

II. Macro environmental factors potentially affecting financial sector

2.1 International economic and financial conditions

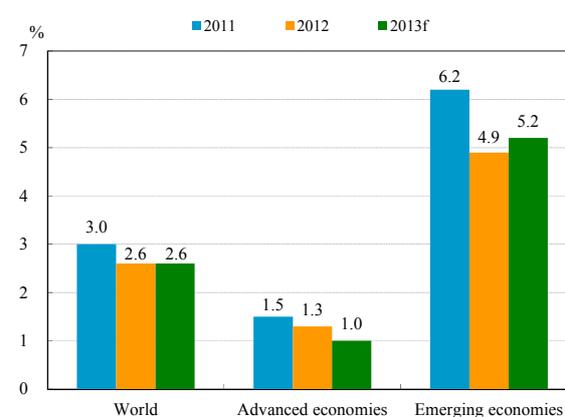
International economic conditions

Global recovery proceeded at a milder pace

The ongoing European sovereign debt crisis in 2012 was mainly reflected in the fact that a deflated property bubble put the Spanish banking industry in financial jeopardy and the road to a Greek bailout remained bumpy. This, coupled with sluggish recovery in the US labor market and fiscal cliff controversy denting market confidence, resulted in subdued global economic performance in the first three quarters of the year. Subsequently, buttressed by a series of policy measures taken by the national governments of major countries, global financial markets showed signs of improving and the global economy also witnessed a gradual upturn. These policy measures included: (1) the FED launching the third round of expanding asset purchases; (2) the ECB adopting OMT to restore market confidence; and (3) Japanese Prime Minister Abe deploying a more aggressive economic renaissance plan.

In 2013, prospects for the US housing market have improved but fiscal retrenchment could dampen economic growth. This, together with a prolonged recession likely facing the euro area, presaged a slow-paced recovery for the global economy. Global Insight predicted world real GDP growth to reach 2.6% in 2013, approximating that achieved in 2012.¹¹ Real GDP in advanced economies is forecast to drop to 1.0% in 2013, lower than the 1.3% recorded a year earlier, pointing to a very modest recovery. Output in emerging economies is forecast to nudge up to 5.2% from 4.9% in 2012 due to advancing

Chart 2.1 Global economic growth rates



Note: Figures for 2013 are Global Insight estimates.
Source: Global Insight (2013/4/15).

¹¹ See Note 1.

momentum in growth (Chart 2.1).

Problems involving lackluster economic circumstances, high unemployment and strict fiscal conditions posed challenges for advanced economies

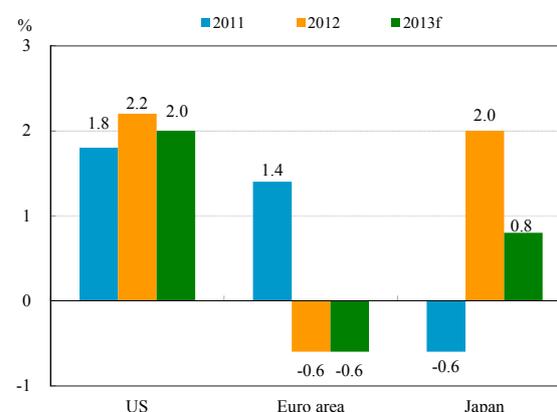
The US economy grew moderately alongside an improving labor market

On the back of accelerating growth in private investment and decelerating reductions in government expenditure, US economic growth rebounded from 1.8% a year before to 2.2% in 2012. Despite an improvement in the housing and labor markets in the beginning of 2013, the impacts of automatic spending cuts, which were launched in March, broadly affected employment, private consumption and national defense expenditure. In turn, they will likely jeopardize economic growth for the whole of the year. Global Insight estimated US economic growth to stand at 2.0% in 2013, falling slightly compared to the previous year (Chart 2.2).

The US unemployment rate dropped to 8.1% in 2012 from 8.9% a year earlier. The rate further descended to a four-year low of 7.6% in March 2013 under the backdrop of a rallying housing market and vigorous development in the energy sector. However, the main reason behind this mainly came from a decline in the labor force participation rate. Global Insight anticipated the US unemployment rate to continue reducing to an annual rate 7.7% in 2013 (Chart 2.3).

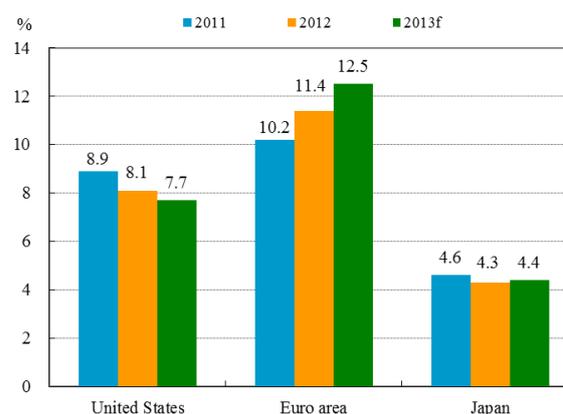
Outstanding US government debt relative to annual GDP increased year by year. According to the International Monetary Fund (IMF), the ratio will keep rising to an estimated 112% in 2013 (Chart 2.4). Furthermore, the impact of the fiscal cliff, a combination of expiring tax

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



Note: Figures for 2013 are Global Insight estimates.
Sources: Official websites of the selected economies and Global Insight (2013/4/15).

Chart 2.3 Unemployment rates in US, Euro area and Japan

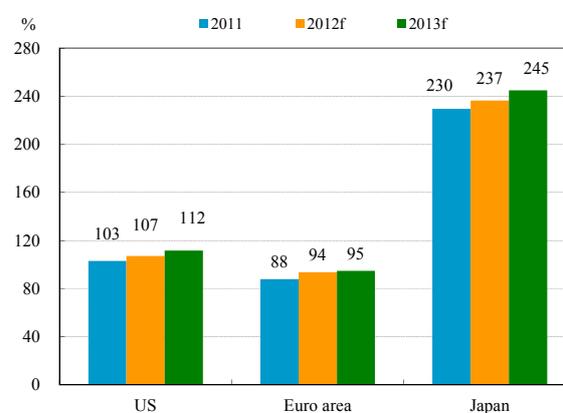


Note: Figures for 2013 are Global Insight estimates.
Sources: Official websites of the selected economies and Global Insight (2013/4/15).

cuts and automatic spending cuts, has alleviated thanks to the passage of the American Taxpayer Relief Act of 2012 on 2 January 2013. Nevertheless, with the automatic spending cuts going into effect in March, it will not only fuel uncertainty over US economic growth but also cloud the global economic outlook.

Euro Area GIIPS countries will move to the peak period of repayment on public debt in 2013

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



Source: IMF (2012), *Fiscal Monitor*, October.

In the euro area, economic growth posted a rate of -0.6% in 2012 amid the European sovereign debt crisis. Corporate spending and private consumption remained feeble owing to the implementation of fiscal austerity by national governments. Global Insight estimated that the euro area would remain mired in recession with GDP again down by 0.6% in 2013 (Chart 2.2).

The euro area unemployment rate spiked to a new high of 11.4% in 2012. Among the segments of the population, youth aged 15 to 24, who suffered an unemployment rate of more than 50% in Spain and Greece, had the most serious problem. Global Insight forecast the unemployment rate to keep advancing to 12.5% in 2013 (Chart 2.3).

In the euro area, the ratio of outstanding government debt-to-GDP was soaring but is expected to grow at only 1 percentage point in 2013 against the backdrop of the implementation of harsh fiscal austerity measures, according to IMF projections (Chart 2.4). Nonetheless, GIIPS will progressively enter the peak period of repayment of public debt in 2013 and 2014.

The Abe cabinet proposed the “three-arrows” strategy for realizing economic revitalization

Bolstered by needs for earthquake reconstruction and the resumption of private consumption, Japanese economic growth registered 2.0% throughout 2012. The government debt-to-GDP ratio further uplifted to 237% during the year as the government issued Reconstruction Bonds in response to funding requirements for earthquake recovery (Chart 2.4). At the end of 2012, the new Japanese Prime Minister Abe proposed the “three-arrows” strategy, comprising:

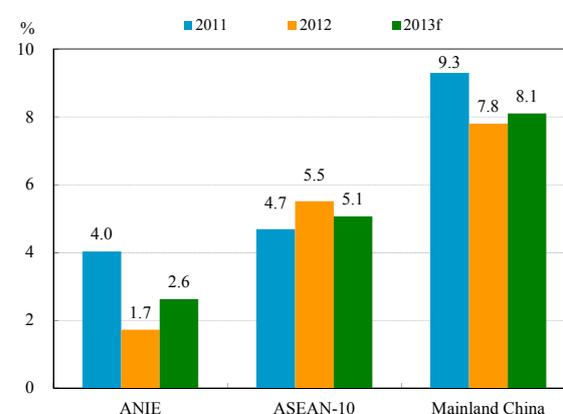
“aggressive monetary policy,” “flexible fiscal policy” and “the growth strategy that promotes private investment,” with the aim of curbing deflation and promoting economic growth. In this context, it is likely to induce a further deterioration in government debt. According to Global Insight, Japanese economic growth is expected to drop to 0.8% in 2013 (Chart 2.2), while the unemployment rate is forecast to climb to 4.4%, somewhat higher than the figure recorded in 2012 (Chart 2.3).

The recovery of Asian emerging economies is expected to accelerate, while unemployment rates in the ASEAN-10 countries showed improvements

Hit by contracting foreign demand, GDP growth in the major Asian emerging economies experienced a slowdown in 2012, and output growth in Mainland China over the same period also decreased to 7.8% from 9.3% in 2011. Moreover, Thailand and the Philippines both saw a marked surge in their economic growth rates in 2012. The former was underpinned by post-flood construction requirements, while the latter was driven by foreign workers’ remittances backstopping private consumption, alongside an expansion in public expenditure. Against this backdrop, output in the 10 member countries of the Association of South East Asian Nations (ASEAN-10) grew by 5.5% in 2012 from 4.7% a year before (Chart 2.5).

Spurred by an expected moderate pick-up in the global economy, Global Insight anticipated that the economic growth rate in the Asian newly industrialized economies would mount to 2.6% in 2013 from 1.7% in 2012. Meanwhile, the ASEAN-10 countries would see steady growth but register a growth rate of 5.1% in 2013, slightly lower than 5.5% a year earlier (Chart 2.5). The unemployment rate in the Asian newly industrialized economies is projected to stand at 3.6%, higher than 3.4% in 2012, while the figure would continue to drop to 4.5% in the ASEAN-10 countries (Chart 2.6).

Chart 2.5 Economic growth rates in emerging Asian economies



Notes: 1. Figures for 2013 are Global Insight projections. Estimates for ANIE are based on 22 February 2013 data, while for ASEAN-10 are 15 April 2013 data.
 2. ANIE refers to Asian Newly Industrialized Economies, including Taiwan, Hong Kong, Singapore and South Korea.
 3. ASEAN-10 refers to 10 member countries for 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 Global Insight (2013/4/15).

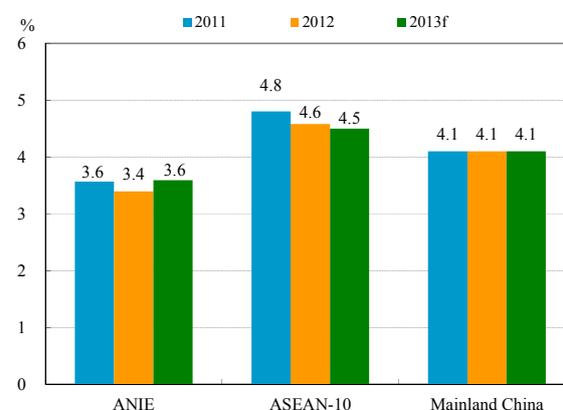
Recently, international hot money flowed into the Asia-Pacific region, emanating from the emerging negative effects of quantitative easing adopted by advanced economies. It not only exerts appreciation pressure on Asian currencies but also fuels the build-up of asset and credit bubbles. Standard and Poor's (S&P) also indicated that rapid movements of hot money are likely to impact Asian economies.¹²

Global inflationary pressures kept subsiding

Global prices of food and crude oil dramatically surged amid climate and geopolitical uncertainty in the third quarter of 2012. However, with increasing production of cereals due to improvement in the climate in cereal producing regions, alongside a still-sluggish global economy, commodity prices resumed stability. Reflecting this, global inflation moderated in 2012 compared to the previous year, with the CPI inflation rate registering 3.2%, down from 4% in 2011. CPI inflation rates in both advanced and emerging economies were lower than the figures recorded a year earlier (Chart 2.7).

