KPMG

Taiwan Banking Report

2021 Edition

home.kpmg/tw

About KPMG

KPMG operates as a global network of independent member firms offering audit, tax, and advisory services. KPMG member firms can be found in 146 countries. Collectively they employ more than 227,000 professionals across a range of disciplines. Member firms' clients look to KPMG for a consistent standard of quality services. Turning knowledge into value, KPMG works closely with clients, helping them to achieve goals and grasp opportunities in an ever-changing business environment.

KPMG in Taiwan has more than 120 certified public accountants and management consulting professionals and nearly 2,500 employees offering audit, tax, and advisory services in Taipei, Hsinchu, Taichung, Tainan, and Kaohsiung. It is currently one of the largest accounting firms in Taiwan.

KPMG in Taiwan has the following affiliates:

— KPMG in Taiwan
— KPMG Advisory Services Co., Ltd.
— KPMG Corporate Finance Co., Ltd.
— KPMG Sustainability Consulting Co., Ltd.
— KPMG Cybersecurity Co., Ltd.
— KPMG Deal Advisory Limited
— KPMG Pharmaceutical and Life Science Consulting Co., Ltd.
— KPMG IT Advisory Services Co., Ltd.

Winston Yu
Chairman
KPMG in Taiwan

KPMG in Taiwan is honored to release the 2021 Taiwan Banking Report, a third consecutive issue, in order to live up to KPMG's vision of being the Clear Choice for clients. In this report, KPMG in Taiwan will elaborate on several issues of influence and significance in 2020 that were selected based on our professionals' customer service experience and observations on domestic and foreign market trends, hoping to give readers insight into the development of Taiwan's banking industry from different perspectives.

Tim Tzang
CEO
KPMG in Taiwan

The world of 2020 was in uncharted waters as the COVID-19 pandemic took a heavy toll on the overall economic and industrial activity, which could be worse than the 2008 financial crisis. Countries around the world were hit hard by the pandemic, and Taiwan was no exception; nonetheless, economic activity in Taiwan continued as usual as the government took proper epidemic prevention measures and sent out relief money. In response to the government policy, domestic banks took on the responsibility to help keep businesses afloat, which encumbered their profitability and growth momentum, along with reduced consumer spending due to the border closure; however, the pandemic emerged as a catalyst for contactless business, pushing domestic banks to speed up the development of digital financial services.

Lin Wu
Deputy CEO
Head of Financial Services
KPMG in Taiwan

Among the domestic industries, the financial services industry has led in digital transformation and even made great strides last year. In 2020, domestic banks reported an increase in the number of digital accounts by more than 90% and in the amount of mobile payments by more than 100% from the previous year. This indicated that people were more willing to accept digital financial services, which would be conducive to the development of financial innovation and inclusion. The underlying difference between digital finance and traditional finance is that digital finance provides user-friendly services by combining emerging technologies with scenarios in life. Combining financial services with digital technologies is expected to help banks achieve breakthrough growth. With more applications of digital financial services being rolled out, ecosystem management should be included in the business strategies while cross-disciplinary talent and information security are key issues that require continuous attention on the part of the operation.

In the past year, both the government and the financial services industry attached more importance to issues such as ESG and green finance. The Financial Supervisory Commission (FSC) issued the "Green

Finance Action Plan 2.0" in 2020, aiming to shape a sustainable financial ecosystem through cooperation between the public sector and the private sector; more domestic banks also became the signatories of the Equator Principles (EP) to continuously push responsible lending forward. The operation of banks hinges on credit, and providing services in compliance with the regulations is one of the banks' priorities. Therefore, the competent authority places much importance on the implementation of supervisory measures in terms of money-laundering prevention, anti-corruption, and ethical corporate management, in order to shape the culture of integrity in banks.

Research institutions generally expect that the overall economy will experience an upturn in 2021. In addition to keeping abreast of international trends in and outlooks for digital finance, domestic banks should pay close attention to the slow withdrawal of the government's relief measures and the operational risks of corporation loan after the COVID-19 pandemic subsides. Next, we will explore the selected issues in detail. If you have any questions or comments on the content of each chapter, please feel free to contact us. Contact information is available at the end of this report.

Table of Contents

Overview of Taiwan's banking industry

As the COVID-19 pandemic imposed operational challenges, digital finance became the driving force for future growth

Lin Wu
Deputy CEO
Head of Financial Services
KPMG in Taiwan

The international economic environment is once again facing the huge impact of black swan event when the COVID-19 pandemic hit the world in the first quarter of 2020 after the 2008 financial crisis. Although the pandemic was not caused by financial transactions, its impact was worse than that of the financial crisis in terms of depth and breadth. While governments around the world made all-out efforts to bail out the affected enterprises and individuals, large pharmaceutical companies and biotech companies also poured money into the development of vaccines and treatments, all hoping to end this calamity as soon as possible in suitable ways.

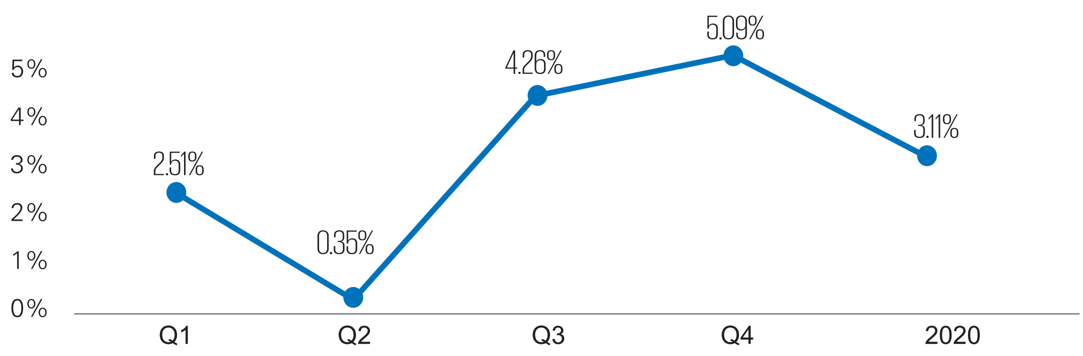
Countries around the world were hit hard by the pandemic, and Taiwan was no exception; nonetheless, industrial activity in Taiwan continued as usual mostly as the government, financial institutions, and the public worked as one to rein in the pandemic. With outstanding epidemic control, the overall economy was less affected. However, domestic banks face certain pressures on the part of the operation. Consumers avoided contact as much as possible during the epidemic control, which unexpectedly accelerated the financial institutions' progress towards digital transformation and furthered the penetration of digital financial services into people's lives.

Economic Activity at Home and Abroad

As the pandemic raged across the globe, many countries were forced to adopt strict social distancing measures and large-scale lockdowns, causing severe economic contractions in the second quarter of 2020; the second wave of the pandemic in winter culminated in negative economic growth in major countries around the world. China, where the pandemic broke out earlier, maintained positive economic growth in 2020 with the support of stable epidemic control and stimuli. According to the Organization for Economic Cooperation and Development (OECD), two mature economies, the United States and the Eurozone, reported negative growth of 3.5% and 6.8%, respectively, in 2020; two major economies in the emerging markets, China and India, performed rather differently, with China continuing to be the locomotive of the global economy with 2.3% growth and India suffering negative growth of more than 7% due to the pandemic.

With outstanding epidemic control, commercial economy in Taiwan was less affected. Together with the government's relief and stimuli, the domestic economy grew slightly from 2019 in the second quarter of 2020, where countries around the world were hit hardest in general. Taiwan saw positive economic growth throughout the year, which was a relatively strong performance among the Four Asian Tigers. According to the data released by the Directorate General of Budget, Accounting and Statistics, Executive Yuan, gross domestic product (GDP) in Taiwan grew positively from 2019 in the four quarters of 2020, resulting in a 3.11% increase for the whole 2020.

GDP by Quarter and throughout 2020



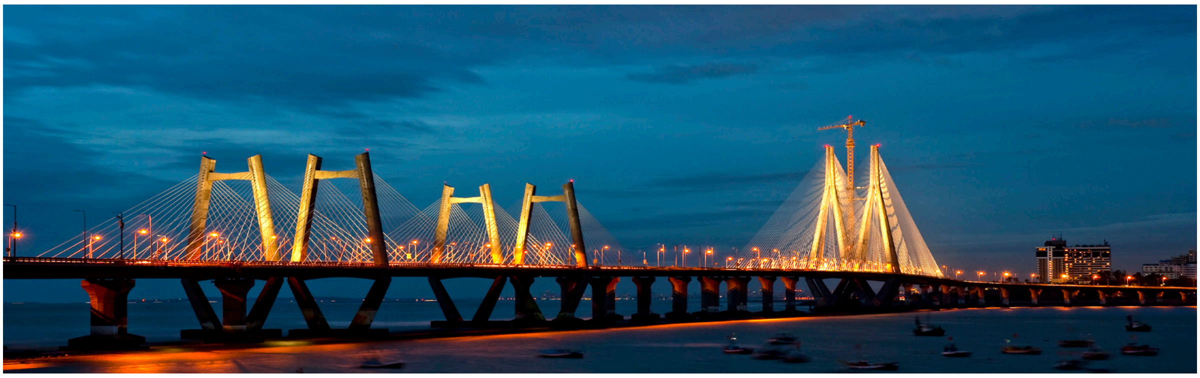
Source: Directorate General of Budget, Accounting and Statistics, Executive Yuan, February 2021

Operating Results of Taiwan's Banking Industry

Revenue

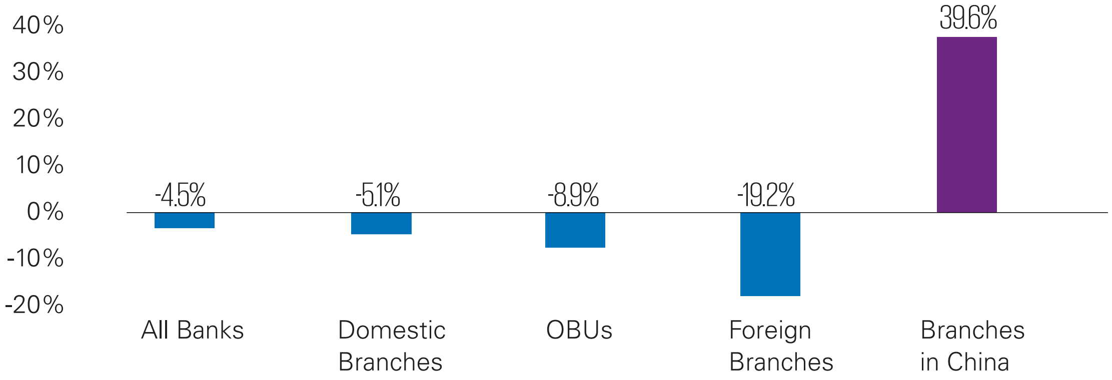
In response to the government's COVID-19 relief measures, financial institutions took responsibility to tide the affected businesses over by making bailout loans. In addition to the Central Bank of the Republic of China's interest rate cuts, people were less willing to spend money during the market upheaval, which caused a certain degree of negative impact on the operation of domestic banks. In general, the overall revenues of domestic banks in 2020 declined from the previous year. Although financial assets and liabilities at fair value, one of the main revenues, increased, interest and fees reported negative growth compared with that in 2019.

The revenues of domestic banks mainly came from interest, fees, and financial assets and liabilities at fair value. According to the data released by the FSC as of December 2020, the above three items accounted for 84.4% of the total revenues of domestic banks, a slight decrease from 85.6% in 2019. The overall revenues of domestic banks in 2020 dropped by 4.5% from 2019, of which interest declined the most by 16.3%, fees fell slightly by 1.5%, and financial assets and liabilities at fair value rose by 6.6%.



In terms of the revenue of each business unit, domestic branches, foreign branches, and offshore banking units (OBU) reported a decline in revenue in 2020 from the previous year. Foreign branches and OBUs shrank by 19.2% and 8.9%, respectively, compared with positive growth of 1.8% and 8.9% in 2019. This indicated that it was extremely difficult for domestic banks to expand business overseas amid the COVID-19 pandemic. However, the revenues of branches in China increased significantly by 39.6% in 2020, which was probably due to the government's rapid response to the pandemic.

Revenue Growth Rate of Domestic Banks in 2020 by Business Unit

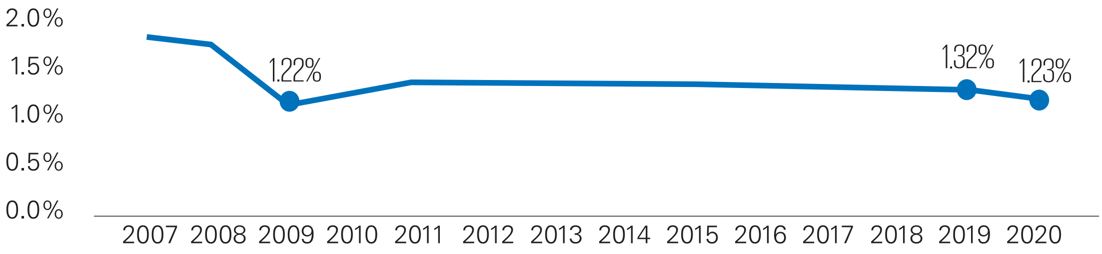


Source: FSC, as of December 2020

Profitability

Earnings before tax of domestic banks in 2019 reached NT$360.73 billion, an 8% increase and positive growth for three consecutive years. In 2020, however, earnings before tax totaled NT$312.68 billion, showing a 13.3% decrease from 2019 due to the COVID-19 pandemic. A slump in the interest rate spread should be one of the key factors in the banking industry's profitability. According to Central Bank of the Republic of China's statistics, the interest rate spread of domestic banks was reduced from 1.32% in 2019 to 1.23% in 2020. According to the FSC data as of the end of 2020, earnings before tax of foreign branches plummeted by 49.8% from the previous year as the pandemic slowed down global industrial and economic activity, putting the international business environment at risk. However, branches in China stood out, with their earnings before tax increasing by 30.8% from 2019.

Interest Rate Spread of Domestic Banks

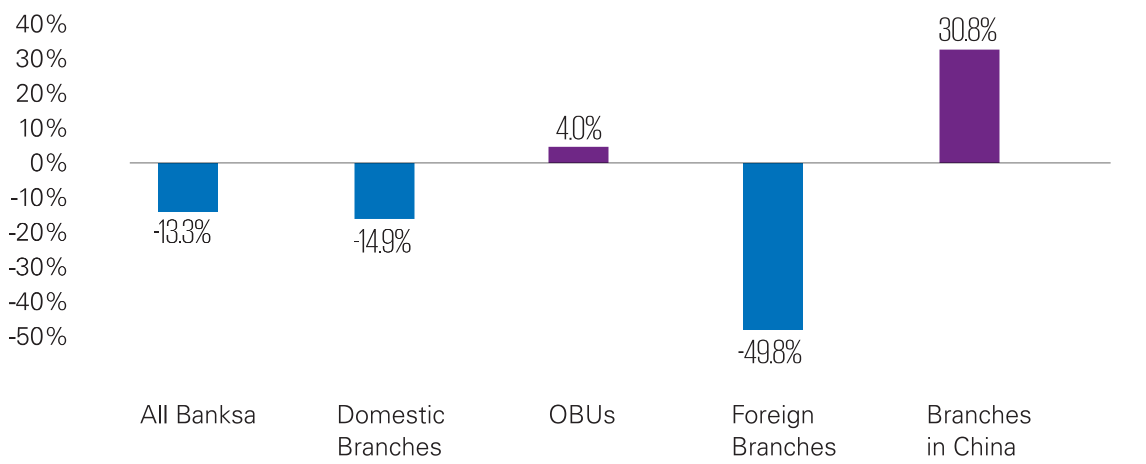


Source: Central Bank of the Republic of China, as of December 2020

In 2020, return on assets (ROA) and return on equity (ROE) declined from the previous year and were also lower than the average of the past ten years (2010~2019). As the profits of domestic banks shrank due to the pandemic, a negative impact on ROA and ROE was inevitable. According to the FSC data as of December 2020, ROA and ROE of domestic banks were 0.6% and 7.7%, respectively, which were lower than 0.7% and 9.4% in 2019 and the average of the past ten years (2010~2019), 0.7% and 9.8%.

In addition, the profits of domestic banks mainly came from those created by subsidiary banks of financial holding companies. In the past two years, subsidiary banks of financial holding companies accounted for more than 70% of total domestic banks in terms of income before tax. In 2020, the percentage rose slightly from 71.8% to 73% while banks other than subsidiary banks of financial holding companies accounted for 27% of total domestic banks, a slight decrease from 28.2%. Due to the ooverall profits decline of domestic banks, earnings before tax of financial holding companies' subsidiary banks and banks other than financial holding companies' subsidiary banks shrank by 11.9% and 17%, respectively, from 2019, showing a certain gap in the profitability of the two.

Earnings before Tax Growth Rate of Domestic Banks in 2020



Source: FSC, as of December 2020

Main Services of Taiwan's Banking Industry

Loan

The COVID-19 took a toll on every walk of life in 2020. Domestic financial institutions made all-out efforts to bail out enterprises and individuals in response to the government's relief policy, which was one of the key factors in the growth of loan balance in 2020 compared with 2019. Affected by the pandemic, Taiwanese businesses abroad became more willing to return and invest in Taiwan as the government actively rolled out programs to draw capital back to Taiwan. The influx of funds in the domestic market was one of the important reasons for banks to make more loans.

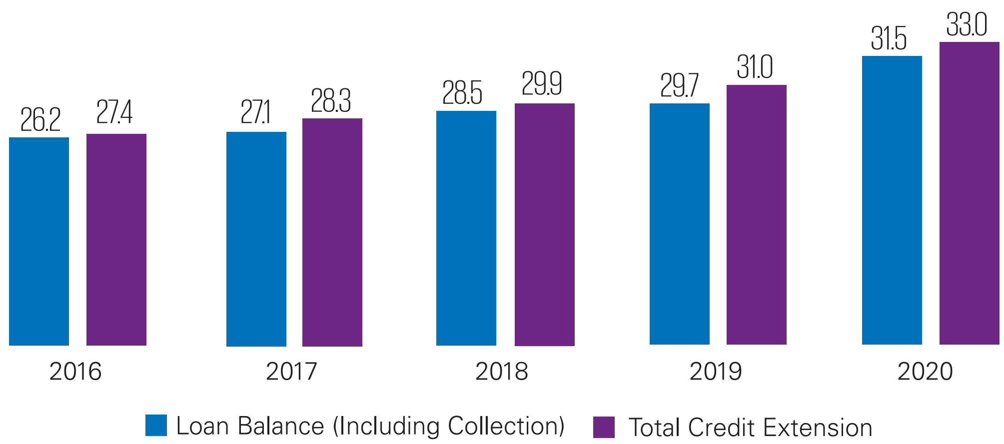
According to the FSC statistics as of December 2020, the loan balance and total credit extension of domestic banks increased by 6.0%

and 6.2%, respectively, from 2019. In terms of loan balance, medium- and long-term loans accounted for the highest (77.1%), a slight increase from 74.8% in 2019. As to borrowers, enterprises accounted for 36.5% of the total borrowers, followed by individuals at 30%. Of business loans, loans to small and medium-sized enterprises (SME) accounted for 68.1%, an increase of NT$914.49 billion in 2019. The increase was far higher than both the annual target of NT$300 billion set by the competent authority[1] and an increase of NT$459.93 in 2019.

In addition, the government launched a NT$1 trillion financing plan and relief measures to keep businesses afloat amid the pandemic, which significantly boosted the growth of SME loans made by the eight government-owned banks in terms of the number of SMEs and the amount of money. According to the statistics published by the Ministry of Finance on SME loans made by the eight government-owned banks as of December 2020, the number of SMEs reached 273,000[2], with the loan balance totaling NT4.7 trillion, a jump from 172,000 and NT$4.2 trillion, respectively, at the end of 2019[3].

Loan Balance and Total Credit Extension of Domestic Banks

(Unit: NTD trillion)



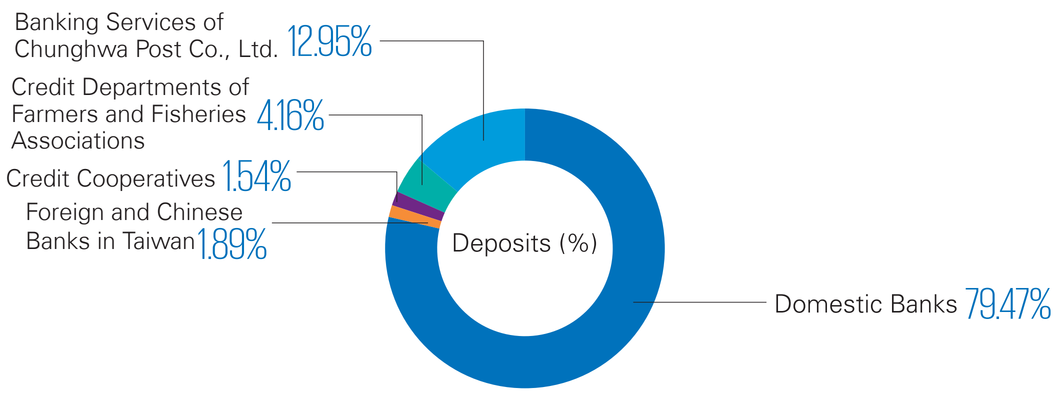
Source: FSC, as of December 2020

Deposit

According to the FSC statistics as of December 2020, the deposit balances of domestic financial institutions totaled NT$48.5 trillion, a 9.3% increase from NT$44.4 trillion as of December 2019. Among the financial institutions in Taiwan, domestic banks remained the most important depository institutions, accounting for 79.5% of the financial institutions in 2020 in terms of deposits, an increase from 78.7% in 2019; foreign and Chinese banks accounted for 1.9% of the financial institutions in 2020 in terms of deposits, an increase from 1.6% in 2019.

1 Refer to https://www.chinatimes.com/newspapers/20201118000218-260205?chdtv
2 Refer to https://www.chinatimes.com/newspapers/20210115000125-260202?chdtv
3 Refer to https://www.chinatimes.com/newspapers/20200116000305-260205?chdtv

Deposits of Domestic Financial Institutions by Percentage

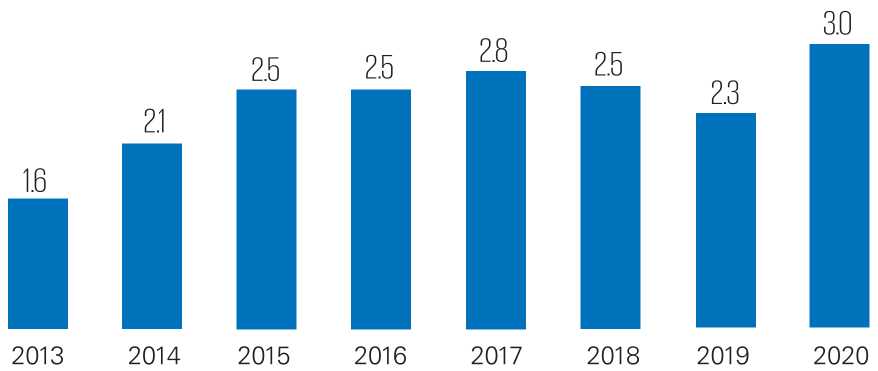


Source: FSC, as of December 2020

In terms of deposit accounts and types, the statistics published by the Central Bank of the Republic of China as of December 2020 showed that enterprises and individuals were the main accounts of deposits, accounting for 97.6%. Among the deposits held by enterprises and individuals, passbook deposits accounted for 46.8%, a significant increase from 43.7% in 2019, followed by time deposits at 34.2% in second place and foreign currency deposits at 17.9% in third place. According to the statistics published by the Directorate General of Budget, Accounting and Statistics, the amount of excess savings topped NT$2 trillion for seven consecutive years from 2014 to 2020 and even reached NT$3 trillion in 2020, a jump from NT$2.3 trillion at the end of 2019. Due to the COVID-19 pandemic, consumer spending was reduced, and it required strenuous effort to direct the influx of funds as a result of the government's programs to draw capital back to Taiwan, leading to an excess of idle funds domestically.

Excess Savings in Taiwan

(Unit: NTD trillion)



Source: Directorate General of Budget, Accounting and Statistics, Executive Yuan, as of December 2020

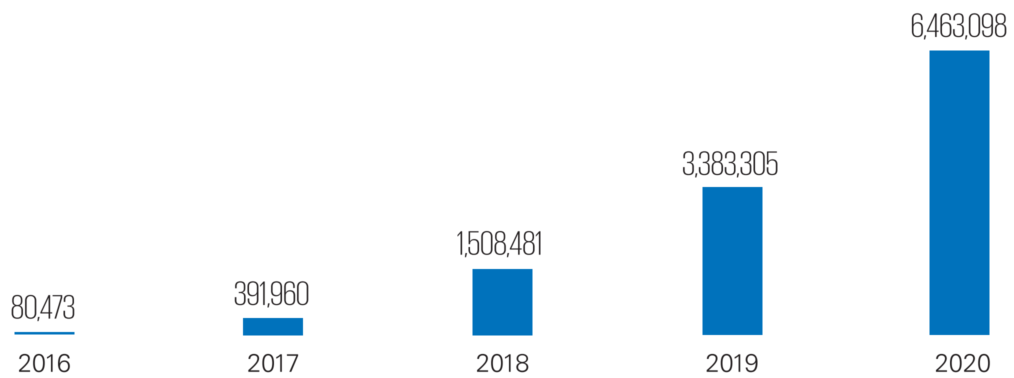
Digital Deposit Account

The COVID-19 pandemic greatly increased people's willingness to embrace digital financial services. It became an important driving force for the substantial growth of digital accounts in domestic banks. The FSC statistics showed that 17 domestic banks offered digital deposit accounts at the end of 2016, with a total of 80,000 accounts opened. In the course of digitalization, there were 30 domestic banks offering digital deposit accounts by the end of 2019 before the outbreak of the pandemic, with the total number of accounts opened reaching 3.383 million.

As the pandemic broke out in the first quarter of 2020, the government adopted strict social distancing measures, causing demand for contactless financial services to soar. By the end of 2020, the number of digital deposit accounts increased to 6.46 million, a 91% increase from the end of 2019, with a total of 35 banks offering digital deposit accounts. By the number of accounts opened in individual banks, 12 banks each opened more than 100,000 digital deposit accounts. Among them, the top five banks opened more than 450,000 digital deposit accounts, with Taishin International Bank being number one (2,360,000), followed by Cathay United Bank (960,000), Bank SinoPac Co., Ltd., O-Bank Co., Ltd., and First Commercial Bank in second to fifth place, in order.

