With rapid growth of household mortgages, the housing bubble risk rose

According to the statistics of the PBC, personal house-purchasing loans kept hitting record highs and rose by 17.58% year on year to RBM25.75 trillion (28.60% of GDP) at the end of 2018. Moreover, household assets were highly concentrated in real estate and housing prices continued to rise, reflecting an elevated asset bubble risk in the real estate market. Given that the risk potentially transmits to the financial system, it may pose a threat to financial stability.

The potential risk of local government debt default increased

According to the statistics of the MOF of Mainland China, the outstanding amount of local government debt reached a high point of RBM18.39 trillion (20.42% of GDP) at the end of 2018, posting an increase of 11.63% year on year. Furthermore, with a serious maturity mismatch of debt, the potential default risk of local government debt elevated.

2.2 Domestic macro environment

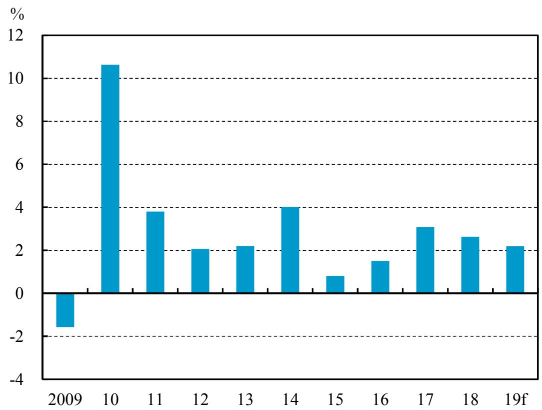
2.2.1 Domestic economic and fiscal conditions

Although the growth of exports saw a downtrend in 2018, the domestic economy grew moderately and inflation remained stable, thanks to modest momentum in private consumption and investment. Short-term external debt servicing ability remained strong on the back of a persistent surplus in the balance of payments and ample FX reserves. Although the scale of external debt slightly increased, overall external debt servicing capacity stayed robust. While the government's fiscal deficits rebounded and outstanding government public debt marginally leveled up, total government debt stayed within a manageable level.

Domestic economy grew soundly

Although the growth of Taiwan's exports experienced a slowdown in 2018, the domestic economy grew steadily, underpinned by the continual improvement of employment and modest momentum in both private consumption and investment. As a result, the annual economic growth rate in Taiwan reached 2.63%, lower than the 3.08% of the previous year (Chart 2.17).

Chart 2.17 Economic growth rate in Taiwan



Note: Figure for 2019 is forecast by CBC.
Sources: DGBAS and CBC.

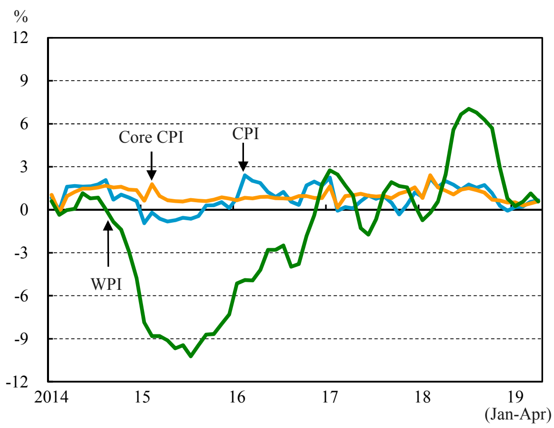
Taking a glance into 2019, the steady momentum of private consumption and the sustainable growth in private investment are expected to be the driving forces of economic growth. However, the slowdown in global demand and economic downturn in Mainland China could jeopardize Taiwan's exports. Accordingly, the Bank forecasts Taiwan's annual economic growth rate to decline to 2.13%[21] in 2019 (Chart 2.17). Moreover, since Taiwan is a small and highly open economy, the US-China trade dispute resulting in turbulence throughout the global economy and financial markets could substantially affect Taiwan's exports and economic growth. Accordingly, these factors warrant close attention (Box 1).

Domestic prices rose moderately

In 2018, affected by the rising international prices of crude oil, the annual wholesale price index (WPI) inflation rate registered 3.63%, higher than the 0.90% recorded in 2017 (Chart 2.18). The expected international prices of raw materials present a declining trend, and the DGBAS projects the annual WPI inflation rate to fall to -0.63% in 2019.[22]

The annual CPI inflation rate registered 1.35% in 2018, higher than the 0.62% of the previous year, owing to the ascending prices in fuel, cigarettes, and food away from home. Meanwhile, the core CPI inflation rate in 2018 also increased mildly and reached 1.21%, slightly higher than the 1.04% recorded in 2017 (Chart 2.18). In 2019, considering that the global prices of crude oil are expected to be lower than the previous year, along with stable domestic demand and the dissipation of effects from an earlier cigarette tax hike, the inflation outlook remains mild. Reflecting this, the Bank forecasts the annual CPI inflation rate to drop to 0.91%.[23]

Chart 2.18 Consumer and wholesale price indices (% change, yoy)



Note: Figures are measured on a year-on-year change basis.
Source: DGBAS.

---

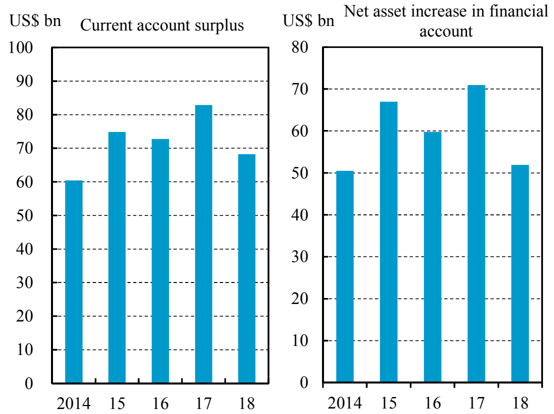
[21] See Note 2.
[22] The figures are based on a DGBAS press release on May 24, 2019.
[23] See Note 2.

Current account displayed a sustained surplus and FX reserves stayed abundant

In 2018, the merchandise trade surplus trended down, causing the annual current account surplus to shrink to US$68.3 billion, or 11.57%[24] of annual GDP, a decrease of 17.60% compared to 2017. The financial account showed continued outflows driven by the expansion of foreign securities investments by domestic investment trust funds and insurance companies, and a reduction of investments by foreign institutional investors in Taiwan's stock markets. The annual financial account posted a net asset increase of US$51.9 billion (Chart 2.19). On account of a simultaneous fall in the current account surplus and a net asset increase in the financial account, the balance of payments surplus stayed at US$12.5 billion in 2018.

With the accumulation of earnings from portfolio investment operations of FX reserve assets, FX reserves climbed to US$461.8 billion at the end of 2018, rising by 2.28% from a year earlier. At the end of April 2019, the amount of FX reserves steadily increased to US$464.8 billion.

