II. Macro environmental factors potentially affecting financial system

2.1 International economic and financial conditions

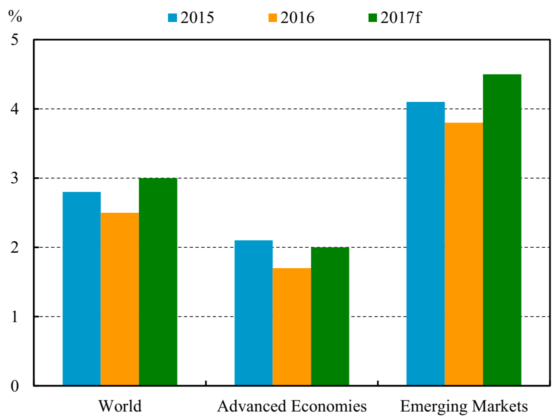
2.1.1 International economic conditions

Global economic growth waned in 2016 but momentum has been building

Affected by the lower-than-expected growth in advanced economies and the slowdown in emerging economies, the global economic growth rate was merely 2.5% in 2016, the lowest level since the 2008-09 financial crisis. Among advanced economies, economic growth in the US was below expectations owing to lackluster growth in inventory, energy sector investment, and exports. By contrast, euro area growth remained steady despite this region facing increasing political and financial risks. Japan continued with its accommodative monetary policy and fiscal stimulus, but sluggish consumption clouded its economic growth. Meanwhile, growth in emerging economies continued decelerating, reflecting the impacts of weaker growth in Mainland China and some Latin American countries.

Looking ahead to 2017, IHS Global Insight predicts[11] world real GDP growth to be 3.0%. Among them, economic growth in advanced economies is projected to increase to 2.0% driven by the recovery in the US. In the meantime, in spite of the economic slowdown in Mainland China, the average growth rate in emerging economies is forecast to increase to 4.5% thanks to a more stable economy in Brazil and Russia, buoyed by increasing commodity and oil prices (Chart 2.1). Although the global economy is gradually gaining momentum, uncertainties surrounding

Chart 2.1 Global economic growth rates

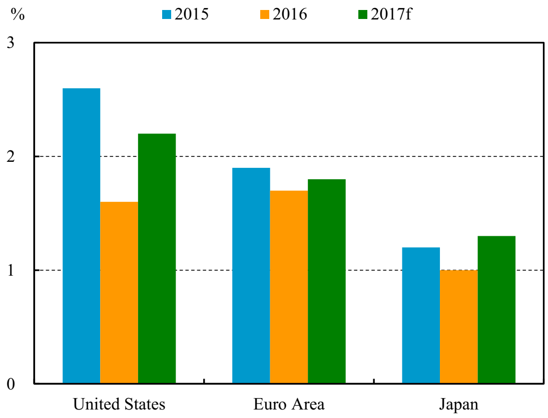


Note: Figures for 2017 are IHS Global Insight estimates.
Source: IHS Global Insight (2017/5/15).

[11] See Note 1.

US policy actions, slower growth in Mainland China and the threat of deepening geopolitical tensions may cause higher global economic risks. In addition, despite the fact that rapid development of free trade has boosted global income, it has always been accompanied by increased income inequality and a shift toward trade protectionism. These factors could trigger uncertainties surrounding political and economic policies, which warrant close attention.

Chart 2.2 Economic growth rates in US, Euro area and Japan

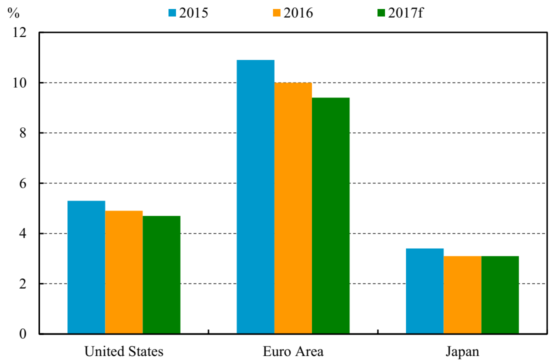


Note: Figures for 2017 are IHS Global Insight estimates.
Sources: Official websites of the selected economies and IHS Global Insight (2017/5/15).

Advanced economies experienced a growth slowdown

Economic activity rebounded strongly in the US following a slowdown

Chart 2.3 Unemployment rates in US, Euro area and Japan



Note: Figures for 2017 are IMF estimates.
Sources: Official websites of the selected economies, IHS Global Insight (2017/5/15) and IMF (2017/4).

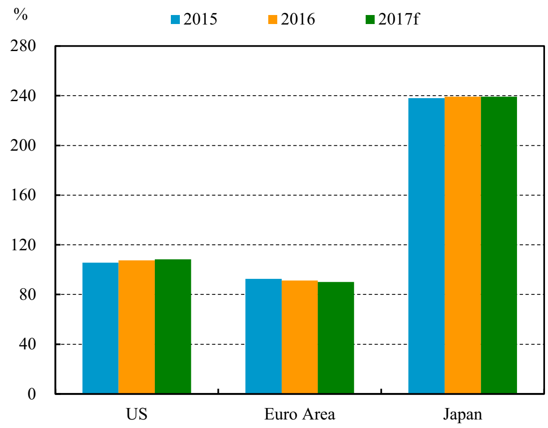
In the first half of 2016, although private consumption increased in the US, the growth rate was below expectations owing to the sluggish growth in inventory as well as investment in the energy sector. Recovery gained momentum in the second half of 2016 because of the increases in private consumption and investment. The annual economic growth rate was 1.6%, lower than the 2.6% registered in 2015. As the Trump administration is going to launch a fiscal stimulus package which will fuel the growth momentum, IHS Global Insight predicts the US economic growth rate to increase to 2.2% in 2017 (Chart 2.2).

The labor market in the US kept improving in 2016 with the unemployment rate dropping to a nine-year low of 4.9%. Since the labor market outlook remained bright, the IMF anticipates the unemployment rate to fall to an annual rate of 4.7%[12] in 2017 (Chart 2.3).

[12] Forecasts for unemployment rates in 2017 are IMF estimates. See IMF (2017), *World Economic Outlook*, April.

In fiscal year 2016, a dramatic increase in medical and social welfare expenditures raised the US deficit to US$587.4 billion. The ratio of gross fiscal deficit to annual GDP also elevated from the 2.4% recorded in 2015 to 3.2%, the first increase in 7 years. Since the Trump administration plans higher fiscal expenditure and lower tax rates, together with higher borrowing costs after lifting the policy rate, the IMF forecasts the ratio of outstanding government debt relative to annual GDP to continue rising to 108.3%[13] in 2017 (Chart 2.4).

Chart 2.4 Government debt-to-GDP ratios in US, Euro area and Japan



Note: Figures for 2017 are IMF estimates.
Source: IMF (2017), *Fiscal Monitor*, April.

The euro area economy slowed down

In 2016, the UK's referendum on exiting the European Union (Brexit) and Italian constitutional referendum resulted in heightened political and economic uncertainties in the euro area. Fortunately, the effect of the Brexit referendum was less than expected. The economic growth rate in the euro area slightly fell to 1.7% in 2016 and the unemployment rate decreased to 10%. From 2017 onwards, considering the diminishing political risk after the French election, IHS Global Insight expects the euro area economic growth rate to rise to 1.8%, and the IMF anticipates the unemployment rate to reduce further to 9.4 % (Chart 2.2, 2.3).

Regarding government finance, the euro area countries made an effort to shrink their fiscal deficits, causing the fiscal deficit to GDP ratio to drop to a nine-year low of 1.7% in 2016. Moreover, the outstanding government debt-to-GDP ratio continued declining to 91.3%. As economic activity in the euro area keeps gaining momentum and the interest rate remains low, the IMF forecasts the ratio to fall slightly to 90.1% in 2017 (Chart 2.4).

Limited economic growth in Japan

In order to revive economic growth and achieve the targeted inflation rate, the BOJ adopted a negative interest rate policy for the first time in February 2016. Additionally, the Japanese

[13] Forecasts for ratios of outstanding government debt relative to annual GDP in 2017 are IMF estimates. See IMF (2016), *Fiscal Monitor*, April.

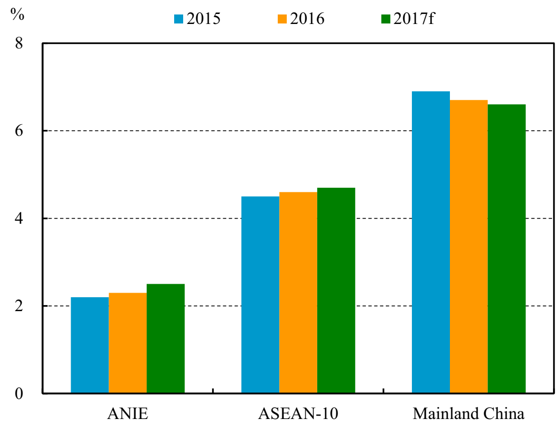
government announced that corporate tax rates would be cut, effective from April 2016, as well as postponing the second sales-tax hike. The Japanese cabinet further approved a strong economic package aiming at carrying out investment for the future in August 2016. The 28.1 trillion yen stimulus package was targeted at backing infrastructure investment and shoring up small and medium-sized enterprises (SMEs). However, the annual growth rate decreased to 1% in 2016 owing to the sluggish growth in private consumption and inventory investment (Chart 2.2).

In consideration of the upcoming economic stimulus measures, IHS Global Insight estimates Japanese economic growth to increase slightly to 1.3% in 2017 and the IMF predicts the unemployment rate to stand at 3.1%, the same figure as in 2016 (Chart 2.2, 2.3). In regard to government finance, as a result of ballooning social welfare expenditures and limited economic growth offering little improvement to Japanese fiscal conditions, the IMF predicts the outstanding government debt-to-GDP ratio to remain at 239.2% in 2017 (Chart 2.4).

Asian emerging economies took divergent growth paths

In 2016, Mainland China's economic slowdown and stagnant world trade left economic growth of Asian emerging economies unchanged. GDP growth in export-oriented Asian newly industrialized economies (ANIEs) merely rose to 2.3%. Likewise, in the ASEAN-10 (Association of South East Asian Nations) countries, the economic growth rate increased slightly to 4.6% mainly because Indonesian's GDP (accounting for about 40% of ASEAN-10's GDP) grew steadily owing to expansionary fiscal policy and easy monetary policy. By contrast, economic activity in Malaysia weakened owing to the anemic global trade environment and a downturn in oil prices. In Mainland China, accumulating local government debt as well as supply-side structural reforms lowered economic growth further to 6.7% (Chart 2.5).

Chart 2.5 Economic growth rates in Asian emerging economies



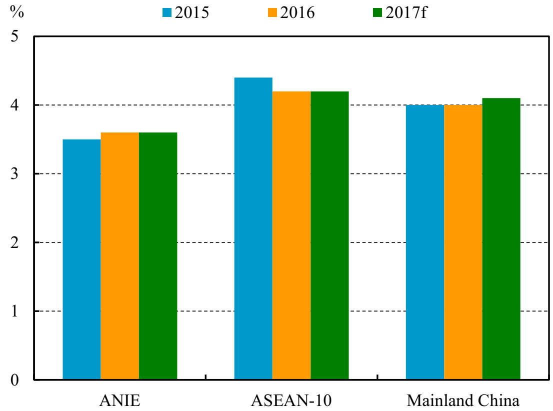
Notes: 1. Figures for 2017 are IHS Global Insight estimates.
2. ANIE refers to Asian Newly Industrialized Economies, including Taiwan, Hong Kong, Singapore and South Korea.
3. ASEAN-10 refers to the 10 member countries of the Association of South East Asian Nations, including Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam.

