3.3 Financial infrastructure

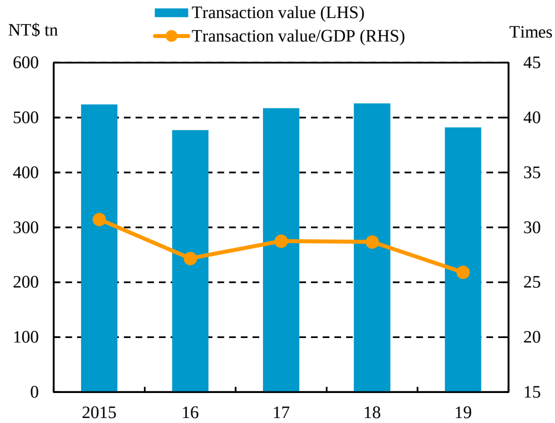
3.3.1 Payment and settlement systems

Overview of the CIFS's operation

The CIFS uses required reserves (part of central bank money) deposited in the Bank to deal with large-value interbank funds transfers. Moreover, it also provides interbank final settlement services to each clearing institution, such as those for domestic securities, bills, bonds and retail payments. In 2019, the daily average reserve balance for settlement was about NT$724.9 billion. The amount of funds transferred via the CIFS was about NT$482 trillion,[71] 25.9 times the GDP for the year (Chart 3.57).

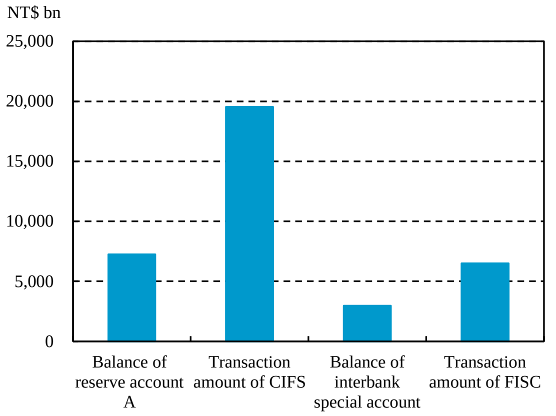
To deal with the clearing and settlement of retail interbank payment transactions[72] in the FISC's Inter-bank Financial Information System (FIS), the Bank set up an Interbank Funds Transfer Guarantee Special Account (Guarantee Account) under the CIFS as the basis to guarantee clearance of interbank payment transactions for each bank. In 2019, the daily average balance of the Guarantee Account was about NT$296.9 billion. The average daily transaction amount of the FIS using the funds of the Guarantee Account was about NT$650.8 billion (Chart 3.58).

Chart 3.57 The amount of funds transferred via the CIFS in the whole year



Sources: CBC and DGBAS.

Chart 3.58 Required reserves for inter-bank transaction settlement



Notes: 1. All data are based on daily average amount in 2019.
2. The balance of the CBC reserve account A includes the balance of the guarantee account.
3. The transaction amount of the CIFS includes financial institutions' funds transfers between the CBC reserve account A and the Guarantee Account.

Sources: CBC and FISC.

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[71] The settlement amount of the CIFS declined in 2019, mainly owing to the reduction in the amount of transactions in interbank call loans, FX and CBC CDs.

[72] Including remittance, ATM cash withdrawals, and fund transfer, etc.

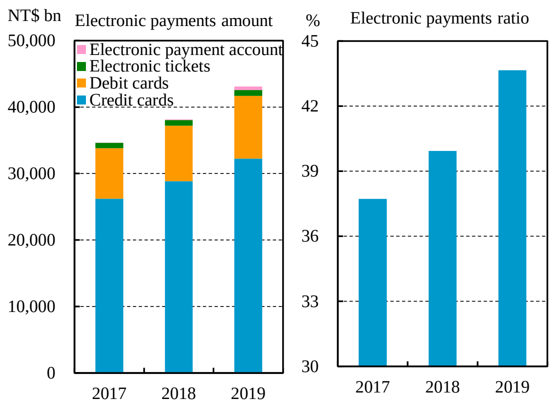
Overview of electronic retail payment transactions

In 2019, the electronic retail payment ratio continued to climb to 43.7%. Annual electronic payment amounted to approximately NT$4.3 trillion. Among the payment types, payment by credit card amounted to NT$3.2 trillion, accounting for the largest share. Electronic tickets and electronic payments account transactions amounted to NT$139.9 billion (Chart 3.59), representing a minor proportion of overall retail payments but a significant increase by 48% year on year.