Chart 2.19 Current account surplus and net asset increase in financial account

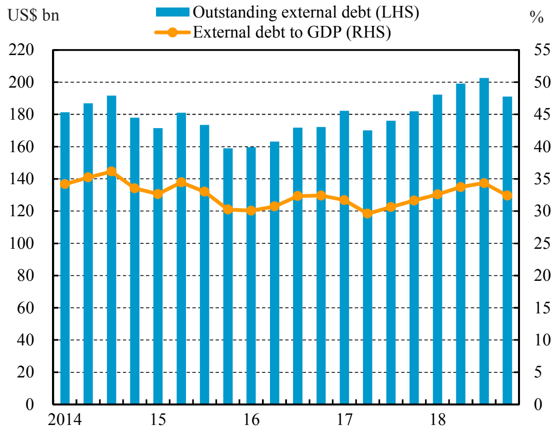


Source: CBC.

Scale of external debt expanded slightly, while debt-servicing capacity remained strong

As a result of the increase in the short-term external debt of the banking sector, Taiwan's external debt[25] showed a constantly upward trend in the first three quarters of 2018, but fell to US$191.2 billion at the end of the year (Chart 2.20), still increasing by 5.07% compared to a year earlier. Among them, private external debt

Chart 2.20 External debt servicing capacity



Sources: CBC and DGBAS.

[24] For the ratio of current account deficit to GDP, the cutoff point for risk is 3%. A country in which the reading is greater than 3% and has risen by at least 5 percentage points from the previous year is considered to be relatively high risk.

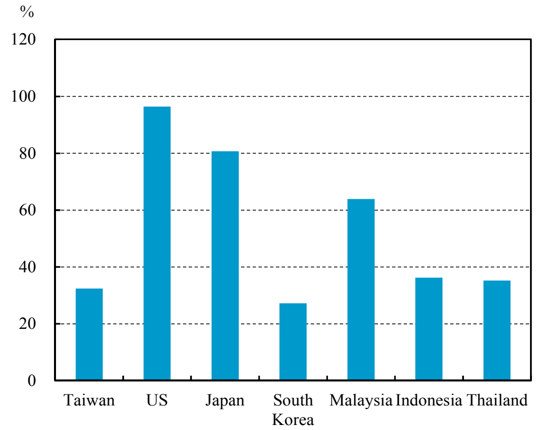
[25] External debt refers to the combined amount owed to foreign parties by Taiwan's public and private sectors, including long-term debt with a maturity of greater than one year and short-term debt with a maturity of one year or less. The term "public external debt" refers to debt that the public sector is either obligated to repay directly or has guaranteed. The term "private external debt" refers to private-sector foreign debt not guaranteed by the public sector.

registered US$191.0 billion, but public external debt only reached US$0.2 billion. Although the scale of external debt expanded slightly, Taiwan's capacity to meet external debt was still better than internationally recognized minimum levels.[26]

Compared to the US and neighboring Asian countries, Taiwan's external debt reached 32.40% of annual GDP at the end of 2018, slightly higher than that in South Korea, but much lower than those in the US, Japan, and Malaysia (Chart 2.21).

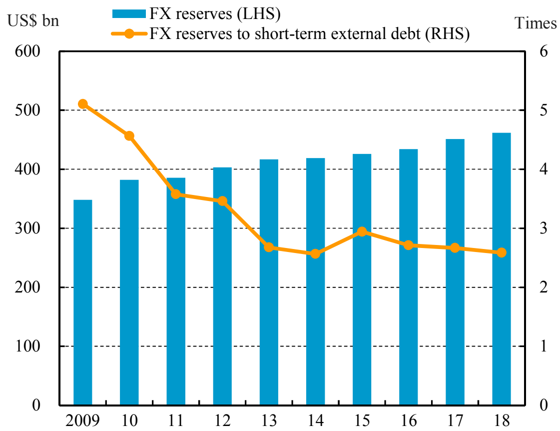
Furthermore, at the end of 2018, the ratio of FX reserves to short-term external debt fell to 2.59 times owing to a greater rise in short-term external debt. Nevertheless, it was much higher than internationally recognized minimum levels,[27] implying that Taiwan's FX reserves have a robust capacity to meet payment obligations (Chart 2.22).

Chart 2.21 External debt to GDP in selected countries



Note: Figures are as of the end of 2018.
Source: CEIC.

Chart 2.22 Short-term external debt servicing capacity



Source: CBC.

Fiscal deficits rebounded and government debt marginally increased

In 2018, the government actively promoted the *National Development Plan* and economic enhancement measures to speed up industrial innovation and structural transformation, leading to an expansion of annual expenditures for both central and local governments. As a result, fiscal deficits rebounded to NT$234.5 billion or 1.32%[28] of annual GDP (Chart 2.23).

At the end of 2018, the outstanding public debt at all levels of government[29] slightly increased to NT$6.30 trillion. However, the ratio of total public debt to annual GDP

[26] The general international consensus is that a country with a ratio of external debt to GDP lower than 50% is deemed to be relatively low risk.
[27] The general international consensus is that a country with a ratio of FX reserves to short-term external debt higher than 100% is deemed to be relatively low risk.
[28] See Note 4.
[29] The term "outstanding debt at all levels of government" as used in this report refers to outstanding non-self-liquidating debt with a maturity of one year or longer.

slightly fell to 35.38%[30] owing to a greater rise in GDP growth (Chart 2.24). In general, total government debt stayed within a manageable level.

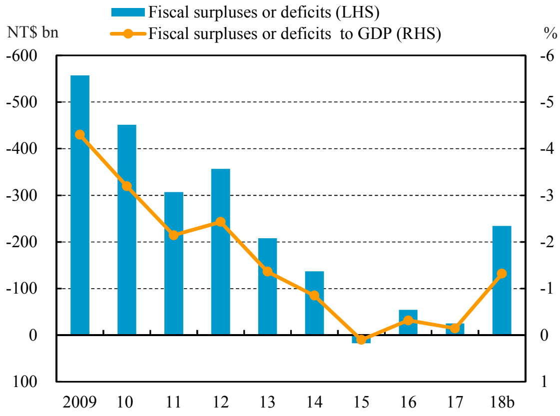
2.2.2 Corporate sector[31]

In 2018, profitability of TWSE-listed companies abated marginally, while that of OTC-listed companies enhanced markedly. Overall, listed companies saw slightly decreasing financial leverage ratios and adequate short-term debt servicing capacity. The NPL ratio for corporate loans granted by financial institutions as of the end of the year hit a record low in recent years, indicating sound credit quality of corporate loans. Nevertheless, the prospects for the corporate sector's future profits remain challenging.

