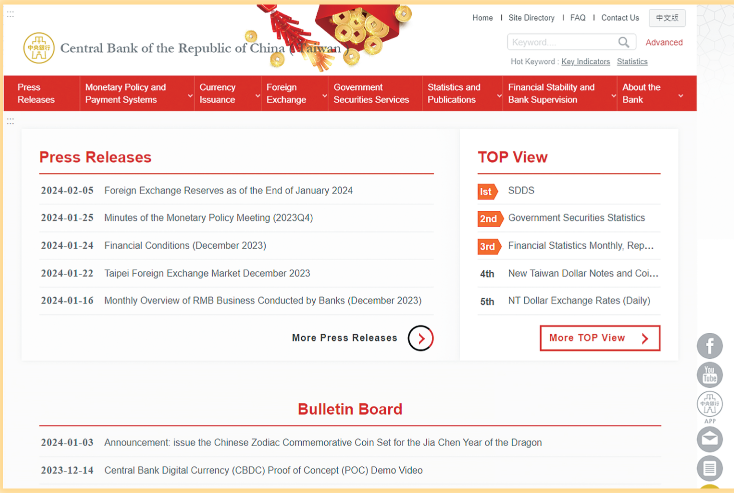
Note: Figures for 2023 are unaudited. Figures for 2022 are audited by the National Audit Office.

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

I. Official Homepage

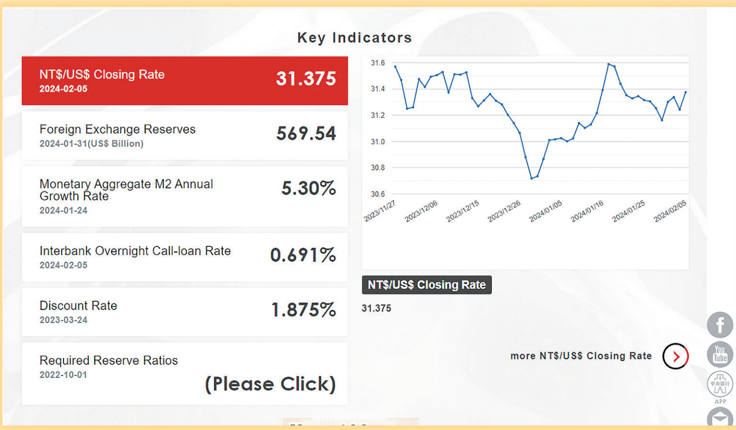
https://www.cbc.gov.tw/en/mp-2.html

Introduces the Bank's operations regarding monetary policy and payment systems, currency issuance, foreign exchange, government securities services, as well as 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 key financial indicators that are periodically updated, such as the NT$/US$ closing rate, foreign exchange reserves, and interest rates.



▼ FAQ

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

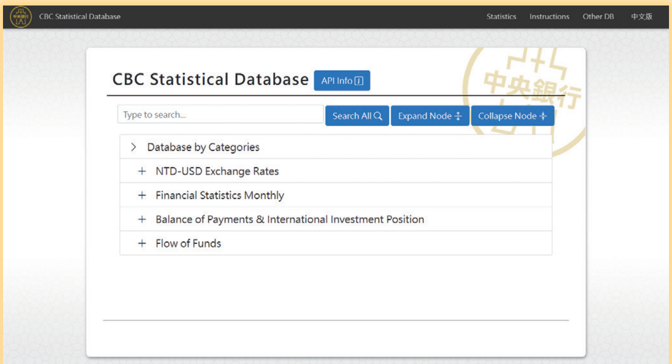
Provides a list of frequently asked questions and answers regarding the Bank's operations and policy-related issues. Information here is updated as needed.