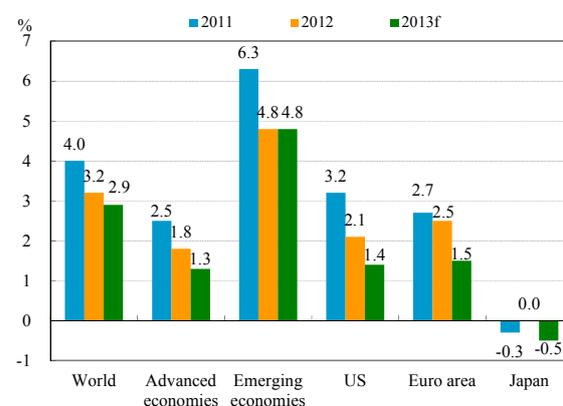
Global crude oil prices trended upward in the beginning of 2013 but turned to decline as a consequence of Mainland China's weak economic performance in the first quarter and a deepening recession in the euro area. In addition, international cereal prices also regained stability due to climate improvement. Reflecting this, global energy prices only showed a modest level of growth. Global Insight predicted the global CPI inflation rate would continue to reduce to 2.9% in 2013 (Chart 2.7).

Chart 2.6 Unemployment rates in emerging Asian economies



Notes: 1. Figures for 2013 are Global Insight projections. Estimates for ANIE are based on 22 February 2013 data, while for ASEAN-10 are 15 April 2013 data.
2. For ANIE and ASEAN-10, see Notes 2 & 3 in Chart 2.5.
Sources: Official websites of the selected economies and Global Insight.

Chart 2.7 Global headline inflation indices



Note: Figures for 2013 are Global Insight estimates.
Sources: Official websites of the selected economies and Global Insight (2013/4/15).

¹² Standard & Poor's (2013), *Economic Research: Global Credit Conditions Underpin Economic Growth Outlook in Asia Pacific*, 13 March.

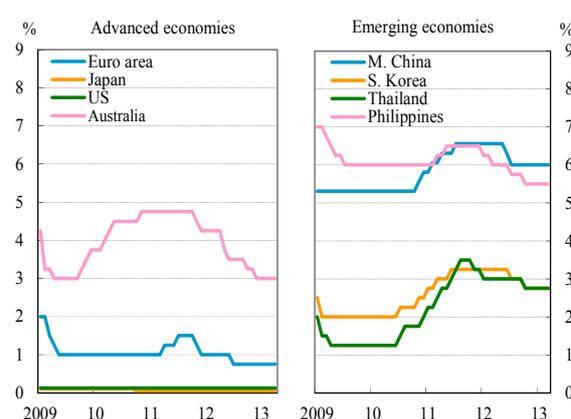
Monetary policy kept easing in advanced economies along with an expansion in the size of asset purchases

With regard to monetary policy, there is confined room for cutting rates given the already low interest rates in major advanced economies.

In the face of the weakening global economy, the ECB cut its policy rate in July 2012,¹³ while the Reserve Bank of Australia also lowered their policy rate four times during the year. By contrast, the FED and the Bank of Japan (BOJ) both kept their low-interest-rate policies unchanged (Chart 2.8), and sequentially stepped up the size of asset purchases (Table 2.1).

Emerging Asian economies continued adopting easier monetary stances in response to the impact of the still-moderate underlying pace of global output growth on their domestic economies. Most economies kept reducing policy rates from 2012 onwards (Table 2.1).

Chart 2.8 Policy rates in selected economies



Notes: 1. Figures are as of end-April 2013.
 2. Figure for the Euro area is based on the main refinancing operations fixed rate; for Japan, uncollateralized overnight call rate; for US, federal funds rate target; for Australia, cash rate target; for Mainland China, financial institution one-year lending base rate; for South Korea, base rate; for Thailand, 1-day repurchase rate; and for the Philippines, repurchase rate.

Sources: Central banks' websites.

Table 2.1 Recent measures of monetary easing in selected advanced and emerging economies

Economy	Dates	Measures
US	2012/9	The Federal Open Market Committee (FOMC) decided to purchase additional agency mortgage-backed securities at a pace of US\$40 billion per month until prospects of the labor market notably improved.
	2012/12	The FOMC decided to take the following measures to sustain monetary easing: 1. Continue purchasing additional agency mortgage-backed securities at a pace of US\$40 billion per month. 2. Purchase longer-term Treasury securities after the program to extend the average maturity of the FOMC's holdings of Treasury securities is completed at the end of 2012, initially at a pace of US\$45 billion per month.

¹³ See Note 2.

		<p>3. Maintain the existing policy of reinvesting principal payments from its holdings of agency debt and agency mortgage-backed securities in agency mortgage-backed securities until prospects of the labor market improved.</p> <p>4. Keep the target range for the federal funds rate at 0 to 0.25% and maintain this low range for the federal funds rate given that the unemployment rate remains above 6.5%, inflation between one and two years ahead is projected to be no more than 2.5%, and longer-term inflation expectations continue to be well anchored.</p>
Euro area	2012/7	The ECB cut the main refinancing operations fixed rate by 25 basis points to 0.75%.
Japan	2012/2, 4, 9, 10, 12	The BOJ successively expanded the size of its Asset Purchase Program on five occasions during 2012, bringing its total value up to 101 trillion yen.
	2013/1	<p>The BOJ decided to take monetary measures as follows:</p> <ol style="list-style-type: none"> 1. Raise the price stability target from 1% to 2%. 2. Pledge to purchase financial assets at a rate of 13 trillion yen per month from 2014 onwards without setting any termination date. 3. Keep the target range for the uncollateralized overnight call-loan rate unchanged at 0 to 0.1%.
	2013/4	<p>The BOJ adopted “quantitative and qualitative monetary easing” by means of the following steps:</p> <ol style="list-style-type: none"> 1. Change the main operating target for money market operations from the uncollateralized overnight call rate to the monetary base. 2. Double the monetary base and the amounts outstanding of Japanese government bonds as well as exchange-traded funds (ETFs) to 270 trillion yen, 190 trillion yen and 3.5 trillion yen, respectively, in two years. 3. Increase the amounts outstanding of Japan real estate investment trusts (J-REITs) by 60 billion yen to 0.17 trillion yen.
Australia	2012/5, 6, 10, 12	The Reserve Bank of Australia lowered the cash rate target four times to 3.0%.
Mainland China	2012/6, 7	The PBC sequentially cut the financial institution one year lending and deposit base rate twice to 6.0% and 3.0%, respectively.
South Korea	2012/7, 10	The Bank of Korea reduced the base rate target twice to 2.75%.
Thailand	2012/1, 10	The Bank of Thailand lowered the 1-day repurchase rates twice to 2.75%.
Indonesia	2012/2	Bank Indonesia cut the Bank Indonesia rate by 25 basis points to 5.75%.
Philippines	2012/1, 3, 7, 10	The Central Bank of the Philippines lowered the repurchase rate four times to 5.50%.

Sources: National official websites.

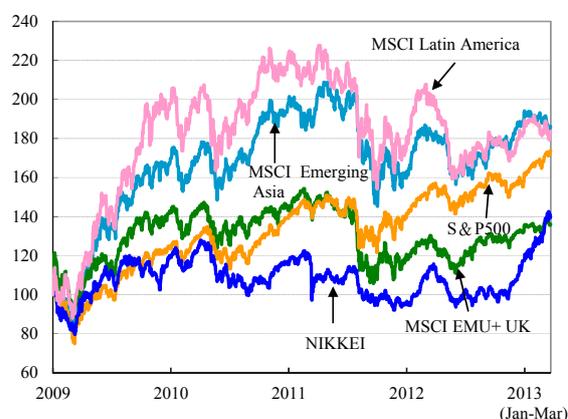
International financial conditions

Improvements in international financial markets

As the European sovereign debt crisis continued to flare up on occasion affecting global financial markets, the ECB launched the three-year LTRO in two phases providing the banking system with a total amount of one trillion euros in low rate loans in December 2011 and February 2012, respectively. This not only contributed to alleviating pressures on funding constraints in markets in the first quarter of 2012, but also promoted asset markets to temporarily stabilize. In turn, major stock markets around the world mostly rebounded amid buoyant sentiment (Chart 2.9).

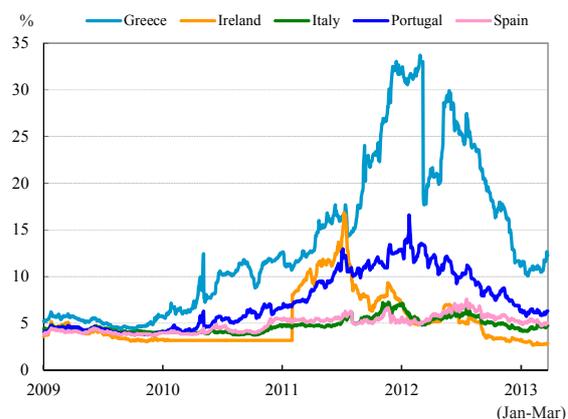
However, the political unrest surrounding the Greek parliamentary election outcome in the beginning of May 2012, coupled with renewed concern over the flagging economy and the health of banks in euro area GIIPS,¹⁴ hit investor confidence. As a consequence, those economies saw capital outflows and experienced a backlash in government bond yields, with Greece especially registering the highest increases (Chart 2.10). Although the three-year LTRO introduced by the ECB has helped to resume the demand for government bonds issued by those economies, its positive effect has receded. Accordingly, risk aversion suffered a sharp upswing alongside capital flight to safe assets, bringing about a precipitous drop in government bond yields in the US, Germany and Switzerland. The safe-haven flows to Japan resulted in Japanese government bond yields hitting historical lows and persistent appreciation in the Japanese yen (Chart 2.11). Investors' confidence towards emerging markets

Chart 2.9 Performance of key international equity indices



Note: 1 January 2009 = 100.
Source: Bloomberg.

Chart 2.10 Government bond yields in euro area GIIPS



Note: All figures are based on 10-year government bond yields except for Ireland's data which are on a 5-year basis.
Source: Bloomberg.

¹⁴ See Note 3.

declined due to elevated risk aversion. Against this backdrop, markets have seen mounting concerns about whether emerging markets are capable of weathering waning domestic economic conditions, especially in the face of shrinking leeway for monetary policy and an opaque global economic outlook.

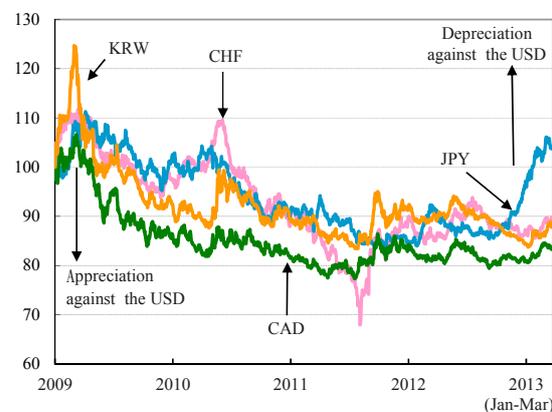
From the third quarter onwards, affected by the protracted Greek sovereign debt crisis, deteriorating fiscal conditions in local governments and a soaring bad debt ratio in the banking industry in Spain, downside risks

remained high. In response, the ECB cut the main refinancing operations fixed rate to a record low of 0.75% in July from 1% and reduced the overnight deposit rate from 0.25% to 0% in an attempt to encourage interbank lending. Subsequently, the OMT program announced by the ECB in September pledged unlimited and fully sterilized purchases of euro area government-issued bonds that mature in one to three years in the secondary market¹⁵ aimed at curtailing the risk of a deteriorating European financial crisis. Moreover, in October, thanks to the introduction of the ESM, a permanent bailout mechanism in the euro area, the GIIPS experiencing deep financial distress saw a plunge in their public bond yields (Chart 2.10).

Furthermore, the US faced faltering employment growth and a persistently high unemployment rate in the third quarter of 2012, despite moderate economic growth. In this context, the FOMC decided to maintain the target range for the federal funds rate at 0 to 0.25% in September 2012 and to keep the rate at this exceptionally low level at least through the middle of 2015. In addition, the FOMC announced the additional purchase of agency mortgage-backed securities at a pace of US\$40 billion per month (also known as the third round of quantitative easing or QE3) and continued its program to extend the average maturity of its holdings of Treasury securities through the end of 2012.

To prevent Japan from a renewed recession and to overcome deflation, the BOJ successively

Chart 2.11 Movements of various currencies against the US dollar



Note: 1 January 2009 = 100.
Source: Bloomberg.

¹⁵ All purchases under the OMT are limited to the sovereign bonds issued by the economies that ask for support under the EFSF/ESM, agree on conditionality to adhere to its fiscal austerity and implement the relevant reforms. Meanwhile, the ECB waived its preferred creditor status to reduce the funding costs for the economies that were jeopardized by financial distress.

expanded the size of its Asset Purchases Program¹⁶ on five occasions during 2012, bringing its total value up to 101 trillion yen in the hope of causing longer-term interest rates and credit risk premiums to decrease. In January 2013, the Japanese government and the BOJ announced the launch of an inflation targeting system, raising the inflation target¹⁷ to 2% from 1% with a view to further reinforcing monetary easing policies. As a result, the Japanese yen experienced a radical depreciation, while the stock market soared markedly (Chart 2.11 and Chart 2.9). To some extent, it would impact on exchange rate stability in Asian countries (Box 1).

