2. Global setting and outlook

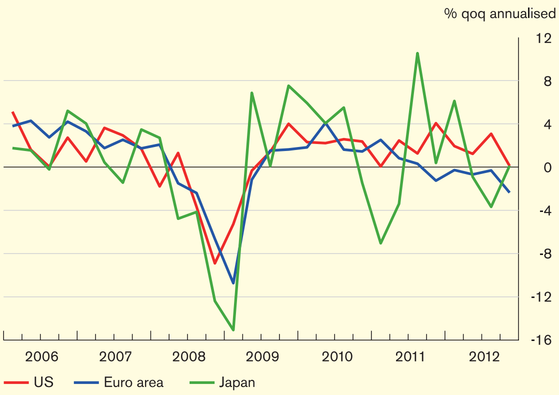
External environment

Tail risks in major advanced economies have diminished over the past six months but growth remained sluggish. Fiscal drag is set to play a more prominent role from 2013 onwards and the economic outlook is still subject to substantial policy uncertainties. Growth momentum in East Asian economies generally improved, and domestic demand will continue to support economic growth going forward.

2.1 Real activities

Tail risks in major advanced economies have receded over the past six months. Nevertheless, economic growth remained sluggish. Latest GDP figures show the US economy grew by 0.1% while the euro area and Japanese economies contracted by 2.3% and 0.2% respectively in the fourth quarter of 2012 (Chart 2.1).[1]

Chart 2.1
US, euro area and Japan: real GDP



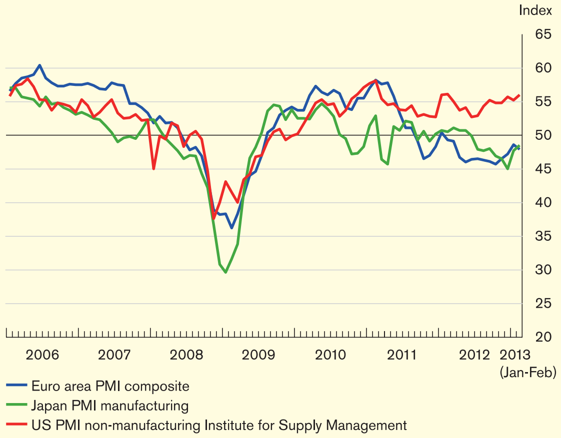
Sources: Bureau of Economic Analysis, Eurostat and Cabinet Office of Japan.

In Europe, the ECB's Outright Monetary Transactions (OMTs) programme, the rescue package for Spanish banks, further credit disbursement to Greece, and the establishment of the Single Supervisory Mechanism have all helped reduce the risks of a euro dissolution and stabilised financial markets. Nevertheless, with the necessary fiscal adjustment and structural reform starting to take hold, the euro area economy continued to deteriorate and recently entered into recession. Across the Atlantic, the "fiscal cliff" was averted but the US economy maintained only a moderate recovery, though there were some notable improvements in the housing market. In Japan, growth weakened sharply in the second half of 2012, amid a slump in exports and subdued private sector demand. The latest Purchasing Managers' Indices (PMI) indicate that growth will likely continue at a

[1] For the US, euro area, Japan, and non-Japan Asia (excluding Mainland China), quarterly real GDP percentage changes are on a seasonally adjusted annualised basis, unless otherwise stated.

moderate pace in the US while the euro area and Japan could see continued contraction (Chart 2.2).

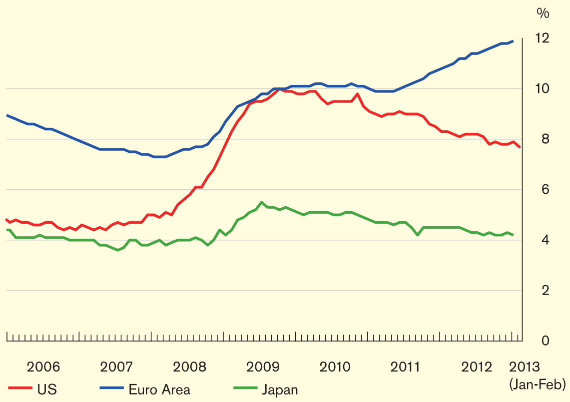
Chart 2.2
US, euro area and Japan: Purchasing Managers' Indices



Source: Bloomberg.

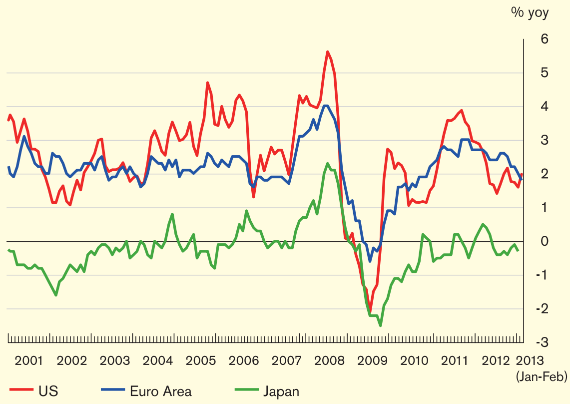
As a result of sluggish growth, the pace of job creation remained slow with labour market conditions worsening in Europe. The unemployment rate stayed at stubbornly high levels of around 7.7% in the US, hitting 11.9% in the euro area, and 4.2% in Japan (Chart 2.3). The high degree of economic slackness, together with the continued fall in energy prices, has kept headline CPI inflation down in the advanced economies with core inflation likely to remain subdued in 2013 (Chart 2.4).

