

II. Macro environmental factors potentially affecting financial sector

2.1 International economic and financial conditions

2.1.1 International economic conditions

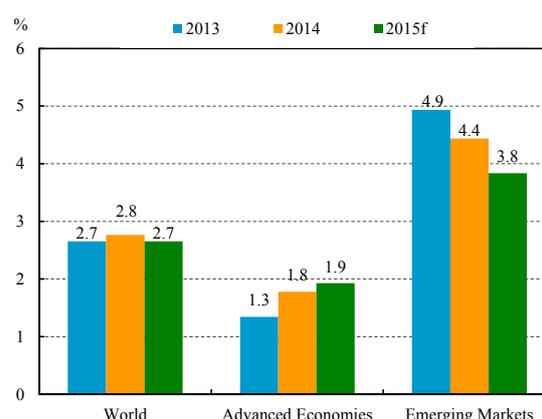
Global economic recovery proceeded at a mild pace

In 2014, global economic recovery remained modest with uneven prospects across the major economies. In the US, economic growth sustained, reflecting a resumed growth in private consumption and fixed investment. However, euro area growth remained weak despite it gradually shrugging off the shadow of the sovereign debt crisis. Meanwhile, Japan witnessed declining economic growth owing to an adverse impact on private demand following its sales tax hike. In emerging markets, growth momentum waned as exports were hampered by a subdued global recovery and domestic demand in many of the economies fell short of expectations.

In 2015 Q1, growth in the US was weaker than expected owing to harsh winter weather and a strong dollar, while continued monetary easing policies gave impetus to growth in the euro area and Japan. However, growth momentum in advanced economies was still not strong enough and emerging markets slowed sharply. In this setting, IHS¹² predicts world real GDP growth to decrease to 2.7% in 2015 from 2.8% in 2014. Real GDP in advanced economies is projected to slightly increase to 1.9%. The average growth rate in emerging economies is forecast to decline continuously to 3.8% (Chart 2.1).

Moreover, the oil price has fallen more than 40% since the end of June 2014. It is expected

Chart 2.1 Global economic growth rates



Note: Figures for 2015 are IHS estimates.
Source: IHS (2015/5/15).

¹² See Note 3.

that the global oil supply and demand balance will not resume, therefore allowing the price to stabilize, until the second half of 2015. Overall, the low oil price was favorable to the global economy and decreased the headline inflation rates of the major economies, including the US, euro area and Japan. However, it is likely to undermine the output of oil-exporting countries, such as Russia and Venezuela (Box 1).

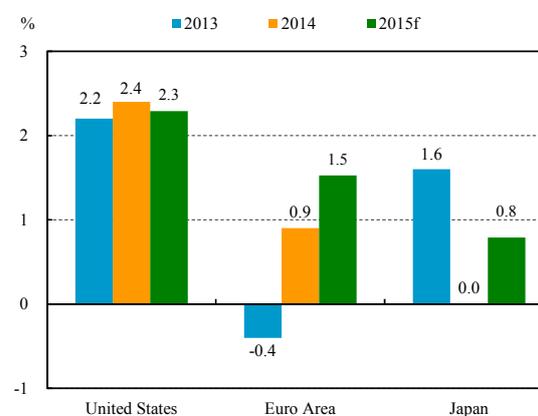
Advanced economies took divergent growth paths

The US economy grew steadily and its labor market improved continuously

The US economy grew steadily in 2014. Even as output contracted in Q1 owing to the harsh weather, recovery gained momentum in Q2 as a result of a pick-up in private consumption when the effects of the severe winter weather faded, along with an increase in fixed investment by the manufacturing sector as it moved production back to the US. The economic growth rate for the whole year rebounded to 2.4% from 2.2% in 2013. In 2015 Q1, growth in the US was weaker than expected owing to harsh winter weather and a strong dollar. IHS estimates US economic growth to slow down slightly to 2.3% in 2015 (Chart 2.2).

The labor market in the US improved continuously in 2014, bringing down the unemployment rate to a six-year low of 6.2% from 7.4% registered in 2013. Although US growth momentum waned from 2015 onwards, the unemployment rate dropped continuously. IHS anticipates the US unemployment rate to continue dropping to an annual rate of 5.4% in 2015 (Chart 2.3).

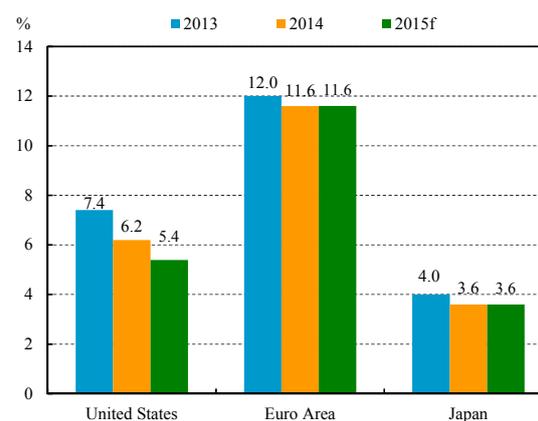
Chart 2.2 Economic growth rates in US, Euro area and Japan



Note: Figures for 2015 are IHS estimates.

Sources: Official websites of the selected economies and IHS (2015/5/15).

Chart 2.3 Unemployment rates in US, Euro area and Japan



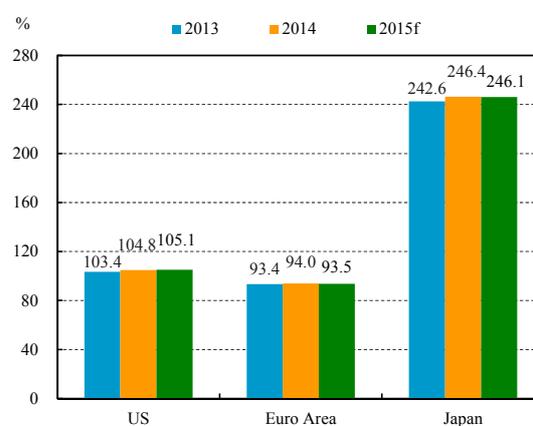
Note: Figures for 2015 are IHS estimates.

Sources: Official websites of the selected economies and IHS (2015/5/15).

In fiscal year 2014, the US deficit shrank to US\$483.3 billion, the lowest level since 2009. Although the fiscal condition improved continuously, the US government's debt burden was still very heavy. Owing to massive fiscal expenditures on medical insurance, social security and interest payments of sovereign debt, outstanding government debt increased persistently and passed the US\$18 trillion mark at the end of 2014, lifting the government debt-to-GDP ratio to 104.8%. Looking ahead, the aging population structure and expenditures on

medical care protection in the US might increase the government's debt burden. The International Monetary Fund (IMF) forecasts that the ratio of outstanding government debt relative to annual GDP will elevate to an estimated 105.1% in 2015¹³ (Chart 2.4).

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



Note: Figures for 2015 are IMF projections.
Source: IMF (2015), *Fiscal Monitor*, April.

The ECB implemented monetary easing policy to lift growth and inflation

Thanks to the receding impact of the European sovereign debt crisis, the euro area has resumed growth since 2013 Q2. However, the euro area unemployment rate has not effectively improved, and governments in the area have implemented harsh austerity measures depressing demand and bringing the shadow of deflation. This, coupled with economic sanctions on Russia that hit the German and French economies, undermined growth momentum in the euro area. As a result, euro area GDP grew by merely 0.9% year on year in 2014. To lift growth and inflation, on 22 January 2015, the ECB announced it would embark on a €1.14 trillion bond purchasing program in March. IHS predicts euro area economic growth to increase to 1.5% in 2015 (Chart 2.2).

