II. International and domestic economic and financial conditions

2.1 International economic and financial conditions

The global recovery continued to accelerate in 2010, but at varying speeds across countries and regions. In emerging and developing economies, particularly in Asia, the economy grew strongly, but the macroeconomic risks of overheating were building. In advanced economies, the risk of a double-dip recession subsided, though recovery proceeded moderately and unemployment remained high. In the euro area periphery, affected by the combined interactions of weak sovereign balance sheets and financial pressures, economic growth was modest or even declined. Meanwhile, Mainland China experienced a rapidly accelerating economy. The implementation of a tightening monetary policy and macroprudential policies to tame the housing boom contributed to moderating excessive credit expansion and surging house prices, but inflationary pressures remained elevated.

Over the year 2010, the global financial system witnessed marked improvement, but financial stability was still not secured. In advanced economies, slow growth prospects and weak fiscal positions, together with sovereign-debt-crisis driven refinancing pressures in the euro area funding market, resulted in the financial system remaining vulnerable. At the same time, strong capital inflows to emerging economies raised concerns about rapid credit growth and asset price bubbles, contributing to a build up of macrofinancial risks.

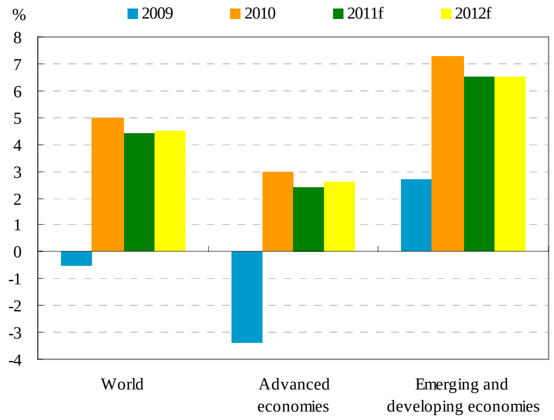
Global recovery proceeded at a solid pace, but speeds varied across regions

The global economic recovery solidified in 2010. A rise in inventory rebuilding and fixed investment, boosted by the buoyant activity in manufacturing and world trade transactions, fueled the strong growth in output in the first half of 2010. From the second half of 2010 onwards, however, the buildup of downside risks in advanced economies, driven by waning inventory rebuilding along with setbacks in resolving ongoing sovereign debt turmoil, the global economy moved to a more moderate rate of growth. International Monetary Fund (IMF) statistics stated that the global economic growth rate rebounded substantially to 5.0% through 2010 from -0.5% a year earlier.[11] Looking forward, although political uncertainty in Northern Africa and the Middle East has heightened fears of oil supply hazards, it is offset by

[11] Except as otherwise noted, all IMF estimates and forecast data and information related to economic growth rates and CPI annual growth cited in this chapter relate to those published in the World Economic Outlook (WEO), April 2011.

improving conditions in global financial markets, continued robust economic activity in emerging and developing economies, as well as returning confidence in the output of advanced economies. As a consequence, the global economy is forecast to experience an ongoing growth rate of 4.4% and 4.5% in 2011 and 2012, respectively (Chart 2.1).

Chart 2.1 Global economic growth rates



Note: Figures for 2011 and 2012 are IMF estimates.
Source: IMF, "World Economic Outlook," April 2011.

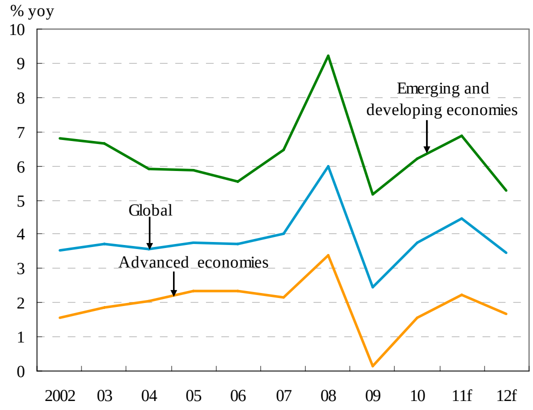
The recovery remained unbalanced across regions. Thanks to continued increases in domestic demand and strong world trade transactions, emerging and developing economies grew at a robust pace. The IMF estimated that output growth expanded by 7.3% in 2010, particularly in emerging Asia, which has continued to outpace other regions with an economic growth rate of 9.5%. Looking ahead, output growth in emerging and developing economies is expected settle down to a more modest 6.5% in 2011 and remain broadly unchanged in 2012 (Chart 2.1).

Recovery continued in advanced economies, but proceeded at a tepid pace. Supported by the recently implemented fiscal stimulus measures to spur growth momentum, together with a stronger-than-expected rebound in private consumption expenditure, output in the United States and Japan witnessed a favorable improvement after reaching a trough and gradually began to recover. The full impact of the earthquake in March 2011 on Japan's macroeconomy is projected to be limited, but uncertainty remains elevated.[12] Growth in the periphery of the euro area has been subdued and even declined as a result of fiscal imbalances and still-moribund real estate markets. Fortunately, this adverse impact was mainly offset by an expansion in output in Germany, boosted by stronger domestic demand. The IMF estimates that real GDP in advanced economies rebounded by 3.0% in 2010 from -3.4% a year earlier, still well below the growth rate of 7.3% in emerging and developing economies, and will register a moderate growth rate of 2.4% and 2.6% in 2011 and 2012, respectively (Chart 2.1).

[12] Regarding potential economic impacts on Japan, the IMF projects Japan's output to decrease by 1.4% in 2011, a downward revision of 0.2 percentage points compared to the October 2010 WEO, and then pick up to 2.1% in 2012, a 0.3 percentage point upward revision. In addition, the Global Insight preliminary estimates suggest that the adverse impact on global growth in 2011 will be in the 0.1-0.2% range, with a correspondingly small rebound in growth in 2012. It also projects that Japanese real GDP growth could drop by 0.05% in 2011, and then rebound to 3.57% in 2012, boosted by the subsequent reconstruction effort.

As for consumer prices, from early 2010 onwards, in response to robust global demand, sluggishness in the supply of selected commodities, and the depreciation of the US dollar, prices for both oil and raw materials surged. This, together with adverse weather conditions, continued natural disasters and geopolitical uncertainty, spurred hikes in crop and energy prices. The inflationary pressure is expected to continue an upward trend in 2011 before becoming more subdued in 2012. In some emerging and developing economies, overheating pressures are building in response to soaring food prices, rapid credit growth and rising asset prices. The IMF estimates that headline inflation rates (consumer price index, CPI) in emerging and developing economies increased to 6.2% in 2010 from 5.2% one year earlier. With surging inflationary pressures, the CPI inflation rate is predicted to keep elevating to 6.9% in 2011, and then exhibit a downward trend to 5.3% in 2012. In advanced economies, inflationary pressures were broadly contained as economic growth moderated and inflation expectations were well anchored. Headline inflation is estimated to rise slightly to 1.6% in 2010 and projected to remain positive at 2.2 % in 2011, before settling at about 1.7% in 2012 (Chart 2.2).

Chart 2.2 Global headline inflation rates



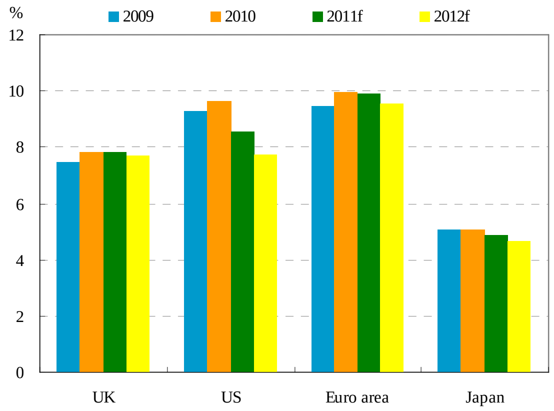
Note: Figures for 2011 and 2012 are IMF estimates.
Source: IMF, “World Economic Outlook,” April 2011.

In 2010, unemployment rates remained persistently high in many advanced economies. Among major advanced economies, the US saw a peak of 9.6% during the year but by April 2011 it had fallen to 9.0%.[13] Nevertheless, the labor market remains slack. In the UK, the unemployment rate continued to rise and stood at 7.88% in 2010 owing to a reduction of jobs in the public sector. The average unemployment rate in the euro area registered 9.98% for 2010. The Netherlands and Austria benefited from stronger labor markets, while unemployment rates moved upward in Portugal, Italy, Ireland, Greece and Spain. Among those economies, Spain suffered from the highest unemployment rate of 20.1%. In Japan, the unemployment rate peaked in June 2010 and then declined moderately, bolstered by the ongoing economic recovery. The IMF projects that the unemployment rate in advanced economies would decrease somewhat in 2011 and 2012 (Chart 2.3).

[13] The figure is based on a U.S. Bureau of Labor Statistics (BLS) news release on 6 May 2011.