Chart 2.3
US, euro area and Japan: unemployment rate



Source: Bloomberg.

Chart 2.4
US, euro area and Japan: headline inflation



Sources: US Department of Labour, Eurostat and Japan Ministry of Internal Affairs.

Policymakers on both sides of the Atlantic have so far prevented tail risk events from happening. However, economic outlook is still subject to substantial policy uncertainties going forward. In Europe, the inconclusive election result in Italy continues to cast doubts over the country's resolve to push through necessary reforms, while the upcoming election in Germany may also affect the country's stance on euro area reforms. Meanwhile, the ECB's new bond purchase programme, OMTs, could eventually be forced into action and there is a risk that it may fail to live up to market expectations. In the US, while the Congress have averted the "fiscal cliff" and extended the debt-ceiling until mid-May, huge political differences over spending cuts mean fiscal uncertainties could drag on for some time with front-loaded cuts and government shutdowns being two major threats to the recovery. In any case, the scheduled rise in both income and payroll tax will reduce households' disposable income and pose headwind on US growth in 2013. In response to weak economic outlook and persistently high unemployment, the Fed and the Bank of Japan (BoJ) have recently announced open-ended quantitative easing programmes. While it is uncertain if unlimited quantitative easing can boost growth and employment, the policy has now increased the risks of currency volatilities and also complicated the timing of policy exits.

Growth momentum in most East Asian economies strengthened in the last quarter of 2012 following a general downward cycle in the previous quarters (Table 2.A). Domestic demand, particularly private consumption, continued to be the major driver of growth. External demand improved somewhat in a few economies, but remained a drag on growth for the region as a whole. Inflationary pressures eased, with average CPI inflation rate declining to 2.6% year on year in January 2013 from 3.0% in June 2012. Some central banks cut their policy rates in October 2012,[2] but, given the recovery in growth momentum, policy rates have been unchanged in the whole region in recent months.

Table 2.A
Asia: real GDP growth

(% qoq, annualised)	2011 Q3	2011 Q4	2012 Q1	2012 Q2	2012 Q3	2012 Q4
NIE-3: [1]	**2.0**	**-1.0**	**4.4**	**0.6**	**0.9**	**3.5**
Korea	3.4	1.3	3.5	1.1	0.2	1.5
Singapore	2.0	-2.3	7.8	0.1	-4.6	3.3
Taiwan	-0.5	-4.6	5.0	-0.1	3.9	7.3
ASEAN-4: [1]	**6.3**	**-3.2**	**16.5**	**7.4**	**5.4**	**9.3**
Indonesia [2]	6.0	7.5	5.5	6.4	5.4	7.0
Malaysia [2]	5.6	4.6	6.8	5.3	4.7	8.9
Philippines	2.2	7.0	11.2	4.4	5.2	7.5
Thailand	10.1	-35.9	48.0	13.0	6.1	15.0
East Asia: [1]	**4.1**	**-2.1**	**10.3**	**3.9**	**3.1**	**6.3**

Notes:
1. Weighted average (weighted by contribution to world GDP value at Purchasing Power Parity).
2. Seasonal adjustment made by HKMA staff.

Sources: International Monetary Fund (IMF), CEIC and HKMA staff estimates.

The latest round of monetary easing in major advanced economies has generated some capital inflow pressures for East Asia. Most regional currencies have been strengthening against the US dollar since late August 2012, but the appreciation pressures appeared to have eased recently (Table 2.B). The performance of most stock markets in the region has improved over the past six months, while the long-term sovereign bonds yield spreads over US Treasury declined as demand for bonds in the region increased. Central banks in the region have generally been accumulating foreign exchange reserves, while some have taken steps to limit banks' currency forward position in an effort to restrain currency speculation.[3] Looking ahead, capital inflow pressure would continue amid ample global liquidity and better growth prospects relative to major economies.

Table 2.B
Asia: changes in major financial market indicators and foreign reserves between 22 August 2012 and 11 March 2013 [1]

	Exchange rates against USD (%)	FX reserves [2] (US$ bn)	Equities (%)	Change in yield spreads (basis points) [3]
NIE-3:				
Korea	3.7	13.0	3.5	-59.6
Singapore	-0.1	15.0	8.0	-21.3
Taiwan	1.0	13.0	7.2	-41.8
ASEAN-4:				
Indonesia	-2.0	-1.4	16.7	-87.2
Malaysia	0.3	5.9	0.3	-51.3
Philippines	3.9	4.1	32.3	-235.7
Thailand	5.3	3.9	27.8	-28.3

Notes:
1. Expectations of further easing by the US Federal Reserve increased sharply after the release of August Federal Open Market Committee minutes on 22 August.
2. Calculated using monthly data from the end of July 2012 to the end of February 2013.
3. Changes in yield spreads between 10-year sovereign bonds and the US Treasury.

Sources: CEIC, Bloomberg and HKMA staff calculations.

The economic outlook for the region should remain positive in the near term. Weaknesses in the advanced economies would continue to weigh on export growth in the region, but the recovery in Mainland China would support intra-regional trade. Consumption is expected to be resilient amid tight labour market conditions, and infrastructure investment would remain strong in some East Asian economies (for instance, Indonesia and Malaysia). Meanwhile, monetary conditions should stay supportive

[2] The central banks in Korea, Thailand and the Philippines cut their respective policy interest rates by 25 basis points in October 2012.

