Relaxing FX regulations for securities firms

To conform with the policy that securities firms are allowed to issue ETNs that track underlying indices of foreign securities, the Bank stipulated in February 2019 the procedures and compliance requirements governing the application for new or additional issuance of ETNs by securities firms.

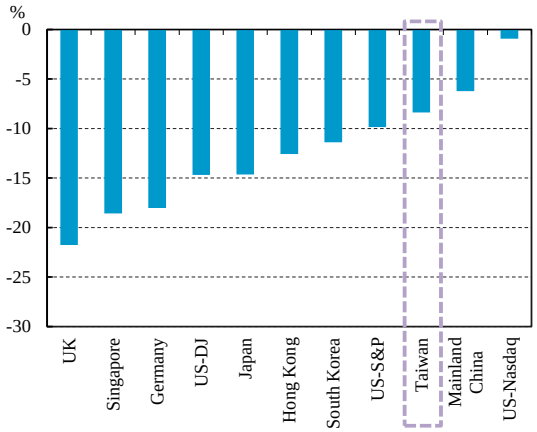
3.4 The impact of the COVID-19 pandemic on domestic financial systems

Owing to the impact of the outbreak of COVID-19 since early 2020, the global economy deteriorated and international financial markets experienced significant turmoil. Although the pandemic also affected domestic economic conditions, Taiwan was successful in fighting against COVID-19, and actively took relief and revitalization measures to mitigate the pandemic-related impacts. In addition, financial markets, financial institutions and financial infrastructures exhibited resilience. This demonstrated that the pandemic only had limited influence on Taiwan's financial system.

3.4.1 Stock indices and the NT dollar exchange rate have been relatively stable

In the beginning of 2020, the COVID-19 pandemic broke out and quickly spread to major economies, triggering dramatic volatility in global stock markets. For the first four months in 2020, stock indices in the UK stock market dropped 21.76%, and the US Dow Jones Industrial Average index fell 14.69%. In contrast, supported by the attractiveness of high-yields on Taiwanese stocks, the domestic stock indices fared relatively better. The TAIEX decreased merely by 8.38%, affected not as much by the COVID-19 crisis compared to major economies (Chart 3.61).

Chart 3.61 Changes in equity indices among major economies

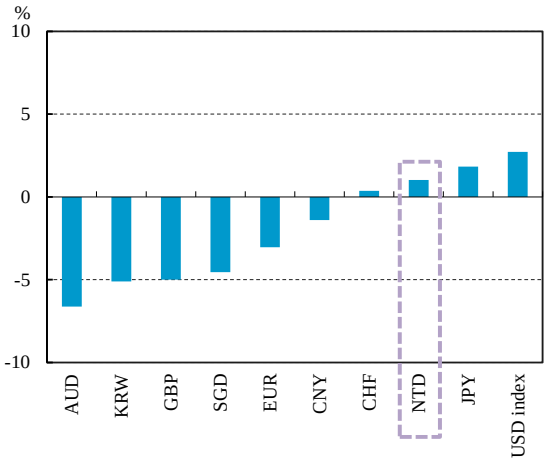


Note: Changes are figures at the end of April 2020 compared to those at the end of 2019.
Source: Bloomberg.

Turbulent financial markets reflected concerns over the global economic outlook. Hence, investors tended to invest in the US dollar to

reduce currency risk. From January to April 2020, the USD Index increased by 2.73%. Other major currencies (except JPY, NTD and CHF) also displayed depreciating trends against the US dollar. The NT dollar exchange rate against the US dollar increased by 1.02% (Chart 3.62), showing that the exchange rate was relatively stable.

Chart 3.62 Exchange rate and USD index changes in major economies



Note: Changes are figures at the end of April 2020 compared to those at the end of 2019.
Source: Bloomberg.

