HONG KONG MONETARY AUTHORITY
香 港 金 融 管 理 局

# HALF-YEARLY MONETARY AND FINANCIAL STABILITY REPORT

*September 2012*

*This Report reviews statistical information between the end of February 2012 and the end of August 2012.*

# Half-Yearly Monetary and Financial Stability Report
September 2012

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# 1. Summary and overview

*Despite a volatile external environment, the Hong Kong dollar has not been subjected to any significant inflow or outflow pressures. Credit growth has been subdued amid slowing economic activities in both the local and regional economies. And, banks' profitability has strengthened despite slower growth of their balance sheets.*

*The local property market continues to be a major source of risk to financial stability in Hong Kong. Tight supply conditions and low interest rates may exert persistent upward pressure on housing prices, but this upward trend could be abruptly reversed by unexpected shocks. It is critical that both banks and their borrowers maintain large cushions of capital on their balance sheets.*

## *The external environment*

The global growth momentum faltered in the first half of 2012. As the stabilising effect of the European Central Bank's three-year Longer-Term Refinancing Operations waned, concerns about the European sovereign debt crisis renewed. With many crisis countries in the euro area plunging deeper into recession, there are growing signs that a vicious circle of recession and banking and sovereign debt problems is in the making in these countries. In the US, subdued economic growth and the slow pace of job creation increase the vulnerability of the economy to shocks emanating externally from Europe and locally from the political debate on fiscal consolidation. Major central banks therefore have stepped up easing and supportive measures.

Given the weaknesses in the external environment, growth momentum in the East Asian emerging economies, including Mainland China also moderated in the first half of 2012. Inflationary pressures have generally moderated and should continue to ease, leaving policymakers more room for supporting economic growth. Signs of capital outflows from the region have also emerged, exerting some downward pressures on regional currencies. Box 1 discusses the long-run performance of the stock market in Mainland China, and addresses the question whether investors should expect a tight relationship between stock market performance and economic growth.

## *The domestic economy*

The Hong Kong economy has advanced at a pace well below its trend rate for more than a year, with the difficult external environment weighing heavily on exports and holding back somewhat on domestic demand. The down cycle became even more evident in the first half of 2012, as real GDP grew by 0.5% in Q1 and then contracted a little by 0.1% in Q2.

Despite the lacklustre economic performance, labour market conditions remained tight. The seasonally adjusted three-month moving-average unemployment rate hovered between 3.2% and 3.4% in the first seven months of 2012, while total employment continued to edge up to a record high. Box 2 examines in more detail the tightness of the labour market conditions, and addresses the question whether the market is likely to remain resilient.

Inflationary pressure continued to recede, although the speed of the deceleration in price pressures has been slower than expected due to the continued strength of the rental component. On an annualised three-month-on-three-month basis, the underlying inflation rate edged down to 3.1% in July from 5.3% in January. All major CCPI components, including rental, tradables and services, have registered some moderation. With increasing downside risks to the domestic economy and strong global headwinds, inflationary pressure is likely to recede further in the near term.

For the rest of the year, the Hong Kong economy is not likely to regain much momentum, given the lull in external demand and global financial volatility. With private sector sentiment and income prospects already turning weaker, domestic demand could only provide a limited offset against the continued weakness in exports. As a result, market analysts have revised their forecasts for annual GDP growth down to a consensus average of 1.8%. The Government also sees growth weakening to the 1 - 2% range.

## *Monetary conditions and capital flows*

Despite heightened uncertainty in the global macro-financial environment, the Hong Kong dollar spot exchange rate has only moved within a tight band so far during the year. At the beginning of 2012, the Hong Kong dollar exchange rate strengthened slightly amid a respite from the euro area crisis. However, the rate softened through mid-May on renewed concerns over the crisis and the weaker global growth prospects. More recently, the demand for the Hong Kong dollar strengthened again on signs of progress in addressing the European sovereign debt crisis. Overall, the strength of the Hong Kong dollar in the past several years, to some extent, reflects its perception as a "safe-haven" currency by investors, a finding discussed in Box 3, which investigates the risk assessment of currencies by international investors in times of financial turmoil.

The low interest rate environment has continued. In the money market, while the overnight Hong Kong dollar interbank offered rate (HIBOR) fixing edged down, interbank rates for maturities of three months and beyond increased slightly, in line with movements in the US dollar interbank rates. The yield curve of Exchange Fund Papers shifted downward across the term structure, reflecting increased demand for high-quality Hong Kong dollar assets and the flattening of the US Treasuries yield curve. The average cost of funds for banks, as reflected by the composite interest rate, has declined slightly as a result of easing deposit interest rates. Mortgage interest rates have also seen a slight decline.

Along with weakening economic growth momentum, both bank lending and deposits have been growing at a moderating pace during the first half of 2012. The growth in bank lending has continued to be driven, to a large extent, by foreign currency loans and loans for use outside Hong Kong. In contrast, Hong Kong dollar loans and domestic credit increased only slightly at low single-digit rates. Both Hong Kong dollar and foreign currency deposits grew at a modest pace.

The funding structure of renminbi business in Hong Kong banks has continued to evolve. Although renminbi deposits decreased modestly from six months ago, the outstanding amount of renminbi certificates of deposit rose markedly from January to June. Along with the growth of renminbi funds, outstanding renminbi loans climbed further from a low base by over 70% during the same period. Cross-border use of the renminbi has continued to grow despite lower expectations of renminbi appreciation. Box 4 studies the determinants of the distribution of eurodollar deposits among different offshore banking centres and draws lessons for further development of offshore renminbi business in Hong Kong.

## Asset markets

Equities came under tremendous pressure amid the deteriorating external economic environment. The manifestation of the European sovereign debt crisis in the form of troubled banks sent global equity markets into a tailspin, while the US and Mainland economies displayed further weakness. The combination of financial and economic woes led to a significant increase in risk aversion, causing local stock prices to fall sharply and implied volatilities to surge. This kept more investors on the sideline in a market where trading was already subdued. In the primary market, fund raising activity was also reduced significantly amid the risk re-appraisal. While the relatively low market valuations may render the market more receptive to positive news, the period ahead is likely to continue to see a volatile market given considerable policy uncertainties in the US, Europe and the Mainland.

The domestic debt market has been dominated by issuances by the public sector and local banks. The European sovereign debt crisis continued to limit the accessibility of private sector issuers to international capital markets, including Hong Kong, especially for longer-term funding. In contrast, the growth of the offshore renminbi debt market continued at a brisk pace, accompanied by a rise in yields. Primary market activity was buoyant, especially at the longer end of the yield curve, attributable in part to issuances by the Mainland Government and state-owned banks. This should provide useful benchmarks for private issuers, hence benefiting the long-term development of the offshore market.

The residential property market has shown a sharp revival since February this year from a mild consolidation during the latter part of 2011. Housing prices have bounced up 13.1% so far this year, while the number of transactions increased by some 40%. Behind the revival was improving home-buying sentiment that helped release the pent-up demand from the earlier consolidation period.

Nevertheless, it is still uncertain how the residential property market will evolve, as it has been caught in a tug-of-war between two opposing forces. On the one hand, upward pressure on housing prices could persist with continued tight supply conditions and low interest rates. On the other, a weaker global outlook would weigh down housing prices. The recent rise in residential property prices has already eroded housing affordability further, with the income-gearing and price-to-income ratios soaring towards their 1997 peaks. It is therefore critical that both banks and their borrowers maintain large cushions of capital on their balance sheets to be resilient against potential shocks from a downward adjustment in housing prices. In view of this, the HKMA introduced on 14 September a new round of measures to further strengthen risk management in property mortgage lending business, including tightened underwriting criteria for loans to borrowers with multiple property mortgages and a newly introduced ceiling for loan tenors.

## Banking sector performance

The local banking sector continued to record healthy growth despite the unfavourable external environment. As the European sovereign debt and banking crisis intensified, banks in Hong

Kong have been prudent in managing their exposure to Europe. With the Mainland economy slowing, banks' credit risk in their Mainland exposure could also be rising, but the banks should be well positioned to manage such risks.

Banks' growth was characterised by strong capital positions by international standards and sound liquidity, as well as a general improvement in asset quality. Notwithstanding the prolonged European sovereign debt crisis and a slowdown in the Mainland economy, retail banks registered a noticeable improvement in earnings, with aggregate pre-tax profits growing strongly by 26.9% in the first half of 2012, from the second half of 2011, and the return on assets rising to 1.25% from 1%. The improvement reflected higher net interest and non-interest income as well as lower operating costs and lower net charges for provisions. Although competition in the loan market, particularly in mortgage lending, continued to be keen, the net interest margin of banks improved further to 1.35% in 2012 H1, from 1.27% in 2011 H2, as funding costs as a whole softened.

Domestic liquidity conditions remained steady, with the average liquidity ratio sustaining at well above the regulatory minimum requirement. The pace of credit growth slowed further to 4.7% in the first half of 2012 from 5.4% in the second half of 2011, while total deposits increased by an even more moderate rate of 1.5%, compared with a rise of 4.9% in the previous period. The overall loan-to-deposit (LTD) ratio increased to 69% in June 2012, but the Hong Kong dollar LTD ratio edged down to 84%. Given the less sanguine economic outlook, more banks expect the loan demand to slow further rather than pick up in the near term.