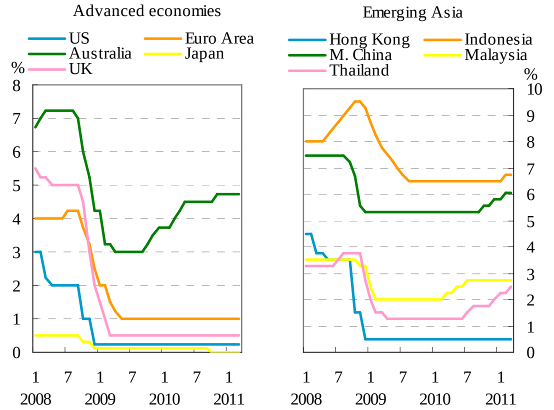
Regarding monetary policy, most advanced economies continued to adopt easy monetary policies in 2010[14] in an effort to boost domestic recovery, given well-anchored inflation expectations and soaring unemployment rates. The Board of Governors of the Federal Reserve System (FED), the Bank of England (BOE) and the European Central bank (ECB) all kept their policy rates unchanged.[15] Meanwhile, the Bank of Japan (BOJ) cut the policy rate and brought back its zero interest rate policy in October 2010[16] in view of continued deflation, an appreciating yen and sluggish stock market. In contrast, the Reserve Bank of Australia successively raised the cash rate target four times, each by 25 basis points, to 4.75% from March to November 2010 due to concerns about mounting inflationary pressures. In emerging Asian economies, some central banks (for example, Mainland China, Malaysia and Thailand) subsequently hiked policy rates in 2010 as a result of sustained economic growth, accelerating inflation and excessive credit expansion, while others such as Hong Kong and Indonesia kept policy rates unchanged. In the beginning of 2011, Mainland China and Thailand saw continued hikes in policy rates. Additionally, the Bank of Indonesia and the ECB also raised policy rates by 25 basis points in February and April of the year, respectively, in the face of rising inflationary pressures (Chart 2.4).

Chart 2.3 Unemployment rates in major economies



Note: Figures for 2011and 2012 are IMF estimates.
Source: IMF, "World Economic Outlook," April 2011.

Chart 2.4 Policy rates in selected economies



Notes: 1. Advanced economies: figure for Australia is based on cash rate target; for the US, federal funds rate target; for the UK, official bank rate; for the euro area, the main refinancing operations fixed rate; and for Japan, uncollateralized overnight call rate.
2. Emerging Asia: figure for Hong Kong is based on discount window base rate; for Mainland China, financial institution one year lending base rate; for Thailand, 1-day repurchase rate; for Indonesia, Bank Indonesia rate; for Malaysia, overnight policy rate.
3. Figures are end-March 2011 data.
Source: Central banks' websites.

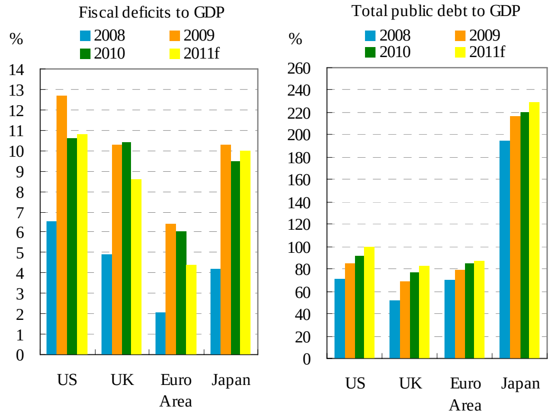
[14] For instance, the Federal Open Market Committee (FOMC) unleashed its second round of quantitative easing (QE2) in November 2010 and planned to purchase a further US$600 billion of longer-term Treasury securities by the end of June 2011.

[15] As of March 2011, the FED maintained the target range for the federal funds rate at 0 to 0.25%, while the BOE policy rate remained at a historical low of 0.5% from March 2009 onwards.

[16] The BOJ cut the uncollateralized overnight call rate from 0.1% to be within the range of 0 to 0.1% in October 2010.

As for fiscal policy, fiscal deficits in advanced economies with fragile fiscal positions improved notably in 2010 from a year earlier. This improvement was mainly backstopped by increasing fiscal revenues due to economic recovery, together with a reduction in fiscal expenditures as financial supports were being phased out following the retrenchment of government spending. Nevertheless, the IMF foresees that the pace of these fiscal consolidations will moderate and proceed at varying speeds across countries in 2011. With the unwinding of new fiscal stimulus packages, the US and Japan, which also encountered reconstruction problems after the earthquake, both delayed their pace of fiscal adjustments. By contrast, major European economies tended to remain on course regarding the retrenchment of their fiscal deficits. For example, the fiscal stimulus measures in Germany and France were subsequently phased out, while Spain and the UK fulfilled sharper cuts in their government spending. Similarly, sizable fiscal adjustment plans are also under way in Greece, Ireland and Portugal (Chart 2.5). In 2009, fiscal positions in major emerging economies (for example, Brazil, Mainland China and India) became weaker due to fiscal expansion. Nevertheless, the IMF estimates that the overall fiscal balance in emerging economies is anticipated to improve with a broadly stable government debt level, mainly spurred by higher raw material prices and delays in capital expenditure projects in some emerging economies (such as Russia, Saudi Arabia and Turkey).

Chart 2.5 Fiscal deficits and public debt in major economies



Note: Figures for 2011 are IMF estimates.
Source: IMF.

According to recent papers on the development of the global economy from the IMF, the Organisation for Economic Co-operation and Development (OECD) and Asian Development Bank (ADB),[17] uncertainty continues to cloud the global growth outlook, including: (1) sovereign debt crisis in the euro area periphery may spread to the core European economies; (2) the absence of progress in formulating medium-term fiscal consolidation plans in key advanced economies; (3) soaring raw material prices exert upward pressure on inflation; (4) favorable trade conditions and strong capital inflows in emerging economies raise concerns about overheating the economy, mounting inflation and asset price bubbles; and (5) global imbalances, rising trade protectionism, and renewed turbulence in foreign exchange markets

[17] IMF, "World Economic Outlook," October 2010 and April 2011; IMF, "World Economic Outlook Update," January 2011; OECD, "Economic Outlook," Volume 2010/2, November 2010; ADB, "Asia Economic Monitor," December 2010.

stemming from government interventions.

In order to ensure that the global recovery is moving on a sustainable path, the IMF offered the following recommendations to address global imbalances:

- Advanced economies should: (1) resume credit supply by speeding up the restructuring of their financial systems; (2) implement well-specified fiscal consolidation plans; (3) overhaul financial regulations and financial supervisory regimes; and (4) enhance the potential for output growth, so as to restore internal balances.

- Emerging economies should: (1) initiate fiscal consolidations and policy rate rises; and (2) adopt macroprudential instruments and incorporate capital flow management measures where necessary, so as to restore external balances.

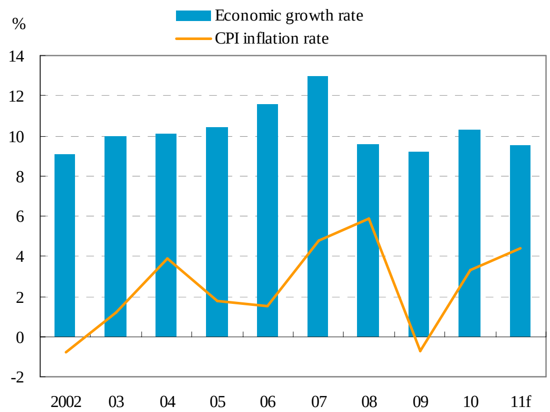
In addition, the OECD also suggests that: (1) macroeconomic policies should be met with fiscal consolidations, the implementation of accommodative policy rates should be adjusted with the pace of economic recovery, and financial reform should be ongoing; (2) structural reform is needed to heighten the efficiency of fiscal consolidations, to improve labor markets, and to reduce the impact of global imbalances on savings and investments.

Mainland China's economic growth accelerated and inflationary pressure built up, but credit expansion slowed down

Mainland China's economic growth accelerated and pressure on consumer prices built up

Underpinned by a series of economic stimulus measures, Mainland China's private consumption and investment continuously increased. Economic growth increased to 11.9% in 2010 Q1 from 11.4% in 2009 Q4. In response to rapid credit expansion and an overheated housing market, the China State Council adjusted macro-control measures and the People's Bank of China (PBC) tightened money supply. Together with contracted exports that resulted from a slowdown in the global economic recovery, Mainland China's economic growth started to cool down in the

Chart 2.6 Economic growth rate and CPI inflation rate in Mainland China



Note: Figures for 2011 are Global Insight projection.
Sources: National Bureau of Statistics of China, Thomson DataStream and Global Insight.