Although the euro area unemployment rate gradually descended from its historical high of 12.0% in 2013, the unemployment rate in 2014 was still high at 11.6%, implying further improvement in the labor market is still needed. Severe youth unemployment is an open question across the area, where Spain and Greece suffered youth unemployment rates of more than 50%. Owing to persistent structural problems in euro area labor markets, IHS predicts the unemployment rate to stay at 11.6% in 2015, even as the ECB's quantitative easing measures are expected to stimulate economic growth in the area (Chart 2.3).

¹³ IMF (2015), *Fiscal Monitor*, April.

Regarding the government's fiscal position, thanks to harsh fiscal austerity measures, the fiscal deficit to GDP ratio dropped to a six-year low of 2.7% in 2014, with Spain and Ireland exiting their respective international bailout programs one after the other. However, owing to weak economic recovery impetus and arduous fiscal problems in Greece, the euro area's outstanding government debt-to-GDP ratio ascended to 94.0%. With the euro area gradually gaining growth momentum, the IMF predicts the ratio to fall slightly to 93.5% in 2015 (Chart 2.4).

Sales tax hike hit Japanese economic growth

In 2014, although Japan sped up implementing its ¥5.5 trillion economic stimulus package, Japanese economic growth turned negative in Q2 owing to the sales tax hike in April hitting private consumption in durables and corporate facility investment. As a result, Japanese annual economic growth dropped to 0% from 1.6% in 2013. In light of the weak economic prospects and growing deflationary expectations, the BOJ expanded quantitative and qualitative monetary easing in October 2014, while the Japanese government phased in a 3.29 percentage points cut in the corporate tax rate to underpin corporate profitability and investment. Moreover, considering that the impact of the sales tax rate increase on consumer confidence was stronger than expected, the Shinzo Abe cabinet postponed the second sales tax hike until April 2017 and approved a ¥3.5 trillion emergency stimulus package to boost private consumption. IHS estimates Japanese economic growth to rebound to 0.8% and the unemployment rate to stabilize at 3.6% in 2015 (Chart 2.2 and 2.3), while the IMF predicts the outstanding government debt-to-GDP ratio to decrease slightly to 246.1% in 2015 alongside the economic recovery (Chart 2.4).

Economic growth of Asian emerging economies slowed down

In 2014, GDP growth in most Asian emerging economies experienced slowdowns. The Asian newly industrialized economies saw slack recoveries in exports; however, output growth in these economies rose to 3.2% from 2.9% in 2013 as falling oil prices boosted private consumption in some economies. Among member countries in the Association of South East Asian Nations (ASEAN-10), Thailand was mired in political vulnerabilities, while growth in Indonesia slowed as a slump in major international commodity prices deteriorated the terms of trade. As a result, the overall growth rates of the ASEAN-10 contracted to 4.4% from 5.1% in 2013. In Mainland China, the economic transition was carried out continuously. While overcapacity industries and falling property prices jeopardized consumption and investment, export growth slowed amid weak external demand. Reflecting this, Mainland China's

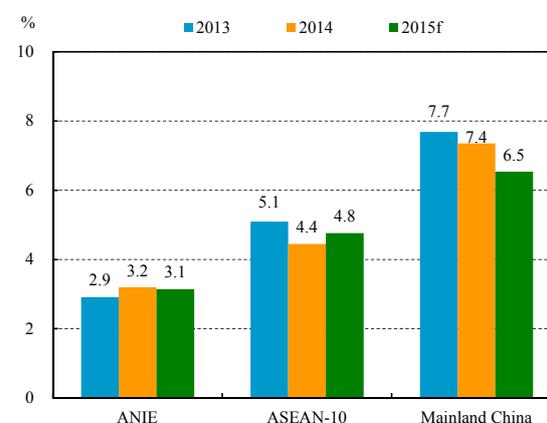
economic growth declined continuously to 7.4% in 2014, the lowest level in 24 years (Chart 2.5).

IHS anticipates that the economic growth rate in the Asian newly industrialized economies will slow slightly to 3.1% in 2015, whereas the ASEAN-10 countries are likely to see rebounding growth of 4.8% thanks to continued strong growth in the Philippines and Vietnam. Meanwhile, Mainland China, suffering from overcapacity and mounting property inventory, is predicted to achieve a more moderate growth rate of 6.5% (Chart 2.5). In addition, the unemployment rate in the Asian newly industrialized economies is projected to decline slightly to 3.4% in 2015 from 3.5% in 2014, while the rate will stand at 4.4% in the ASEAN-10 countries, the same figure as in 2014. In Mainland China, the unemployment rate is forecast to elevate slightly to 4.2% from 4.1% in 2014 (Chart 2.6).

Global inflation fell continuously

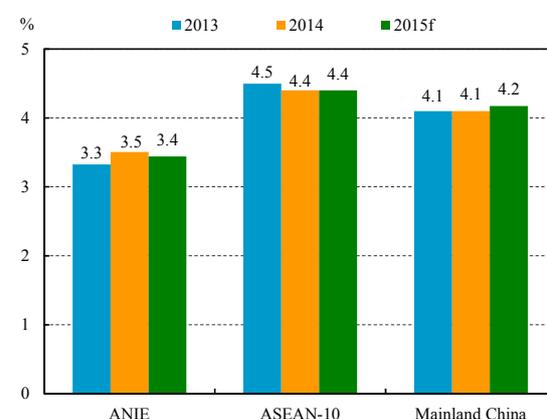
In 2014, global prices of crude oil fell continuously from mid-June as oil supply surpassed demand and speculative trading arose in oil markets. As for cereals, in the beginning of 2014, the cereal supply was impacted by harsh weather and political tension in Ukraine, resulting in a rise in international prices. As the weather improved afterwards, the production of soy, wheat and corn increased, reversing the international prices of cereals to trend downwards. Reflecting this, the global headline inflation rate declined slightly to 2.9% from 3.0% in 2013. Headline inflation rates in advanced economies

Chart 2.5 Economic growth rates in Asian emerging economies



Notes: 1. Figures for 2015 are IHS projections.
 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 (2015/5/15).

Chart 2.6 Unemployment rates in Asian emerging economies



Notes: 1. Figures for 2015 are IHS projections.
 2. For ANIE and ASEAN-10, see Notes 2 & 3 in Chart 2.5.
 Sources: Official websites of the selected economies and IHS (2015/5/15).

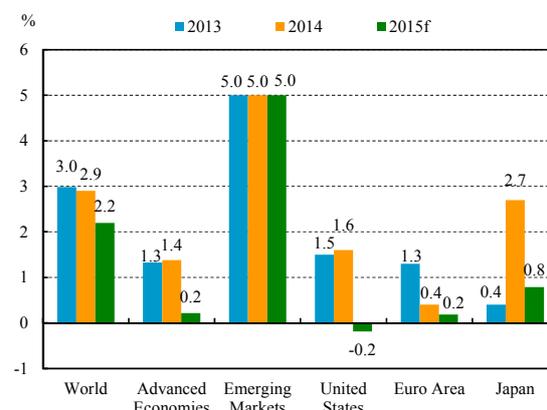
increased marginally to 1.4% from 1.3% in 2013 as Japan's sales tax hike greatly inflated consumer prices, whereas the rates in emerging economies stabilized at 5% (Chart 2.7).

From the beginning of 2015 onwards, global prices of crude oil rebounded slightly owing to geopolitical uncertainty in the Middle East and a slump in US oil rig count. However, most international research institutions still expected oil prices to stay at low levels. With regard to cereals, owing to climate improvement and increasing cultivation area, international cereal prices fluctuated with a downward trend. IHS predicts the global headline inflation rate to fall continuously to 2.2% in 2015, while the US and the euro area may both face the challenge of disinflation (Chart 2.7).