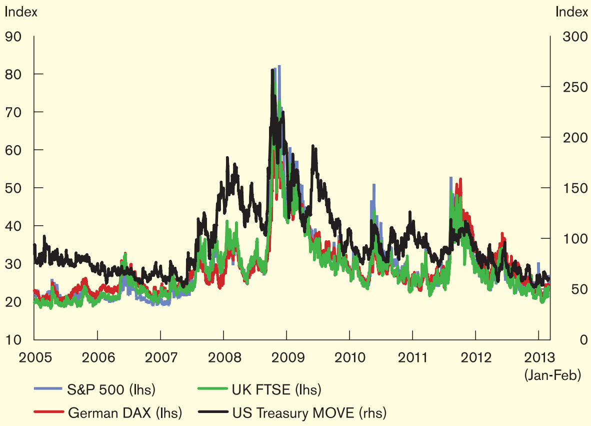
[3] Authorities in Korea and the Philippines announced measures to cap currency forward positions held by banks.

of growth amid continued monetary easing in major advanced economies and the stabilisation of deleveraging by European banks. Accordingly, risks to inflation appear to be tilted towards upside, particularly if global commodity prices strengthen along with a stabilisation of global conditions. The latest consensus forecasts project the region's GDP to grow by 4.4% as a whole in 2013, compared with 3.9% in 2012, while inflation rate would increase to 3.2% from 3.0%.

2.2 Global financial conditions

Global financial conditions have improved significantly in the past six months, driven by extraordinary accommodative monetary policy from central banks in the developed countries and reduced tail risks in the US and Europe. These positive developments have given a strong boost to investor sentiment, triggering large capital flows into risky assets. Equity markets rallied strongly around the world, with implied volatilities falling to their lowest levels since the onset of the global financial crisis (Chart 2.5).[4]

Chart 2.5
Equity and bond market option implied volatility indices

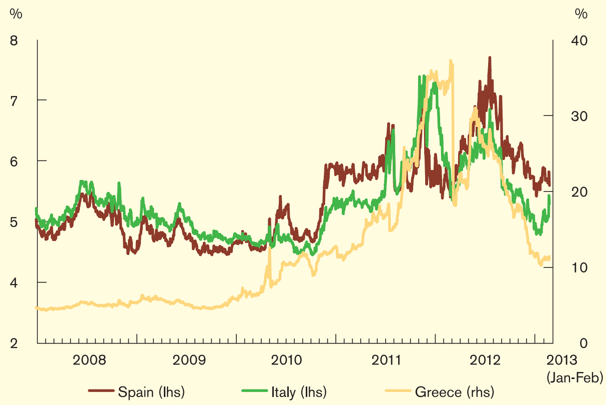


Source: Bloomberg.

Developments in the euro area continued to be a major source of financial market volatility. Earlier fears that Greece would need to undergo another debt restructuring were laid to rest, after the troika approved the disbursement of rescue aid on condition that the Government would step up efforts on fiscal austerity. The aversion of a debt default and an immediate exit from the euro area brought relief to the market, prompting a substantial fall in Greek bond yields. However, despite the near-term improvement, concerns about the country's long-run debt sustainability remain.

In addition to Greece, Spain and Italy also came under pressure throughout much of last year, as concerns about their fiscal positions and troubled banks intensified. These fears were later contained by the actions of the ECB, with President Draghi pledging to "do whatever it can to save the euro", followed by the introduction of the OMTs programme. The move marked a major turning point in the peripheral bond markets, with renewed capital inflows driving bond yields substantially lower (Chart 2.6).

Chart 2.6
Ten-year sovereign bond yields of selected peripheral European countries



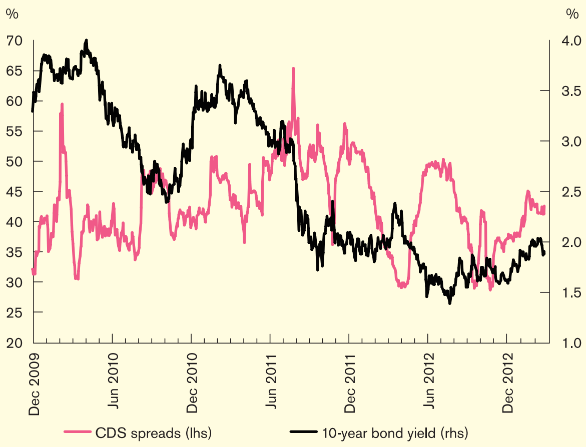
Source: Bloomberg.

[4] The US Treasury MOVE, compiled by Merrill Lynch, is the weighted average of implied volatilities of one-month options on 2-year, 5-year, 10-year, 30-year Treasury Bonds with weights 0.2, 0.2, 0.4 and 0.2 respectively.

However, the banking system in Europe continues to be a stumbling block, as banks are still highly leveraged and inadequately capitalised. Constrained by poor balance sheets, banks have been reluctant to lend to the real economy, taking a toll on any potential recovery.

Outside Europe, the threat of the "fiscal cliff" to the US economy was a major focus of financial markets during the fourth quarter. The subsequent aversion of a potential fiscal crisis, albeit only temporary, was a significant confidence booster for investors, with the risk of the worst-case scenario removed. Global financial markets were given a shot in the arm, with investors rushing from the sideline and risk appetite increasing. However, from a policy perspective, the fiscal situation remains a significant concern and fiscal risks continue to loom large (Chart 2.7).