Sources: Official websites of the selected economies and IHS Global Insight (2017/5/15).

IHS Global Insight anticipates that the economic growth rates in the ANIEs and

ASEAN-10 will improve to 2.5% and 4.7%, respectively, in 2017 thanks to a more solid global economy and stronger external demand. Conversely, Mainland China's annual growth rate is projected to lower to 6.6% in 2017, reflecting a structural adjustment[14] together with the effect of new economic and trade policies in the US (Chart 2.5). Additionally, the unemployment rates in the ANIEs and the ASEAN-10 are expected to remain at 3.6% and 4.2% in 2017, while the unemployment rate in Mainland China is projected to rise slightly to 4.1% (Chart 2.6).

Chart 2.6 Unemployment rates in Asian emerging economies

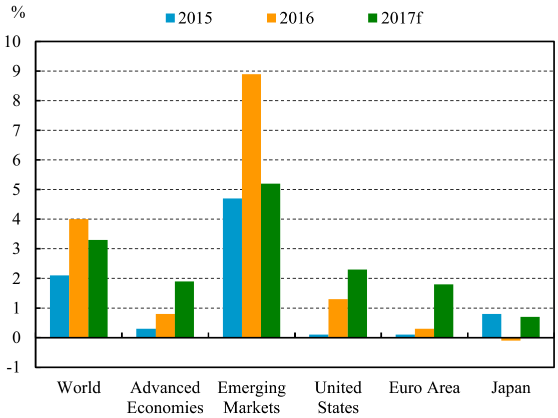


Notes: 1. Figures for 2017 are IHS Global Insight estimates.
2. For ANIE and ASEAN-10, see Notes 2 & 3 in Chart 2.5.

Sources: Official websites of the selected economies and IHS Global Insight (2017/5/15).

Global inflation rose in 2016

Chart 2.7 Global headline inflation indices



Note: Figures for 2017 are IHS Global Insight estimates.

Sources: Official websites of the selected economies and IHS Global Insight (2017/5/15).

In 2016, the price of crude oil bounced back from a 13-year low. The upturn of oil prices was more significant after the Organization of the Petroleum Exporting Countries (OPEC) reached an agreement to freeze output on November 30. At the end of December, the price of Brent crude oil nudged above US$50 to US$54.56 per barrel. In the meantime, a rebound of metal prices in January was due to increasing demand for base metals in China as well as tightening supply and inventory. The international prices of cereals, vegetable oil, dairy, sugar and meat also grew steadily.[15] Reflecting more solid growth in commodity, oil and food prices, the global CPI inflation rate rose in 2016. Among them, the headline inflation rate in advanced economies picked up marginally to 0.8%. Moreover, the global headline inflation rate rose to 4.0% as the headline inflation rate in emerging economies accelerated significantly

[14] In order to avoid financial risks and achieve sustainable growth, Mainland China changed its growth pattern from industrial sector to service sector, from investment-driven market to demand-driven market, and from export-oriented economy to domestic demand-oriented economy.

[15] In 2016, the Food and Agriculture Organization of the United Nations (FAO) food price index increased from 149.3 at the end of January to 170.2 at the end of December. The index consists of the average of five commodity group (meat, dairy, cereal, vegetable oil and sugar) price indices.

to 8.9% as a result of Venezuela's crisis of mounting deficits and high inflation (Chart 2.7).[16]

In early 2017, the global price of crude oil continued its upward trend. Thereafter, oil prices reversed to drop in March because of a significant increase in US shale oil production, yet the price was still above the figure registered at the beginning of the year. With regard to international cereals, sufficient export supply led to a slight decline in cereal prices in March, though they were still higher than the same period of the previous year. In sum, IHS Global Insight predicts that the global headline inflation rate will decline, whereas the headline inflation rate in advanced economies will continue increasing to 1.9% owing to a recovery in inflation. On the other hand, the headline inflation rate in emerging economies is expected to moderate to 5.2% as inflationary pressure in Latin American countries and Russia will ease (Chart 2.7).[17]

The US raised interest rates gradually, while most economies continued to adopt easy monetary policy stances

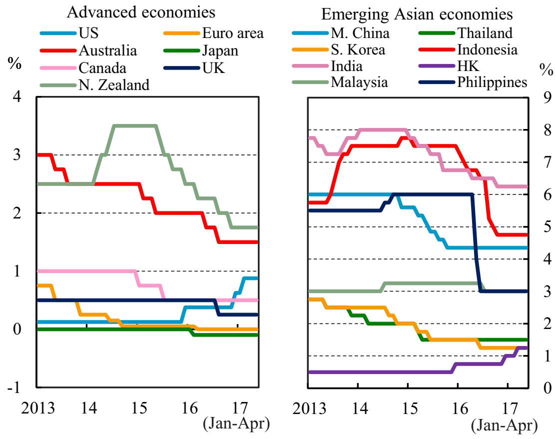
From 2016 onwards, advanced economies continued to adopt different monetary policies. As US economic activity and the labor market grew steadily, the Fed hiked its target band for the federal funds rate twice (in December 2016 and March 2017) by a total of 50 basis points (bps) to 0.75-1%, showing the normalization of US monetary policy. Meanwhile, since most indicators of inflation in the euro area remained muted, in December 2016, the ECB decided to keep running the asset purchase program until the end of December 2017. However, from April 2017, the net asset purchases at the current monthly pace of €80 billion were intended to decrease to a monthly pace of €60 billion.

For stimulating the economy, the BOJ continued implementing its quantitative and qualitative monetary easing (QQE) policy and further cut interest rates into negative territory in February 2016. Moreover, in order to conduct QQE in a more flexible manner, the BOJ introduced QQE with yield curve control upon the original framework in September 2016. The UK cut its official bank rate and expanded QE in August 2016 to mitigate the impact of the Brexit referendum. Australia and New Zealand also lowered their policy rates to boost economic growth in 2016.

[16] According to IHS Global Insight estimates (2017/5/15), the inflation rate in Venezuela accelerated to 558.1% in 2016.
[17] See Note 2.

As for emerging Asian economies, in 2016, most of them kept easing monetary policies to enhance their domestic economies. Among these countries, the Bank Indonesia announced four Bank Indonesia rate (BI rate) cuts by a total of 100 bps and the BI 7-day reverse repurchase rate was trimmed twice by a total of 50 bps. The Reserve Bank of India cut its repurchase rate twice by a total of 50 bps. South Korea and Malaysia cut their policy rates by 25 bps, respectively. The Bangko Sentral ng Pilipinas (BSP) decided to modify the policy rate from overnight repurchase rate to overnight reverse repurchase rate and introduced an interest rate corridor system. The financial institution one-year lending base rate in Mainland China remained unchanged. Still, the People's Bank of China (PBC) cut its reserve requirement ratio in March 2016. To maintain the effective operation of the linked exchange rate system, the Hong Kong Monetary Authority (HKMA) raised the base rate charged through its overnight discount window in December 2016 and March 2017, respectively, by a total of 50 bps (Chart 2.8).

Chart 2.8 Policy rates in selected economies



Notes: 1. Advanced economies: figure for the US is based on the target federal funds rate; for the euro area, the main refinancing operations fixed rate; for Australia, cash rate target; for Japan, interest on excess reserves (before 2016/2/16, uncollateralized overnight call rate); for Canada, the target for the overnight rate; for the UK, official bank rate; for New Zealand, official cash rate.

2. Emerging Asia: figure for Mainland China is based on financial institution one-year lending base rate; for Thailand, 1-day repurchase rate; for South Korea, Bank of Korea base rate; for Indonesia, BI 7-day reverse repurchase rate (before 2016/8/19, Bank Indonesia rate); for India, repurchase rate; for Hong Kong, base rate; for Malaysia, overnight policy rate; for Philippines, overnight reverse repurchase rate (before 2016/6/3, overnight repurchase rate).

3. Figures are as of April 30, 2017.

Sources: Central banks' websites.

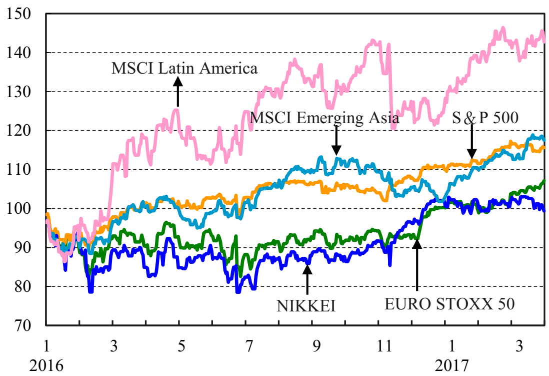
2.1.2 International financial conditions

Financial risks mitigated from 2016 onwards, yet low interest rates, political and policy uncertainties posed challenges

From 2016 onwards, commodity prices regained stability and some countries' economic conditions improved. Long-term interest rates gradually rebounded, which helped enhance interest rate spreads and long-term profitability of banks and insurance companies. Against this backdrop, the global financial stability risk reduced. However, US policy stances and a rise in protectionism brought about economic policy and political uncertainties. These, coupled with a prolonged period of low growth and low interest rates, had adverse impacts on bank profitability as well as the solvency of insurers and pension funds, and posed challenges to global financial markets.

Weak bank profitability in some advanced economies may raise risks in the future

Chart 2.9 Performance of key international equity indices



Notes: 1. January 1, 2016 = 100.
2. The Euro STOXX 50 refers to a stock index consisting of the largest 50 stocks in the 12 major economies of the euro area.
Source: Bloomberg.

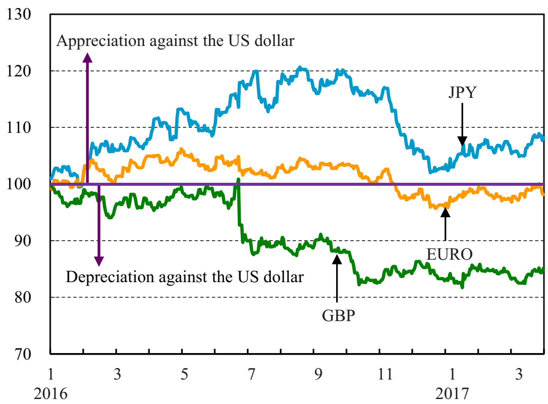
In 2016, financial conditions of banks in advanced economies improved compared to the global financial crisis, but weak bank profitability in some economies, particularly in Europe and Japan, may negatively affect their financial system stability. US banks recovered at a faster pace and had stronger profitability than European and Japanese banks, reflecting lower risks in the US. Nevertheless, the Trump administration advocated relaxing some financial regulations; as a result, the direction and magnitude of regulatory changes in the future will influence bank profitability and their risk-bearing capacity. On the other hand, profitability of European banks weakened owing to a large stock of problem assets. Among these countries, Italian banks' nonperforming loan problems led to a slump in stock and foreign exchange markets for a time. Moreover, uncertainty concerning the outlook of banks in the UK rose resulting from the outcome of the Brexit referendum.[18] Regarding Japanese banks, the erosion of profits accelerated by falling domestic net interest spreads reduced banks' ability to generate capital. The overseas expansion of Japanese banks in recent years increased their demand for short-term US dollar funding. Therefore, higher US rates would raise their funding cost, affect profitability, and increase external funding risk.