3.4.2 Varying degrees of impacts on financial institutions

With interest rate cuts in numerous economies in response to the COVID-19 pandemic, interest rate spreads between deposits and loans could shrank, which could undermine domestic banks' future profitability. Moreover, the asset quality of domestic banks' corporate loans to several industries could decline due to the impacts of the pandemic. However, because the government actively adopted relief and revitalization measures, the impacts of COVID-19 on domestic banks could be reduced. Under the influence of the COVID-19 crisis, the aggregate net income before tax of domestic banks was NT$81.3 billion in 2020 Q1, decreasing by 16.96% year on year[81] (Table 3.4). Furthermore, the NPL ratio increased to 0.24% compared to the end of 2019 Q4 and the NPL coverage ratio declined. A few banks received negative rating outlooks. Nevertheless, overall financial conditions and operations of domestic banks remained stable, as asset quality was satisfactory with sufficient loss provisions; in addition, capital ratios were adequate (Table 3.5). With sound risk bearing capacity, domestic banks were able to withstand financial shocks brought by the pandemic.

The massive investment portfolios of life insurance companies were inevitably influenced by the turmoil in international financial markets. However, the reduction of interest rates in many countries led market rates to decrease, which was favorable to the valuation of bond positions. In particular, the quickly narrowing interest rate spreads of the USD and the NTD helped to reduce hedging costs. In 2020 Q1, life insurance companies reported net income before tax of NT$63.3 billion, a huge year-on-year increase of 93.58% (Table 3.4), mainly driven by actively realized capital gains of stock and bond investments. Nevertheless, in March 2020, the total value of equities of these companies decreased by NT$466.7 billion or 24.18% compared to

[81] In 2020 Q1, the aggregate net income decreased mainly because of a huge reduction in investment income, especially in March, when the impact on profitability was significant.

that at the end of 2019, owing to an increase in unrealized losses on financial assets affected by the global stock market crash and the wider interest rate spreads of some corporate bonds. Moreover, the rating outlooks of some life insurance companies were revised to negative. Accordingly, the COVID-19 pandemic had quite an impact on life insurance companies. However, taking into consideration that life insurance companies have continuously injected profits as capital in recent years, the capability to overcome unfavorable impacts has enhanced. Moreover, as global stock markets strongly rebounded and interest rate spreads of corporate bonds narrowed in April 2020, the impact of the pandemic on life insurance companies would be easing.

Table 3.4 Net income before tax of major financial institutions

Unit: NT$ bn

Financial Institutions	2020/Q1	2019/Q1	Changes
Domestic banks	81.3	97.9	-16.96%
Life insurance companies	63.3	32.7	+93.58%
Bills finance companies	2.9	2.4	+20.83%

Sources: CBC and FSC.

Table 3.5 Financial conditions of domestic banks

Items	2020/Q1	2019/Q4	Changes; (pps)
NPL ratio	0.24%	0.22%	+0.02
NPL coverage ratio	568%	650%	-82
Capital adequacy ratio	14.27%	14.07%	+0.2

Source: CBC.

The major investments of bills finance companies were bill and bond holdings. After the outbreak of the COVID-19 pandemic, long-term interest rates turned low, which was favorable to the valuation of bond investments. However, there were hidden reinvestment risks. Furthermore, short-term interest rates also turned low, which was also beneficial to the long-term holdings of bills and bonds. Nevertheless, it was worth noting that future credit quality might be still affected by the pandemic. Meanwhile, bills finance companies have been profitable in recent years and have adequate capital with satisfactory asset quality. In addition, a net income before tax of NT$2.9 billion was posted in 2020 Q1, with an increase of 20.83% year on year (Table 3.4). In March 2020, the total equities of bills finance companies decreased

merely by 0.54% compared to the end of the previous year, showing that COVID-19 did not have large impacts on the industry.

3.4.3 Domestic major payment and settlement systems operated smoothly, without being affected by the COVID-19 pandemic

Important domestic financial infrastructures such as major payment and settlement systems were equipped with complete remote backup systems (including system and data backup, etc.). The CIFS and the FISC took pandemic prevention actions to cope with COVID-19 related impacts. The pandemic prevention operational system included having key operational staff working in an off-site office, as well as enhancing remote backup systems to achieve the goal of uninterrupted operations of payment systems.

In response to the crisis, in March 2020, the Bank promulgated guidance for the CIFS and open market operating systems to cope with the COVID-19 pandemic. The guidance included preparing a remote backup system in advance and activating remote operation measures, etc. These measures ensured the consistency of financial institutions participating the CBC interbank and open market operations. As a whole, domestic major payment and settlement systems operated smoothly and were not severely affected by the COVID-19 crisis.