Profitability of TWSE-listed companies abated marginally, while that of OTC-listed companies enhanced markedly

In 2018, profitability of TWSE-listed companies abated marginally as their average ROE declined to 14.92% from the 15.81% of the previous year. The main reason was that the profitability of the optoelectronics industry declined significantly, affected by the expansion of manufacturing capacity and the price cuts to reduce inventory by the red supply chain rivals in Mainland China. As for OTC-listed companies, the persistently strong demand for silicon wafers and passive components, coupled

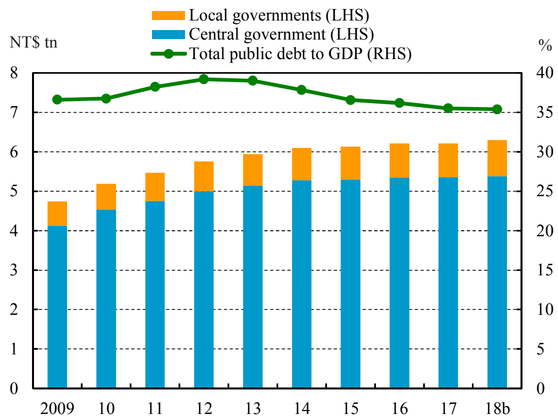
Chart 2.23 Fiscal deficits



Notes: 1. Fiscal position data include those of central and local governments.
2. Data of fiscal deficits are annual figures. Figures for 2018 are final accounts and budgets for the central government and local governments, respectively.

Sources: MOF and DGBAS.

Chart 2.24 Public debt



Notes: 1. Outstanding public debt refers to non-self-liquidating debt with a maturity of one year or longer, excluding external debt.
2. Figures for 2018 are preliminary final accounts and budgets for the central government and local governments, respectively.

Sources: MOF and DGBAS.

---

30 See Note 5.

31 Corporate sector only includes the non-financial industrial data of TWSE-listed companies and OTC-listed companies. Throughout this section, figures for listed companies are consolidated financial data; prior to 2011, the data are on the basis of generally accepted accounting principles in the Republic of China (Taiwan) (ROC GAAP), while from 2012, the data are on the basis of International Financial Reporting Standards as endorsed for use in Taiwan (TIFRSs). In light of changes in accounting treatment and presentation, readers should interpret these figures prudently when comparing statistics before and after IFRSs adoption.

with successive developments and the launch of new biotech drugs, prompted the profitability of related industries. As a result, profitability of OTC-listed companies enhanced markedly with their average ROE soaring to 13.02% from the 10.44% of the previous year (Chart 2.25).

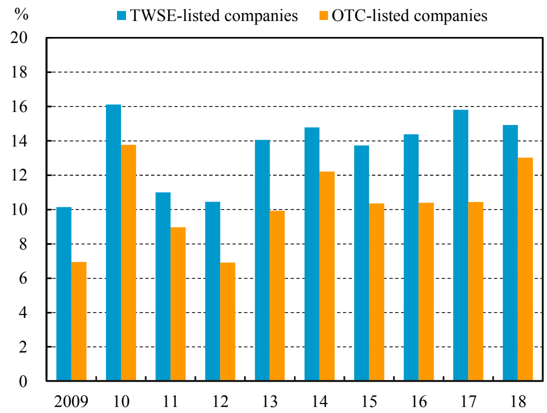
Leverage ratios decreased slightly for listed companies

At the end of 2018, the average leverage ratio for TWSE-listed companies and OTC-listed companies fell marginally to 99.48% and 82.36%, respectively (Chart 2.26). Leverage ratios moderated mainly because listed companies continued to generate earnings from operations which brought about a greater increase in equity.

Short-term debt servicing capacity for listed companies held at an adequate level

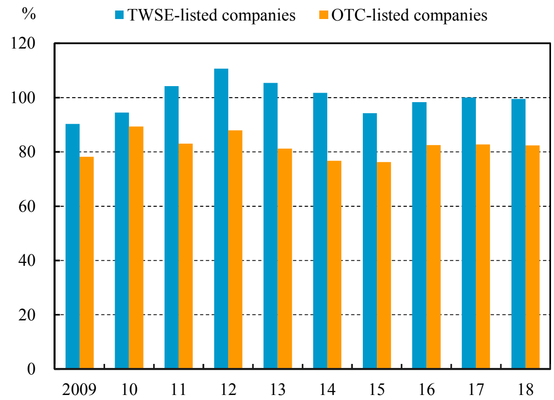
The current ratio for TWSE-listed companies rose to 154.61% at the end of 2018, indicating that their current assets were able to better meet short-term obligations. Although their interest coverage ratio dropped to 11.18 over the same period, the capacity to meet their interest obligations with operating earnings remained satisfactory. Meanwhile, the current ratio and the interest coverage ratio for OTC-listed companies elevated to 183.74% and 16.23, respectively, demonstrating a considerable enhancement in their short-term debt servicing

Chart 2.25 Return on equity in corporate sector



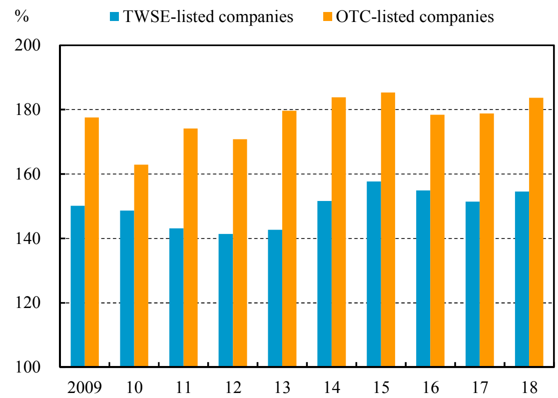
Note: Return on equity = net income before interest and tax/average equity.
Source: TEJ.

Chart 2.26 Leverage ratios in corporate sector



Note: Leverage ratio = total liabilities/total equity.
Source: TEJ.

Chart 2.27 Current ratios in corporate sector



Note: Current ratio = current assets/current liabilities.
Source: TEJ.

capacity (Chart 2.27 and 2.28). For listed companies as a whole, short-term debt servicing capacity remained at an adequate level in 2018.

Credit quality of corporate[32] loans strengthened

At the end of 2018, the NPL ratio for corporate loans from financial institutions fell to a 10-year-low of 0.30%. The overall credit quality for the corporate sector strengthened (Chart 2.29).