Digital Deposit Accounts in Domestic Banks

(Unit: Number of accounts opened)



Source: FSC, as of December 2020

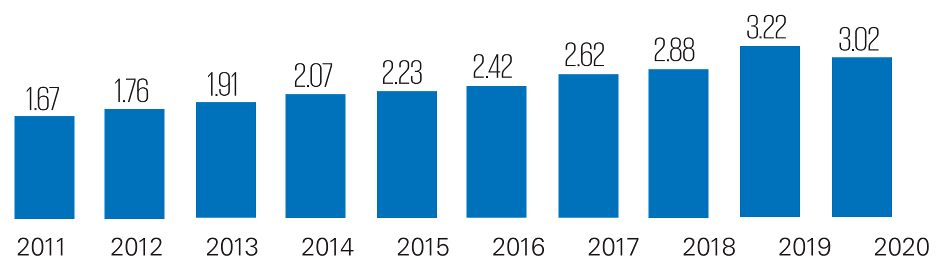
Credit Card

Credit cards are one of the important services offered by domestic banks. There are currently 33 credit card issuers in Taiwan, of which 31 are banks and two are credit card companies. According to the FSC statistics as of December 2020, 50,116,000 credit cards were issued and 33,004,000 credit cards were valid across Taiwan, showing an increase of 5.7% and 3.4%, respectively, from December 2019. Among them, 49,347,000 credit cards were issued by banks and 32,655,000 credit cards were valid, an increase of 5.8% and 3.7%, respectively, from December 2019. By the number of credit cards issued, CTBC Bank Co., Ltd. continued to rank first (7.28 million), followed by Cathay United Bank (7.11 million), E.Sun Commercial Bank, Ltd., Taishin International Bank, and Taipei Fubon Commercial Bank Co., Ltd. in second to fifth place, in order. By the number of valid credit cards, Cathay United Bank continued to rank first (5.13 million), followed by CTBC Bank Co., Ltd. (4.72 million), E.Sun Commercial Bank, Ltd., Taishin International Bank, and Taipei Fubon Commercial Bank Co., Ltd. in second to fifth place, in order.

Although the number of valid credit cards increased, the amount of credit card transactions was reduced as consumers were unable to travel abroad and spent less amid the pandemic, causing the credit card business of banks to pull in less revenue. The amount of credit card transactions reached NT$3 trillion in 2020 once again, a 6.3% decrease from 2019; domestic credit card transactions amounted to NT$2.8 trillion, down 2.3% from 2019, and the amount of foreign credit card transactions was only NT$179.31 billion, a heavy slump by 43.4% from 2019. The decline in the amount of credit card transactions caused credit card transaction fees, revolving interest, and cash advance fees to drop by 11.2%, 4.4%, and 11%, respectively, or a 9.3% decrease in total, from 2019.

Credit Card Transactions

(Unit: NTD trillion)



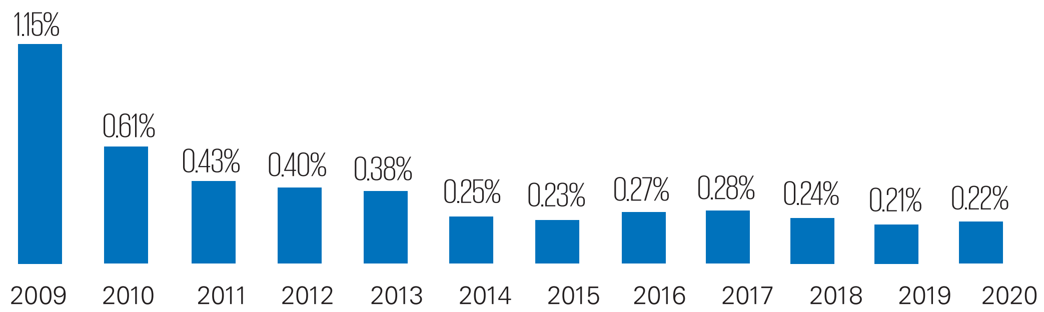
Source: FSC, as of December 2020

Asset Quality

In response to the pandemic, the government actively rolled out relief measures to keep businesses afloat. Professional institutions generally held that banks would support the affected businesses at the risk of experiencing increased loan default. However, statistics showed that domestic banks saw a slight increase in the non-performing loan ratio thanks to outstanding epidemic control.

According to the FSC statistics as of the end of 2020, the non-performing loan ratio of domestic banks was 0.22%, a 0.21% increase from 2019 and the second lowest in the past decade. In addition, late credit card payments only accounted for 0.15% of total credit card payments in 2020, which was lower than 0.21% at the end of 2019. With the government's outstanding epidemic control and financial institutions' cooperation, domestic banks managed to maintain good asset quality in a high-risk environment.

Non-performing Loan Ratio of Domestic Banks



Source: FSC, as of December 2020

Development of Green Finance

The financial authority in Taiwan, FSC, has been active in promoting matters in relation to environmental, social, and governance (ESG) trends. In 2017, the FSC put forward the "Green Finance Action Plan," which was approved by the Executive Yuan for implementation. With the outbreak of the COVID-19 pandemic, people became more aware of business sustainability and environmental protection. To respond to international trends in sustainable finance and to play the role in promoting the sustainable development of the financial system, the FSC released the "Green Finance Action Plan 2.0" in August 2020, hoping that the public sector and the private sector would join forces to shape a sustainable financial ecosystem.

According to the first sustainable finance survey of Taiwan Business Council for Sustainable Development[4], 90% of the financial institutions surveyed had integrated ESG and decision-making processes in the aspects of investment most (77.8%), followed by lending (33.3%). From the domestic banks' perspective, green finance or responsible lending correlates closely with their business operations. According to the "Important Measures and Achievements of Green Finance Action Plan 2.0 as of the end of

[4] Refer to https://www.gvm.com.tw/article/76815

2020, the balance of loans by domestic banks to the green energy technology industry was about NT$1.2 trillion, up NT$230 billion compared to that before the implementation of the incentive program in 2016. This showed that the results of the green finance action plan started to roll in.

In 2020, 26 Taiwanese enterprises were selected in the Dow Jones Sustainability World Index (DJSI) or DJSI Emerging Markets, compared with the figure (23) in 2019. A total of nine domestic financial institutions were selected, of which four fell into the banking industry, namely CTBC Financial Holding Co., Ltd., E.Sun Financial Holding Co., Ltd., First Financial Holding Co., Ltd., and Taishin Financial Holding Co., Ltd. Such international recognition is worthy of acclamation; however, only eight of the 37 domestic banks became the signatories of the EPs and integrated ESG into project financing as of the end of 2020. There is still a long road ahead of Taiwan's banking industry with respect to the development of green and sustainable finance.

Domestic Financial Institutions Committed to the EPs and Green Finance

Financial Institution	Commitments to the EPs, Green Finance (Lending/Investing), and Responsible Lending (Unit: NTD)
Cathay Financial Holdings Co., Ltd.	**Year of Cathay United Bank becoming a signatory of the EPs: 2015** **Achievements in green finance (lending/investing) and responsible lending in 2019:** - Amount of responsible investing/lending: NT$1.2 trillion; sum of green finance-related investing/ lending, investing in renewable energy companies, funding green transportation, and supporting products or services of environmental startups: NT$916 billion - Number of applications to be disclosed under the EPs (granted for loans under contract): 2 - Number of corporate loan applications closed: 9,043; number of ESG-related applications with reasons for undertaking or maintaining loans submitted: 320; one application rejected due to the person in charge's integrity issue; 3,148 applications under review; number of ESG-related applications with reasons for maintaining loans stated and under management: 88
E.Sun Financial Holding Co., Ltd.	**Year of E.Sun Commercial Bank, Ltd. becoming a signatory of the EPs: 2015** **Achievements in green finance (lending/investing) and responsible lending in 2019:** - Balance of renewable energy project finance: NT$6.881 billion, a 104% increase from 2018 - Amount of green bonds issued: NT$5.915 billion - Position of bond investment falling into the DJSI: US$4.6 billion, a 9.8% increase from 2018 - Position of equity investment falling into the DJSI: NT$2.8 billion, a 2.4% increase from 2018 - Balance of responsible lending in 2109: NT$42.99 billion - Ten project finance applications applying to the EPs approved and three applications rejected in 2019
Fubon Financial Holding Co., Ltd.	**Year of Taipei Fubon Commercial Bank Co., Ltd. becoming a signatory of the EPs: 2017** **Achievements in green finance (lending/investing) and responsible lending in 2019:** - Balance of green lending: NT$109 billion - Amount of green bond investment: NT$12.3 billion - Amount of green bonds issued: NT$1 billion - Amount of responsible lending: NT$1,338.2 billion
CTBC Financial Holding Co., Ltd.	**Year of CTBC Bank Co., Ltd. becoming a signatory of the EPs: 2019** **Achievements in green finance (lending/investing) and responsible lending in 2019:** - Amount of renewable energy finance: NT$86 billion - Cumulative amount of green and sustainable bonds underwritten: NT$8.52 billion

Domestic Financial Institutions Signing the EPs and Putting Green Finance into Practice (Continued)

Financial Institution	Commitments to the EPs, Green Finance (Lending/Investing), and Responsible Lending (Unit: NTD)
Taishin Financial Holding Co., Ltd.	**Year of Taishin International Bank becoming a signatory of the EPs: 2019** **Achievements in green finance (lending/investing) and responsible lending in 2019:** - Loan balance of green and environmental businesses: NT$90.31 billion - 49 loan applications reviewed under the PEs, with 18 approved, 23 approved conditionally, and 8 rejected; total amount of loans: NT$63.13 billion
SinoPac Financial Holdings Co., Ltd	**Year of Bank SinoPac Co., Ltd. becoming a signatory of the EPs: 2020** **Achievements in green finance (lending/investing) and responsible lending in 2019:** - Balance of green finance: NT$29.715 billion, a 51% increase from 2018 - Amount of green bonds issued: NT$3 billion - All loan applications reviewed with ESG risks taken into account; loan balance in 2019: NT$290.159 billion
Yuanta Financial Holding Co., Ltd.	**Year of Yuanta Commercial Bank becoming a signatory of the EPs: 2020** **Achievements in green finance (lending/investing) and responsible lending in 2019:** - Amount of loans to businesses in relation to the 5+2 Industrial Innovation Plan, sustainability, public transit, healthcare, and education: NT$165.39 billion - Amount of sustainable infrastructure loans: NT$6.748 billion - Amount of six green bonds underwritten: NT$7.236 billion - Amount of green bond investments, green warrants, ESG funds, and sustainability funds: NT$46 billion
First Financial Holding Co., Ltd.	**Year of First Commercial Bank becoming a signatory of the EPs: 2020** **Achievements in green finance (lending/investing) and responsible lending in 2019:** - Loan balance of green businesses: NT$68.137 billion - Amount of green consumer loans: NT$477 million - Amount of green bonds issued: NT$1 billion - Balance of green bond investments: NT$4.8 billion - 53,353 loan applications reviewed under the "Green Finance Review Guidelines" (domestic: 51,613, foreign: 1,740), accounting for 100% of corporate loans, with 48,698 applications approved (domestic: 47,305, foreign: 1,393)

Source: 2019 corporate social responsibility reports of financial holding companies

Taiwan Banking Industry's Outlook in the Post-pandemic Era

After hurdling the second COVID-19 wave in the winter of 2020, people are becoming more confident that the worst is over and hope for the best in 2021. Domestically, the financial services industry should focus on areas such as financial technology (fintech), field applications, digital financial services ecosystems, information security and supervision, and open banking while keeping abreast of the epidemic situation worldwide.

First, fintech investment is trending up. According to the FSC, the domestic financial services industry's investment in fintech totaled NT$16.52 billion in 2019, a 40.8% increase from NT$11.73 billion in 2018. The investment is estimated to further go up by 14.3% to NT$18.88 billion in 2020. The FSC also unveiled the "FinTech Development Roadmap" as the guidelines for promoting fintech development in the next three years. Following the government's clearer plan, industry players are expected to pour more money into fintech development.

Second, increasing field applications will be the focus of digital financial services. During the transit from face-to-face service to digital financial services, financial services providers should be geared to computers or mobile phone screens. The key point is to create user-friendly customer experience as face-to-face service. If there are not enough fields available for digital financial services, it will be difficult to create satisfactory customer experience and attract more users. Therefore, financial institutions should focus more on the development of field applications after several years of exploration and landing, making digital finance become increasingly ubiquitous within people's daily lives.

Third, financial institutions may invest more in shaping the ecosystem. In 2020, large financial institutions already started to establish and run digital financial services ecosystems. With the emergence of internet-only banks, financial service providers should lay more stress on the ecosystem apart from other key business strategies. In the highly competitive era of digital financial innovation, financial institutions should put aside the single-handed business model; instead, they should embrace cross-industry and virtual integration and find the right ecosystem models through cross-industry alliances in order to stand out above the rest.

Fourth, information security and supervision will be taken more seriously. The FSC released the "FinTech Development Roadmap" and the "Financial Cyber Security Action Plan" in August 2020, giving a clear direction for fintech development and also emphasizing the importance of cyber security and supervision. As digital finance becomes increasingly ubiquitous within people's daily lives, authorities and financial institutions should make more efforts to provide safe, user-friendly, and uninterrupted financial services.

Fifth, open banking is unstoppable. Open finance is becoming the norm, and open banking plays a crucial role in this trend. The government and industry players will work together to keep pushing open banking forward. In Taiwan, banks have entered the second stage of open banking. As consumers are gradually given the right to access open data, how financial institutions can make a breakthrough in open banking will hinge on their ability to strike a balance between financial innovations and personal information security.

Most research institutions expect the economy to rebound further from the previous year and remain robust in 2021. While internet-only banks have emerged in the domestic market, most financial service providers are expected to put a variety of digital financial services on the table in order to stay competitive and seize new business opportunities. Fueled by the pandemic, digital finance will continue to drive growth for the financial services industry.

According to the report of Fitch Ratings, an international credit rating agency, released in February 2021[5], Fitch Ratings expects Taiwan's economy to recover and grow in the next 12 months. The recovery is expected to improve the domestic banking industry's operations and ratings. At the beginning of 2021, Fitch Ratings also alerted the banking industry to the potential risks that the government's gradual withdrawal of support measures could bring to business operations and cautioned it to deal with related risks discreetly. While keeping abreast of the growth and industrial development amid the economic recovery, domestic banks should pay attention to the operational risks of borrowers that may arise from the government's withdrawal of support measures after the pandemic gradually subsides.

Research institutions generally expect the domestic economy to grow in 2021, and domestic banks have proved to be capable of maintaining good asset quality; however, with the gradual withdrawal of the government's support measures, the pace of recovery may vary from industry to industry, and some businesses are likely to experience higher operational risks. Therefore, banks should take heed of related credit default risks.

[5] https://www.fitchratings.com/research/banks/taiwan-improving-operating-environment-to-ease-pressure-on-bank-ratings-26-02-2021

Digital finance is becoming a new growth driver in the banking industry

Sean Chen
Sector Head of Banking
KPMG FRM Asia-Pacific regional leader
KPMG in Taiwan

The world economy wobbled in the past two years. Benefitting from order transfers amid the trade war and the government's policy to draw capital back to Taiwan, the domestic economy steadily gained momentum in 2019, with domestic banks profiting at record highs. The year also marked a new milestone in the development of digital finance as the competent authority issued three business licenses for internet-only banks and initiated the first stage of open banking. The COVID-19 pandemic, which broke out in the first quarter of 2020, ravaged the economy at home and abroad, taking a heavy toll on the industry as a whole.

Compared with the 2008 financial crisis, the pandemic seems to have a greater impact in the present day. Although financial transactions were not the cause of the pandemic, all industries were hit hard by the pandemic, including the banking industry. Due to the pandemic, however, industries around the world were in urgent need of keeping businesses afloat in a digital fashion, which in turn accelerated digital transformation. The banking industry also took this opportunity to roll out digital financial services. Digital finance will play a more important role in driving the future growth of banks.

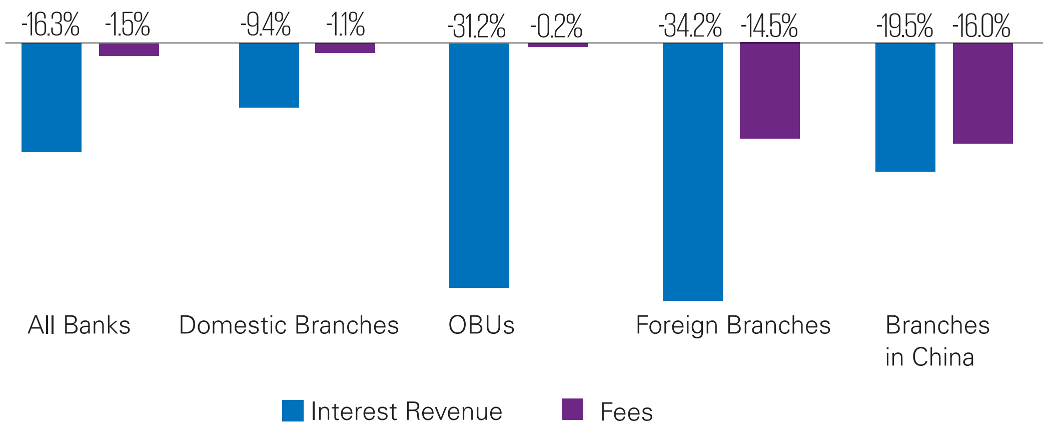
Domestic Banks Went through an Ordeal amid the Pandemic

In April 2020, Fitch Ratings expected in its report[1] that Taiwan's export-dependent economy would see a rise in credit losses caused by the COVID-19 pandemic and thus revised the sector and rating outlook for Taiwanese banks to negative from stable. On the part of the domestic economy and industry in 2020, however, business opportunities driven by the pandemic (e.g., emerging technologies and remote applications) contributed to the strong export performance and positive economic

[1] Fitch Ratings, Taiwanese Banks Outlook Turns Negative Due to Coronavirus, 2020/4

growth throughout the year, although profits of domestic banks were whittled down by the pandemic. In 2020, the profits of domestic banks were whittled down by negative growth of interest revenue and fees. According to the FSC statistics, the interest revenue and fees of domestic banks in 2020 dropped by 16.3% and 1.5%, respectively, from 2019, resulting in a year-on-year decrease of 13.3% in earnings before tax. Compared with the positive growth of interest revenue, fees, and earnings before tax in 2019 from the previous year, the pandemic did have a negative impact on the operation of domestic banks in 2020.

Annual Growth Rate of Interest Revenue and Fees of Domestic Banks in 2020



Source: FSC, as of December 2020

Digital Transformation Boosts the Economic Value of the Country and Industry

In the report released in January 2016[2], the World Economic Forum (WEF) estimated the industrial value brought by emerging digital technologies (e.g., artificial intelligence, Internet of Things, and big data analytics) to be more than US$10 trillion by 2025. Industrial changes brought about by emerging technologies have become more visible in the past few years. Enterprises are increasingly keen on tech startups that use technologies to change the existing business models and create higher values. From 2016 to 2019, global investments in related tech startups topped US$100 billion each year[3].

In the WEF report issued in February 2019[4], by 2022, 60% of global GDP will be digitized. Yet today, only 45% of people trust that technology will improve their lives. From a regional and national perspective, there may be an opportunity to promote industrial upgrading and increase economic value through digital

[2] World Economic Forum, Digital Transformation of Industries, 2016/1
[3] KPMG, Venture Pulse Q1 2020, 2020/4
[4] World Economic Forum, Our Shared Digital-Responsible Digital Transformation-Board Briefing, 2019/2

transformation. Based on the observations on the ten countries in Central and Eastern Europe, McKinsey & Company held in 2018 that digital transformation will bring an additional 1% increase in GDP per year in Central and Eastern Europe by 2025[5].

IDC study commissioned by Microsoft in 2018[6] predicts that the pace of digital transformation in Asia Pacific will be accelerating and that approximately 60% of Asia Pacific's GDP will be derived from digital products or services by 2021. Digital transformation will add an estimated US$15 billion to Taiwan's GDP per year. Southeast Asia, which is considered to have potential for economic development in Asia Pacific, has seen amazing growth in the scale of digital economy. According to research conducted by Google, Temasek, and Bain & Company[7], the scale of Southeast Asia's digital economy exceeded US$100 billion in 2019 and is expected to grow even faster to US$300 billion by 2025. The amount of digital payment is estimated to be US$1 trillion or more by 2025; that is, half the amount of money is spent through digital payment.

Domestic Banks Seize Opportunities for Business Growth

The COVID-19 pandemic has accelerated the pace of digital transformation in industries around the world, including the banking industry, and digital finance is one of the projects that have boomed after the pandemic. Due to the China-U.S. trade war, the Anti-Extradition Law Amendment Bill (Anti-ELAB) movement in Hong Kong, and the pandemic, Taiwanese businesses have been more inclined to return and invest in Taiwan in recent years., calling the competent authority's attention to executive wealth management. In May 2020, the FSC proposed four financial goals, among which promoting financial innovation and implementing financial inclusion correlate closely with digital finance. This shows that a combination of finance and technology has become one of the main policies for the development of the financial services industry. In addition, turning Taiwan into a center of fund management for Asian enterprises and wealth management for high-asset customers was also one of the competent authority's main policies in 2020.

According to Taiwan Ratings' report in July 2020[8], the banking industry is currently protected by domestic regulations from fintech disruption, but the lack of innovation will eventually leave banks uncompetitive. However, social distancing measures taken amid the pandemic are speeding up digital transformation of Taiwan's banking industry. As of today, the results of digital financial services and mobile payments have gradually rolled in. According to Caijing Magazine's survey[9], "digital accounts" and "mobile payments" are the two most popular digital financial services rated by consumers.

In terms of executive wealth management, the Global Wealth Report, published by Credit Suisse in 2019, estimates the number of high-asset customers in Taiwan at 411,700 by the

5 McKinsey&Company, The Rise of Digital Challengers, 2018/11
6 Refer to https://news.microsoft.com/zh-tw/2021-digital-transformation-gdp/
7 Google, Temasek, Bain&Company, e-Conomy SEA 2019, 2019/10
8 Refer to https://udn.com/news/story/7239/4746538
9 Refer to https://www.wealth.com.tw/home/articles/27903

definition of the FSC; the figure is expected to reach 760,000 by 2024 at an annual growth rate of 9%. Assets under management totaled NT$25.85 trillion in 2019, which are expected to grow rapidly at an average annual rate of 13%. Such data indicate more business opportunities brought about by emerging affluents in Taiwan.

Digital Finance Will Be the Focus of the Banking Industry

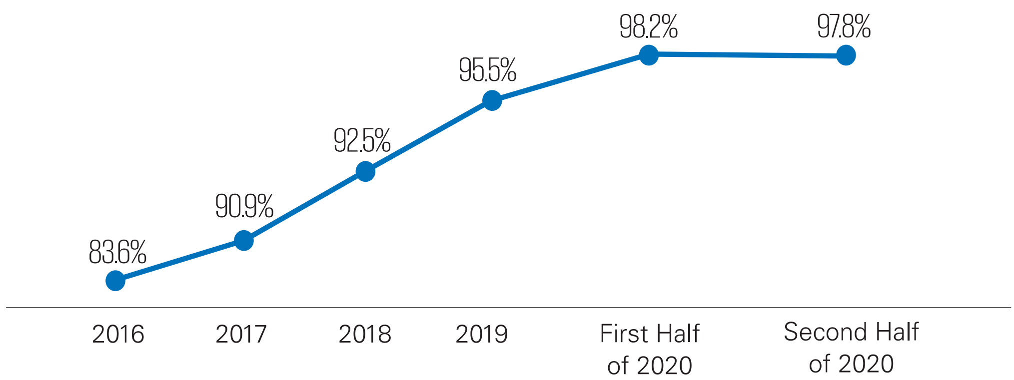
According to the FSC statistics as of the end of December 2020, the number of digital deposit accounts in banks reached 6.46 million, a 91% increase from the end of 2019, showing people's inclination to accept digital financial services. In terms of mobile payment, the amount of transactions in 2019 increased by 282% from 2018 to NT$182.4 billion; the figure further increased to NT$420 billion in 2020, more than a double increase from 2019[10]. According to the Institute for Information Industry's survey[11], about 98% of people caught on to mobile payment in 2020, a significant increase from 83.6% in 2016 and above 90% since 2017. Among the mobile payment users, more than 77% of them bound to credit cards, indicating that more and more people were aware of mobile payment and inclined to use credit cards as the main payment method. It was conducive to the banks' digital financial services.

In Taiwan, internet-only banks have carried on business in the first quarter of 2021. Competition between traditional banks and internet-only banks will intensify when three internet-only banks officially provide digital financial services in the market. Elements such as trust, availability, and innovation will be fundamental to the banking industry in terms of digital financial services. In order to use digital devices and create the same, trustworthy financial services as face-to-face experience, internet-only banks and traditional banks have to constantly think about how to evolve and draw up and effect the right strategies in the process of digital transformation.

The government's open data platform, MyData, started trial operation in July 2020. Seven domestic banks took the lead to join, and other banks followed. At the end of 2020, Taiwan Depository and Clearing Corporation (TDCC) led the second stage of open banking. As open data may gradually become mainstream, domestic banks should invest more in fintech applications such as artificial intelligence, big data analytics, blockchain, biometrics, and information security. Other than technological advancements, field applications that can improve customer experience may play an even crucial role in creating business opportunities for banks. Therefore, financial innovation and ecosystems should be one of the banks' key business strategies in the digital era.

[10] Refer to https://www.chinatimes.com/newspapers/20210313000189-260205?chdtv
[11] Institute for Information Industry, Mobile Payment 2500 Survey – Second Half of 2020, November 2020

People's Awareness of Mobile Payment in Taiwan by Percentage



Source: Institute for Information Industry, November 2020

Digital financial services in progress — ecosystem

Wayne Lai
Head of Digital
Partner
KPMG in Taiwan

Among all industries, the financial services industry was already in the forefront of digital transformation before the pandemic. The pandemic enabled the financial services industry to step up the pace of digitalization. With innovative technologies, financial services will become increasingly ubiquitous within people's daily lives. User-friendly and safe financial services are as accessible to consumers as utilities or shopping. To achieve this goal step by step, first, financial institutions have to team up with like-minded corporate partners in every walk of life so that financial services can be accessible in people's daily lives. Enterprises use open application programming interfaces (Open API) Open API to provide consumers end-to-end services in their daily lives, thus shaping a financial ecosystem with various new service models.

For Taiwan's banking industry, shaping an ecosystem should be a key strategy for the future development of digital finance.Many research reports have pointed out that there is an oversupply and fierce competition in the domestic banking industry. Taking ATMs for example, domestic banks provide customers ATM services in an extremely high density and competitive market. According to the FSC data, more than 30,000 ATMs are currently installed across Taiwan, which is equivalent to about 160 ATMs per 100,000 adults. The figure is significantly higher than the global average of about 50 ATMs per 100,000 adults. If banks want to stand out in competition and reach more customers in the digital era, creating an ecosystem is a key business strategy they should adopt.