Chart 2.7
US sovereign credit default swap spreads and 10-year bond yields

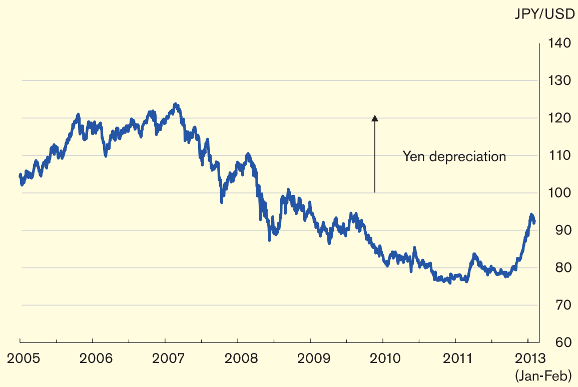


Source: Bloomberg.

On the monetary side, the Fed stepped up its quantitative easing programme in the fourth quarter, and assured the market that interest rates would be kept low "as long as the unemployment rate remains above 6.5%" and "inflation expectations continue to be well anchored.[5]" However, concerns seem to be emerging over the potential long-term negative consequences of the extraordinary accommodative monetary policy, as reflected in the sentiment of the recent FOMC meetings.

In Asia, proposed policy changes by the BoJ have caused significant market reaction since last November. The Japanese yen has fallen around 15% to a 2½ year low in response to the threat of unlimited quantitative easing and an increase to the BoJ's inflation target to 2% (Chart 2.8). With unconventional monetary policies pursued by central banks in the developed countries spreading far and wide, the amount of liquidity in the global financial system has reached unprecedented levels. How this liquidity is managed and eventually unwound will have significant implications for the global economy and financial markets.

Chart 2.8
Japanese yen vis-avis US dollar



Source: Bloomberg.

[5] See the US Federal Reserve press release on the FOMC meeting issued on 12 December 2012.

Mainland China

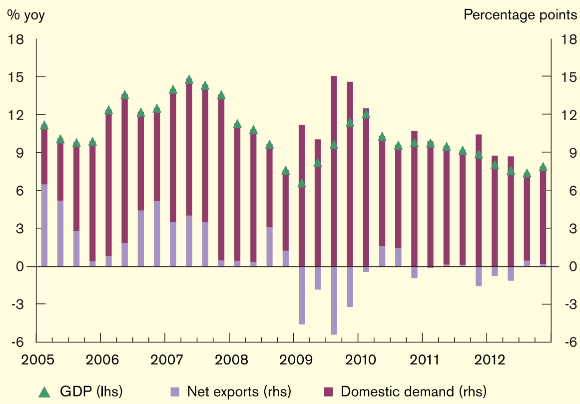
Growth of the Mainland economy has stabilised and shown signs of a pick-up since the last quarter of 2012. Partly reflecting robust expansion in non-bank financing activities, monetary conditions eased, while property markets continued to improve. The banking sector achieved solid profit growth, but still faces pressures on asset quality. Looking ahead, growth momentum is expected to improve further, with risks to inflation being tilted towards the upside accordingly.

2.3 Output growth and inflation

Growth in the Mainland economy stabilised in the last quarter of 2012, with real GDP increasing by 7.9% year on year, compared with 7.4% in the previous quarter (Chart 2.9). Domestic demand strengthened amid continued policy support and solid income growth. In particular, infrastructure investment remained strong, and real estate investment activity picked up in the latter part of the year along with the recovery in the property markets. Exports also improved, especially to emerging Asia, while the trade balance increased as a share of GDP accordingly.[6]

Growth momentum may continue to improve in the near term. Export growth is expected to remain modest along with the weak recovery of major advanced economies, but domestic demand could gain momentum on the back of proactive fiscal policy stance, improvement in business sentiment, as well as the initiatives by the authorities to promote household consumption. On the other hand, economic growth is not likely to see a sharp acceleration as the Government has reiterated its commitment to avoid any big economic stimulus to prevent a resurgence of overheating risks, particularly in the property markets. The consensus forecasts in March project GDP growth to rise to 8.2% in 2013 from 7.8% in 2012.

Chart 2.9
Mainland China: contributions by domestic demand and net exports to GDP growth



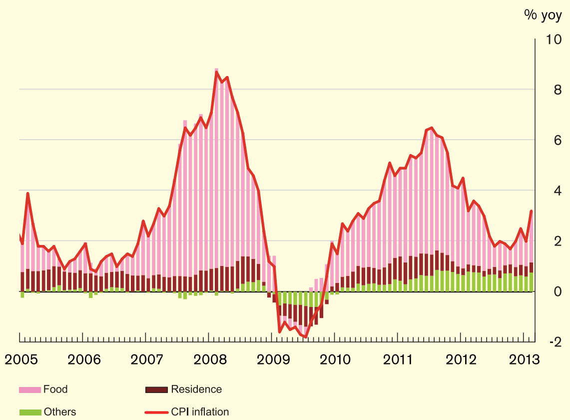
Sources: CEIC and HKMA staff estimates.

Inflationary pressures remained contained over the review period, but could increase somewhat going forward. Headline CPI inflation rate stayed around 2.0% year on year most of the time and then rose to 3.2% in February 2013 due partly to the Lunar New Year holiday effect

[6] The trade surplus rose to 3.4% of GDP in the second half of 2012 from 2.0% of GDP in the first half.

(Chart 2.10), while producer prices declined at a decelerated pace amid improvement in growth momentum. Continued quantitative easing in major advanced economies would support global commodity prices and raise China's import prices, particularly if global conditions turn out to be stronger than envisaged. The strengthening economic outlook and further reforms of resource prices at home may add some upward pressures to domestic costs. However, as the economy is expected to grow at a rate that is not far from the trend, inflationary pressures should not rise sharply. There have been concerns among investors that the decline in working age population would push up wages and add to inflationary pressures. Our analysis shows that the overall impact of labour market development on labour costs and employment has been limited, although some enterprises in the coastal areas have been affected (see Box 1 for more discussions). The latest consensus forecasts suggest that the headline CPI inflation rate could increase to 3.2% in 2013 from 2.6% in 2012.