Most emerging economies adopted easy monetary policy stances, while the US ended its asset purchase program

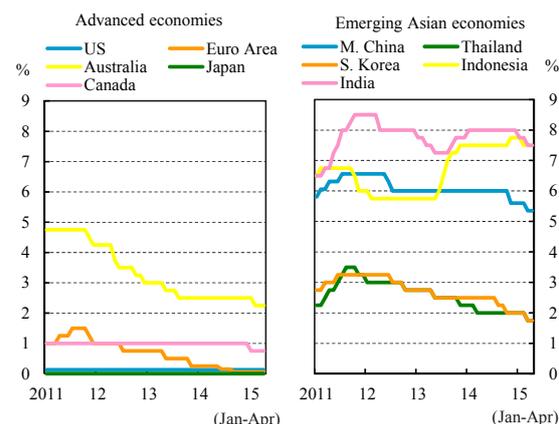
From 2014 onwards, most economies preserved their easy monetary policy stances. In advanced economies, the US ended its asset purchase program at the end of October 2014 owing to economic recovery and improvements in the labor market. Although the federal funds rate target remained unchanged, future interest rate rises or the Fed ceasing to reinvest proceeds from its maturing holdings may create negative spillover effects on emerging economies, and thus warrants close attention (Box 2). Japan and the euro area expanded the sizes of their asset purchase programs successively owing to low growth and inflation, while Canada and Australia lowered policy rates to boost economic growth. As for emerging Asian economies, in order to

Chart 2.7 Global headline inflation indices



Note: Figures for 2015 are IHS estimates.
Sources: Official websites of the selected economies and IHS (2015/5/15).

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, uncollateralized overnight call rate; for Canada, the target for the overnight 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, base rate; for Indonesia, Bank Indonesia rate; for India, repurchase rate.
3. Figures are as of 24 April 2015.
Sources: Central banks' websites.

alleviate the impact of insufficient global output growth momentum on their domestic economies and prevent financial market turmoil caused by massive capital outflows from major economies arising from their easy monetary policy stances, most emerging economies kept reducing policy rates (Chart 2.8).

2.1.2 International financial conditions

Macroeconomic impacts threatened global financial markets

In 2014, the global economy recovered moderately, bolstered by persistent easy monetary policies in major advanced economies alongside more neutral fiscal policy relaxations that offset the adverse impacts of the economic slowdown in emerging economies. However, against the backdrop of a prolonged period of monetary policy easing and a low-interest-rate environment, herding among portfolio managers searching for yield has been rising and credit markets appeared to be undergoing structural changes. As a result, financial stability risks have shifted from advanced economies to emerging markets and from banks to shadow banks, particularly the asset management industry, amplifying market risks and liquidity risks.

Major threats to global financial stability flagged by the IMF¹⁴ include the following: (1) persistent financial risk taking and search for yield keep stretching some asset valuations; (2) oil- and commodity-exporting countries and firms have been severely affected by dropping asset valuations and climbing credit risks; (3) briskly depreciating exchange rates not only have increased repayment pressures on firms that borrowed heavily in foreign currencies but also have sparked massive capital flow reversals for several emerging markets; (4) volatility in major exchange rates has increased to even more than it was during the global financial crisis period, reflecting increased market and liquidity risks given that sudden episodes of volatility could become more common and more pronounced.

Financial markets in advanced economies had yet to fully stabilized

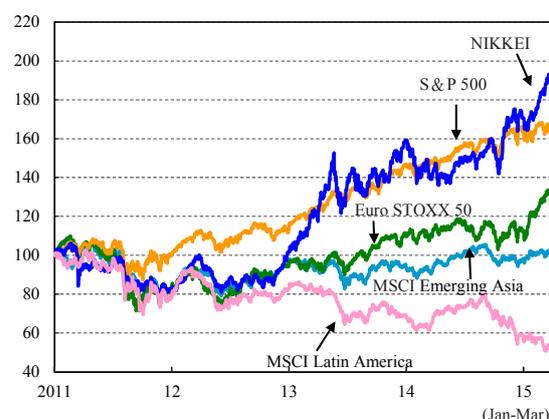
In the US, the Fed kept moderately tapering its asset purchases throughout 2014. Over this period, the S&P 500 initially dropped owing to unfavorable market sentiment. However, subsequently benefitting from better-than-expected performance in the profitability of domestic enterprises, share prices trended upwards and repeatedly hit new highs (Chart 2.9). In addition, with a gradual economic recovery, the US ended its asset purchase program at the

¹⁴ IMF (2015), *Global Financial Stability Report*, April.

end of October 2014 and kept its low-interest-rate policy unchanged. Nevertheless, chronically low interest rates have spurred a dramatic rise in the borrowings of domestic speculative firms and resulted in rocketing growth in high-yield corporate bonds and leveraged loans. These, coupled with easing lending conditions in credit markets, induced amplified credit risk. Moreover, mutual funds and exchange-traded funds (ETFs), which increased their holdings in illiquid high yield corporate bonds or leveraged loans, could be faced with liquidity pressures and jeopardize financial stability if investors were to make significant redemptions from these funds.

In early 2014, the current account deficit recorded a historical high in Japan. Following this, the Japanese Nikkei 225 stock index fluctuated within a narrow range. Then the volatility became more dramatic driven by volatility in the US and the European stock markets over the same period. Afterwards, Japanese stock prices witnessed a rebound (Chart 2.9) propelled by incentives such as: the Government Pension Investment Fund deciding to expand its allocation to domestic equities; the BOJ announcing a bold new monetary measure; and the Japanese government delaying its sales tax rate hike until 2017 (Chart 2.10). Moreover, sharp yen depreciation¹⁵ (Chart 2.10), resulting from the ongoing expansion of the Quantitative and Qualitative Monetary Easing (QQE) policy by the BOJ at the end of October, may possibly spur capital outflows and impact both emerging economies and advanced economies through its spillovers.

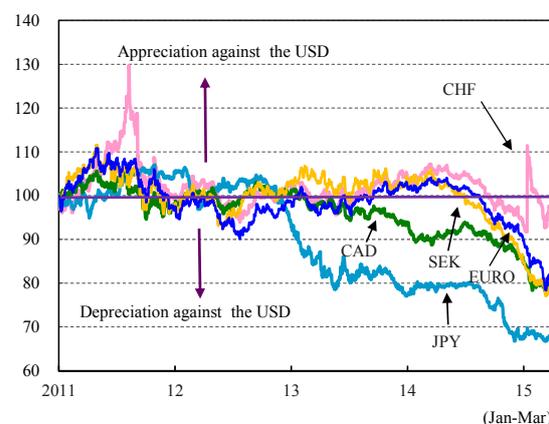
Chart 2.9 Performance of key international equity indices



Notes: 1. 1 January 2011 = 100.
2. The Euro STOXX 50 refers to a stock index of the euro area consisting of the largest 50 stocks in the 12 major economies.

Source: Bloomberg.

Chart 2.10 Movements of various currencies against the US dollar



Note: 1 January 2011 = 100.

Source: Bloomberg.

¹⁵ The Japanese yen exchange rate against the US dollar was 119.62 at the end of 2014, depreciating by 12.24% year on year.

In response to the potential deflation risks and growth downturn, the ECB continued implementing the Targeted Long-Term Refinancing Operations and further announced additional quantitative easing monetary policy measures by launching a bond purchase program totaling €1.14 trillion in January 2015 (Charts 2.9 and 2.10). Reflecting this, European stock prices surged and the euro depreciated considerably against the US dollar. In some economies (such as France, Italy, Portugal and Spain), the persistently high level of debt in the corporate sector has cast a shadow over the prospects for economic growth and financial stability. The euro area periphery economies kept facing the challenges of elevated government debt, high unemployment rates, mounting deflationary risks and financial fragmentation.¹⁶ In particular, the new Greek government, which advocated anti-austerity policies when it came to power in January 2015, has yet to reach bailout and debt-servicing agreements with international creditors, continuing to impact global investor confidence.