The Financial Stability Board has recently identified shadow banking as a potential source of systemic risk. Box 5 assesses the situation in Hong Kong and finds that the scale of shadow banking is small, with no material concerns on the participants' leverage, funding structure and interconnectedness with the local banking sector. Nevertheless, continuous monitoring is required since the situation may evolve amid rapid regulatory changes in the global financial system.

The *Half-yearly Report on Monetary and Financial Stability* is prepared by the staff of the Research Department of the Hong Kong Monetary Authority.

# 2. Global setting and outlook

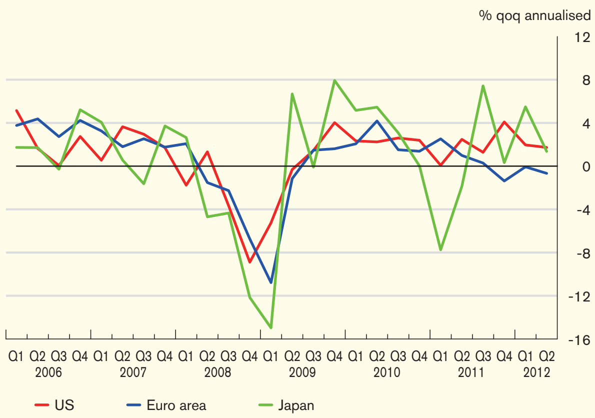
## External environment

*Growth in major advanced economies weakened in the first half of 2012. The European sovereign debt problem continues with heightened concerns over the build-up of a vicious circle between recession and banking and sovereign crises in some economies. East Asian economies saw slower growth momentum in the second quarter amid sluggish external demand, and the European sovereign debt crisis remains a major challenge to the region's near-term outlook.*

### *2.1 Real activities*

Growth in advanced economies weakened during the first half. Latest real GDP figures show the economies of the US and Japan grew by 1.7% and 1.4% respectively, while the euro area economy contracted by 0.7% in 2012 Q2 (Chart 2.1).[1]

**Chart 2.1**
**US, euro area and Japan: real GDP**



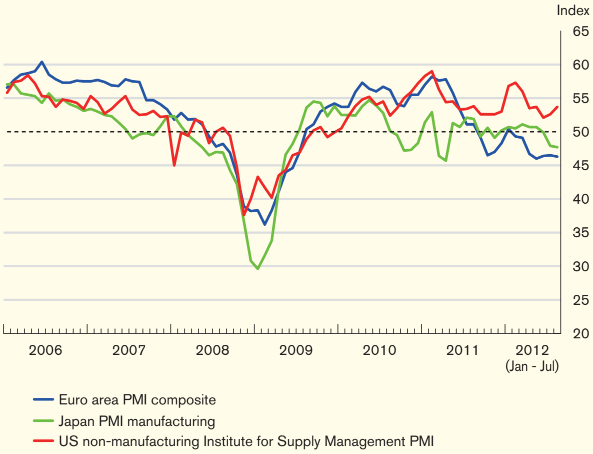

Sources: Bureau of Economic Analysis, Eurostat and Cabinet Office of Japan.

The economic downturn in Europe has heightened concerns over the build-up of vicious circles between recession and sovereign and banking crises in Italy and Spain. The borrowing costs for both countries were once pushed above levels that were widely regarded as unsustainable. In response, euro area finance ministers approved a €100 billion bailout for recapitalising Spanish banks, but the policy failed to calm markets. The situation was stabilised only after the President of the European Central Bank (ECB), Mario Draghi, pledged to do "whatever it takes" to defend the euro, and announced a new bond buying programme. Across the Atlantic, growth momentum of the US economy also slowed, particularly in the second quarter, although recovery in the housing market remained broadly on track. In Japan, growth slowed in Q2 following a strong rebound in Q1, supported by government reconstruction projects and the subsidies for eco-friendly cars, which boosted private consumption. The recent subdued readings in the Purchasing Managers' Indices

[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.

(PMI) indicate that growth will likely continue at a moderate pace in Japan and the US, while the euro area could see further contraction (Chart 2.2).

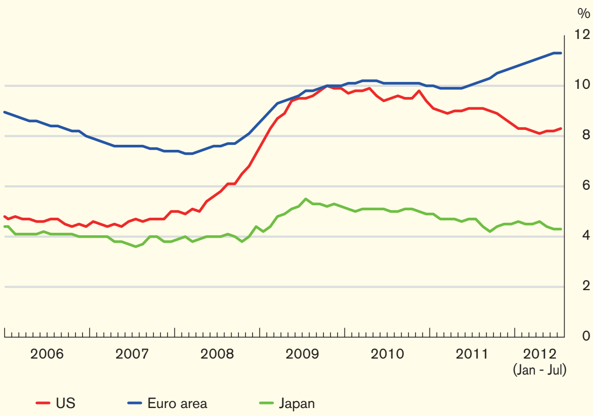
**Chart 2.2**
**US, euro area and Japan: Purchasing Managers' Indices**




Source: Bloomberg.

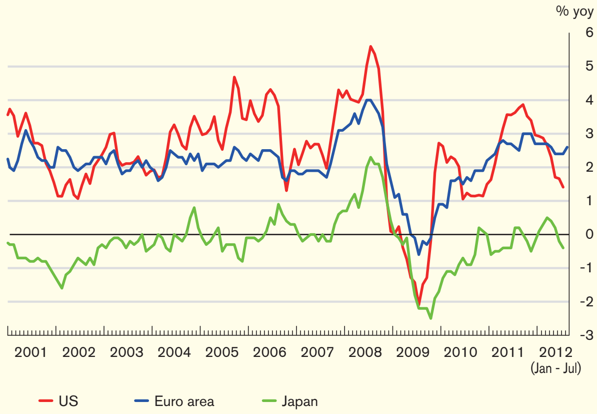
As a result of the subdued economic growth, the pace of job creation continued to remain slow. The unemployment rate stayed at stubbornly high levels of around 8.1% in the US, above 11% in the euro area, and 4.3% in Japan (Chart 2.3). The high degree of economic slackness, together with the earlier fall in food and energy prices, have eased headline CPI inflation in the advanced economies, with core inflation likely to fall gradually over the latter half of 2012 (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.

The economic outlook is subject to policy risks on both sides of the Atlantic. In Europe, deepening recessions in many crisis countries have increased the risk of failure to meet deficit reduction targets and fuelled public dissent on austerity. The ECB's new bond purchase programme, Outright Monetary Transactions (OMTs), has raised hopes that the potentially "unlimited" purchase of crisis economies' bonds with maturities up to three years may finally provide an effective backstop for the euro. While the programme may help prevent a full-blown crisis and buy time for governments to put in place structural reforms, it carries significant implementation risks. The chances of crisis economies failing to meet austerity and reform targets also remain high amid deep recession and the need to undertake sizable economic adjustments in these economics. Meanwhile, fiscal and political risks in the US also look set to heighten in the face of the "fiscal cliff" and in the run-up to November's presidential election. Although there is a reasonable chance that a deal between the two main political parties will eventually be struck, more political wrangling could increase policy uncertainties and market volatilities, leading to a loss in consumer and business confidence. In response to the slowing growth, high unemployment and limited fiscal space, the Federal Reserve has announced further quantitative easing measure to purchase $40 billion of mortgage-backed securities per month until the labour market improves "substantially". The Fed has also pushed back its anticipation that the federal funds rate would remain low at least through mid-2015. It remains highly uncertain whether the new round of quantitative easing would be effective in promoting growth and employment given that structural adjustments are yet to be completed.

Following a general strengthening in 2012 Q1, growth momentum in most East Asian economies moderated in Q2, due mainly to sluggish external demand (Table 2.A).[2] Inflationary pressures have broadly softened, with average CPI inflation declining from 3.7% year on year in December 2011 to 2.8% in July 2012. Against this backdrop, some central banks in the region have loosened their monetary policy between March and August (Table 2.B). In line with major stock markets, regional equity prices fell sharply in May amid a worsening in the euro area debt crisis, but recovered somewhat recently. Regional currencies weakened against the US dollar in May, and experienced some two-way movements in the past two months.

**Table 2.A**
**Asia: real GDP growth**

| (% qoq, annualised) | 2011 Q1 | 2011 Q2 | 2011 Q3 | 2011 Q4 | 2012 Q1 | 2012 Q2 |
|---|---|---|---|---|---|---|
| **NIE-3:**[1] | **8.6** | **2.3** | **1.6** | **-0.2** | **3.5** | **1.7** |
| Korea | 5.3 | 3.4 | 3.4 | 1.3 | 3.5 | 1.1 |
| Singapore | 19.7 | -3.0 | 2.0 | -2.5 | 9.5 | -0.7 |
| Taiwan | 10.4 | 2.1 | -1.9 | -2.1 | 1.5 | 3.5 |
| **ASEAN-4:**[1] | **5.1** | **2.9** | **4.9** | **-2.4** | **17.2** | **7.3** |
| Indonesia[2] | 4.6 | 6.3 | 5.5 | 9.6 | 4.1 | 6.4 |
| Malaysia[2] | 7.6 | 3.4 | 3.2 | 6.6 | 6.2 | 5.5 |
| Philippines | 6.2 | 1.9 | 2.5 | 7.3 | 12.6 | 0.9 |
| Thailand | 3.4 | -2.8 | 6.7 | -35.7 | 50.8 | 13.9 |
| **East Asia:**[1] | **6.9** | **2.6** | **3.2** | **-1.3** | **10.1** | **4.4** |

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.