II. Statistics and Publications

▼ Statistics

https://cpx.cbc.gov.tw/Tree/TreeSelect?mp=2

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



▼ Publications

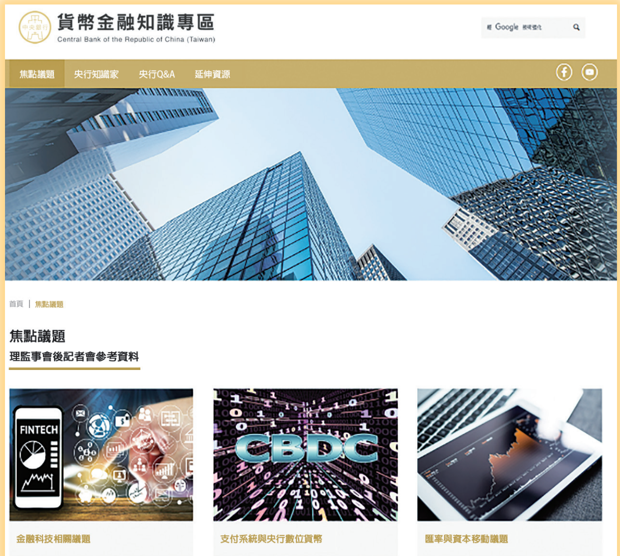
https://www.cbc.gov.tw/en/lp-535-2.html

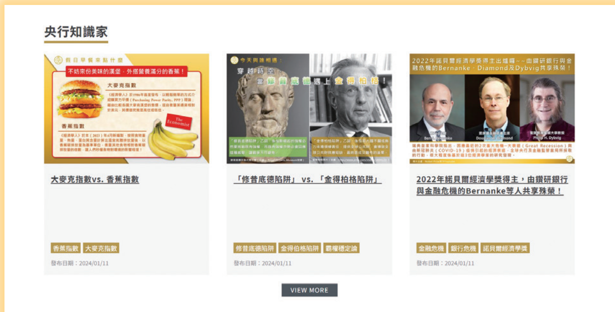
- Provides access to periodical publications, including statistical publications (e.g., financial statistics, balance of payments, flow of funds, and condition and performance of domestic banks), quarterly bulletins, financial stability reports, and annual reports.
- Offers occasional notes or reports on topics related to the Bank's operations or international and domestic economic and financial conditions.

III. Monetary and Financial Knowledge Hub (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, current issues in finance, and videos introducing the Bank's operations and NT dollar-related knowledge.





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 NT 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 (Chinese Only)

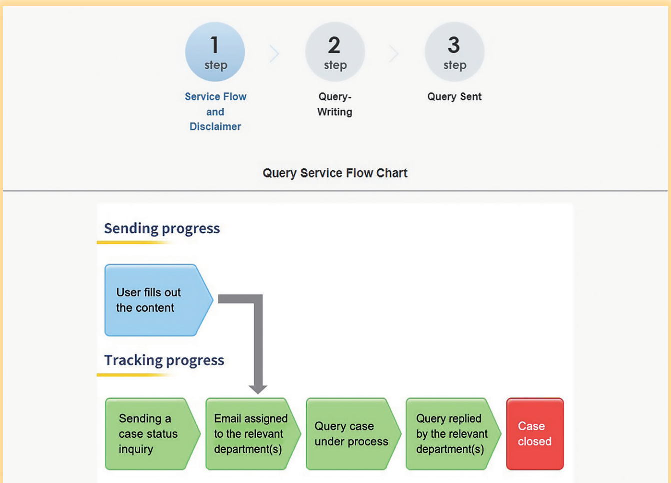
https://museum.cbc.gov.tw/museum

Allows viewers to browse banknotes and coins 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 (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 listed below and/or downloading our mobile apps on iOS or Android devices.

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

Abbreviations

ADB	Asian Development Bank
APEC	Asia-Pacific Economic Cooperation
BIS	Bank for International Settlements
BoJ	Bank of Japan
BoK	Bank of Korea
BOP	Balance of payments
CABEI	Central American Bank for Economic Integration
CBC	Central Bank of the Republic of China (Taiwan)
CBDC	Central bank digital currency
CD	Certificate of deposit
CGSS	Central Government Securities Settlement System
CIFS	CBC Interbank Funds Transfer System
COFER	Currency Composition of Official Foreign Exchange Reserves
COVID-19	Coronavirus disease
CPI	Consumer price index
DBU	Domestic banking unit
DGBAS	Directorate-General of Budget, Accounting and Statistics
DVP	Delivery-versus-payment
ECB	European Central Bank
Fed	Federal Reserve (System)
FINIs	Foreign institutional investors
FISC	Financial Information Service Co., Ltd.
FSC	Financial Supervisory Commission
GDP	Gross domestic product
GNI	Gross national income
IMF	International Monetary Fund
LTV	Loan-to-value
NCCC	National Credit Card Center of R.O.C.
NCD	Negotiable certificate of deposit
NFCC	National Federation of Credit Cooperatives, R.O.C.
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
PEPP	Pandemic Emergency Purchase Programme
PPI	Producer price index
PVP	Payment-versus-payment
Repo	Repurchase agreement
SEACEN	South East Asian Central Banks
SITE	Securities investment trust enterprise
SMEs	Small and Medium Enterprises
TAIEX	Taiwan Stock Exchange Capitalization Weighted Stock Index
TCH	Taiwan Clearing House
TCX	Taiwan Carbon Solution Exchange
TDA	Treasury deposit account
TDCC	Taiwan Depository and Clearing Corporation
TDR	Taiwan depositary receipt
TPEx	Taipei Exchange
TWSE	Taiwan Stock Exchange Corporation
VaR	Value at risk
YCC	Yield curve control

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