In the first quarter of 2016, the stock markets in advanced economies trended downward and fluctuated dramatically on account of unfavorable market sentiment. From the second quarter onwards, stock prices in the US rebounded and progressively hit record highs as the US grew steadily. Stock markets in Japan and the euro area stayed at low levels because of sluggish economic growth. Among them, stock markets in the euro area fluctuated significantly owing to unfavorable market sentiment such as rising bank risks and the Brexit referendum. In the fourth quarter, as the global economy recovered, stock markets in advanced economies generally trended upward and continued on their ascendant paths in the first quarter of 2017 (Chart 2.9).

[18] The IMF indicated that Brexit may lead to several uncertainties for the UK financial sector, including: (1) loss of passporting rights for UK banks may increase banks' operating costs; (2) as some 60 percent of the current financial services rulebook is estimated to be composed of EU rules, the revision would cover several aspects, such as legal, compliance, operational, and information technology changes; (3) protracted negotiations could not only postpone consumption and investment decisions, but also lower physical and human capital inflows and adversely affect economic development. See IMF (2016), *Global Financial Stability Report*, October.

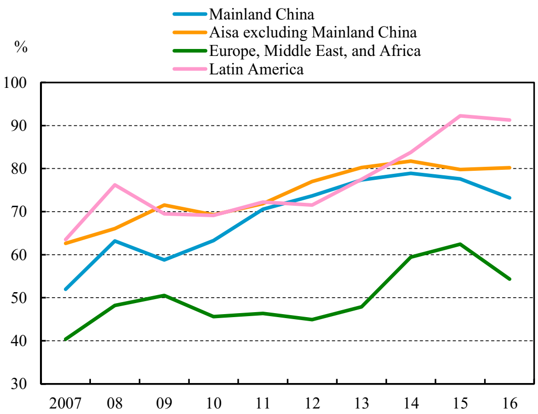
With regard to foreign exchange markets, the Japanese yen appreciated markedly because of investors' hedging demand and no further expansion of monetary easing policies by the BOJ. In addition, increased uncertainty over the economic outlook driven by the Brexit referendum in June has led to massive capital outflows from the UK, resulting in a sharp depreciation of the British pound against the US dollar.[19] Under the influence of Brexit, the euro depreciated as well. Following market expectations of the Trump administration's fiscal expansion and tax cuts in November and the Fed's interest rate hike in December, the US dollar became stronger, while the Japanese yen, the British pound and the euro turned notably weak before reversing to appreciate marginally in the first quarter of 2017 (Chart 2.10).

Chart 2.10 Movements of various currencies against the US dollar



Note: January 1, 2016 = 100.
Source: Bloomberg.

Chart 2.11 Corporate leverage ratios of emerging economies



Note: Leverage ratio = total liabilities/total equity.
Source: IMF (2017), *Global Financial Stability Report*, April.

Financial risks in emerging economies remained high owing to global policy uncertainty

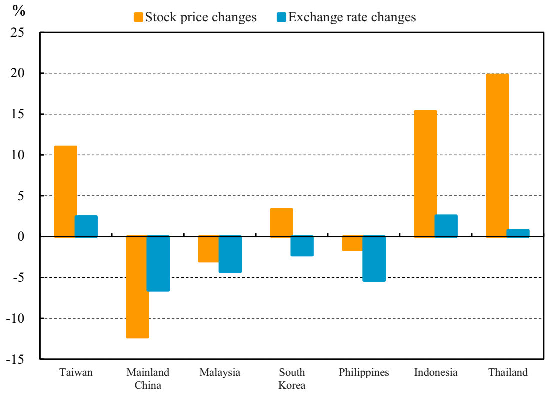
From 2016 onwards, benefiting from stability of commodity prices and improvement in some economies' economic conditions, corporate leverage declined and short-term financial risks receded. Notwithstanding, corporate leverage in some economies remained at high levels (Chart 2.11). Moreover, political and policy uncertainties in major advanced economies may open channels for negative spillovers to emerging economies. Overall, financial risk in emerging economies remained high.

In addition, there were considerable short-term international capital inflows into emerging economies during the second and third quarters of 2016. However, such capital flows were susceptible to shifts in investor sentiment and changes in policies of central banks in major

[19] The British pound exchange rate stood at 1.3679 against the US dollar on June 24, 2016, registering a decline of 8.1% compared to 1.4877 the day before.

economies. A sudden shift in policy or market sentiment could quickly reverse capital flows[20] and may trigger a disorderly deleveraging process. As a result, companies will have higher funding costs and lower corporate earnings, which will increase problem loans and undermine the soundness of the banking system, especially for the economies with insufficient bank loss provisions. In Mainland China, credit grew at a rapid pace and total assets of banks expanded continually.[21] Many financial institutions heavily relied on short-term wholesale financing with sizable asset-liability mismatches, meaning that they faced high credit and liquidity risks.

Chart 2.12 Changes in equity indices and exchange rates among Asian emerging economies



Notes: 1. The comparison is based on the difference between the figures at end-2015 and end-2016.
2. Taiwan uses TWSE Weighted Index; Mainland China uses SSE Composite Index; Malaysia uses Kuala Lumpur Composite Index; South Korea uses KOSPI Index; Philippines uses PSEI Index; Indonesia uses Jakarta Composite Index; Thailand uses SET Index.

Sources: Datastream and Bloomberg.

In 2016, because advanced economies continued their monetary easing policies, along with policy reforms and infrastructure projects launched by some emerging economies (such as Thailand, India and Indonesia, etc.), fundamentals improved gradually and international capital inflow continued, causing stock markets in emerging economies to rally (Chart 2.9). Among Asian emerging economies, stock indices of Thailand, Indonesia and Taiwan rose over 10% year on year (Chart 2.12).

In the first three quarters of 2016, international capital flowed into emerging economies to search for higher yields as the Fed delayed its rate-hike plan. Most Asian emerging economies' currencies appreciated against the US dollar, while those currencies reversed to depreciate after the Fed raised interest rates in the fourth quarter. Among Asian emerging economies, the Philippine peso depreciated considerably against the US dollar, registering a decline of 5.37%, as rising domestic political risks caused capital outflows. As for Mainland China, the depreciation of the renminbi against the US dollar reached 6.56% owing to foreign exchange reform and waning growth momentum (Chart 2.12).

IMF called on national authorities to take measures to promote global financial stability

Given that the effectiveness of a negative interest rate policy is limited and a prolonged

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[20] In the third quarter of 2016, emerging economies' capital inflows (equity and debt investments) reached US$57.3 billion. However, this reversed to outflows of US$25.7 billion owing to the Fed's interest rate hike in the fourth quarter. See IMF (2017), *Global Financial Stability Report*, April.

[21] The ratio of total assets to GDP for banks in Mainland China at the end of 2016 was 307.34%, higher than the ratio of 286.02% at the end of 2015. See IMF (2017), *Global Financial Stability Report*, April.

low-interest-rate environment has an adverse influence on the development of financial institutions, the IMF has advocated[22] that national authorities should take measures, apart from macroeconomic and macroprudential policies, to promote a benign cycle between financial markets and the real economy as follows:

- National authorities should adjust regulatory requirements cautiously to avoid rising financial risks resulting from lower regulatory standards and opting out of mutually established regulations in a unilateral manner that may lead to reigniting a race to the bottom in regulatory standards.

- Banks in some advanced economies should reduce large stocks of problem loans as soon as possible and adjust dated business models to maintain financial stability in a low-rate and low-growth environment.

- Emerging economies should engage in a smooth deleveraging path and proactively monitor and address corporate vulnerabilities, arising from excess leverage and foreign exchange exposures, to preserve financial stability.

- Mainland China's corporate debt overhang and financial vulnerabilities of some institutions must be addressed promptly through a comprehensive approach. Furthermore, curbing excessive credit growth and adjusting interbank funding structures would reduce the stress on the financial system.

2.1.3 Mainland China's economic and financial conditions

Economic growth momentum successively waned

In 2016, suffering from the global economic slowdown, supply-side structural reforms, and mounting local government debts, Mainland China's economic growth rate fell to 6.7% from 6.9% in 2015, and recorded the lowest level since 1990 (Chart 2.13).

Taking a glance into 2017, owing to international political risks concerning policy uncertainty under the Trump administration and Brexit, Mainland China's National People's Congress (NPC) and Chinese People's Political Consultative Conference (CPPCC) in March targeted an economic growth rate of 6.5%, lower than its previous target range of 6.5% to 7% in 2016. IHS Global Insight projects the economic growth rate to continue falling to 6.6% in 2017 because of weakening property markets and new economic and trade policies of the US (Chart 2.13).

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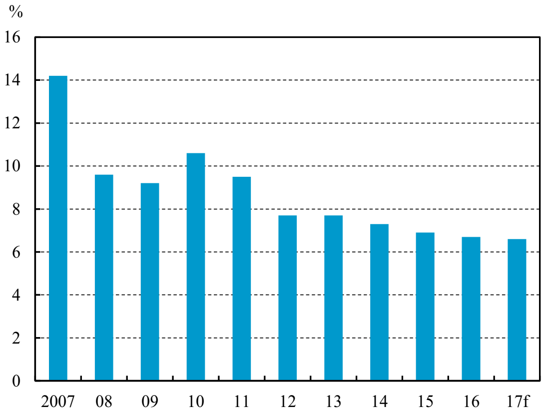
[22] IMF (2016), *Global Financial Stability Report*, October; IMF (2017), *Global Financial Stability Report*, April.

Prices remained stable and housing prices increased

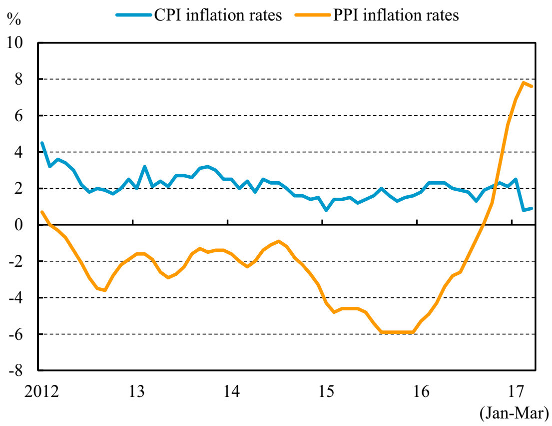
Because of stable food prices, the CPI inflation rate of Mainland China was 2.0% in 2016, lower than the official target of 3.0%. In the beginning of 2017, dragged by a significant decrease in food prices after the Lunar New Year, the CPI inflation rate declined to 0.9% in March. IHS Global Insight projects the annual CPI inflation rate of 2017 to increase to 2.1%. Moreover, the producer price index (PPI) showed negative growth over the longer run caused by destocking and restructuring. In September 2016, the PPI rebounded to 0.1% owing to higher prices for commodities such as coal and steel, thereby ending a 54-month decline. Additionally, affected by imported inflationary pressure arising from the pickup in crude oil prices and depreciation of the renminbi, the growth rate of the PPI has risen at a faster monthly pace since September. Therefore, the PPI inflation rate rose to 5.5% in December, and registered -1.4% for 2016 as a whole. Furthermore, the PPI rose to 7.6% in March 2017 (Chart 2.14).

Chart 2.13 Economic growth rates of Mainland China



Note: Figure for 2017 is an IHS Global Insight estimates.
Sources: National Bureau of Statistics of China and IHS Global Insight (2017/5/15).

Chart 2.14 Inflation rates of Mainland China



Source: National Bureau of Statistics of China.