In 2019, mobile payment was introduced to a wider variety of aspects of daily life. Merchants and people began to increasingly accept mobile payment, and the penetration rate exceeded 60%. Since 2017 Q4, the amount of mobile payment transactions has grown rapidly. It exceeded NT$110 billion in 2019 [73] and increased by approximately 120% year on year.

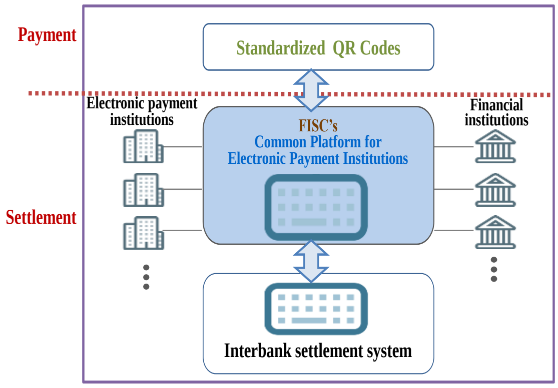
In 2017, the FISC joined hands with state-owned banks to promote standardized QR codes, an effort in line with the rising global trend of mobile payment. For long-term development, the Bank has urged the FISC to set up a "Common Platform for Electronic Payment Institutions" (Chart 3.60) based on the common QR code specifications so that banks and non-bank payment providers can connect across institutions, [74] further increasing the penetration of mobile payment. As of the end of 2019, the cumulative number of transactions conducted by scanning standardized QR codes was about 14.82 million, and the transaction amount totaled approximately NT$66.9 billion.

Chart 3.59 Overview of electronic retail payment transactions



Sources: CBC, FSC, FISC and DGBAS.

Chart 3.60 Common Platform for Electronic Payment Institutions



Source: FISC.

[73] The statistics cover 20 domestic banks. Mobile payments include the tap-to-pay payment and QR code-based payment of mobile credit cards, mobile debit cards and mobile banking.

[74] At present, the payment system provided by each electronic payment institutions and electronic ticket payment provider separately and respectively operate via its own closed system and cannot be used for inter-institutional transfer of funds. In order to be in line with the global trend, the government has planned to allow funds transfer among these institutions.

Impact of the rise of BigTechs on the payment market

The fact that in recent years, BigTechs have begun to enter the payment field could create a significant impact on the market and has thus attracted the attention of many countries (Box 2). For example, with the rise of blockchain technology, Facebook announced plans to use this technology to issue a stablecoin named Libra to provide global payment services. However, at present, there are still many challenges in the implementation of blockchain technology in practical applications,[75] whereas traditional centralized payment systems have long provided secure and efficient services. Only in the field of cross-border payment, where it involves multiple intermediaries and systems, may blockchain technology have room to develop and thrive.

3.3.2 The designation of domestic systemically important banks

To ensure sound development of the financial system and accord with international standards, the FSC established an assessment framework for D-SIBs in Taiwan based on “A framework for dealing with domestic systemically important banks” set out by the Basel Committee on Banking Supervision (BCBS) and the practices adopted by major economies. In December 2019, the FSC designated five D-SIBs,[76] including CTBC Bank, Cathay United Bank, Taipei Fubon Commercial Bank, Mega International Commercial Bank, and Taiwan Cooperative Bank, and required them to adhere to a set of enhanced supervisory measures. The requirements include: (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. Moreover, D-SIBs should actively proceed with the adjustment of their capital planning (Box 3). In response, the FSC also proposed four incentives with differentiated management for the D-SIBs,[77] so as to mitigate the impact of enhanced supervisory measures on their competitiveness.

[75] For example, it must meet some transaction requirements, such as security, speed or privacy, and also the anti-money laundering/countering the financing of terrorism (AML/CFT) regulatory requirements.

[76] The FSC excluded 100% government-owned banks from the assessment process.

[77] The four incentives include: (1) D-SIBs’ applications for investments in financial-related businesses would be automatically approved if the amount of investment was under NT$50 million and in compliance with related regulations; (2) the D-SIBs would have an advantage when applying to establish new domestic branches and would be given priority when applying to set up new branches in Mainland China or foreign jurisdictions; (3) when developing business activities through pilot programs according to the *Operation Directions Governing Banks’ Applications for Pilot Programs,* capital adequacy ratios may be an extra item for consideration and the approval may be fast tracked; and (4) D-SIBs would also be granted priority when applying to launch new businesses, and their application for extension of period would be automatically approved after a three-year trial period if no serious fault are committed by them.