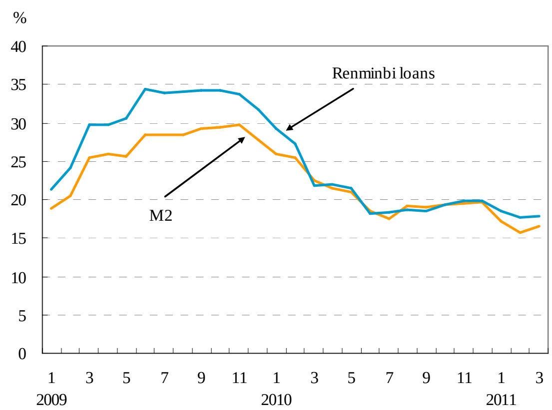
second quarter and registered rates of 10.3% and 9.6% in Q2 and Q3 2010, respectively. Nevertheless, economic growth for the whole of 2010 still reached 10.3%. Global Insight projects Mainland China's economic growth rate through 2011 to slightly decrease to 9.3%[18] (Chart 2.6).

Regarding consumer prices, the CPI inflation rate showed an upward trend in 2010 due to increased consumption demand and rising food prices. In May, the CPI inflation rate reached 3.1%, exceeding the official annual target of 3% for the first time. Subsequently, the flood that hit major agricultural regions pushed up grain prices further and made the China State Council take seven measures in August to stabilize the prices of agricultural products. However, the CPI inflation rate still surged to an annual peak of 5.1% in November, a new high in 28 months. To contain price inflation, the China State Council further announced sixteen measures in November to stabilize prices and the China Banking Regulatory Commission (CBRC) asked commercial banks to prevent loans from being diverted to bid up agricultural products via hoarding and speculation. The CPI inflation rate dramatically increased from -0.7% in 2009 to 3.3% in 2010 and reached a new high of 5.4% in March 2011. Global Insight projects Mainland China's inflation rate to register 4.5%[19] in 2011, indicating a buildup in inflationary pressure (Chart 2.6).

Monetary policy tightened, and bank credit and property price growth slowed

In 2009, due to extremely easy monetary policy, Mainland China's bank credit boomed as the annual growth rates of renminbi loans and M2 all reached historical highs of 34.4% and 29.7%, respectively. As a large amount of newly granted loan funds poured into the property market, the annual growth rate of building sales prices in Mainland China's 70 medium-large cities reached a five-year high of 12.8% in April 2010, suggesting an overheating property market. In order to prevent a property bubble and alleviate inflationary pressure, the PBC substantially contracted market liquidity by raising the reserve requirement ratio (RRR) for depository financial institutions six times by a

Chart 2.7 Annual growth rates of M2 and renminbi loans in Mainland China

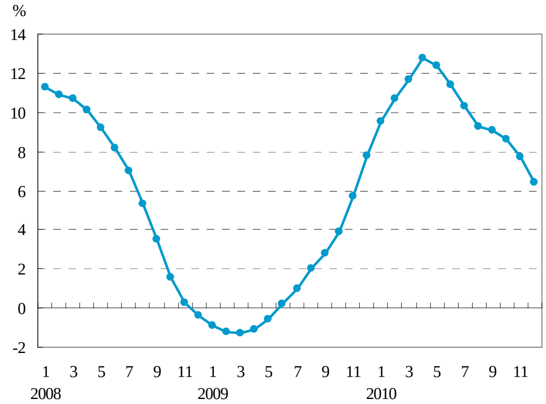


Source: PBC.

18 Global Insight Estimate in April 2011.
19 See Note 18.

total of three percentage points, raising 1-year renminbi benchmark deposit and lending rates of financial institutions two times to 2.75% and 5.81%, respectively, and conducting open market operations several times. Other official institutions, including the China State Council, successively implemented measures to curb property price rises (Table 2.1). The growth of bank credit and property prices therefore slowed down, and in December the annual growth rates of renminbi loans and M2 decreased to 19.9% and 19.7%, respectively, and the annual growth rate of building sales prices in 70 medium-large cities settled down to 6.4% (Chart 2.7 & Chart 2.8).

Chart 2.8 Annual growth rates of building sales prices in 70 medium-large cities of Mainland China



Note: From 2011 onwards, the National Bureau of Statistics of China stopped publishing a national total sales price index of building in 70 medium-large cites.
Source: National Bureau of Statistics of China.

Starting 2011, in response to increased inflationary pressure, the PBC continuously tightened the money supply by raising the RRR rate and the benchmark deposit and lending rates.[20] The General Office of the China State Council further took measures to curb property prices (Table 2.1). Consequently, the annual growth rates of renminbi loans and M2 decreased to 17.9% and 16.6% (Chart 2.7), and the number of cities with inflated building sales prices also gradually decreased.[21] However, building price adjustment may weigh on the real estate industry and the loan quality of banks, and thus warrants close attention.

Meanwhile, according to Mainland China's economic stimulus plan that was rolled out during the financial crisis, fixed capital formation, which was the key engine of economic growth, was attributed to enormous infrastructure investments from all levels of government. Local governments, facing fiscal constraints and legal restrictions on bank borrowing and bond issuance, established local government financing platforms (LGFPs)[22] to fund investments. Some banks relaxed lending terms for LGFPs for their implicit local

[20] During January to April 2011, the PBC again raised the RRR rate by a total of 1.5 percentage points and 1-year deposit and loan rates to 3.25% and 6.31%, respectively.

[21] Starting 2011, the National Bureau of Statistics of China stopped publishing the national total sales price index of building in 70 medium-large cites and only published a sales price index of building for individual cities. In Q1 2011, the building prices of most medium-large cities kept increasing but the number of cities with inflated building prices gradually decreased. In January 2011, more than 80% of medium-large cities registered inflated building prices, but the proportion decreased to 70% and 60% in February and March, respectively.

[22] The local government financing platforms are independent legal entities set up by local governments via financial grants, injection of land or shares.

government guarantee.[23] The number and borrowing scale of LGFPs therefore have grown rapidly in the last two years, which has raised doubts about the fiscal health of local governments and the debt servicing capacity of LGFPs. Therefore, Mainland China's official authorities began to implement a series of measures in order to strengthen the management of LGFPs starting mid-2010 so as to decrease fiscal risk and strengthen the health of banks.

Table 2.1 Measures adopted by Mainland China to curb property prices in 2010 and 2011 Q1

Date	Announced by	Measures
2010.1.7	The General Office of the State Council	The down payment ratio for second-time homebuyers should not be less than 40%.
2010.4.17	The State Council	1. The down payment ratio for first-time homebuyers should not be less than 30%. 2. The down payment ratio for second-time homebuyers should not be less than 50% and the lending rate is not allowed to be less than 1.1 times the PBC benchmark lending rate. 3. Banks in areas with excessively rising house prices could suspend mortgage lending to third-time homebuyers. 4. Banks could suspend mortgage lending to non-resident citizens who fail to offer certificates which evidence payment of taxes or social insurance for one year or more.
2010.5.25	The Ministry of Finance of Mainland China	1. Strengthen the collection of land value appreciation tax. 2. Raise pre-levy rate of land value appreciation tax. 3. The assessment-based levy rate of land value appreciation tax should not be lower than 5%, and forbid tax authorities taking assessment as major means for collection of land value appreciation tax.
2010.9.29	The People's Bank of China (PBC) The China Banking Regulatory Commission (CBRC)	1. Suspend mortgage lending to third-time homebuyers. 2. Suspend mortgage lending to non-resident citizens who fail to offer certificates which evidence payment of taxes or social insurance for one year or more. 3. Restate that the down payment ratio for first-time homebuyers should not be less than 30%, for second-time homebuyers should not be less than 50% and the lending rate should not be less than 1.1 times the PBC benchmark lending rate.
2010.9.29	The Ministry of Finance of Mainland China	Starting 1 October 2010, cancel the personal income tax exemption for home-sellers who purchase another house within one year.
2010.11.4	The Ministry of Housing and Urban-Rural Development of Mainland China The State Administration of Foreign Exchange	1. Offshore individuals are allowed to purchase only one residence to live in. 2. Offshore institutions that have branch or representative offices in Mainland China are only permitted to purchase properties for business use in cities where they are registered.
2011.1.26	The General Office of the State Council	1. Homeowners who sell homes within five years of acquisition will be charged full transaction taxes. 2. Raise minimum down payment ratio for second-time homebuyers to 60% and restate that the lending rate should not be less than 1.1 times the PBC benchmark lending rate. The branches of the PBC may raise the aforementioned ratio and

[23] Some local governments guaranteed the debts of LGFPs. If such debts are not self-liquidating, their insolvency may impair the fiscal health of local governments.

		floor rate according to local government policy. 3. Impose fines and withdraw land use rights from developers if they fail to obtain building construction licenses within two years. Real estate developers are not allowed to transfer underlying land or development items if their paid-in construction investments are less than 25% of the amount (excluding land price) of the project planned. 4. Cities with surging or high house prices and large cities, such as municipalities, should implement house purchase limit policies. Suspend selling houses to residents who already owned two or more houses, nonresidents who already owned one or more houses or nonresidents who fail to offer certificates which evidence payment of taxes or social insurance.