In addition, some European central banks reshaped their monetary policy stances without warning, also triggering turmoil in the financial markets. For example, in January 2015, the SNB announced an end to its cap of 1.20 francs per euro, which was introduced in September 2011, and lowered the interest rate on sight deposits in the SNB to -0.75% from 0.5%. As a result, the Swiss franc immediately soared and the stock market plunged.¹⁷ In February, the Bank of Sweden, in a surprising move, cut interest rates and ventured further into negative territory, and launched a quantitative easing monetary policy by purchasing government bonds worth SEK10 billion (US\$1.2 billion). Reflecting this, the Swedish krona tumbled to a post-April 2009 low against the US dollar¹⁸ (Chart 2.10).

Financial risks in some emerging markets mounted

In 2014, falling oil and raw material prices alongside alleviated inflation pressures benefited emerging economies. In addition, a stronger US dollar also helped improve their market competitiveness. However, some oil and raw material exporting countries or economies subject to high levels of external debt, notably Russia, Argentina, and Brazil, faced higher economic and financial risks because of shrinking export revenues or mounting debt pressures. Among them, as a consequence of the imposition of economic sanctions by NATO countries,¹⁹ Russian stock markets plummeted sharply and triggered a currency crisis, with the ruble depreciating by more than 45% over the course of 2014 (Chart 2.11).

¹⁶ The ECB adopted an easy monetary policy keeping interest rates at historical lows. This allowed businesses in the euro area core economies to access funds at lower interest rates. Nevertheless, for businesses in the euro area peripheral economies it remained difficult to raise funds.

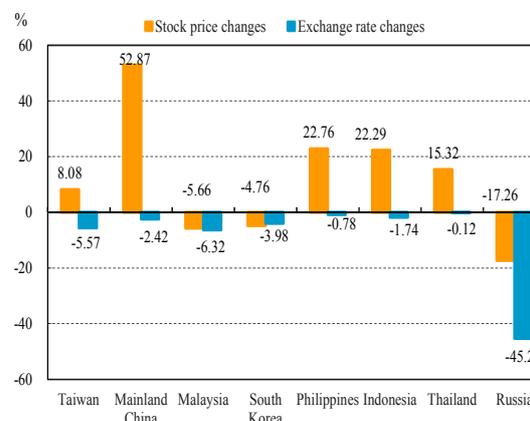
¹⁷ The Swiss National Bank announced to decouple the Swiss franc from the euro on 15 January 2015, causing the Swiss franc against the euro to appreciate by 41% to 1.1741. Meanwhile, stock markets tumbled by 10%, recording their biggest one-day drop in 25 years.

¹⁸ The Swedish krona exchange rate against the US dollar at one point dipped to 8.7136 on 13 March 2015.

¹⁹ Refers to the major countries of the North Atlantic Treaty Organization such as the UK, US, Germany, France, and Italy.

Furthermore, massive capital flows into Asian emerging economies led to Asian stock markets staying mostly buoyant in the face of the monetary easing constantly embarked upon by major advanced economies. With the exception of Korea and Malaysia,²⁰ among others, stock markets in Taiwan, the Philippines, Indonesia and Thailand trended upwards. In regard to foreign exchange markets, Asian currencies against the US dollar mostly depreciated in 2014, arising from the effect of price comparison between the strengthening US dollar and the markedly weakening Japanese yen. Among them, the sharpest was the depreciation of the Malaysian ringgit against the US dollar, registering a decline of 6.32% as falling international raw material prices adversely impacted on exports. The renminbi remained undervalued against the dollar and declined by 2.42% throughout the year (Chart 2.11).

Chart 2.11 Changes in equity indices and exchange rates among Asian and European emerging economies



Note: The comparison is based on the difference between the figures at end-2013 and end-2014.

Sources: Datastream and Bloomberg.

However, given the possible future scenario that the US raises interest rates and further appreciates the dollar, or that foreign investors reduce asset holdings amid large outflows in response to rising geopolitical risks, these situations would impose intense pressures on the financial markets in emerging economies. In addition, some emerging economies still face challenges derived from mounting enterprise leverage, worsening loan quality and rapid growth in non-bank lending. These impacts would also pose a threat to their financial stability were they to come to fruition.

International organizations called on national authorities to take measures to promote global financial stability

According to the IMF assessment in 2014,²¹ structural changes in global financial risks were shifting their locus from advanced economies to emerging economies, from banks to shadow banks, and from credit risks to market liquidity risks. In view of the increase in market

²⁰ For South Korea, feeble stock prices were mainly derived from a devaluation of the yen severely impacting their major export industries and fierce competition in mobile phone markets. Malaysia was affected by a slump in energy stock prices as well. Stock prices for South Korea and Malaysia both fell by 4.76% and 5.66%, respectively, at the end of 2014.

²¹ See Note 14.

volatilities and growing financial risks, international organizations such as the IMF²² and the OECD²³ advocated that national authorities should take further preemptive measures to reduce the related risks by heeding the major suggestions as follows:

- National authorities should deliberately mitigate adverse spillovers that could threaten global financial stability, lessen the reliance on unconventional monetary accommodation and easy liquidity conditions, which, in turn, would allow economies to move toward sustained investment-oriented growth.
- Supervisory authorities should strengthen the transmission of monetary policy, encourage the efficient allocation of credit, and properly employ macroprudential tools. This, in turn, could avoid prematurely adjusting interest rates, reinforce the resilience of systemically important financial institutions, and dampen the procyclicality of asset prices and credit, so as to safeguard financial stability.
- Policymakers could take the following measures to mitigate risks associated with shadow banking: (i) enhancing supervision on shadow banks or banks' exposures to shadow banking, (ii) addressing the root causes driving the growth of shadow banking, (iii) extending the protection of a public safety net to systemically important banks; and (iv) establishing a resolution regime or similar deposit insurance schemes for shadow banking.
- With an increase in international banks transforming business models to subsidiary-based operations in extending local loans in order to slim down cross-border lending, policymakers, in addition to continuing to strengthen banks' capacities to take risks, should fortify international cooperation to jointly address regional or global impacts as well.
- The euro area is expected to relax fiscal norms to revitalize its sluggish economy, and to improve the restructuring of the corporate sector and banks' asset quality. Nevertheless, financial authorities should cautiously prevent the contraction of domestic credit from the further deleveraging of banks and avoid this adverse effect spilling over to other economies.
- Emerging economies should adopt more powerful macroprudential measures to address considerable international capital inflows resulting in the problems of rapid credit growth and an excessive buildup of leverage. In addition, supervisory authorities should require

²² IMF (2014), *Global Financial Stability Report*, October; IMF (2015), *Global Financial Stability Report*, April.

²³ OECD (2014), *Economic Outlook*, NO. 96 November.

banks to conduct stress tests on risks associated with foreign currencies and raw material prices, and thoroughly monitor the degree of leverage and the risk exposure of foreign exchange in the corporate sector.

- In response to vigorous development in the asset management industry and structural changes in financial investments, such as substantial expansion in bond funds and more investment in illiquid assets, national authorities should strengthen the oversight of the asset management industry, and reexamine the roles and adequacy of existing risk management tools, including liquidity requirements, fees, and fund share pricing rules.