3.3.3 Strengthening the supervision measures on life insurance companies

In order to ensure a balance among the principles of prudential insurance supervision, sound industrial development and protection of the rights and interests of policyholders, the FSC not only duly revised policy reserves interest rates for life insurance companies in accordance with market conditions, but also proposed the following measures on life insurance companies to better manage their usage of funds, adjust the structure and sales of products, reinforce the capital framework, while urging them to be successfully prepared for the IFRS 17.

Managing the usage of funds

In October 2019, the FSC stipulated that the NTD-denominated bond ETF holdings of insurance companies that invest in foreign markets should be included in their foreign asset exposures when calculating the capital charge for exchange rate risks, at a risk weight of 6.61%. In December, the FSC required that the ratings of underlying bond holdings of insurance companies' ETF investments should not be lower than 'BBB-'. In May 2020, in response to successive interest rate cuts by many central banks, the FSC issued new contract policy rates, to be applicable in the second half of 2020, for life insurance policies in various currencies so as to ensure the safe and sound operation of life insurance companies.

Adjusting the structure of products

In December 2019, the FSC revised the relevant regulations on life insurance products in order to return the purpose to protection against risks instead of parking savings, and to strengthen the product review process, credited interest rates, and post-sale management of insurance products, effective from July 1, 2020.

Correcting mis-selling sales practices induced by revenue chasing

In November 2019, the FSC, aiming to correct the insurance industry's improper sales practices induced by revenue chasing and to fulfill the principle of fair hospitality, revised the relevant regulations to ban improper solicitation behaviors of insurance companies including misleading policy holders to rescind or terminate contracts, or granting a loan or a policy loan to help pay premiums.

Reinforcing capital framework

In December 2019, with the aim of urging insurance companies to attach importance to capital structures, the FSC amended the relevant regulations, prescribing that insurance companies with an equity to asset ratio below 3% or 2% shall be ordered to put forward a plan for capital injection or for financial or business improvement within the specified period of time, effective from April 1, 2020.

Urging insurers gear up for the IFRS 17

The FSC amended the relevant regulation to urge life insurance companies to establish a stabilization mechanism for credited interest rates. In addition, the amendment sets out a list of items that insurers should examine and evaluate at their monthly credited interest rate meetings, and requires them to set aside a provision for special capital reserves when they have distributable earnings in segregated accounts. The amendment was put into effect on July 1, 2020.

3.3.4 Taiwan achieved the best result of the AML evaluation

Taiwan is a founding member of the APG and actively implemented corresponding measures in response to the third-round of APG mutual evaluation in 2018.[78] Those measures included establishing a dedicated "Anti-Money Laundering Office" under the Executive Yuan, amending nearly one hundred pieces of regulations governing AML/CFT, and strengthening financial supervision and illegal cash flow tracking.

In addition to completing four large-scale national risk assessment procedure meetings through close cooperation between the public and private sectors, concerned agencies and/or institutions examined and assessed the risk of AML/CFT and conducted a simulation evaluation. The APG Evaluation Team has been coming to Taiwan since August 2018 to hold preparatory meetings for mutual evaluation, as well as meetings for on-site evaluations and face-to-face communication.

In June 2019, the APG released a draft of its final report, stating that Taiwan reached the best "regular follow-up"[79] category. The final report passed the review by the global network and was published on October 2, 2019, assigning Taiwan the top-tier ranking for member jurisdictions in the Asia-Pacific region. The result showed that the efforts of the government

[78] Taiwan previously underwent the first two rounds of APG mutual evaluation in 2001 and 2007, respectively.
[79] See Note 16.

and the private sectors to collaboratively promote the work of AML/CFT were internationally recognized.

3.3.5 Establishing the Regulations Governing the Financial Investment, Management, and Utilization of Repatriated Offshore Funds

To attract offshore funds towards domestic financial markets and industries, boost economic development, and increase employment, the Executive Yuan approved the *Management, Utilization, and Taxation of Repatriated Offshore Funds Act* on July 24, 2019, which entered into force from August 15 onwards. Pursuant to the *Act*, the MOF, the MOEA and the FSC established related regulation[80] on taxation operation and management and utilization of financial and industrial investment, so as to ensure that the repatriated funds would be used in investing in industries and financial markets rather than for other purposes, such as speculation in the real estate market.