Chart 2.10
Mainland China: contributions to CPI inflation



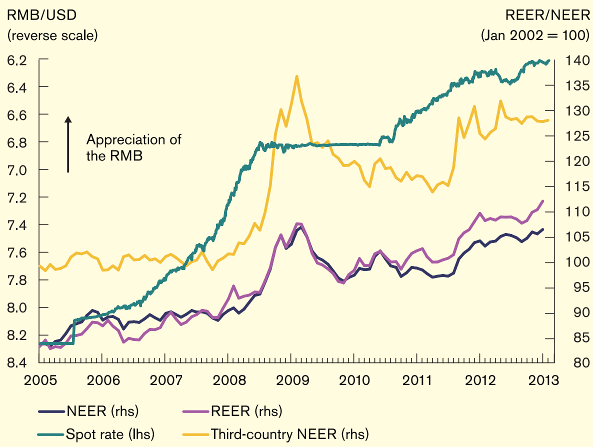
Sources: CEIC and HKMA staff estimates.

2.4 Monetary conditions, asset markets and banking risks

There appeared to be net capital outflows from the Mainland in the second half of 2012. Changes in official reserves netting out the trade balance, foreign direct investment and valuation effect were still negative in the fourth quarter of 2012, reflecting mainly bank-related capital outflows resulting from the unwinding of banks' liability position, while net portfolio flows were largely balanced. Capital outflow pressures showed signs of easing recently, and capital flow pressures could become more balanced going forward, along with the strengthening growth momentum on the Mainland, a drop in risk aversion and continued monetary easing in major advanced economies.

The renminbi remained strong in effective terms, and reversed the weakening momentum against the US dollar in the third quarter, partly reflecting eased concerns about the slowdown in the Mainland economy. The RMB/USD exchange rate has appreciated by around 2% on a cumulative basis since mid-August (Chart 2.11). Looking ahead, the renminbi is expected to stay firm against the US dollar, and consensus forecasts in March project the RMB/USD exchange rate to appreciate by about 1% in 12 months.

Chart 2.11
Mainland China: the renminbi exchange rates

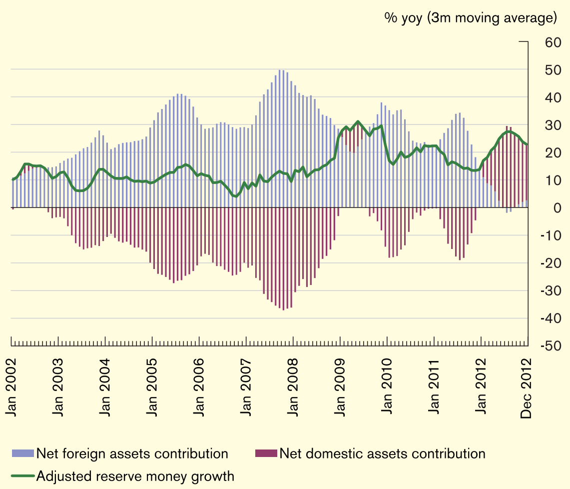


Note: A higher effective exchange rate index indicates a stronger renminbi. The third-country nominal effective exchange rate (NEER) takes into account the competition that China faces in foreign markets from other economies which export similar products. The methodology of constructing the third-country effective exchange rate is presented in Box 2 of the December 2006 issue of this report.

Sources: Bank for International Settlements, Bloomberg, CEIC and HKMA staff estimates.

The People's Bank of China (PBoC) maintained a largely pro-growth policy stance over the review period. Both benchmark interest rates and reserve requirement ratio were unchanged, whereas the growth of reserve money has stayed high by historical standards (Chart 2.12). Specifically, the contribution from net foreign assets remained low, but that from net domestic assets stayed solid. The PBoC has also continued to use the reverse repos actively to stabilise short-term inter-bank liquidity. In January 2013, the PBoC introduced the Short-term Liquidity Operations so that it can conduct open market operations on a daily basis. This increased the flexibility for the central bank to adjust liquidity in the financial system and would help smooth short-term interbank rates.

Chart 2.12
Mainland China: contributions to reserve money growth

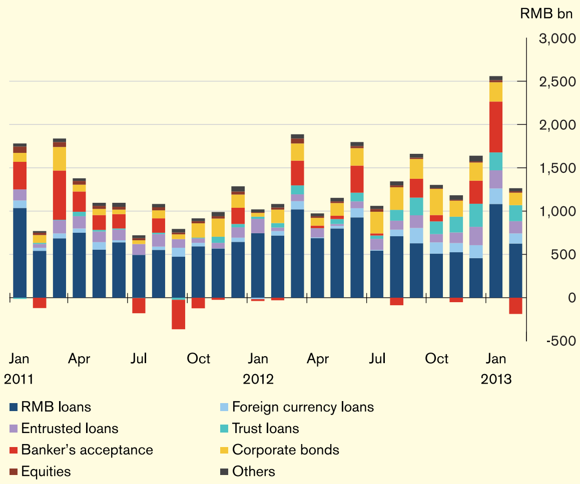


Note: Total reserve money is adjusted for the changes in the reserve requirement ratio.
Sources: CEIC and HKMA staff estimates.