The major European economies, the US and Japan conducted substantial injections of liquidity into financial markets by means of their unprecedented low rate policies and unconventional measures including asset purchases. Consequently, international financial conditions improved notably alongside rising asset prices and there were strong rebounds in major stock markets around the world in the first quarter of 2013 (Chart 2.9). Nevertheless, some banks in the euro area periphery economies, in which government debt-to-GDP ratios stayed high, still faced significant challenges emanating from elevated funding costs, worsening asset quality and meager profits.

The adoption of monetary easing policies by national governments leading to run-ups of asset prices grew concerns of bubbles forming. Meanwhile, protracted low interest rates over a long period of time have increased financial sector vulnerabilities and sensitivities in the advent of an unexpected rise in interest rates. Central banks should maneuver their exiting mechanisms and take adequate responsive measures as they exit their easy monetary policies so as to minimize the impacts on markets. In addition, the spillover of monetary easing policies taken by advanced economies spurred a rise in the volatility risk of asset prices in emerging economies, putting financial stability at risk. The World Bank suggested that the central banks in East Asia should closely monitor the movement of capital inflows and consider developing capital controls that could play a role in dampening excessive inflows in the short term.¹⁸

¹⁶ The BOJ first announced the introduction of the Asset Purchase Program amounting to 35 trillion yen in October 2010 and, in turn, successively increased the size of the program on eight occasions, bringing the total value up to about 101 trillion yen. The program is composed of the asset-purchase fund used for a securities line of 76 trillion yen and for a credit lending line of 25 trillion yen. The scope of asset purchases includes Japanese government bonds, treasury bills, commercial paper, corporate bonds, exchange-traded funds (ETFs) and J-REITs.

¹⁷ It refers to the CPI inflation rate.

¹⁸ See Note 4.

Progress has been made in international financial reforms, but there is still a need for ongoing impetus and effective implementation

The unfolding global financial crisis of 2008 and the subsequent European sovereign debt crisis had significant impacts on financial systems and financial markets around the world. In response, national financial authorities and international organizations successively launched a series of financial supervisory reforms in an attempt to heighten the transparency of financial markets and financial institutions and to lessen the complication of financial instruments and activities, as well as to deleverage balance sheets. These measures aimed at eventually lowering risks in financial institutions and enhancing their resilience, so as to reinforce the safety of the financial system.

These international financial reforms mainly focused on: (1) raising regulatory capital levels and liquidity buffers to strengthen the ability of financial institutions to cope with distress; (2) restricting deposit-taking institutions from proprietary trading and investment activities to insulate them from a flare-up of the underlying causes of the subprime crisis; (3) ring-fencing retail banks from investment banking activities and requiring higher capital charges for retail banks; and (4) improving the supervision on shadow banking and OTC derivatives, and averting further risks derived from non-bank financial institutions and OTC markets that may undermine financial stability.

Considerable progress has been made in the regulatory reform agenda at both the national and global levels. Nevertheless, according to an IMF survey,¹⁹ problems with regard to overly complex financial systems, excessive concentration in banking assets, strong domestic interbank linkages and too-important-to-fail issues still lie ahead. With a view to underpinning future financial stability and the development of financial markets, ongoing impetus and effective implementation of reform agendas are necessary for national financial authorities and international organizations.

¹⁹ IMF (2012), Global Financial Stability Report-Restoring Confidence and Progressing on Reforms, October.

Mainland China's economic and financial conditions

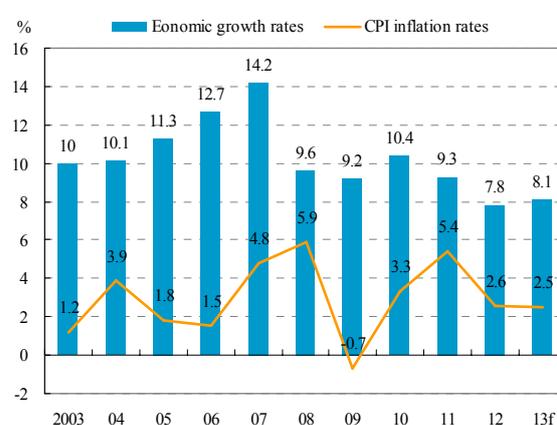
Economic growth slowly rebounded

After seven consecutive quarters of economic slowdown, Mainland China's economic growth touched a three-year low of 7.4% in 2012 Q3, owing to weak external demand and contracted internal demand driven by a cooling local housing market. In Q4, thanks to policy actions taken by the PBC through lowering benchmark interest rates and reserve requirement ratios, economic growth rebounded to 7.9% and registered 7.8% for the whole year. Though a thirteen-year low, the recorded growth rate was still above the 7.5% official target. However, growth dropped to 7.7% in 2013 Q1, reflecting uncertainty in their economic recovery. Currently, Mainland China is aggressively transforming its growth policies. In the future, it will rely more on expansion of domestic demand and urbanization strategies to support economic growth. Global Insight projected Mainland China's economic growth through 2013 to rebound to 8.1% (Chart 2.12).

Softened food prices alleviated inflationary pressure

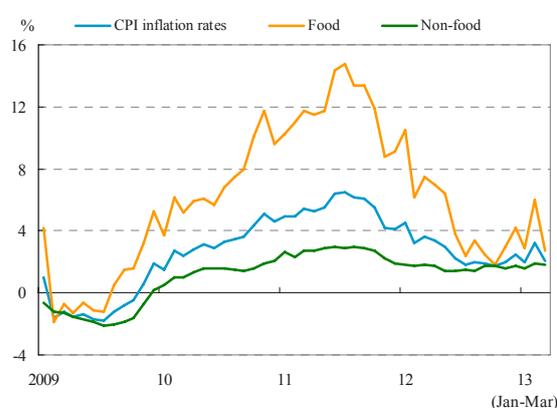
Regarding consumer prices, thanks to stable international raw materials prices, slowing domestic food price increases and stable domestic non-food prices, the CPI inflation rate decreased from 5.4% in 2011 to 2.6% in 2012. In February 2013, affected by Lunar New Year holidays and a low 2012 base, the CPI inflation rate rose to 3.2%. However, it fell back to 2.1% in March (Chart 2.13). Global Insight projected Mainland China's inflation rate for the whole of 2013 to decrease further to 2.5% (Chart 2.12).

Chart 2.12 Economic growth rates and CPI inflation rates of Mainland China



Note: Figures for 2013 are Global Insight projections.
Sources: National Bureau of Statistics of China and Global Insight (2013/4/15).

Chart 2.13 Food and non-food CPI inflation rates of Mainland China



Source: National Bureau of Statistics of China.

Accelerated bank credit expansion led to cautious monetary policy

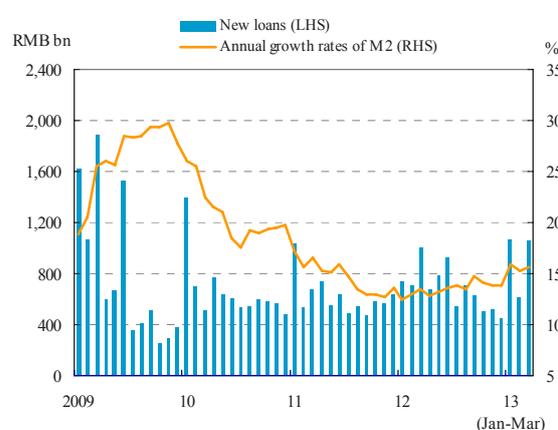
In response to economic slowdown and eased inflationary pressure, starting from February 2012, the PBC lowered the reserve requirement ratio for depository financial institutions by a total of one percentage point. Furthermore, the rates for 1-year renminbi benchmark deposits and loans of financial institutions were cut twice to 3.0% and 6.0%, respectively. Moreover, after lowering interest rates in July, the PBC shifted to reverse repo operations in order to increase the money supply. The trends of M2 annual growth rates and new renminbi loans remained stable in 2012. In January 2013, the annual growth rate of M2 increased from 13.8% as of the end of 2012 to 15.9%, and total new loans also reached a three-year high of RMB 1.07 trillion, due to ample market liquidity and clear signs of economic recovery.

On 19 February 2013, the PBC conducted repo operations for the first time to tighten the money supply. The annual growth rates of M2 and new renminbi loans both decreased in February but rebounded in March. The annual growth rates of M2 for February and March were 15.2% and 15.7%, respectively, both higher than the 2013 target of 13% (Chart 2.14).

Housing market warmed up and shadow banking system surged

In January 2013, the annual growth rate of building sales prices in 70 medium-large cities was 0.8%, turning positive for the first time in ten months, while monthly growth rates stayed positive for seven consecutive months. In response to the inflating housing market, starting from February 2013, Mainland China successively implemented

Chart 2.14 New loans and annual growth rates of M2 of Mainland China



Source: PBC.

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



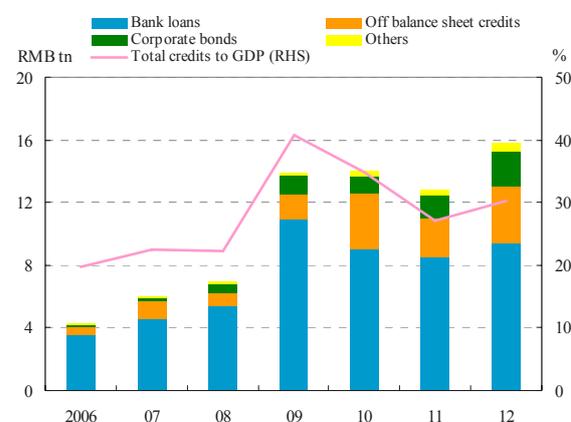
Note: Figures for 2011 onwards are estimated by Thomson Reuters, based on statistics published by the National Bureau of Statistics of China.

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

measures to curb housing price rises, including levying 20% individual income tax on residential property sales as well as raising the down payment ratio and interest rate for second house loans. However, such measures only had limited effects in a short time period as the annual growth rate of building sales prices in 70 medium-large cities in February and March continued increasing to 2.1% and 3.6%, respectively (Chart 2.15).

Meanwhile, Mainland China has imposed interest rate controls as well as credit rationing for a long time, and its credit markets were oligopolized by large commercial banks. As a result, the financial intermediation function of the banking system has proven to be insufficient, which has given rise to various types of shadow banking.²⁰ As a proportion of aggregate financing to the real economy, off-balance sheet credits have gradually increased in recent years (Chart 2.16), indicating active shadow banking activities. The Wenzhou private lending crisis bursting in 2011 demonstrated how severe the problem was. The biggest risk posed by shadow banking is excessive leverage. Without a sound supervisory mechanism, such risk will severely jeopardize the financial system once the economy fluctuations occur.

Chart 2.16 Aggregate financing to the real economy of Mainland China



Source: PBC.

²⁰ Shadow banking in Mainland China includes: (1) non-bank institutions, such as pawnshops, credit guarantee companies and micro-finance companies; (2) private equity; (3) wealth management products, such as entrusted loans and trust loans; (4) financial innovation products, such as asset securitization and derivatives. This definition draws from IMF (2011), *People's Republic of China: Financial System Stability Assessment*, Country Report No. 11/321, November, and other relevant papers.

Box 1**Depreciation of the Japanese yen and its impacts on Taiwan's economy**

Since Shinzo Abe resumed the position as Prime Minister of Japan on 26 December 2012, his administration has actively adopted loose fiscal and monetary policies geared toward jolting the country out of its decades-long deflationary malaise. With the step by step implementation of various revival policies, the value of the Japanese yen dropped. This box will explore the major causes that led to the latest depreciation of the Japanese yen and its economic and financial impacts in Asia and Taiwan.

1. Abe's economic policies and changing domestic and international environments pushed the yen down

After taking office, Prime Minister Abe vigorously advanced new economic policies. Prompted by these policies and other concurrent factors, such as the gradually stabilizing economies of the US and the euro area, lasting merchandise trade deficits in Japan, and massive yen sell-off by international investors, the yen began to weaken.

1.1 Abe's assertion of economic policies is conducive to yen depreciation

Abe's administration launched a three-pronged economic plan, namely an accommodative monetary policy, an expansionary fiscal policy, and a growth strategy that encourages private sector investment, which are collectively dubbed "Abenomics." Major policy measures under implementation are as follows:

1.1.1 Expanding public expenditure

The administration put forth a hefty package of Emergency Economic Stimulus Measures worth 20.2 trillion yen (US\$227 billion), of which 10.3 trillion yen will be put in broad categories of government spending with a focus on infrastructure.

1.1.2 Easing monetary policy

The newly appointed BOJ Governor Haruhiko Kuroda, who has been in office since 4 April 2013, announced at his first monetary policy meeting that, in order to achieve the 2% inflation target as early as possible within a two-year timeframe, the BOJ would conduct a quantitative and qualitative monetary easing policy, changing the target of open market operations from the uncollateralized overnight call rate to the monetary base. Within two years the monetary base and holding of long-term Japanese government bonds (JGBs) and ETFs will double from their original amounts to 270 trillion yen, 190

trillion yen and 3.5 trillion yen, respectively. Additionally, the outstanding balance of Japan Real Estate Investment Trust (J-REITs) holdings will increase by the amount of 60 billion yen to 0.17 trillion yen.