Box 2
The Influence of BigTechs on the payment market and financial stability

In recent years, some large technology companies (BigTechs) that did not primarily provide financial services have started from payment services to provide innovative financial services such as lending, insurance, savings, and investment products. Their business scale and competitiveness have posed challenges for conventional banks, while potentially affecting financial stability in the future. The novel trend has drawn attention from international financial regulators.

1. What drives BigTechs to provide financial services

According to BIS research,[1] BigTechs have intrinsic elements such as data analytics, network externalities[2] and interwoven activities (collectively referred to as "DNA") that mutually reinforce their benefits. Such elements, combined with the provision of non-financial businesses and financial services, allow BigTechs to expand their market share in financial markets. Furthermore, BigTechs collect customer data from different sources through their original non-financial activities, and those data can be used to support the development of new businesses, generate economies of scale and scope, and reduce the cost of new business development.

2. Operating characteristics of BigTechs and conventional banks as well as the competitive-cooperative relationship between them

Conventional banks typically provide wide-ranging financial services and diversified service channels, and tend to have stable and long-term customer relationships. In comparison, BigTechs' operating characteristics include using multiple complementary business activities to quickly enhance customer engagement and having a good command of customer information, logistics, and cash flow at the same time. They can understand customer behavior and preferences from multiple aspects and have relatively flexible use of data.

The global competitive-cooperative relationship between BigTechs and conventional banks can mainly be divided into complementary cooperation or direct competition (Table B2.1), based on factors such as the penetration rates of financial services and of mobile devices, and the rigidity of financial supervision. For instance, in developed countries, where the penetration rates of financial services are high and financial supervision is stricter, BigTechs often strategically cooperate with conventional banks. On the other hand, in many emerging markets and developing countries, BigTechs tend to adopt direct

competition strategies because of lower penetration rates of financial services and relatively loose financial supervision.

Table B2.1 BigTechs and conventional banks' operating characteristics, competitive-cooperative relationship and degree of financial regulations

Items		Conventional Banks	BigTechs
Management	Financial services	Comprehensive	Increasingly diversified
	Channels	Branches; internet	Internet
	Financial technology (FinTech) capabilities	Improving gradually	Strong
Customer relationship	Sources	Via promotion or walk-in customers	Extending from non-financial activities
	Relationship building	Based on long-term relations	Using multiple complementary activities to quickly improve customer engagement
	Data source	Focused on financial side (e.g., cash flow)	Multi-faceted, including customer information, logistics, and cash flow
	Use of data	Strict regulatory limits (e.g., *Personal Data Protection Act*)	More flexible
Relationship with conventional banks		—	Cooperation or direct competition
Degree of financial regulation		Highly regulated	Increasing regulated (e.g., on market entry for banking business)

Source: CBC.

3. Major changes that BigTechs may cause are in the payment market

In terms of market capitalization, BigTechs is far superior to FinTech companies (e.g., PayPal) with the latter being smaller in scale and usually focusing on one specific field (e.g., payment, lending, etc.), and even large international financial institutions may find it difficult to compete with BigTechs. If BigTechs successfully apply their "DNA" competitiveness to the payment market and get hold of privacy-related cash flow data, they will be able to comprehensively analyze individual consumer habits to enhance their competitive advantages. Therefore, BigTechs may bring about structural changes in the payment market and even monopolize the market.

4. Risks and impacts arising from BigTechs regarding financial stability

With BigTechs entering the field of financial services, they could improve the efficiency of financial services, enhance the competitiveness and fairness of financial products pricing, prompt conventional banks to strengthen their financial innovation capabilities, and promote financial inclusion. However, if BigTechs continue to expand their financial

services footprint, they may bring about the following impacts on financial stability:

4.1 Conventional banks with weakening profitability may be forced to conduct risky activities

The increasing competition between BigTechs and conventional banks could jeopardize the profitability of conventional banks. In order to maintain profit levels, banks might engage in more risky activities and take excessive risks.