Overall monetary conditions appear to have eased in recent months. Formal bank lending edged down year on year and new medium- and long-term loans also declined remarkably as a share of total new loans towards the end of the year, but total social financing, which covers part of the shadow banking activities, increased at a robust pace (Chart 2.13). Specifically, new trust loans, most of which were used to finance infrastructure and industrial and commercial enterprises, have grown by multiple times in the second half of 2012 from a year ago, while corporate bond financing doubled over the same period.

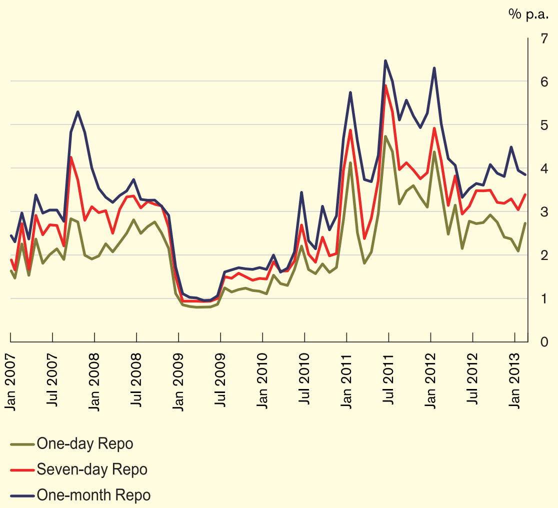
In addition, market interest rates generally stayed close to their medium-term levels (Chart 2.14), and corporate bond yields remained largely stable. Financing difficulties of private enterprises might have eased as well. For instance, private lending rates in Wenzhou have trended downwards in recent months.

Chart 2.13
Mainland China: total social financing



Source: CEIC.

Chart 2.14
Mainland China: money market rates

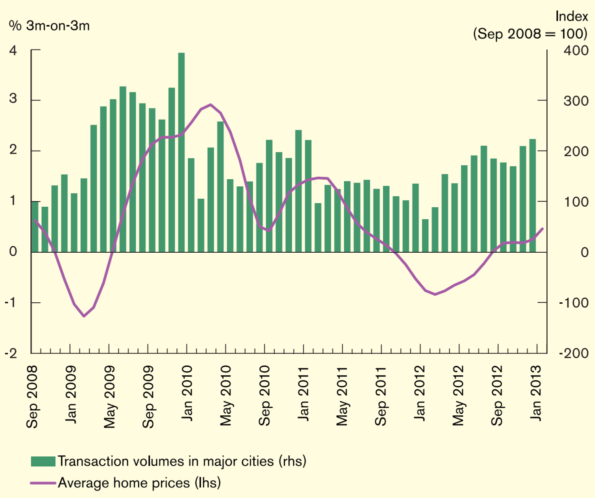


Sources: CEIC and WIND.

Equity markets reversed the downward trend towards the end of the year, partly reflecting a rise in investor confidence in the Mainland economic outlook. The price-to-earnings ratio of Shanghai A shares rose from an historical low of 10.6 in early December 2012 to 12.6 in mid-March 2013.[7] Going forward, the generally improving prospect of corporate profitability could continue to support market sentiment.

The housing markets have recovered further in the past few months. Property prices in most cities have been rising since September 2012, while property transaction volumes remained robust (Chart 2.15). The recovery was due mainly to the free-up of underlying demand supported by continued fine-tuning of property-related policies as well as improvement in market sentiment.

Chart 2.15
Mainland China: house prices and sales



Notes:

1. The transaction volume index is constructed based on the number of units sold in each month in Beijing, Shanghai, Hangzhou, Guangzhou, Shenzhen, Tianjin, Nanjing, Fuzhou, Xiamen and Ningbo.
2. Average home prices are the simple average of the price indices for 70 major cities.

Sources: CEIC, WIND and HKMA staff estimates.

The prospects for the Mainland housing markets should remain positive in the near term. Housing affordability has improved along with solid income growth, while the strengthening economic growth momentum and the Government's promotion of urbanisation in the coming years would continue to underpin market sentiment. Our analysis shows that house inventories in the big cities continued to decline over the review period, while major developers' financial conditions have improved along with an increase in sales revenues. This suggests the incentives for developers to cut prices have generally weakened. That said, property prices are not expected to see a sharp increase, given the gradual economic recovery, as well as the Government's determination to maintain administrative controls to ensure healthy development of the real estate sector.

The banking sector remained stable over the past few months. Commercial banks achieved impressive profit growth in the second half of the year despite the slowing economic growth.[8] It has been reported that some areas have seen a visible increase in bad loans, but the aggregate non-performing loan (NPL) ratio remained low at 0.95% in the fourth quarter. The weighted capital adequacy ratio was still high in the fourth quarter (13%), while commercial banks' loan loss reserves remained about 3.0 times of bad loans on average at the end of December 2012. Market sentiment about the banking industry showed signs of improving, with the price-to-book ratio of banks' shares increasing to 1.3 in early March 2013 from around 1 in early December 2012.

[7] This was still much lower than the past ten-year average of around 30.

[8] Our calculation based on the China Banking Regulatory Commission data suggests commercial banks' net profit growth was 14.3% year on year in the second half of 2012, compared with 23.3% in the first half.

However, concerns over the banking sector's profitability and asset quality may not ease significantly in the near term. The recovering property markets and the authorities' active management of lending to local government financing vehicles have reduced pressures on banks' asset quality. On the other hand, some small- and medium-sized enterprises and those sectors with substantial overcapacity (for instance, steel industry) may still have difficulty in repaying loans. Indeed, the NPL ratio in Wenzhou, where a large number of small enterprises are located, rose to 3.4% in November 2012 from 2.7% in June.