Resulting from easy monetary policy and stock market index fluctuation at a low level and within a narrow range in 2016, massive capital flowed to housing markets leading to a marked rise in the first- and second-tier cities' housing prices while the third- and fourth-tier cities faced the pressure of stock clearance. Afterwards, Mainland China's government implemented targeted policies[23] that varied among different cities in September; therefore, the monthly growth rate of housing prices in 70 medium-large cities significantly fell to 0.3% at the end of the year from a high level of 2.1% in September, while the corresponding annual

[23] See note 3.

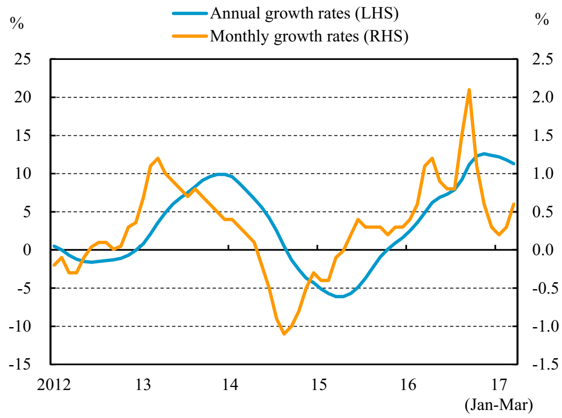
growth rate reached 12.4%. In the beginning of 2017, housing prices continued their upward trend, which was caused by a rise in specific third- and fourth-tier cities. Consequently, Mainland China further launched targeted policies aimed at specific third- and fourth-tier cities in March 2017 in order to stabilize housing prices. As a result, the annual growth rate was 0.6% in March, while the corresponding annual growth rate reached 11.3% (Chart 2.15).

PBC continued to implement prudential monetary policies

In an effort to reduce financing costs with the aim of sustaining economic growth, the People's Bank of China (PBC) lowered the reserve requirement ratio (RRR) for all banks by 50 bps in March. Subsequently, alternative targeted monetary easing measures were taken to inject funds into markets through different policy tools, including launching the medium-term lending facility (MLF) and pledged supplementary lending (PSL). In the beginning of 2017, against a backdrop of persistent depreciation of the renminbi, massive capital outflows and policy measures aimed at preventing housing bubbles, the PBC implemented prudential monetary policies, such as raising repurchase rates twice as well as hiking MLF rates and standing lending facility (SLF) rates resulting in stabilized interest rate spreads and exchange rate margins.

Furthermore, the Shanghai Interbank Offered Rate (SHIBOR) gradually rose from September 2016. Afterwards, the SHIBOR fluctuated dramatically because of prudential monetary policies, expanding inspection items of macro prudential assessment (MPA) and tighter liquidity conditions in the Chinese New Year holidays. Meanwhile, the PBC launched temporary liquidity facilities (TLF)

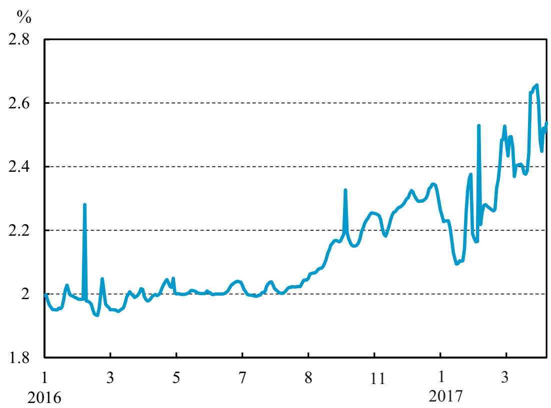
Chart 2.15 Average growth rates of building sales prices in 70 medium-large cities of Mainland China



Note: Figures are estimated by Thomson Reuters based on statistics published by the National Bureau of Statistics of China.

Sources: National Bureau of Statistics of China and Thomson Reuters.

Chart 2.16 Shanghai Interbank Offered Rates



Source: China Foreign Exchange Trading System & National Interbank Funding Center.

to temporarily inject liquidity into the financial system. However, the SHIBOR reached a yearly high, affected by the Fed raising interest rates, in March 2017 (Chart 2.16).

Stock markets fluctuated within a narrow range and at a low level whereas foreign exchange markets sharply fluctuated

In early 2016, owing to a circuit breaker mechanism and capital outflows driven by depreciation of the renminbi, the Shanghai Stock Exchange (SSE) Composite Index sharply declined. Afterwards, the SSE Composite Index gradually stabilized; however, the SSE fluctuated within a narrow range and at a low level because of Mainland China's slowing growth. Despite MSCI inclusion of Mainland China's shares as well as a Shenzhen-Hong Kong stock connect on December 5, 2016, market participants' concern over the slowing growth in Mainland China deepened and the SSE Composite Index reached 3,104 at the end of December, with an annual decrease of 12.3% (Chart 2.17).

Regarding the foreign exchange market, the PBC's intervention in the foreign exchange market to prevent speculative and arbitrage behavior, coupled with market expectations that the Fed would delay raising interest rates, brought the renminbi exchange rate against the US dollar to stabilize in 2016 Q1. However, the renminbi turned to depreciate against the US dollar following the Brexit vote in June. In the second half of 2016, the IMF included the renminbi in the special drawing right (SDR) currency basket, which became effective in October. Nevertheless, market participants' expectations that the momentum of renminbi exchange rate stabilization by the PBC had declined, along with the Fed signaling a faster pace of interest rate hikes, led to a further weakening of the renminbi exchange rate. Meanwhile, the renminbi exchange rate sharply depreciated because of the combined effect of capital outflows and expectations of renminbi depreciation. At the end of December, the renminbi exchange rate stood at 6.9495 against the US dollar, an annual depreciation of 6.56% (Chart 2.18).

In early January 2017, the renminbi exchange rate dropped to 6.9557 against the US dollar. Afterwards, the PBC intervened to greatly drive up the Hong Kong Interbank Offered Rate (HIBOR) to boost the cost of shorting

Chart 2.17 Shanghai Stock Exchange Composite index

Source: Bloomberg.

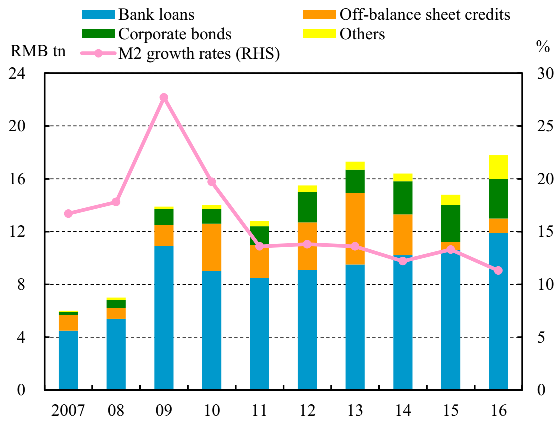
the renminbi offshore. In addition, capital outflow restrictions and accelerated sales of the US dollar by the PBC, as well as President Trump's belief that a strong US dollar contributed to the trade imbalance between the US and Mainland China, reversed the downward pressure on the renminbi. Following this, the renminbi exchange rate rebounded to 6.8342.[24] However, following Mainland China's trade deficit in February 2017 and the Fed gradually raising interest rates, the renminbi faced further depreciation pressure.

Chart 2.18 RMB/USD exchange rate

Source: CBC.

The increment in aggregate financing to the real economy increased, and NPL ratios of banks continually trended up

Chart 2.19 Aggregate financing to the real economy and annual growth rates of M2 in Mainland China



Source: PBC.

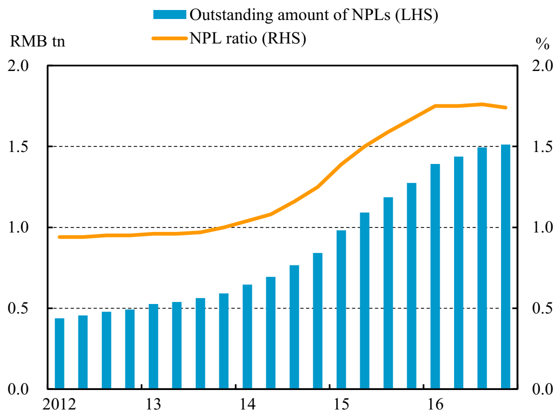
With a backdrop of the renminbi depreciation and capital outflows, the annual growth rate of broad money supply M2 decreased to 11.3% at the end of 2016, lower than the official annual target of 13%; thus, the PBC lowered the M2 growth target for 2017 to 12%. Meanwhile, aggregate financing to the real economy rose by RMB17.8 trillion in 2016 (Chart 2.19). However, slowing economic growth led to capital flowing to real estate, causing rapid mortgage growth as well as an increase in trust loans and entrusted loans. Accordingly, the annual growth rate increased to 12.8% from 12.4% a year earlier.

As a result of moderate economic growth, the NPL ratio of commercial banks edged up to 1.74% at the end of 2016 from the 1.67% recorded a year earlier (Chart 2.20). Because Mainland China's government continually cut excessive industrial capacity and cleaned up indebted corporates, the NPL ratio may continue to increase. However, Mainland China

[24] The renminbi exchange rate against the US dollar on January 18, 2017.

launched a debt-for-equity program in October 2016 in an effort to relieve the corporate debt burden and reduce banks' outstanding amount of NPLs.

Chart 2.20 NPL ratios of Mainland China's commercial banks



Source: China Banking Regulatory Commission.

With local government debts coming due, various measures were successively launched

Because of increasing pressure to service their debts[25] amid ongoing economic slowdown, Mainland China's government approved to launch a RMB3.2 trillion local government debt-swap program in 2015 to address the sources of financial stability pressure. Furthermore, Mainland China's government expanded the local government debt-swap program by RMB4.9 trillion in 2016 to enable local governments to tackle their debt due problems. Meanwhile, the State Council decided to adopt a local government debt ceiling in order to reduce default risk of local government debts.

2.2 Domestic macro environment

2.2.1 Domestic economic and fiscal conditions

In 2016, thanks to a gradual recovery in exports and modest growth in investment, domestic economic growth momentum strengthened and inflation remained stable. Short-term external debt servicing ability remained strong on the back of a sustained surplus in the balance of payments and ample foreign exchange reserves. Although the scale of external debt slightly increased, overall external debt servicing capacity stayed robust. Moreover, the government's fiscal deficits rebounded and the total government debt level slightly mounted; nevertheless, the government continued implementing the *Fiscal Health Plan* to enhance a sound fiscal system.

Export growth improved and the domestic economy rebounded progressively

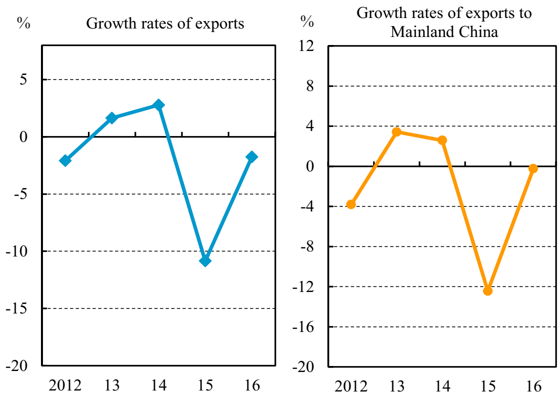
With the moderate global economic recovery and increasing demand for semiconductors, Taiwan's export growth improved significantly in 2016. The decrease in the annual export growth rate sharply recovered to -1.76% from -10.86% a year earlier, in line with the drop in

[25] The National Audit Office of the People's Republic of China published the audit findings of public debts at all levels of government in December 2013. Based on the report, about RMB1.52 trillion of the total local government debts fell due in 2016, and about RMB1.08 trillion will fall due in 2017.

exports to Mainland China (including Hong Kong) narrowing from -12.44% recorded a year earlier to -0.23% (Chart 2.21). The gradual recovery in exports and modest growth in both investment and private consumption underpinned the positive economic growth rate which increased continuously from Q2 2016 and even reached 2.79% in Q4. Overall, the annual economic growth rate stood at 1.48%, higher than the 0.72% of the previous year (Chart 2.22).