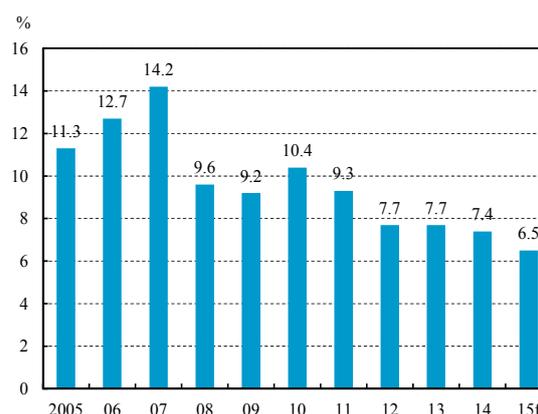
2.1.3 Mainland China's economic and financial conditions

Economic growth momentum waned

In early 2014, affected by excess capacity in manufacturing and weakening property markets, Mainland China's economic growth rate dipped to 7.4% in Q1. In Q2, thanks to the government's micro-stimulus measures,²⁴ economic growth rebounded to 7.5%. However, in the second half of 2014, owing to the housing recession, economic growth rates stood at 7.3% in Q3 and Q4, the lowest quarterly growth in six years. As a result, the annual economic growth rate fell to 7.4% from 7.7% in 2013, lower than its official 2014 growth target of 7.5% (Chart 2.12).

Taking a glance into 2015, despite low oil prices being favorable to global economic growth, it is expected that the growth momentum of consumption and investment will move at a slower pace. Consequently, in March, the National People's Congress (NPC) and Chinese People's Political Consultative Conference (CPPCC) targeted an economic growth rate of 7% for 2015, revealing that Mainland China's economy will shift to a "new normal" phase. Accordingly, IHS projects the economic growth rate to continue falling to 6.5% in 2015 (Chart 2.12).

Chart 2.12 Economic growth rates of Mainland China



Note: Figure for 2015 is an IHS projection.
Sources: National Bureau of Statistics of China and IHS (2015/5/15).

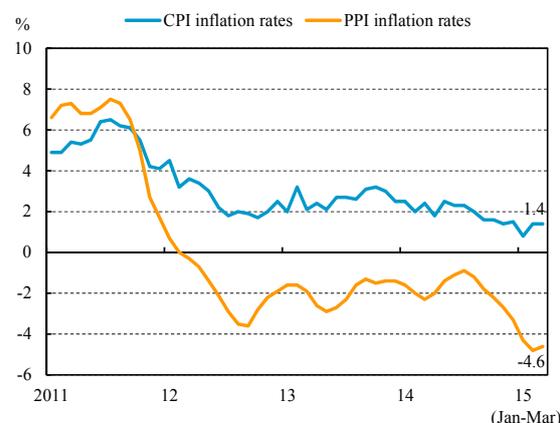
²⁴ The measures include extending tax exemptions for small businesses, building social housing to replace shanty villages, improving railway construction and cutting the reserve requirement rate (RRR) for rural financial institutions, etc.

Prices remained stable and housing prices turned to decline

Owing to sluggish domestic demand and falling international raw material prices, the CPI inflation rate of Mainland China was 2.0% in 2014, lower than the official goal of 3.5%. In 2015, the CPI inflation rate slightly rebounded to 1.4% in March after reaching a five-year low of 0.8% in January. IHS projects the annual CPI inflation rate of 2015 to decrease to 1.4%. Moreover, in 2014, the producer price index (PPI) inflation rate registered -1.9% owing to industrial overcapacity and lackluster domestic demand. The PPI inflation rate further dropped to -4.6% in March 2015, the 37th consecutive month in negative territory (Chart 2.13).

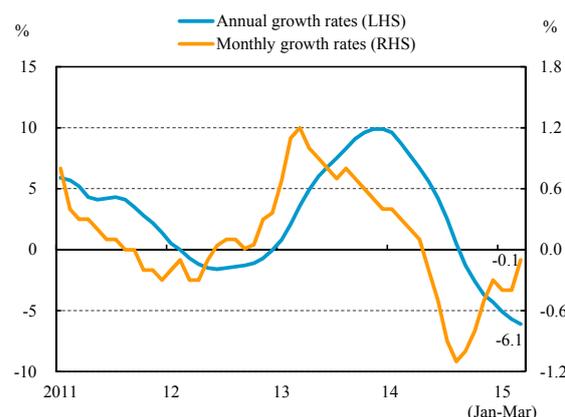
With a view to adjustments in the property market and lack of investor confidence, real estate sales fell by 7.8% in 2014. The annual growth rate of building sales prices in 70 medium-large cities reversed to decline at a faster pace month by month from May onwards. To avoid the slumping housing prices jeopardizing economic growth, several specific second-tier cities successively eased purchase restrictions from September 2014. Additionally, housing prices witnessed a narrower downturn thanks to the People’s Bank of China (PBC) loosening mortgage loan restrictions²⁵ at the end of September. The monthly growth rate of building sales prices in 70 medium-large cities recorded a contraction of -0.3% at the end of the year, while the corresponding annual growth rate reached -4.3%. In the beginning of 2015, housing prices continued their downtrend owing to the real estate market remaining sluggish. Accordingly,

Chart 2.13 Inflation rates of Mainland China



Source: National Bureau of Statistics of China.

Chart 2.14 Average growth rates of building sales prices in 70 medium-large cities of Mainland China



Note: Figures for 2011 onwards 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.

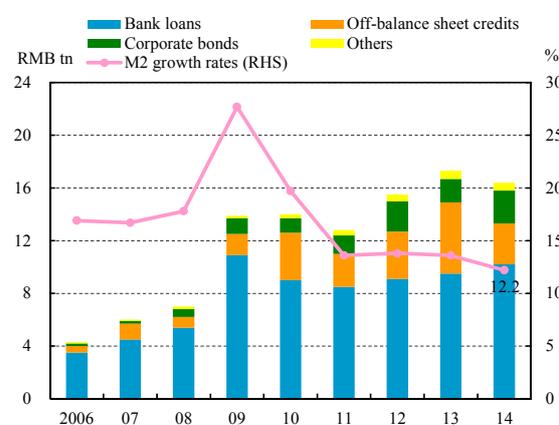
²⁵ Such loosening restrictions will affect Chinese citizens who wish to buy a second home as they will be able to enjoy the same 30 percent down payment and 30 percent discount on the benchmark rate for mortgage requirements as first-time home buyers if they have fully repaid their previous mortgage loans.

Mainland China further launched a series of deregulation measures in the housing market at the end of March 2015 aimed at stabilizing housing prices and promoting economic growth. The measures include cutting the down payment ratio for second house buyers and shortening the owning period to exempt sellers from business taxes when individuals sell an ordinary house (Chart 2.14).

Aggregate financing to the real economy slightly decreased, but NPL ratios of banks trended up

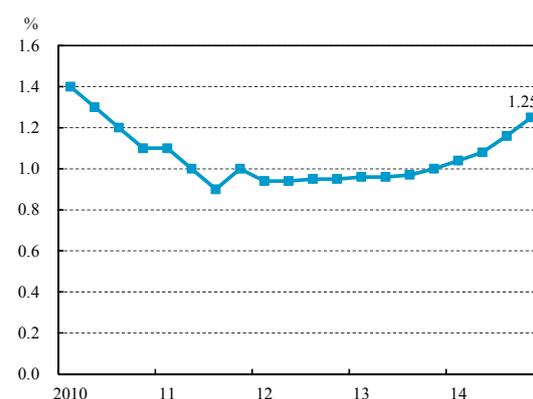
The annual growth rate of broad money supply M2 in 2014 increased from 12.9% in Q1 to 14.7% in Q2, in line with the PBC's reinforcement of the financial sector to support the real economy. However, the figure declined to 12.2% at the end of 2014, slightly lower than the official annual target of 13%.²⁶ Meanwhile, aggregate financing to the real economy²⁷ in 2014 contracted to RMB16.4 trillion from RMB17.3 trillion in the previous year, mainly resulting from a decline in trust loans and entrusted loans as Mainland China strengthened its supervision on shadow banking²⁸ and financial institution deleveraging (Chart 2.15). Despite a sustained rise in bank loans in the most recent three years, NPLs edged up to 1.25% at the end of 2014 from 1% recorded a year earlier as a result of moderate economic growth and the implementation of economic restructuring (Chart 2.16).