The rapidly expanding shadow banking system also posed uncertainty to the banking sector's asset quality and profitability. There is not yet a consensus on the definition of shadow banking, but according to most commentators of the Mainland economy, it mainly consists of banks' off-balance sheet financing activities, non-bank financial institutions' (for instance, trust companies) financing activities, and informal lending activities. There is much uncertainty over the size of shadow banking in Mainland China, but most estimates suggest it should be relatively much smaller than in major economies.[9] Moreover, part of the shadow banking activity is incentivised by the remaining interest rate controls in the banking system and is therefore not entirely negative or risky. In general, products that offer very high interest rates are likely to be more problematic than those whose yields are only a few percentage points higher than benechmark deposit rates, and the former does not appear to be a large part of bank-related activities. That said, the close yet opaque relationship between shadow banking and regular banking activities has raised concerns over its potential impact on financial stability, particularly given that some sectors financed through shadow banking still face headwinds in profit growth, and there may be a significant amount of maturity transformation and therefore liquidity risks built in such activities. Reflecting these concerns, the regulatory authorities on the Mainland have stepped up their supervision of shadow banking activities.

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9 See *Global Shadow Banking Monitoring Report 2012*, Financial Stability Board.

Box 1
How did labour market development affect labour costs in Mainland China?[10]

Labour markets in Mainland China have experienced some remarkable changes in recent years. First, working-age population (15-59 years old) started to decline in 2012 according to the National Bureau of Statistics. Secondly, it has been reported that there has emerged a shortage of "migrant workers" in coastal areas in recent years, while minimum wages have risen at a fast pace.

As labour market development matters for an economy's growth and inflation, this article first studies the extent to which labour market tightness has affected labour costs on the Mainland. It then explores the impact of changes in migrant labour forces on labour costs and employment in East China (Bohai gulf, Jiangsu-Zhejiang-Shanghai and Fujian-Guangdong-Hainan). Policy implications are also discussed accordingly.

Our research shows that the overall impact of labour market development on labour costs and employment has been limited, although Hong Kong-Macau-Taiwan (HMT) firms and private enterprises have been affected, particularly in the coastal areas. This suggests China has not yet seen an absolute shortage of labour, but structural problems, such as skill-mismatch, do exist in the labour markets.

How did labour market tightness affect labour costs in China?

According to economic theory, labour costs are mainly determined by minimum wages, labour demand-to-supply ratio and other control variables such as output. While an increase in minimum wages could partly capture the growth in living costs and hence reflect workers' wage requirement, a rise in labour demand-to-supply ratio implies intensification in labour market tightness and would push up labour costs. We study the impact of these factors on labour costs using annual firm-level data of above-scale industrial firms from 2001-2008 across regions (East China, Central China, West China and Northeast China), technology levels and firm ownerships. Specifically, firms in each region are grouped as state-owned enterprise (SOEs), foreign firms, HMT firms and private firms.

Our estimates show that the impact of labour market tightness on labour costs has been limited at the aggregate level, but has been larger for some HMT and private firms. The t-statistic of the coefficient for the labour demand-to-supply ratio, which measures the importance of labour market tightness in explaining the changes in labour costs, has been insignificant for SOEs and foreign enterprises in all regions, but has been significant for HMT and private firms in some areas. Specifically, the short-term coefficient of labour demand-to-supply ratio is around 0.2 for HMT and private firms in East China, suggesting a rise in the labour demand-to-supply ratio by one percentage point would lead to a rise in real labour costs by 0.2% in the short run (Table B1.A).

Table B1.A
Short-term elasticity of labour costs with respect to labour market tightness in East China

	SOE	Foreign	HMT	Private
Coefficient	-0.04	-0.14	0.16**	0.23*
T-statistic	-0.33	-0.83	2.21	1.61

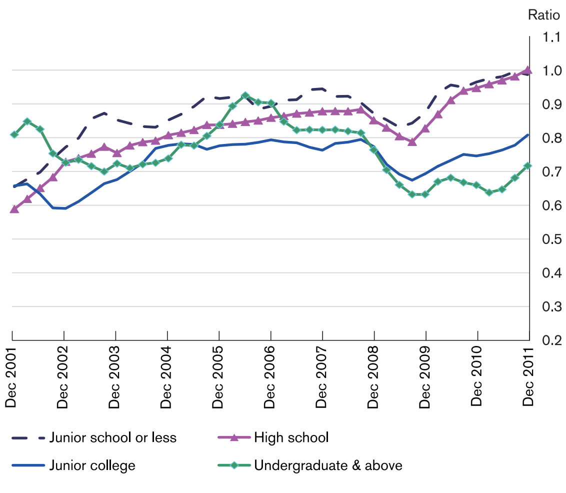
Note: * and ** denote statistical significance at 10% and 5% confidence levels respectively.
Sources: China Annual Survey of Industries and HKMA staff estimates.

[10] This article is adapted from "How did labor market development affect labor costs in China?" by W. Zhang and G. Han (2013), Hong Kong Institute for Monetary Research Working Paper, forthcoming.

As to other regions, the coefficient is only significant for private firms in West China and HMT firms in Northeast China. Our research further shows the picture remains essentially unchanged from a longer-term perspective, with labour market tightness only affecting the labour costs of some HMT and private firms.