Internet-only Banks Put Pressure on the Operation of Traditional Banks

Slightly different from the business model of traditional banks, internet-only banks' operation focuses on financial services in people's daily lives and financial scenes, which will pressure traditional banks into developing ecosystems. According to the observations on international markets, many internet-only banks are not formed by pure financial service providers. Most of them operate across fields and industries such as telecommunications, instant messaging, online e-commerce, large-scale technology companies with financial institutions. For example, the first two internet-only banks in South Korea, K Bank and Kakao Bank, were established by KT Corporation (KT), Kakao, an instant messaging company, and asset management companies. Japan Net Bank (JNB), Japan's first internet-only bank, was founded by telecommunications companies, NTT East and NTT Docomo, Tokyo Electric Power Company, and banks and insurance companies. Rakuten Group, Japan's large e-commerce group, also established its internet-only bank, Rakuten Bank, which is now operating successfully in Japan.

Domestically, the three internet-only banks have shareholders across fields and industries. Next Bank is formed by companies in industries such as telecommunications, banking, insurance, retail chain, and security; LINE Bank is established by companies in fields such as instant messaging, banking, and telecommunications; Rakuten Bank is mainly founded by banks and financial holding companies. For entrepreneurs tapping into the banking industry, they may have a very different business philosophy from that of traditional bankers. Since internet-only banks do not have the physical channels of traditional banks, they mainly develop their business through virtual channels such as the Internet. They compete with traditional banks by connecting financial services and consumer spending with innovative technologies; therefore, creating an ecosystem becomes a key method for them to stand out in the competition. In a highly saturated market, the emergence of internet-only banks will pressure traditional banks into taking positive action to introduce digitalization. Creating and operating an ecosystem may become the key to success in the era of digital financial innovation.

Financial Ecosystems of the Banking Industry

According to the current international developments and the views of the financial services industry, there are three types of ecosystems established by banks and companies other than banks: "Banking-as-a-Service (BaaS)," "Banking-as-a-Platform (BaaP)," and "Open Banking"[1].

In the BaaS model, banks provide financial products or services by connecting with businesses through Open API; that is, in the same structure of the financial services industry, banks transform themselves into services for everyday use. In the BaaP model, which is the opposite of BaaS, banks transform themselves into a market platform that provides various transactions in life. In the platform, banks not only provide their financial services, but help

[1] CommonWealth Magazine, The Financial Ecosystem Is Coming!Banks and Online Merchants Forge Alliances to Make House and Flight Ticket Purchases Possible, June 2020
[2] Refer to https://www.antgroup.com/about/history
[3] Refer to https://news.cnyes.com/news/id/220113

businesses market their products through Open API, giving customers an opportunity to meet all their needs in one stop.

Last, the Open Banking model is the cooperation between banks and third-party service providers. Banks give the ownership of customer information back to customers and, with the customers' consent or according to law, provide the information through Open API for third-party service providers to tailor products or services to customer needs. Both BaaS and Baap are currently adopted by domestic banks. With the government's support, banks have also entered the second stage of open banking: consumer information inquiry.

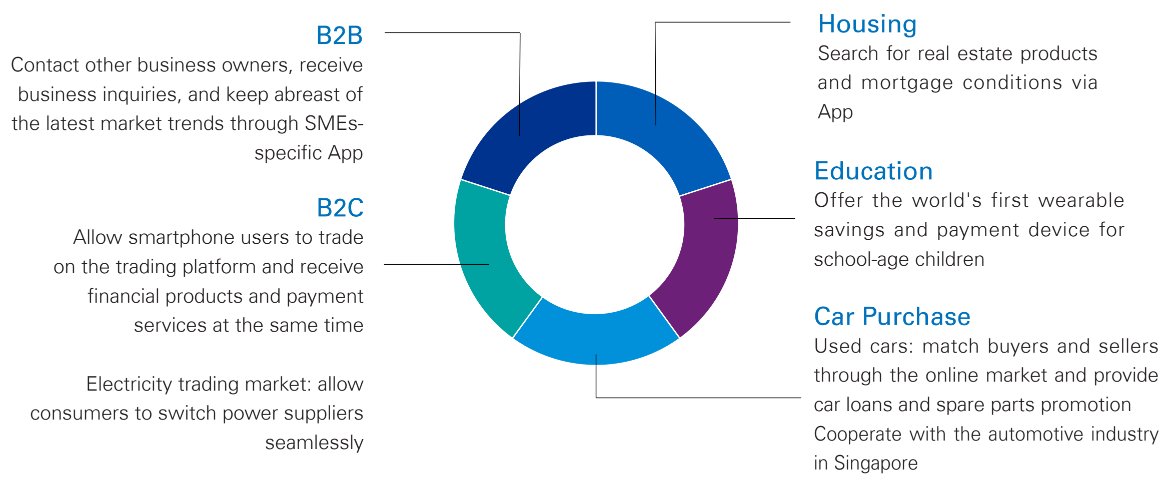
The world's largest fintech unicorn, Ant Group, provides a good example of the BaaS model. Alipay, which was spun off by Taobao in 2004, has boomed Ant Group. After its establishment, Alipay started to become a payment partner for Alibaba-related online merchants and other overseas e-commerce websites. In 2008, it launched payment services for public utilities such as water, electricity, coal, and communications. After smartphones became widely used, Alipay has been cooperating with banks on fast payment for student loans and credit card transactions since 2010; in 2013, it launched Yu'ebao, allowing users to purchase monetary funds from fund companies online[2]. Alipay cooperated with McDonald's in Shanghai in 2015 and later took the cooperation further in locations throughout China[3].

Established in 2014, Ant Financial Services Company Limited owns Alipay, Yu'ebao, and MyBank, an internet-only bank. It has gradually evolved into a multi-functional financial service platform offering payment, wealth management, insurance, consumer lending, and more. In course of its development, Alipay cooperates with different types of third-party service providers such as online merchants, banks, fund companies, and McDonald's by integrating its financial products or services into the partners' premises. Such a digital financial services ecosystem is a good inspiration to banks.

DBS Bank (DBS), one of the largest banks in Southeast Asia, has actively taken action to promote digital finance in recent years. Based on the BaaP model, its financial ecosystem has successfully connected to several businesses, setting an excellent example to other banks. Studies show that DBS, which has been active in promoting digital finance in the past few years, has taken advantage of its large customer base and close connections with enterprises to successfully run the financial digital services ecosystems in aspects of housing, car purchase, education, business-to-consumer (B2C), and business-to-business SME (B2B). In terms of housing, for example, DBS has formed alliances with large real estate brokers to develop an App concerning the purchase and sale of houses and mortgage valuations, allowing customers to search for real estate products in the App and evaluate mortgage conditions immediately.

[2] Refer to https://www.antgroup.com/about/history
[3] Refer to https://news.cnyes.com/news/id/220113

DBS Bank Ecosystems



Source: McKinsey & Company, April 2019

Domestic Banks Are Actively Shaping the Ecosystems

Financial institutions have explored applications such as fintech and digital transformation in recent years. As the pandemic accelerated the development of digital finance in 2020, one by one domestic banks launched financial ecosystems that fitted their business strategies. Among the domestic banks, the financial ecosystems of Cathay Financial Holdings Co., Ltd. and Taishin International Bank were quite attention-getting.

(I) Implementation of BaaS and BaaP

In July 2020, Cathay Financial Holdings Co., Ltd. unveiled the financial services ecosystem built on the BaaS model, with the main field applications ranging over transportation, tourism, e-commerce, insurance, telecommunications, everyday use, and finance. The ecosystem operates based on digital data and technology and creates new business models in cooperation with partners in various fields. In 2016, Cathay Financial Holdings Co., Ltd. established the Digital Data and Technology Center (DDTC) to build big data infrastructure and acquire the mastery of data analytics. Based on the data-as-a-service structure, DDTC connects various financial scenes to establish a unique data ecosystem.

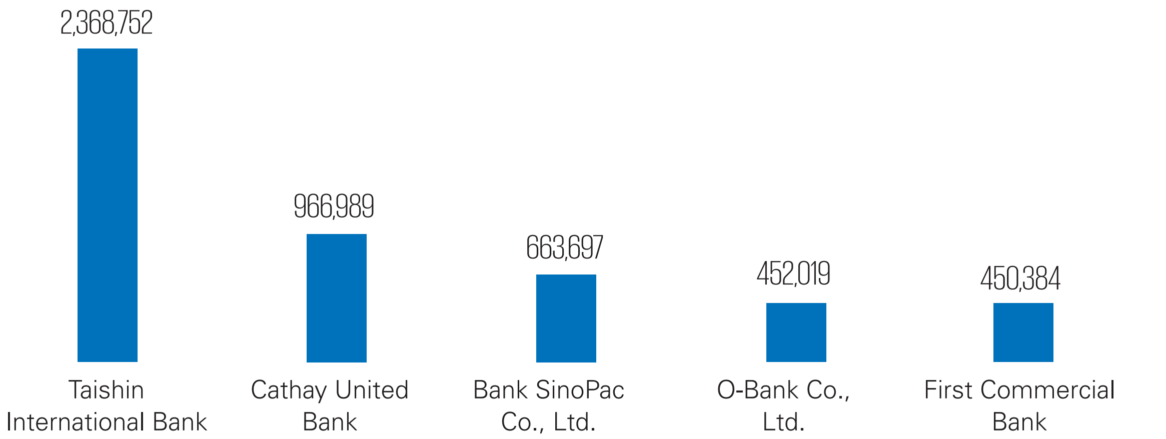
After several years of developments in big data infrastructure and digital data and technology, the results of the ecosystem have started to roll in. In mid-2019, Cathay Financial Holdings Co., Ltd. worked with Taiwan Star Telecom Corporation Limited to offer smartphone numbers and preferential loans. At the end of 2019, it launched the first insurance regulatory sandbox with Ez Travel Agency Co., Ltd. (Ez Travel), allowing consumers to purchase travel insurance via Ez Travel's website or App. At the beginning of 2020, Cathay Financial Holdings Co., Ltd. partnered with Shopee to loan to online merchants at appropriate credit lines and interest rates based on the credit evaluation supported by e-commerce data. In addition to the above seven scenes, Cathay Financial

Holdings Co., Ltd. continued exploring other fields such as healthcare, communities, and the Internet of Things (IoT), hoping to perfect the digital financial services ecosystem.

Taishin International Bank has done a great job in promoting digital finance. Its digital bank, Richart, currently has 2.36 million deposit accounts, ranking first among domestic banks (36.7%). In 2020, Taishin International Bank made a big step in the construction of the ecosystem. In August, it joined forces with 22 brands in other industries to launch "Richart Life," an App that shares information on payment, reward points, and discounts. Richart Life should fall into the BaaP model. Richart Life puts together business partners in industries close to people's lives, including department stores, retail, telecommunications, transportation, and online shopping, and links membership reward points through API, allowing users to check on their membership reward points in the App.

Top Five Banks in 2020 by Digital Deposit Accounts

(Unit: Number of accounts opened)



Source: FSC, as of December 2020

Reward points and payment are important tools for domestic banks to maintain customer loyalty. At present, no domestic financial institution is able to successfully exchange reward points between different merchants. Setting up a point swap mechanism is what Taishin International Bank plans to do next. For domestic banks, the loyalty economy closely tied in with credit cards is fundamental to their operations. Starting from negotiation, banks have to cooperate with many businesses, which is, in fact, an initial ecosystem model. In addition to expanding the methods for consumers to obtain reward points, banks also have to develop channels where consumers can spend the points. If reward points are redeemed across brands and platforms, they will be used in more financial scenes. Making customers get used to redeeming reward points on the same platform enables banks to have a better understanding of customer behavior, thus reaching more customers and business opportunities.

(II) Other Ecosystem Models

In addition to Cathay Financial Holdings Co., Ltd. and Taishin International Bank, CTBC

Bank Co., Ltd., E.Sun Commercial Bank, Ltd., and Far Eastern International Bank have done quite an impressive job in their ecosystems. CTBC Bank Co., Ltd. creates financial scenes in people's daily lives through virtual integration; with artificial intelligence and big data analytics, digital financial services are accessible to customers' premises such as CPC Pay in cooperation with CPC Corporation, LINE Pay, and "Lansan Piggy," a subscription-based consumption and wealth management service model.

The ecosystem of E. Sun Commercial Bank, Ltd. covers two aspects. Internally, E. Sun Commercial Bank, Ltd. has developed E-Fingo series of digital products, including digital accounts, credit, mortgage, foreign exchange, credit cards, and funds, and builds and maintains customer loyalty through a membership model, forming an internal digital ecosystem. Externally, E.Sun Commercial Bank, Ltd. has cooperated with PChome to launch a co-branded credit card, Pi App. In this "reward point ecosystem," cardholders can redeem reward points obtained from credit card transactions to pay for spending such as utilities, online shopping, and charity donations. In 2019, E.Sun Commercial Bank, Ltd. integrated digital lending into Pi App to combine finance with new retail scenes, creating more potential business opportunities for new financial services.

Far Eastern International Bank rolled out Bankee, a community bank, in 2018. BaaP allows customers to run their own communities through Bankee. Bankee has become one of the models of digital financial innovation in Taiwan's banking industry. At the end of 2020, Bankee cooperated with a technology company specializing in human resources management to establish an "HR Fintech ecosystem," which assists SMEs in digital transformation. The ecosystem can save SMEs time for account opening and payroll processing and also lists tens of thousands of business partners with special offers. Far Eastern Group, the parent company of Far Eastern International Bank, is an industrial holding company spanning over many industries. Therefore, Far Eastern International Bank is well-equipped to build ecosystems in potential fields like telecommunications, retail, and transportation.

"Taiwan Pay," a payment platform led by the eight government-owned banks, plays a crucial role in building the ecosystem with reward points. According to statistics[9], as of November 2020, more than 5.5 million debit cards and 730,000 credit card users in the eight government-owned banks were added to Taiwan Pay, a jump from 2.8 million debit cards and 390,000 credit cards at the end of 2019; the amount of transactions also increased from NT$26.9 billion in 2019 to over 45.7 billion in 2020. Under certain transaction amounts, the eight government-owned banks began to provide users reward points or credit card rewards for redemption with 160,000 business partners. The eight government-owned banks expected that Taiwan Pay would attract more users and business partners, thus creating a win-win situation between consumers, merchants, and banks.

[9] Refer to https://money.udn.com/money/story/5613/5147474

Partnership and Customer Experience Are Key Elements of Ecosystems

Brett King, a world-renowned financial observer and godfather of fintech,floated the idea, "Bank 4.0: Banking Everywhere, Never at a Bank." That digitalization promotes the establishment of a financial ecosystem should be a good fit for this idea in the real world.

With technologies leading digitalization, the evolution of smartphones has brought about tremendous changes in financial services. Mobile banking or mobile payment has gradually been accepted by consumers. As new technologies are constantly being rolled out, providing financial services digitally via the Internet has become mainstream globally. In the course of this trend, financial institutions should put aside the single-handed business model; instead, they should embrace cross-industry and virtual integration and find the right ecosystem models through cross-industry alliances.

In the course of digitalization, banks should take positive action to cooperate in the ecosystems. As new digital financial products constantly being rolled out, they will be accepted by more and more customers. Changes in customer behavior are expected to boom the ecosystems, thus creating more financial scenes. While operating an ecosystem or a digital environment, financial institutions should pay close attention to elements such as reliable partnership and customer experience. Maintaining a reliable relationship with business partners should be conducive to good customers experience; good customer experience is expected to improve customer loyalty, helping financial institutions build an ever-growing ecosystem.

Cross-disciplinary talent is the key to business operations in the rise of digital finance

Jeff Chen
Head of Audit
KPMG in Taiwan

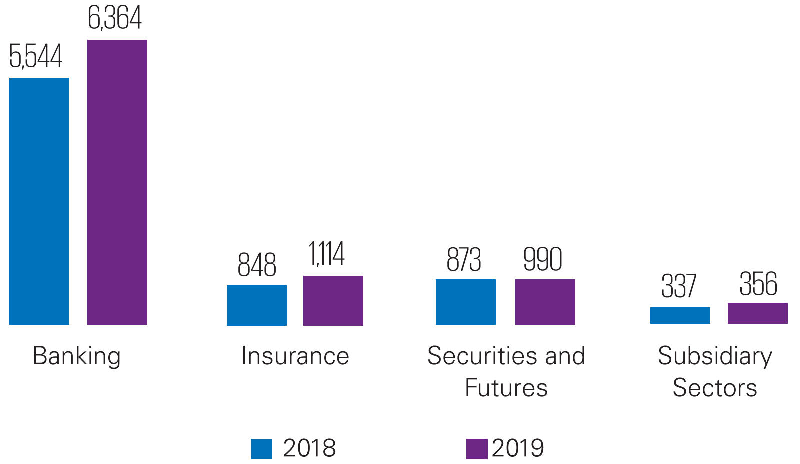
As Fintech is now the mainstream in the financial services industry, boundaries between industry sectors continue to blur. In the process of digital transformation, it is necessary for the human resources of traditional financial institutions to change their recruitment policies with the times. In the past, financial institutions mostly used technology to support or improve operational efficiency, which had no deep influence on business operations or management. As digital finance evolves at a good pace, customer experience in digital scenes has gradually become an important way for customers to choose financial service providers. Management in financial institutions is also undergoing transformations such as automation and human-machine collaboration. With technology, the business operations and mid- and back-end management of the financial services industry are now connected in depth. For financial institutions, talents with finance skills no longer hold a special attraction in the digital age; instead, those with cross-industry, cross-field capabilities will become the focus of training and recruitment.

Fintech Talents Are in Great Demand in the Banking Industry

According to the FSC statistics in August 2020, the domestic financial services industry's investment in fintech in 2019 totaled NT$16.52 billion, a 40.8% increase from NT$11.73 billion in 2018. The number of employees in charge of fintech in 2019 was 8,824, a 16.1% increase

from 7,602 in 2018. In the domestic financial services industry, banks invested most in fintech, with the total investment amounting to NT$11.89 billion in 2019, a 49.9% increase from the previous year. Meanwhile, the number of employees in the banking industry responsible for fintech business increased by 14.8% from 5,544 in 2018 to 6,364 in 2019. In the domestic financial services industry, banks play a leading role in the development of fintech in terms of investment and manpower.

The Number of Employees in Charge of Fintech in Domestic Danks

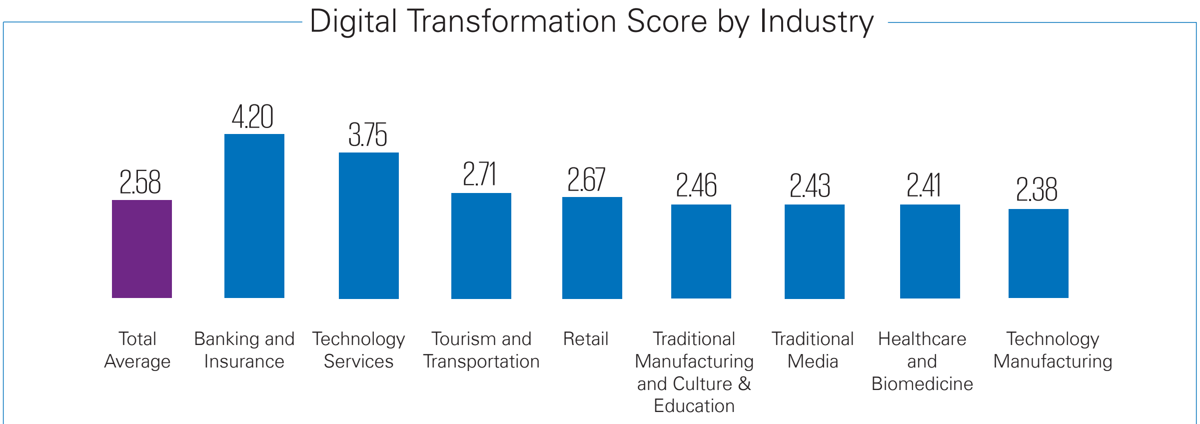


Source: FSC, August 2020

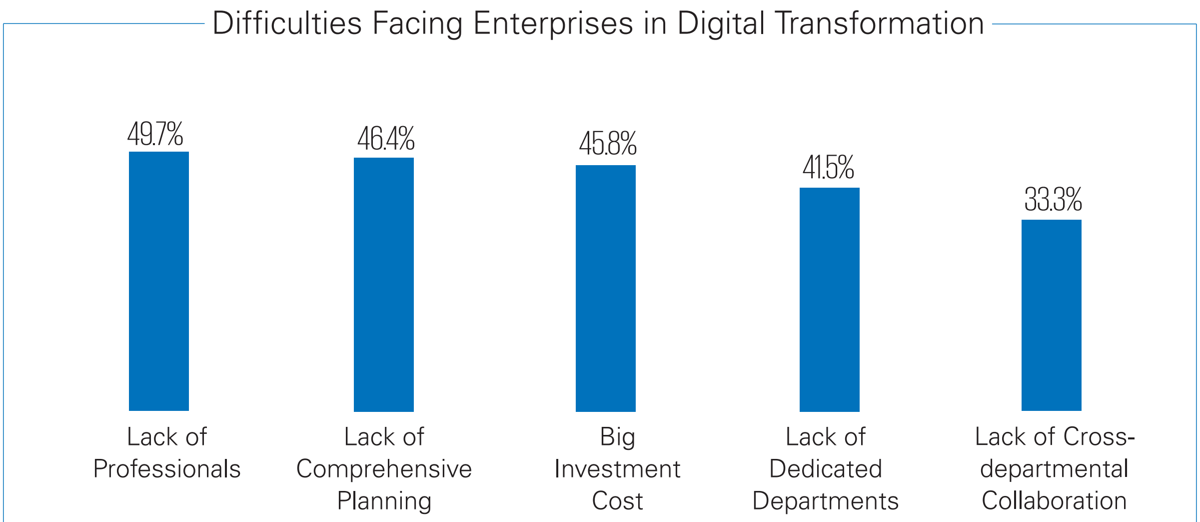
Digital Functions in the Financial Services Industry Are Mounting

The contactless economy has been driven faster by the COVID-19 pandemic, and digital finance is one of the most noticeable factors. According to the FSC data as of the end of 2020, the number of digital accounts in domestic banks reached 6.46 million, a significant increase of 91% from the end of 2019. The statistics of the domestic bank[1] aalso show that the pandemic drove 60% of the customers to start using digital financial services or use them more often. Apart from younger generations who preferred using financial services via the Internet, people were less willing to go to banks during the pandemic, prompting them to switch to digital financial services. According to the results of the 2019 Enterprise Digital Transformation Survey[2], 88.2% of the interviewed enterprises thought about digital transformation, and the financial services industry was ahead of other domestic industries, making great strides in digital transformation. The COVID-19 pandemic increased the consumers' demand for digital services and played a key role in fueling the development of digital finance. However, there are a lot of difficulties that businesses have to overcome in the process of transformation. The survey result indicates that lack of professionals is the main pain point for businesses, followed by lack of planning and big investment costs.

[1] Refer to https://udn.com/news/story/7239/4950212
[2] Refer to https://gvsrc.cwgv.com.tw/articles/index/14825



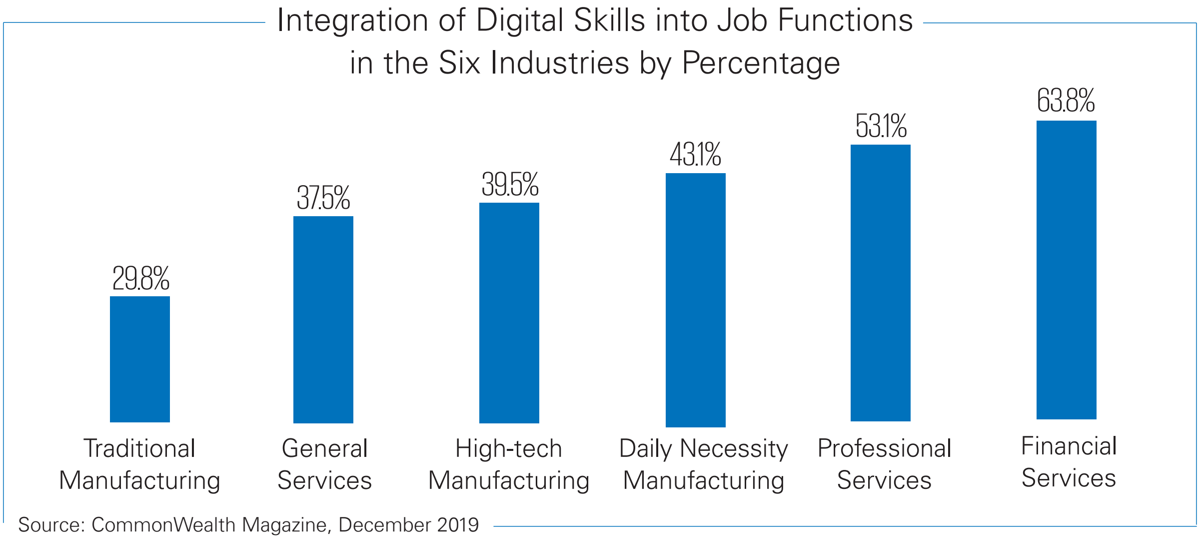
Source: Global Views Monthly, November 2019



Source: Global Views Monthly, November 2019

Industry trends drive changes in the demand for talents, and talent cultivation affects the future development of business operations. According to the talent survey of 2,000 domestic enterprises in 2019[3], more than 63% of the financial service providers interviewed had included digital skills in job requirements and 25% had implemented community management, digital marketing, and e-commerce in day-to-day business operations. The results of this survey show that the financial services industry is currently ahead of other industries in terms of digital transformation, which has resulted in a lot of digital skills related job openings.

[3] CommonWealth Magazine, Whitepaper on the Digital Transformation and Talent Survey of 2000 Enterprises 2019, December 2019



According to media surveys, financial institutions such as financial holding companies and government-owned and private banks have zeroed in on digital finance-related talents in their recruitment plans in recent years. With digital transformation taking a leap amid the pandemic, the recruitment plans of financial institutions are now centering on digital finance-related talents who are even in great demand this year. On the whole, financial service providers have made clearer recruitment plans for digital talents as fintech evolved in the past few years. Talents in big data analytics, community management, AI, information security, digital applications, and compliance are in great demand. Those who have the ability to work across different fields will be the key for financial institutions to optimize digital financial services and further increase operational efficiency.

Cross-industry Financial Talents Are the Key to Business Operations

According to estimates by an international management consulting company, 7% to 10% of tasks in the financial services workforce could be automated by 2025, while 43% to 48% could be augmented with technology[4]. In the past, the digitalization of traditional financial institutions mainly involved e-commerce and internet-based financial services, where most users were existing customers, and was more like providing value-added services. In contrast, digital finance is an independent channel where customers have access to financial innovations in addition to traditional financial services. The competition among financial institutions becomes intense with the emergence of online financial service providers. It will be a big challenge for traditional financial institutions to find suitable digital finance talents. As finance is increasingly tied in with technology, boundaries between industry sectors continue to blur, resulting in great demand for interdisciplinary talents. It is necessary for financial institutions to recruit talents with backgrounds in science, technology, information security, law, and risk management and having insight into financial innovations.