Chart 2.15 Aggregate financing to the real economy and annual growth rates of M2 of Mainland China



Source: PBC.

Chart 2.16 NPL ratios of Mainland Chinese commercial banks



Source: China Banking Regulatory Commission.

²⁶ The PBC set M2 growth target at around 12% for 2015.

²⁷ See Note 5.

²⁸ According to Document No. 107 issued by the State Council of Mainland China in 2013, shadow banks fall into three categories: (1) unlicensed and unregulated credit intermediaries, including online finance companies and third-party wealth management institutions, etc.; (2) unlicensed and lightly regulated credit intermediaries, including credit guarantee companies and micro-finance companies, etc.; and (3) services provided by licensed institutions that lack sufficient regulation or avoid regulation, including money market funds, asset-backed securitization and certain wealth management services, etc.

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

The National Office of Audit of Mainland China published the audit findings of public debts at all levels of government in December 2013. Based on the report, local government debts reached RMB17.9 trillion at the end of June 2013, of which RMB2.78 trillion will fall due in 2015. Given that local governments are facing increasing pressure to service their debts owing to ongoing economic slowdown, Mainland China amended the *Budget Law of the People's Republic of China* (hereafter *Budget Law*) in January 2015 in order to strengthen transparency in the national fiscal system and local government debt management, and lessen local government debt burden by refinancing. The new *Budget Law* will put local government debt management in place and address the related problems via the following methods: (1) allowing local governments to issue bonds directly; (2) replacing existing debts with new loans by refinancing; (3) balancing expenditure and revenue; and (4) except for bond issuance, offering local governments more flexibility in collecting tax revenue, which will allow them to levy property taxes as a source of revenue.

Furthermore, in March 2015, the State Council of the People's Republic of China consented to launch a RMB1 trillion local government debt-swap program, aimed at converting part of local government financing platform debt to local government bonds with longer maturity and lower interest rates. Afterwards, the State Council determined to raise the limit that allows the National Social Security Fund to invest in local government bonds in April, so as to enable local governments to tackle their debt due problems.

Implementing easing monetary policy to maintain balance between stabilizing growth and restructuring the economy

In efforts to enhance financial support to the real economy and to reduce financing costs with the aim of sustaining economic growth, the PBC launched a series of monetary easing measures in 2014, such as successively cutting the reserve requirement rate (RRR) for targeted²⁹ agricultural and micro enterprises in April and June. Subsequently, alternative targeted monetary easing measures were taken that injected funds into markets through different policy tools, including cutting repurchase rates several times, launching a medium-term lending facility (MLF)³⁰ and short-term liquidity operations (SLOs). Besides

²⁹ The PBC cut the RRR for country-level rural commercial banks and rural cooperatives by 200 bps and 50 bps to 16% and 14%, respectively, from 25 April 2014. On 16 June, the PBC lowered the RRR by 0.5 percentage points for banks whose proportions of lending extended to agricultural-related and micro-sized companies met a certain ratio.

³⁰ The PBC provides funds for the targeted financial institutions through setting interest rates on credit which is backed by collateral within three months, aiming to guide commercial banks to lower their lending rates and overall social-financing costs.

these, the PBC applied asymmetric adjustments³¹ to the official loan and deposit rates by cutting their corresponding one-year benchmark rates to 2.75% and 5.6%, respectively, in November, which was the first interest rate cut since July 2012. In view of economic slowdown in 2015 Q1, the PBC kept lowering the benchmark deposit and lending rates to 2.5% and 5.35%, separately, in March 2015. Later, the RRRs for all banks were slashed in February and April 2015, respectively, with a view to maintaining the sustainability of economic growth in China.

In the face of easy monetary policy, the Shanghai Interbank Offered Rate (SHIBOR) essentially fluctuated within a narrow range except for a temporary rise during Chinese New Year because of seasonal demand (Chart 2.17).

Chart 2.17 Shanghai Interbank Offered Rates



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

³¹ Asymmetric adjustments refer to lower deposit and lending rates at the same time with changed spreads. The PBC slashed its benchmark deposit rate by 0.25 percentage points, while cutting its lending rate by 0.4 percentage points.

Box 1

Anatomy of the recent oil price fall and its impacts on the global and Taiwan's economy

World crude oil prices have declined by over 40% since June 2014. While the decline reflects weaker demand, the accelerating growth in output owing to increased production from US shale oil and Canada's oil sands has also been a key factor leading to excess supply in the market. The price fall has also been impacted by relevant financial-side factors including the appreciation of the US dollar, driven by a veer in US monetary policy, and speculative trading in oil futures. According to analysis by the Energy Information Administration (EIA) and the International Energy Agency (IEA), the global oil supply still outstripped demand in the first half of 2015; however, the supply-demand balance is expected to be gradually restored in the second half of the year, helping oil prices to continue stabilizing. This box will address the causes of the recent oil price slide and its impacts on the global and Taiwan's economy.

1. Causes of the recent oil price fall and future outlook

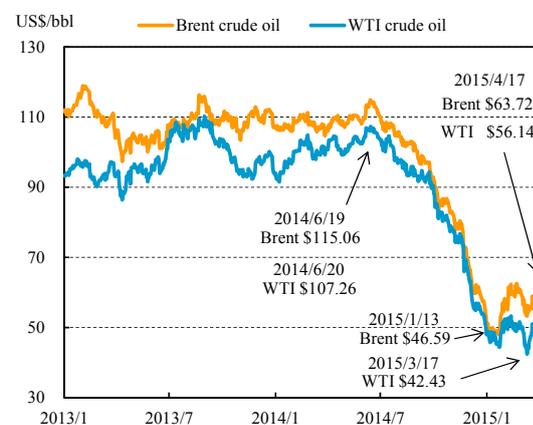
1.1 The recent dip in oil prices was mainly owing to oversupply and a stronger dollar

Brent crude oil plunged from a high of US\$115.06 per barrel on 19 June 2014 to a low of US\$46.59 on 13 January 2015, a drop of nearly 60%. Nevertheless, oil prices appeared to have stopped dropping somewhat, closing at US\$63.72 a barrel on 17 April. The price for West Texas Intermediate (WTI) crude oil also showed a similar trend (Chart B1.1).

Janet L. Yellen, Chair of the Board of Governors of the Federal Reserve System testified in Congress on 24 February

2015 that the bulk of the decline in oil prices was ascribed to supply-side factors.¹ The International Monetary Fund (IMF) has also expressed similar viewpoints.² In addition, a study published by the Bank for International Settlements (BIS)³ indicated that both trading in commodity futures and imbalance between supply of and demand for crude oil were the factors that dragged down oil prices. Therefore, the possible causes of the recent slump in

Chart B1.1 Trends in crude oil futures prices



Source: Bloomberg.

oil prices are comprised of:

- (1) Expeditious growth in the supply of US shale oil and production from Canada's oil sands, along with a slowdown in demand owing to a slack global economy and the increased supply of energy conservation products and alternative energy.⁴
- (2) A change of direction in US monetary policy pushing up the value of the US dollar, and thereby leading commodity prices denominated in US dollars to head lower.⁵
- (3) Speculative trading in oil futures markets resulting in the significant fluctuation of oil prices.⁶

1.2 Prospects for the crude oil market

- (1) Low oil prices have caused investment in US shale oil to slow down. The shale-oil rig count falling from 1,609 on 10 October 2014 to 734 on 17 April 2015 should be conducive to rebalancing the supply and demand of crude oil.
- (2) Expansion of shale oil production intensified the competitiveness of the crude oil market. Shale oil producers replaced OPEC as the global "swing producer." It is widely envisaged that, in the case of a rise in oil prices, shale oil producers that exited from the supply chain will throw their production into the market again, thereby subduing oil prices. Under such a situation, crude oil prices higher than US\$100 per barrel seem unlikely.
- (3) The EIA projects⁷ that low oil prices will retard production growth in North America markedly in the second half of 2015. Combined with the soft growth in global demand, supply-demand balance in the crude oil market is not expected to resume until 2016 Q1.
- (4) The EIA and the Economist Intelligence Unit (EIU) predict that the excess supply problem will be serious in the first half of 2015, while oil prices could drop to a low between the first and second quarter. With supply and demand returning to equilibrium in the second half of 2015, oil prices are expected to gradually rise in 2016.