Expansionary quantitative easing (QE) pushed down long-term rates and the yield on ten-year JGB hit a new record low of approximately 0.32% on 4 April 2013. International investors successively shorted the yen and, meanwhile, carry trades (i.e. borrowing the yen at a low interest rate in order to invest in another currency that is likely to provide a higher return) resurged, triggering the yen's further depreciation.

1.2 Gradually stabilizing economies of the US and the euro area precipitated the yen's slide against the US dollar

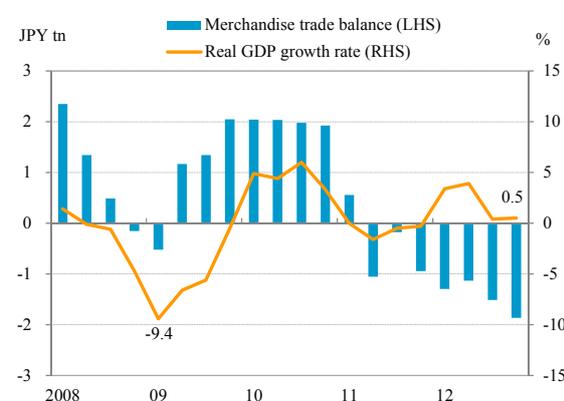
Positive signs of economic recovery in the US began to appear from September 2012. Many leading indicators, such as property prices and the unemployment rate, continued meliorating. Economic and financial conditions in the euro area also stabilized progressively after the European Central Bank's announcement of the Outright Monetary Transactions (OMT) policy. These factors caused an upsurge in financial markets as investors bought back the US dollar and the euro as investment positions.

1.3 Expanding merchandise trade deficit in Japan exacerbated the yen's depreciation

Japan has posted seven consecutive quarters of merchandise trade deficits since 2011 Q2 (Chart B1.1), representing the longest period since 1985. Combined with its lackluster economic growth, the situation intensified the trend of yen depreciation. The major factors causing the expansion of Japanese trade deficits are as follows:

- (i) Short-term factors: global economic slowdown and huge fuel imports due to the shut-down of nuclear power plants after the devastating earthquake and tsunami in Fukushima in March 2011.
- (ii) Long-term factors: Corporates' offshore production and sliding competitiveness in niche products, such as motor and engineering

Chart B1.1 Merchandise trade balances and real GDP growth rates in Japan



Source: Ministry of Finance and Cabinet Office, Japan.

industries, as well as the structural shift stemming from reducing demand for nuclear power.

2. Yen depreciation would benefit Japanese export competitiveness but could destabilize the exchange rates of emerging Asian economies

2.1 Yen depreciation would be conducive to Japanese export competitiveness

The yen's real effective exchange rate dropped 17.6% between October 2012 and March 2013 (Chart B1.2), which helped raise the relative advantage in its export prices and hence benefited export competitiveness. Owing to its increase in the exportation of organic compounds and motor components, the annual growth rate of overall exports reached 6.4% in January 2013, the first positive growth seen in the most recent consecutive eight months. However, it subsequently decreased to 1.1% in March 2013 as exports to Mainland China and the European Union (EU) slipped.

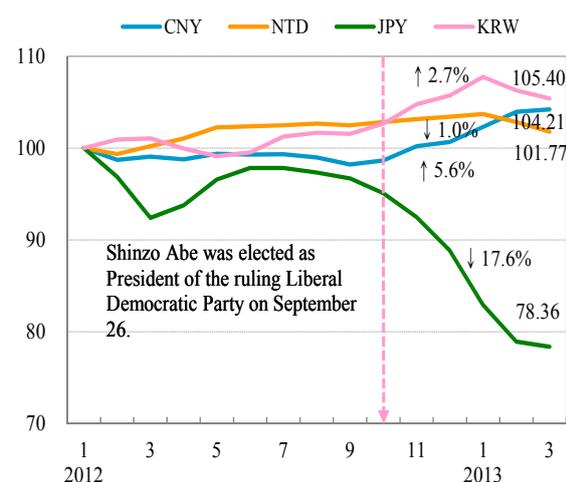
2.2 Yen depreciation could impact the South Korean economy because of their export structure similarities

Among major economies in Asia, Japan and South Korea are most similar in the type of exports. Therefore, South Korea's exports are most likely to be hurt most by the yen's depreciation, particularly in the shipping, steel and motor industries. Thus, competition between Japan and South Korea will be stiffer. After the latest G20 meeting, the Bank of Korea expressed its hope for Japan not to weaken the yen intentionally and that it would keep a close watch on the impacts of Japan's stimulus measures on the South Korean economy.

2.3 Yen depreciation could destabilize the exchange rates of Asian economies

Due to the yen's depreciation, Southeast Asian countries can perhaps benefit from increasing demand for their raw materials and intermediate goods or products driven by the expansion of Japanese

Chart B1.2 The change in real effective exchange rates in Asia



Notes: 1. January 2012 = 100.

2. ↑ and ↓ represent appreciation and depreciation, respectively. % refers to the rate change between October 2012 and March 2013.

Source: BIS effective exchange rate, broad indices.

exports. Among these countries, Thailand's economic outlook, which may benefit from being part of the production supply chain of the Japanese motor industry, could be optimistic. However, Asian countries, taking into account their high degree of export competitiveness, might be prompted to adopt responsive measures to stabilize their exchange rates in the case of excessive fluctuations in the yen-dollar rate.

3. Impacts on the economy and finance in Taiwan

3.1 Massive international hot money flowed in and out of the local foreign exchange market, affecting the stability of the NT dollar exchange rate

With international hot money veering into Asia, the net inflow of foreign capital increased in 2012 Q4, exerting appreciating pressure on the NT dollar.

3.2 Yen depreciation can help decrease Taiwan's trade deficits with Japan and reduce production costs

As Japan is the number one source of imports and the fourth-largest export destination for Taiwan, a huge bilateral trade deficit with Japan has persisted for a long time. In 2012, Taiwan's imports from Japan (about US\$47.6 billion) were much higher than its exports to Japan (about US\$18.9 billion.) At the same time, the weight of yen-denominated imports was also larger than that of exports. Thus, when the yen's value falls versus the US dollar, the decreased value of imports, converted into US dollars, will be larger than that of exports in the short run. Under this situation, Taiwan's trade deficit with Japan is expected to narrow temporarily. Chemicals and machinery, two major imports from Japan that constitute a hefty portion of Taiwan's trade deficits, will benefit more from the yen's depreciation.

3.3 The purchasing power of Japanese visitors to Taiwan will decrease while that of Taiwanese to Japan will increase

The yen's depreciation will lessen the incentives and consumption ability of Japanese visitors to Taiwan. On the contrary, the number of Taiwanese tourists to Japan will rise because of the increase of their purchasing power.

3.4 Yen depreciation could dampen the investment intentions of Japanese corporations in Taiwan, but will be helpful for Taiwanese enterprises hoping to buy Japanese technology

Japanese corporations, in order to reduce costs and diversify risks, have been actively

investing in Taiwan. Coupled with the close network between the two countries in terms of industrial clusters development and the improved cross-strait relationship, Japanese investment in Taiwan rose steadily in recent years. Although the latest yen depreciation could affect their intentions to invest in Taiwan, corporations' long-term investments generally focus on future returns, and the appreciation or depreciation of currencies is not the only reference indicator. Furthermore, the yen's depreciation can raise the relative purchasing power of the NT dollar, which is beneficial for Taiwan's enterprises to engage in direct investment in or purchase technology from Japan.

3.5 The costs of imports from Japan are expected to decline but the impact on consumer prices will be minimal

Even though the yen's depreciation can help reduce the costs of imports, the merchandise imported from Japan largely arises from derived export demand, including key components and capital equipment. Therefore, the impact of the yen's depreciation on domestic consumer prices will be limited. Moreover, price rigidity normally exists in the adjustment process of commodity prices. Following the yen's depreciation, the level of price reduction for consumer goods in the short term probably won't be noticeable. However, in the case where the yen continues depreciating, domestic enterprises would face rising pressures to lower their commodity prices.

2.2 Domestic economic and financial conditions

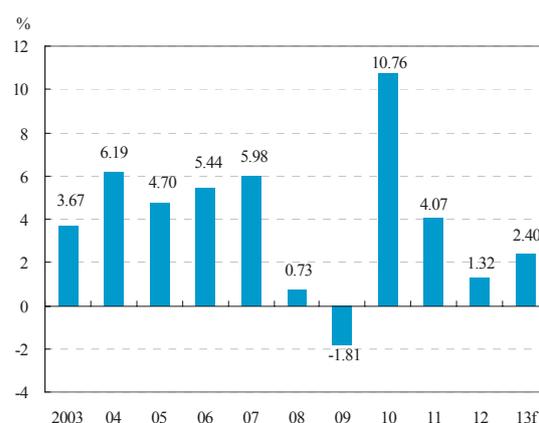
Taiwan's economy grew at a decelerated pace in 2012 compared to the previous year due to weaker foreign demand. Meanwhile, the rise in the price level remained moderate. Short-term external debt servicing ability remained strong on the back of a continued surplus in the current account and ample foreign exchange reserves. Although the scale of external debt continued to expand, overall external debt servicing ability stayed robust. Moreover, the government's fiscal deficit shrank, whereas total government debt continuously mounted.

Domestic economic expansion decelerated

In the first half of 2012, owing to the weakening global economy, exports declined continuously and private investment trended downward. Benefiting from increasing sales of the catering and retail industries, private consumption acted as a key factor underpinning overall growth. However, factors including a dull stock market and shrinking financial wealth somewhat counteracted the growth momentum. The economic growth rate registered merely 0.59% in Q1 and further declined to -0.12% in Q2. As for the second half of the year, in addition to a recovering global economy and a lower base, private consumption and export growth both performed better than expected. All of these favorable conditions led the economic growth rates for Q3 and Q4 to rebound to 0.73% and 3.97%, respectively. Nevertheless, DGBAS statistics stated that the annual economic growth rate dropped to 1.32%²¹ in 2012, exhibiting a significant fall from 4.07% a year earlier (Chart 2.17).

In order to cope with global economic turmoil and domestic issues such as an imbalanced industrial structure and maladjustment between labor supply and demand, the Executive Yuan proposed several policies, such as the Economic Power-Up Plan²² in September 2012, to promote economic growth momentum and to strengthen the country's ability to weather external impacts (Box 2). Taking a glance into 2013, the global economic recovery softened as growth faltered, and Taiwan's export expansion

Chart 2.17 Economic growth rates in Taiwan



Note: Figure for 2013 is forecast by DGBAS.

Source: DGBAS.

²¹ See Note 6.

²² See Executive Yuan press release on 11 September 2012.

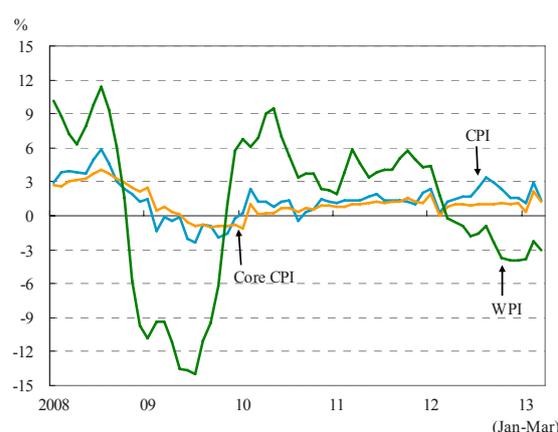
suffered waning momentum due to lackluster international markets and pressure from increasing competition. In addition, as a consequence of falling real wages and a dull stock market, private consumption performed worse than expected. Reflecting this, the DGBAS revised the forecast of Taiwan's economic growth rate down to 2.40%²³ in 2013 (Chart 2.17). Moreover, the U.S. fiscal cliff and the European sovereign debt crisis both raise uncertainties concerning global economic recovery. Therefore, the ongoing impact on Taiwan's economy is worth close attention.

Domestic prices rose mildly

Despite ascending prices of international agricultural products and domestic electricity, prices of crude oil, base metals and plastic raw materials trended downwards. As a result, the average wholesale price index (WPI) inflation rate showed a decreasing trend and registered only 0.46% during the first half of 2012. Afterward, cooling international raw materials markets and relatively low prices of oil, machinery and equipment together brought the WPI inflation rate significantly down to -3.95% in December, hitting a record low since November 2009 (Chart 2.18). The annual WPI inflation rate registered -1.16% in 2012, materially lower than the 4.32% recorded a year earlier, according to the DGBAS.

As for the consumer price level, at the beginning of 2012, the CPI inflation rate rose moderately due to declining raw material prices. However, after April, the electricity and gasoline price hikes pushed inflation expectations upwards. In addition, domestic prices of vegetables and fruits, and international prices of crude oil and crops all moved up, and as a consequence the CPI inflation rate soared to a yearly high of 3.43% in August. Subsequently, a slowdown in vegetables and fruits prices, and relatively low prices of telecom service charges and consumer electronics products collectively offset some of the price increases of fuels, lubricants and household electricity, leading to a descending CPI inflation rate. Overall, the average CPI inflation rate of 2012 was 1.93%, higher than the 1.42% of the previous year, and the core CPI²⁴ inflation

Chart 2.18 Consumer and wholesale price inflation rates



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

²³ See Note 6.