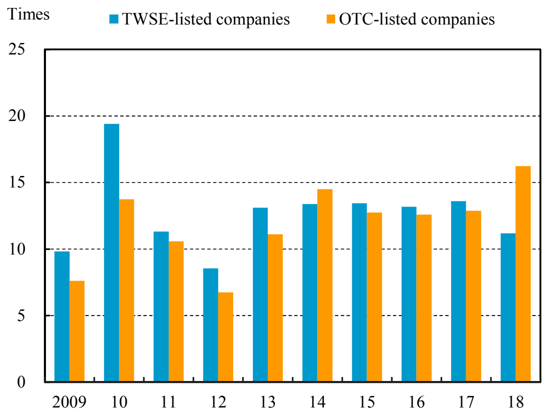
Prospects for corporate sector's future operations face challenges

The DGBAS predicts the growth rate of domestic private real investment to continue increasing to 4.48% in 2019, which should help enhance the growth momentum of corporate profits in the future (Chart 2.30). However, in view of the fading momentum in global economic growth, an economic slowdown in Mainland China, uncertainties over US-China trade talks, and the Brexit deadlock, the outlook for future operations of corporations in Taiwan remains challenging.

2.2.3 Household sector

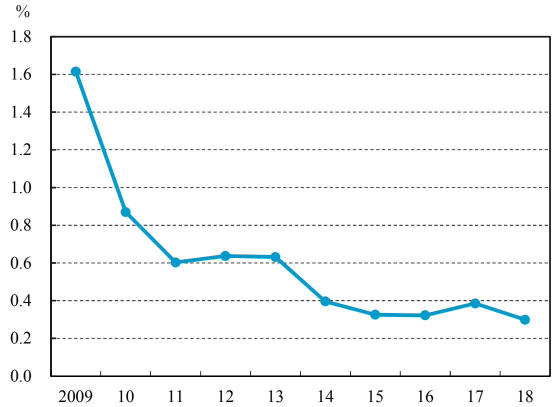
In 2018, the balance of total household borrowing expanded slowly and the overall credit quality of household borrowing improved. The household debt burden rose, yet the falling unemployment rate and growing regular earnings should help underpin the debt servicing capacity of households.

Chart 2.28 Interest coverage ratios in corporate sector



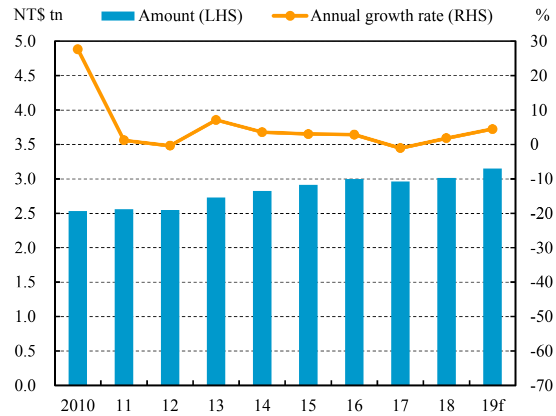
Note: Interest coverage ratio = income before interest and tax/interest expenses.
Source: TEJ.

Chart 2.29 NPL ratio of corporate loans



Source: JCIC.

Chart 2.30 Private investment



Notes: 1. Total private investment and growth rate are expressed in real terms.
2. Figures for 2019 are forecast by DGBAS.
Source: DGBAS (2019/5/24).

[32] The data for the corporate sector herein are on the basis of listed and unlisted corporations provided by the Joint Credit Information Center (JCIC).

Household borrowing growth slowed slightly

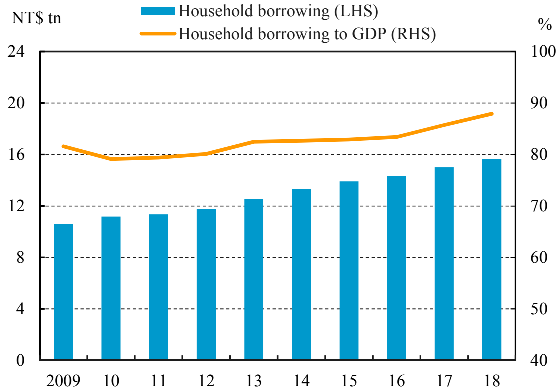
At the end of 2018, total household borrowing expanded and reached NT$15.64 trillion, equivalent to 87.89% of annual GDP (Chart 2.31). The largest share of household borrowing went for the purchase of real estate (63.08%), followed by current operation loans[33] (34.31%).

In 2018, the annual growth rate of total household borrowing decreased to 4.24%, and was mainly contributed to by an increase in the purchase of real estate and current operation loans. Compared to other countries, the growth of total household borrowing and total household borrowing as a percentage of GDP in Taiwan were both lower than those in South Korea and Australia, but higher than those in the US and Japan (Chart 2.32).

Household debt burden rose moderately

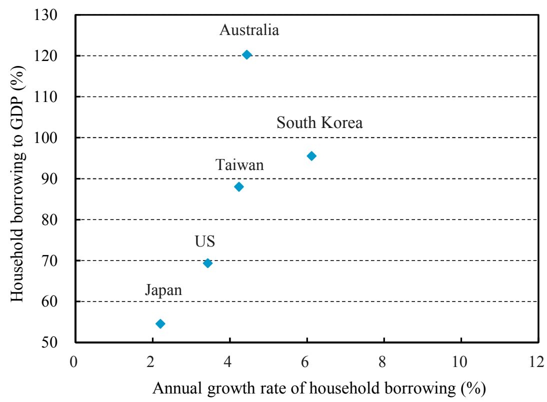
As total household borrowing grew at a faster pace than disposable income in 2018, the ratio of household borrowing to total disposable income[34] rose to 1.44 at the end of the year, reflecting a moderate rise in the household debt burden. Moreover, owing to the increase in loans for current operations, which typically have a shorter term, the debt servicing ratio also elevated to 48.15% (Chart 2.33), thereby reflecting a slight build-up of short-term

Chart 2.31 Household borrowing to GDP



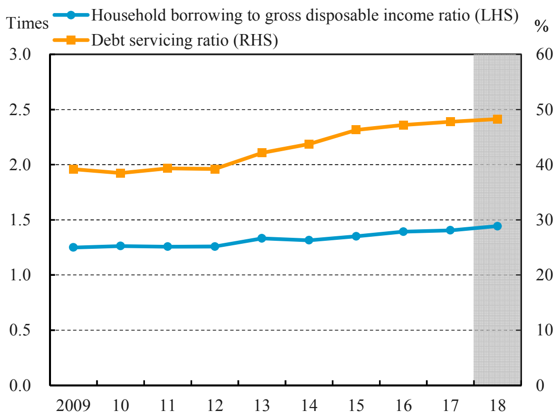
Sources: CBC, JCIC and DGBAS.

Chart 2.32 Household indebtedness in selected countries



Note: Figures are as of the end of 2018.
Sources: Fed, BOJ, BOK, ABS, IMF, DGBAS, CBC and JCIC.