[4] Accenture, Workforce 2025: Financial Services skills and roles, 2019/12

The "Red Queen Effect" proposed by the American scholar, Stuart Kauffman, indicates that dynamic competition among businesses triggers a series of organizational learning and natural elimination, which further intensifies competition, and that organizations must constantly evolve and innovate to excel in an ever-changing environment. For the financial services industry, digital finance marks a new era in which traditional services must be reformed with technological innovations. Finding talents best-suited to fintech will be the key to success in business operations. For any company, talent cultivation is a very important part of the operation. Many domestic financial institutions have long been aware of this fact and have forged long-term collaboration with universities and colleges in recent years to foster fintech talents with high growth potential.

In addition to building a talent pool required to compete in the digital age, financial institutions should continue creating an innovation culture and organizing more training courses to enhance the skills of in-service employees. As fintech continues to evolve, most financial institutions have learned to think creatively. However, in order to stand out in the development of digital financial services, financial institutions have to embed the idea of innovation in the organizational culture, empowering all departments and employees to adapt to change in day-to-day business operations. While it is not easy to find cross-field talents, it is even harder to locate those who can well adapt to the cultures of different industries. Therefore, focusing on training existing employees is an opportunity for companies to unlock the employees' potential with digital skills; it may also help save the time and cost spent on manhunt and cultural integration and allow companies to maintain a diversified talent pool.

Cybersecurity is a prerequisite for the sound development of digital finance

Jason Hsieh
Deputy Head of Advisory
KPMG in Taiwan

In the post-pandemic financial development, information security and supervision will be taken more seriously in 2021. The FSC released the "FinTech Development Roadmap" and the "Financial Cyber Security Action Plan" in August 2020, giving a clear direction for fintech development and also emphasizing the importance of cyber security and supervision. As digital finance becomes increasingly ubiquitous within people's daily lives, authorities and financial institutions should make more efforts to provide safe, user-friendly, and uninterrupted financial services.

Before the COVID-19 pandemic broke out in early 2020, the WEF pointed out in the report[1] that information infrastructure breakdown and cyberattacks were respectively rated the 6th and 8th most impactful risks globally; data fraud or theft and cyberattacks were respectively rated the 6th and 7th most likely risks globally. Information security-related risks are getting more and more attention in an everyday general environment. Cyberattacks are a critical type of risk that cannot be ignored as they may result in IT infrastructure breakdown and data leakage.

[1] World Economic Forum(WEF), The Global Risks Report 2020, 2020/1

Main Types of Global Risks

Top 10 risks in terms of **Likelihood**	Top 10 risks in terms of **Impact**
1 Extreme weather	1 Climate action failure
2 Climate action failure	2 Weapons of mass destruction
3 Natural disasters	3 Biodiversity loss
4 Biodiversity loss	4 Extreme weather
5 Human-made environmental disasters	5 Water crises
6 Data fraud or theft	6 Information infrastructure breakdown
7 Cyberattacks	7 Natural disasters
8 Water crises	8 Cyberattacks
9 Global governance failure	9 Human-made environmental disasters
10 Asset bubbles	10 Infectious diseases

Source: WEF, January 2020

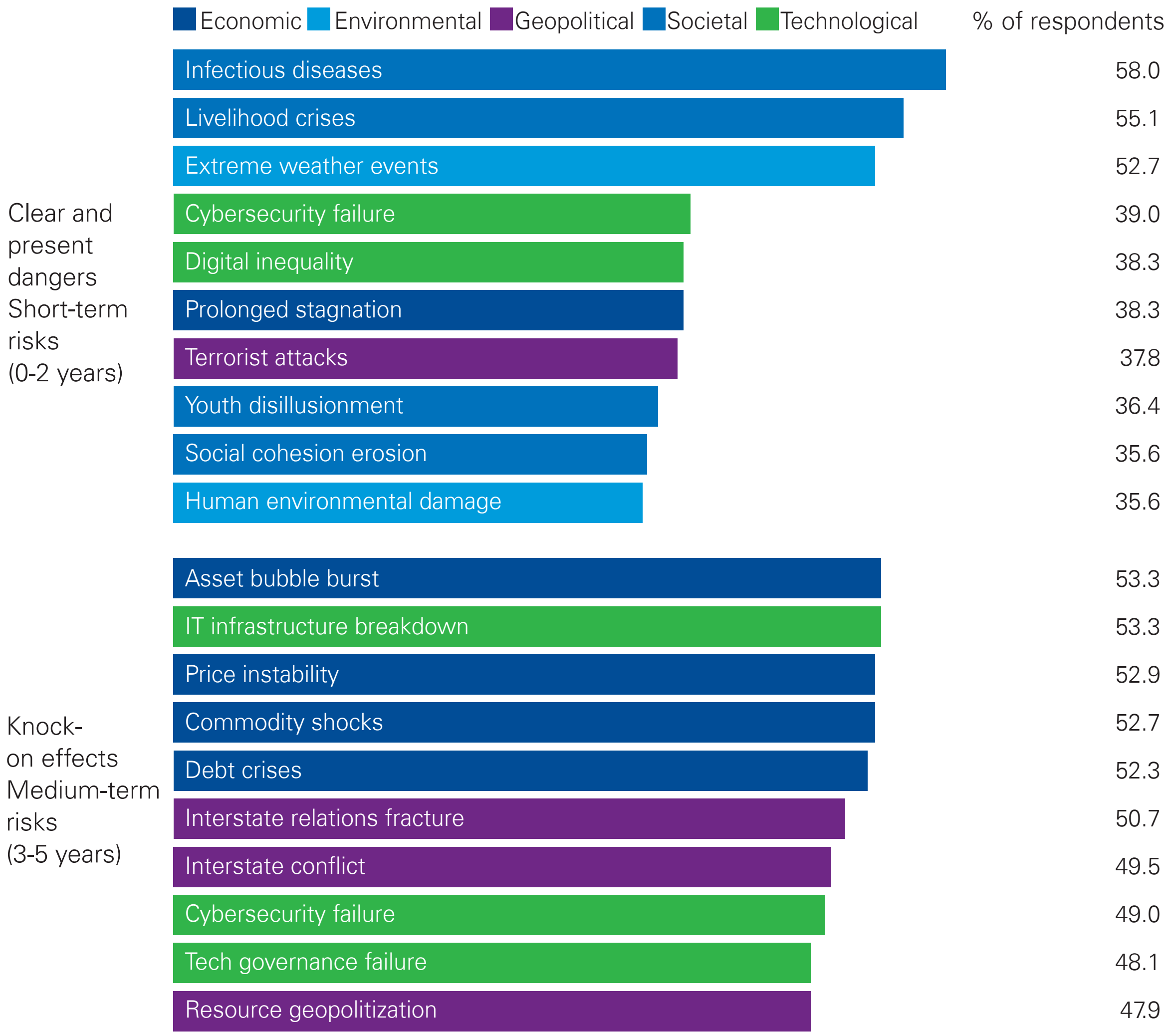
The pandemic has further accelerated industrial digitalization, but it also comes with an increase in information security risks. According to the WEF report released in January 2021[2], among the top ten global risks to be watched out for in the next two years, cybersecurity failure and digital inequality rank 4th and 5th; within three to five years, IT infrastructure breakdown ranked second, and cybersecurity failure and tech governance failure rank 8th and 9th respectively. With digital transformation evolving at a good pace after the pandemic, countries around the world have been increasingly aware of cybersecurity and technology-related risks. They are expected to lay more stress on risk management.

With regard to the possible impact of digital cybersecurity risks on financial institutions, the International Monetary Fund (IMF) published a report in February 2020[3], stating that cybersecurity incidents may cost global financial institutions more than US$100 billion a year based on the research conducted by the Operational Riskdata eXchange Association (ORX). This indicates that cybersecurity risks have changed from qualitative risks to quantifiable losses. Financial institutions must address cybersecurity risks with caution to keep them under control effectively.

[2] World Economic Forum(WEF), The Global Risks Report 2021, 2021/1
[3] IMF, Cyber Risk Surveillance: A Case Study of Singapore, 2020/2

Global Risk Survey Results

When do respondents forecast risks will become a critical threat to the world?



Source: WEF, January 2021

In 2020, the COVID-19 pandemic greatly accelerated the speed of digital transformation, along with a jump in global cyberattacks. According to the KPMG CIO Survey 2020, 83% of respondents said that the COVID-19 pandemic had significantly increased phishing attacks, and 63% believed that malware attacks had also increased. According to the cybersecurity report released by a major international antivirus software company[4], more than 27.8 billion threats were intercepted in the first half of 2020, an increase of 1 billion compared to the same period in 2019, and 93% of them were distributed via emails, of which business email compromise (BEC) attacks increased by 19% from the second half of 2019. As the world's collective attention was paid to the COVID-19 pandemic, there were 8.8 million

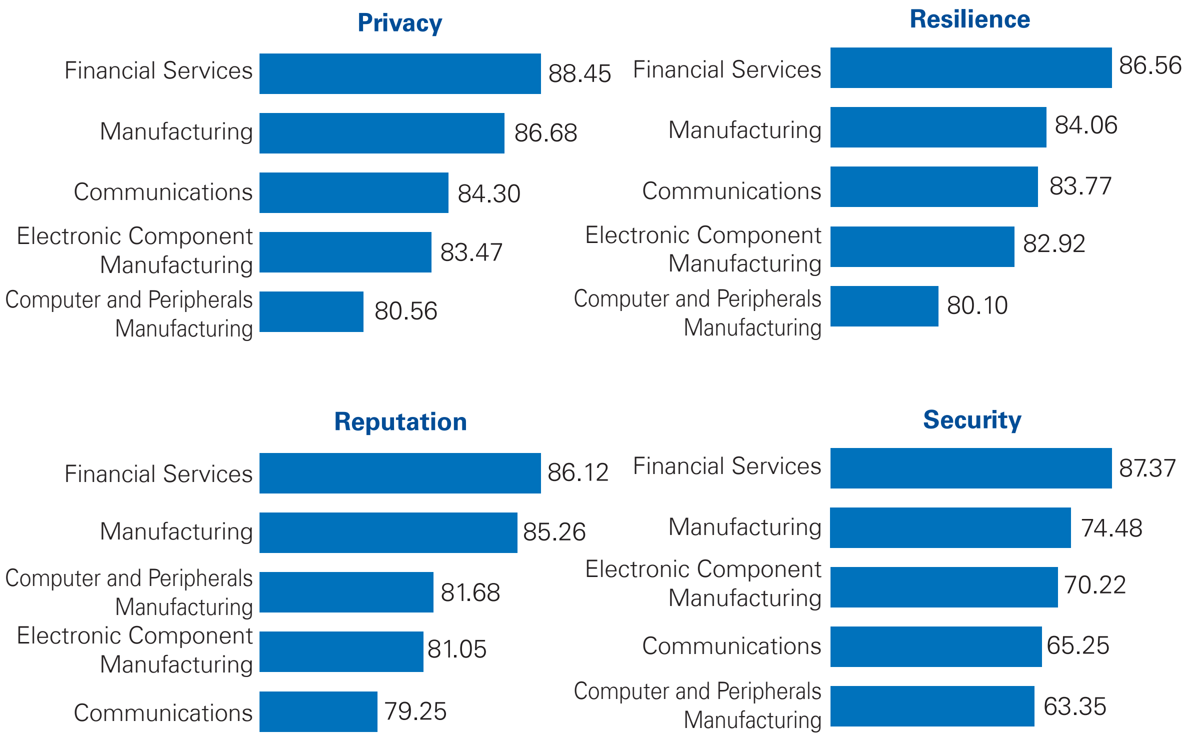
[4] Refer to https://blog.trendmicro.com.tw/?p=65601#more-65601

single threats in relation to the pandemic in the first six months of 2020, of which nearly 92% were distributed through spam. Cybersecurity risks facing the industries are expected to increase with the acceleration of digital transformation.

There Is Still Room for Improvement in the Domestic Financial Services Industry's Well-found Network Protection

According to the results of KPMG's report on “Cybersecurity Risks of Taiwanese Enterprises” in January 2021, among the domestic five industries surveyed, the financial services industry is the best performer in the four aspects of network protection, namely privacy, resilience, reputation, and security, with an average score of 87 points, far better than the overall average of 78.68 points. The main reason is that the financial services industry has addressed itself to information protection for the longest time, coupled with the competent authority's increasing emphasis on cybersecurity risk supervision.

Scores on Four Dimensions of Network Protection by Industry



Source: KPMG, January 2021

Financial gains through profit-driven criminal activity on the Internet are huge, making the financial services industry 300 times more likely to be attacked than other industries. Today, the financial services industry is still suffering from plenty of cyber threats and challenges. Network protection must evolve to keep pace with the times. According to the KPMG CIO Survey 2020, in the post-pandemic new normal, information privacy and security ranked first in the most likely technology investments of the enterprises interviewed at 47%. This indicated that enterprises paid more attention to information privacy and security as the pandemic fueled the combination of technology and business operations. Although the financial services industry tops the chart on the part of network protection, consumers in the digital age are paying more attention to information privacy and security. It is imperative for banks and other financial institutions to impose stricter requirements for related risk management.

In point of financial cybersecurity risk management, Taiwan’s financial services industry's cybersecurity protection is not completely impeccable. According to the results of the report on “Cybersecurity Risks of Taiwanese Enterprises,” 13 of the 50 industry-leading enterprises surveyed are financial institutions. In the overall evaluation composed of four dimensions and a total of 20 evaluation items, the financial services industry was in the cellar in both “brand monitoring” and “webpage ranking” under the dimension, “Reputation.” Improvement should be made in these two items. Among these financial institutions, 11 financial institutions ranked among the top 20 in the survey in terms of overall network protection scores, and two fell behind the 30th. This indicates a gap between financial institutions with strong network protection and those with network vulnerabilities, and the latter is very likely to become a priority on target for hackers. On the part of resilience, the financial services industry only scored 76.46 points in "Domain Name System (DNS) health," ranking second-to-last among the five industries. It shows that there is still much room for improvement in this part. Strengthening DNS security will enable financial service providers to prevent users from linking to fraudulent websites and improve its usability through data comparison, security authentication, and structural adjustments.

Exceptional Talents Are the Key to Cybersecurity in Financial Services

In recent years, the FSC has made relentless efforts to strengthen cybersecurity control in the financial services industry, with a particular focus on the requirements for cybersecurity organizations and manpower. Since 2018, large financial institutions such as banks, insurance companies, securities firms, and bills finance companies have been required to set up

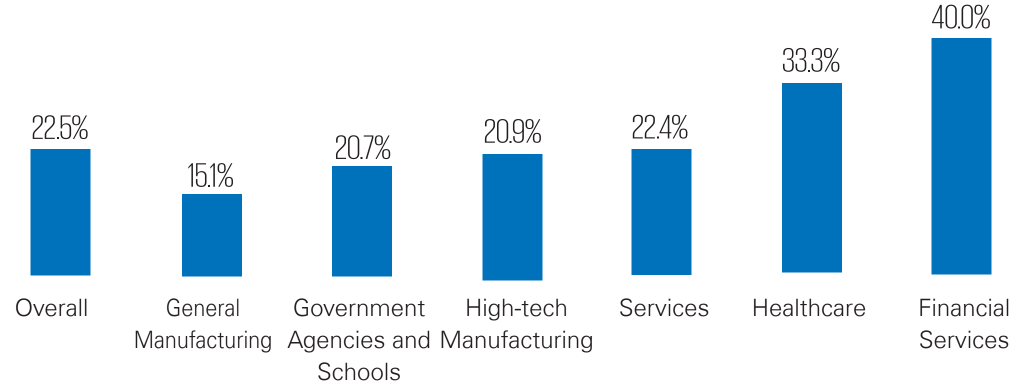
[5] Refer to https://www.ithome.com.tw/article/136637

dedicated departments and chief information security officers for cybersecurity management. Finance cybersecurity is part of the Six Roadmaps to Prosperity announced by the FSC in May 2020. In August of the same year, the FSC announced the "Financial Cyber Security Action Plan," aiming to provide secure, user-friendly, and uninterrupted financial information services. The "Financial Cyber Security Action Plan" sets the four directions: strengthening cybersecurity supervision, deepening cybersecurity governance, improving financial resilience, and leveraging cybersecurity joint defense. Related cybersecurity measures will be taken in four years to improve the domestic financial services industry's cybersecurity capability and to create an environment where consumers can use financial services safely.

In an ever-changing digital world, financial cybersecurity incidents are inevitable, and it is very difficult to use information in a perfectly secure environment; however, people still hope for safe, user-friendly, and uninterrupted financial services. To live up to people's expectations, the competent authority aims to shape an organizational culture of financial institutions in which c-suite executives take cybersecurity seriously and make information security management become one of the important operating strategies of financial institutions. Therefore, professional and sufficient manpower is the cornerstone of cybersecurity best practices. The right cybersecurity talents play a key role in strengthening and implementing cybersecurity management of financial institutions.

According to the KPMG CIO Survey 2020, cybersecurity skills ranked first among the five skills that interviewed enterprises thought were most lacking. According to the Taiwanese Enterprise Cybersecurity Survey 2020[5], the number of cybersecurity personnel in large enterprises averaged 6.2, a 30% increase from the average of 4.7 employees in 2018; the percentage of dedicated cybersecurity personnel also rose sharply to 82.2% in 2020 from 48.9% in 2018. In addition, 22.5% of the surveyed enterprises had a demand for cybersecurity personnel in 2020. Among them, 40% of financial service providers had related job vacancies, the highest percentage among the industries. All of these survey data indicate that enterprises are in urgent need of cybersecurity talents and that cybersecurity talents are in great demand.

Percentage of Vacancies for Cybersecurity Personnel in 2020 by Industry



Source: iThome, March 2020

Cybersecurity Threats to Financial Services in the Post-pandemic Era

For fintech to work as expected, the financial services industry has to eliminate all kinds of digital crises and risks. The following are the common emerging risks after the pandemic:
Financial intelligence risk: Smart devices equipped with financial applications are generally accepted by users. It also means that AI and algorithms have a greater influence on people's daily lives.Incidents like wrong investment decisions caused by smart wealth management systems or the misuse of AI or wrong decision-making due to algorithms learning and design take place frequently. The financial services industry must face up to the risks of AI.

Remote and cloud application risk: With the exponential growth of remote tools and cloud applications driven by the contactless economy in the post-pandemic era, cloud services have changed from an emerging technology to infrastructure for the financial services industry. However, the advantages of large cloud storage, ecosystems, and various applications go hand in hand with the risks of cloud data access control and data availability; the financial services industry also has to consider operational risks such as the leakage of confidential or private data stored in the cloud, business losses caused by an unexpected cessation of cloud services, etc.

Open finance risk: The independent control of personal data (e.g., Open Banking, Open Finance, and other policies) is the long-term vision and goal of digital financial services. It is also a mirror of the trend where financial service providers adapt to a user-centric approach in the course of digitalization to maximize the value of data. All users of the digital financial services ecosystem can expect to inquire about their real-time assets and liabilities and complete transfers and payments on the same platform intuitively without restriction or high costs from different financial institutions or platforms. However, there is a great concern about whether such platform can withstand external cyberattacks and protect users' privacy and personal information.

New Cybersecurity Trends and Tools in Financial Services

Based on an insight into the recent laws or policies on digital technologies and applications and industrial supervision in countries around the world, the era of "website monetization," where innovation is preferable to risk, data to privacy, and efficiency to security with the help of fintech and business models, has come to pass. In the future, countries around the world will establish a new norm in the digital world through new regulations on data governance, financial supervision, cybersecurity, and privacy protection. It is imperative for the financial services industry to strike a balance between innovations and risks.

Taking mobile identification for financial services for example, the FSC released the “FinTech Development Roadmap” in August 2020, aiming to develop a standardized mobile identification mechanism for financial services and to forge the Financial FIDO (F-FIDO) Alliance. Following the competent authority's policy, financial institutions have recently been discussing the introduction of FIDO standards and expect to forge the F-FIDO Alliance in August 2021. In the initial stage of introduction, financial institutions will apply to the FSC to try verifying the feasibility of FIDO as a mobile identification mechanism for low-risk financial services and rolling out mobile identification and authorization for medium and low-risk financial services; FIDO will then be further applied to inter-institution ID verification and other online applications and quick login services depending on the results of implementation.

Digital identification has become prevalent as more and more digital applications are being rolled out today. Considering risk management, traditional financial institutions process most applications offline; however, it is imperative for them to provide more user-friendly digital identification services in order to compete with emerging internet-only banks in the era of digital financial innovation. As long as financial institutions pay attention to personal information protection and effectively control the risk of leakage, new technologies enable them to promote more digital applications and provide better customer experience through verification and confirmation of digital identities. With competent authorities and financial institutions joining forces, 2021 will mark the first year of Taiwan's digital identification that speeds up the digital transformation of financial services.

Electronic payment represents the evolution of inclusive finance in the banking industry

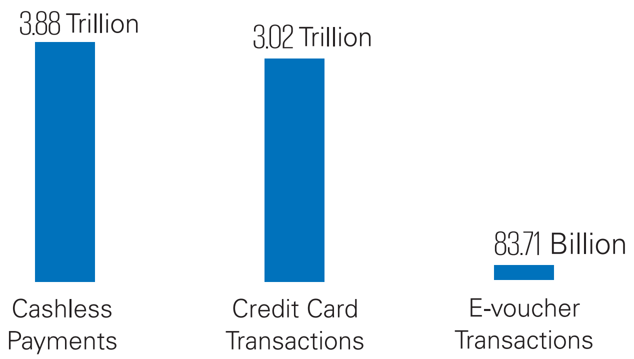
Jeff Chen
Head of Audit
KPMG in Taiwan

Compared with cash payments, electronic or cashless payments are mainly card-based, which can significantly improve the efficiency of payments, lower the processing costs of financial institutions, and facilitate the prevention of money laundering activities. With the government and enterprises giving every effort to promote digital transformation, technology has been closely tied in with people's daily lives. Consumers and businesses are more willing to pay electronically, which has a positive effect on the overall operation of domestic banks. Compared with other Asian countries, Taiwan has been struggling to boost electronic payments as people are relatively dependent on cash and have access to cash easily. It will take a long time for Taiwan to transform into a cashless society. The government and enterprises should hold a common view on digital economy and financial inclusion as they work together to further increase the ratio of electronic payments to consumer payments.

Credit Cards Are a Useful Payment Tool with the Number of E-payment Users Reaching Tens of Millions

Cashless payments are generally made by credit cards, debit cards, or e-vouchers through electronic payment systems. Statistics show that credit cards play a very important role in consumer spending. According to the FSC data, the amount of cashless payments (excluding ATM transfers) totaled NT$3.88 trillion in 2020. The figure increased to NT$4.95 trillion with the amount of ATM transfers included[1]. In 2020, the amount of credit card transactions reached NT$3.02 trillion and the amount of e-voucher transactions was NT$83.71 billion, accounting for 77.8% and 2.2% of cashless payments (excluding ATM transfers) respectively.

Amount of Cashless Payments, Credit Card Transactions, and E-voucher Transactions in 2020



Source: FSC and Economy Daily News, as of December 2020

In Taiwan, banks and credit card companies are the main credit card issuers. There are currently 33 credit card issuers, 31 of which are banks and only two are credit card companies. As of December 2020, the number of credit cards issued by the banks was 49.35 million, with 32.65 million active cards, while the number of credit cards issued by the two credit card companies was 770,000, with 350,000 active cards. There are five e-voucher issuers in Taiwan. The number of e-vouchers issued was 135 million as of December 2020, an increase of approximately 7.1% from 126 million at the end of 2019. Among the five e-voucher issuers, EasyCard and iPASS issued 85.04 million and 25.42 million cards, followed by 22.91 million cards issued by icash.

With the support of the government and enterprises in recent years, the number of e-payment users topped 10 million in the second half of 2020. According to the FSC statistics, there were 26 e-payment institutions (dedicated and concurrent) in December 2018, with a total of 4.29 million users. In December 2019, the number of e-payment institutions increased to 28, with the number of users increasing by 61.3% to 6.92 million. In December 2020, there were 28 e-payment institutions, with the number of users topping 10 million, a new milestone and a 70% increase to 11.78 million from 6.92 million in 2019. Among the e-payment institutions, JKoPay

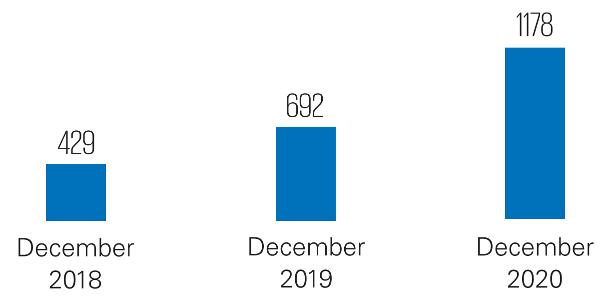
[1] Refer to https://money.udn.com/money/story/5613/5295590

ranked first with 4 million users, followed by 3.05 million iPASS users and 1.28 million users of E.Sun Commercial Bank, Ltd.

The "Act Governing Electronic Payment Institutions" took effect in 2015. The FSC set up the FinTech Office in the same year and released the “FinTech Development Strategy Whitepaper” a year later, setting the goal of doubling the ratio of cashless payments to consumer spending from 26% to 52% in 2020. In 2015, cashless payments accounted for only 26% of total payments in Taiwan, significantly lower than that in neighboring Asian countries such as South Korea, Hong Kong, China, and Singapore. According to the FSC statistics, the percentage of cashless payments was 40.91% at the end of 2019 and even decreased to 40.37% in 2020[2]. The percentage rose to 51.7% with ATM transfers included, which still fell short of the target in 2020 (52%).

Number of E-payment Users

Unit: 10,000



Source: FSC, as of December 2020

The Popularization of Mobile Payments Has a Positive Effect on Financial Inclusion and Banking

Driven by the government and enterprises, the amount of mobile payments has been multiplied every year since 2017. The COVID-19 pandemic pushed mobile payments even forward. Mobile payments only amounted to NT$1.49 billion when they were promoted in 2016. The amount of mobile payments went up to NT$14.8 billion with a leap in 2017 and further increased to NT$47.8 billion in 2018. In 2019, it continued to grow at a doubling rate and reached NT$182.4 billion above NT$100 billion. Due to the COVID-19 pandemic, people reduced the use of cash and other payment methods that required contact, causing the amount of transactions through five types of mobile payments to exceed NT$420 billion in 2020, double the total amount in 2019[3].