**Table 2.B**
**Asia: policy interest rates**

| | Policy interest rate[1] | | | |
|---|---|---|---|---|
| | 31 Jul 2012 (% p.a.) | Recent peak in 2011 (% p.a.) | Cumulative rate cut from recent peak (Percentage points) | Rate cut since Mar 2012 (Percentage points) |
| Indonesia | 5.750 | 6.750 | 1.000 | – |
| Korea | 3.000 | 3.250 | 0.250 | 0.250 |
| Malaysia | 3.000 | 3.000 | – | – |
| Philippines | 3.750 | 4.500 | 0.750 | 0.500 |
| Taiwan | 1.875 | 1.875 | – | – |
| Thailand | 3.000 | 3.500 | 0.500 | – |

Note:
1. Indonesia: BI rate; Korea: base rate; Malaysia: overnight policy rate; The Philippines: overnight reverse repo rate; Taiwan: discount rate; and Thailand: policy rate.

Sources: Bloomberg and HKMA staff estimates.

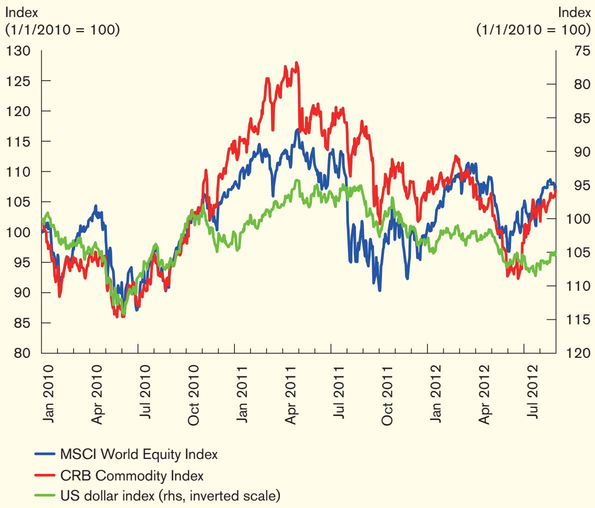
The European sovereign debt crisis remains a major challenge to the economic outlook for the region. Exports are facing strong headwinds, while growing pressures for de-leveraging in European banks could reduce credit availability in East Asia and push up funding costs accordingly. Overall inflationary pressures in the region should continue to ease, leaving the policymakers sufficient room to support economic growth in the period ahead. The latest consensus forecasts project the region's GDP to grow by 3.9% for 2012 as a whole, compared with 4.1% in 2011; and inflation to decline to 3.0% from 3.9% last year.

## *2.2 Global financial conditions*

Global financial market conditions have remained fragile over the past six months, amid a deepening of the European crisis and rising concerns about the global economy. This has triggered strong capital inflows into safe-haven assets, boosting the US dollar and Japanese yen, while keeping yields of US Treasuries and German Bunds at record low levels. In contrast, global equity markets and growth-sensitive commodities have been hit hard by deteriorating macro conditions and reduced investors' risk appetite throughout Q2, although there have been some significant recoveries lately (Chart 2.5).

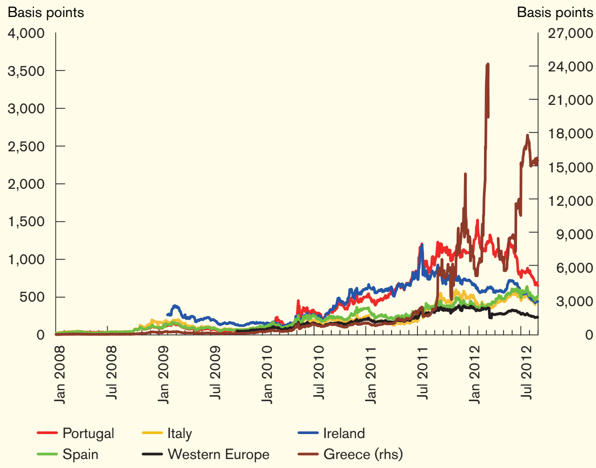
[2] The sharp rise in Thailand's GDP in 2012 Q1 after the fall in the previous quarter was mainly due to the recovery of manufacturing production and exports after a temporary disruption as a result of severe flooding.

### Chart 2.5
### MSCI World Equity Index, CRB Commodity Index and US Dollar Index




Source: Bloomberg.

### Chart 2.6
### Five-year sovereign CDS spreads of peripheral European countries

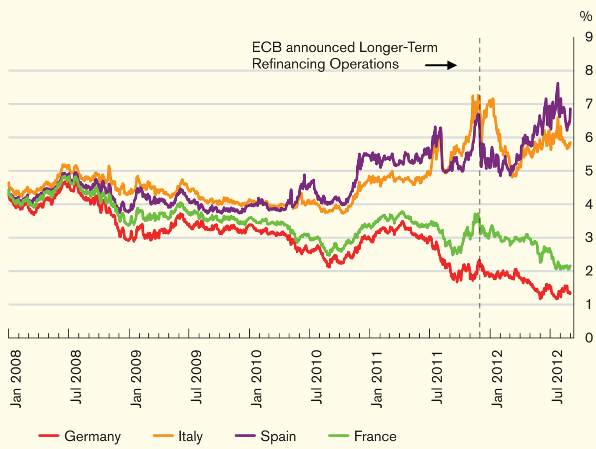



Source: Bloomberg.

Developments in the euro area continued to be the main source of market turbulence during this period. At the epicentre of the crisis, the Greek situation became very vulnerable at one stage. In Q2, escalating political disagreement within the country threatened to drive it out of the euro area. While the risk of a disrupting exit was reduced after the second election, the Greek sovereign credit risk remains elevated (Chart 2.6), with financial markets pricing in significant risks of another debt default and the country eventually leaving the European monetary union.

As the crisis spread, some larger European countries, such as Spain and Italy, saw their borrowing costs rise significantly. The health of Spanish banks was called into question as banks' capital was eroded by the collapse of the Spanish housing market, and deposit outflows widened banks' funding gaps. The announcement of a Spanish bank recapitalisation programme by the European Union did little to calm the market, as investors questioned the effectiveness of the bailout, and feared that the government's balance sheet would be undermined by the bank rescue. Despite some sizable declines recently following speculation of additional ECB stimulus, long-term bond yields in Spain and Italy have remained at elevated levels (Chart 2.7).

### Chart 2.7
### Ten-year bond yields of selective European countries

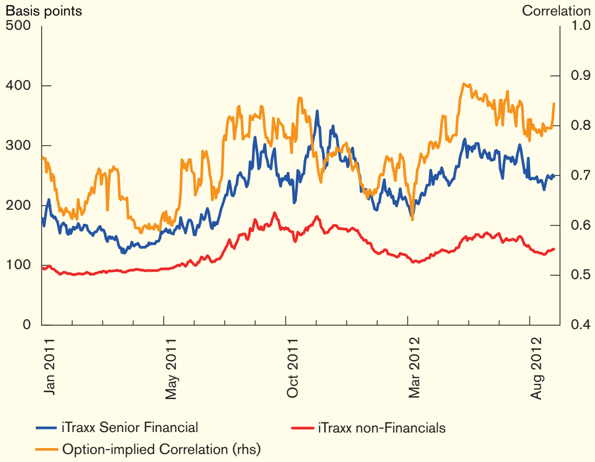



Source: Bloomberg.

In addition to the peripherals, core European countries were also not immune from the escalating crisis. Moody's recently lowered the outlook for some triple A-rated euro area countries to negative from stable, on concerns about the rising bailout costs of the existing programmed countries and the colossal contingent liabilities they would face should Spain and Italy also require full sovereign rescues. While these downgrades, if they were to occur, would increase the difficulty of supporting the peripherals, it is hoped they could also accelerate progress towards greater euro area integration, and spur much needed reforms that tackle the fundamental problems of the region.

As well as the negative contagion among the sovereigns, the crisis has also spread rapidly across economic sectors. Weakened sovereign bond markets have hurt banks' balance sheets, while deteriorating financial sector conditions have, in turn, led to rising default risks of non-financial corporates (Chart 2.8).

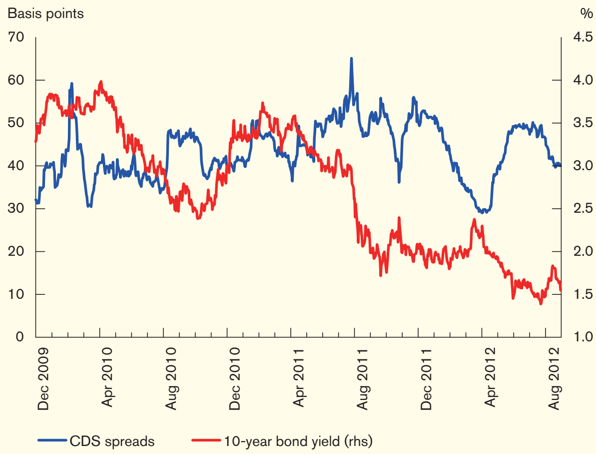
**Chart 2.8**
**CDS spreads of European financials and non-financials and their implied correlation**




Sources: Bloomberg and HKMA staff estimates.