Chart 2.33 Household indebtedness and debt servicing ratio



Notes: 1. Gross disposable income in shaded area is CBC estimate.
2. Debt servicing ratio = borrowing service and principal payments/gross disposable income.
Sources: CBC, JCIC and DGBAS.

[33] The term “current operation loans” includes outstanding debit card loans.
[34] Total disposable income = disposable income + rental expenses + interest expenses.

household debt servicing pressure. Nevertheless, prolonged low interest rates on domestic loans in recent years, together with the falling domestic unemployment rate and improving regular earnings in the industrial and service sectors, should help sustain the debt servicing capacity of households (Chart 2.34).

Credit quality of household borrowing improved

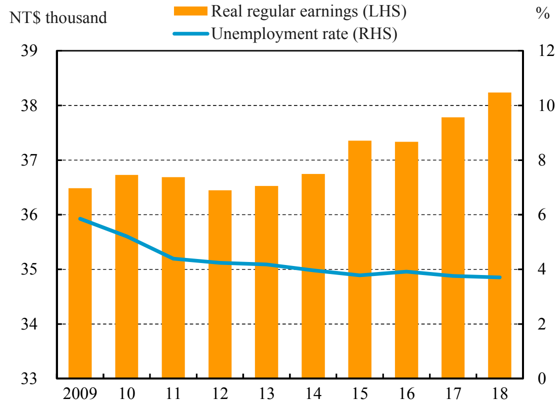
In 2018, the NPL ratios of household borrowing and loans to purchase real estate decreased to 0.26% and 0.21%, respectively, at the end of the year. Credit quality of household borrowing improved (Chart 2.35).

2.2.4 Real estate market

Trading volume in the housing market grew mildly and house prices rose slightly in 2018. In addition, housing loans and construction loans increased, and the mortgage burden moderately decreased but remained near its peak. Building ownership transfers for transaction continued to grow moderately from January to April 2019; however, there are very large regional differences in housing markets between northern and southern cities.

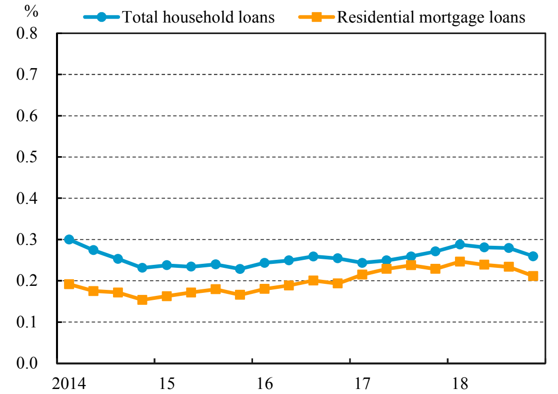
Trading volume in the real estate market grew mildly

Chart 2.34 Unemployment rate and regular earnings



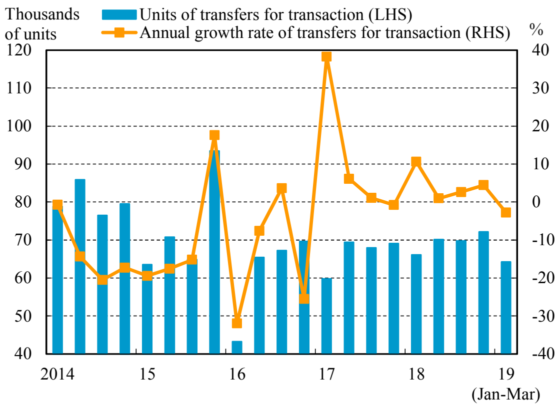
Sources: DGBAS and Ministry of Labor.

Chart 2.35 NPL ratios of household borrowing



Source: JCIC.

Chart 2.36 Building transfers for transaction and annual growth rate



Source: Monthly Bulletin of Interior Statistics, MOI.

Due to the steady expansion of the domestic economy, in 2018 Q1, the total number of building ownership transfers for transaction increased by 10.63% year on year. However, the annual growth rate decreased to 0.97% in Q2 as a result of a higher base period in the previous year stemming from an improved housing market. The annual growth rate gradually increased in Q3 and rose to 4.46% in Q4, supported by a buoyant housing market owing to an increase in the delivery of new buildings as well as the elimination of uncertainties surrounding domestic elections (Chart 2.36).

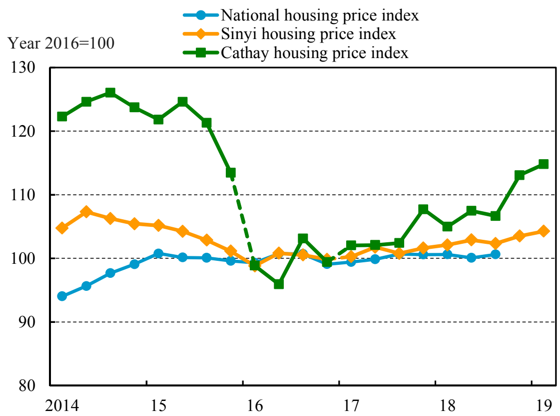
For the period of January to April 2019, the total number of building ownership transfers for transaction recorded an annual growth rate of 4.30%. However, large differences exist between housing markets in northern and southern cities. The total number of building ownership transfers for transaction decreased by 4.21% year on year in Taipei, while that of Kaohsiung increased by 23.55% from a year earlier, underpinned by boosted investor confidence and an increase in the delivery of new buildings.

Real estate prices moderately increased

The national housing price index shows a relatively stable pattern from 2016 onwards. As of the end of 2018 Q3, the index registered 100.63, decreasing by 0.06% year on year (Chart 2.37).

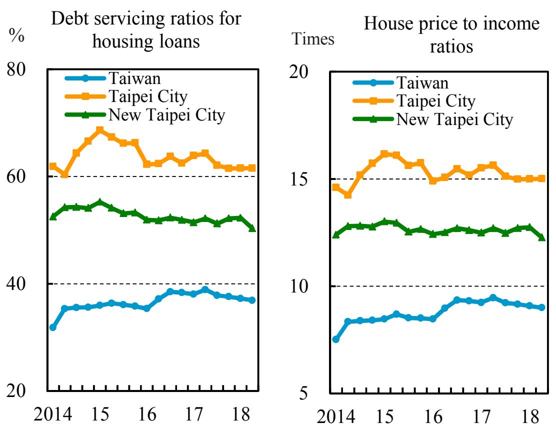
In the second half of 2018, the Sinyi housing price index rose gradually. In 2019 Q1, the index roughly returned to the level of 2015 Q2. Owing to new residential building sales picking up as the housing market gained momentum, the Cathay housing price index increased significantly in 2018 Q4. In 2019 Q1, the index continued to rise (Chart 2.37), mainly driven by a sharp increase in prices of new residential buildings both in Tainan City and Kaohsiung City.