In 2017, the government set the adoption rate of mobile payments at 60% in 2020 and the interim goal of 90% in 2025. According to the statistics published by the National Development Council (NDC), the adoption rate of mobile payments reached 62.2% in 2019, an 11.9% increase from 2018. It has a good chance of reaching 90% in 2025. Among the mobile payment users, the adoption rate of

[2] FSC, The FSC Sets New Indicators for Cashless Payments, March 2021

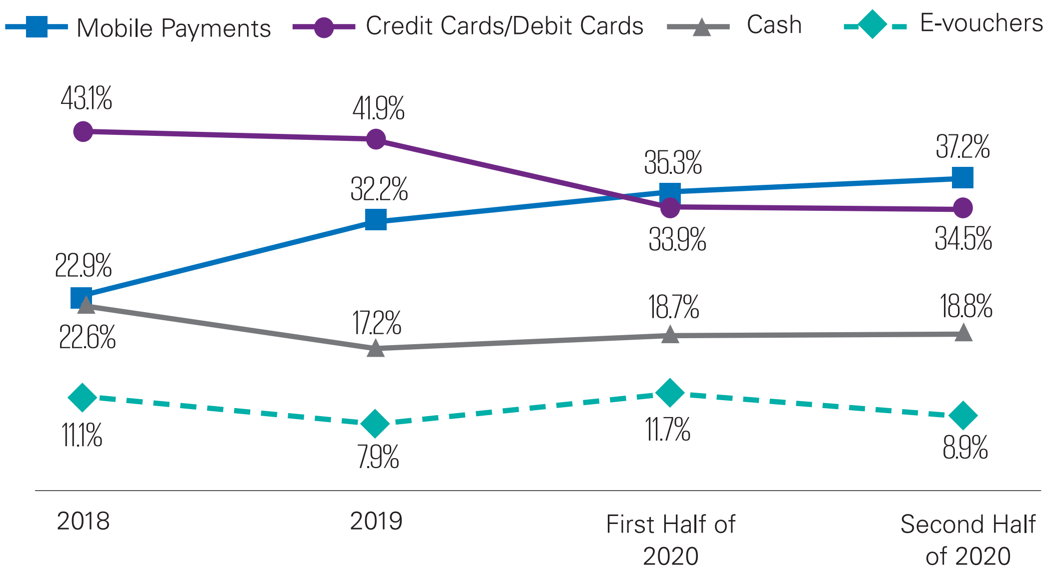
[3] Refer to https://www.chinatimes.com/newspapers/20210313000189-260205?chdtv

the middle-aged and elderly people aged 46 to 55 increased by 30% to 77.6% from 46.4% in 2018, and the adoption rate of users aged 56 to 65 also rose from 41.4% to 52.9%[4]. These two groups of users were key to a higher adoption rate.

According to the Institute For Information Industry's Mobile Payment User Survey[5], the consumers' awareness of mobile payment increased from 83.6% in 2016 to 97.8% in the second half of 2020, and the number of regular users grew from 52.8% in 2019 to 60.3%. Among the mobile payment users, 77.2% bound their mobile payments mainly to credit cards and 92.8% used online banking. This shows that mobile payments are extremely conducive to banking and are also a good way to popularize financial services.

After payment tools became diversified, 37.2% of the users preferred mobile payments in the second half of 2020, slightly higher than 34.5% of users choosing physical credit cards/debit cards. The preference for mobile payments over physical cards continued from the first half of 2020; 18.8% of the users preferred cash payments. In terms of the transaction amount, 97.2% of mobile payment users spent an average of less than NT$1,000 per transaction, showing that micropayments remained the mainstay; however, the percentage of mobile payment users spending more than NT$1,000 per transaction rose to 2.8% from 0.9% in 2019. In addition, more than 88% of the consumers surveyed were willing to continue or start using mobile payments. This shows that mobile payments have almost become indispensable to people's daily lives in Taiwan.

Consumers' Preferred Payment Tools



Source: Institute for Information Industry, November 2020

[4] Refer to https://money.udn.com/money/story/5613/4284019
[5] Institute for Information Industry, Mobile Payment 2500 Survey – Second Half of 2020 (I)(II), November 2020

Future Possibilities

On the whole, electronic payments have become more acceptable to people in Taiwan; however, it is still difficult to boost the percentage of cashless payments due to several factors such as culture, user behavior, and security and availability of banknotes. First, in common sense, people trust cash more when they transact. If a significant cultural change is not possible in a short period of time, it will only be natural that increasing the percentage of cashless payments should be tough. Second, the percentage of counterfeit New Taiwan dollar banknotes is extremely low in Taiwan. At present, the percentage of counterfeit banknotes in Taiwan is almost the lowest in the world, making it relatively safe for people and merchants to make and receive cash payments. It is never easy to change user behavior drastically. Third, cash is extremely accessible to people. According to the FSC statistics as of December 2020, the number of ATMs in Taiwan topped 31,000, and there were about 160 ATMs per 100,000 adults, more than three times the global average of 49.6 ATMs per 100,000 adults[6]. Cash withdrawals from ATMs are accessible to people at banks, four major supermarkets, MRT stations, and railway stations. And the high availability of cash withdrawals has become one of the obstacles to promoting cashless payments.

Among all financial services, payment is most closely linked to people's lives and is also one manifestation of financial inclusion. It has been taken seriously by the government, banks, and fintech companies alike. E-payment and e-voucher institutions have taken concrete action to promote e-payment services in the past few years, which has gradually perfected the domestic e-payment systems. However, e-payments and e-vouchers are regulated separately and are two closed systems that share no interoperability. Most businesses launch their own applications in response. Users may have to add multiple applications to meet their needs, which is quite an inconvenience. To make e-payments accessible to people and adaptable to businesses, the Executive Yuan passed the draft amendment to the "Act Governing Electronic Payment Institutions" in July 2020," which was later passed by the Legislative Yuan in December 2020. The legislation integrates e-payments and e-vouchers into one system, facilitating the virtual integration of payment tools and the interoperability of money flows between institutions in the payment ecosystem.

While continuing to increase the adoption rate of mobile payments, the government will strive to boost the percentage of electronic payments in consumer spending by adding more merchants and strengthening user experience and marketing. In order to increase the percentage of e-payments, it is necessary for places where cash dominates over other payment methods, including night markets, small enterprises, and traditional markets, to adopt e-payments. The government has rolled

[6] Refer to https://data.worldbank.org/indicator/FB.ATM.TOTL.P5

out tax cuts as one of the incentives to adopt e-payments. If small businesses apply to adopt mobile payments, the government will levy the business tax at 1% only. More than 3,000 small businesses' applications have been approved. If the number of small businesses adopting e-payments beefs up, consumers will become aware of it and be more inclined to pay electronically.

The approved amendment to the “Act Governing Electronic Payment Institutions,” is slated to take effect in July 2021. E-payment institutions can expect the interoperability of money and information flows. Users also have an opportunity to choose from different payment service providers to pay contracted merchants electronically via one single application. In addition, payment institutions other than banks can accept transfers from other payment institutions. E-payments across institutions should be conducive to the development of the payment ecosystem. With more and more contracted merchants available, Taiwan should see an increase in the adoption rate of e-payments and inclusive financial services.

The development of supply chain finance in the post-pandemic era

Wayne Lai
Head of Digital
Partner
KPMG in Taiwan

Supply chain management (SCM) became a popular theory in the 1990s. With the development of the world economy, trade competition intensified. There was an opportunity for closer integration of finance and SCM as enterprises expected to deliver on operating results with SCM. In the global markets where trade was growing much faster, traditional financial services could no longer meet the needs of enterprises; financial institutions also poured money into SCM in hopes of tapping into new business opportunities. As a result, a new type of supply chain finance emerged at that time, marking an innovation in trade finance.

For banks, supply chain finance should be a business activity with relatively high value and low risk. S&P Global Market Intelligence's report[1] points out that each credit transaction in relation to trade finance has a default rate of only 0.03% to 0.25% on average. Supply chain finance is not a recently new financial innovation. It has become a type of fairly mature credit lending service after decades of global development. In the current business model, however, banks still face risks such as complicated credit checking on SMEs, repeated lending, and unsuccessful collection. The application of blockchain may be the solution to this pain point. Besides, industries are forced to accelerate digital transformation due to the great impact on the global supply chain of the COVID-19 pandemic. The prospects of technology-driven supply chain finance are brightening in the post-pandemic era.

Supply Chain Finance

According to the definition of supply chain by the Council of Supply Chain Management Professional (CSCMP), supply chain is "the activities required to produce and deliver goods from suppliers and manufacturers

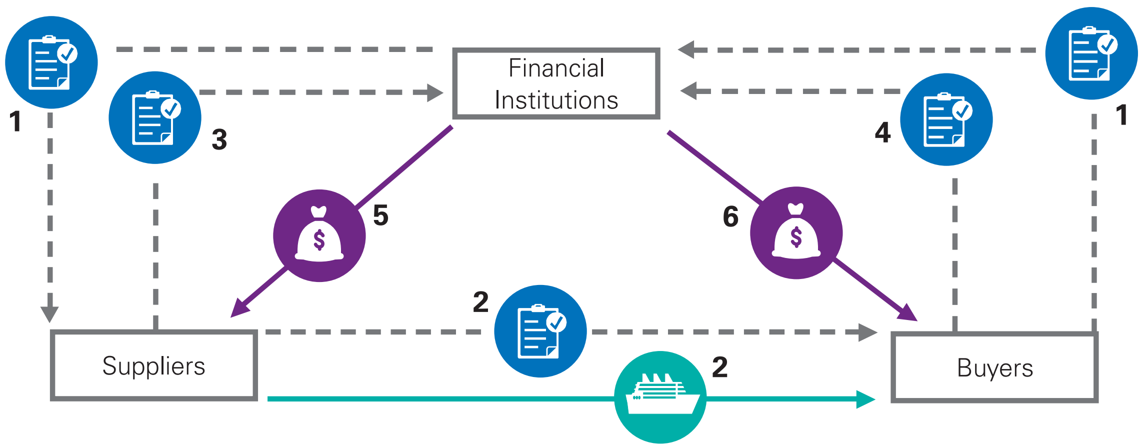
[1] Refer to https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/55001061

to customers." In Taiwan, the Ministry of Economic Affairs defines supply chain as "the link of all activities, from the supply of raw materials to the sale of products to consumers, encompassing raw materials, equipment, production, inventory, sales, and after-sales service"[2]. In order to give play to the operational efficiency and value of the supply chain, SCM has been introduced to businesses. In addition to production and logistics, SCM incorporates marketing, sales, and research and development, as well as financial management[3]. Financial management includes obtaining funds from financial institutions.

Lending is one of the most important financial services provided by banks. In the traditional business model, banks mostly make loans to single businesses after evaluating their loan applications. For the industry's leading businesses that play a critical role in the supply chain, they are more likely to obtain funds from banks due to sound finances and business operations and a relatively low risk of credit default. However, most of the suppliers in the entire supply chain are SMEs that are constantly struggling to get funded by banks for relative lack of capital, revenue, and collateral.

However, competition becomes more intense as banks look to expand lending services, along with a fall in interest rates. Therefore, a financial service model combining lending and SCM has gradually emerged, shaping the

Supply Chain Finance Flowchart [4]



1. Supply chain finance products flow between buyers and financial institutions or suppliers (industry-leading enterprises and upstream and downstream suppliers) and financial institutions.
2. Suppliers request buyers to provide receipts for shipments and sales.
3. Suppliers submit the receipts provided by buyers to the financing platform of the fund providers.
4. Buyers confirm the receipts submitted by suppliers to the fund providers.
5. Fund providers allocate funds to suppliers (after deducting interest and fees).
6. Fund providers deduct the loans from buyers' bank accounts when the receipts become mature.

Source: trade finance analytics

[2] Bureau of Standards, Metrology and Inspection, Ministry of Economic Affairs, Introduction to ISO 28000 Supply Chain Security Management System, September 11, 2001
[3] CSCMP, Supply Chain Management Terms and Glossary, 2013/8
[4] Refer to https://tradefinanceanalytics.com/what-is-supply-chain-finance

so-called supply chain finance. Supply chain finance encompasses the money, logistics, and information flows between financial institutions, industry-leading businesses, and upstream and downstream SMEs. Industry-leading businesses help SMEs improve their credit scores and reduce the banks' risk of lending, ensuring that banks make loans to their suppliers and collect repayments successfully.

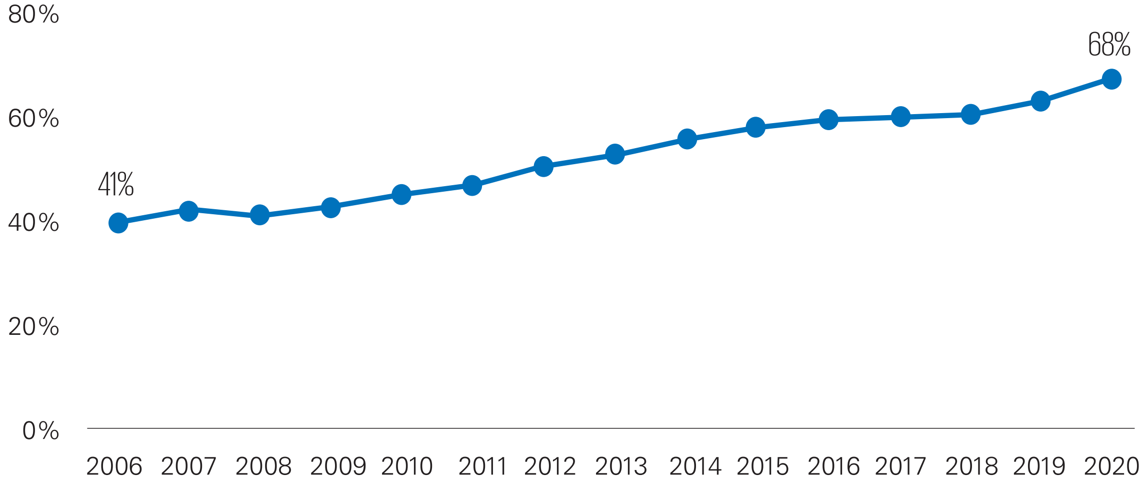
Supply Chain Finance Promotes SME Financing

From the suppliers' and distributors' perspectives, the trade finance model of manufacturers should consist of four types: accounts receivable, advances, inventories, and orders. In the process of trade finance, banks will require businesses to provide transaction-related documents such as a list of accounts receivable, purchase orders, invoices, ocean bills of lading, and insurance policies. Compared with unsecured loans, trade finance should allow banks to better control the use of funds, the repayment schedule, and the source of repayment, thus lowering the risk of credit default.

SMEs attached to the entire value chain should benefit most from supply chain finance. For banks, it is more difficult to fully assess the risks of informationally opaque SMEs and make the right decisions. Therefore, most SMEs are less likely to obtain funds from banks. The development of supply chain finance gives SMEs in the value chain an opportunity to get funded more easily.

According to the FSC statistics, the balance of domestic bank loans to SMEs accounted for about 41% of the overall business loan balance in 2016; the percentage increased to 68% in

Ratio of Domestic Bank Loans to SMEs to Overall Corporate Loans



Source: FSC, as of December 2020

[5] Refer to https://www.moeasmea.gov.tw/article-tw-2344-5369

2020. Although supply chain finance may not be an absolute factor for domestic banks to increase loans to SMEs, it should be one of the key factors in the banks' willingness to loan to SMEs. For SMEs that create more than 78% of domestic employment[5], supply chain finance has greatly contributed to the stable development of the overall industry.

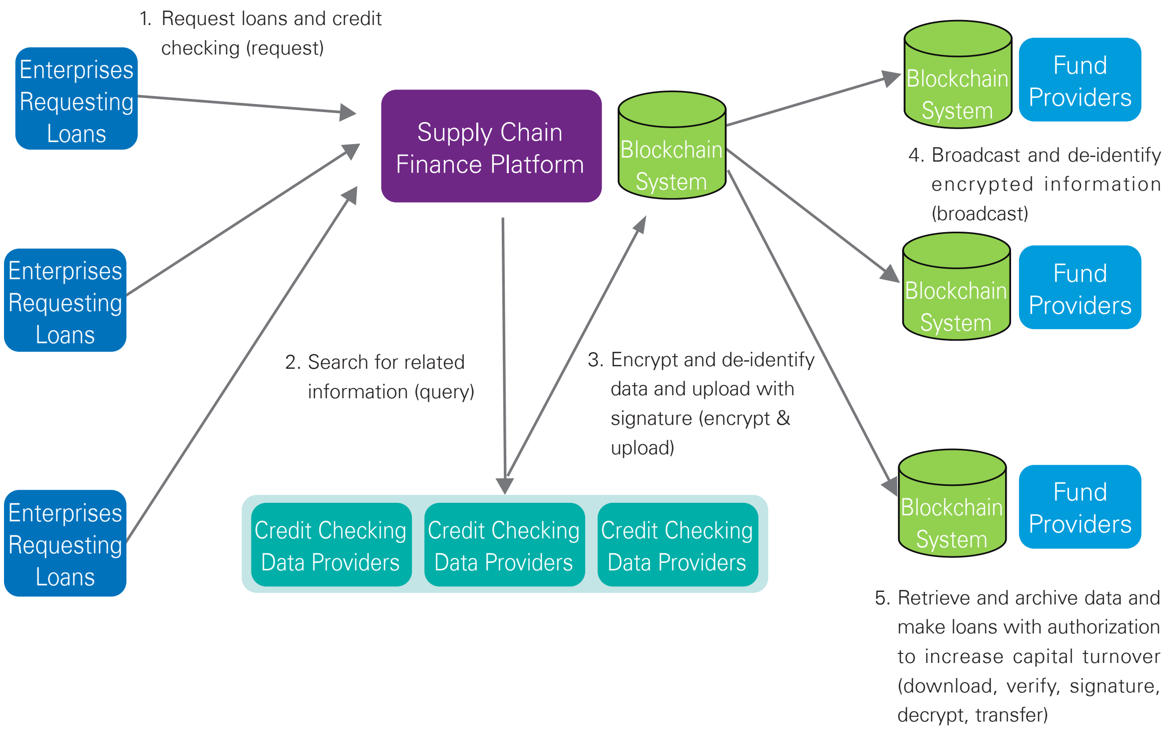
Fintech and Supply Chain Finance

After years of development of supply chain finance, banks still find it difficult to get transparent information, fully verify the authenticity of credentials, and trace transactions, which results in disputes easily. To lower the possible impacts of such disputes, the rigorous manual review process is introduced with real-time risk management. With the application of fintech, the difficulties facing the banks in the past have been greatly addressed in recent years.

The combination of fintech and supply chain finance is not just to make the offline process online. It involves importing new data, risk management processes, and pricing strategies to the aspects of audit, data analysis, and risk management with the integration of technologies such as big data analytics, AI, blockchain, and cloud computing. In the integration of technologies, blockchain plays a key role in solving the pain points of traditional supply chain finance.

The distributed ledger technology of the blockchain can reduce the risk of centralized ledger-based accounting and storage; it can also save manpower and time required to review data by the exchange of information, thus streamlining the review process. In addition, the blockchain's non-tamperable characteristic should be able to effectively prevent the transaction information in every aspect of supply chain finance from being tampered with, improve the transparency of real-time information monitoring, and increase the traceability of transactions. In the past, banks had difficulty in integrating the information of businesses, giving businesses an opportunity to apply for loans with false accounting information. With the combination of blockchain and supply chain finance, banks may now be able to outroot loan fraud.

Application of Blockchain in Supply Chain Finance[6]



Source: BlockTempo, synthesized by KPMG, January 2020

Fintech Development in the Domestic Supply Chain

The extensive application of fintech and digital transformation have made finance further tied in with technology in the domestic supply chain. CTBC Bank Co., Ltd. has been actively deploying the blockchain. In 2019, it closed the world's letter of credit blockchain transaction across Europe and Asia. In the second half of 2020, Cathay Financial Holdings Co., Ltd. released the shared global blockchain, disrupting the single-handed business model financial institutions used to adopt. In addition to Cathay United Bank, Cathay Financial Holdings Co., Ltd. entered into a memorandum of understanding with the Shanghai Commercial & Savings Bank, Ltd., Shin Kong Commercial Bank, Sunny Bank, Ltd., and Bank SinoPac Co., Ltd. respectively to forge an inter-bank alliance. It also planned to connect with the shipping data of international shipping companies such as CargoSmart, Evergreen Marine Corporation, and YangMing Marine Transport Corp. Cathay Financial Holdings Co., Ltd. is Taiwan's first financial service provider that promotes the exchange of corporate financial data using the blockchain.

In addition to the financial services industry, other industries in Taiwan are pouring a lot of money into the combination of emerging technologies and supply chain finance. In December 2020, nearly 100-year-old Yuen Foong Yu Group formed the "Yuen Foong Yu Blockchain and Supply Chain Finance Alliance"

[6] Refer to https://www.blocktempo.com/bitoex-bitopro-supply-chain-finance/

with Mega International Commercial Bank, CTBC Bank Co., Ltd., Taishin International Bank, and other banks. By connecting logistic, business, money, and information flows with the blockchain, the alliance aims to solve the problems encountered in the traditional supply chain (e.g., lack of interaction, integration, and methods for verifying the authenticity of transactions) and help shorten the time for approving loans, thus creating a win-win situation for enterprises, banks, and suppliers.

Technology-driven Supply Chain Finance Will Boom after the Pandemic

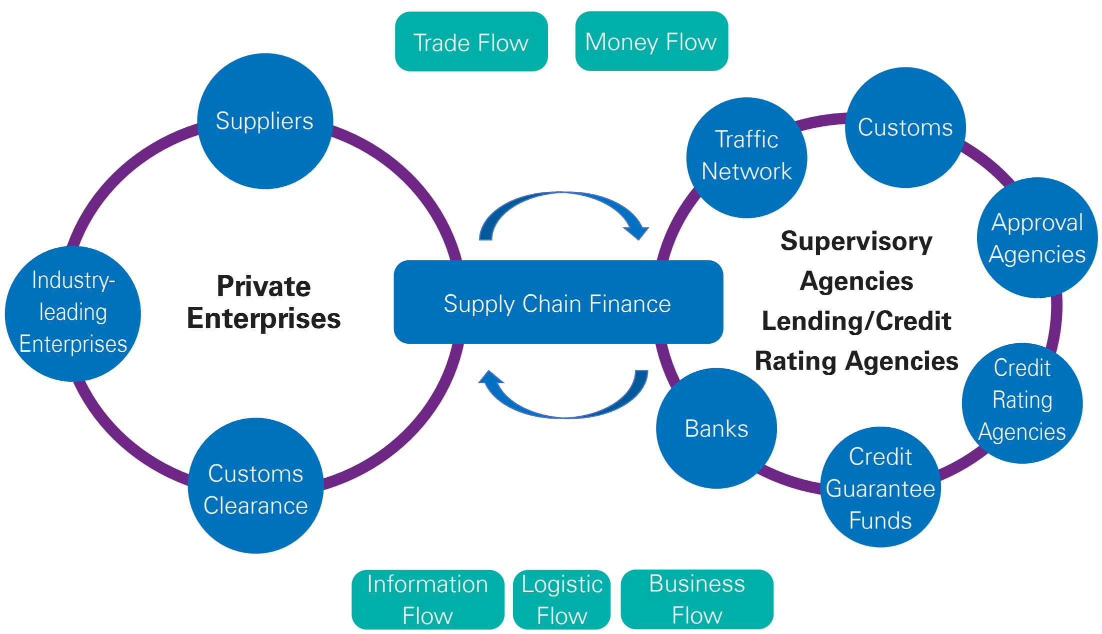
Many countries have implemented restrictions on population movement due to the outbreak of the COVID-19 pandemic, hitting the global supply chain hard and causing the capital chain rupture of enterprises. As the economy gradually recovers from the pandemic, businesses are striving to return to normal operations and find a way to weather similar emergencies more effectively in the future operations. For many companies and industries, digitalization has become the main option to stay adaptable. The pandemic has prompted more business owners to embrace the digital business model, which is expected to facilitate the combination of technology and supply chain finance. The blockchain should play an important role in driving the upgrading and development of companies and industries.

In the process of combining supply chain finance and fintech, people may have some doubts about how to ensure the accuracy and authenticity of blockchain information and data and prevent fake transactions. When the blockchain is used in smart contracts, its non-tamperable characteristics may easily identify any malicious fraud. The correct information stored in the blockchain is less likely to be

changed due to the environmental impact of the pandemic, which should address the lending problems caused by communication barriers between industry-leading enterprises and SMEs in the supply chain. After the pandemic subsides, the gradually stabilizing supply chain should continue to benefit from the combination of emerging technologies and supply chain finance in a post-pandemic environment that values digitalization.

Supply chain finance itself is a cooperative business system in which trade flows, money flows, logistics flows, business flows, and information flows interconnect and operate like an ecosystem. In addition to industry-leading enterprises and upstream and downstream suppliers, supply chain finance encompasses product buyers and sellers, logistics companies, banks, credit guarantee funds, supervisory agencies (e.g., customs and approval agencies), credit rating agencies, and the land, sea, and air transportation network. The environment had not undergone major changes before the pandemic, so there was no urgent need for closer integration. After the pandemic, it became incumbent on enterprises and government agencies to pay more attention to necessary response measures during the rehabilitation, which stepped up the pace of digital transformation; it could also promote the complete establishment of the supply chain finance ecosystem. The supply chain finance ecosystem is expected to become more close-knit and sounder in all aspects, driving yet another disruptive change in the future.

Supply Chain Finance Ecosystem[7]



Source: BlockTempo, synthesized by KPMG, January 2020

[7] Refer to https://www.blocktempo.com/bitoex-bitopro-supply-chain-finance/

The application of the equator principles to ESG due diligence in the banking industry

Sam Lin
Partner
KPMG in Taiwan

Since more than ten global banks such as Citibank, Barclays, Credit Suisse established the EPs in 2003, banks have gradually made it the international best practices to consider environmental, social, and governance (ESG) risks in the credit granting process.

According to the WEF's annual global risk reports, all major emerging risks in recent years are ESG-related. Take the latest report (2021) for example, top five risks in terms of likelihood are extreme climate, climate action failure, human-made environmental disasters, infectious diseases, and biodiversity losses. Based on the basic requirements of the EPs, this article will explore the importance of ESG in the banks' credit risk management and the current practices of banks at home and abroad and give some advice accordingly.

Basic Requirements of the EPs and Overview of Domestic Banks as Signatories

The EPs are a voluntary set of guidelines developed by the banks for managing social and environmental issues related to the financing of projects. According to the EPs, banks are required to categorize risks according to the potential environmental and social impacts of the financing projects and conduct different levels of due diligence on customers. The EPs have undergone several revisions since their initial adoption in 2003. The fourth edition (EP4 for short) has been released. In addition to expanding the scope of application to project-related refinancing and M&A financing, EP4 emphasizes that banks must also give careful consideration to human rights, biodiversity, and climate change issues. These three risks are also mentioned above as the top emerging risks globally.