Outside Europe, concerns about the global economy dampened market sentiment. In the US, the rapid slowdown in economic growth and sluggish labour market recovery led the Federal Reserve to extend its Operation Twist programme to the end of this year, and spurred increasing talk of further quantitative easing in financial markets. On the fiscal side, the significant uncertainty stemming from the upcoming presidential election, the debt ceiling, and more importantly, the scheduled fiscal tightening, or the "fiscal cliff", have kept investors on edge and hindered risk appetite. These concerns have put some upward pressure on the US sovereign credit default swap (CDS) spreads, but the Treasury markets appear to be unfazed, with long-term bond yields remaining at near record lows (Chart 2.9). However, it is likely the fiscal debate will gain increasing momentum in the remainder of the year as the economy moves closer to the "cliff".

**Chart 2.9**
**Ten-year US Treasury bond yields and five-year US sovereign CDS spreads**

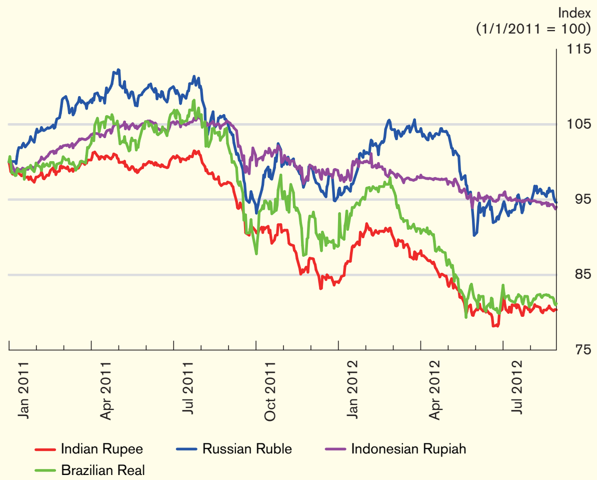



Source: Bloomberg.

In addition to the problems in the developed world, recent developments have also been disconcerting in emerging market (EM) countries. The significant slowdown in the economies, along with growing imbalances in some countries, caused significant falls in EM currencies and equity prices, with ratings agencies threatening critical downgrades

(Chart 2.10). There are fears some EM countries that have been subject to very strong capital inflows and credit growth in recent years may join their developed counterparts in undergoing a period of de-leveraging.

**Chart 2.10**
**Selective emerging market country currencies against the US dollar**




Source: Bloomberg.

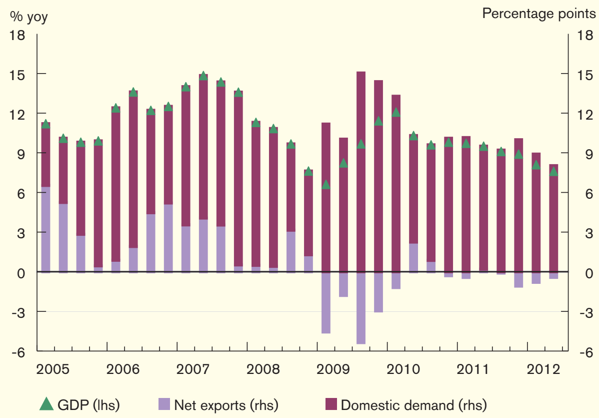
## Mainland China

*Economic growth moderated further amid a slowdown in both domestic and external demand, while inflationary pressures continued to ease. With a rise in real interest rates, monetary conditions appear to have tightened, but remain supportive of growth. Property markets showed signs of stabilisation, and banks were starting to face pressure on profitability and asset quality. Growth momentum is expected to improve in the next couple of quarters along with a shift in policy focus towards supporting economic growth.*

### 2.3 Output growth and inflation

Growth of the Mainland economy moderated further in the first half of 2012 amid a softening in both domestic and external demand (Chart 2.11). Slower growth in domestic demand appeared to have been driven mainly by weaker growth in investment spending. Growth in real estate investment continued to decline amid tight property market policies, whereas infrastructure investment recovered somewhat recently. The trade surplus as a share of GDP continued to trend downwards and will likely stay modest in the next couple of years amid sluggish global demand.[3]

**Chart 2.11**
**Mainland China: contributions by domestic demand and net exports to GDP growth**




Sources: CEIC and HKMA staff estimates.

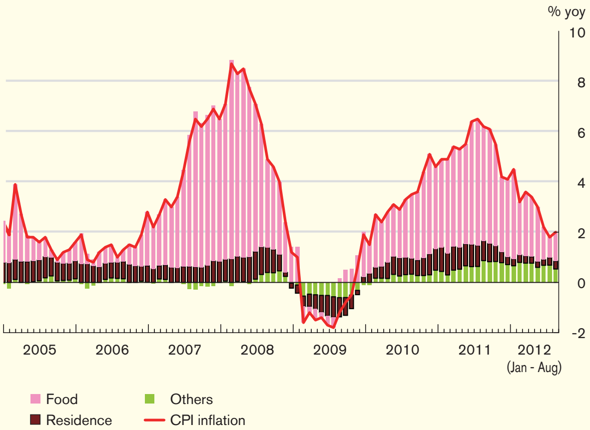
Growth momentum should improve somewhat in the next couple of quarters. The European sovereign debt crisis will continue to dampen China's exports and manufacturing investment. Real estate investment growth will also stay moderate amid continued administrative controls on the property markets. However, spending on infrastructure projects is expected to grow at a faster pace, while the recently announced fiscal incentives to encourage households' purchases, tax reforms, and continued fine-tuning in monetary policy will help foster domestic demand and support growth. A number of local governments have also announced a range of measures to support industrial growth in the past few months. The latest consensus forecasts project the Mainland economy to grow by 7.7% for 2012 as a whole.

Inflationary pressures eased further along with the moderating growth momentum and will remain contained in the near term. The CPI inflation rate fell from 4.5% year on year in January to 2% in August, driven by the softening

[3] The trade surplus was 2.1% of GDP in the first half of 2012, compared with 2.9% and 2.2% in the same periods of 2010 and 2011 respectively.

food price inflation and residence costs (Chart 2.12), while the PPI inflation rate has stayed negative year on year for six consecutive months, due mainly to a weakening in raw material prices. The recent drought and the implementation of another round of quantitative easing in the US posed some upside risks to global commodity prices and China's import prices, but the weak global conditions would have some dampening effect, while subdued demand pressures at home will weigh on domestic costs. On the other hand, risks for deflation are remote given the economy is growing at a rate that is probably not far from the trend. The latest consensus forecasts project the headline CPI inflation to be 2.8% for 2012 as a whole.

**Chart 2.12**
**Mainland China: contributions to CPI inflation**

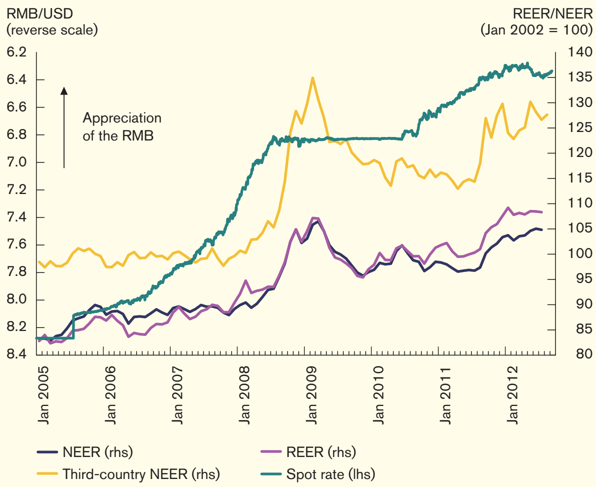



Sources: CEIC and HKMA staff estimates.

## 2.4 Monetary conditions, asset markets and banking risks

The softening growth momentum, together with the rising risk aversion due to renewed tensions in the European sovereign debt crisis, continued to dampen capital flows into China and exerted some downward pressures on the RMB/USD exchange rates. Foreign direct investment continued to register inflows in net terms, but portfolio investment saw net outflows in Q2, while financial institutions' foreign exchange purchases remained volatile. The renminbi appreciated slightly in effective terms in the past few months (Chart 2.13), but experienced more noticeable two-way movements against the US dollar after the daily trading band was widened by a half percentage point around the central parity in April, and weakened modestly on a cumulative basis since then.

**Chart 2.13**
**Mainland China: the renminbi exchange rates**

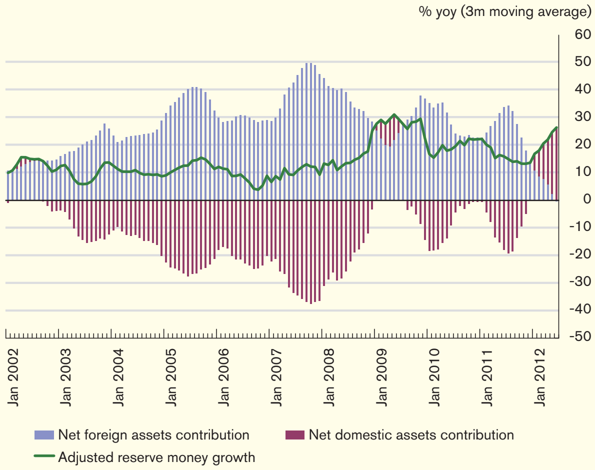



Note: A higher effective exchange rate index indicates a stronger renminbi. The third-country nominal effective exchange rate (NEER) takes into account the competition that China faces in foreign markets from other economies which export similar products. The methodology of constructing the third-country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

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

The authorities have shifted the policy focus towards supporting growth in view of the slowdown in economic activity and reduction in inflationary and capital inflow pressures. The People's Bank of China (PBoC) cut the reserve requirement ratio twice by a total of 100 basis points in February and May and has also actively used reverse repos to manage short-term fluctuations in interbank liquidity. As the contribution from net domestic assets more than offset the effect of a drop in net foreign assets, the reserve money growth has risen distinctly in recent months (Chart 2.14). In addition, the PBoC cut the benchmark interest rates twice in June and July and made an important step towards interest rate liberalisation by granting commercial banks more flexibility in setting both lending and borrowing interest rates. While there is still enough room for monetary easing, policymakers need to strike the right balance between supporting economic growth and avoiding a resurgence of overheating risks in the property markets.