Chart 2.37 House price indices



Notes: 1. The Cathay housing price index adjusted the possible transaction price model from 2016 Q1. In 2018 Q1, the model's parameters were revised, and from January 2017 the opening price, transaction price, and index of each quarter were recalculated.
2. For comparison purposes, all four indices use the same base year of 2016 (2016 average = 100).
Sources: MOI, Cathay Real Estate, and Sinyi Real Estate Inc.

Chart 2.38 Debt servicing ratios for housing loans and house price to income ratios



Notes: 1. Debt servicing ratio for housing loans = median monthly housing loan payment/median monthly household disposable income.
2. House price to income ratio = median house price/median annual household disposable income.
3. The latest data are as of 2018 Q2.
Source: Housing Price Affordability Indicator Statistics, Construction and Planning Agency of the MOI.

Mortgage burden stayed high though decreased slightly

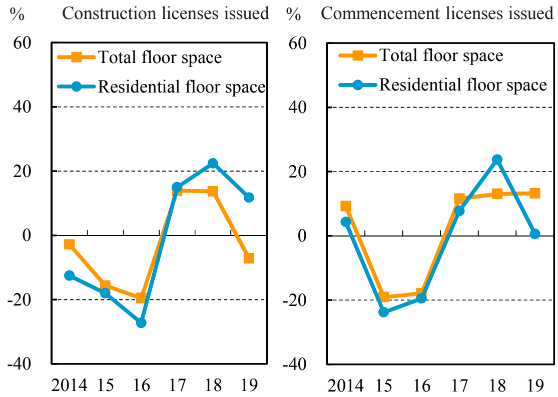
The debt servicing ratio for housing loans decreased gradually from its highest point of 38.90% in 2017 Q2 and then fell to 36.90% in 2018 Q2 (Chart 2.38). Similarly, the house price to income ratio trended up to the highest point of 9.46 in 2017 Q2 before moderately dropping to 9.00 in 2018 Q2 (Chart 2.38). The mortgage burden saw a slight decrease but still stayed at a high level. Among the six metropolitan areas, Tainan City had the lowest burden, while the debt servicing ratio for housing loans and the house price to income ratio in Taipei City registered 61.56% and 15.01, respectively (Chart 2.38), showing the heaviest mortgage burden.

Commencement licenses issued expanded, and pressure from the expansion of unsold new residential properties might increase

In 2018, with the housing market gaining momentum, a rise in properties construction projects, as well as increasing demand from expansion and construction of plants, the total floor space of commencement licenses issued rose by 13.08% year on year, with residential properties increasing by 23.76%. The main reasons were that construction companies' confidence in investing in the real estate market was restored as well as continual commencement of social housing and industrial and commercial buildings construction. In 2019 Q1, the total floor space of commencement licenses issued successively increased by 13.22% year on year, with residential properties increasing by 0.57% (Chart 2.39).

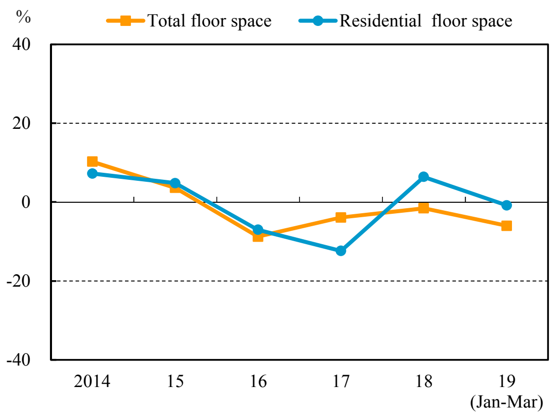
Owing to the gradual completion of residential properties construction projects in recent years, the annual growth rate of the total floor space of usage licenses issued rebounded to -1.57% year on year in 2018, with residential properties turning to a positive 6.40%. In 2019 Q1, the total

Chart 2.39 Annual growth rates of floor space of construction and commencement licenses issued



Source: Monthly Bulletin of Interior Statistics, MOI.

Chart 2.40 Annual growth rates of floor space of usage licenses issued

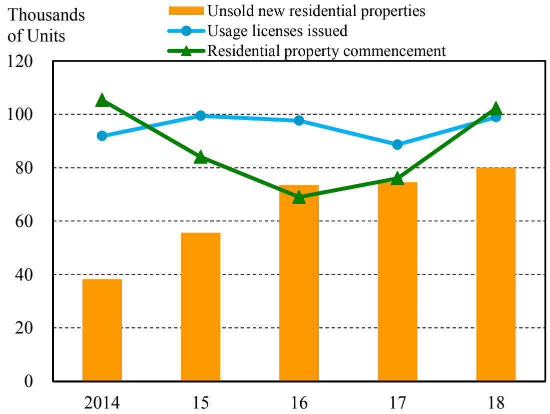


Source: Monthly Bulletin of Interior Statistics, MOI.

floor space decreased at an annual rate of -6.01%, with residential properties also falling to -0.82% year on year (Chart 2.40).

In 2018, usage licenses issued for residential properties amounted to 99 thousand units, an annual increase of 10.3 thousand units, and registered 21.8 thousand units in 2019 Q1. Meanwhile, new residential buildings commencement reached 102.2 thousand units, an annual increase of 26.2 thousand units in 2018 (Chart 2.41); the figure recorded 22.2 thousand units in 2019 Q1. However, given that prices of new residential buildings remained high and demand for house purchases for self-use did not expand significantly, the expansion of unsold new residential properties remained a concern.

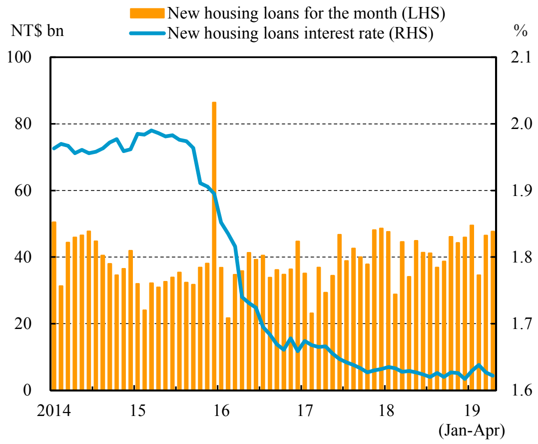
Chart 2.41 Unsold new residential properties, usage licenses issued and commencement for residential properties



Note: Unsold new residential properties includes residential properties built within the last five years, still maintaining the first registration and having the possibility of being for sale. The data are currently published to 2018 Q2.
Source: Monthly Bulletin of Interior Statistics, Real estate information platform, MOI.