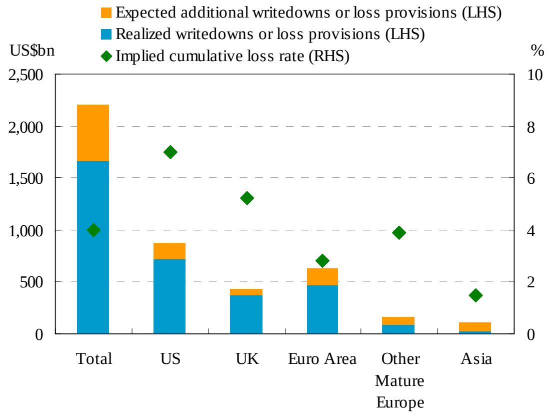
Source: CBC staff summary.

The global financial system has improved but fragilities remain

Driven by the improving economic climate, ample liquidity and greater risk appetite, global financial market performance turned favorable in 2010. At the same time, global equity prices rose broadly, while the capital levels of banks improved. In October 2010, the IMF revised downward its forecast for global asset writedowns and loan provisions to US$2.2 trillion (Chart 2.9). More than three-quarters of them had already been realized or recognized, leaving a residual amount of about US$550 billion.

The vulnerabilities threatening global financial stability subdued, but the global financial system remained fragile. The two-track global recovery[24] continued to pose considerable challenges to policy making. In advanced economies, the slowdown in economic growth alongside fiscal imbalances raised concerns about sovereign debt sustainability. The intensified interaction between sovereign and banking sector risks led to renewed pressures in funding markets in the euro area, and, as a result, induced a pronounced rise in funding costs to governments and banks. Meanwhile, the household debt burden followed an upward trend, while credit risks in the banking sector

Chart 2.9 Global bank writedowns or loss provisions



Notes: 1. Figure for realized writedowns or loss provisions are based on 2007 Q2-2010 Q2 data, while for expected additional writedowns or loss provisions is 2010 Q3-2010 Q4 data.
2. "Other Mature Europe" includes Denmark, Norway, Iceland, Sweden and Switzerland. "Asia" includes Australia, Hong Kong, Japan, New Zealand and Singapore.

Source: IMF, "Global Financial Stability Report," October 2010.

24 Advanced economies grew slowly, while emerging economies grew rapidly.

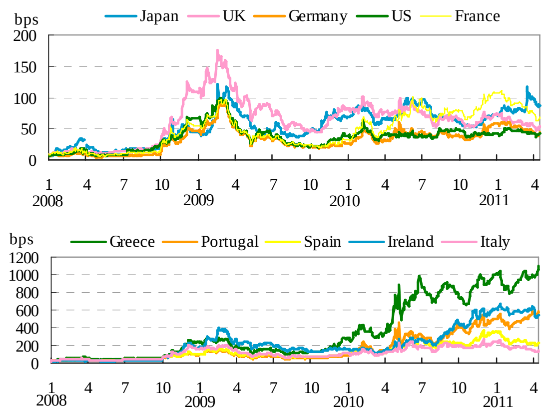
heightened. Stronger economic growth in emerging economies, coupled with accommodative monetary policy in advanced economies, spurred massive capital flows into emerging economies, in turn contributing to higher leverage ratios in financial markets. This not only raised concerns about asset price bubbles but also created upward pressure on inflation.

The financial systems in advanced economies were still at risk

In the second quarter of 2010, the Greek sovereign debt problem once again spurred a recurrence of financial turbulence in the euro area, but the financial system gradually resumed stability in the wake of a range of measures, such as financial support from the European Union (EU) and the IMF as well as the announcement of fiscal adjustment plans by Greece. In November, however, the sovereign debt crisis resurged as lingering concerns about fiscal sustainability and the banking system in Ireland resurfaced. Deteriorating European sovereign debt risks spilled over to other economies and financial systems. The correlation of sovereign bond spreads in Portugal, Italy, Ireland, Greece and Spain (PIIGS) increased markedly with intensifying financial tensions. The credit default swap (CDS) spreads for sovereign bonds of the PIIGS nations also elevated dramatically and even influenced those of France and Germany (Chart 2.10). In the euro area, some banks faced substantial selling pressure on their equities and bonds, while many banks became mired in difficulties of rising funding costs, shortening financing terms and the inability to access funding markets. The confluence of funding pressures and weak balance sheets in the banking sector led to financial system fragility in the euro area and exposed it as highly vulnerable to further market turmoil.

In the US, the financial system improved but financial vulnerabilities persisted, including: (1) the financial system needed to raise more capital to keep on tackling the impact stemming from ongoing deleveraging and financial supervisory reform; (2) a lackluster real estate market and a backlog of foreclosures hindered credit extension and the return to a normally functioning mortgage market; (3) the focus of market concern on credit risks in government-sponsored enterprises (GSEs) shifted to fiscal balances, and how the government sector might deal

Chart 2.10 Sovereign CDS spreads in major advanced economies



Note: Figures are based on 5-year credit default swap.
Source: Bloomberg.

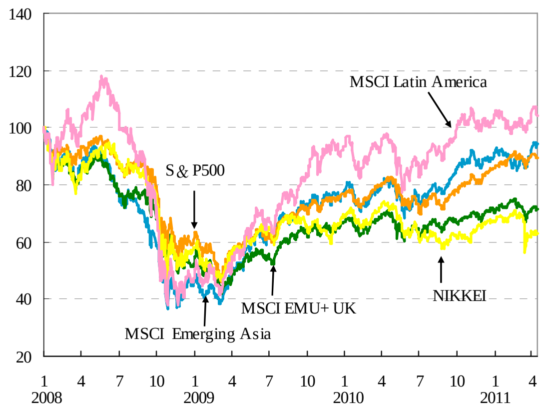
with excessive debt burdens is still an open question. In Japan, banks have been facing low capital levels and depressed profitability. This, together with a stock market downturn, exacerbated pressures on Japanese banks' capitalization and profitability. The banking system was also vulnerable to weakening sovereign funding access. Moreover, an earthquake in Japan exacted a terrible human toll and asset damage, leading to a further deterioration in the banking sector.

Over the past years, several economies have been phasing out their emergency supports. Meanwhile, the effects of low-interest-rate policies have gradually subsided and fiscal stimulus packages have met considerable political criticism. Against this backdrop, the IMF supposes that the monetary and fiscal support policies instituted merely had near-term effects and more structural reforms are needed in the long run. These recommendations include: (1) advanced economies with higher foreign debts (such as euro area economies, the US and Japan) should further combine credible medium-term fiscal consolidation plans with better public debt management; and (2) an ongoing financial supervisory reform agenda to overhaul the financial system is required.[25]

Strong capital inflows into emerging economies raised concerns over the gradual buildup of macrofinancial risks

Relatively favorable fundamentals and stronger growth potential in some emerging economies, together with lower interest rate levels in advanced economies, evoked the resurgence of massive global capital inflows to emerging economies, particularly to Asia and Latin America. According to IMF statistics, international capital movements, which were moderate during the financial crisis, rebounded in 2010 bolstered by asset reallocation by institutional investors, the carry-trade, and expectations of foreign exchange rate appreciation incentives. The international capital flows into emerging economies were estimated to register about 4% of GDP in those economies.

Chart 2.11 Performance of key international equity indices



Note: 1 January 2008 = 100.
Source: Bloomberg.

Abrupt increases in capital inflows into emerging economies have pushed up their

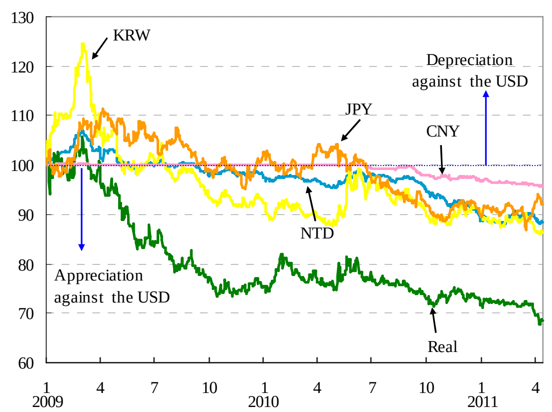
[25] IMF, "Global Financial Stability Report," April 2011.

equity prices. From 2010 onwards, equities indices in emerging markets have been generally buoyant, particularly in Latin America and some emerging Asian economies (Chart 2.11). Capital inflows also triggered excessive credit expansion in emerging economies, reflecting a sharp rise in non-financial sector debt-to-GDP ratios. In some economies (for example, Brazil, Chile, Mainland China, India and South Korea), these ratios have become close to historical highs for the past 15 years. Furthermore, heavy capital inflows have enabled weaker enterprises to easily access funds by issuing bonds, resulting in a further deterioration in the credit quality of assets held by investors. If interest rates unexpectedly rise in advanced economies, economic prospects worsen in emerging markets, or investor appetites change, it could lead to sudden reversals of capital inflows and compromise the soundness of the financial system.