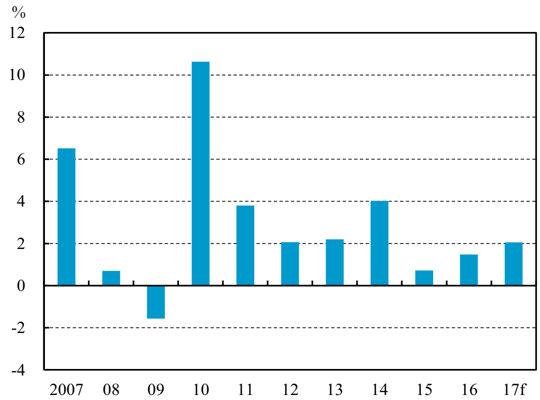
Taking a glance into 2017, the growth of the global economy and international trade is expected to boost exports. Moreover, the government has adopted an expansionary fiscal policy and is carrying out the *Forward-looking Infrastructure Development Program* to elevate investment momentum. Furthermore, private consumption is experiencing mild growth. As a result, the DGBAS forecasts Taiwan's annual economic growth rate to increase to 2.05%[26] in 2017 (Chart 2.22).

Chart 2.21 Growth rates of exports



Source: MOF.

Chart 2.22 Economic growth rates in Taiwan



Note: Figure for 2017 is forecast by DGBAS.
Source: DGBAS.

Domestic prices rose mildly

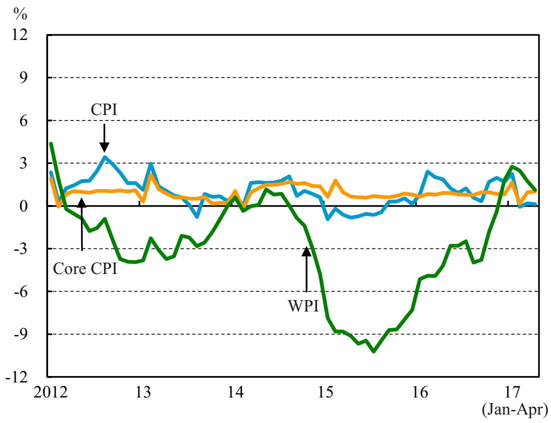
In 2016, pushed up by the gradual increase in the international prices of raw materials, such as crude oil, the pace of the decrease in the wholesale price index (WPI) inflation rate gradually abated and the annual WPI inflation rate registered 1.79% in December (Chart 2.23). Moreover, the annual WPI inflation rate stood at -2.99% in 2016, higher than the -8.84% recorded in 2015. The DGBAS projects the annual WPI inflation rate to climb successively to 0.50% in 2017.[27]

[26] See Note 4.
[27] See Note 4.

Attributed to severe coldness and the Lunar New Year holidays in early 2016, the CPI inflation rate rose to a peak of 2.41% in February. In subsequent months, the CPI inflation rate reversed to a downtrend. However, affected by the ascending prices of crude oil and the lagged effect of typhoons and torrential rain, the CPI inflation rate rebounded from October and rose to 1.69% in December. Overall, the annual CPI inflation rate registered 1.40% in 2016, higher than the -0.31% of the previous year, while the core CPI inflation rate rose moderately and reached 0.84%, slightly higher than the 0.79% recorded in 2015 (Chart 2.23).

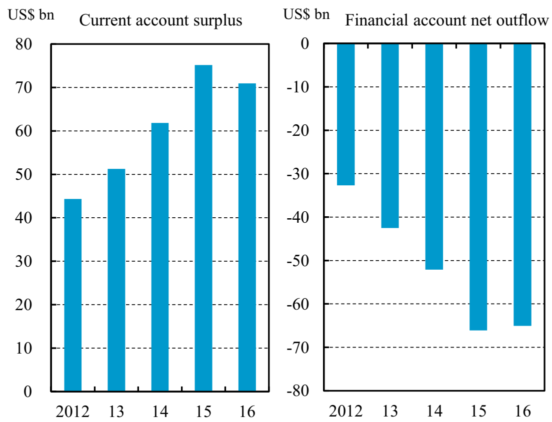
In 2017, although the international prices of raw materials are showing an upward trend, the inflation rate is expected to rise mildly owing to recent NT dollar appreciation easing imported inflation pressure, moderate domestic demand and a negative output gap. The CBC forecasts the annual CPI inflation rate and the core CPI inflation rate to stand at 1.25% and 1.06%,[28] respectively.

Chart 2.23 Consumer and wholesale price inflation rates



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

Chart 2.24 Current account surplus and financial account net outflow



Source: CBC.

Current account surplus persisted and foreign exchange reserves stayed abundant

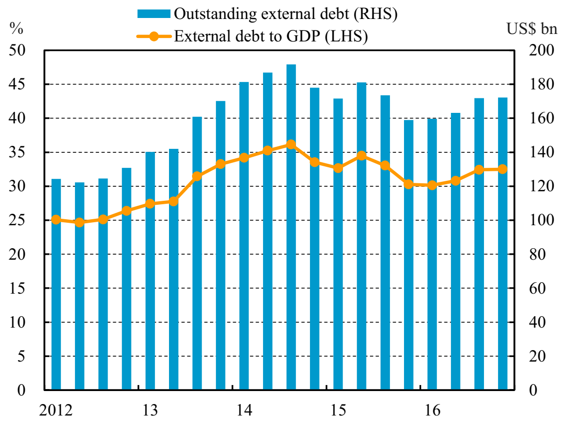
In 2016, although both merchandise exports and imports decreased compared to the previous year, the trade surplus declined as exports decreased more than imports, causing the annual current account surplus to shrink to US$70.9 billion, or 13.39%[29] of annual GDP, a decrease of US$4.2 billion or 5.64% compared to 2015. As for the financial account, in spite of the increase in foreign investments by insurance companies, the annual balance of outflows

[28] See Note 5.
[29] 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 at relatively high risk.

slightly shrank to US$65.0 billion as the outflows were partially offset by increases of inflows in both non-resident deposits and short-term foreign loans (Chart 2.24). With a greater decrease in the current account surplus, the balance of payments surplus shrank to US$10.7 billion in 2016, decreasing by 28.97% from the previous year.

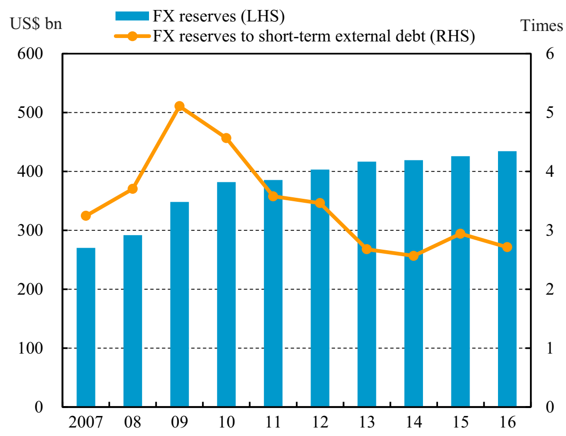
With the accumulation of earnings from portfolio investment of foreign exchange reserve assets, the foreign exchange reserves climbed to US$434.2 billion at the end of 2016, a slight increase of 1.92% from a year earlier. At the end of April 2017, the amount of foreign exchange reserves continued to increase to US$438.4 billion.

Chart 2.25 External debt servicing capacity



Sources: CBC and DGBAS.

Chart 2.26 Short-term external debt servicing capacity



Source: CBC.

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

Owing to the increase in the short-term external debt of the banking sector, Taiwan's external debt[30] showed an upward trend in the first three quarters of 2016, but slowed down in Q4. As a result, external debt registered US$172.2 billion, or 32.50% of annual GDP, at the end of the year (Chart 2.25).[31] Taiwan's capacity to service external debt remained robust, although the scale of external debt expanded slightly.

Furthermore, at the end of 2016, the ratio of foreign exchange reserves to short-term external debt fell to 2.71 times owing to a greater rise in short-term external debt. Nevertheless, it was

[30] The CBC defines external debt as 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 (starting from December 2004, figures for public external debt include outstanding foreign debt arising from repo transactions between the CBC and international financial institutions). The term "private external debt" refers to private-sector foreign debt not guaranteed by the public sector.

[31] 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.

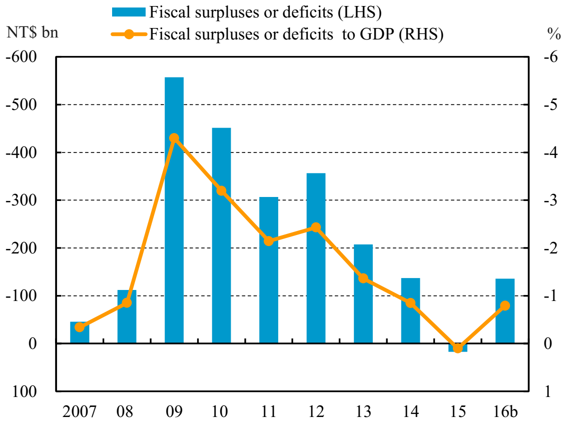
higher than internationally recognized minimum levels,[32] implying that Taiwan's foreign exchange reserves have a robust capacity to meet payment obligations (Chart 2.26).

Fiscal deficits rebounded and government debt slightly rose

Since the government implemented the *Fiscal Health Plan* from 2014 and the annual revenues in 2015 were higher than expected, fiscal revenues and expenditures had improved significantly. In 2016, the government appropriately increased annual expenditures in response to economic conditions, causing fiscal deficits to rebound to NT$135.7 billion, or 0.79%[33] of annual GDP (Chart 2.27).

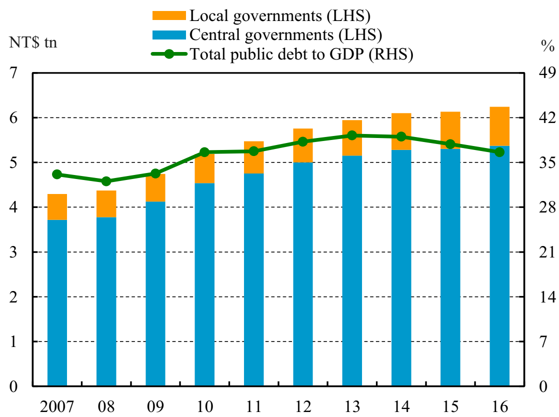
As fiscal deficits remained a concern and both central and local governments relied on debt issuance to finance debt servicing expenditures, outstanding public debt at all levels of government[34] in 2016 slightly expanded to NT$6.24 trillion[35] from the NT$6.13 trillion registered in the previous year. However, the ratio of total public debt to annual GDP slightly fell to 36.46%[36] on account of a higher increase in GDP growth (Chart 2.28).

Chart 2.27 Fiscal deficits position



Notes: 1. Fiscal position data include those of central and local governments.
2. Data of fiscal deficits are annual figures. Figures for 2016 are final accounts and budgets for the central government and local governments, respectively.
Sources: MOF and DGBAS.