**Chart 2.14**
**Mainland China: contributions to reserve money growth**

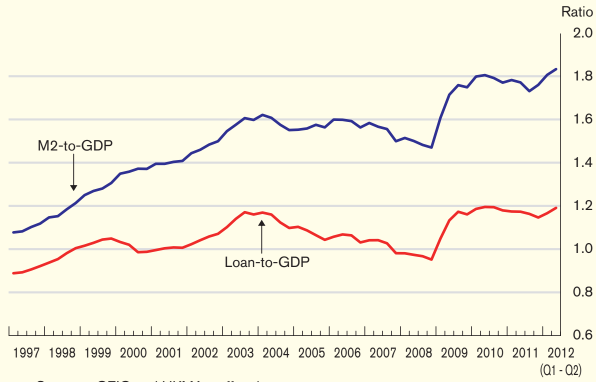



Note: Total reserve money is adjusted for the changes in the reserve requirement ratio.
Sources: CEIC and HKMA staff estimates.

Broad money continued to grow at a moderate pace in recent months after touching an historical low, year on year, in January 2012. This was due in large part to a drop in corporate deposits amid a weakening in corporate profitability and re-allocation of assets from deposits to wealth management products. New short-term loans grew at a firm pace, but medium and long-term credit continued to drop year on year before recovering somewhat recently, partly reflecting the impact of controls on lending to local government financing vehicles (LGFVs) and property developers. However, the recent weak reading on money and loan growth may overstate the tightness of monetary conditions in the Mainland economy, given the strong expansion of money and credit during 2009 - 2010, as well as the rapid development of the shadow banking system in recent years.

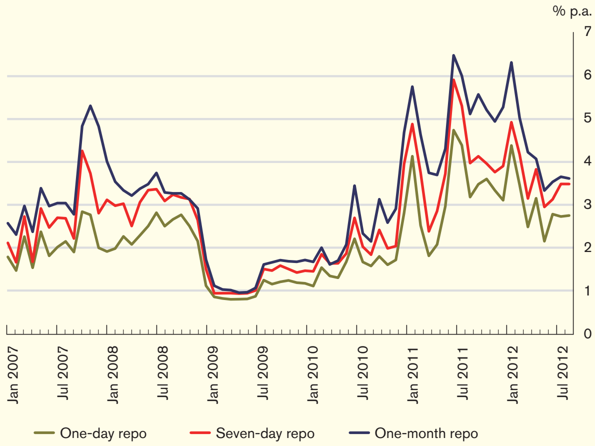
Overall, monetary conditions have tightened somewhat amid a rise in real interest rates, but should still be supportive of growth. The ratios of broad money and credit to GDP registered historical highs in Q2 (Chart 2.15), while the size of financing other than bank loans in the first half of the year, which covers part of the funding through the shadow banking system, was comparable to that of the same periods in recent years. In addition, corporate bond yields and money market rates have trended downwards to around the medium-term levels (Chart 2.16). Nevertheless, private enterprises, particularly the small and micro-sized ones, still face difficult funding conditions. For instance, private lending rates in Wenzhou stayed above 20% a year.

**Chart 2.15**
**Mainland China: ratios of broad money and loans to GDP**



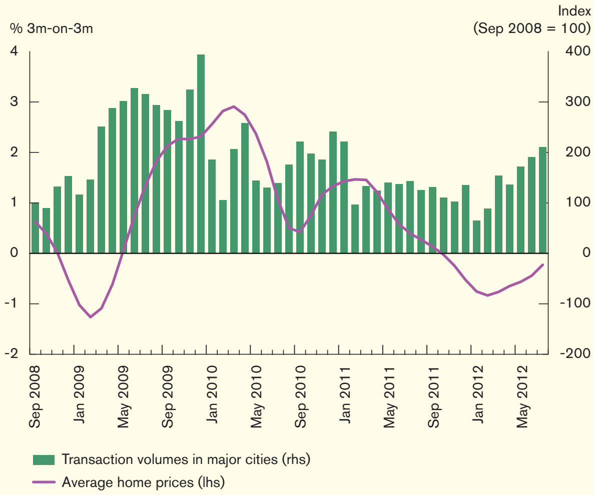

Sources: CEIC and HKMA staff estimates.

### Chart 2.16
### Mainland China: money market rates




Sources: CEIC and HKMA staff estimates.

### Chart 2.17
### 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 cities.

Sources: CEIC, WIND and HKMA staff estimates.

Equity markets remained sluggish amid the softening growth momentum and increased risk aversion. Having risen briefly to about 15 in February, the price-earnings ratio of Shanghai A shares trended downwards to below 12 in August, compared with the past 10-year average of about 30. Box 1 discusses the relationship between economic growth and long-run performance of stock markets in Mainland China.

The housing markets have recovered somewhat in the past few months. Overall, property prices dropped at a decelerated pace, while many large cities, including Beijing and Shanghai, saw a recovery in prices on a sequential basis more recently. Property transaction volumes have also risen steadily (Chart 2.17), reflecting mainly the release in underlying demand, driven by the declines in house prices as well as the fine-tuning of property-related policies to support economic growth. For instance, some cities have loosened mortgage lending conditions and down-payment requirements for first-home buyers.

Looking ahead, prospects for the housing markets appear to be unclear. Local governments may continue to fine-tune policies to support housing markets and expectations among investors for more pro-growth policy measures would underpin market sentiment, but continued administrative controls will weigh on the property markets in the near term. While growth in new housing starts and completions has weakened, inventories remained high by historical standards. Further escalation in the European sovereign debt crisis would not have a major direct impact on Mainland asset markets, but the indirect impact through, say, a weakening in market sentiment should not be underestimated. As potential demand for properties, driven by urbanisation as well as home upgrading and investment incentives, remains robust, the government should be able to fine-tune the administrative controls to balance the risks if needed.

The banking sector continued to see strong profits in the first half of 2012. While the aggregate non-performing loan (NPL) ratio of the banking sector remained stable at below 1%, anecdotal evidence suggests that some regions experienced a visible rise in the NPL ratio in the past few months amid slowing economic activities. Against this backdrop, shares in Mainland banks, especially for smaller banks, recently came under stronger selling pressure.

The Mainland banking sector may continue to face pressures on profitability and asset quality amid uncertainties over the property markets and slower trend growth. Some banks may need to be recapitalised in order to meet the new requirements[4], although for commercial banks as a whole, the capital adequacy ratio averaged 12.9% at the end of June 2012, visibly higher than the official requirement. However, overall risks to the banking industry should be manageable. The strong profits in the past should provide banks much room to absorb possible increases in credit losses. The authorities have also actively managed banking-related risks including lending to LGFVs, while commercial banks' loan loss reserves were increased to about 2.9 times that of bad loans on average at the end of June 2012, compared with less than 1.2 times at the end of 2008. A recent stress test by the PBoC suggests that Mainland banks are generally resilient to a sharp slowdown in economic growth and a noticeable rise in the NPL ratio.[5]

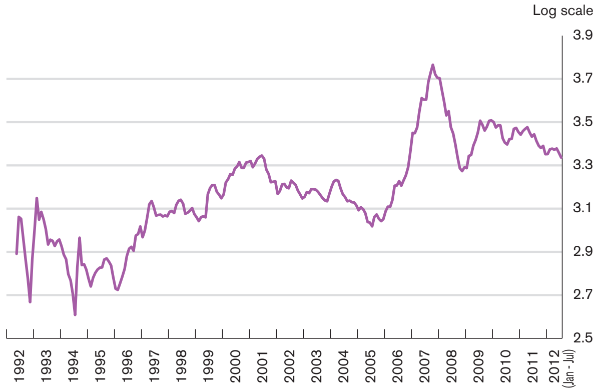
4 In line with Basel III provisions, the China Banking Regulatory Commission has set the minimum capital adequacy ratio at 10.5% for commercial banks and at 11.5% for systemically important banks.