²⁴ The term "core CPI" in this report refers to the consumer price index excluding perishable fresh fruits and vegetables, fish and shellfish, and energy.

rate of 2012 was 1.0%, slightly lower than the 1.13% registered a year earlier.

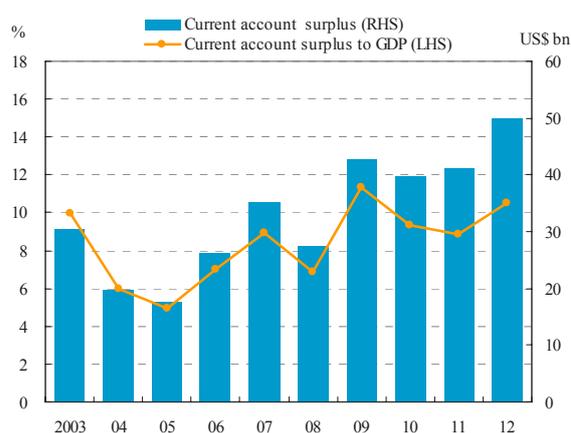
With regard to 2013 Q1, the average WPI inflation rate was -3.08%, and the average CPI and core CPI inflation rates were 1.81% and 1.23%,²⁵ respectively (Chart 2.18). As the sluggish global economy lowered the demand for crude oil and raw materials production faced a situation of excess capacity, the DGBAS projected the annual WPI inflation rate in 2013 to continuously decline to -1.22%. As for the CPI, because prices of international commodities moved to a lower level, and prices of Japanese imported products gradually reflected the depreciation effects of the Japanese yen against the NT Dollar, the CPI inflation rate was predicted by the DGBAS to drop back to 1.23%.²⁶

Current account surpluses persisted and foreign exchange reserves stayed abundant

In 2012, although influenced by tepid growth in Western economies, the decrease in exports was smaller than that in imports, making Taiwan's goods trade surplus trend up. Combined with a larger trade surplus of both services and income, and a narrower current transfers deficit, the annual current account surplus reached US\$49.8 billion, or 10.51% of annual GDP,²⁷ increasing by US\$8.6 billion or 20.93% compared to 2011 (Chart 2.19).

As for the financial account, in 2012, direct investments and portfolio investments both saw net outflows, due to the considerable expansion of business activities in Mainland China by Taiwanese companies, insurance companies' greater investments in foreign debt securities and residents' greater investments in foreign funds combined. However, the net inflows from other investments²⁸ during the same period somewhat offset the effects of the above-mentioned capital outflows. As a result, the annual balance of outflows in the financial account still registered US\$31.4 billion,

Chart 2.19 Current account surplus



Note: Current account surplus and GDP are annual figures.
Sources: CBC and DGBAS.

²⁵ See Note 5.

²⁶ See Note 6.

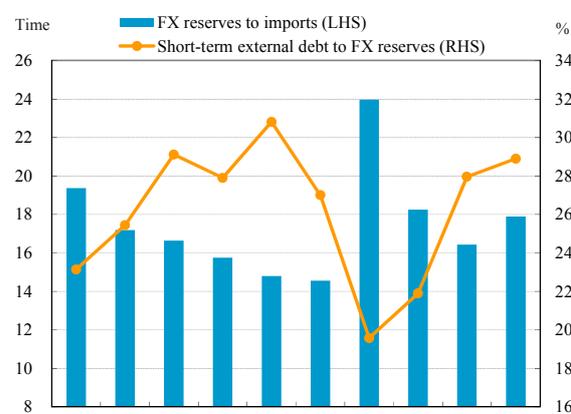
²⁷ For the ratio of current account deficit to GDP, the cutoff point for risk is 3%. A country in which the reading is greater than 3% and has risen by at least 5 percentage points from the previous year is considered to be at relatively high risk.

²⁸ Two parts mainly contributed to the net inflows from other investment in 2012. In the banking sector, it included the redemption of foreign short-term loans and inbound remittance of funds from banks' foreign branches. In the private sector, it resulted from the withdrawal of foreign deposits and increases in foreign borrowings.

slightly lower than US\$32.0 billion the previous year. With the current account surplus and marginal decline in outflows on the financial account, the balance of payments surplus recorded US\$15.5 billion in 2012, a significant growth of 148.18% from a year earlier.

In 2012, the steady balance of payments surplus together with continuously accumulated earnings on investments made with foreign exchange reserves contributed to ascending foreign exchange reserves, which reached US\$403.2 billion in December, a 4.57% increase from the previous year. Furthermore, at the end of April 2013, the number had continuously climbed to US\$405.1 billion, reflecting ample foreign exchange reserves. At the end of 2012, the ratio of foreign exchange reserves to imports increased to 17.89 months,²⁹ led by growth in foreign reserves and shrinkage of imports, whereas the ratio of short-term external debt to foreign exchange reserves elevated to 28.90%³⁰ due to a rise in external debt. These two ratios were both below internationally recognized warning levels, implying that Taiwan's foreign exchange reserves have a robust capacity to meet payment obligations for imports and to service short-term external debt (Chart 2.20).

Chart 2.20 Short-term external debt servicing capacity



Notes: 1. FX reserves and external debt are end-of-period figures.

2. Imports are annual figures.

Sources: CBC, DGBAS and MOF.

Scale of external debt was moderate and debt-servicing capacity remained strong

There was a slight decrease in Taiwan's external debt³¹ in the first half of 2012, resulting from the reduction in debt owned by foreign institutional investors. However, external debt mounted from 2012 Q3 as a result of the increase of domestic banks' borrowing from overseas. Overall, outstanding external debt rebounded to US\$130.8 billion, or 27.58% of annual GDP, at the end of 2012, implying a moderate level of external debt.³² Moreover,

²⁹ A country with a ratio of foreign exchange reserves to imports of more than three months is considered to be at relatively low risk.

³⁰ The general international consensus is that a ratio of short-term external debt to foreign exchange reserves less than 50% indicates relatively low risk.

³¹ 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 that is not guaranteed by the public sector.

³² The general international consensus is that a country with a ratio of external debt to GDP lower than 50% is deemed to be at relatively low risk.

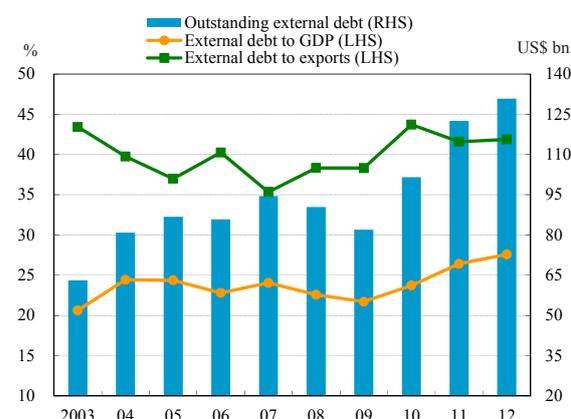
owing to the shrinkage of exports, the ratio of external debt to annual exports jumped to 43.43% as of the end of 2012. Nevertheless, export revenues were still sufficient to cover external debt³³ (Chart 2.21), and there were no signs of servicing pressure on external debt.

Fiscal deficits slightly rebounded while government debt kept accumulating

Since the times of peak spending on public infrastructure construction and domestic demand expansion plans ended, fiscal deficits at all levels of government have contracted from 2009 onwards. In 2012, the amount of the fiscal deficit, compared to the previous year, marginally rebounded to NT\$325.5 billion, and the ratio of fiscal deficits to annual GDP increased to 2.32% over the same period, but it is expected to drop to 1.95% in 2013³⁴ (Chart 2.22).

As fiscal deficits stayed high and both central government and local governments relied on debt issuance to finance debt servicing expenditures, outstanding public debt at all levels of government³⁵ in 2012 continuously expanded to NT\$5.75 trillion,³⁶ or 40.92% of annual GDP,³⁷ well above the NT\$5.49 trillion recorded in 2011 (Chart 2.23).

Chart 2.21 External debt servicing capacity

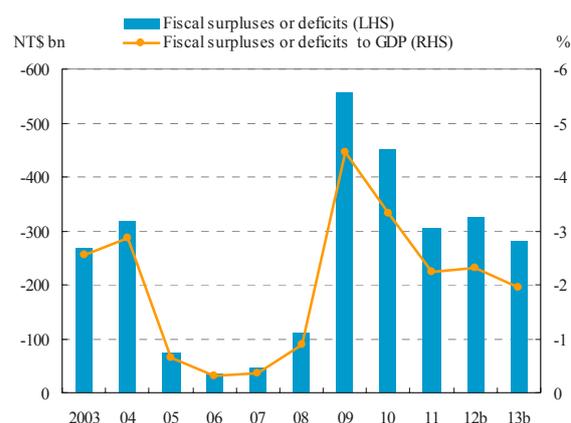


Notes: 1. External debts are end-of-period figures.

2. GDP and exports are annual figures.

Sources: CBC, DGBAS and MOF.

Chart 2.22 Fiscal position



Notes: 1. Fiscal position data include those of central and local governments.

2. Data of fiscal surpluses (deficits) are annual figures.

Figures for 2012 and 2013 are budgets.

Sources: MOF and DGBAS.

³³ The general international consensus is that a ratio of external debt to exports less than 100% indicates relatively low risk.

³⁴ See Note 7.

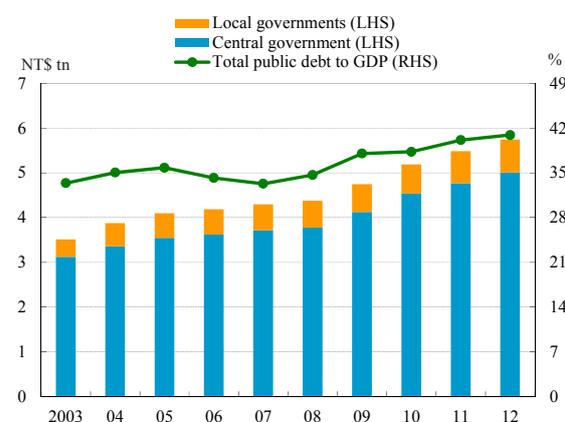
³⁵ The term “outstanding debt at all levels of government” as used in this report refers to outstanding non-self-liquidating debt with a maturity of one year or longer. The budgeted figures for outstanding one-year-or-longer non-self-liquidating public debt (NT\$5.63 trillion) issued by all levels of government during the 2012 fiscal year is equivalent to 41.24% of the average gross national product (GNP) for the preceding three fiscal years (NT\$13.65 trillion). This figure is below the ceiling of 48% set out in the Public Debt Act.

³⁶ The figure is based on final accounts (or preliminary final accounts) of outstanding non-self-liquidating debt at all levels of government with a maturity of one year or longer at the end of 2012. If adding in debt with a maturity of less than one year and self-liquidating debt, outstanding public debt at the end of 2012 stood at NT\$6.70 trillion.

³⁷ As a comparison, outstanding debt in EU member nations is not allowed to exceed 60% of GDP, according to the Maastricht Treaty and the subsequent Stability and Growth Pact.

To promote fiscal health, Taiwan's government will put into practice five medium and long-term strategies that aim to enhance a sound fiscal system, including: (1) diversifying sources of government funds; (2) managing government finance with the entrepreneurial mindset; (3) promoting fair taxation; (4) optimizing local finance; and (5) minimizing public debt. Besides these, the government will also implement measures, including: (1) strictly monitoring debt limits; (2) lowering debt leverage; and (3) increasing mandatory debt principal repayment, to effectively manage outstanding public debt.³⁸

Chart 2.23 Public debt



Notes: 1. Outstanding public debt refers to non-self-liquidating debt with a maturity of one year or longer, excluding external debt.

2. Figures for 2012 are final accounts and preliminary final accounts for the central government and local governments, respectively.

Sources: MOF and DGBAS.

³⁸ See Ministry of Finance press release on 6 September 2012.

Box 2

Taiwanese government's policy responses to the global economic slowdown

In order to ease the impacts of persisting global uncertainties arising from the euro area sovereign debt crisis and slowdown in Western economies since the second half of 2011, the Taiwanese government unveiled the Economic Climate Response Program in December 2011, putting forward seven strategies and ten focuses to stimulate economic growth. The program, which adopted countercyclical measures such as the augmentation of private participation in public construction and expansion of exports, displayed considerable efficacy. It placed emphasis on shorter-term response measures, even though it was designed to mitigate challenges that typically cannot be solved in a short time. For instance, external challenges include the prolonged Eurozone debt crisis which has caused global economic turmoil, weaker-than-expected growth in industrial countries, decelerating growth momentum in Mainland China and other emerging economies, and the emergence of regional economic integration which has significantly affected Taiwan's exports. On top of that, internal challenges hindering the domestic economy, such as an imbalance in industrial structure and mismatch between labor supply and demand, highlight the need for redress. Thus, the Executive Yuan again issued the Economic Power-up Plan on 11 September 2012 with the aim of improving industrial health, propelling economic impetus, and raising the capability to respond to economic challenges.