Chart 2.28 Public debts



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 2016 are preliminary final accounts for both the central government and local governments.
Sources: MOF and DGBAS.

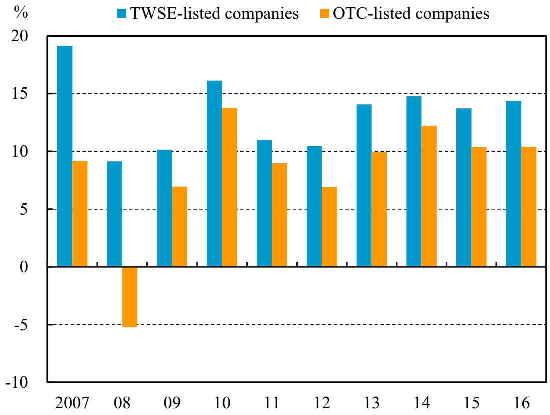
[32] The general international consensus is that a country with a ratio of foreign exchange reserves to short-term external debt higher than 100% is deemed to be relatively low risk.
[33] See Note 6.
[34] The term "outstanding debt at all levels of government" as used in this report refers to outstanding non-self-liquidating debt with a maturity of one year or longer.
[35] At the end of 2016, outstanding non-self-liquidating debt at all levels of government with a maturity of one year or longer was NT$6.24 trillion, including NT$5.37 trillion and NT$0.87 trillion for central government and local governments, respectively, which are both preliminary final accounts. As of April 2017, the outstanding one-year-or-longer non-self-liquidating public debt is NT$6.20 trillion, including NT$5.44 trillion, NT$0.60 trillion, NT$0.16 trillion, and NT$0.4 billion for central government, municipalities, counties, and townships, respectively. The figures account for 32.63%, 3.63%, 0.94%, and 0.003% of the average GDP for the preceding three fiscal years, which are below the ceilings of 40.6%, 7.65%, 1.63%, and 0.12% for central government, municipalities, counties, and townships, separately, set out in the Public Debt Act.
[36] See Note 7.

In order to achieve a sound fiscal system, the Ministry of Finance continued to implement the *Fiscal Health Plan* and *Central Government Debt Improvement Plan,* seeking to improve the structures of revenue and expenditure of government and control the scale of debt.

2.2.2 Corporate sector[37]

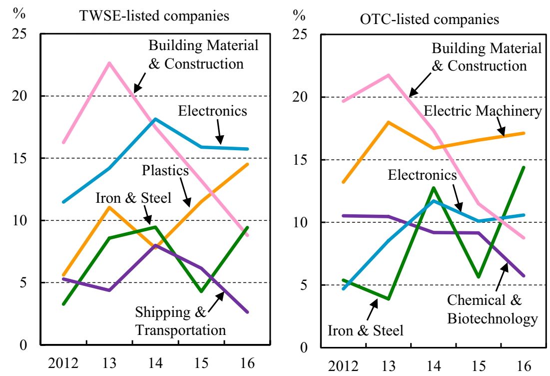
The profitability of listed companies enhanced in 2016. However, their financial leverage ratio rose and short-term debt servicing capacity dropped, yet remained at an adequate level. At the end of 2016, the NPL ratio for corporate loans granted by financial institutions reached a historical low, indicating sound credit quality of corporate loans. Nevertheless, it is notable that the deceleration in corporate investment growth could affect the long-term development of domestic industries.

Chart 2.29 Return on equity in corporate sector



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

Chart 2.30 Return on equity of TWSE-listed and OTC-listed companies by major industries



Source: TEJ.

Profitability of listed companies enhanced in 2016

In 2016, benefiting from the rebound in international prices of raw materials and the gradual recovery of exports in Taiwan, the average ROEs of TWSE-listed and OTC-listed companies slightly rose to 14.38% and 10.39%, respectively, marginally higher than a year earlier (Chart 2.29). Profitability enhanced, mainly driven by the improvement in market demand boosting profitability in the plastics and the iron & steel industries.

[37] 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 are under ROC GAAP, while from 2012 are under the TIFRSs. In light of changes in accounting treatment and presentation, readers should interpret these figures prudently when comparing statistics before and after IFRSs adoption.

Except for the building material & construction and the shipping & transportation industries with declining ROEs and the electronics industry with flat ROE, all other industries for TWSE-listed companies reported increasing ROEs in 2016, especially the iron & steel industry. For OTC-listed companies, except for the chemical & biotechnology and the building material & construction industries, all other major industries had better performance (Chart 2.30).

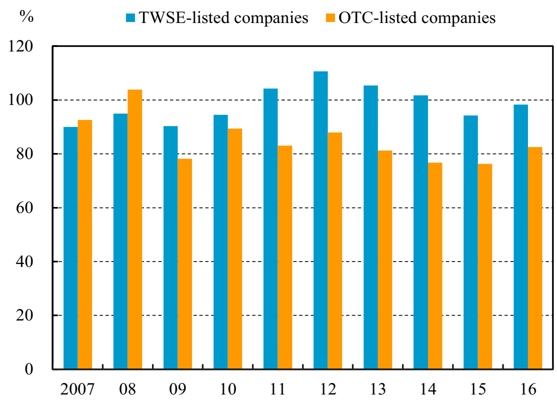
Leverage ratio rose for listed companies

At the end of 2016, the average leverage ratio for TWSE-listed companies rose to 98.33% from 94.29% at the end of the previous year. Similarly, the average leverage ratio for OTC-listed companies also increased to 82.52% from 76.26% a year earlier (Chart 2.31). Leverage ratios rose mainly because listed companies increased borrowing from banks and raised funds through commercial paper in response to the demand for operations.

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

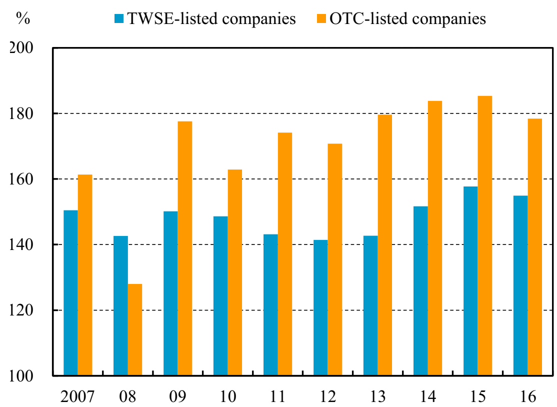
Owing to a greater increase in current liabilities, the current ratio for TWSE-listed companies dropped to 155% at the end of 2016, while the interest coverage ratio

Chart 2.31 Leverage ratios in corporate sector



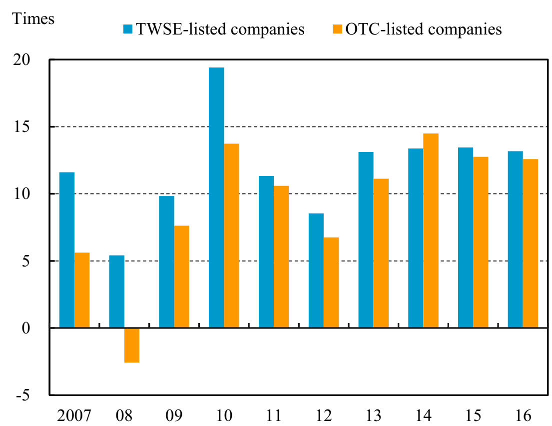
Note: Leverage ratio = total liabilities/total equity.
Source: TEJ.

Chart 2.32 Current ratios in corporate sector



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

Chart 2.33 Interest coverage ratios in corporate sector



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

slightly decreased to 13.18. In addition, the current ratio and the interest coverage ratio for OTC-listed companies also fell to 178% and 12.59, respectively (Chart 2.32 and 2.33). For listed companies as a whole, short-term debt servicing capacity generally dropped, yet still held at an adequate level.

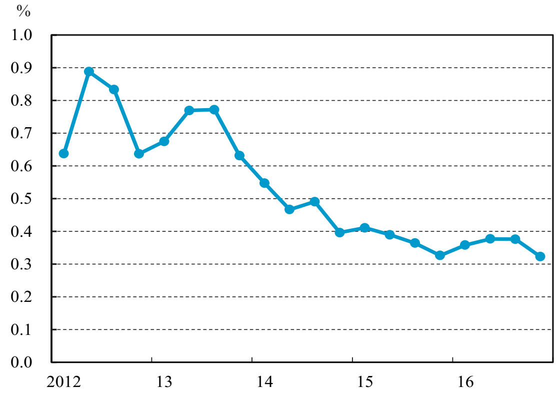
Credit quality of corporate[38] loans remained sound

In the first three quarters of 2016, the NPL ratio for corporate loans from financial institutions rose because of an increase in past-due loans of some corporations. However, the ratio turned to decline to only 0.32% at the end of the year and continued to reach the lowest level on record as a result of partial recoveries of bad debts and write-offs of NPLs by financial institutions, reflecting sound credit quality for the corporate sector (Chart 2.34).

Paying close attention to the deceleration in corporate investment growth

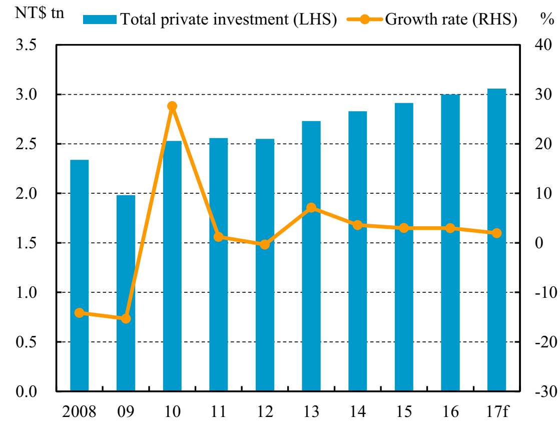
Benefiting from the development of advanced manufacturing in the semiconductor industry and the expansion of aircraft fleets in the aviation industry, the growth rate of domestic private real investment was 2.95% in 2016, still slightly lower than that of the previous year (Chart 2.35). In view of the increasing pressure of

Chart 2.34 NPL ratios of corporate loans



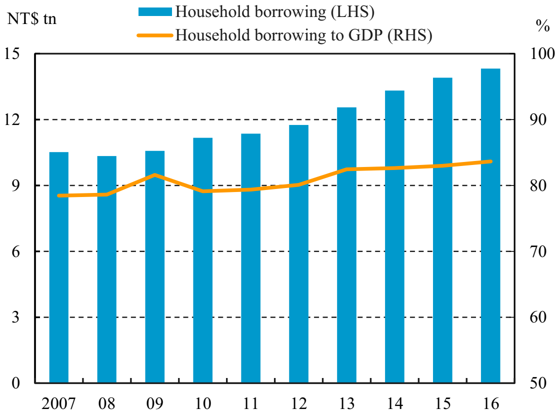
Source: JCIC.

Chart 2.35 Private real investment



Note: Figure for 2017 is forecast by DGBAS.
Source: DGBAS.

Chart 2.36 Household borrowing to GDP



Sources: CBC, JCIC and DGBAS.

[38] The data for the corporate sector herein are on the basis of listed and unlisted corporations provided by the JCIC.

international competition among peers, the rise of trade protectionism, and the crowding-out effect by industrial supply chain localization in Mainland China affecting the corporate sector's future operation and investment, the DGBAS predicts the growth rate of domestic private real investment to fall to 1.95% for 2017. It is noteworthy for banks to pay close attention to the impact of moderating corporate investment growth on their long-term operation and development.