Among those regulations, the FSC established the *Regulations Governing the Financial Investment, Management, and Utilization of Repatriated Offshore Funds*, which entered into force on August 15, 2019. The regulations governing the scope and method of management and utilization of the repatriated offshore funds used for financial investments are shown in Table 3.3. It is expected that some of these repatriated funds would be utilized through the wealth and asset management industry, which would in turn benefit the development of financial markets in Taiwan.

Table 3.3 Key Requirements of the *Regulations Governing the Financial Investment, Management, and Utilization of Repatriated Offshore Funds*

Items	Contents
Investment cap	• 25% of the amount of the funds repatriated by deposit to the segregated FX deposit account after withholding tax.
Manner of investment	• Funds withdrawn from the segregated FX deposit account must be deposited into a segregated trust account or segregated securities discretionary account to invest. • The segregated trust account shall be an individually managed and utilized money trust, which furthermore shall be a self-benefit trust.
Scope of investment	• Domestic securities: Government bonds, and publicly offered and issued corporate bonds, financial bonds, international bonds, stock of TWSE-listed and OTC-listed

[80] Those regulations included the *Regulations Governing the Management, Utilization, and Taxation of Repatriated Offshore Funds*, the *Regulations on Industries Investment from Repatriated Offshore Funds*, and the *Regulations Governing the Financial Investment, Management, and Utilization of Repatriated Offshore Funds*, which were established by the MOF, the MOEA, and the FSC, respectively.

	companies, investment trust funds (including ETFs), futures ETFs, and exchange-traded notes (ETNs). • Hedging derivatives: TWSE-listed and OTC-listed put warrants; futures or options transactions for hedging purposes. • Insurance products: Individuals can use the funds within the limit of 3% of the segregated FX deposit account after withholding tax to buy domestic insurance products for care and protection and/or for the elderly.
Upper limit of domestic securities investment	• The total amount of investment utilizing the funds in the stock of any single listed company may not exceed 10% of the total number of issued shares of that company (5% for investment made by means of a non-discretionary money trust). • The total amount of investment utilizing the funds in the stocks and corporate bonds of any single company may not exceed 20% of the total amount of investment utilizing the funds in domestic securities (10% for investment made by means of a non-discretionary money trust).
Prohibited items	• Engaging in securities margin transactions is prohibited. • Lending or borrowing securities is prohibited. • Investing in any leveraged or inverse ETF or ETN is prohibited. • Pledging objects of the investment or providing them as security is prohibited, nor may policy loans be made on domestic insurance products.
Funds withdrawal	• Counting from the day that the funds are deposited in the segregated FX deposit account, one-third of the funds may be withdrawn after five full years, a further one-third may be withdrawn after six full years, and all may be withdrawn after seven full years.

Source: FSC.

3.3.6 FX regulation amendments

Relaxing FX regulations for banks

The Bank successively relaxed FX regulations for banks to promote development of the financial services industry in the context of financial globalization and liberalization. The regulation amendments in 2019 are as follows:

- The Bank revised the *Regulations Governing Foreign Exchange Business of Banking Enterprises* in February 2019, adding provisions relevant to the qualification criteria for internet-only banks to apply for approval to become authorized FX banks.

- In line with the amendments to the aforementioned regulations, the Bank revised related directions to expand business scopes and simplify application procedures for banks engaging in FX business with customers through electronic or communications equipment.

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.

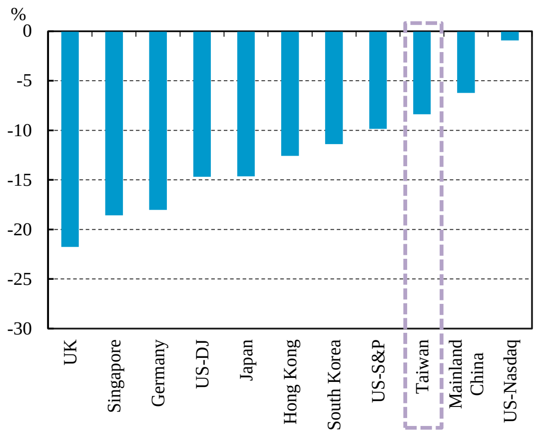
3.4 The impact of the COVID-19 pandemic on domestic financial systems

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