Table 1 Signatories of the EPs in Taiwan

Date of Signing	Signatory
2015/03	Cathay United Bank
2015/12	E.Sun Commercial Bank, Ltd.
2017/12	Taipei Fubon Commercial Bank Co., Ltd.
2019/01	CTBC Bank Co., Ltd.
2019/11	Taishin International Bank
2020/02	Bank SinoPac Co., Ltd.
2020/10	Yuanta Commercial Bank
2020/12	First Commercial Bank (first government-owned bank)

As of March 2021, there are currently eight of more than 30 Taiwanese banks that have voluntarily signed the EPs (Table 1), ranking first with Japan in Asia. Following the private banks, First Commercial Bank became the first government-owned bank to adopt the EPs in December 2021. The FSC even aims for 100% of government-owned banks to be the signatories of the EPs. This shows that both the financial services industry and the supervisory agency attach great importance to ESG risk management in the credit granting process.

Expanding ESG Risk Management from Project Financing to All Lending Services

The main reason why the business scope regulated by the EPs targets project financing is that large financing projects usually involve bigger funds, large-scale development, and various stakeholders in mining, land development, electricity, transportation, and more and have the most direct impact on the environment and society. In addition to project financing, other lending services and investments may have environmental and social impacts. Based on years of experience,

Figure 1 Significance of EPs and PRI

The Equator Principles (EP)

The EPs are a voluntary set of international standards for determining, assessing and managing environmental and social risk in project finance. The fourth edition of the Equator Principles (EP4) was released in 2020.EP4 requires that banks should give full consideration to risks such as the IFC's eight performance standards, human rights, climate change, and biodiversity.

Principles for Responsible Banking (PRB)

- Align business strategies to be consistent with the Sustainable Development Goals
- Increase positive impacts and set targets
- Work with customers to encourage sustainable practices
- Engage with relevant stakeholders
- Establish effective governance and a culture of responsible banking
- Be transparent and accountable

international leaders have referred to the EPs and extended the scope of ESG risk management to other financial services. Cathay United Bank, the first signatory of the EPs in Taiwan, has also established a comprehensive ESG risk management system for credit granting.

In 2019, the United Nations Environment Programme Finance Initiative (UNEP FI) worked with nearly 30 banks to launch the Principles for Responsible Banking (PRB), emphasizing that ESG risk management and sustainable finance should be encapsulated in all business activities of the banking industry in order for banks to exert their influence as fund providers and to achieve sustainable development goals with customers. The PRB echoes with the spirit of the FSC’s Green Finance Action Plan 2.0.

Environment and Social Risks of Domestic Bank Loans

In general, what are changes in the environmental and social risks of domestic bank loans? KPMG uses the International Finance Corporation (IFC) “Performance Standards on Environmental and Social Sustainability” cited by the EPs as the basis for analyzing ESG risks of businesses that domestic banks loan to.

In 2020, the amount of loans granted by Taiwan's top 15 banks to their top 10 loan customers totaled NT$1.496 trillion, of which about 78% were rated as medium-to-high ESG risk as defined by the IFC, showing a 3% decrease from 81% in 2018.

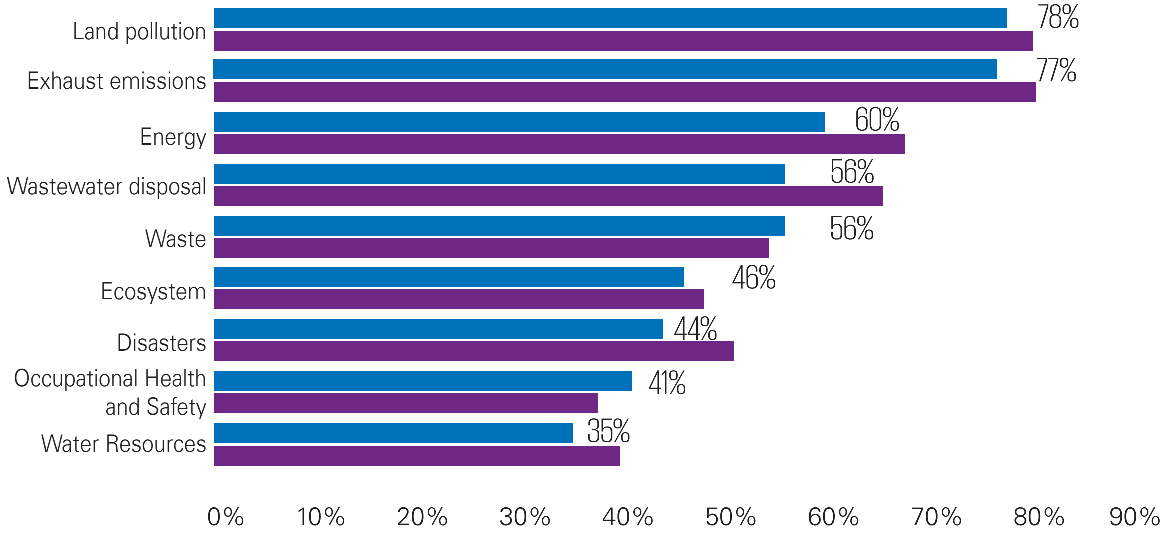
ESG risks involved in loan assets were mainly land pollution (78%), exhaust emissions (77%), and energy (60%) related. Compared with the data in 2018 (Figure 2), the percentage of the above three ESG risks in the banking industry declined. Among them, the percentage of energy risks dropped significantly, which reflected Taiwan’s energy policy on low-carbon transition. However, the percentages of waste risks and occupational health and safety risks increased. In Taiwan, there are currently eight banks having signed the EPs to strengthen ESG risk management in project finance; however, project finance only accounts for a small part of corporate finance. As a whole, introducing ESG risk management in all lending services remains a challenge that most banks must face up to in the future.

In addition to the risks defined by the IFC, how to assess and manage the potential impacts of climate risks on loan customers is a pressing issue facing the banking industry. After years of discussion on the EU’s carbon border tax and the introduction of carbon markets in countries around the world, the carbon tax that was previously excluded from financial statements will now be compulsorily internalized by carbon-intensive loan customers as an additional cost.

The banking industry also has to assess the possible losses arising from climate risks to loan customers. Flooding caused by extreme weather, lack of water, and forced shutdowns are extreme weather events that may cause loan customers to suffer losses and thereby fail to repay.

Figure 2 Comparison between ESG Risks Involved in Loan Assets of Domestic Banks in 2018 and 2020

Top Ten Risks Involved in Loan Assets of Top 15 Domestic Banks by Percentage



Top 15 Banks		
Bank of Taiwan	First Commercial Bank	Chang Hwa Commercial Bank
CTBC Bank Co., Ltd.	Taipei Fubon Commercial Bank Co., Ltd.	Taishin International Bank
Mega International Commercial Bank	Hua Nan Commercial Bank, Ltd.	The Shanghai Commercial & Savings Bank, Ltd.
Cathay United Bank	E.Sun Commercial Bank, Ltd.	Bank SinoPac Co., Ltd.
Taiwan Cooperative Bank	Land Bank of Taiwan	Yuanta Commercial Bank

2020 2018

Establishing ESG Due Diligence for Loan Customers

Citing the practices of the world's top banks, KPMG recommends that banks establish ESG due diligence bank-wide based on the EPs and the IFC Performance Standards on Environmental and Social Sustainability to give full consideration to major industry-specific risks; setting up an ESG scoring system is also recommended in order to review the major environmental and social risks and sustainability of loan customers and gradually improve ESG risk management in banks.

Taking land pollution with the highest ESG risk in Figure 2 for example, the IFC identifies textile and apparel manufacturing, cement manufacturing, chemicals, metals, and electronics manufacturing as industries in relation to this risk. Banks can further design a questionnaire according to the detailed requirements of the IFC Performance Standards on Environmental and Social Sustainability to score the practices and results of loan customers in land pollution prevention and management. If identifying major risks, banks may request the customers to provide explanations and action plans for follow-up improvement and management; the action plans will be included in loan terms and follow-up review to reduce potential risks through continuous management.

Trends in the integration of internal control in the banking industry

Sean Chen
Head of Banking
KPMG FRM Asia-Pacific regional leader
KPMG in Taiwan

In the financial services industry, different departments may be responsible for the second line of defense (compliance and risk management) and the third line of defense (audit), but the duties involved are closely linked to internal control to which financial regulators attach great importance. Financial institutions have set up internal control departments in sequence according to their own demand and the regulators' stringent requirements. Generally, financial institutions that have been operating for many years have audit departments in charge of internal control first, followed by risk management departments and recently new compliance departments. However, there are issues such as division of work and integration of management-related information that must be addressed by financial institutions with painstaking care.

Poor Utilization of Internal Control Resources

In recent years, the financial services industry has felt the necessity of integrating internal control resources. For business owners, every resource has a cost. If the duties of internal control departments overlap or even conflict, it will be considered a waste of resources and greatly compromise the effectiveness of internal control. In response to regulatory requirements, the financial services industry is required to invest substantial resources in implementing internal controls, including periodic self-inspection, compliance self-assessment, compliance risk assessment (CRA), money laundering and terrorism financing risk assessment, risk and control self-assessment (RCSA), and information security risk assessment.

Although such inspection and self-assessment are essential, it is undeniable that there is a big overlap between these functions. On principle, most of these self-assessments are actually the same, mainly for identifying risks and then assessing the risks and the effectiveness of the controls. The multiplier effect of repeated execution is limited. One of the biggest pain points in the financial services industry is excessive self-assessment. In the end, self-assessment has become a formality that bank clerks have to go through perfunctorily, which deviates from the original purpose of self-assessment.

Essentials of Internal Control Integration

It is easier said than done for the financial services industry to integrate internal control resources. Financial institutions often find it difficult to promote internal control integration due to lack of strong leaders such as bank presidents. Therefore, things do not go as expected most of the time. In most financial institutions, compliance, audit, risk management, and information departments carry out their own department-based risk controls or systems under departmental egoism.

The so-called internal control integration is not to integrate the second and third lines of defense into one department. After all, these departments must exist in substance regardless of regulatory requirements or business practices. Integration takes place in terms of methodologies or actions for risk management. The first step of internal control

integration is to review and design the most basic elements of risk management in the financial services industry, including operating procedures, laws and regulations, internal policies, risks, and control measures. In point of operating procedures, financial institutions must go beyond the organizational structure and design operating procedures entirely from a service or product perspective. After reviewing the operating procedures, the second and third lines of defense have to monitor all possible breakpoints in the entire life cycle of services or products.

The second step of internal control integration is to re-identify and sort out the required elements of internal control that can be shared within the organization (e.g., laws and regulations databases, internal policies, risk profiles, and control types). In order to integrate the underlying elements of internal control, it is necessary to find and synthesize items that are shared with the self-assessments. Taking compliance risk assessment (CRA) implemented by KPMG in the financial services industry for example, it is important to comply with laws and regulations and all statutory requirements for the financial services industry in the course of providing specific services. The laws and regulations database must interconnect with the operating procedures to identify the relevance; therefore, the definition of operating procedures and the link to corresponding laws and regulations become the underlying elements that can be shared in the internal control system. The same principle applies to risks and controls. If employees have different perceptions of risks and controls and design the self-assessment questions separately, it will be difficult for the second and third lines of defense and even c-suite executives to learn about the risks or control gaps within the organization.

Regulatory Technology Makes Internal Control Integration More Efficiently

The better results of internal control integration hinge on the support of technology as all the underlying elements which encompass at least millions of links between operating procedures, laws and regulations, internal policies, risks, and controls must be checked before integration. To solve the pain points the financial services industry encounters in the course of internal control integration, KPMG started developing Governance, Risk and Compliance (GRC) in line with Taiwan's practices many years ago.

The key technology of this regulatory technology (RegTech) is to combine IT and banks' services and internal control. GRC was selected by Regulation Asia as the 2018 Best Solution for Regulation Change. Promoting the internal control integration of financial institutions through GRC is also one of the main reasons why KPMG was selected by Risk Asia as the best consulting company in 2020 for the first time. KPMG has been adamant in helping Taiwanese financial institutions improve their corporate governance and internal control according to the regulators' requirements so that they are better equipped to provide new types of financial services in a responsible manner and contribute to an upgrade in the overall financial market.

Three Lines of Defense Model

Source: synthesized and drawn by KPMG

Financial crimes and compliance trends

Rex Chu
Head of Risk Consulting & Forensic
KPMG in Taiwan

Financial crime and compliance risk management has become an international trend. How can financial institutions respond to emerging compliance issues effectively? Financial crimes cover a broad range of actions. This article will explore the compliance practices in three aspects based on the latest international trends: fraud prevention, anti-money laundering and counter-terrorism financing (AML/CTF), and integrity and anti-bribery and corruption.

Fraud Prevention and Ten Directives for Financial Advisors

On June 14, 2019, the FSC promulgated the Internal Control Guidelines for Preventing the Misappropriation of Customer Funds by Financial Advisors in Banks, commonly known as the "Ten Directives for Financial Advisors." In terms of related management guidelines, the priority is to set up dedicated departments and personnel. As financial advisors function across multiple departments in the organization, it will be difficult to implement the standard operating procedures under the Ten Directives for Financial Advisors without effective coordination, communication, and promotion through dedicated departments.

Conduct Risk Management

When managing financial advisors, financial institutions are currently faced with various fast-growing risks. Conduct risk is the biggest difference between the fast-growing risks at present and those in the past. According to the "Retail Conduct Risk Outlook" published by the Financial Supervision Authority (FSA), the United Kingdom in 2011, the so-called conduct risk is a risk that financial institutions will lead to poor consumer outcomes (e.g., investment fraud, hidden product information, misleading marketing/swindles, and misappropriation or embezzlement of customer funds) in the process of retail sales.

Eliminating Information Asymmetry

According to the media reports on fraudulent practices, conduct risk has affected more and more financial institutions in a rapidly changing social and economic environment based on many subjective and objective factors. Conduct risk can happen in a one-time event on a case-by-case basis or may become widespread misconduct in an organization due to the prevailing culture of corruption. In course of conduct risk management, people must pay special attention to information asymmetry when checking and identifying risks in the operating procedures.

Information asymmetry refers to the chance of acting inappropriately that may be caused by inconsistent information in the entire process. For example, a financial advisor has an opportunity to forge the statement and send it to the customer while the authentic statement is sent to the financial advisor's personal address. Financial institutions should identify asymmetric information in the wealth management process as much as possible and design corresponding control points to manage related risks.

Introducing Emerging Technologies

Financial institutions have frequent transactions. They may consider using emerging technologies such as AI and machine learning to instantly and effectively assist the management in identifying potential abnormalities and misconduct; they also have to take the technology learning curve and the time required for model adaptation into account. As a reminder, sorting out data sources and centralizing processing are the biggest challenges to most organizations when they analyze data using technology.

Anti-money Laundering and Counter-terrorism Financing (AML/CTF)

Anti-money laundering (AML) in Taiwan has been improving since it was granted a green light in the national evaluation in 2019. In an environment where technology is ever-changing, virtual assets have become popular with the endorsement of celebrities, which comes with potential higher money laundering risks. Internationally, the Financial Action Special Task Force (FATF) released the guidelines for preventing money laundering of virtual assets in 2019. To this end, the government of Taiwan officially set the "scope of enterprises handling virtual currency platforms or transactions" in Article 5 of the Money Laundering Control Act in April this year, including virtual asset enterprises in the scope of anti-money laundering. According to the said scope, enterprises are required to implement KYC (know your customers) and fulfill their obligations to prevent money laundering, including on-site evaluation, transaction monitoring, and abnormal transaction reporting, in accordance with Article 5 of the Money Laundering Control Act. The aforesaid act will take effect on July 1, 2021.

There are five categories of enterprises newly added to the scope:

1. Platform operators (commonly known as exchanges): organizations that exchange virtual assets through fiat money;

2. Virtual currency exchange companies: companies transacting between virtual currency and virtual currency;
3. Virtual currency transfer service providers: over-the-counter trading platforms and virtual wallet service providers;
4. Custody service and management tool providers: virtual asset custodians such as companies that provide custody technological tools; and
5. Companies participating in and providing financial services in relation to the issuance or sales of virtual currencies and companies providing initial coin offering (ICO) services.

The main purpose of the related regulations is to protect the rights and interests of investors and to keep order in the virtual asset market, so as to avoid money laundering and terrorism financing risks and keep AML practices in line with international standards. For the aforesaid enterprises, how to put relevant AML measures in place in a short period of time to comply with the four compliance goals (i.e., customer due diligence, transaction monitoring, abnormal transaction reporting, and retention of transaction records) is a real challenge. For financial service providers, they have to include the aforesaid five types of enterprises in the existing scope of risk assessment and assign them corresponding risk levels; they should also consider taking active action for customer name verification, transaction monitoring, and retention of transaction records in order to comply with the related regulations.

Integrity operation and Anti-bribery / Corruption management

In November 2018, the Executive Yuan resolved at the “Central Integrity Committee” meeting that it would promote integrity, legal training, anti-corruption in the private sector according to “ISO 37001 Anti-Bribery Management System (ABMS)” in order to prevent corruption through public-private partnerships. On May 23, 2019, the Taiwan Stock Exchange Corporation promulgated the “Ethical Corporate Management Best Practice Principles for TWSE/GTSM Listed Companies” amended according to ISO 37001 ABMS; anti-bribery and corruption reports and regulations released by Transparency International, International Chamber of Commerce, and the Independent Commission Against Corruption of Hong Kong were also referred to for domestic amendments and the development of anti-bribery and corruption mechanisms to keep up with international trends.

According to the “National Money Laundering and Terrorist Financing Risk Assessment Report” published by the Anti-Money Laundering Office, Executive Yuan in 2018, eight types of predicate offenses are high money laundering threats in Taiwan, one of which is corruption and bribery. For the public and private sectors, corruption and bribery not only put their business at risk, but also cause long-term damage that cannot be measured by money due to the tarnished reputation and corporate image. How to build a sound bribery and corruption risk management system is the task that the public and private sectors should aim at in the short run.

In terms of global compliance trends, whether financial institutions should establish procedures for managing corruption and bribery is also mentioned in Chapter 4 of the Wolfsberg Group Correspondent Banking Due Diligence Questionnaire (CBDDQ V1.3 2019), which is closely related to international correspondent banking services. Financial institutions should think about how to build an internal control system to meet the requirements for corruption and bribery management at home and abroad.

Based on the above "Ethical Corporate Management Best Practice Principles for TWSE/GTSM Listed Companies," ISO 37001 ABMS, and international trends in anti-bribery and corruption, KPMG suggests that a good anti-bribery and corruption compliance plan be made in accordance with the six principles of ISO 37001 ABMS and include at least the following:

1. Governance and supervision: To establish a sound governance structure and a culture of integrity in a financial institution, it is important for the management and the corporate governance department (e.g., board of directors or functional committees) to support and actively participate in the establishment, supervision, and control of management mechanisms and to take a zero-tolerance attitude toward corruption and bribery.
2. Policies and procedures and internal control mechanisms: Financial institutions should establish proper anti-bribery and corruption policies and operating procedures according to the laws and regulations, the size of the organization and the type of industry, and the corruption and bribery risks; the policies should at least include anti-bribery and corruption commitments, action plans, and methods for risk mitigation.
3. Risk assessment: In addition to identifying and assessing bribery and corruption risks, financial institutions should develop a risk assessment framework for departments, services, or business activities to further assess the likelihood and impact of each risk. The results of the risk assessment should be reported to and shared with the management and the corporate governance department.
4. Due diligence: Due diligence should be conducted on third parties to carefully assess any bribery and corruption risks that may arise from them. In addition, anti-bribery and corruption clauses should be included in the contracts to ensure that third parties understand and follow the internal anti-bribery and corruption policies.
5. Training and communication: Employees should receive training on a regular basis to understand and identify bribery and corruption risks. The anti-bribery and corruption policies must be clearly communicated to employees and third parties (e.g., suppliers and customers) as a basis for compliance in the course of business dealings.
6. Whistleblowing system: Financial institutions should establish mechanisms for handling suspicious activity and reporting incidents such as anonymous hotlines or other reporting channels so that employees can raise concerns about corruption or bribery safely. An independent department should be responsible for carrying out investigations into reported incidents,

recording the results of the investigations in detail, and reporting the investigation and handling results of the reported cases to the management and the corporate governance department.

7. **Monitoring and verification**: Financial institutions should evaluate the employees' and third parties' fulfillment of their obligations to prevent bribery and corruption on a regular basis and put forward corrective measures for violations.
8. **Recording and retention**: Financial institutions should record control measures taken against corruption and bribery as appropriate, including supporting information on due diligence, audit, monitoring, or payment management. In addition, financial institutions should keep all account books and records of transactions, including receipts of related.

Finally, KPMG analyzes bribery and corruption risks from the perspectives of internal control, enterprise risk management, and internal audit and summarizes the priorities as follows:

1. Draw up policies and shape a corporate culture;
2. Manage business relationships and dealings, identify and assess organizational bribery risks, and check whether corresponding internal control systems are put in place for related risks;
3. Confirm the scope of business and internal and external parties applicable to bribery and corruption risk management;
4. Know your third party and create a third-party background checklist for third-party integrity management;
5. Manage political donations, philanthropic activities, charitable donations, and sponsorships;
6. Keep and retain account books and records in detail;
7. Establish an internal reporting, investigation, and protection mechanism for whistleblowers;
8. Continue to conduct internal audits and immediately take corrective measures and make adjustments for issues found; and
9. When planning the scope and items of anti-bribery and corruption audits, the internal auditors of an enterprise may take the following into account:
   - Evaluate the design and effectiveness of the enterprise's existing bribery and corruption controls and propose improvements;
   - Identify the bribery risk as a risk assessment item in the annual internal audit plan and list related audit items; and
   - Conduct continuous audits on expense accounts with higher bribery risks, including service fees, entertainment expenses, travel expenses, petty cash, expedite fees (or facilitating expenses), and donations, identify the types of other non-routine expenses, and confirm whether a sound payment management system is put in place.

Conclusion

The compliance trends in and developments of anti-fraud, anti-money laundering, and anti-bribery and corruption are separately explained above. These three compliances trends interconnect and may affect each other. For example, the culture of corruption may lead to fraudulent activity and money laundering; fraud may take place due to a corrupt culture, and criminal proceeds may be processed through money laundering; as money laundering produces a culture of corruption, it may also trigger fraudulent activity within an organization. Therefore, mitigating financial crime risks effectively is not just for the purpose of compliance. For financial institutions, it is a preemptive measure worth taking to combat financial crimes.

Overview of M&A trends in Taiwan's banking industry

Vincent Chang
Head of Advisory
Head of Private Equity
KPMG in Taiwan

The Establishment of Financial Holding Companies Has Driven Bank Mergers and Acquisitions

Taiwan's banking industry has undergone several mergers over the past two decades. Financial holding companies have been established successively since 2001, setting out the first wave of bank mergers. However, this wave of bank mergers did not solve the over-banking problem as expected. There are two reasons for this: First, when banks became part of financial holding companies, they were only subsidiaries within the group except for a few cases (e.g., the merger of Mega International Commercial Bank and International Commercial Bank of China). In fact, the number of banks remained the same; besides, branch licenses were like securities according to the government's policy, so it's only natural that financial holding companies should not abolish branches after mergers and acquisitions. Therefore, this wave of bank mergers had a limited impact. Following the establishment of financial holding companies, the heat of mergers between financial holding companies and banks waned quickly. The main reason was that only a few banks were left independent of financial holding companies. The acquirers became more cautious while the sellers were waiting for good prices.

(Schedule 1 16 Financial Holding Companies and Their Subsidiaries)

(Schedule 2 Financial Institutions Merged and Acquired by Financial Holding Companies)

It's worth mentioning that from 2006 to 2007, a number of private equity funds were optimistic about the mergers in Taiwan's banking industry. They purchased controlling shares from the major shareholders of the banks and even acquired ownership, making an attempt to increase the business scale through bank mergers. A number of private equity funds investing in Taiwanese banks included Shinsei Bank investing in Jih Sun Financial Holding Co., Ltd., GE Capital and SAC acquiring Cosmos Bank, Longreach acquiring EnTie Bank, and the Carlyle Group acquiring Ta Chong Commercial Bank CO., Ltd.

Affected by the financial crisis of 2007 to 2008, Taiwan's banking industry turned to adopt generally conservative business strategies, making bank mergers and acquisitions even scarce. With the gradual recovery of the world economy, financial holding companies once again began to review their competitiveness, in an attempt to expand their business presence; private equity funds also made their exit one after another, leading to another wave of mergers and acquisitions. For example, China Development Financial Holding Co., Ltd. merged with Cosmos Bank (due to GE Capital's exit) in 2014 and obtained its business license and business activities to reinforce the group's commercial banking services. In 2016, Yuanta Financial Holding Co., Ltd. acquired Ta Chong Commercial Bank Co., Ltd. (from the Carlyle Group) to strengthen its existing banking services.

Mergers and Acquisitions of Overseas Banks

In recent years, the government has actively promoted the New Southbound Policy, encouraging domestic banks to set up branches or offices in Southeast Asian countries; however, domestic banks operate in Southeast Asian countries merely to serve Taiwanese businesses. With such a conservative business strategy, they are unable to tailor financial services to the growing power of consumers and domestic demand in Southeast Asian countries. As a result, overseas operations are limited in terms of business presence and scale. In the face of South Korea, Japan, and other countries that actively tapping into emerging markets in Southeast Asia with a strategic goal of building extensive presence, the government has revised the New Southbound Policy as appropriate to encourage domestic banks to participate in equity or mergers and acquisitions of overseas banks. With the government's support, domestic banks have successfully gotten footholds in the Philippines, Malaysia, Cambodia, Japan, South Korea, and even Europe and the United States. Unfortunately, no government-owned bank has successfully held any equity interest in overseas banks or acquired overseas banks as of today.

(Schedule 3 Overseas M&As and Equity Participation of Banks in Taiwan)

Mergers and Acquisitions of Domestic Banks in Recent Years

The banking industry is capital-intensive, so banks with large asset scales have competitive advantages. The profitability often positively correlates with the asset scale. In order to improve operating results, further consolidation in the banking industry is inevitable. In view of this, the FSC made an announcement in September 2018, specifying several indicators that meet the conditions for mergers and acquisitions. The FSC hoped that banks or financial holding companies with a better structure would merge to help the domestic

banking industry stay competitive in the international arena.
(Schedule 4 FSC M&A Index)

At the end of 2020, Fubon Financial Holding Co., Ltd. announced a take-over bid for more than 50% of Jih Sun Financial Holding Co., Ltd.'s equity, marking the first merger between financial holding companies in the history of Taiwan's financial services industry. The motive for the merger was to respond to the government's policy; economies of scale were also the main consideration. After the merger, Fubon Financial Holding Co., Ltd. will have the largest number of bank branches and a good chance of securing the second-largest brokerage market share in Taiwan. IBF Financial Holdings Co., Ltd. also announced in February 2021 that it authorized the chairman of the board to negotiate terms for the "investment business," which is generally believed to be EnTie Bank. The motive for the merger is simply because IBF Financial Holdings Co., Ltd. is the only financial holding company that does not yet have a bank. It is imperative for IBF Financial Holdings Co., Ltd. to expand the business scale and stay competitive through bank mergers. Although consolidation in the financial services industry is inevitable, it is worth mentioning that the target companies of bank mergers and acquisitions in recent years (e.g., Cosmos Bank, Ta Chong Commercial Bank Co., Ltd., and Jih Sun Financial Holding Co., Ltd.) are previously owned by private equity funds. After the private equity funds' exit, the domestic financial services industry is expected to see a certain degree of difficulty in consolidation if financial institutions continue to "think it better to be the head of a dog than the tail of a lion."