2.2.3 Household sector

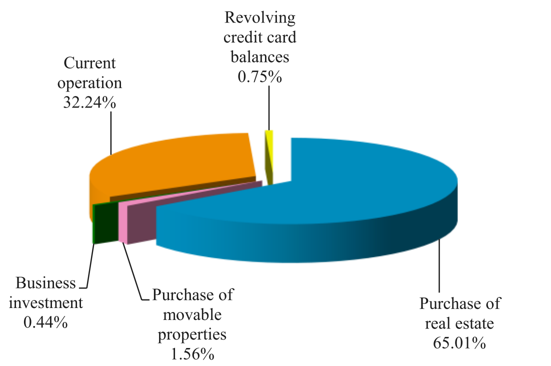
The household debt burden relieved slightly as the balance of total household borrowing expanded more slowly than that of disposable income. The overall credit quality of household borrowing remained satisfactory. Meanwhile, the unemployment rate and interest rates on loans remained low, which should help underpin the debt servicing capacity of households.

Household borrowing increased continually

At the end of 2016, total household borrowing saw a slight expansion and reached NT$14.32 trillion, equivalent to 83.65% of annual GDP (Chart 2.36). The largest share of household borrowing went for the purchase of real estate (65.01%), followed by current operation loans[39] (32.24%). The rest of the household borrowing categories took only minor percentages, including loans to purchase movable properties, largely consisting of vehicle loans, business investment loans, and revolving balances on credit cards (Chart 2.37).

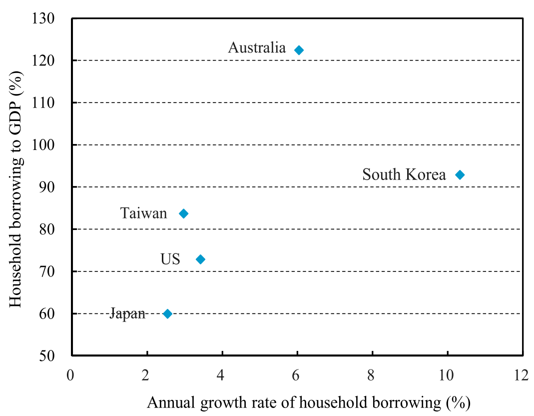
In 2016, total household borrowing grew

Chart 2.37 Household borrowing by purpose



Note: Figures are as of the end of 2016.
Sources: CBC and JCIC.

Chart 2.38 Household indebtedness in selected countries

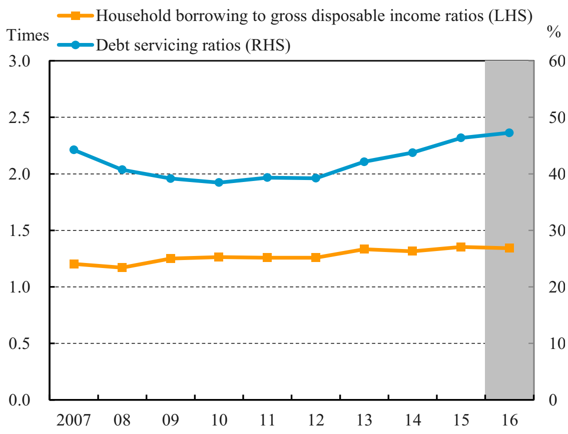


Note: Figures are as of the end of 2016.
Sources: Fed, BOJ, BOK, ABS, IMF, DGBAS, CBC and JCIC.

[39] The term "current operation loans" includes outstanding cash card loans.

moderately, with the annual growth rate falling to 2.97% at the end of the year. The increment of total household borrowing was mainly from an increase in loans for the purchase of real estate and current operation loans. Compared to other countries, the growth of total household borrowing in Taiwan was lower than that in South Korea and Australia, equivalent to that in the US, but higher than that in Japan. In addition, as a percentage of GDP, household borrowing in Taiwan was lower than that in Australia and South Korea, but higher than that in the US and Japan (Chart 2.38).

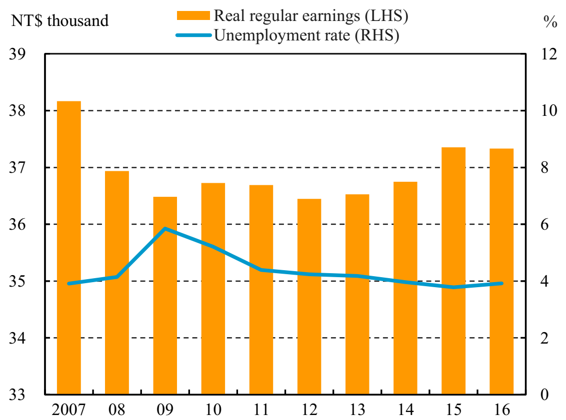
Chart 2.39 Household indebtedness and debt servicing ratios



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

Household debt burden relieved slightly

Chart 2.40 Unemployment rate and regular earnings



Sources: DGBAS and Ministry of Labor.

As total household borrowing grew at a slower pace than disposable income in 2016, the ratio of household borrowing to total disposable income[40] declined marginally to 1.34 at the end of the year from 1.35 a year earlier, reflecting slight relief of the household debt burden. However, owing to the increase in loans for current operations, which typically have a shorter term, the debt servicing ratio uplifted to 47.27% in 2016 (Chart 2.39), thereby indicating that household short-term debt servicing pressure mounted slightly. Although regular earnings of employees in the industrial and service sectors failed to grow in 2016, the domestic unemployment rate (Chart 2.40) and interest rates on loans stayed low, which could help sustain the debt servicing capacity of households.

[40] Total disposable income = disposable income + rental expenses + interest expenses.

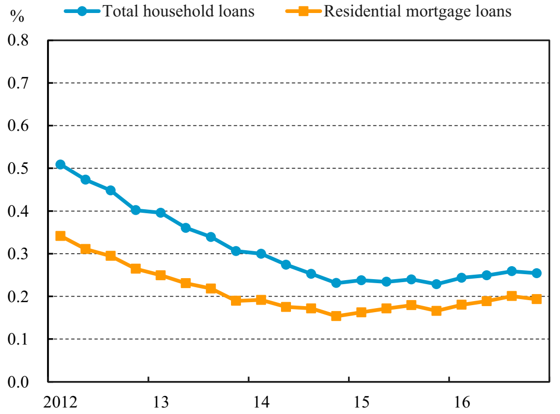
Credit quality of household borrowing remained satisfactory

In 2016, the NPL ratio of household borrowing grew slightly but remained at a low level of 0.25% at the end of the year, reflecting satisfactory credit quality (Chart 2.41).

2.2.4 Real estate market

In 2016, trading volume in the real estate market continuously contracted and house prices declined gradually owing to a downturn in the housing market along with a heavier tax burden on real estate owners. In addition, housing loans and construction loans grew slowly, and mortgage interest rates continued at low levels. With the government's measures aimed at encouraging sound development of the real estate market gradually coming into effect as well as banks improving their risk control of real estate loans, the CBC repealed most of the rules imposed on housing loans and land collateralized loans, except for high-value housing loans, in late March 2016. From early 2017 onwards, transactions in the housing market showed signs of stabilization.

Chart 2.41 NPL ratios of household borrowing

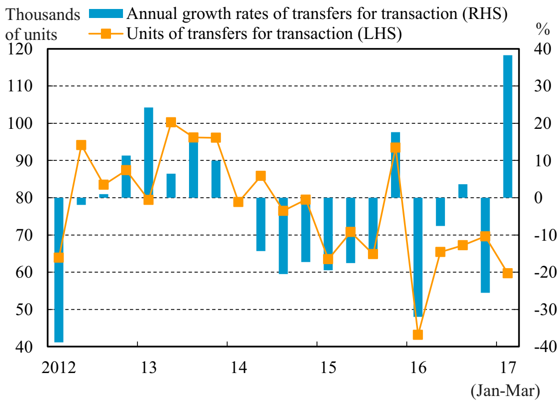


Source: JCIC.

Trading volume in the real estate market stabilized after contracting dramatically

In 2016 Q1, the total number of building ownership transfers for transaction decreased dramatically by 31.97% year on year owing to the levying of a consolidated housing and land income tax, a heavier tax burden on real estate owners, as well as real estate market participants remaining hesitant. Subsequently, affected by improving domestic economic growth, declining housing prices, increasing number of residential property buyers in the housing market, and a rise in the release of new buildings, housing market transactions recovered gradually. In Q2, the extent of the

Chart 2.42 Building ownership transfers for transaction



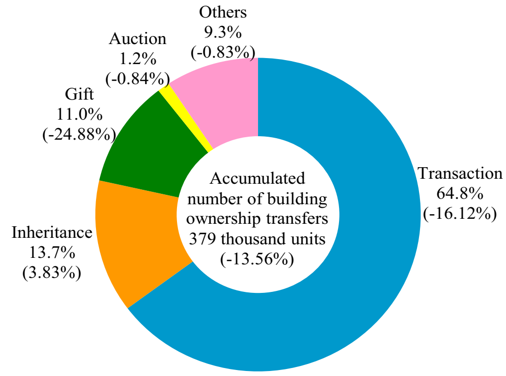
Source: Monthly Bulletin of Interior Statistics, MOI.

decrease narrowed, and later trading volume in the housing market registered positive growth of 3.63% in Q3. However, the annual growth rate decreased to -25.51% in Q4 as a result of a higher base period in the previous year stemming from dramatically increased transactions before the levying of a consolidated housing and land income tax (Chart 2.42).

The accumulated number of building ownership transfers was 379 thousand units in 2016, declining by 13.56% year on year. The number of building ownership transfers for transaction registered a record low of 245 thousand units, accounting for 64.8% of the total transfers and decreasing by 16.12% year on year. The number of transfers for gift, making up 11.0% of the total transfers, also decreased by 24.88% year on year. These figures show that the government's efforts to curb speculation in the housing market have proved effective (Chart 2.43).

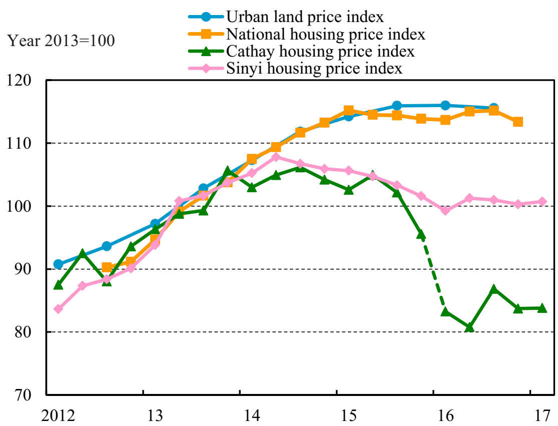
In 2017 Q1, the total number of building ownership transfers for transaction turned to positive growth, with an annual growth rate of 38.3%. The main reasons were a lower base period in 2016 and falling housing prices helping to stabilize the transactions of residential properties.

Chart 2.43 Building ownership transfers and annual growth rate in 2016



Source: Monthly Bulletin of Interior Statistics, MOI.

Chart 2.44 Land and house price indices



Notes: 1. Taiwan land price index is released semiannually. Figures are as of the end of March and September.
2. The Cathay housing price index modified the index basis from 2016 Q1, mainly including applying the new definition of "standard housing" (the newly-defined standard housing represents the typical quality of houses being transacted in a specific area), and amending the calculation of the bargaining rate.
3. For comparison purposes, all four indices use the same base year of 2013 (2013 average = 100).