Real estate loans grew as mortgage interest rates continued at a lower level

Chart 2.42 New housing loans – amount and interest rate



Source: CBC.

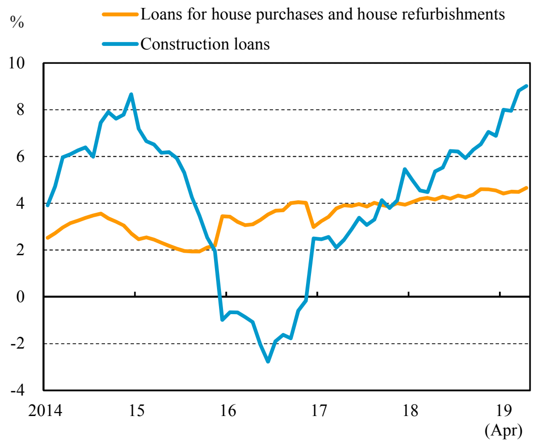
With transactions in the housing market expanding, the total new housing loans granted by the top five banks registered NT$494.1 billion in 2018, increasing by 7.09% year on year. In the first four months of 2019, the figure increased by 14.92% year on year. In 2018, the interest rate for new housing loans remained at a lower level, and dropped to the lowest point of 1.617% in December. Afterwards, the interest rate rebounded slightly and registered 1.622% in April 2019 (Chart 2.42).

From 2018 onwards, mortgage loans were mainly for self-use house purchases. The sum of outstanding loans for house purchases and house refurbishments granted by banks[35] maintained steady growth, registering an annual growth rate of 4.65% at of the end of April 2019. Meanwhile, owing to construction companies increasing land purchases and construction projects,

[35] Refers to domestic banks and the local branches of foreign and Mainland China's banks.

outstanding construction loans continued to expand from April 2018 onwards and reached an annual growth rate of 9.01% at the end of April 2019 (Chart 2.43).

Chart 2.43 Annual growth rates of real estate loans

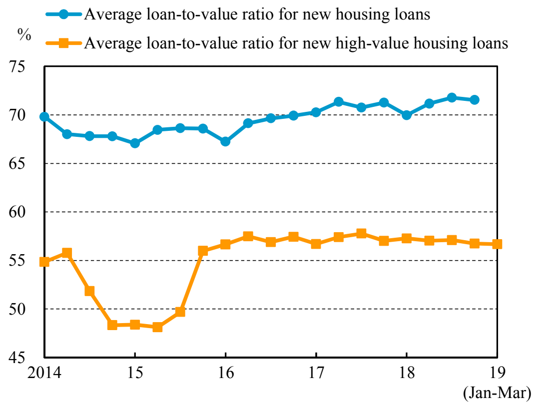


Source: CBC.

Banks assumed self-discipline on real estate loans and risk management remained satisfactory

The Bank repealed most rules imposed on housing loans and land collateralized loans in March 2016, except for high-value housing loans. At the same time, financial institutions were required to strengthen self-discipline on mortgage-related credit risk. In 2018, the average loan-to-value ratio for new housing loans registered 71.10%, slightly higher than that in 2017. Moreover, the average loan-to-value ratio for high-value housing loans decreased to 57.04% and kept falling to 56.68% in 2019 Q1 (Chart 2.44).

Chart 2.44 Average loan-to-value ratios for new housing loans



Notes: 1. Figures are calculated by using the loan-to-value ratios for new housing loans granted by all financial institutions.
2. Figures are calculated by using the loan-to-value ratios for new high-value housing loans granted by all banks.
Sources: JCIC and CBC.

In the second half of 2018, the NPL ratios of housing loans and construction loans decreased moderately. The NPL ratios of those loans registered 0.21% and 0.19%, respectively, at the end of March 2019, both lower than the overall 0.25% NPL ratio of loans granted by domestic banks. Reflecting this, the risk management capability of domestic banks to cope with potential mortgage loan losses remained satisfactory.

Box 1
The impacts of the US-China trade tensions on Taiwan's economy and finance

Since US President Donald Trump assumed office, the objectives of foreign economic and trade policies in the US have been emphasized as "fair trade" and "America first" through gradual strengthening of trade protection measures aimed at protecting benefits for American citizens. On the other hand, as a beneficiary of globalization and a rising power, Mainland China actively promoted the "Made in China 2025" plan that provoked a heightened sense of alertness among market participants in the US and became the main reason behind the US-China trade dispute.

From March 2018 onwards, following several rounds of trade negotiations, the US and Mainland China successively raised a series of concrete and tough bilateral trade sanctions and retaliations. In early May 2019, however, the two economies still failed to reach an agreement and instead announced tariff hikes on each other's products, further escalating the trade dispute. It is generally believed that even if US-China trade negotiations reach an agreement, the great-power competition between the US and Mainland China is likely to continue because of their inherent conflicts of interest. Considering that the US and Mainland China both are important trading partners of Taiwan, it could undermine Taiwan's economic growth and financial stability if the trade dispute remains unresolved. This box discusses the impacts of the US-China trade conflicts on Taiwan's economic and financial conditions, and introduces the preemptive measures which were launched by the government.

1. The impacts on Taiwan's economic and financial conditions

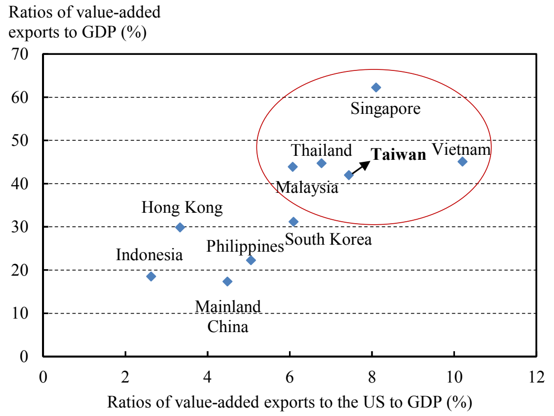
1.1 Economic influences

The US-China trade dispute has a certain degree of impact on Taiwan's economy which are shown below:

1.1.1 Taiwan is highly involved in global value chains and prone to be affected by the trade dispute between the large countries

Taiwan is a small and highly open economy which registered a high engagement of 56.8%[1] in global value chains and a higher

Chart B1.1 Value-added exports of major Asian countries



Note: Calculations are based on the latest published data of 2015.
Sources: IMF and OECD-WTO TiVA.

value-added exports to the US to GDP ratio than other Asian countries such as South Korea and Mainland China[2] (Chart B1.1). Considering that the US and Mainland China are both major export markets of Taiwan,[3] the trade dispute could jeopardize Taiwan's commodity exports and economic growth if protectionist trade policies are implemented by these economies. Moreover, spillover risks induced by a potential economic "hard landing" in Mainland China in the future could lead to a greater impact on Taiwan's economy.