The estimates suggest that there has not yet emerged an absolute shortage of labour on the Mainland, but there are some sectoral issues. Specifically, there seems to be a negative relationship between market tightness and education level of labour forces. As shown in Chart B1.1, the urban demand-to-supply ratios for labour forces with lower education (high school and junior school or less) have been trending upwards to close to unity in recent years, while those for higher-education groups (junior college, undergraduates and above) have been trendless over the whole sample period and stayed far below unity.

Chart B1.1
Labour demand-to-supply ratios by education



Sources: CEIC and HKMA staff estimates.

At the same time, there appears to be a shortage of skilled labour forces. China has been the "world-factory" and experienced a boom in construction in the past decades, while high-end industries and service sectors have developed at a slower pace. Demand for young skilled workers increased rapidly, but vocational training and technical school education have lagged much behind. On the other hand, enrolment of colleges has risen at a fast pace since mid-1990s, while the demand-to-supply ratio of college graduates has been far below unity, implying an over-supply of college graduates.

As most employees of HMT and private firms have been in the less educated group and, in many cases, young skilled workers, the above mentioned structural problems may explain why labour market tightness has had a larger impact on HMT and private firms' labour costs than on other types of firms. As shown in Table B1.B, the 2004 data indicates that more than 60% of the staff of private and HMT firms had received education of junior school or less, while only around 50% of the staff for SOEs and foreign firms received similar level of education. On the other hand, 4-5% of staff for SOEs and foreign firms had received university education, while less than 2.5% of the staff for HMT and private firms had studied in college.

Table B1.B
Education distribution of staff across firm ownerships in 2004 (%)

	SOE	Foreign	HMT	Private
Junior school or less	49.4	52.5	61.4	64.1
High school	36.7	35.6	30.7	28.7
Junior college	9.9	7.3	5.5	5.2
University	4.0	4.6	2.4	1.9

Sources: China Annual Survey of Industries and HKMA staff estimates.

How did labour migration affect labour costs in East China?

While East China remains the major destination for migrant workers, it has been reported that there has emerged a shortage of labour forces in this area in recent years, and wages have risen at a fast pace. Against this backdrop, we also study the extent to which changes in migrant labour forces have affected labour costs and employment in East China.

Our analysis considers both direct and indirect impacts of labour migration on labour costs and employment in East China. A decline in labour migration into East China would reduce the supply of labour in this area, thus increasing the labour market tightness and pushing up wages accordingly. A rise in labour costs would weigh on labour demand and thus reduce labour market tightness, which would in turn dampen wage growth. Such a dynamic process would continue until the demand for and supply of labour reach a new equilibrium. As changes in wages would lead to a change in the relative demand for labour across firms and hence generate some second-round effects on wages and employment, our analysis also takes into account the indirect impact of labour migration that stems from labour substitution between different levels of technologies and between firm ownerships.

Our estimates show that the impact of labour migration on labour costs is negligible for SOEs and foreign firms in East China, but it has been larger for private and HMT firms. Specifically, a 10% fall in labour migration would raise the real labour costs by 0.9% for private firms and by 0.3% for HMT firms in the short run. Meanwhile, employment in private firms would fall by 0.9%, followed by a 0.6% fall in HMT firms and a 0.5% fall in SOEs and foreign firms (Table B1.C).

Table B1.C
Short-run impact of a 10% fall in labour migration on labour costs and employment in East China (%)

	SOE	Foreign	HMT	Private
Labour costs	0.0	0.0	0.3	0.9
Employment	-0.5	-0.5	-0.6	-0.9

Sources: China Annual Survey of Industries and HKMA staff estimates.

The long-term effects on labour costs are larger for HMT and private firms, with a 10% fall in labour migration leading to a 3.6% and 0.9% rise in real labour costs for private and HMT firms respectively, but the impact remains insignificant for SOEs and foreign firms. The long-term responses of employment to the shock would be four times those of the short run. Our analysis also suggests that it is difficult for employers to substitute labour forces across different levels of technology or across firm ownerships, but it is easy to substitute labour forces across regions given other things unchanged.

Discussions

The main implication from our research is that, the overall impact of labour market development on labour costs and employment has been limited. However, the impact has been more noticeable for HMT and private firms (particularly in coastal areas) which have had a larger demand for a young less educated labour force that is in tighter supply.

Although our research has been based on data of 2001-2008, major findings should still hold currently and even in the years ahead. As shown in Chart B1.1, while the market has become tight in recent years for less educated labour forces, the supply of better-educated labour forces is still much larger than demand. On the other hand, our results may reflect structural problems in the Mainland labour markets.

First of all, segmentation of rural and urban labour markets makes it difficult for rural labour forces to work in urban areas for long enough, thus increasing the tightness for labour markets of less educated groups and skilled workers. Despite the progress made in the past decade in deregulating labour markets, there still exist many institutional factors (for instance, limited access to social security networks and schooling facilities for children) that prevent rural labour forces from working in cities on a permanent basis. In fact, some research shows that migrant workers started to return home at the age of 25-35 to set up family and would not come back to urban areas afterwards.

Secondly, as mentioned earlier, mismatch between labour demand and supply appears to be serious. Specifically, while higher education is conducive to an economy's growth from a long-term perspective, there could be structural problems in the labour markets in the short run if the level of education attainment does not match the demand for labour.

As such, it is useful to remove the barriers to labour mobility and develop vocational education to reduce sectoral tightness in the Mainland labour markets. It is also important to upgrade industrial chain and develop service sectors to reduce demand and supply mismatch in the labour market.