The Economic Power-up Plan focuses on the adjustment of Taiwan's economic structure and the relaxation of regulations as its two key pivots, thereby incorporating dimensions of both short-run growth and medium- to long-term development. Through joint deliberation and periodical reviews by concerned Cabinet agencies, this plan has been mapped out into five dimensions – industry, exports, human resources, investment, and government efficacy – according to the required elements of economic growth. The government set forth five policy directions and 25 concrete focal undertakings and responding action plans. Each of the policy actions has been set a time line for completion, with an overall time frame spanning from 2012 to 2030. The total expenditure is estimated to be about NT\$389.4 billion. Summarized in Table B2.1 below are the plan's initiatives and targets.

Table B2.1 The Economic Power-up Plan : Initiatives and targets

Initiatives	Targets
Promote innovative and diverse industries	<ol style="list-style-type: none"> 1. Implement the Three Industries, Four Reforms Program, namely: a service-oriented manufacturing industry, an internationalized and high-tech services industry, and a specialty-oriented traditional industry. 2. Turn small and medium enterprises (SMEs) into backbone enterprises. 3. Accelerate the application of R&D results. 4. Lift the quality and quantity of tourism. 5. Spark sustainable growth in the financial sector. 6. Develop top-quality, eco-friendly and sustainable energy. 7. Create a “golden agricultural corridor” featuring modern agriculture practices with the special characteristic of Lifestyles of Health and Sustainability (LOHAS).
Develop new export markets	<ol style="list-style-type: none"> 1. Increase value-added exports and explore emerging markets. 2. Raise the competitiveness of service exports. 3. Strive to participate in regional economic integration. 4. Strengthen intellectual property rights strategies.
Cultivate industry talents	<ol style="list-style-type: none"> 1. Improve technical and vocational education to meet industry needs. 2. Develop industries with value-added human resources to enhance industry-academia training convergence. 3. Promote strategic distribution of human resources and nurture talents specialized in emerging markets. 4. Adjust labor laws and regulations according to industrial and social trends.
Spur investment and public construction	<ol style="list-style-type: none"> 1. Attract private-sector investment. 2. Finance public works with innovative financial strategies. 3. Facilitate more medium and long-term investment for public works. 4. Adjust investment regulations in time with industrial trends. 5. Design free economic pilot zones.
Enhance government efficacy	<ol style="list-style-type: none"> 1. Improve government procurement mechanisms. 2. Implement government budget review mechanisms. 3. Strengthen regulatory reviews and revise laws to meet changing needs. 4. Effectively utilize public land and assets. 5. Push state-owned enterprises to launch major investment projects.

Source: Executive Yuan.

The Executive Yuan has urged concerned ministries/agencies to earnestly implement the plan so as to lift Taiwan’s competitiveness in the medium and long term. Among the initiatives, attracting overseas Taiwanese businessmen to invest back in Taiwan and enlivening sustainable growth in the financial sector have achieved the desired effects rather well. Moreover, the free economic pilot zones currently under programming should be able to effectively raise national competitiveness. Illustrated below are these three major undertakings.

Strengthen efforts to encourage overseas Taiwanese firms to invest back in Taiwan

Owing to the fact that the phenomenon of “order-taking in Taiwan followed by offshore production” has been increasing over the years making domestic employment

opportunities decline gradually, the Executive Yuan ratified the “Program of Promoting the Investment of Overseas Taiwanese Businessmen Back to Taiwan” on 26 October 2012 in order to attract inbound investment from overseas Taiwanese firms, increase job opportunities, and power up the engine for economic growth. Based on the program, the government will actively help businessmen solve attendant problems concerning their investment with regard to issues such as access to land and labor, optimizing the investment environment to boost domestic investment and employment, and embarking on upgrading industrial structure. Within four months after the program was initiated in the beginning of November 2012, the Ministry of Economic Affairs, jointly with other concerned agencies, approved 22 cases of applications for inbound investment by overseas Taiwanese businessmen, with total amounts estimated to be about NT\$168.4 billion and jobs to be generated for twenty-three thousand workers. Therefore, the performance of this program was notable.

Ignite sustainable development in the financial sector

In order to develop financial services with cross-strait characteristics, three major policy measures have been initiated. First, the CBC and the People’s Bank of China jointly signed the Memorandum on Cross-Strait Currency Clearing Cooperation and designated NTD and renminbi (RMB) clearing banks, respectively. A bilateral mechanism for the clearing and settlement of cross-strait currencies was officially inaugurated. Thereafter, the CBC opened up RMB deposits, loans and remittances to be conducted by authorized banks. Second, the FSC repealed the restriction that foreign corporations with more than 30% of their capital held by mainland investors should not list on Taiwan’s stock exchange and over-the-counter (OTC) market. Listing on the stock exchange and the OTC market was also opened up as an option for well-performing overseas Taiwanese corporations. Third, the FSC, through the platform of cross-strait supervisory cooperation, loosened the criteria for banks in Taiwan to enter the mainland market and lifted the ceiling of shareholding of domestic banks and financial holding companies by a single bank registered in the mainland.

In order to promote a Taiwan-centric wealth management platform, the FSC and the CBC revised the Directions for Banks Conducting Financial Derivatives Businesses and the Regulations Governing Foreign Exchange Business of Banking Enterprises, respectively, opening up derivatives that are allowed to link to RMB-denominated indicators, such as exchange rates, interest rates and stock prices, and relaxed the rules on foreign currency-denominated securities investment trust funds to use NT dollars as a payment

vehicle.

Move forward free economic pilot zones

The detailed programming of the free economic pilot zones is expected to be completed by the end of June 2013. Its design mainly lies in the core philosophy of liberalization, internationalization, and being forward-looking in nature. The program will greatly loosen the restrictions on the flows of merchandise, people, funds, information, and knowledge, and earnestly put into effect the policy of opening markets. The promotion strategies will be focused on breaking through regulatory limitations and innovating administration mechanisms, with a view to holistically building a superior liberalized and internationalized business environment. For example, policy measures include, among others, easing restrictions on foreign white-collar professionals to work in Taiwan, allowing free import and export of agricultural and industrial raw materials and merchandise without taxes, opening markets and loosening investment constraints, facilitating access to land and granting of preferential rents, as well as setting up a highly efficient single window providing government services. These measures will be able to effectively raise the national competitiveness of Taiwan, achieving the expected effectiveness of attracting investment and increasing output value.

2.3 Non-financial sectors

2.3.1 Corporate sector

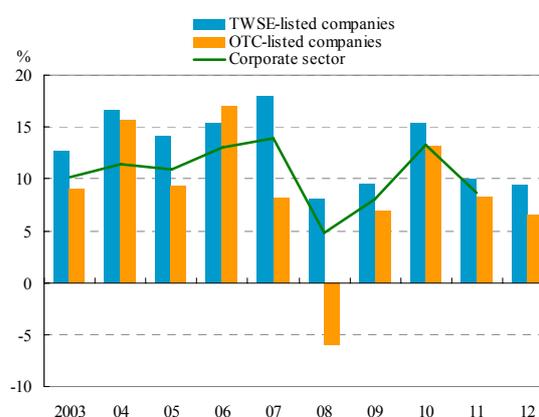
The profitability of listed companies weakened in 2012 due to a considerable slowdown in the domestic and global economies. Corporate leverage ratios rose slightly, while short-term debt servicing capacity weakened as a result of a slide in profitability but still remained at acceptable levels. The credit quality of corporate loans remained sound, as NPL ratios fell back by the end of 2012 after increasing earlier in the year. However, some TFT-LCD panel and DRAM manufacturers reported operating losses again in 2012 which might negatively impact the asset quality of their creditor banks.

Profitability of listed companies was disappointing in 2012

In 2012, decelerating global growth weakened exports and industrial production. This, together with weak private consumption hampered the profitability of TWSE-listed and OTC-listed companies, as their ROEs fell to 9.39% and 6.60%, respectively (Chart 2.24).

Except for the electronics and the shipping and transportation industries, all major industries for TWSE-listed companies reported decreasing ROEs, especially the plastics and the iron and steel industries. For OTC-listed companies, except for increased profitability in the building material and construction industry, all other industries experienced deteriorating performance (Chart 2.25).

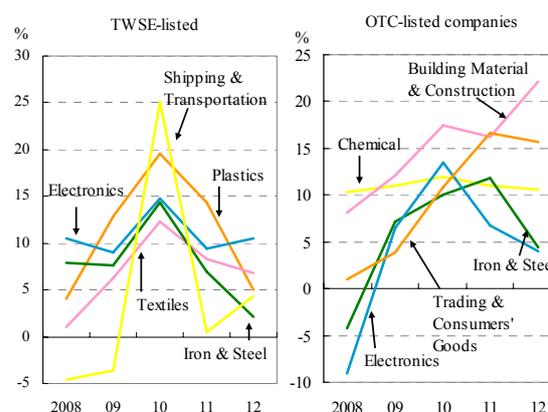
Chart 2.24 ROE in corporate sector



Notes: 1. ROE = net income before interest and tax / average equity.
2. Latest data for the corporate sector is as of 2011, while those for TWSE-listed and OTC-listed companies are as of 2012.

Sources: JCIC and TEJ.

Chart 2.25 ROE of TWSE-listed and OTC-listed companies by major industries



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

Leverage ratio rose slightly for listed companies

At the end of 2012, the average leverage ratio for TWSE-listed companies rose to 76.72% from 73.53% at the end of the previous year. In addition, the average leverage ratio for OTC-listed companies increased to 67.75% from 66.25% a year earlier (Chart 2.26). The main reason for the rise in the leverage ratio was that the gradual recovery of the domestic economy in the second half of 2012 encouraged the listed companies to increase their borrowings to meet their investment and operation demands.

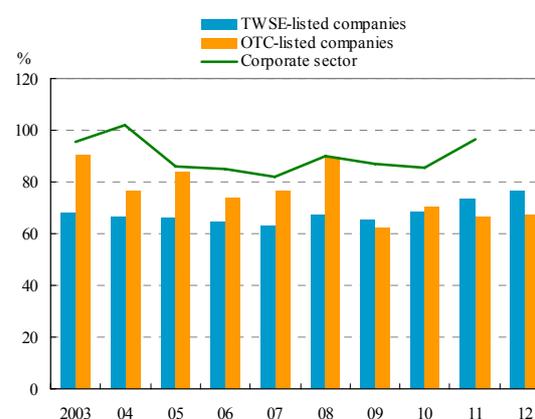
Short-term debt servicing capacity for listed companies remained acceptable though weakened

The current ratio for TWSE-listed companies decreased to 132.70% at the end of 2012 due to increases in current liabilities, while their interest coverage ratio fell to 16.16 as a result of deteriorating profitability. The current ratio for OTC-listed companies also declined and registered 165.19%, while their interest coverage ratio fell to 11.23 (Chart 2.27 and 2.28). Nevertheless, short-term debt servicing capacity for listed companies as a whole remained acceptable though weakened.

Credit quality of corporate loans remained sound

In the first half of 2012, the NPL ratio for corporate loans granted by financial institutions increased significantly, owing to the reclassification of impaired loans of large corporations, such as ProMOS Technologies, as NPLs. However, the ratio declined to 0.64% at the end of

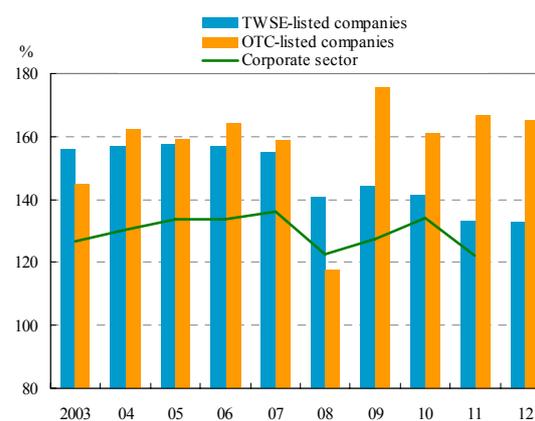
Chart 2.26 Leverage ratio in corporate sector



Notes: 1. Leverage ratio = total liabilities / equity.
2. Latest figure for the corporate sector is as of the end of 2011, while those for TWSE-listed and OTC-listed companies are as of the end of 2012.

Sources: JCIC and TEJ.

Chart 2.27 Current ratio in corporate sector



Notes: 1. Current ratio = current assets / current liabilities.
2. Latest figure for the corporate sector is as of the end of 2011, while those for TWSE-listed and OTC-listed companies are as of the end of 2012.

Sources: JCIC and TEJ.

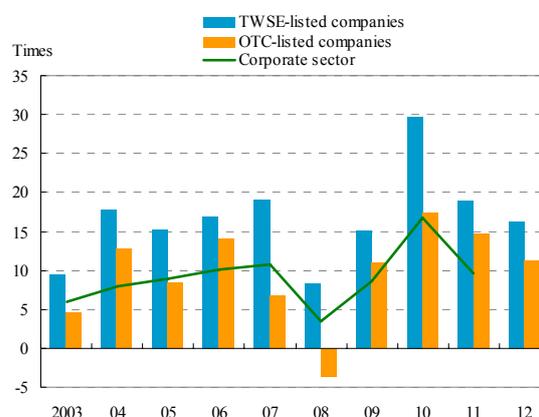
the year, higher than the ratio of 0.60% posted the year before. Nevertheless, it remained at a low level and reflected sound credit quality for the corporate sector (Chart 2.29).