Sizable capital inflows also put upward pressure on currency appreciation in emerging economies, for example, the NT dollar, renminbi, real and won all faced such problems (Chart 2.12). To prevent exchange rates from being disrupted by international capital inflows and undermine the stability of financial markets and commodity prices, some emerging economies successively initiated a number of capital flow management measures aimed at containing short-term capital inflows (Box 1). In addition, some central banks and financial supervisors (such as in Taiwan, South Korea, Singapore and Hong Kong) also introduced targeted credit control measures for real estate-related loans by financial institutions to prevent domestic asset prices from being disrupted by speculative demand.

In response to strong capital inflows, the IMF suggests that emerging economies need to rely on macroprudential polices (such as more stringent loan-to-value ratios and limits on the combination of funding sources) to reduce overheating and financial imbalance risks, in addition to the implementation of macroeconomic policies (for example, more flexible exchange rates, accumulating foreign exchange reserves and fiscal tightening). Capital flow management measures could be resorted to when the above-mentioned approaches fail to effectively mitigate risks. The IMF supposes that the signs point to the fact that these capital inflows to emerging economies were driven by increased structural changes in global asset allocation.

Chart 2.12 Movements of various currencies against the US dollar



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

Emerging economies should deploy policies aimed at strengthening local financial market deepening to enhance their capacity to absorb inflows. These policies could entail the streamlining of corporate bond issuance procedures, removal of barriers for securities issuance and improvement of financial regulations and infrastructure.

International financial regulatory reforms have made greater progress

From 2010 onwards, international financial regulatory reforms have made striking progress. In December 2010, the Basel Committee on Banking Supervision (BCBS) announced a comprehensive framework presenting the details of global regulatory standards on bank capital adequacy and liquidity (also known as Basel III). The framework set up standards covering both microprudential and macroprudential elements. From the microprudential perspective, regulations aimed at enhancing the resilience of individual banks have put in place explicit criteria and are expected to be abided by national supervisors. These approaches entail better capital quality and higher capital levels, the expansion of the coverage of risk-weighted assets, the introduction of a leverage ratio and the formulation of two global minimum liquidity standards. The macroprudential policies could entail creating counter-cyclical capital buffers as well as imposing a capital surcharge or establishing stricter limits on large exposures for systemic risks and linkages. These policies, which aim to ensure the stability of the financial system as a whole, are emerging issues and their implementation could pose significant challenges to policymakers. More details about Basel III are summarized in Box 2, while the implications of systemic risks and macroprudential supervision are listed in Box 3.

In addition, the deliberation or discussion of some initiatives are under way and still await further action. These include guidance for identifying systemically important financial institutions and measuring their systemic risk contributions, macroprudential policies to mitigate systemic risks as well as the establishment of an effective cross-border bank resolution mechanism. Nevertheless, the European economies and the US have successively set up an independent body responsible for the oversight of systemic risks in hopes of better monitoring systemic risks as follows that warrant close attention.

- The European Systemic Risk Board (ESRB), which came into force in December 2010 and started operation in January 2011, is mainly composed of the governors of national central banks in the European Union (EU). It is in charge of macroprudential supervision which indentifies, measures and monitors threats to the financial stability of the EU, and the establishment of an early warning mechanism. The ESRB shall suggest policy responses, where necessary, to mitigate various risks.

- Under the US Dodd-Frank Wall Street Reform and Consumer Protection Act of July 2010, the Financial Stability Oversight Council (FSOC), composed of the head of supervisory agencies in the US, is charged with monitoring and addressing systemic risks arising from large financial institutions, financial instruments and financial activities.

- In the UK, the Financial Policy Committee (FPC) was set up under the Bank of England to monitor the macroeconomic and financial issues that may threaten the resilience of the financial system, and to adopt macroprudential tools.

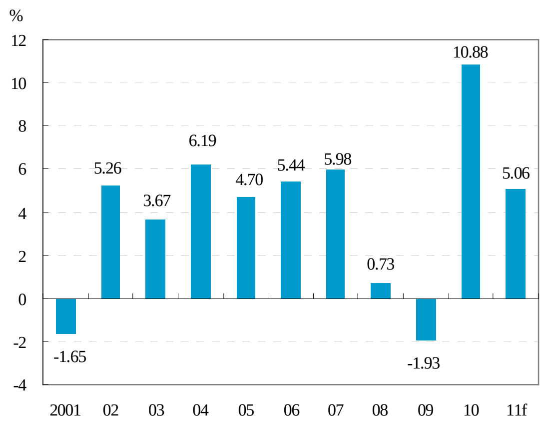
2.2 Domestic economic and financial conditions

Taiwan's economy saw solid growth through 2010 with stable commodity prices. Short-term external debt servicing ability remained strong on the back of a continued surplus in the current account and ample foreign exchange reserves. The scale of external debt continued to expand but at a moderate pace, and overall external debt servicing ability stayed robust. The government's fiscal deficits shrank, whereas government debt elevated.

Domestic economy expanded at a robust pace

In the first quarter of 2010, economic growth rebounded to 13.59%, a record-high since 1978 Q4 and sustained a high level of 12.86% in the following quarter. These high growth rates mainly were underpinned by sharp growth in exports which resulted from brisk foreign demand due to gathering momentum in the global economic recovery, upward momentum in private investment, mild growth in private consumption, and a lower base compared to a year earlier. In the second half of the year, private investment continued to expand alongside rising private consumption. But meanwhile economic growth turned to moderate, registering 10.69% and 7.3% in the last two quarters of 2010, respectively, on the back of slowing growth momentum alongside the continued influence of a high base in the previous year.

Chart 2.13 Economic growth rates in Taiwan



Note: Figure for 2011 is forecast by DGBAS.
Source: DGBAS.

Based on DGBAS statistics, annual economic growth registered a robust 10.88% in 2010,[26] the highest annual growth rate recorded since 1987, from -1.93% in 2009 (Chart 2.13).

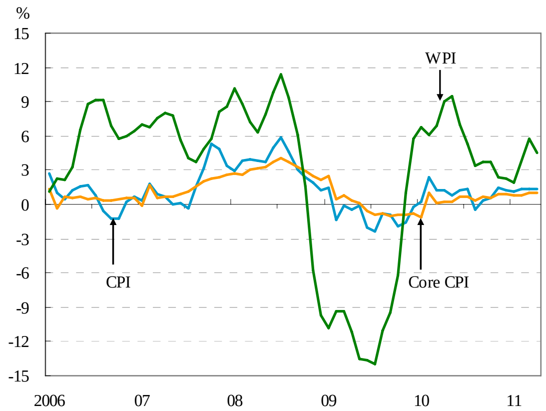
From the start of 2011 onwards, exports expanded steadily and private consumption performed well. However, affected by the influence of a much higher base, the DGBAS preliminary statistics show that the output growth rate stood at 6.55% in the first quarter of 2011 and may decline to 5.06% for the year as a whole[27] (Chart 2.13). Moreover, domestic automobile, electronics and telecommunication industries, which heavily rely on key components as well as machinery and equipment from Japan, could take an adverse hit as a result of supply disruption following the recent earthquake and tsunami in Japan. Meanwhile, the number of Japanese tourists visiting Taiwan is estimated to decline in the short term. Nevertheless, this unfavorable impact may have been offset to some extent by the fact that many domestic firms subsequently benefited from offering capacity support to Japanese firms or receiving transfer orders from customers. Therefore, the overall impact of Japan's earthquake on Taiwan's economy is generally expected to be limited.[28]

Domestic prices remained stable

From the beginning of 2010 onwards, the international prices of agricultural and industrial raw materials (such as of crude oil, natural gas, and grains) exhibited large increases compared to the same period of the previous year. Reflecting this, together with a lower base, the wholesale price index (WPI) inflation rate visibly rose before gradually declining after hitting a peak of 9.43% in May 2010. The annual WPI inflation rate stayed at 5.46% in 2010, far above the -8.74% recorded a year earlier.

Driven by the upsurge in retail prices of gasoline and imports owing to increasing costs, coupled with the deferred effects of imposing a higher tax on tobacco in June 2009 and soaring overseas travel fares, the CPI inflation rate moved within a range of

Chart 2.14 Consumer and wholesale price inflation rates



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

[26] The figures are based on the DGBAS press release on 19 May 2011.
[27] See Note 26.
[28] According to Global Insight analysis, Taiwan, South Korea and Thailand are more vulnerable than other Asian economies to sustained disruptions in Japanese output. The impact, which is expected to be relieved in the second half of 2011, would not pose any serious threat to those economies.

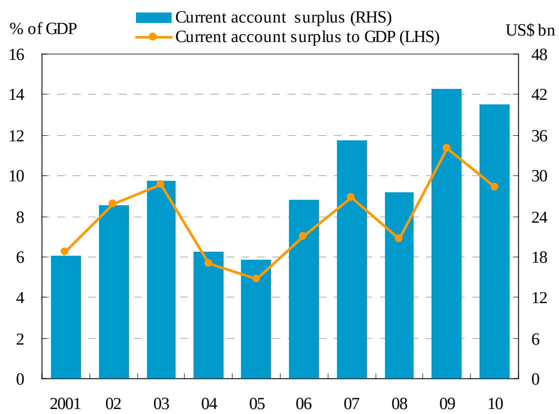
0.2% to 2.4% in 2010, except for a negative recording in August due to the influence of a high base in the prices of certain commodities and products (for example, gas, cars, motorcycles and vegetables) a year earlier. In parallel, the core CPI[29] inflation rate mostly remained below 1% during the same period (Chart 2.14). The annual headline CPI and core CPI inflation rates in 2010 were 0.96% and 0.44%, respectively, higher than the -0.87 and -0.14% a year earlier. This showed a stable price level for the year 2010.