2. Low oil prices benefit the world economy, but come as mixed blessings for oil-importing and -exporting countries

An IMF study⁸ noted that the current drop of 50% in oil prices would add between 0.3% and 0.7% to global gross domestic product (GDP) in 2015 (Table B1.1). In terms of the impact on inflation, it supposes that the recent oil price fall will cause the overall inflation rate to slide 1 percentage point in major economies like the United States, Europe, Japan,

etc., and core inflation to decline by 0.2 percentage points.

In addition, the World Bank's Global Economic Prospects published in January 2015 indicates that, when world oil prices fall 30%, global GDP growth will increase by about 0.5 percentage points in the medium term. Overall, the recent oil price fall is favorable to oil-importers (for example, India and Mainland China), but unfavorable to oil-exporters (such as Russia, Venezuela, etc.) (Table B1.2).

Table B1.1 Impacts on global, US and Mainland China GDP of the current episode of falling oil prices

Unit : %

Year	Global GDP	US GDP	Mainland China GDP
2015	+0.3 ~ +0.7	+0.2 ~ +0.5	+0.4 ~ +0.7
2016	+0.4 ~ +0.8	+0.3 ~ +0.6	+0.5 ~ +0.9

Source: IMF.

Table B1.2 Impacts on the global economy of world oil price falls

Category	Drop in oil prices	Effects
Global economy	30%	It is expected to raise global GDP by 0.5 percentage points in the medium term.
Oil-importing countries	10%	GDP growth over the following year would rise by between 0.1 and 0.5 percentage points, and fiscal and financial accounts would noticeably improve.
Oil-exporting countries	10%	GDP growth over the following year would fall by between 0.8 and 2.5 percentage points, and fiscal pressures will noticeably rise.

Source: World Bank.

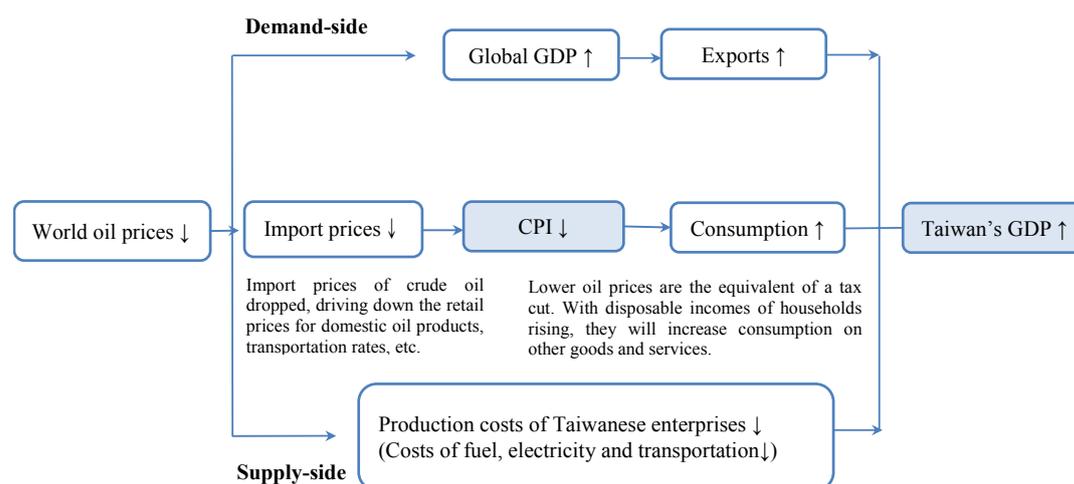
3. Taiwan's economy is expected to benefit from falling oil prices

On the demand side, as the international oil price fall is conducive to global GDP, it will indirectly increase Taiwan's overall exports⁹ and bring forth investment. Moreover, a drop in import prices of crude oil will also trigger the retail prices of domestic oil products to slide,¹⁰ which is akin to a tax cut, thereby raising the disposable incomes of the household sector. On the supply side, the world oil price decline helps reduce the costs of Taiwanese enterprises with respect to oil consumption, electricity bills and transportation expenses, further pulling down their production costs, and is therefore beneficial to increasing production (Chart B1.2). On the whole, Taiwan is expected to benefit from falling international oil prices.

According to the projections by Liang, C. Y. (2009)¹¹ and Yang, T. H. (2013),¹² when domestic oil prices fall 10%, Taiwan's GDP is estimated to increase by between 0.10 and 0.24 percentage points. Furthermore, according to the CBC's estimation, a drop of 20% in

world oil prices would be reflected by a fall of 10% in the retail prices of domestic oil products. Provided that a fall of 10% in such retail prices continues for one year, its direct impact on the annual growth of CPI is estimated to be -0.35 percentage points, while its indirect impact is estimated to be -0.15 percentage points, with a total drop of 0.50 percentage points.

Chart B1.2 The transmission channels of world oil price falls on Taiwan's economy



Source: CBC.

- Notes: 1. Yellen, J. (2015), *Semiannual Monetary Policy Report to the Congress Before the Committee on Banking, Housing, and Urban Affairs*, Feb. 24.
2. Arezki, R. and O. Blanchard (2014), *Seven Questions About The Recent Oil Price Slump*, iMFDirect, International Monetary Fund, Dec. 22.
3. BIS (2015), *Global liquidity: Selected indicators*, Feb. 7.
4. Economist News (2014), *Oil Spill*, Economist, Dec. 15.
5. Frankel, J. (2014), *Why Are Commodity Prices Falling?* Project Syndicate, Dec. 15. The US dollar index has risen about 22.1% since the end of June 2014 until 17 April 2015.
6. Reuters News (2014), *OPEC Chief Defends Policy, Says Group to Try to Ride Out Price Fall*, Reuters, Dec. 14. Beidas-Strom et al. (2014), *Oil Price Volatility and the Role of Speculation*, IMF Working Paper, No. 14/218, Dec. 18.
7. US Energy Information Administration (2015), *Short-Term Energy Outlook*, Apr. 7.
8. Same as Note 2.
9. According to the IMF's estimation, a 50% drop in recent oil prices would boost global GDP growth by between 0.3 and 0.7 percentage points in 2015. Even though the world oil price fall is unfavorable to Taiwan's exports of oil products and petrochemicals (accounting for about 20% of total exports), Taiwan's economy, generally speaking, is expected to benefit from the rising global GDP because its exports focus on electronics, information and communication products (about 40% of the total).
10. Taiwan is an oil-importing country. Its imports of crude oil accounted for 12% of total imports in 2014. From January to February 2015, Brent oil dropped by 51.49% compared to the prices during the same period of 2014. Domestic fuel costs also fell by 28.81% correspondingly, making

the annual CPI inflation rate decline by 1.08 percentage points to -0.56%.