5 See PBoC's Financial Stability Report 2012.

# Box 1
# Economic growth and the long-term performance of the stock markets in Mainland China

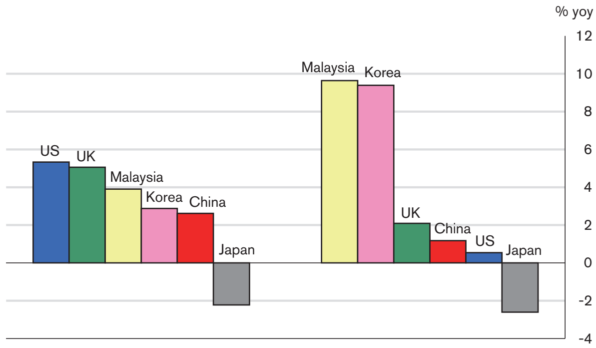
It is generally believed that economic growth supports the performance of stock markets. While Mainland China has seen an average annual GDP growth rate of about 10% in the past decade, its stock price indices have experienced dramatic ups and downs and dropped recently to a level close to that of early 2001 (Chart B1.1). Further analysis suggests that, on the whole, the Mainland stock markets have had a poorer performance than other major markets in the past decade, with the annual stock return being only 1.2% a year in real terms, higher than that of the US, but much lower than those of most emerging Asian economies including Malaysia and Korea (Chart B1.2). The picture does not change much for a longer sample period (left panel of Chart B1.2). Against this backdrop, the analysis below attempts to shed some light on the apparent "puzzle" from both theoretical and empirical perspectives.

**Chart B1.1**
**Shanghai A share index**




Sources: CEIC, WIND and HKMA staff estimates.

**Chart B1.2**
**Real stock returns across markets (year on year)**




Note: Stock returns in this chart are calculated from the HP-filtered trends of total return indices to reduce the sensitivity of the results to data cut-off dates. CPI inflation rates are used to deflate stock returns. The US: S&P500; the UK: FTSE; Japan: TOPIX; Korea: KOSPI; Malaysia: KLCI; and China: Shanghai A share.

Sources: Bloomberg, CEIC and HKMA staff estimates.

## *GDP growth and stock market performance: what does economic theory say?*

Economic theory does not necessarily support the view that faster economic growth implies stronger equity market performance. According to basic asset pricing theories, stock prices are the discounted value of the sum of future dividends, and under certain crucial assumptions (for instance, perfect information, market efficiency and a system of complete markets), stock returns should equal return to capital in equilibrium.[6] This suggests only the type of economic growth that is driven mainly by an improvement in total factor productivity with a rise in returns to capital would imply a rise in stock returns. In contrast, if economic growth is solely driven by expansion in capital investment, stock returns could decline as a result of diminishing returns to capital.

On the other hand, if the assumptions underlying these theoretical arguments are not met, stock returns may not have a tight link with return to capital in the corporate sector. In this case, economic growth, even if driven by improvement in total factor productivity with higher returns to capital, does not necessarily

[6] See "Production-based asset pricing and the link between stock returns and economic fluctuations" by J. H. Cochrane, *The Journal of Finance*, Vol. 46, No. 1, pages 209 - 237, 1991.

point to an improvement in stock market performance. A number of factors could invalidate the assumptions of conventional asset pricing theories in reality. Specifically, market frictions have been common in practice. For instance, in a stock market that has a large degree of information asymmetry and where corporate governance is weak, investors may prefer alternative assets with valuations and risk factors that could be better understood, thus undermining stock market performance regardless of return to capital and economic growth.

Market structure may have a bearing on the link between stock returns and economic growth, especially for emerging economies where stock markets are mainly represented by large or state-owned companies, while private companies, an important driving force of economic growth, are often left non-listed.[7]

In addition, the openness of an economy may also affect the link between GDP growth and stock prices. Specifically, since Mainland China manages its capital account rather tightly, international investors cannot fully invest in the Mainland stock market up to their desired or optional allocations. Such restrictions may weaken the link between Mainland China's growth and its stock market performance. On the other hand, while capital account liberalisation could enhance market competition and efficiency, company earnings and stock returns might become less sensitive to domestic economic growth due to increasing influence from their foreign businesses as they become more international. Therefore, the net impact of capital account liberalisation on the link between economic growth and stock market performance is theoretically not clear.

Indeed, empirical evidence shows mixed results on the correlation between GDP growth and stock market performance, depending on the economies studied, sample periods covered and methodologies used. For instance, a study by Ritter (2005) for 16 major developed economies finds that the cross-country correlation of real stock returns and per capita GDP growth over 1900 - 2002 had been negative[8], and a research by the National Bureau of Economic Research (NBER) finds similar results for 19 emerging economies from the 1970s to early 2000s.[9] However, O'Neill et al. (2011) find that the cross-country correlation between the two variables for 34 economies (including members of the OECD and some emerging economies) was 0.4 for the sample period of 2000 - 2010 and exceeded 0.6 for 2005 - 2010.[10] Using a multi-factor model, Mauro (2000) also shows that there had been a strong relationship between economic growth and stock returns in both advanced and emerging market economies during 1971 - 1998, and the correlation had been stronger in economies with a high market capitalisation, a large number of listed domestic firms and English origin of regulations governing the market.[11]

### *Economic growth and equity market performance in Mainland China: how weak is the link, and why?*

Based on the aforementioned asset pricing theories, some commentators argue that economic growth in emerging economies may not drive equity markets, since GDP growth in these economies has been in large part driven by rapid accumulation of capital with a falling rate of return rather than improvement in total factor productivity.

7 See T. Ito's comment on "Growth and Returns in Emerging Markets" by P.B. Henry and P. Kannan in NBER-EASE Volume 17, 2008.

8 See "Economic growth and equity returns", by J.R. Ritter, *Pacific-Basin Finance Journal* No. 13, 2005, pages 489 - 503.

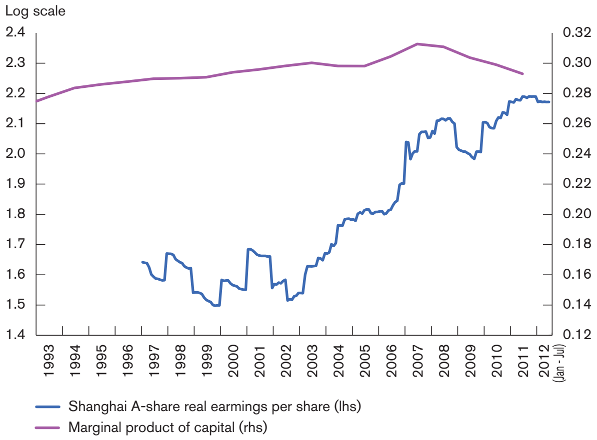
9 See "Growth and returns in emerging markets", by P.B. Henry and P. Kannan, in *International Financial Issues in the Pacific Rim: Global Imbalances, Financial Liberalisation, and Exchange Rate Policy*, NBER-EASE Volume 17, 2008.

10 See "Linking GDP growth and equity returns", by J. O'Neill, A. Stupnytska and J. Wrisdale, *Goldman Sachs Monthly Insights*, May 2011.

11 See "Stock returns and output growth in emerging and advanced economies", by P. Mauro, *IMF Working Paper*, WP/00/89.

However, rigorous academic research has shown that GDP growth in Mainland China has been in large part driven by productivity growth, with solid return to capital in the past two decades.[12] An HKMA staff analysis shows that, despite rapid growth in investment, the marginal product of capital has been rising since the early 1990s before weakening slightly in recent years (Chart B1.3). Earnings of listed companies, the source of dividends, have also been trending upwards in the past decade.

**Chart B1.3**
**Marginal product of capital and earnings per share**

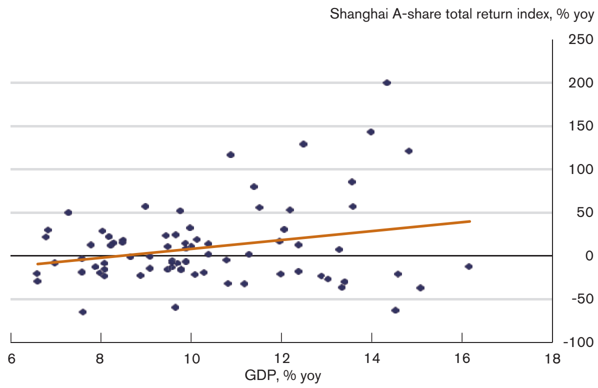



Note: Marginal product of capital is estimated with the Constant-Elasticity-of-Substitution production function. Earnings per share are deflated with CPI inflation.

Sources: Bloomberg, CEIC and updated results of "How efficient has been China's investment? Empirical evidence from national and provincial data" by D. He, W. Zhang and J. Shek, *Pacific Economic Review*, Vol. 12, No. 5, 2007, pages 597-617.

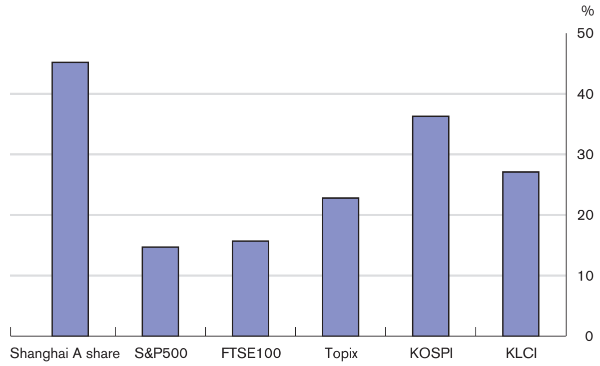
That said, the correlation between economic growth and stock returns on the Mainland appears to be weaker than other major economies. There has been a positive relationship between stock returns and economic growth in the past two decades (Chart B1.4), but a simple regression of the stock returns on GDP growth shows that the standard error of regression has been much larger than those from similar regressions for other major economies (Chart B1.5). This suggests GDP growth has had a weaker explanatory power for stock returns in Mainland China than in other economies. Note, however, that the relationship between economic growth and stock returns in Mainland China appears to have become closer since the mid-2000s, with the trends of the two being more consistent with each other.