The average WPI inflation rate from January to April 2011 dropped to 4.04%, while the average CPI and core CPI inflation rates continued to accelerate by 1.29% and 0.89%,[30] respectively, over the same period, revealing that commodity prices increased somewhat in the earlier part of 2011 (Chart 2.14). Looking ahead, fueled by the still-strong global demand, shortage of supply due to adverse weather conditions, and ample liquidity in markets, the prices of crude oil and agricultural and industrial raw materials are expected to keep surging. This will further push domestic wholesale and retail prices up. The DGBAS projects the annual WPI and CPI inflation rates in 2011 to register 3.42% and 2.10%,[31] respectively.

Current account surpluses persisted and foreign exchange reserves stayed abundant

Taiwan's imports and exports both saw visible increases in 2010 thanks to the ongoing global economic recovery and solid growth in emerging Asian economies. Despite the fact that the trade surplus was slightly lower than a year earlier as the rise in imports was larger than that of exports, the current account surplus still persisted and registered US$40.62 billion through the whole of 2010, or 9.44% of annual GDP[32] (Chart 2.15). As for the financial account, massive net inflows from other investments[33] mostly offset sustained

Chart 2.15 Current account surplus

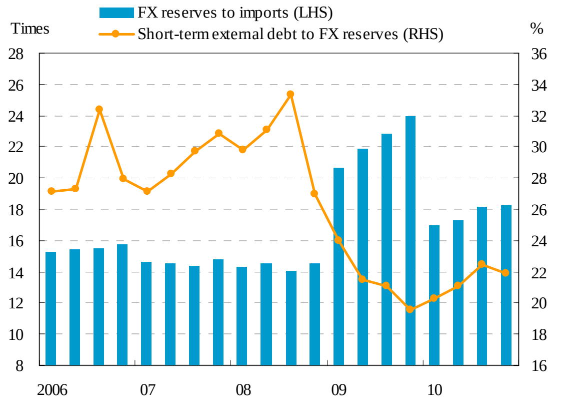


Note: Current account surplus and GDP are annual figures.
Sources: CBC and DGBAS.

[29] The term "core CPI" in this report refers to the consumer price index excluding perishable fresh fruits and vegetables, fish and shellfish, and energy.
[30] The figures are based on a DGBAS press release on 5 May 2011.
[31] See Note 26.
[32] 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.
[33] The "net inflows from other investment" was mainly contributed to by two parts in 2010. In the banking sector, it included the redemption of foreign loans and a rise in both the inbound remittance of funds from banks' foreign branches and the deposits received from non-residents. In the private sector, it resulted from the withdrawal of foreign deposits.

net outflows from direct investments and portfolio investments, leading to a shrinkage in the annual balance of net outflows in the financial account of US$0.61 billion. Over the same period, the balance of payments recorded a surplus of US$40.17 billion as result of the sizable current account surplus and small net outflows in the financial account.

Chart 2.16 Short-term external debt servicing capacity



Notes: 1. FX reserves and external debt are end-of-period figures.
2. Imports are average monthly figures.
Sources: CBC, DGBAS and MOF.

The continuous balance of payments surplus, coupled with the fact that major currencies (such as the euro) held as part of Taiwan's foreign exchange reserves appreciated against the US dollar over the same period, pushed foreign exchange reserves to continue accumulating to record highs and register US$382 billion at the end of 2010, and further climb to US$399.5 billion at the end of April 2011. This reflects ample foreign exchange reserves. Nevertheless, the ratio of foreign exchange reserves to imports declined to 18.25 months,[34] led by excessive growth in imports. Furthermore, the ratio of short-term external debt to foreign exchange reserves elevated to 21.90%[35] owing to a notable expansion in short-term external debt (Chart 2.16). These two ratios, nevertheless, were still below internationally recognized warning levels. This implies that Taiwan's foreign exchange reserves have a robust capacity to meet payment obligations for imports and to service short-term external debt.

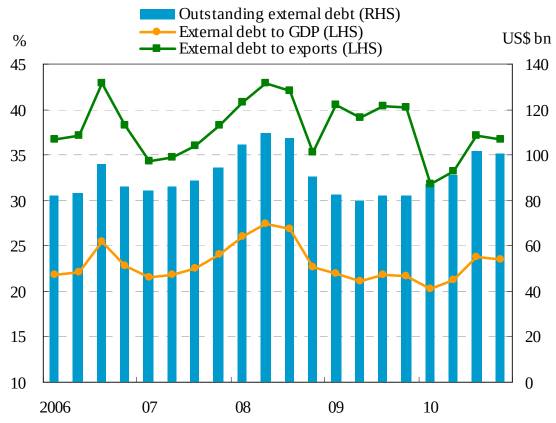
External debt contracted after following an upward trajectory and debt servicing capacity remained strong

There was a substantial increase in Taiwan's external debt[36] in the first three quarters of 2010 resulting from a sharp upsurge in private external debt. However, external debt decreased somewhat in 2010 Q4, triggered by the reduction in debt owed by domestic banks to foreign banks and the balance of NT dollar deposits held by non-residents. Overall, outstanding

[34] A country with a ratio of foreign exchange reserves to imports more than three months is considered to be at relatively low risk.
[35] The general international consensus is that a reading of less than 50% indicates relatively low risk.
[36] External debt is defined by the CBC 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.

external debt stood at US$100.8 billion, or 23.43% of annual GDP, at the end of 2010, implying a low level of external debt.[37] Moreover, the ratio of external debt to annual exports declined to 36.70% as of the end of 2010, due to the strong rebound in exports, indicating that export revenues were still sufficient to cover external debt (Chart 2.17), and there were no signs of servicing pressure on external debt.[38]

Chart 2.17 External debt servicing capacity

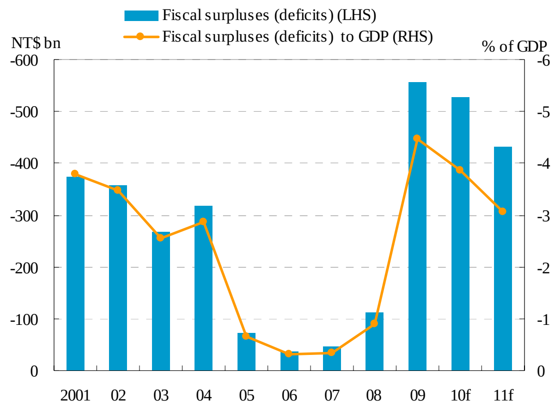


Notes: 1. External debt are end-of-period figures.
2. GDP and exports are annual figures.
Sources: CBC, DGBAS and MOF.

Fiscal deficits turned to contract while government debt stayed elevated

Driven by the expansion of infrastructure construction expenditures undertaken with the aim of revitalizing the economy, fiscal deficits increased sharply and reached a historical high in 2009. However, these declined in 2010 and registered NT$526.4 billion, partly because fixed capital investments of the government and state-run enterprises contracted gradually with the fall in major infrastructure construction demand. This, coupled with healthy GDP growth, caused the ratio of fiscal deficit to annual GDP to decline to 3.07% in 2011,[39] following a drop to 3.87% in 2010 (Chart 2.18).

Chart 2.18 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 2010 and 2011 are budget accounts.
Sources: MOF and DGBAS.

In 2010, outstanding public debt at all levels of government[40] expanded to NT$5.10 trillion, or 37.48%[41] of annual GDP, well

[37] 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.

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

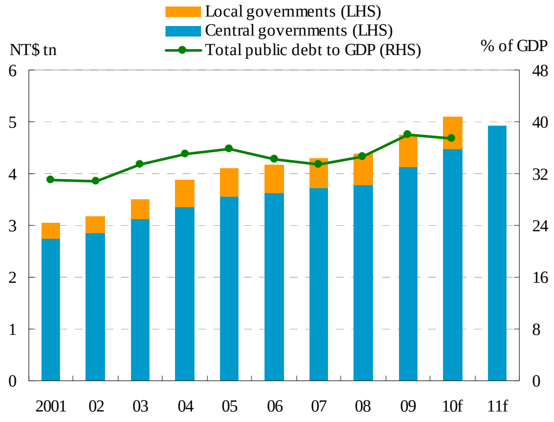
[39] In contrast with the 1992 European Union Maastricht Treaty and the subsequent Stability and Growth Pact, fiscal deficits in EU member nations are not allowed to exceed 3% of GDP.