Though listed companies showed weakened operating performances, the pickup in domestic economic growth in the fourth quarter of 2012, along with low interest rates and plentiful liquidity, helped to improve the operating performance and financial conditions of the corporate sector. However, some TFT-LCD panel and DRAM manufacturers suffered large losses in 2012 despite the improvements compared to the previous year. The development of these industries and the impact on the loan quality of their creditor banks, therefore, warrant close attention.

2.3.2 Household sector

As the balance of total household borrowing increased and expanded faster than disposable income, the household debt burden rose. Short-term debt servicing capacity of the household sector slightly deteriorated; however, the overall credit quality of household borrowing remained satisfactory. Moreover, the gradual easing of the unemployment rate and the continuous growth of regular earnings should help to enhance the debt servicing capacity of households.

Chart 2.28 Interest coverage ratio in corporate sector



Notes: 1. Interest coverage ratio = income before interest and tax / interest expenses.
 2. Latest figure for the corporate sector is as of 2011, while those for TWSE-listed and OTC-listed companies are as of 2012.

Sources: JCIC and TEJ.

Chart 2.29 NPL ratio of corporate loans



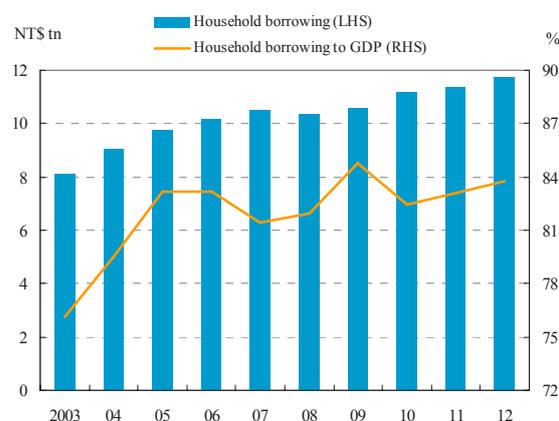
Note: End-of-period figures.
 Source: JCIC.

Household borrowing increased continuously

Total household borrowing³⁹ increased continuously in 2012 and reached NT\$11.76 trillion at the end of the year, equivalent to 83.77% of annual GDP (Chart 2.30). The year-on-year growth rate of household borrowing, which was mainly contributed to by an increase in working capital loans, rose to 3.54% at the end of 2012 from 1.71% a year earlier. The largest share of household borrowing went for the purchase of real estate (71.05%), with an annual growth rate of 1.84%, followed by working capital loans⁴⁰ (23.80%), with a significantly increased annual growth rate of 10.89%. Business investment loans, mainly for margin purchases of securities, and revolving balances on credit cards took only minor percentages (Chart 2.31), and experienced negative annual growth rates of 7.6% and 6.84%, respectively, owing to weakened stock market and domestic economic conditions.

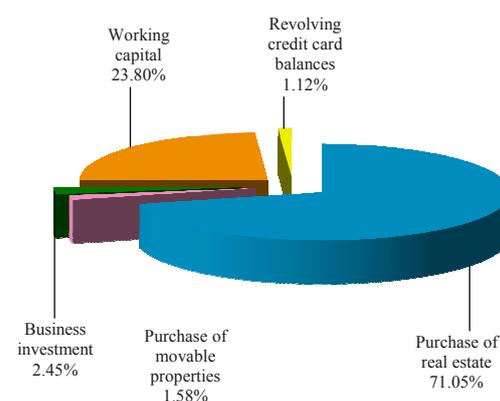
Compared to other selected countries, the growth of total household borrowing in Taiwan remained positive but was lower than that in Australia and South Korea. As a percentage of GDP, the household borrowing in Taiwan was lower than that in Australia, approximating that in South Korea, but higher than that in the US and Japan (Chart 2.32).

Chart 2.30 Household borrowing to GDP



Sources: CBC, JCIC and DGBAS.

Chart 2.31 Household borrowing by purpose



Note: Figures are as of the end of 2012.
Sources: CBC and JCIC.

³⁹ The term “household borrowing” as used in this section refers to outstanding loans and revolving credit card balances taken out by households from the following financial institutions:

- (1) Depository institutions: domestic banks (including medium business banks), local branches of foreign banks, credit cooperatives, credit departments of farmers’ associations, credit departments of fishermen’s associations, and the Remittances & Savings Department of Chunghwa Post Co.
- (2) Other financial institutions: trust and investment companies, life insurance companies, securities finance companies, and securities firms.

⁴⁰ The term “working capital loans” includes outstanding cash card loans.

Household debt burden rose

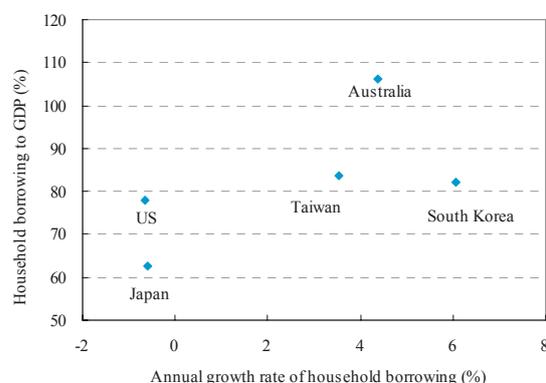
As total household borrowing grew at a faster pace than disposable income in 2012, the ratio of household borrowing to gross disposable income⁴¹ increased to 1.22 at the end of the year, reflecting a heavier debt burden.

Accordingly, the debt servicing ratio rose to 37.98% in 2012 from the previous year's 36.93% (Chart 2.33), due to the increase in working capital loans, showing that household short-term debt servicing pressure slightly increased. However, the fact that the domestic unemployment rate decreased gradually and regular earnings grew continuously (Chart 2.34) should help to improve the debt servicing capacity of the household sector.

NPL ratio of household borrowing dropped to a record low

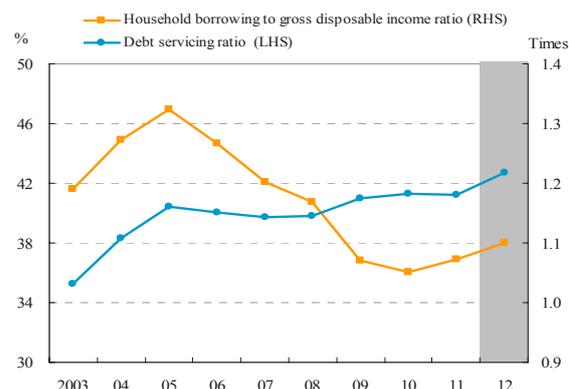
The NPL ratio of household borrowing declined continuously to 0.40 % at the end of 2012, the lowest level in fifteen years (Chart 2.35). The main reason behind this was that NPLs for real estate purchases and working capital loans, the largest shares of household borrowing, contracted during the year. This indicated that household credit quality remained satisfactory.

Chart 2.32 Household indebtedness in selected countries



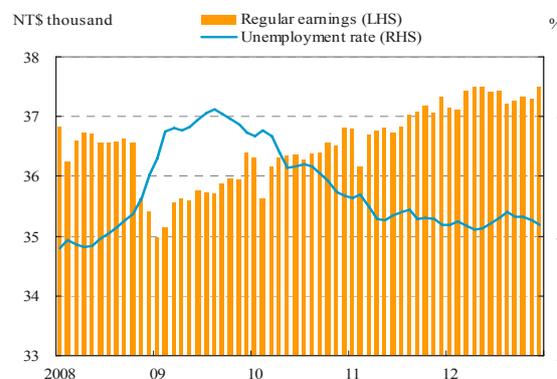
Note: Figures for Taiwan and the US are as of the end of 2012. The others are as of the end-September 2012.
Sources: Fed, BOJ, BOK, ABS, IMF, DGBAS, CBC and JCIC.

Chart 2.33 Household debt servicing ratio



Note: Gross disposable income in shaded area is CBC estimate.
Sources: CBC, JCIC and DGBAS.

Chart 2.34 Unemployment rate and regular earnings



Source: DGBAS.

⁴¹ Gross disposable income = disposable income + rental expenses + interest expenses.

2.3.3 Real estate market

In 2012, trading volume in the real estate market contracted, while housing prices remained high. Real estate-related loans grew at a slower pace as mortgage interest rates gradually rebounded. As massive construction projects introduced over the last few years were continuously completed, some areas with high volumes of construction projects continued to face increasing downward pressure on housing prices.

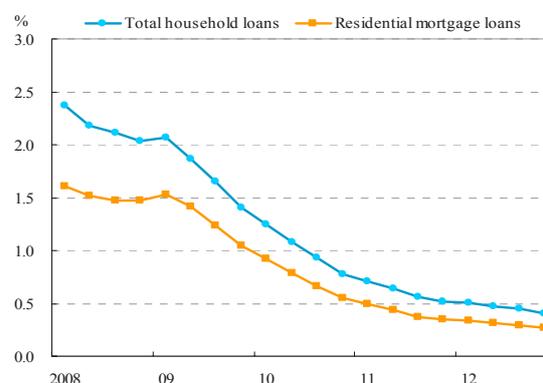
Trading volume in the housing market was volatile

Starting 2012, trading volume in the housing market contracted continuously due to economic slowdown and the implementation of the Specifically Selected Goods and Services Tax. In Q3, the total number of building ownership transfers for transaction further decreased by 11.92% quarter on quarter owing to the launch of a property transaction price registration system in August. However, in Q4, as quantitative easing measures in Japan and the US boosted market expectations, trading volume in the housing market rebounded (Chart 2.36). The number of building ownership transfers for transaction in 2012 reached a ten-year low of 330 thousand units, with an annual growth rate of -8.84%. Analyzed by metropolitan areas, Taipei City and New Taipei City registered the greatest year-on-year decreases of 22.73% and 17.65%, respectively, while Taichung City as well as Tainan City saw slower decreases, and Taoyuan County and Kaohsiung City returned to positive growth rates.

Real estate prices stayed high

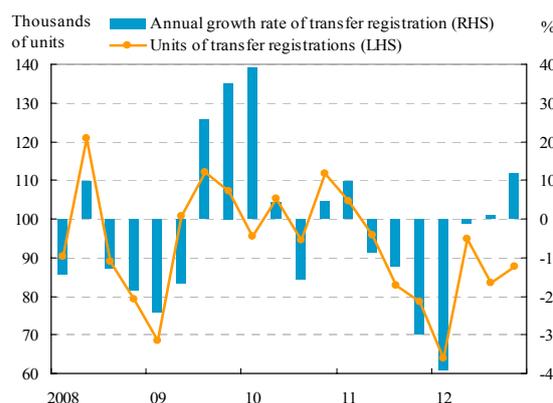
In line with a cooling real estate market, real estate prices declined slightly in 2012 Q3. However, due to economic recovery, a stock market rally and housing demand increase, real

Chart 2.35 NPL ratio of household borrowing



Note: Figures are as of the end of each quarter.
Source: JCIC.

Chart 2.36 Building ownership registrations for transaction



Source: Monthly Bulletin of Interior Statistics, MOI.

estate prices rebounded in Q4. The Taiwan area land price index stood at 118.78 in September 2012, recording an annual growth rate of 6.01% (Chart 2.37).

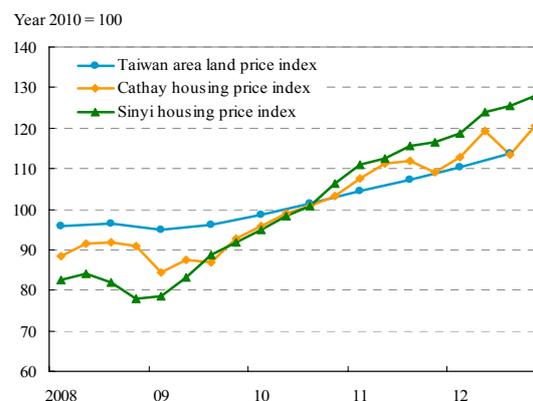
In 2012, the Cathay housing price index (for new construction) experienced fluctuating movements. It registered a year-on-year increase of 10.39% in Q4 owing to rising house prices in the Taoyuan and Hsinchu areas as well as the central and southern parts of Taiwan, while house price growth in Taipei City slowed. The annual growth rate of the Cathay housing price index for the whole of 2012 was 7.48%, decreasing by 2.64 percentage points compared to 10.12% a year earlier.

The Sinyi housing price index (for existing buildings) increased gradually and registered an annual growth rate of 9.7% in Q4 2012. The average growth rate of the index was 8.89% in 2012, decreasing by 5.08 percentage points compared to 13.97% a year earlier. House prices in Taoyuan County, Taichung City and Kaohsiung City saw significant growth, while those in Taipei City and New Taipei City reported slower growth rates but remained at high levels.