1.1.2 Although conciliation between the US and Mainland China could avoid the intensification of the trade dispute, Taiwan still should prudently manage the potential order-transfer effect and the rearrangement of supply chains

If the US-China trade dispute can reach an agreement as soon as possible, it would be beneficial to global trade and economic growth, and also helpful to Taiwan's exports. However, on account of high uncertainties surrounding the conditions of a US-China trade agreement, if Mainland China promises to purchase more American products in the future, it might lead to a crowding-out effect on the commodities exported from Taiwan to Mainland China. In addition, if the US and Mainland China engage in long-term political wrestling, it could boost the transfer of the global supply chain hub from Mainland China to neighboring countries.

1.2 Financial influences

According to a BIS report[4], when the market showed signs of mounting trade tensions, it not only caused negative impacts on global stock markets, but also induced emerging market currencies, especially the renminbi, to turn to depreciate against the US dollar. However, the impacts on Taiwan's stock and FX markets were relatively mild.

1.2.1 Global stock markets fell in 2018, but Taiwan's stock markets remained relatively stable

In 2018, most Asian economies saw drops in their stock markets. Above all, Mainland China registered the sharpest decrease (-24.59%) owing to the direct impact of the US-China trade dispute. However, the decline in the Taiwan Stock Exchange Weighted Index (-8.60%) was more moderate than those in the stock indices of other Asian economies such as South Korea (-17.28%) and Hong Kong (-13.61%).

1.2.2 The rising trade dispute speeded up international capital movements, yet the impact on Taiwan's FX market remained relatively limited

The escalating US-China trade dispute could cause capital flight to safety, such as US government bonds, gold, and Japanese yen, and in turn, accelerate global capital movements and undermine financial market stability. However, thanks to the strong balance of payments, a sustained current account surplus, ample FX reserves, and sufficient liquidity of the financial system in Taiwan, the capital outflow-bearing capacity remained relatively sound. The NT dollar against the US dollar depreciated by 2.88% in 2018, lower than the 5.15% of the renminbi and the 4.05% of the Korean won, reflecting that the impact of the US-China trade dispute on Taiwan's FX market remained relatively limited.

2. Taiwan's preemptive measures

2.1 Economic and taxation measures

In response to the possible order-transfer effect and the rearrangement of supply chains, the Executive Yuan consecutively implemented several supporting measures, including: (1) strengthening the contribution of research and development in production to promote industrial upgrades; (2) promptly executing domestic demand development plans, such as energy transition and urban renewal, to foster Taiwanese enterprises to invest back in Taiwan; (3) carrying out the "five plus two" innovative industries plan; and (4) actively promoting multilateral economic and trade cooperation plans.[5]

Moreover, in order to guide Taiwanese firms to repatriate their overseas funds into domestic industries and financial markets in Taiwan, the Executive Yuan in April 2019 passed the *Draft Act on the Use and Taxation on the Inward Remittance of Overseas Funds*. This draft act allows individuals' inward remittance of overseas funds as well as the profit-seeking enterprises' allocated investment income which are remitted back from their offshore invested companies to apply for applicable tax preferences according to the regulation.[6] Except for the compliance with the *Money Laundering Prevention Act* and the *Counter-Terrorism Financing Act*, the usages of overseas funds remitted back by Taiwanese enterprises shall be properly managed so as to prevent the negative influences of capital inflows on the capital and financial markets in Taiwan.

2.2 Financial measures

2.2.1 The FSC's preemptive measures

The FSC will continue to pay close attention to the changes in international financial conditions. If there is any significant event affecting Taiwan's economic development or investor confidence, the FSC will adopt necessary preemptive measures to stabilize the domestic stock and futures markets.

The FSC has established a mechanism monitoring the exposures of domestic banks to

Mainland China. At the end of 2018, the exposures of all domestic banks to Mainland China stood at NT$1.78 trillion, or 53% of banks' net worth, lower than the statutory limit of 100% and within a manageable range. Moreover, domestic banks are required to meet the requirement that minimum loan loss provisions and guaranteed reserves shall be at least 1.50% of the outstanding credit to customers in Mainland China so as to reinforce their risk-bearing capacity.

2.2.2 The Bank's preemptive measures

(1) The Bank will closely monitor the new developments of the US-China trade dispute. If the dispute induces rapid movements of international capital, leading to excess volatility and disorderly movements in the NT dollar exchange rate with adverse implications for domestic economic and financial stability, the Bank will, in line with its mandate, aptly maintain FX market order and provide markets with sufficient liquidity to support economic activity.

(2) The Bank will continue to monitor the changes in economic and financial conditions in Mainland China, and the exposures of domestic banks to it. Furthermore, the Bank will contact the FSC to deal with any abnormal situation if necessary.

3. Conclusions

If the US-China trade dispute escalates, it could bring about seriously negative impacts on global trade momentum. The trade dispute heightens global economic and financial uncertainty, which not only has protracted impacts on the economies of the US and Mainland China, but also exacerbates volatilities in international financial markets. Nevertheless, on the back of the close attention and preemptive measures undertaken by the relevant governmental agencies, the impact of the trade dispute on Taiwan could be mitigated.

Notes: 1. The figure is calculated by using published data of December 2018 from OECD-WTO TiVA.

2. Based on the latest value-added exports data of 2015 from OECD-WTO TiVA, Taiwan, South Korea and Malaysia not only highly directly exported to the US, but also indirectly exported to the US through Mainland China. Therefore, the impacts of the US-China trade dispute on the above-mentioned countries were higher than those on other emerging countries.

3. Based on the exports data of Taiwan in 2018, Taiwan's exports to the US and Mainland China accounted for 12% and 41%, respectively.

4. BIS (2018), *BIS Quarterly Review,* September.

5. BOFT (2018), *The Development of International Trade in the Republic of China (Taiwan) 2018-2019*, August.

6. Among the inward remittance of overseas funds, 5% of remitted funds can be used freely, but cannot be used for the acquisition of real estate; 25% shall be engaged in financial investments

through trust accounts or securities discretionary accounts. The remaining remitted funds can be used in substantive investments and directly invested in the important policy-focused industries through domestic venture capital investment or private equity funds. Within the first year and the second year from the date of the implementation of this Act, the applicable tax rates of inward remittance of overseas funds will be 8% and 10%, respectively. Furthermore, after the investment is completed within the expiration date, an application for a refund of 50% of the tax amount may be submitted to the tax authorities; in other words, the tax rates will be 4% and 5%, respectively.