[40] 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. Final audited figures for outstanding one-year-or-longer non-self-liquidating public debt (NT$5.10 trillion) issued by all levels of government during the 2010 fiscal year is equivalent to 39.15% of the average GNP for the preceding three fiscal years (NT$13.02 trillion). This figure is below the ceiling of 48% (i.e. 40% for central government and 8% for local governments) set out in the Public Debt Act.

[41] In contrast with the Maastricht Treaty and the subsequent Stability and Growth Pact, outstanding debt in EU member nations is not allowed to exceed 60% of GDP.

above the NT$4.75 trillion[42] in 2009, as fiscal deficits stayed high and governments relied on debt issuance to finance debt servicing expenditures. It is expected that public debt will further grow at a firm pace in 2011 with the ongoing implementation of large-scale infrastructure projects[43] (Chart 2.19).

Chart 2.19 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. Outstanding public debt for 2010 and 2011 are budget accounts; the 2011 number for local governments is not available.

Sources: MOF and DGBAS.

[42] If adding in debt with a maturity of less than one year and self-liquidating debt, outstanding public debt at the end of 2009 stood at NT$5.83 trillion.

[43] Refer to the "i-Taiwan 12 projects," which are expected to raise a total investment of NT$3.99 trillion via private investment and government budget in twelve prioritized infrastructure projects within eight years.

Box 1
Recent measures to manage capital flows in emerging economies

From the second quarter of 2009 onwards, rebounded investor risk appetite and continued low interest rate policies in advanced economies, coupled with an upturn of economic prospects in emerging economies, fueled strong capital inflows for portfolio investment into emerging Asian and Latin American economies, and consequently raised concerns about the mounting risks of inflation and asset price bubbles. In response, many Asian and Latin American economies successively launched a variety of measures to manage capital flows since 2010, including imposing taxes on foreign investors for their inbound remittances, placing ceilings on foreign exchange positions held by financial institutions or corporations, and easing restrictions on domestic funds for offshore investments. The key components of these measures are summarized in Table B1.1.

Table B1.1 Recent capital flow management measures in selected emerging economies

Economies	Date	Measures
South Korea	October 2010	1. Capped corporate foreign exchange hedging limit to 100% of export receipts. 2. Set a ceiling on foreign exchange (FX) forward positions of domestic banks to 50% of equity capital. 3. Set a ceiling on FX forward positions of foreign bank branches to 250% of equity capital.
	19 October 2010	Inspected banks involved in FX derivative activities.
	January 2011	Proposed to impose a tax on the purchase/sale of depository receipts: 1. Imposed a levy on either 22% of capital gains or 11% of initial public offering (IPO) funds, whichever is lower. 2. Imposed a 0.3% tax on exchange transactions, and 0.5% on over-the-counter (OTC) transactions.
	1 January 2011	Reimposed a 15.4% withholding tax on interest income and 22% on capital gains for all foreign holdings of short-term government bonds.
	March 2011	Lowered limits on domestic banks' FX forward positions from 50% of equity capital to 40%, and foreign bank branches from 250% to 200%.
	Date to be determined	Proposed to impose a 0.2% tax on less-than-one year tenor foreign currency loans by domestic banks, a 0.1% tax on 1-3 year tenor loans, a 0.05% tax on 3-5 year tenor loans and a 0.02% tax on above 5-year tenor loans. This proposal, expected to be submitted to the congress in May 2011, could be effective from 1 July 2011 given the passage of the bill.
Thailand	16 September 2010	Relaxed five regulations relating to the banning capital outflows, including: 1. Removed the cap on offshore direct investments by Thai

		corporations. 2. Relaxed the limit on the provision of credit by Thai corporations to non-related enterprises to USD50 million per year. 3. Increased the limit on offshore purchases of real estate by Thai corporations to USD10 million per year. 4. Raised the ceiling on foreign currency deposits held by Thai corporations to USD500 thousand from USD300 thousand. 5. Raised the cap on offshore foreign currency deposits held by Thai exporters to USD50 thousand from USD20 thousand.
	12 October 2010	Companies with FX revenues are allowed to transfer FX funds from their local FX account to onshore counterparties. FX transactions below USD50 thousand only need to provide documentation on remittance purposes.
	13 October 2010	Revoked the waiver on a 15% withholding tax on interest income and capital gains on foreign investments in government bonds.
Indonesia	17 June 2010	1. Introduced a one-month holding period on Bank Indonesia Certificates (SBIs) and issued nine- and twelve-month SBIs. 2. Expanded the difference between the overnight call rate and the Bank Indonesia rate to 2% from 1%.
	January 2011	Capped banks' short-term FX borrowing to 30% of equity capital.
	March 2011	Raised required reserves on FX positions held by banks to 5% from 1% in March 2011, and further increased it to 8% in June 2011.
Taiwan	2 August 2010	Imposed a US dollar denominated margin for short sale accounts held by foreign investors.
	11 November 2010	Reinstated a 1995 rule that caps foreign investments of nonresident inbound remittances at 30%, to include government bonds.
	27 December 2010	Reduced the limit of the add-up position of local currency non-delivery forwards (NDFs) and options to one-fifth of total position from one-third.
	1 January 2011	Raised required reserves on local currency demand deposit accounts held by nonresidents to 90% from 9.775% on the increment exceeding the outstanding balance recorded on 30 December 2010, and 25% (from 9.775%) on balances below the end-2010 level. Required reserves for such accounts are non-remunerated.
Brazil	20 October 2009	Imposed a 2% IOF tax (financial operations tax) on foreign exchange inflows for the purchase of Brazilian equities instruments and fixed income instruments.
	19 November 2009	Imposed a 1.5% tax on American Depository Receipts (ADR) issued by Brazilian corporations.
	1 April 2010	Imposed a 0.38% tax on FX outflows when converting Depository Receipts (DR) to local shares.
	5 October 2010	Raised the IOF tax on foreign exchange inflows for the

		purchase of fixed income instruments to 4% from 2%.
	20 October 2010	1. Further increased the IOF tax on foreign exchange inflows for the purchase of fixed income instruments to 6% from 4%. 2. Raised the futures margin to 6% from 0.38%.
	4 April 2011	Banks are required to deposit cash in the Brazilian central bank account to cover 60% of short positions, given that their holdings of US dollar denominated short positions either exceed USD3 billion or their equity capital, whichever is lower. Deposits for such accounts are non-remunerated.

Sources: CBC, IMF April 2011 GFSR, Nomura Global Economics and BNY Mellon NetInfo.

Box 2
Basel III: capital and liquidity reform

Regarding recent global financial turmoil, the main reasons the financial crisis became so aggravated were that the banking sector employed excessive leverage, maintained an inadequate and deteriorated capital base and held insufficient liquidity buffers. The crisis was further amplified by a procyclical deleveraging process and the interconnectedness of systemically important financial institutions, resulting in significant global economic loss. To address these issues, the Basel Committee on Banking Supervision (BCBS) has introduced a number of capital and liquidity reforms[1] (Basel III) since 2009, which were finalized and published in December 2010 after endorsement by the G20 leaders at their November Seoul Summit.

1. Basel III: capital and liquidity reforms

The Basel III reforms not only emphasize microprudential supervision that raise the resilience of individual financial institutions when facing stressed conditions, but also have a macroprudential focus that helps to reduce the potential impacts coming from common exposures of banks and procyclicality.

1.1 Microprudential supervision reforms

The microprudential supervision reforms introduced in Basel III include three parts: (1) strengthening capital and liquidity regulations of individual banks; (2) enhancing related financial supervision, risk management and internal governance; and (3) reinforcing market discipline. The first part, capital and liquidity reforms, will significantly influence the global banking industry, and is described as follows.

Strengthening regulatory capital frameworks

Raising capital quality

Banks are required to raise their capital quality, which includes employing common equity as the predominant form of capital along with a stricter definition of common equity. Furthermore, the BCBS further requests banks, when issuing non-common Tier 1 and Tier 2 instruments, to incorporate provisions that require such instruments to either be written off or converted into common equity once they are determined to be non-viable by the relevant authorities.[2]

Enhancing risk coverage

With regard to securitization transactions, Basel III introduces higher risk-weights for complex securitization financial instruments and raises the capital charge for off-balance sheet exposures, while requiring banks to adopt more careful credit analyses on securitization transactions. Regarding trading book transactions, Basel III requires banks to calculate stressed value-at-risk at least every week and set aside additional capital charges accordingly, while banks using models to calculate specific risk are subject to the incremental risk capital charge. Additionally, Basel III also urges banks to strengthen capital charges and risk management for counterparty risk.

Increasing capital ratios

In order to enhance the loss absorbing capacity of banks, Basel III raises the common equity Tier 1 ratio from 2% to 4.5% and Tier 1 capital ratio from 4% to 6%, while asking for an additional capital conservation buffer of 2.5%, comprising only common equity, and a countercyclical capital buffer of 0-2.5%.[3]

Introducing a leverage ratio

Basel III introduces a non-risk based leverage ratio, which is calculated by dividing Tier 1 capital by total assets. The Tier 1 capital for the leverage ratio should be based on the new definition set out in Basel III, while total assets consists of on- and off-balance sheet assets. The preliminary leverage ratio is 3% and will commence in a parallel run starting from 1 January 2013. Any adjustments to the leverage ratio will be carried out in the first half of 2017 and the leverage ratio will be migrated to a Pillar I treatment on 1 January 2018.