Mortgage burden remained heavy

Following climbing housing prices, the average house price to income ratio for the six metropolitan areas increased and reached 8.3⁴² in 2012 Q4. The average mortgage burden

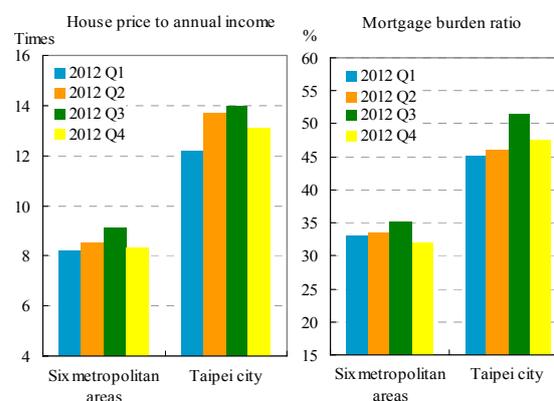
Chart 2.37 Land and house price indices



- Notes: 1. Taiwan area land price index is released semiannually (i.e. in March and September).
 2. The sample and compilation methods employed to generate the Cathay housing price index were changed in 2012 Q4 and applied retroactively to historical data.
 3. For comparison purposes, all the three indices use the same base year of 2010.

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

Chart 2.38 House price to income ratios and mortgage burden ratios



- Notes: 1. Mortgage burden ratio = monthly mortgage expenditure / household monthly income.
 2. Six metropolitan areas refer to Taipei City, New Taipei City, Taoyuan and Hsinchu City and County, Taichung City, Tainan City, and Kaohsiung City.
 Source: "Taiwan Housing Demand Survey Report," MOI.

⁴² Housing prices increased in 2012 Q4 but the average house price to income ratio in Q4 was lower than that in Q3. The main reason was that the average house price to income ratio released in *Taiwan Housing Demand Survey Report* was estimated according to the total house price paid and total household annual income of a sample of house buyers. In Q4, due to increasing purchases of low-priced houses, the total house price paid decreased, resulting in the drop of the average house price to income ratio.

ratio during the same period was 32.0%, demonstrating that the mortgage burden remained heavy. Among the metropolitan areas, the house price to income and mortgage burden ratios in Taipei City were the heaviest, reaching 13.1 and 47.6%, respectively (Chart 2.38).

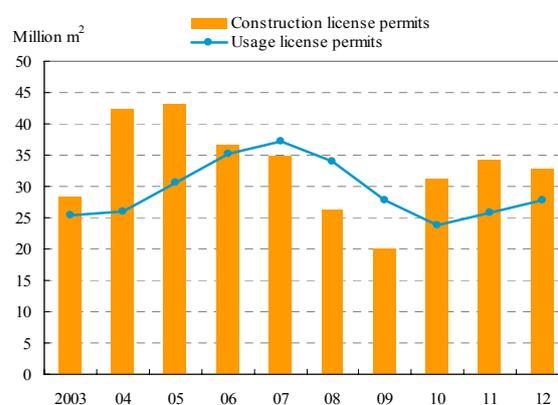
Newly introduced construction projects contracted, while residential property vacancies remained high

Due to decreasing construction projects introduced to the market, the total floor space of construction license permits decreased 3.71% year on year in 2012. Total floor space of usage permits increased by 7.25% year on year, with commercial properties posting the highest growth of 45.31% and residential properties increasing by 18.79% (Chart 2.39). Moreover, the average number of vacant residential properties in 2012, estimated by the number of units consuming less electricity than the minimum service charge from the Taiwan Power Company, still stood at a high level of 1.426 million units, increasing by 16 thousand units or 1.13 % year on year (Chart 2.40). The movements in housing inventory levels in areas with high vacancy rates and numerous construction projects are worth close monitoring.

Real estate-related loans grew at a slower pace as mortgage interest rates gradually increased

Due to the effect of the CBC and the FSC's measures to strengthen risk management regarding the real estate-related loans of banks, the outstanding balance for house purchases and house refurbishments granted by banks⁴³ rose at a decelerating annual growth rate of

Chart 2.39 Floor space of construction license permits and usage license permits



Source: Monthly Bulletin of Interior Statistics, MOI.

Chart 2.40 Estimated units of vacant houses



Source: Taiwan Power Company.

⁴³ Refers to domestic banks and the local branches of foreign banks.

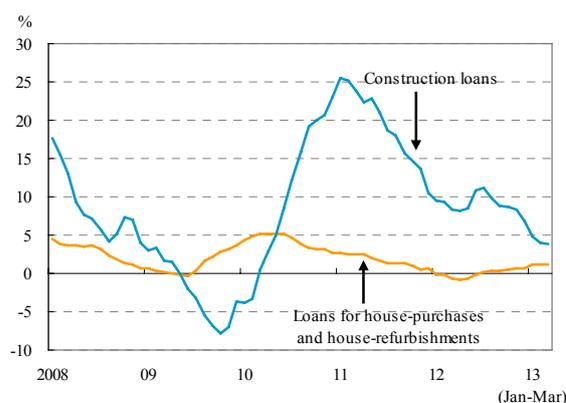
0.76% to NT\$5.80 trillion at the end of 2012. Outstanding construction loans continued to climb in 2012, albeit at a much slower pace of 7.33% year on year, and reached NT\$1.47 trillion at the end of 2012 (Chart 2.41).

In line with property market trends, new loans for house purchases granted by the five large banks⁴⁴ decreased by 5.74% year on year to NT\$ 45.4 billion in December 2012. The accumulated amount of such new loans for the whole of 2012 also registered a 9.49% year-on-year decrease. The interest rate for new mortgages rose to 1.948% in March 2013 and slightly decreased to 1.946% in April.

Concentration of real estate-related loans decreased after the CBC and the FSC undertook targeted prudential measures

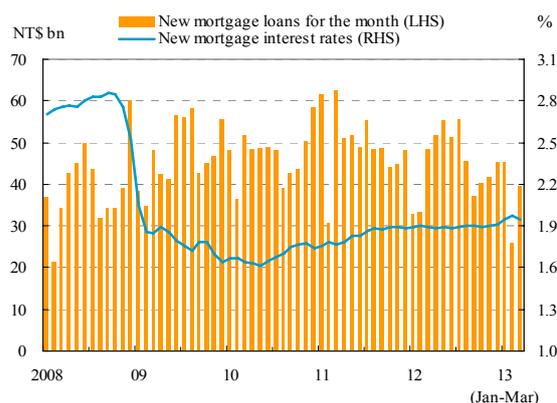
The CBC continuously deployed measures to supervise the credit risk of land collateralized loans and housing loans in specific areas in 2012 and introduced regulations governing high-value housing loans in June. Meanwhile, the FSC strengthened supervision on banks with high concentrations of real estate-related loans and raised risk weights of non-self-use residential mortgage loans. Those measures proved to be effective, as the concentration of real estate-related loans continuously decreased and loan-to-value ratios also fell significantly. Such measures, together with the implementation of the Specifically Selected Goods and Services Tax and the property transaction price registration system, helped promote sound development of the real estate market (Box 3).

Chart 2.41 Annual growth rates of real estate-related loans



Source: CBC.

Chart 2.42 New mortgages – amounts and interest rates



Source: CBC.

⁴⁴ The five large banks refer to Bank of Taiwan, Taiwan Cooperative Bank, First Commercial Bank, Hua Nan Commercial Bank, and Chang Hwa Commercial Bank before October 2008. Starting November 2008, they refer to Bank of Taiwan, Taiwan Cooperative Bank, First Commercial Bank, Hua Nan Commercial Bank, and Land Bank of Taiwan.

Box 3

Plan to enhance the soundness of the housing market: progress and effectiveness

The housing market plays an important role in a country's economic development, since it possesses industrial relevance and has a locomotive effect on the economy. In order to ensure the soundness of the housing market and maintain justice and fairness within society, the government formulated the Plan to Enhance the Soundness of the Housing Market in April 2010, in accordance with the four principles of "tailoring measures to the needs of localities and populations," "acting moderately but effectively," "stressing soundness and stability," and "pursuing social equity." Targeting the six issues of "balancing the supply and demand of housing in the Taipei metropolitan region," "helping low- and mid-income earners and salaried employees increase their ability to purchase (or rent) a house," "improving housing information transparency," "enhancing risk management for real estate loans," "enhancing social fairness," and "taking relevant complementary measures," the government has offered 21 principles for dealing with the problems encompassed, and suggested other practical measures for relevant authorities and local governments to actively implement.

1. Progress of the Plan

The plan has now been implemented for 3 years, and part of the mechanisms prescribed have been implemented or promoted, thus leading to a gradual stabilization of the housing market. Below is a table succinctly describing the methods outlined in the plan and the progress made (Table B3.1).

Table B3.1: Progress of the Plan to Enhance the Soundness of the Housing Market

Issues	Contents and progress of implementation
Balancing the supply and demand of housing in the Taipei metropolitan area	<ol style="list-style-type: none"> 1. Planning the development of affordable houses in the areas of Airport Linkou A7 Station and Banqiao, where 3,960 and 4,455 housing units, respectively, will be constructed. 2. Selecting 5 bases around metropolitan areas including Wanhua and Songshan Districts in Taipei City, Sanchong and Zhonghe in New Taipei City, etc., and constructing 1,661 units of social housing.
Helping low- and mid-income earners and salaried employees increase their ability to purchase (or rent) a home	<ol style="list-style-type: none"> 1. Implementing the "Plan for the Consolidation of Resources for Housing Subsidy" for mid- and low-income households. From its initiation in 2007 to the end of 2012, a total of 226,000 households received rental subsidies, house purchase assistance and mortgage interest subsidies for the purpose of home refurbishment. 2. Implementing the "Plan for Government Housing Subsidies for the Youth." From its initiation in 2009 to 22 February 2013, rental subsidies were offered to around 33,000 households, and interest subsidies were allocated to around 67,000 households, in total aiding 100,000 households.

Improving housing information transparency	<ol style="list-style-type: none"> 1. Setting up the Real Estate Information Platform to collect and consolidate real estate information for the public. 2. Requiring the Joint Credit Information Center to provide seasonal reports including information such as contract value of house transactions, etc. for the Ministry of the Interior to make public on its housing Net website. 3. Modifying the law to set up a property transaction price registration system and establishing a data warehouse that allows the public to inquire about the related information via the Internet. 4. Releasing different templates of real estate contracts for public reference, and announcing the application of standard form contracts for pre-sale real estate transactions.
Enhancing risk management for real estate loans	<ol style="list-style-type: none"> 1. From June 2010 onwards, the CBC has gradually taken targeted macroprudential measures on land collateralized loans and housing loans in specific areas and high-value housing loans. 2. The FSC introduced several measures to supervise the real estate lending risks of banks, including raising the risk weight from 45% to 100% for new loans collateralized by non-owner-occupied houses. 3. The two authorities reinforced the inspection of real estate-related loans in accordance with the above mechanisms.
Enhancing social fairness	<ol style="list-style-type: none"> 1. Reviewing the suitability of house taxes and land taxes, such as verifying the current value of the house, limiting the applicability of land value tax exemption, and abolishing the regulation of temporary exemption for vacant lot tax. 2. Implementing the Specifically Selected Goods and Services Tax from 1 June 2011 onwards to cool down the overheating housing market.
Taking relevant complementary measures	<ol style="list-style-type: none"> 1. Stipulating the regulations regarding superficies on state-owned and non-public-use land to strengthen the development of the land. 2. Temporarily ceasing the auction of state-owned land in prime areas of Taipei City. 3. Enacting the Housing Act, which was implemented from 30 December 2012. 4. Raising the incentive for private investment to promote the private sector to participate in the construction of public infrastructure, the six emerging industries and budding ICT industries. This would not only help improve industrial development and provide job opportunities in areas surrounding these industrial hubs, but could also galvanize the soundness of the housing market in neighboring districts.

Sources: Council for Economic Planning and Development and Control Yuan.

2. Effects of Implementation

Since the enactment of the Plan to Enhance the Soundness of the Housing Market, part of the mechanisms have already shown promising results, for example:

- (1) Since the CBC and the FSC undertook the measures to control the risk of real estate loans, the ratio of new loans, with collateral located in specific areas (Taipei City and 13 districts in New Taipei City), to total new loans has dropped from 64.37% pre-regulation in June 2010 to 48.02% in March 2013. The loan-to-value (LTV) ratio also dropped from 63.97% pre-regulation in July 2010 to 56.82% in April 2013.

- (2) After the Ministry of Finance implemented the Specifically Selected Goods and Services Tax from June 2011, the number of building ownership transfers for transaction during June 2011 to May 2012 dropped 22.12% relative to the previous counterpart period (from June 2010 to May 2011). Of them, the number of transfers in Taipei City and New Taipei City significantly dropped 33.34% and 34.96%, respectively. It illustrated that the policy has effectively tempered speculation in the housing market.
- (3) From October 2012 onwards, transaction prices of real estate should be registered in a data warehouse run by the government and disclosed to the public. This has increased the transparency of real estate transaction information, thus decreasing the differentiation of anticipated prices between buyers and sellers and, in turn, increased the effectiveness of the real estate market.