Sources: MOI, Cathay Real Estate and Sinyi Real Estate Inc.

Real estate prices declined slightly

In 2016, dragged by a contracted housing market, land prices also fell gradually. The annual growth rate of the land price index[41] was -0.31% as of the end of September 2016. The

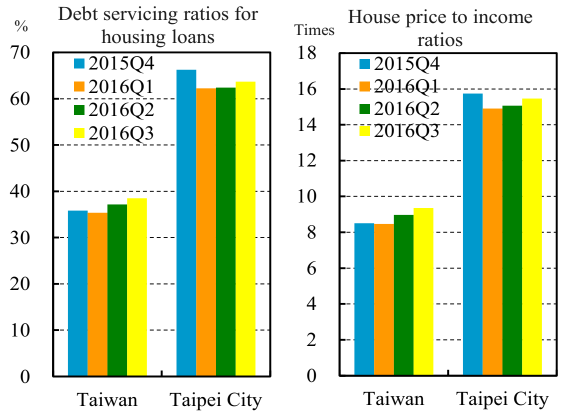
[41] The land price index was 118.91 as the Ministry of Interior re-designated March 31, 2013 as the base period (index = 100).

national housing price index reached its highest point in 2015 Q1 and then fell gradually. As of the end of 2016 Q2, the annual growth rate increased slightly to 0.46%, yet declining by 0.16%[42] from its highest point (Chart 2.44).

The Cathay housing price index[43] (for new residential buildings) has fallen slowly since 2015 Q3. The index rallied slightly on the back of an improving housing market from 2016 Q4 onwards (Chart 2.44).

From 2016 onwards, the Sinyi housing price index (for existing residential buildings) continuously declined at a slower pace (Chart 2.44), but the degree of the decline narrowed quarter by quarter. The index turned to increase by 1.47% in 2017 Q1. However, compared to its highest point in 2014 Q2, the index was still down by 6.56%.

Chart 2.45 Debt servicing ratios for housing loans and house price to income ratios



Notes: 1. Debt servicing ratios for housing loans = median housing loans monthly payments/median household monthly disposable income.
2. House price to income ratios = median house price/median household annual disposable income.
Source: Housing Price Affordability Indicator Statistics, Construction and Planning Agency of the MOI.

Mortgage burden stayed high

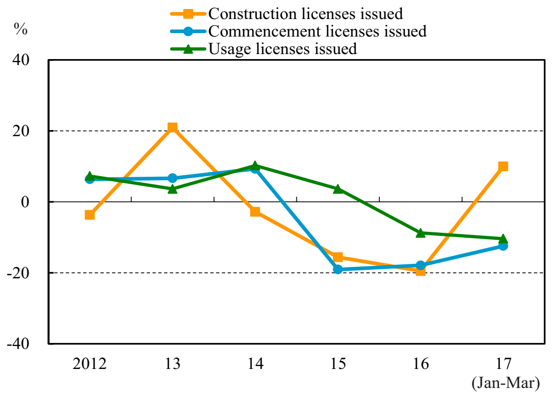
In 2016, housing prices declined gradually and mortgage interest rates showed a downward trend. With the growth of household disposable income continuing to slow, the debt servicing ratio for housing loans increased to 38.49% in 2016 Q3, the highest level since statistics began, increasing by 2.39 percentage points year on year. The house price to income ratio trended up to 9.35, the highest level on record, rising by 0.83 year on year (Chart 2.45). Compared to other cities in Taiwan, the debt servicing ratio for housing loans and the house price to income ratio in Taipei City were the highest, reaching 63.71% and 15.47, respectively, followed by New Taipei City, registering 52.33% and 12.70, respectively.

[42] See the “Housing price index” report for 2016 Q2, compiled by the Construction and Planning Agency, the Ministry of the Interior.
[43] In 2017 Q1, the Cathay housing price index retrospectively adjusted the relevant index, including adjusting the base period, applying the new definition of “standard housing” (the newly-defined standard housing represents the typical quality of houses being transacted in a specific area) from 2016 Q1, and amending the calculation of the bargaining rate.

Construction licenses issued contracted, while unsold new residential properties expanded

In 2016, with sluggish housing market growth, a reduction in residential properties construction projects, as well as enterprises decreasing their demand for launching new stores and expanding plants, the total floor space of construction licenses issued decreased by 19.51% year on year (Chart 2.46), with residential properties decreasing by 27.25%. In 2017 Q1, the annual growth rate of the total floor space of construction licenses issued turned to positive growth of 9.98%, mainly driven by a rise in the demand for expanding offices and plants as well as a lower base period in the previous year; however, the floor space of construction licenses issued for residential properties still decreased by 5.20%.

Chart 2.46 Annual growth rates of floor space of construction, commencement, and usage licenses issued



Note: The data in 2017 are the annual growth rates from January to March.
Source: Monthly Bulletin of Interior Statistics, MOI.

Owing to worse-than-expected sales of new construction projects, construction companies were mostly committed to reducing inventory and new buildings constructions. In 2016, the total floor space of commencement licenses issued fell by 17.90% year on year (Chart 2.46), with residential properties decreasing by 19.49%. In 2017 Q1, the total floor space continuously dropped by 12.46% year on year, with residential properties decreasing by 23.77%.

With construction companies reducing construction projects, the total floor space of usage licenses issued decreased by 8.76% year on year in 2016 which was the first negative growth rate since 2011 (Chart 2.46), with residential properties decreasing by 7.04%. In 2017 Q1, the total floor space decreased by 10.38% year on year, with residential properties decreasing by 21.84%.

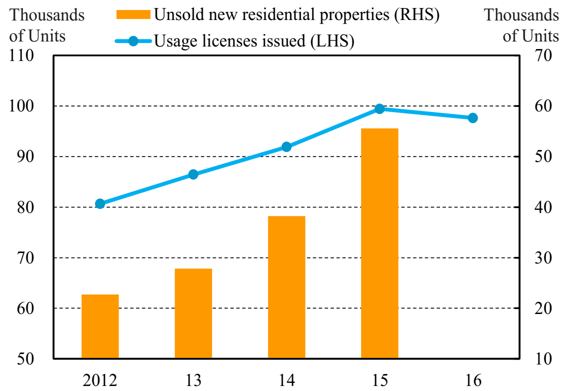
According to the Ministry of Interior, unsold new residential properties registered 56 thousand units at the end of 2015, increasing by around 17 thousand units or 45.36% year on year. In 2016, 98 thousand usage licenses issued were released, decreasing by 2 thousand units or 1.81% year on year (Chart 2.47). Owing to the prices of new residential properties staying high as well as a sluggish housing market, unsold new residential properties will continuously expand.

Real estate loans grew modestly as mortgage interest rates continuously decreased

With demand in the housing market returning to be dominated by self-use housing buyers, the total new housing loans granted by the top five banks[44] registered NT$435.7 billion in 2016, decreasing by 2.39% year on year, a narrower decline than the previous year. In January 2017, the figure also decreased by 4.71% year on year but turned to positive growth from February onwards, and registered 6.37% in March. The interest rate for new housing loans exhibited a downward trend, and dropped to 1.659% in December 2016. From 2017 onwards, the housing loan interest rate rebounded slightly, but still stayed at a low level, registering 1.665% in March (Chart 2.48).

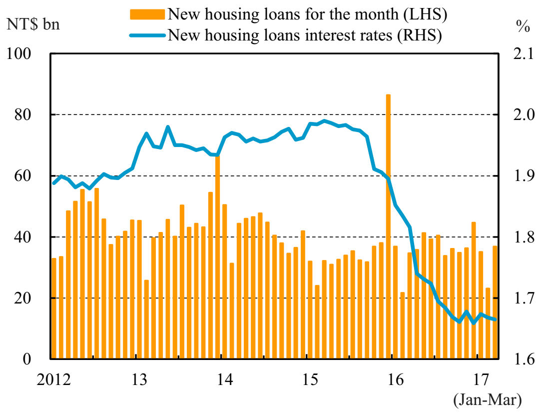
From March 2016 onwards, with transactions in the housing market gradually resuming stability, the annual growth rate of the outstanding loans for house purchases and house refurbishments granted by banks[45] showed a moderate upward trend, registering 3.78% as of the end of March 2017 (Chart 2.49). Meanwhile, the decrease in outstanding construction loans narrowed gradually since July 2016. Those loans turned to positive growth as of the end of December, registering an annual growth rate of 2.11% at the end of March 2017 (Chart 2.49).

Chart 2.47 Unsold new residential properties and usage licenses issued for residential properties



Note: Unsold new residential properties use data from land registration, house tax registration and Taiwan Power Company, filtering the residential properties built within the last 5 years, still maintaining the first registration and having the possibility of being for sale. The data are currently published to 2015 Q4.
Source: Monthly Bulletin of Interior Statistics, Real estate information platform, MOI.

Chart 2.48 New housing loans – amounts and interest rates



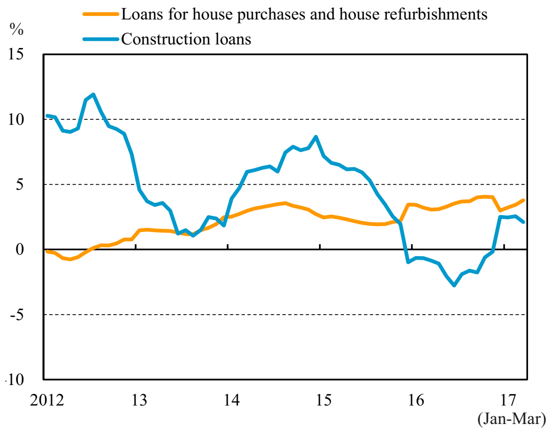
Source: CBC.

44 The top five banks refer to Bank of Taiwan, Taiwan Cooperative Bank, First Commercial Bank, Hua Nan Commercial Bank, and Land Bank of Taiwan.
45 Refers to domestic banks and the local branches of foreign and Mainland China's banks.

The CBC repealed most targeted prudential measures and banks were urged to exercise self-discipline on real estate loans

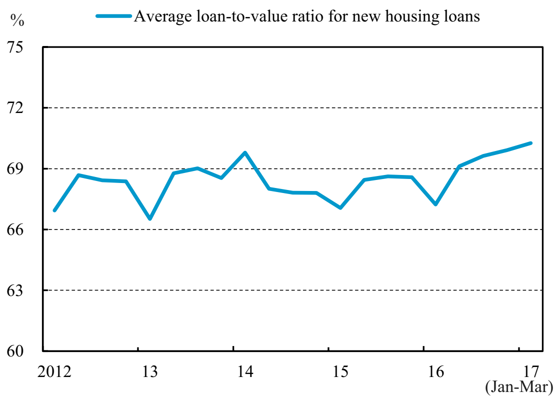
As the regulations governing real estate loans have proved effective, the CBC repealed most rules imposed on housing loans and land collateralized loans, except for high-value housing loans, and required financial institutions to strengthen self-discipline on mortgage-related credit risk. As a result, the average loan-to-value ratio for new housing loans rose at a moderate pace from 67.23% in 2016 Q1 to 70.26% in 2017 Q1 (Chart 2.50). In the future,0 the CBC will continue to monitor banks' real estate lending and developments in the housing market, and adopt appropriate measures in a timely manner to sustain financial stability.

Chart 2.49 Annual growth rates of real estate loans



Source: CBC.

Chart 2.50 Average loan-to-value ratio for new housing loans



Note: Figures are the average loan-to-value ratio for new housing loans extended by all financial institutions.
Source: JCIC.