Challenges Facing Taiwan's Banking Industry

In recent years, financial technology companies (FinTechs) and big technology companies (BigTechs) have expanded their business into financial services such as new payment tools and online lending platforms, resulting in market share erosion in traditional banking. New payment tools such as Paypal and Square have risen as e-commerce transactions ballooned in the wake of the COVID-19 pandemic and have seriously affected existing e-payment systems (e.g., VISA and MasterCard). How to integrate new technologies with existing services in response to the ever-changing market is now a top priority for the financial services industry. In fact, the FSC approved the establishment of three internet-only banks in the second half of 2019 in hopes of leading traditional banks to accelerate financial innovation.

Future M&A Trends in Taiwan's Banking Industry

As the COVID-19 pandemic gradually subsides, Taiwan's financial service providers will continue improving their operating results and, at the same time, expanding their business scales through mergers and acquisitions at home and abroad in order to add acquired technologies to their competitive advantages.In terms of domestic mergers and acquisitions, to reduce operating costs by economies of scale has become an imperative given highly homogeneous bank services and the difficulty in developing new services. Consolidation has also improved the competitiveness of financial holding companies to a certain extent. In the financial services industry where mergers between financial holding companies stay, no doubt banks independent of financial holding companies will have more difficulty in operating their business without group resources. As for overseas mergers and acquisitions, more M&A cases can be expected if domestic banks overcome common problems (e.g., unfamiliarity with the M&A process and regulations, lack of thorough due diligence, and lack of post-merger integration plans).

Schedule 1 16 Financial Holding Companies and Their Subsidiaries

Date of Founding	Financial Holding Company	Major Subsidiaries	
1999	Hua Nan Financial Holdings Co., Ltd.	Hua Nan Commercial Bank, Ltd. Hua Nan Securities Co., Ltd.	
2001	Fubon Financial Holding Co., Ltd.	Fubon Insurance Co., Ltd. Fubon Life Insurance Co., Ltd.	Taipei Fubon Commercial Bank Co., Ltd. Fubon Securities Co., Ltd.
2001	China Development Financial Holding Co., Ltd.	CDIB Capital Group KGI Securities Co., Ltd.	KGI Bank China Life Insurance Co., Ltd.
2001	Cathay Financial Holdings Co., Ltd.	Cathay Life Insurance Company, Ltd. Cathay United Bank	
2002	CTBC Financial Holding Co., Ltd.	CTBC Bank Co., Ltd. Taiwan Life Insurance Co., Ltd.	
2002	SinoPac Financial Holdings Co., Ltd.	Bank SinoPac Co., Ltd. SinoPac Securities Corporation	
2002	E.Sun Financial Holding Co., Ltd.	E.Sun Commercial Bank, Ltd.	
2002	Yuanta Financial Holding Co., Ltd.	Yuanta Securities Co., Ltd. Yuanta Commercial Bank Yuanta Securities Finance Co., Ltd.	Yuanta Futures Co., Ltd. Yuanta Life Insurance Co., Ltd.
2002	Taishin Financial Holding Co., Ltd.	Taishin International Bank Taishin Securities Co., Ltd	
2002	Shin Kong Financial Holding Co., Ltd.	Shin Kong Life Insurance Co., Ltd. Shin Kong Commercial Bank Masterlink Securities Corp	
2002	Mega Financial Holding Co., Ltd.	Mega International Commercial Bank Mega Securities Co., Ltd. Mega Bills Finance Co., Ltd.	
2002	Jih Sun Financial Holding Co., Ltd.	JihSun Securities Co., Ltd. Jih Sun International Bank	
2002	IBF Financial Holdings Co., Ltd.	International Bills Finance Corporation IBF Securities Co., Ltd. IBF Venture Capital Co., Ltd.	
2003	First Financial Holding Co., Ltd.	First Commercial Bank First Life Insurance Co., Ltd.	
2008	Taiwan Financial Holdings Co., Ltd.	Bank of Taiwan Bank Taiwan Life Insurance Co., Ltd.	
2011	Taiwan Cooperative Financial Holding Co., Ltd.	Taiwan Cooperative Bank Taiwan Cooperative Bills Finance Corporation BNP Paribas Cardif TCB Life Insurance Company Ltd.	

Note: Only subsidiaries accounting for more than 1% of consolidated total assets as of the third quarter of 2020 are listed.
Source: Market Observation Post System and official websites of financial holding companies

Schedule 2 Financial Institutions Merged and Acquired by Financial Holding Companies

Financial Holding Company	Date of Founding	Financial Institutions Merged and Acquired by Financial Holding Companies	Financial Institutions Invested in or Merged and Acquired by Subsidiaries of Financial Holding Companies
Hua Nan Financial Holdings Co., Ltd.	1999	N/A	N/A
Fubon Financial Holding Co., Ltd.	2001	2002-Fubon Asset Management Company Limited 2002-Taipei Bank 2004-International Bank of Asia Limited 2009-ING Antai Life Insurance Co., Ltd. (merged into Fubon Life Insurance Co., Ltd. in 2009) 2013-First Sino Bank 2021-Jih Sun Financial Holding Co., Ltd.	2008-Fubon Bank (Hong Kong) Limited invested in Xiamen Bank's shares. 2015-Fubon Life Insurance Co., Ltd. acquired a 48% interest in Hyundai Life Insurance Co., Ltd., a 20% interest in CITIC Capital Holdings Limited, and a 6.53% interest in China United Insurance Group Company Limited; Fubon AMC, Ltd. invested in 25% of CITIC Futong Financial Leasing Co., Ltd.'s shares; Fubon Securities Co., Ltd. acquired a 40% interest in Huishang Futures Co., Ltd. 2016-Fubon AMC, Ltd. invested in FundRich Securities Co., Ltd. 2017-Fubon Insurance Co., Ltd. invested in WeSure Internet Insurance Limited Company's shares. 2018-Taipei Fubon Commercial Bank Co., Ltd. invested in Line Pay Taiwan Limited's shares. 2019-Fubon Life Insurance Co., Ltd. acquired a 4.2% interest in Woori Financial Group Inc. Taipei Fubon Commercial Bank Co., Ltd. acquired a 25.1% interest in Line Bank, an internet-only bank.
China Development Financial Holding Co., Ltd.	2001	2002-United International Securities Limited 2002-First Taiwan Securities Inc. 2013-KGI Securities Co., Ltd. 2014-Cosmos Bank 2017-China Life Insurance Co., Ltd. (25.33%) 2020-China Life Insurance Co., Ltd. (21.13%)	2014-KGI Securities Co., Ltd. acquired AmFraser Securities Pte. Ltd. (n.k.a. KGI Securities (Singapore) Pte. Ltd.) 2019-KGI Bank acquired a 7% interest in Next Bank, invested RMB200.4 million in JiangSu Suyin KGI Consumer Finance Co. Ltd.
Cathay Financial Holdings Co., Ltd.	2001	2002-Tong Tai Insurance (n.k.a. Cathay Century Insurance Co., Ltd.) 2002-United World Chinese Commercial Bank 2005-Lucky Bank Taiwan Inc. 2011-Cathay Conning Asset Management Limited, a joint venture founded with Conning Holdings Corp. in Hong Kong	2014-Cathay Life Insurance Company, Ltd. acquired Conning& Company Inc. 2014-Rizal Commercial Bank (RCBC) (21.57%) 2015-Cathay Life Insurance Company, Ltd. invested in Bank Mayapada's shares (40%); Cathay Securities Corporation acquired Horizon Securities (Hong Kong) Limited. 2017-Cathay United Bank and Cathay Life Insurance Company, Ltd. acquired Bank of Nova Scotia Berhad, a branch of Scotiabank in Malaysia.

Schedule 2 Financial Institutions Merged and Acquired by Financial Holding Companies (Continued)

CTBC Financial Holding Co., Ltd.	2002	2002-CTBC Insurance Brokers Co., Ltd., CTBC Securities Co., Ltd., CTBC Security Co., Ltd. 2011-MetLife Taiwan Insurance Co., Ltd. 2012-Truswell Securities Investment Trust Co., Ltd. (98.6%) 2015-China CITIC Bank International Limited, Taiwan Life Insurance Co., Ltd.	2003-CTBC Bank Co., Ltd. acquired Grand Commercial Bank. 2004-CTBC Bank Co., Ltd. acquired Fengshan Credit Cooperative in Kaohsiung County. 2007-CTBC Bank Co., Ltd. acquired Enterprise Bank of Hualien. 2013-CTBC Life Insurance Co., Ltd. acquired Manulife (International) Limited, Taiwan Branch 2014-CTBC Bank Co., Ltd. acquired Tokyo Star Bank, Ltd. 2016-LH Financial Group Public Company Limited, LHFG (35.6%, increasing to 46.6% in 2021); Taiwan Life Insurance Co., Ltd. merged with CTBC Life Insurance Co., Ltd., and Taiwan Life Insurance Co., Ltd. was the surviving company. 2020-CTBC Bank Co., Ltd. invested in LINE Bank's shares.
SinoPac Financial Holdings Co., Ltd.	2002	2003-Huaxin Antai Credit Card Co., Ltd. 2005-International Bank of Taipei	2009-SinoPac Leasing Corporation invested in Yangzhou Scientific Innovation Guarantee Limited Company's shares. 2012-SinoPac Securities Corporation acquired Pacific Securities Co., Ltd. 2015-SinoPac Securities Corporation acquired BEA Wealth Management (Taiwan) Ltd. 2016-SinoPac Securities Corporation acquired the assets and business activities of IBT Securities Co., Ltd.
E.Sun Financial Holding Co., Ltd.	2002	2003-E.SUN Securities Investment Trust Co., Ltd. (sold in 2006), E.SUN Insurance Brokers Co., Ltd. (merged with E.SUN Commercial Bank, Ltd. in 2016)	2003-E.SUN Securities Investment Trust Co., Ltd., acquired through stock swap 2004-E.SUN Commercial Bank, Ltd. generally assumed the assets, liabilities, and business activities of Kaohsiung Business Bank. 2008-E.SUN Securities Investment Trust Co., Ltd., sold to Schroders plc 2011-E.SUN Commercial Bank, Ltd. generally assumed the assets, liabilities, and business activities of Zhunan Credit Cooperative. 2012-E.SUN Commercial Bank, Ltd. generally assumed the assets, liabilities, and business activities of Chiayi Fourth Credit Cooperative. 2013-E.SUN Commercial Bank, Ltd. invested in 70% of Union Commercial Bank Plc.'s shares, later increasing its interest to 75% in 2015 and to 100% in 2017. 2016-E.SUN Commercial Bank, Ltd. invested in 58.34% of Bankpro E-Service Technology Co., Ltd.'s outstanding common shares, having a 61.67% interest in combination of the original shares.

Schedule 2 Financial Institutions Merged and Acquired by Financial Holding Companies (Continued)

Yuanta Financial Holding Co., Ltd.	2002	2011-Polaris Securities 2014-New York Life Insurance Company 2016-Ta Chong Commercial Bank Co., Ltd., KKTrade Securities Company Limited	2014-Yuanta Polaris Securities Co., Ltd. acquired a controlling interest in Tongyang Securities Inc.; Yuanta Commercial Bank acquired Tong Yang Savings Bank (Philippines). 2015-Yuanta Polaris Securities Co., Ltd. acquired PT AmCapital Indonesia. 2016-Yuanta Commercial Bank acquired Hanshin Savings Bank. 2017-Yuanta Securities Finance Co., Ltd. and Yuanta Securities Co., Ltd. acquired a 99.95% interest in First Securities Joint Stock Company (Vietnam), later increasing their interest to 100% in 2018. 2018-Yuanta Commercial Bank merged with Ta Chong Commercial Bank Co., Ltd.
Taishin Financial Holding Co., Ltd.	2002	2002-Taiwan Securities Co., Ltd. (sold in 2009), Taishin Bills Co., Ltd. 2005-Changhua Bank (22.55%) (sold in 2014) 2010-Dongxing Securities Co., Ltd., IBT Securities Investment Trust Co., Ltd. 2011-Franklin Insurance Broker Co., Ltd. 2020-Prudential Life Insurance Company of Taiwan Inc.	2004-Taishin International Bank generally assumed Hsinchu Tenth Credit Cooperative. 2010-Taishin Bills Co., Ltd. merged into Taishin International Bank; Taishin Securities Investment Trust Co., Ltd. merged with IBT Securities Investment Trust Co., Ltd. 2017-Taishin Securities Co., Ltd. merged with Ta Chong Securities Co., Ltd.
Shin Kong Financial Holding Co., Ltd.	2002	2004-United-Credit Commercial Bank 2005-Makoto Bank 2006-Masterlink Securities Corp. (becoming a wholly-owned subsidiary in 2018)	.2020-Shin Kong Life Insurance Co., Ltd. invested in DingCheng Life Insurance Company Ltd.
Mega Financial Holding Co., Ltd.	2002	2002-Chung Hsing Bills Finance Corporation, Barits Securities Corporation, International Commercial Bank of China, Chung Kuo Insurance Co., Ltd. 2003-Central Securities Investment Trust Corporation 2005-Chung Yin Insurance Agency Company; Taiwan Business Bank (5%~26%) (fully sold in 2019) 2006-International Investment Trust Co., Ltd.	2006-Chiao Tung Bank was merged into International Commercial Bank, which was then renamed Mega International Commercial Bank Co., Ltd. 2007-Mega Investment Trust Corp. was merged into International Investment Trust Co., Ltd., which was then renamed Mega International Investment Trust Co., Ltd. 2019-Mega International Commercial Bank Co., Ltd. initiated the establishment of Next Bank (25.1%)
Jih Sun Financial Holding Co., Ltd.	2002	N/A	2002-JihSun Securities Co., Ltd. merged and acquired Ever Trust Securities Company Limited, Hemei Securities Co., Ltd., and Toufen Securities Co., Ltd. 2005-Jih Sun International Bank acquired the Investment Trust Department of Taiwan Land Development Trust and Investment Company.

Schedule 2 Financial Institutions Merged and Acquired by Financial Holding Companies (Continued)

IBF Financial Holdings Co., Ltd.	2002	2002-IBF Securities Co., Ltd., Concourse Securities Co., Ltd., and Dadong Securities Co., Ltd. 2019-Rakuten Bank, Ltd., an internet-only bank (49%), established with Rakuten Group as a Joint venture	2010-IBF Securities Co., Ltd. invested in 20% of Waterland Securities Co., Ltd.'s shares, later increasing its interest to 100% in 2011 and disposing of a 80% interest in 2019.
First Financial Holding Co., Ltd.	2003	2003-Firstrade Securities Inc., MSIG Mingtai Insurance Co., Ltd. (sold in 2005), and Jianhong Securities Investment Trust Co., Ltd. 2007-First Aviva Life Insurance Co., Ltd., established with Aviva plc as a joint venture (51%) (becoming a wholly-owned subsidiary in 2017)	2004-First Securities Inc. merged and acquired First Worldsec Securities Limited. 2011-First Commercial Bank invested in Hua Nan Financial Holdings Co., Ltd.'s shares.
Taiwan Financial Holdings Co., Ltd.	2008	N/A	N/A
Taiwan Cooperative Financial Holding Co., Ltd.	2011	N/A	N/A

Source: Official websites of financial holding companies and Capital IQ

Schedule 3 Overseas M&As and Equity Participation of Banks in Taiwan

Year	Domestic Bank	Local Bank/Partner	Joint Venture
Joint Venture			
2000	Cathay United Bank	Vietinbank, a state-owned Vietnamese bank	Indovina Bank Limited (Vietnam's first joint venture bank)
2018	CTBC Bank Co., Ltd.	Gome Holdings Group and JinYuan Investment Group	Xiamen Jinmeixin Consumer Finance Co., Ltd.

Year	Domestic Bank	Local Bank/Partner	Joint Venture
Equity Participation			
2008	Fubon Financial Holding Co., Ltd. (Fubon Bank (Hong Kong) Limited)	Xiamen Bank in China	19.95%
2014	Cathay Financial Holdings Co., Ltd. (Cathay Life Insurance Company, Ltd.)	Rizal Commercial Banking Corp. (RCBC) in the Philippines (Rizal Commercial Banking Corp, RCBC)	20%
2015	Cathay Financial Holdings Co., Ltd. (Cathay Life Insurance Company, Ltd.)	PT Bank Mayapada Internasional in Indonesia (Bank Mayapada)	40%

Schedule 3 Overseas M&As and Equity Participation of Banks in Taiwan (Continued)

Year	Domestic Bank	Local Bank/Partner	Joint Venture
Equity Participation			
2016	CTBC Financial Holding Co., Ltd. (CTBC Bank Co., Ltd.)	LH Financial Group Public Company Limited in Thailand	35.62%

Year	Domestic Bank	Local Bank/Partner	Joint Venture
M&A			
2004	Fubon Financial Holding Co., Ltd. (Fubon Life Insurance Co., Ltd.)	International Bank of Asia (IB) (Later renamed Fubon Bank (Hong Kong) Limited)	100%
2007	Industrial Bank of Taiwan	EverTrust Bank in the U.S. (EverTrust Bank)	100%
2009	Fubon Financial Holding Co., Ltd.	Chinfon Commercial Bank in Vietnam (Chinfon Commercial Bank)	100%
2014	Fubon Financial Holding Co., Ltd.	First Sino Bank in China	100%
2013	E.Sun Financial Holding Co., Ltd.	Union Commercial Bank PLC (UCB) in Cambodia (Union Commercial Bank PLC, UCB)	100%
2014	Cathay Financial Holdings Co., Ltd. (Cathay United Bank)	Singapore Banking Corp Ltd (SBC) in Cambodia (Singapore Banking Corp Ltd, SBC)	100%
2014	CTBC Bank Co., Ltd.	The Tokyo Star Bank, Limited in Japan (The Tokyo Star Bank, Limited)	100%
2015	CTBC Bank Co., Ltd.	Citic Bk Intl (China) Ltd in China Citic Bk Intl(China) Ltd	100%
2015	Yuanta Commercial Bank	Tong Yang Savings Bank in the Philippines (Tong Yang Savings Bank)	100%
2016	Yuanta Commercial Bank	Hanshin Saving Bank in South Korea (Hanshin Saving Bank)	100%

Source: Taiwan Academy of Banking and Finance - Trends in and Strategies for International Joint Ventures, Equity Participation, and M&As of Taiwan's Financial Institutions

Schedule 4 FSC M&A Index

Condition	Description
Capital adequacy	After obtaining the controlling interest, a financial holding company must maintain a regulatory capital adequacy ratio, with the double leverage ratio less than 125%; a bank must maintain a regulatory capital adequacy ratio concerning the establishment of foreign branches, with the total amount of investment less than 40% of its net worth.
Operating ability	The audited consolidated statements for the past three years have no accumulated losses, and the average return on assets (ROA) and return on equity (ROE) before tax are not lower than the top two-thirds of financial holding companies or banks in the industry.
International presence	A subsidiary of a financial holding company must have operations (excluding offices) in more than three countries or regions, with one of the operations having run for more than five years; a bank must have branches or subsidiaries in more than three countries or regions, with one of its branches or subsidiaries having run for more than five years.
Corporate social responsibility	A financial holding company or a bank has ranked top 35% in the corporate governance evaluation for the past three years, with concrete efforts made to fulfill its social responsibility (e.g., active participation in social or public welfare activities, consumer protection, labor-management relations and employee benefits, environmental sustainability, and corporate social responsibility policy).

Source: FSC, press release on Sep. 11, 2018, Advance Announcement of the "Regulations Governing the Investing Activities of a Financial Holding Company" to Encourage the Merger of Financial Institutions

Financial Institutions Qualified for Non-consensual M&As	2018	2020
Financial holding companies	Cathay Financial Holdings Co., Ltd., Fubon Financial Holding Co., Ltd., E.Sun Financial Holding Co., Ltd., CTBC Financial Holding Co., Ltd., and Taishin Financial Holding Co., Ltd.	Yuanta Financial Holding Co., Ltd., Fubon Financial Holding Co., Ltd., E.Sun Financial Holding Co., Ltd., CTBC Financial Holding Co., Ltd., and Taishin Financial Holding Co., Ltd.
Banks	Cathay United Bank, Taipei Fubon Commercial Bank Co., Ltd., E.Sun Commercial Bank, Ltd., CTBC Bank Co., Ltd., Taishin International Bank, and The Shanghai Commercial & Savings Bank, Ltd.	Cathay United Bank, Taipei Fubon Commercial Bank Co., Ltd., CTBC Bank Co., Ltd., E.Sun Commercial Bank, Ltd., Taishin International Bank, and Yuanta Commercial Bank

Source: https://ctee.com.tw/news/finance/387116.html

Financial performance of domestic banks in Taiwan

Banks		Income Statement									
		Net Interest Income		Net Fee Income		Other Income		Other Expenses		Income Before Tax	
		2019	2020	2019	2020	2019	2020	2019	2020	2019	2020
1	Bank of Taiwan	26,675	27,481	4,844	4,633	265,228	257,005	283,690	276,845	13,057	12,274
2	Land Bank of Taiwan	28,113	26,395	2,621	2,529	7,345	10,254	25,078	28,250	13,001	10,929
3	Taiwan Cooperative Bank	34,155	33,740	6,546	6,240	19,231	22,533	41,033	45,275	18,900	17,238
4	First Commercial Bank	27,832	28,534	7,858	7,328	78,200	107,714	91,184	125,220	22,706	18,356
5	Hua Nan Commercial Bank, Ltd.	25,131	24,326	7,581	7,213	19,688	22,627	34,726	39,688	17,675	14,479
6	Chang Hwa Commercial Bank	22,071	18,442	4,615	4,514	17,877	24,980	31,055	39,623	13,508	8,312
7	The Shanghai Commercial & Savings Bank, Ltd.	12,738	11,424	3,123	3,079	12,237	14,629	11,540	14,555	16,559	14,576
8	Taipei Fubon Commercial Bank Co., Ltd.	23,325	25,466	12,672	12,298	59,270	53,687	71,724	70,223	23,542	21,226
9	Cathay United Bank	32,649	32,109	16,927	16,162	67,382	91,486	91,656	114,736	25,303	25,022
10	The Export-Import Bank of the Republic of China[Note 1]	1,467	1,468	57	64	522	584	1,341	1,372	706	746
11	Bank of Kaohsiung	2,764	2,606	488	432	943	1,408	3,308	3,560	887	888
12	Mega International Commercial Bank	33,434	29,324	6,536	6,461	17,785	14,674	29,440	27,161	28,316	23,298
13	Citibank Taiwan Limited	14,023	11,132	9,553	8,576	7,366	6,355	16,271	16,304	14,672	9,759
14	O-Bank Co., Ltd.	1,958	1,915	809	584	7,669	8,104	9,224	9,370	1,210	1,233
15	Taiwan Business Bank	16,887	16,070	3,014	2,815	6,006	5,875	17,926	19,402	7,980	5,358
16	Standard Chartered Bank (Taiwan)	4,302	4,985	4,864	4,565	6,503	5,754	12,344	12,525	3,324	2,780
17	Taichung Commercial Bank	7,838	7,781	1,921	2,116	2,204	2,474	6,904	7,691	5,060	4,681
18	King's Town Bank	4,604	5,017	1,647	1,858	2,373	3,378	4,778	4,021	3,846	6,231
19	HSBC Bank (Taiwan) Limited	-36	3,017	4,671	4,119	10,155	4,600	10,142	8,060	4,647	3,676
20	Taipei Star Bank	822	948	107	120	178	114	872	930	237	251
21	Hwatai Bank	1,461	1,337	274	235	278	361	1,712	1,592	302	342
22	Shin Kong Commercial Bank	11,720	11,246	3,446	3,275	9,985	13,613	18,462	21,463	6,688	6,670
23	Sunny Bank, Ltd.	5,563	5,750	1,165	1,099	989	1,116	4,986	5,189	2,731	2,777
24	Bank of Panhsin	2,466	2,550	917	896	552	699	2,924	3,022	1,012	1,125
25	Cota Bank	2,537	2,458	274	226	205	74	2,094	1,903	922	855
26	Union Bank of Taiwan	6,532	7,667	2,777	2,869	4,325	4,013	9,689	10,662	3,945	3,887
27	Far Eastern International Bank	5,401	5,979	3,031	2,802	12,595	8,932	16,799	14,879	4,229	2,834
28	Yuanta Commercial Bank	12,999	12,171	5,672	4,867	14,266	20,928	21,457	29,948	11,481	8,019
29	Bank SinoPac Co., Ltd.	14,258	16,391	4,665	6,598	40,332	43,429	47,554	55,374	11,699	11,044
30	E.Sun Commercial Bank, Ltd.	18,240	19,560	17,506	17,895	41,248	47,375	54,263	66,020	22,732	18,810
31	KGI Bank	6,745	7,609	1,771	1,832	64,677	60,089	68,470	64,807	4,723	4,724
32	DBS Bank (Taiwan) , Ltd.	5,095	5,273	2,899	3,223	2,080	962	9,547	8,516	527	941
33	Taishin International Bank	18,318	20,280	11,458	11,846	59,040	52,664	75,436	70,734	13,381	14,056
34	Jih Sun International Bank	2,748	2,574	1,113	1,140	1,331	1,334	4,053	3,964	1,139	1,083
35	EnTie Commercial Bank	3,661	3,426	1,774	1,680	2,164	2,266	5,141	4,811	2,458	2,561
36	CTBC Bank Co., Ltd.	39,893	41,341	31,942	32,904	101,348	102,110	135,556	144,444	37,628	31,910
37	Rakuten International Commercial Bank Co., Ltd.[Note 2]	-	51	-	-	-	-	-	324	-	-274

Note 1: The Export-Import Bank of the Republic of China is a credit bank in Taiwan and does not process deposits and consumer loans.
Note 2: Rakuten International Commercial Bank Co., Ltd. obtained a business license as a domestic internet-only bank and tried a pilot scheme in December 2020.