4.2 High connectedness between conventional banks and BigTechs could increase the instability of the financial system

Some banks are becoming gradually more reliant on BigTechs to offer third-party services, which will increase operational and information security risks, the complexity of the financial system, and the possibility of risk contagion, and in turn compromise stability of the financial system as a whole.

4.3 The expansion of BigTechs could bring about too-big-to-fail risks

When the scale of BigTechs directly providing financial services develops to a certain extent, their operational or financial failure may have a wide-ranging impact on the overall financial system, even jeopardizing the economy, and pose too-big-to-fail risks.

4.4 A dramatic expansion in payment services by BigTechs could weaken the soundness of conventional banks' balance sheets

Once BigTechs successfully extend the payment services to their existing user bases, the deposits of commercial banks held by those users may be converted into electronic money or other forms of instruments on a large scale. As a result, it could weaken the soundness of banks' balance sheets and undermine the liquidity and financial stability of the banking system.

4.5 BigTechs may bring about risks such as data privacy and fair competition concerns

It is not unusual for BigTechs to violate the privacy of users in data storage and usage. If they further capture the key cash flow information, it could pose major risks to personal privacy. In addition, BigTechs may use their competitive advantages such as business scales and technologies to engage in unfair competition or adopt pricing models that are unfavorable to consumers.

5. Currently, the development of BigTechs has not caused significant impacts on financial stability in Taiwan

While BigTechs have entered the domestic financial services sector, mainly in providing mobile payment services, they have not yet caused any major threat to the banking industry or undermined financial stability in Taiwan. Nevertheless, relevant competent authorities should pay attention to their future development and propose appropriate supervision policies in a timely manner in line with the principle of "same business, same risks, same rules," and should strengthen the communication and cooperation with foreign supervisors, so as to reduce possible adverse effects.

Notes: 1. BIS (2019), "*Big tech in finance: opportunities and risks," BIS Annual Economic Report 2019*, June.

2. "Network externality," also known as network effects, refers to the phenomenon when the value of a product depends on the overall number of users in the market. The more users a product has, the higher the value or benefit for new users, and thus the more attractive it becomes.

Box 3
The designation of domestic systemically important banks and their future capital planning

To enhance financial stability and accord with international standards, the FSC designated five domestic banks as the domestic systemically important banks (D-SIBs) in December 2019, and then adopted strengthened sup ervisory measures to improve their loss-absorbing capacity. However, most of them have not met the supervisory requirements and they may face pressure to increase capital in the future, which warrants close attention.

1. The development of D-SIBs identification in Taiwan

To resolve the "too-big-to-fail" problem, the Basel Committee on Banking Supervision (BCBS) issued "A framework for dealing with domestic systemically important banks"[1] in October 2012 and recommended that national authorities should develop their own assessment indicators and weighting system in the D-SIBs methodology. Banks should be required to improve loss-absorbing capacity in accordance with the degree of their systemic importance.

Following the aforementioned framework set out by the BCBS and the actual practices adopted by major economies, the FSC established an assessment framework for D-SIBs in Taiwan. The methodology in the framework identified four categories of factors: size, interconnectedness, substitutability, and complexity (Table B3.1). Meanwhile, the FSC amended the *Regulations Governing*

Table B3.1 Assessment framework for D-SIBs in Taiwan

Category (weighting)	Indicators	Indicator weighting
Size (25%)	Total assets	25%
Interconnected-ness (25%)	Interbank related assets	8.33%
	Interbank related liabilities	8.33%
	Securities outstanding	8.33%
Substitutability (25%)	Deposits and remittances	6.25%
	Outstanding balance of loans	6.25%
	Clearing and settlement volumes	6.25%
	Custodian services	6.25%
Complexity (25%)	Trading and available-for-sale financial assets	6.25%
	Nominal amount of OTC derivatives	6.25%
	Cross-jurisdictional activity	6.25%
	Intra-group interaction	6.25%

Source: FSC.