11. Liang, C.Y. (2009), *The impacts of energy price changes on domestic prices and economic activities*, Central Bank Quarterly, Volume 31, Issue 1, March 2009, pp. 9-34. This study found that, as domestic oil prices fall 20.6%, Taiwan's GDP would increase by 0.49 percentage points. If projected by a linear proportion, a 10% drop in the domestic oil prices would add 0.24 percentage points to Taiwan's GDP.
12. Yang, T. H. (2013), *Assessment of the economic effect of domestic oil mechanism adjustment*, National Development Council, Economic Research, Volume 14, pp. 67-79. This study found that, in the case of a 10% rise in domestic oil prices, Taiwan's GDP would decrease by between 0.10 and 0.195 percentage points. The study assumes that the simulation effect of the model is symmetrical, a drop of 10% in domestic oil prices would support Taiwan's GDP growth by 0.10 to 0.195 percentage points.

Box 2

The effect of the US's gradual exit from unconventional policy measures on emerging market economies

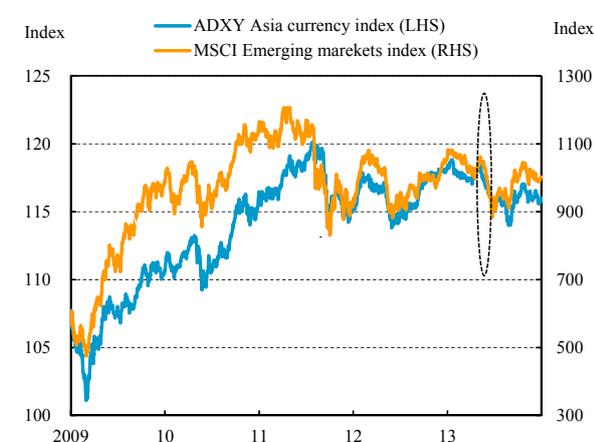
Lehman Brothers filed for bankruptcy protection on 15 September 2008, triggering the global financial crisis and deeply traumatizing the US financial system. In response, the US Board of Governors of the Federal Reserve System (Fed) engaged in three successive rounds of quantitative easing (QE) in November 2008, November 2010 and September 2012, with a total of US\$3.98 trillion in asset purchases. These unconventional policy measures have succeeded in stabilizing US financial markets, prompting a rebound in property prices, improving unemployment rates, and promoting economic growth. However, ample liquidity caused by the three rounds of QE raised concerns about potential asset price bubbles. Moreover, the spillover effects of US QE on emerging economies fueled the surge of massive capital inflows, and further translated into currency appreciation and inflationary pressures.

In 2013, the US Fed officials revealed messages hinting at the gradual tapering of asset purchase programs on several occasions, significantly impacting emerging financial markets. The Fed started to taper its monthly bond purchases in January 2014, and eventually ended its asset purchase program in October owing to improvements in employment and economic growth, and plans to raise interest rates and cut its balance sheet in the future. Such events could have sizable influences on emerging market economies and hold cause for concern.

1. The tapering announcements of the US Fed in 2013 had significant impacts on emerging markets

Ben Bernanke, the former US Fed Chairman, delivered a speech in a hearing before Congress on 22 May 2013, revealing, for the first time, the message of tapering bond purchases in the future. It immediately brought about significant impacts on Asian emerging financial markets and resulted in currency depreciation and stock prices dropping (Chart B2.1), as foreign investors switched to net selling of

Chart B2.1 Trends of Asian Currencies Index and MSCI Emerging Markets Index



Source: Bloomberg.

local shares (Table B2.1, column 2). Later, on 10 July 2013, after a speech delivered at the National Bureau of Economic Research (NBER) conference, Ben Bernanke made some dovish comments to ease the market disturbance. In consequence, most Asian stock prices rebounded as foreign investors turned to net buying (Table B2.1, column 3). However, in August 2013, three directors of the Fed showed their support for a steady reduction in bond purchases, causing foreign investors to switch to net selling of stocks in most Asian markets and pulling down stock prices (Table B2.1, column 4).

Table B2.1 Frequent foreign capital movements in Asian stock markets caused by uncertainties over US monetary policy

Units : US\$ billion

Periods Countries	2013/1/2-5/22 Risk on		2013/5/22-7/10 Risk off		2013/7/11-8/5 Risk on		2013/8/6-8/21 Risk off	
	Net buy /sell	Changes of stock prices	Net buy /sell	Changes of stock prices	Net buy /sell	Changes of stock prices	Net buy /sell	Changes of stock prices
Taiwan	5.10	9.08%	-5.33	-4.61%	3.17	1.58%	-1.63	-3.76%
South Korea	-4.35	-0.16%	-4.36	-8.51%	1.75	5.05%	0.52	-2.54%
India	14.49	3.18%	-0.97	-3.83%	-1.02	-0.58%	-0.43	-6.65%
Indonesia	2.57	20.65%	-3.03	-14.00%	0.40	3.62%	-0.57	-9.10%
Thailand	-0.15	17.19%	-2.52	-14.89%	0.08	2.59%	-0.90	-4.86%
Philippines	1.59	27.05%	-0.09	-14.58%	0.21	3.20%	-0.10	0.25%

- Notes: 1. Risk on/off mode refers to the buying/selling of risky assets because of decreases/increases in the risk aversion of investors.
 2. Changes of stock prices refer to changes of stock market indices. The Bloomberg tickers of these countries are TWSE, KOSPI, SENSEX, JCI, SET and PSEi.
 3. Periods of risk on/off modes refer to periods of buying/selling of risky assets of investors, owing to decreases/increases in risk aversion affected by announcements and speeches of US Fed officials.

Source: CBC calculation.

2. The effects of the Fed's exit from QE on emerging market economies

Because of the ample liquidity in the global financial system, the end of the Fed's asset purchase program in October 2014 only had limited effects on global economic and financial conditions. Nevertheless, when the Fed raises its policy rates or stops its reinvestments of maturing bonds owing to improvements in the US economy and employment, it could induce global capital to flow back to the US and have heavy impacts on emerging stock and foreign exchange markets. However, the European Central Bank's (ECB) expansion of its quantitative easing program¹ and other central banks' continuous implementation of stimulus policies could help to dampen the adverse impacts of the Fed raising policy rates.

2.1 The end of US QE may impact several emerging market economies

Short-term foreign capital movements have become an important driver of the volatility in foreign exchange rates and stock prices in emerging market economies. Foreign investors may collectively buy or sell stocks and foreign currencies based on specific market information. The asymmetry and incompleteness of information usually evokes herding behavior among foreign investors, with the consequence of massive movements of short-term capital and over reaction of the markets. In particular, the messages sent from US monetary policymakers play a key role in driving short-term global capital movements.

The end of US QE could have more severe impacts on financially fragile emerging market economies because large capital outflows caused by the ending of QE could lead to rising local borrowing costs, contracting credit supply and declining asset prices, and eventually result in financial turmoil. In turn, such a disturbance in the financial system might spill over to the real sector and worsen the fundamentals of the macro economy.

2.2 The end of US QE is only likely to have a minor influence on Taiwan

Compared to other emerging markets, Taiwan, with a current account surplus, sufficient foreign exchange reserves, ample liquidity in local financial markets and limited foreign debts, has relatively less capital outflow pressures. Therefore, it is expected that the threat of an exit from US QE to Taiwan's economy is likely to be limited. Additionally, research² on exchange rate changes and economic vulnerabilities in 15 emerging market economies (including Taiwan) published by the US Fed in February 2014 indicated that emerging market economies which were more vulnerable suffered sharper depreciations of their currencies. It also pointed out that Taiwan was more resilient to economic shocks from the end of US QE, as it has strong economic fundamentals and relatively stable foreign exchange rates. Therefore, the impacts of the Fed's interest rates increase on Taiwan's economy is expected to be limited.

Notes: 1. The ECB announced the expanded asset purchase program on 22 January 2015. According to the program, the ECB will expand asset purchases to €60 billion each month from March 2015 to September 2016, with a total of €1.14 trillion.

2. Monetary Policy Report submitted by the Fed on 11 February 2014 delivered an analysis of foreign exchange rate changes and the economic vulnerability in 15 emerging-market economies.