Unit: NTD million

Balance Sheet									
Total Assets		Loan		Loan Loss Provision		Deposit		Equity	
2019	2020	2019	2020	2019	2020	2019	2020	2019	2020
5,125,565	5,399,031	2,721,288	2,913,875	45,143	44,666	3,971,769	4,172,465	378,548	383,048
3,003,509	3,115,808	2,018,222	2,114,413	31,727	34,550	2,591,896	2,688,353	168,163	175,350
3,504,565	3,898,350	2,210,012	2,293,946	27,201	29,001	2,898,552	3,271,646	226,871	241,389
3,095,754	3,422,034	1,772,896	1,914,353	22,414	23,728	2,386,594	2,694,803	218,948	219,313
2,678,195	3,068,786	1,690,497	1,805,616	20,394	21,318	2,225,703	2,528,365	197,650	201,984
2,125,981	2,303,458	1,429,938	1,481,728	17,296	18,703	1,756,125	1,909,148	162,232	165,064
1,291,074	1,355,487	731,826	769,199	9,558	9,757	989,724	1,039,397	153,295	154,469
2,637,171	2,809,453	1,297,254	1,427,906	17,193	17,992	1,951,888	2,131,853	199,680	219,121
2,882,974	3,124,395	1,513,902	1,620,594	25,983	26,846	2,292,920	2,575,542	227,563	242,297
142,295	150,750	134,065	143,027	1,721	1,972	-	-	34,194	34,789
270,718	276,223	177,241	178,203	2,089	2,044	225,805	230,223	15,506	16,294
3,313,408	3,435,439	1,882,687	1,899,057	29,282	28,857	2,438,395	2,593,118	291,795	294,640
808,655	849,485	319,284	305,879	5,770	5,662	629,736	631,773	105,970	104,723
335,251	328,853	176,407	166,100	2,426	2,183	250,581	253,374	33,257	35,556
1,747,071	1,791,909	1,146,091	1,224,295	13,341	14,326	1,503,902	1,486,552	95,489	98,857
621,672	715,772	286,861	290,523	4,719	4,632	514,146	620,847	45,916	46,498
675,484	728,239	441,016	461,753	6,573	6,335	585,030	638,511	51,292	57,367
279,534	321,018	157,618	187,843	2,268	2,941	191,815	227,153	40,932	46,581
723,885	683,325	282,504	257,018	3,702	3,330	465,806	465,143	50,297	49,094
92,616	89,463	50,232	51,182	573	588	71,463	71,134	5,585	5,595
142,412	153,904	87,933	88,695	1,368	1,193	126,871	138,008	9,938	10,387
940,684	1,040,507	604,874	652,823	7,568	8,481	815,251	910,400	65,112	69,698
524,545	605,696	344,307	388,494	4,246	4,834	460,350	525,314	32,939	36,443
252,088	270,705	167,955	181,269	2,033	2,117	219,429	241,404	16,445	17,669
170,073	179,930	113,045	121,414	1,593	1,712	153,572	162,045	11,498	12,527
691,435	748,178	390,683	429,083	4,239	4,778	539,207	613,803	56,059	60,267
656,702	681,519	390,200	388,857	5,552	5,664	537,695	582,614	47,282	48,744
1,330,367	1,434,281	750,049	772,152	12,414	11,620	1,132,988	1,241,712	121,861	123,943
1,696,270	1,983,297	991,884	1,125,822	13,513	14,607	1,377,653	1,637,211	133,623	139,695
2,430,733	2,885,979	1,428,300	1,602,852	17,050	19,985	2,045,522	2,442,181	170,974	177,692
662,361	780,258	347,076	379,955	4,465	4,996	421,424	513,574	64,172	66,986
420,827	415,638	254,994	256,040	3,562	3,395	363,133	350,736	35,064	35,682
1,954,022	2,140,384	1,155,330	1,260,733	16,253	16,425	1,461,890	1,635,916	153,353	162,188
260,840	273,365	167,649	167,712	2,120	2,146	225,858	239,631	22,416	22,976
306,180	311,555	203,625	203,474	3,527	3,173	261,125	263,365	33,694	34,519
3,475,317	3,763,490	1,848,038	1,939,815	25,774	26,565	2,744,125	3,068,834	309,985	312,300
-	9,850	-	-	-	-	-	-	-	9,781

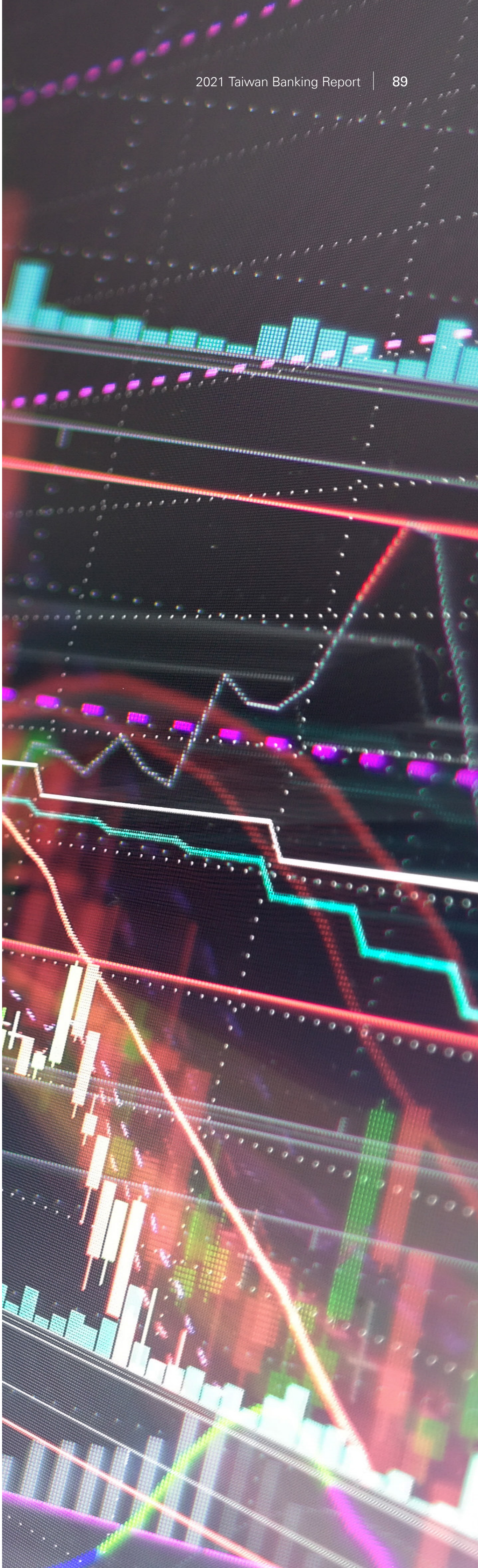
Financial performance of domestic banks in Taiwan (continued)

	Banks	Financial Ratio							
		Net Interest Income		Net Fee Income		Other Income		Other Expenses	
		2019	2020	2019	2020	2019	2020	2019	2020
1	Bank of Taiwan	67.38%	68.77%	0.52%	0.52%	0.26%	0.23%	3.79%	3.22%
2	Land Bank of Taiwan	76.64%	77.37%	0.94%	0.86%	0.43%	0.36%	7.99%	6.36%
3	Taiwan Cooperative Bank	75.31%	69.23%	1.01%	0.91%	0.56%	0.47%	8.65%	7.36%
4	First Commercial Bank	73.35%	70.16%	0.94%	0.88%	0.76%	0.56%	10.71%	8.38%
5	Hua Nan Commercial Bank, Ltd.	75.04%	70.57%	0.94%	0.85%	0.66%	0.50%	9.25%	7.25%
6	Chang Hwa Commercial Bank	80.44%	76.63%	1.05%	0.83%	0.64%	0.38%	8.47%	5.08%
7	The Shanghai Commercial & Savings Bank, Ltd.	72.98%	73.07%	1.03%	0.86%	1.33%	1.10%	11.64%	9.47%
8	Taipei Fubon Commercial Bank Co., Ltd.	65.58%	66.14%	0.92%	0.94%	0.93%	0.78%	12.21%	10.14%
9	Cathay United Bank	64.89%	61.88%	1.15%	1.07%	0.90%	0.83%	11.79%	10.65%
10	The Export-Import Bank of the Republic of China[Note 1]	-	-	1.11%	1.00%	0.53%	0.51%	2.13%	2.16%
11	Bank of Kaohsiung	77.57%-	76.52%	1.03%	0.95%	0.33%	0.32%	5.93%	5.58%
12	Mega International Commercial Bank	76.01%	72.12%	1.03%	0.87%	0.87%	0.69%	9.85%	7.95%
13	Citibank Taiwan Limited	49.78%	47.52%	1.77%	1.34%	1.85%	1.18%	14.01%	9.26%
14	O-Bank Co., Ltd.	69.43%	64.69%	0.58%	0.58%	0.36%	0.37%	3.71%	3.58%
15	Taiwan Business Bank	75.32%	81.39%	1.00%	0.91%	0.47%	0.30%	8.84%	5.51%
16	Standard Chartered Bank (Taiwan)	54.88%	46.05%	0.69%	0.75%	0.53%	0.42%	7.30%	6.02%
17	Taichung Commercial Bank	74.26%	71.33%	1.15%	1.11%	0.74%	0.67%	10.21%	8.62%
18	King's Town Bank	80.99%	81.40%	1.65%	1.67%	1.38%	2.08%	10.11%	14.24%
19	HSBC Bank (Taiwan) Limited	59.85%	54.54%	0.00%	0.43%	0.62%	0.52%	9.18%	7.40%
20	Taipei Star Bank	69.49%	71.12%	0.92%	1.04%	0.26%	0.28%	4.32%	4.49%
21	Hwatai Bank	68.23%	63.40%	1.04%	0.90%	0.21%	0.23%	3.10%	3.37%
22	Shin Kong Commercial Bank	73.27%	70.78%	1.29%	1.14%	0.74%	0.67%	10.73%	9.90%
23	Sunny Bank, Ltd.	73.87%	73.03%	1.11%	1.02%	0.55%	0.49%	8.65%	8.00%
24	Bank of Panhsin	75.62%	74.21%	0.99%	0.98%	0.41%	0.43%	6.35%	6.60%
25	Cota Bank	72.57%	73.87%	1.51%	1.40%	0.55%	0.49%	8.25%	7.12%
26	Union Bank of Taiwan	71.67%	69.13%	0.98%	1.07%	0.59%	0.54%	7.46%	6.68%
27	Far Eastern International Bank	71.54%	65.77%	0.84%	0.89%	0.66%	0.42%	9.19%	5.90%
28	Yuanta Commercial Bank	65.11%	61.25%	1.00%	0.88%	0.88%	0.58%	9.67%	6.52%
29	Bank SinoPac Co., Ltd.	71.02%	67.87%	0.89%	0.89%	0.73%	0.60%	8.91%	8.08%
30	E.Sun Commercial Bank, Ltd.	68.99%	64.81%	0.78%	0.74%	0.98%	0.71%	13.81%	10.79%
31	KGI Bank	81.30%	73.01%	1.01%	1.05%	0.70%	0.65%	7.71%	7.20%
32	DBS Bank (Taiwan) , Ltd.	69.24%	72.03%	1.17%	1.26%	0.12%	0.22%	1.56%	2.66%
33	Taishin International Bank	77.92%	76.06%	0.99%	0.99%	0.73%	0.69%	9.11%	8.91%
34	Jih Sun International Bank	73.29%	69.09%	1.09%	0.96%	0.45%	0.41%	5.19%	4.77%
35	EnTie Commercial Bank	76.63%	76.05%	1.19%	1.11%	0.80%	0.83%	7.34%	7.51%
36	CTBC Bank Co., Ltd.	66.41%	62.34%	1.20%	1.14%	1.13%	0.88%	12.42%	10.26%
37	Rakuten International Commercial Bank Co., Ltd.[Note 2]	-	-	-	0.52%	-	-2.78%	-	-2.80%

Note 1: The Export-Import Bank of the Republic of China is a credit bank in Taiwan and does not process deposits and consumer loans.
Note 2: Rakuten International Commercial Bank Co., Ltd. obtained a business license as a domestic internet-only bank and tried a pilot scheme in December 2020.

Unit: TWD million

	Credit Quality			
	Total Assets		Loan	
	2019	2020	2019	2020
	4,946	4,479	0.18%	0.15%
	3,558	3,244	0.18%	0.15%
	5,453	6,745	0.25%	0.29%
	4,249	4,500	0.24%	0.24%
	1,977	2,682	0.12%	0.15%
	4,913	5,589	0.34%	0.38%
	1,491	1,652	0.20%	0.21%
	2,424	2,317	0.19%	0.16%
	2,286	2,274	0.15%	0.14%
	2	51	0.00%	0.04%
	851	534	0.48%	0.30%
	2,614	3,977	0.14%	0.21%
	1,446	1,223	0.45%	0.40%
	1,325	705	0.75%	0.42%
	3,628	6,133	0.32%	0.50%
	399	307	0.14%	0.11%
	1,382	983	0.31%	0.21%
	23	25	0.01%	0.01%
	111	85	0.04%	0.03%
	86	69	0.17%	0.14%
	421	68	0.48%	0.08%
	1,190	1,261	0.20%	0.19%
	964	870	0.28%	0.22%
	541	479	0.32%	0.26%
	492	243	0.44%	0.20%
	573	606	0.15%	0.14%
	1,088	1,978	0.28%	0.51%
	1,107	943	0.15%	0.12%
	2,116	1,558	0.21%	0.14%
	2,662	3,045	0.19%	0.19%
	605	593	0.17%	0.16%
	1,514	1,177	0.59%	0.46%
	1,995	1,920	0.17%	0.15%
	252	418	0.15%	0.25%
	1,847	1,972	0.91%	0.97%
	3,086	4,470	0.17%	0.23%
	-	-	-	-



Financial performance of foreign and Chinese banks in Taiwan

	Banks	Income Statement									
		Net Interest Income		Net Fee Income		Other Income		Other Expenses		Income Before Tax	
		2019	2020	2019	2020	2019	2020	2019	2020	2019	2020
1	Mizuho Bank Ltd.	-3,254	-81	327	340	14,197	8,430	9,286	3,989	1,984	4,700
2	Bank of America, National Association	510	359	129	116	2,765	1,246	2,250	1,484	1,154	237
3	Bangkok Bank Public Company Ltd.	77	213	81	78	475	251	558	488	74	54
4	Metropolitan Bank and Trust Company	47	93	21	22	70	-	-	112	43	50
5	The Bank of New York Mellon Corporation	-4	2	-	-	934	753	941	688	39	109
6	United Overseas Bank	-1,533	277	39	38	2,813	-	-	5,881	945	816
7	State Street Bank and Trust Company	-58	-8	-	-	2,088	2,067	1,826	-	395	474
8	Societe Generale	-365	4	163	114	14,608	13,465	14,104	13,286	304	296
9	Australia and New Zealand Banking Group Limited, Taipei Branch	-378	281	28	35	2,012	1,317	1,501	-	160	755
10	Deutsche Bank AG	-310	63	235	476	3,934	8,436	3,516	7,742	345	1,233
11	The Bank of East Asia Ltd.	344	304	87	86	-	-	-	-	243	157
12	JPMorgan Chase Bank, N.A.	185	149	1,045	1,127	3,989	3,883	3,411	-	1,807	3,148
13	DBS Bank Ltd.	-305	1,007	76	134	2,547	2,127	1,565	2,377	754	891
14	BNP Paribas	-1,185	406	953	1,371	3,943	3,380	-	2,077	1,655	3,080
15	Standard Chartered Bank	170	238	115	81	-	-	-	-	-67	230
16	Oversea-Chinese BankingCorporation Limited	-1,473	52	67	71	3,152	2,261	1,296	1,854	450	530
17	Credit Agricole Corporate and Investment Bank	-624	104	237	259	30,005	32,172	29,293	31,556	325	979
18	UBS AG	1,221	1,128	662	953	3,066	3,726	3,090	3,243	1,861	2,564
19	ING Bank N.V.	-602	264	18	40	2,321	2,145	1,490	2,022	247	426
20	Wells Fargo Bank, National Association	3	0	6	4	-	-	-	-	83	44
21	MUFG Bank, Ltd., Taipei Branch	-999	358	189	257	11,340	16,473	8,946	15,585	1,586	1,504
22	Sumitomo Mitsui Banking Corporation	-1,538	119	304	259	5,710	3,120	3,676	-	799	1,098
23	Citibank N. A.	246	226	2	90	-	-	185	173	71	144
24	The Hongkong and Shanghai Banking Corp. Ltd.	316	271	10	59	-	-	-	-	122	240
25	Banco Bilbao VizcayaArgentaria, S.A.	-464	-61	10	16	1,346	438	967	356	-75	38
26	Natixis, Taipei Branch	-251	-21	83	79	720	449	401	456	151	52
27	Bank of ChinaLimited	743	1,048	138	55	18,979	39,356	18,422	38,549	1,438	1,909
28	Bank of Communications Taipei Branch	-277	972	523	81	2,087	2,028	2,142	2,251	191	829
29	China Construction Bank Taipei Branch	-377	4,206	-70	-66	6,716	5,734	4,068	7,550	2,201	2,325

Unit: TWD million

Balance Sheet									
Total Assets		Loan		Loan Loss Provision		Deposit		Equity	
2019	2020	2019	2020	2019	2020	2019	2020	2019	2020
623,194	624,839	305,981	286,259	3,060	2,863	345,744	227,708	14,560	17,460
86,168	182,470	43,985	25,966	376	260	35,995	118,913	8,958	8,703
37,530	30,379	22,271	19,246	1,769	1,852	12,337	13,455	4,723	4,718
11,031	10,992	8,599	8,021	90	84	500	508	782	826
3,592	2,147	52	134	40	1	8	8	1,360	1,390
211,653	209,797	35,193	49,906	261	416	11,650	7,911	5,645	6,282
10,334	12,400	-	-	-	-	-	-	2,807	2,953
47,301	33,117	3,550	7,338	37	111	1,960	3,404	2,153	2,393
181,791	203,329	42,428	46,787	466	481	50,780	81,854	20,237	17,700
83,746	95,279	5,913	6,262	59	63	32,713	32,696	1,936	2,664
28,428	25,500	24,529	21,650	245	305	18,768	15,437	2,243	2,284
57,551	76,288	6,006	1,576	60	16	38,102	47,210	2,916	3,961
206,485	253,732	92,106	138,573	921	1,386	40,633	29,983	5,002	5,799
151,140	157,894	45,577	43,492	278	266	58,305	67,204	3,699	6,391
51,058	35,388	33,395	20,587	334	207	7,828	8,538	1,532	1,682
102,854	159,558	12,820	13,360	128	134	148	503	1,820	2,277
183,686	140,866	84,623	49,695	801	454	46,858	79,926	4,587	5,420
227,447	220,307	102,395	92,781	479	539	133,488	141,161	3,633	4,265
96,610	108,883	25,697	43,201	213	403	3,584	13,099	4,045	4,364
704	724	-	-	-	-	-	-	249	292
233,781	276,387	183,246	158,747	1,761	1,587	131,751	138,388	11,649	13,007
398,560	330,375	222,331	145,644	2,192	1,920	144,412	170,830	7,377	8,318
42,492	45,862	37,341	40,428	373	404	-	-	2,695	2,797
67,495	72,121	64,190	63,456	599	581	4,500	1,000	2,426	2,476
42,726	52,939	34,916	36,024	285	236	183	3	1,048	1,755
13,924	12,580	1,116	3,210	11	32	456	-	551	594
758,036	818,339	58,763	65,446	588	654	70,363	62,107	8,651	10,169
368,407	339,385	37,389	29,414	374	294	66,177	47,482	3,103	3,729
682,958	613,517	41,382	56,375	414	721	54,820	56,539	7,907	9,806

Financial performance of foreign and Chinese banks in Taiwan (continued)

	Banks	Financial Ratio					
		Loan to Deposit Ratio		Net Interest Income to Total Assets Ratio		ROA (pre-tax)	
		2019	2020	2019	2020	2019	2020
1	Mizuho Bank Ltd.	87.61%	124.46%	-0.53%	-0.01%	0.33%	0.75%
2	Bank of America, National Association	121.15%	21.62%	0.42%	0.27%	0.96%	0.18%
3	Bangkok Bank Public Company Ltd.	166.18%	129.28%	0.20%	0.63%	0.19%	0.16%
4	Metropolitan Bank and Trust Company	1701.80%	1562.40%	0.46%	0.84%	0.42%	0.45%
5	The Bank of New York Mellon Corporation	150.00%	1662.50%	-0.12%	0.07%	1.18%	3.80%
6	United Overseas Bank	299.85%	625.58%	-0.69%	0.13%	0.43%	0.39%
7	State Street Bank and Trust Company	-	-	-0.41%	-0.07%	2.80%	4.17%
8	Societe Generale	179.23%	212.31%	-0.66%	0.01%	0.55%	0.74%
9	Australia and New Zealand Banking Group Limited, Taipei Branch	82.63%	56.57%	-0.25%	0.15%	0.10%	0.39%
10	Deutsche Bank AG	17.90%	18.96%	-0.24%	0.07%	0.27%	1.38%
11	The Bank of East Asia Ltd.	129.39%	138.27%	1.12%	1.13%	0.79%	0.58%
12	JPMorgan Chase Bank, N.A.	15.61%	3.30%	0.32%	0.22%	3.16%	4.70%
13	DBS Bank Ltd.	224.41%	457.55%	-0.15%	0.44%	0.38%	0.39%
14	BNP Paribas	77.69%	64.32%	-0.71%	0.26%	0.99%	1.99%
15	Standard Chartered Bank	422.34%	238.70%	0.37%	0.55%	-0.15%	0.53%
16	Oversea-Chinese BankingCorporation Limited	8575.68%	2629.42%	-1.23%	0.04%	0.37%	0.40%
17	Credit Agricole Corporate and Investment Bank	178.89%	61.61%	-0.35%	0.06%	0.18%	0.60%
18	UBS AG	76.35%	65.35%	0.57%	0.50%	0.87%	1.15%
19	ING Bank N.V.	711.05%	326.73%	-0.60%	0.26%	0.25%	0.41%
20	Wells Fargo Bank, National Association	-	-	0.24%	0.00%	6.59%	6.16%
21	MUFG Bank, Ltd., Taipei Branch	137.75%	113.56%	-0.41%	0.14%	0.65%	0.59%
22	Sumitomo Mitsui Banking Corporation	152.44%	84.13%	-0.43%	0.03%	0.22%	0.30%
23	Citibank N. A.	-	-	0.62%	0.51%	0.18%	0.33%
24	The Hongkong and Shanghai Banking Corp. Ltd.	1413.13%	6287.50%	0.49%	0.39%	0.19%	0.34%
25	Banco Bilbao VizcayaArgentaria, S.A.	18924.04%	1192933.33%	-1.38%	-0.13%	-0.22%	0.08%
26	Natixis, Taipei Branch	242.32%	-	-1.66%	-0.16%	1.00%	0.39%
27	Bank of ChinaLimited	82.68%	104.32%	0.09%	0.13%	0.18%	0.24%
28	Bank of Communications Taipei Branch	55.93%	61.33%	-0.09%	0.27%	0.06%	0.23%
29	China Construction Bank Taipei Branch	74.73%	98.43%	-0.06%	0.65%	0.35%	0.36%

Unit: NTD million

Credit Quality			
Non-performing Loan		Non-performing Loan Ratio	
2019	2020	2019	2020
-	-	-	-
-	-	-	-
121	483	0.50.54%	2.51%
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
95	65	0.22%	0.14%
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

KPMG financial services report

Pulse of Fintech H2 2020

This report analyzes global fintech investment trends and data in 2020 Q2,in this servey, words became action as the global pandemic made digitalization a critical priority for businesses of every shape and size. The same can be said for incumbent financial nstitutions, and most importantly, for consumers.

New cost imperatives in banking

In our recent survey of more than 200 executives at some of the world's largest banks, a clear majority said they are looking to intensify and accelerate their cost transformation programs. This urgency derives from the downturn in bank profitability globally.

Banking in the new reality

In many ways, trust in banks is at an all-time high. The key now is to retain those gains and build on them as we move through what KPMG describes as the 4 phase framework: from reaction, to building resilience, followed by recovery, and then arrival in a new reality.

Future of retail banking

These are pivotal times for retail banking. As the industry adjusts to the effects of COVID-19 and looks towards the future, the landscape is very different. Banks must negotiate a multitude of shifting factors — from changing customer behaviors to economic headwinds, intensifying competition, regulatory pressures and technological disruption.

Frontier in finance 2020

We explore the rapidly growing ESG agenda in the financial services sector by looking at the opportunities and growth areas. The growing demand for standardized measurement and disclosure; and the evolving political and regulatory landscape related to ESG.

The future is open

Our article aims to arm banks with practical insights as they seek to leverage key trends, such as digital banking, customer experience and personalization, data analytics, security and intelligent authentication, for sustainable competitive advantage and growth in the long run.

Our Services

KPMG in Taiwan provides audit, tax, risk and advisory services to businesses spanning all segments of the banking and finance industry. Our approach is based on understanding the issues affecting the marketplace. We work closely with a number of leading industry organizations and government bureaus providing support in understanding and tackling some of the major issues facing the industry.

Services overview

Audit & Assurance

- Financial Information Audit and Assurance
- Capital Market Services
- Internal Control (Audit) Services
- Accounting Project Advisory Services
- Other Assurance and Attestation

Tax & Investment

- Dispute Resolution & Controversy Services
- International tax
- Global Transfer Pricing Services
- Global Mobility Services
- Tax Management Consulting
- BEPS and VCM Advisory
- Tax Agent Services for Foreign Institutional Investors
- Family (Individual) Estate Tax Advisory Services
- China Tax Advisory Services
- Japanese Tax Services
- Investment and Registration Services
- Accounting, Tax, and Payroll Outsourcing Services
- Financial Services Industry Tax Consultation Services
- Tax Technology Services

Audit & Assurance

Management Consulting

Business Performance Services

- Strategy & Operation Business Performance
- Financial Management
- People and Change

Digital transformation

- Digital-led Customer Growth and Innovation
- Intelligent Manufacturing (Industry 4.0)
- Robotic Process Automation(RPA)

IT & Business Systems Advisory

Risk Consulting

- Financial Risk Management
- Internal Audit, Risk and Compliance
- Accounting Advisory
- Forensic Services
- Climate Change and Sustainability
- Social Enterprise Service

Deal Advisory

- Buying a Business
- Selling a Business
- Funding a Business
- Partner
- Fixing a Business

Industry Specific Consulting

- Fintech Services
- Government and Infrastructure Advisory
- Technology, Media and Telecom Advisory
- Healthcare Transformation & Strategy Services

Contact Us

Lin Wu
Deputy CEO
Head of Financial Services
KPMG in Taiwan
wu@kpmg.com.tw

Sean Chen
Sector Head of Banking
KPMG FRM Asia-Pacific regional leader
KPMG in Taiwan
schen26@kpmg.com.tw

Dannie Lee
Deputy Head of Financial Services
Sector Head of Insurance
KPMG in Taiwan
dannielee@kpmg.com.tw

home.kpmg/tw

2021 Taiwan Banking Report