Table B3.2 Enhanced supervisory measures for D-SIBs in Taiwan

Items	Requirements
Additional Capital requirements	• 2% additional regulatory capital buffer: supervisory measures on inadequate capital in the *Banking Act* are applied to D-SIBs. • 2% bank's internal capital buffer: not a statutory standard; D-SIBs are only required to include this rule into their internal management.
Contingency plans	• D-SIBs are required to report to the FSC and the CDIC their "Contingency Plans for Business Crisis" (including emergency actions in the event of capital shortage).
Stress Test	• D-SIBs are mandated to conduct and report 2-year stress test results to competent authorities according to the principles of supervisory review in Pillar II of the Basel III.

Source: FSC.

the Capital Adequacy and Capital Category of Banks in December 2019 and designated five D-SIBs, including CTBC Bank, Cathay United Bank, Taipei Fubon Commercial Bank, Mega International Commercial Bank, and Taiwan Cooperative Bank. To improve D-SIBs' loss-absorbing capacity and mitigate the negative impacts incurred by the failure of D-SIBs on the financial system, the FSC required them to follow a set of enhanced supervisory measures, including: (1) holding an additional 2% regulatory capital buffer and 2% bank's internal capital buffer; (2) proposing "Contingency Plans for Business Crisis"; and (3) conducting and passing a 2-year stress test on an annual basis (Table B3.2).

The requirement of 2% additional regulatory capital buffer has been included in the *Regulations* mentioned in the preceding paragraph. If the D-SIBs fail to hold the minimum capital, they will be subject to supervisory measures governing inadequate capital in the *Banking Act*. In addition, the requirement of 2% bank's internal capital buffer is not a statutory standard. Therefore, it is not included in the calculation of D-SIBs' consolidated capital adequacy ratios and not used to judge if a bank passes the 2-year stress test.

2. *D-SIBs in Taiwan should actively proceed with the adjustment of their capital planning*

Since the additional regulatory and bank's internal capital buffer must be supported by common equity Tier 1 (CET 1) capital, the minimum requirements of CET 1 ratio, Tier 1 capital ratio and capital adequacy ratio for D-SIBs will rise to 11.0%, 12.5% and 14.5%,[2] respectively. To facilitate D-SIBs' capital planning, the FSC allowed them to calibrate the annual increase evenly in capital ratios within four years after the designated date. However, the outbreak of the COVID-19 pandemic earlier this year seriously impacted the domestic economy and financial markets. To promote the financial intermediary function of domestic banks, the FSC agreed that the implementation of the requirement of 2% bank's internal capital buffer for D-SIBs could be postponed to a year later[3] to assist them in conducting various relief and reviltalization programs (Table B3.3). According to the data at the end of 2019, most of the capital ratios of the five D-SIBs did not meet the minimum standard after the

Table B3.3 Minimum standard of D-SIBs' capital adequacy ratios within the adjustment period

Adjust-ment period	CET1 ratio (%)	Tier 1 capital ratio (%)	Total capital ratio (%)
1st year	7.5	9.0	11.0
2nd year	8.5	10.0	12.0
3rd year	9.5	11.0	13.0
4th year	10.5	12.0	14.0
5th year	11.0	12.5	14.5

Source: FSC.

adjustment period, and those banks should actively adjust their capital planning in the next five years so as to meet the enhanced supervisory requirements.

3. Conclusion

Owing to the small difference in the size of domestic banks, the enhanced supervisory measures for D-SIBs will increase their operating costs. In the medium and long term, they may be able to adopt some prudential strategies for business growth as a response, such as adjusting the structure of risk-weighted assets or modifying their dividend policy under a balanced consideration between capital accumulation and disposition of earnings. Nonetheless, if their profits cannot further improve, the business performance may be affected, posing significant challenges to these D-SIBs.

Alternatively, the competent authority may consider reviewing the components of indicators as well as the weighting system in the D-SIBs methdology on a regular basis. If in need, the methdology should be adjusted or revised properly according to the outcome of the trial calculation.

Notes: 1. BCBS (2012), "A framework for dealing with domestic systemically important banks," October.
2. The minimum standards of CET 1 ratio, Tier 1 capital ratio and capital adequacy ratio for non-D-SIBs are 7%, 8.5%, and 10.5%, respectively.
3. The 2% additional regulatory capital buffer will be calibrated equally from 2020 to 2023, while the 2% bank's internal capital buffer will be calibrated equally from 2021 to 2024.