Proposing international liquidity standards

During financial crises, liquidity can evaporate very quickly. In response, the BCBS has developed two minimum standards for funding liquidity, including: (1) the Liquidity Coverage Ratio (LCR) to strengthen banks' resilience to short-term liquidity needs; and (2) the Net Stable Funding Ratio (NSFR) to improve the problem of liquidity mismatch for banks over a longer time horizon. The minimum requirement for both ratios is 100%.

1.2 Macroprudential supervision reforms

Reducing procyclicality

In order to reduce procyclicality, the BCBS has proposed two capital requirements related to macroprudential supervision, including a capital conservation buffer and a countercyclical capital buffer, and suggested that the International Accounting Standards Board (IASB) adopt an expected loss approach for provisioning. The capital conservation buffer is designed to ensure that banks hold additional capital of 2.5% above the regulatory minimum. Restrictions on capital distribution will be imposed on banks if their capital conservation buffer falls below 2.5% so as to retain their capital. Regarding the countercyclical capital buffer of 0-2.5%, Basel III requires national authorities to monitor domestic credit growth with reference to the ratio of credit to GDP and other related indicators and apply adequate judgments in determining the size of such buffers.[4]

Addressing systemic risk and interconnectedness

The BCBS and the Financial Stability Board (FSB) are developing an integrated approach, including combinations of systemic capital surcharges, contingent capital and bail-in debt, which requires systemically important financial institutions to have loss absorbing capacities beyond the minimum standards. Moreover, the BCBS is developing quantitative and qualitative indicators to assess the systemic importance of financial institutions while studying viable alternative measures to strengthen the additional loss absorbency of systemically important financial institutions and reduce the risk of spillover among such institutions, including liquidity surcharges, tighter large exposure restrictions and enhanced financial supervision. Furthermore, according to the lessons learnt from the financial crisis, the orderly resolution of cross-border problem banks is key to decreasing systemic risk and solving the too-big-to-fail problem. Therefore, setting up a resolution mechanism for cross-border banks is also an important reform issue for the BCBS.

2. Potential impacts of Basel III on domestic banks

Based on the results of a quantitative impact study of Basel III conducted by the BCBS and the FSB, the BCBS announced the granting of an eight-year transition period for banks to raise capital ratios progressively starting from 2013 until full implementation of Basel III in 2019. In Taiwan, the Financial Supervisory Commission (FSC) has conducted preliminary calculations of capital ratios in accordance with Basel III standards using banks' data as of June 2010. The results indicated that the average common equity ratio of domestic banks was 7.54%, above the standard of 7% to be implemented in 2019, and the average Tier 1 capital ratio was 7.8%, also above the standard of 7.25% set to come into effect in 2017.[5] In line with the eight-year phase-in period of Basel III, the FSC has announced that banks will be required to strengthen risk absorbing capacities and meet international supervisory guidance through adequate long-term capital planning and dividend policies.

Notes: 1. The Basel Committee on Banking Supervision (2010), "Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems" and "Basel III: International Framework for Liquidity Risk Measurement, Standards and Monitoring," December.

2. The Basel Committee on Banking Supervision (2011), "Minimum Requirements to Ensure Loss Absorbency at the Point of Non-viability," January.

3. The Basel Committee on Banking Supervision (2010), "Guidance for National Authorities Operating the Countercyclical Capital Buffer," December.

4. Regarding the procedures and guidance for operating the countercyclical capital buffer regime, see the publication listed in note 3.

5. The Financial Supervisory Commission (2010), press release, 16 September.

Box 3
Systemic risks and macroprudential supervision

Systemic risks played a role as an important accelerator in the global financial crisis which originated from the US subprime mortgage debacle in 2007 and then spilled over to the rest of the world. The crisis revealed that microprudential supervision alone was insufficient to achieve financial stability. Supervisory authorities also need to strengthen macroprudential supervision to assess and address systemic financial risks to ensure the stability of financial system.

1. The definition and sources of systemic risks

Systemic risk may be defined as a risk of disruption to financial services that is: (1) caused by an impairment of all or parts of the financial system; and (2) may have serious negative consequences for the real economy (IMF, BIS and FSB, 2009).

There are two potential sources of systemic risks (BOE, 2009):

- Aggregate risks: the risks arising from the collective tendency of financial institutions to assume excessive risk in an upswing and then to become excessively risk-averse during the downswing. It could bring about procyclical effects on real economic activities and undermine the stability of the financial sector and real economy.
- Network risks: the risks arising from the interconnectedness or common exposures across the system leading to joint failures of financial institutions at a given point of time.

The global financial crisis has shown that relying only on microprudential supervision of individual institutions and market discipline is insufficient to detect and mitigate systemic risks. Supervisory authorities should adopt macroprudential measures through regulations and supervisions (i.e. macroprudential supervision policies) to address the two sources of systemic risks and the spillover channels of excessive leverage and maturity mismatches in order to maintain financial stability.

2. The international adoption of macroprudential supervision policies

Macroprudential supervision seeks to enhance the stability of the whole financial system and, therefore, should take the interactions between the financial system and the real economy into account (BIS, 2010). According to a survey of 33 central banks in November 2009 (CGFS, 2009), it showed that macroprudential instruments mainly targeted credit growth as well as the size and composition of bank balance sheets, as presented in Table B3.1. In fact, Asian countries implemented a variety of macroprudential instruments during the 1997 Asian financial crisis.

Table B3.1 Macroprudential instruments adopted by central banks

Objectives	Types of instruments	Examples
Measures targeting credit growth	1. Limits calibrated to borrower risk characteristics	Loan-to-value caps, loan-to income limits, foreign currency lending limits
	2. Absolute limits	Aggregate or sectoral credit growth ceilings, limits on exposures by instrument
Measures targeting size and composition of bank balance sheets	1. Measures to limit interconnectedness (1) Limits on leverage (2) Financial system concentration limits	 (1) Size-dependent leverage limits or asset risk weights, capital surcharges for systemically important institutions (2) Limits on interbank exposures
	2. Measures to limit procyclicality (1) Capital (2) Provisioning	 (1) Time-varying capital requirements, restrictions on profit distribution (2) Countercyclical/dynamic provisioning
	3. Measures to address specific financial risks (1) Liquidity risk (2) Currency risk	 (1) Loan-to-deposit limits, core funding ratios, reserve requirements (2) Limits on open currency positions or on derivatives transactions

Note: The table includes only instruments where the main or usual purpose is macroprudential. This excludes instruments such as official interest rates, emergency liquidity provisions and foreign exchange market intervention, since these are mainly used for other policy purposes, even though their usage might often have macroprudential benefits.

Source: Committee on the Global Financial System (2010).

3. Macroprudential supervision policies adopted by the CBC

Promoting financial stability is one of the operational objectives pursued by the CBC. To achieve this objective, besides adopting appropriate monetary and foreign exchange policies to provide a beneficial financial environment, the CBC has used various macroprudential tools in a timely manner in recent years, as well as serving as the lender of last resort when necessary, so as to maintain financial stability. The macroprudential tools deployed by the CBC are as follows:

- Declaring to take asset prices into consideration when setting monetary policies; promulgating the Regulations Governing the Extension of Land Collateralized Loans and Housing Loans in Specific Areas by Financial Institutions, which set limitations on loan-to-value ratios and other lending terms for real estate loans for the purposes of enhancing credit risk management in financial institutions and maintaining financial stability.

- Strengthening macroprudential analysis and surveillance, as well as issuing the Financial Stability Report periodically to offer insight into the state of Taiwan's financial system and its potential risks and spur market participants to take responsive actions in a timely manner.
- Enhancing the prudential supervision of the liquidity of financial institutions, as well as monitoring the funding maturity structure of individual financial institutions and the overall liquidity stance in the financial system in response to the exit of the blanket deposit insurance scheme.

4. Further challenges in the future

The importance of macroprudential supervision policies in maintaining financial stability has drawn international recognition and a high degree of attention. However, there are numerous implementation challenges, including:

- There may be tradeoffs between macroprudential policies and other policy measures. For example, central banks raising policy rates to cope with rising property prices and heightened inflationary pressures may increase the vulnerability of banking systems.
- Effective tools for assessing systemic importance are still not available. Also, supervisory tools targeting systemically important institutions, such as systemic capital and liquidity surcharges, and restrictions on credit growth, need to be further calibrated and agreed on internationally.
- Risk models and tools to evaluate systemic risks lack maturity and need to be improved. Some macroprudential supervisory tools are in the initial stages of development and their effectiveness is yet widely recognized.
- Reinforcing macroprudential supervision may involve a restructuring of the existing supervisory framework and accountability, which would have extensive effects throughout the financial system.

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