**Chart B1.4**
**GDP growth and Shanghai A-share stock returns (1993 Q2 – 2012 Q2)**




Sources: Bloomberg, CEIC and HKMA staff estimates.

**Chart B1.5**
**Standard errors from regression of stock returns on GDP growth**




Note: Sample periods are as follows: Shanghai: 1993 Q2 – 2012 Q2; S&P500: 1989 Q1 – 2012 Q2; FTSE100: 1989 Q1 – 2012 Q1; TOPIX: 1990 Q1 – 2012 Q2; KOSPI: 1981 Q1 – 2012 Q2; and KLCI: 1992 Q1 – 2012 Q1. A higher standard error implies a weaker link between stock returns and GDP growth.

Sources: Bloomberg, CEIC and HKMA staff estimates.

[12] See "Accounting for China's growth" by L. Brandt and X. Zhu, *University of Toronto Working Paper* No. 394, 2010, and "The return to capital in China" by C. Bai, C. Hsieh and Y. Qian, *Brookings Papers on Economic Activity*, No. 2, 2006, pages 61 - 101.

The weak link between equity market performance and GDP growth in Mainland China appears to be due to structural and institutional issues that violate the assumptions of conventional asset pricing theories[13]:

- Uncertainties regarding the conversion of non-tradable shares into tradable shares. As an historical legacy, the majority of shares of large listed companies was owned by the government and legal persons and had not been tradable before the share-split reforms were basically completed in 2006. Accordingly, the long-lasting concerns among investors over a sharp increase in the supply of stocks resulting from potential conversion of non-tradable to tradable shares had, to some extent, distorted asset pricing in the secondary markets.

- Regulatory and supervisory issues. For instance, there were concerns among investors over inadequate initial public offering (IPO) information disclosure, transparency of company financials and related party transactions, especially between the controlling shareholders and management.

- The under-development of institutional investors with a long-term investment horizons. The turnover rate (frequency of trading), a commonly used measure for the degree of speculation, has been much higher in China than in both developed markets as well as other major emerging markets. Dominance of retail investors who are less informed and hence less rational than institutional investors, together with inadequate disclosure of company financial information, appears to be a major reason for excessive speculation in Mainland stock markets.

The Mainland authorities have introduced rounds of reforms to solve the structural issues in the equity markets since the early 1990s. These policy actions, including the share-split reforms and efforts to increase the participation of institutional investors in the stock markets, have helped reduce irregularities in the Mainland markets. For instance, speculation appears to have weakened somewhat in recent years, with the turnover rate in the Shanghai A share markets declining from over 600% in 2007 to about 250% in 2011.

The China Securities Regulatory Commission (CSRC) has launched another round of major reforms since late 2011 to enhance information disclosure, strengthen corporate governance and investor protection, and improve the efficiency of the IPO and delisting processes. For instance, the new policies introduced major adjustments to IPO rules that will enhance market monitoring and regulatory supervision, and improve the pricing of IPO stocks to better reflect their fundamental values. Delisting rules have been made more transparent and will be enforced consistently. Listed companies will be required to set up dividend policies and ensure consistent implementation of such policies. Enforcement action against insider trading will also be strengthened. In addition, investor education will be stepped up so that the presence of investors with long-term investment horizons will be increased overtime.

These reforms, if implemented consistently, are expected to improve equity market efficiency and functionality, and to strengthen the allocative efficiency of China's financial system in general. However, they will only be necessary conditions for a tighter correlation between stock market performance and economic growth in the long run.

13 The deviations of stock price movements from economic growth in earlier years could be partly due to the fact that the stock markets were much less representative of the Mainland economy, because in those years only a small basket of firms was listed.

*Conclusion*

The main messages of this box are summarised as follows:

- Economic theory indicates that faster economic growth is not necessarily accompanied by stronger equity market performance. Whether a rise in economic growth supports equity markets depends on the sources of growth, as well as other factors including market structure and efficiency. Empirical evidence also shows mixed results on the link between economic growth and stock market performance.

- The link between GDP growth and stock returns has been weaker in Mainland China than in other major markets, very likely reflecting the consequences of special structural and institutional deficiencies, which are being addressed by the authorities.

- The recent policy reforms by the CSRC are expected to improve Mainland equity market efficiency and functionality. As long as economic growth of the Mainland economy continues to be driven by higher total factor productivity, then the correlation between economic growth and stock market returns in the long run can also be expected to become tighter.

# 3. Domestic economy

*Significant drags from net exports and a moderation in private consumption resulted in Hong Kong's growth momentum remaining weak in the first half. The near-term economic outlook has tilted slightly to the downside given the lull in external demand and global financial volatility. Risks to the longer term outlook continue to turn on the developments in the euro area crisis and their impact on global macro-financial conditions.*

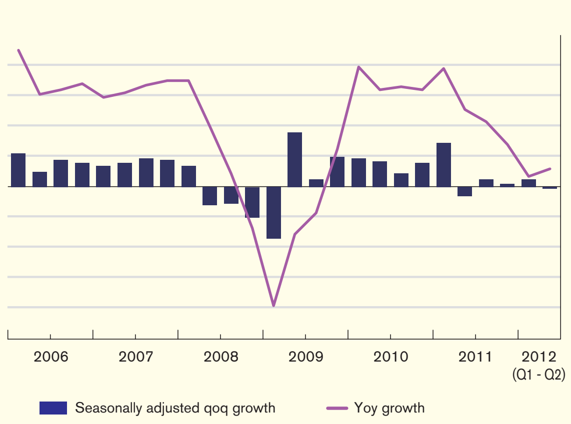
*The labour market remained tight despite strong external headwinds, with the unemployment rate hovering between 3.2% and 3.4%. Labour demand stayed buoyant, but the outlook is clouded by the highly uncertain external economic conditions.*

*Inflationary pressures receded on the back of lowered Mainland inflation, the slower pass-through of market rentals, and lacklustre domestic growth. Inflation is expected to moderate further in the near term, although the recent upward momentum in the property market may pose some risks.*

## *3.1 Aggregate demand*

Growth momentum continued to be muted in the first half of this year. On a seasonally adjusted quarter-to-quarter comparison, real GDP grew at a sub-par rate of 0.5% in Q1, and then contracted a little by 0.1% in Q2 (Chart 3.1). The weakness in real activity largely reflected a difficult external environment. Net exports turned into a drag in the first half, detracting 0.9 percentage points from output growth in Q1 and 2.2 percentage points in Q2 (Chart 3.2). Bolstered by a sustained rise in private consumption and a revival in overall investment spending, domestic demand remained solid, although it failed to completely offset the drag from net external trade in Q2. At a longer horizon, real GDP grew by 0.7% year on year in Q1 and 1.2% in Q2, both well below its trend rate over the past decade.

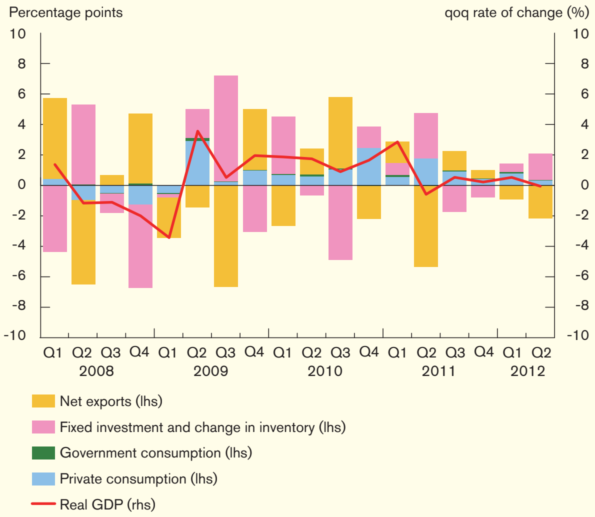
**Chart 3.1**
**GDP at constant market prices**




Source: Census and Statistics Department (C&SD).

The near-term outlook for real activity remains weak, with little signs of a rebound in the growth momentum. Continued external headwinds arising from the weakness in the euro area

### Chart 3.2
### Contributions to quarter-to-quarter percentage change in real GDP




Sources: C&SD and HKMA staff estimates.

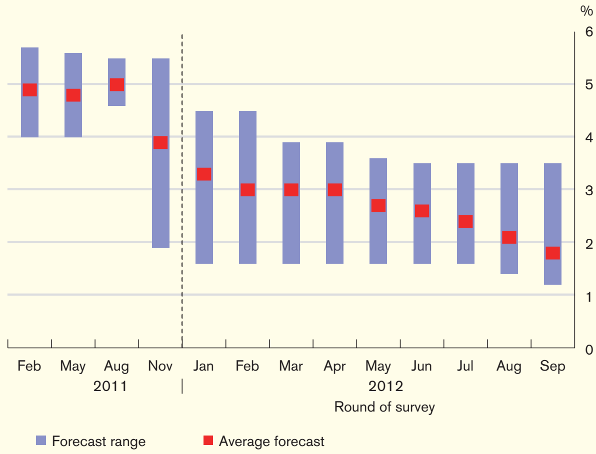
### Table 3.A
### Recent trends of the coincident economic indicator and the leading economic indicator

| | 2012 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Jan | Feb | Mar | Apr | May | Jun | Jul |
| | (Percentage change over 1 month) | | | | | | |
| CEI | -2.6 | +3.0 | -2.1 | +1.1 | -1.6 | +1.2 | -1.9 |
| LEI | +1.1 | +1.0 | +0.4 | +0.7 | +0.0 | +0.3 | -0.1 |
| | (Percentage change over 6 months) | | | | | | |
| CEI | -1.3 | +0.6 | +0.1 | -0.3 | -0.4 | -1.1 | -0.5 |
| LEI | +1.1 | +2.6 | +3.3 | +3.6 | +3.7 | +3.6 | +2.4 |

Note: The six-month rate of change of a leading economic indicator is commonly referred to for detection of any business cycles turning points.

Source: HKMA staff estimates.

### Chart 3.3
### Consensus forecasts for 2012 real GDP growth




Source: Consensus Economics.

demand and fragile growth in the US and Mainland China are expected to restrain Hong Kong's exports. This in turn could feed through to the broader economy, inhibiting domestic demand partly owing to weaker consumer and business confidence. Local private consumption may go through a soft patch because of decelerating income growth or weaker income prospects. Heightened macroeconomic uncertainty also tends to weigh on private investment. On the other hand, fiscal stimulus from the 2012/13 Budget should help support the economy with a large pipeline of committed infrastructure projects and some relief measures in place. Latest survey results reveal that businesses and households are more cautious about the outlook in the near term. Our composite leading economic indicator also pointed to softer economic activity towards the end of 2012, as evidenced by its muted sequential momentum and a moderating six-month growth rate (Table 3.A). In line with this outlook, the Government's GDP growth forecast for 2012 was revised to 1.0 - 2.0% in August, compared with 1.0 - 3.0% announced earlier this year. Market analysts also pared down their forecasts to an average of 1.8% in September (Chart 3.3).

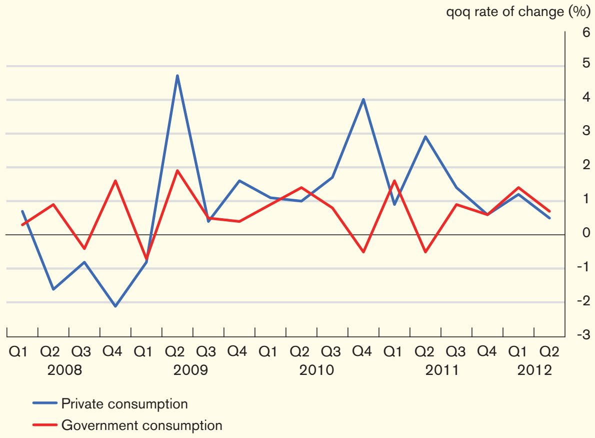
The baseline economic outlook is subject to considerable uncertainty. On the one hand, heightened global uncertainties will subject financial market conditions and fund flows to substantial volatilities and cast a shadow over Hong Kong's growth outlook. In a worst case scenario, an intensification of the euro area crisis or a global synchronised downturn could throw Hong Kong into recession. On the other hand, a stabilisation of external conditions — owing to easing euro area concerns, further monetary easing in the advanced economies or a policy-induced recovery in Mainland economic growth — could allow the economy to return to trend growth at a faster pace and may also lead to some overheating pressures in the local asset markets.

## 3.2 Domestic demand

### *Consumption*

Underpinned by stable job creation and rising income, private consumption broadly held up in the first half, but its growth profile showed signs of losing steam, with sequential growth moderating from 1.2% in Q1 to 0.5% in Q2 (Chart 3.4). Demand for consumer goods, in particular non-durable goods, increased at a slower pace and service consumption growth moderated, partly because of subdued financial market activities. Indeed, consumer sentiment turned more cautious moving into Q2, due in part to a retreat in stock prices, dimming economic outlook and weaker income prospects. For the remainder of the year, a tepid growth in private consumption is expected, although sustained rises in income and low unemployment will provide some cushion. The mean consensus forecast for private consumption growth is now 3.9% for 2012, more than halving from the 8.2% growth in 2011.

**Chart 3.4**
**Private and government consumption**




Source: C&SD.

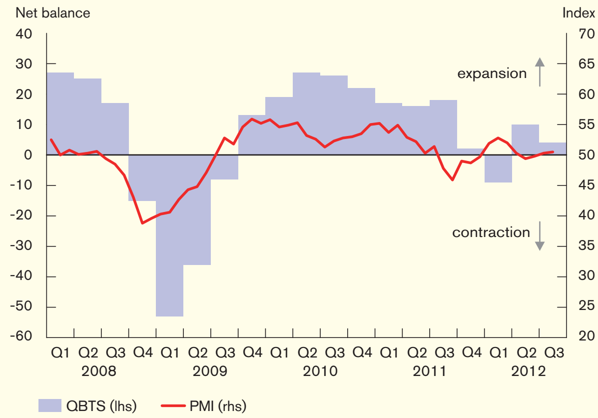
Government consumption rose by 1.4% in Q1 and 0.7% in Q2. However, its growth is expected to pick up in the future as outlined in the 2012/13 Budget, where the recurrent part of public expenditure is projected to increase by 6.8% in real terms in the coming fiscal year, slightly higher than the 6.5% increase in 2011/12.

### *Investment*

After contracting for two quarters, investment spending bounced back in Q1 and Q2, contributing 0.5 and 1.7 percentage points to output growth respectively. In particular, there was a sizable increase in gross fixed investment, powered by a strong rise in private construction works and a revival in business capital spending. Public construction activities were buoyed by works under way on a number of large-scale infrastructure projects. Inventory investment apparently remained stable.

Gross fixed investment is likely to progress steadily for the remainder of 2012, in view of robust private and public construction activities ahead and their possible flow-on effects on capital investment. However, business sentiment has weakened, according to the latest Quarterly Business Tendency Survey (QBTS) and the recent PMI readings (Chart 3.5). To some extent, this will weigh on private capital spending in the near term. The latest market consensus now sees a 5.5% increase in gross fixed investment in 2012, down from 7.5% in 2011.

**Chart 3.5**
**Business sentiment**

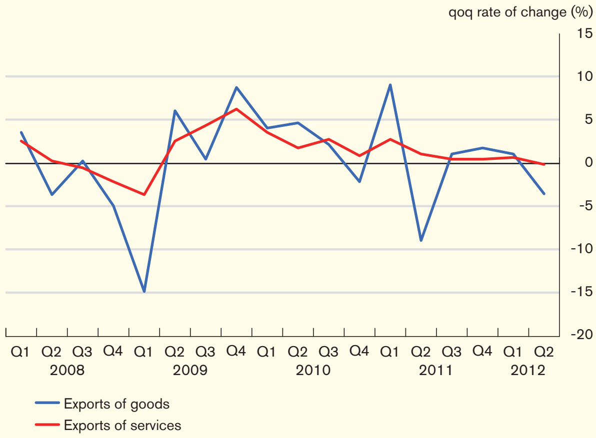



Sources: C&SD and Markit Economics.

## 3.3 External trade

Hong Kong's export performance was rather weak in the first half of this year. Against the backdrop of sluggish demand in the advanced economies and slackening intra-Asia trade flows, exports of goods contracted by 3.5% in Q2 following a modest 1.1% increase in Q1 (Chart 3.6). Services exports also lost traction, declining by 0.1% in Q2 after rising by 0.7% in Q1. This largely reflected the sluggish external demand for transportation and trade-related services, as well as flagging performance in financial and business services exports. Exports in travel services also showed some signs of moderation in Q2.

**Chart 3.6**
**Exports of goods and services**




Source: C&SD.

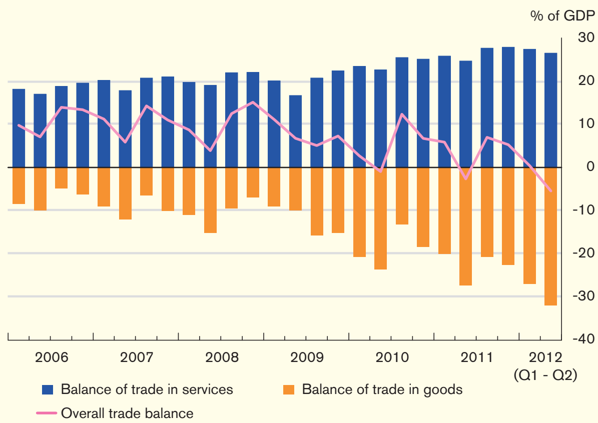
Imports of goods recorded a 1.9% drop in Q2, compared with a 1.5% increase in Q1 (Chart 3.7). Despite a drag from the export-induced demand, domestic consumption and investment continued to provide support for the overall import of goods. Services imports declined by 1.0% in Q2 after a tepid 0.9% increase in Q1, mainly driven by weaker trade-related services imports and sluggish demand for financial services.

**Chart 3.7**
**Imports of goods and services**


Sources: C&SD and HKMA staff estimates.

Taken together, the external sector has been a significant laggard in output contribution, with net exports pulling down GDP growth by 0.9 percentage points in Q1 and 2.2 percentage points in Q2. In seasonally unadjusted terms, the overall trade balance recorded a deficit in the first half of 2012, at \$23.8 billion, equivalent to 2.5% of GDP (Chart 3.8). In contrast, a surplus of \$15.1 billion (or 1.6% of GDP) was recorded in the first half of last year.

**Chart 3.8**
**Trade balance by component (in nominal terms)**



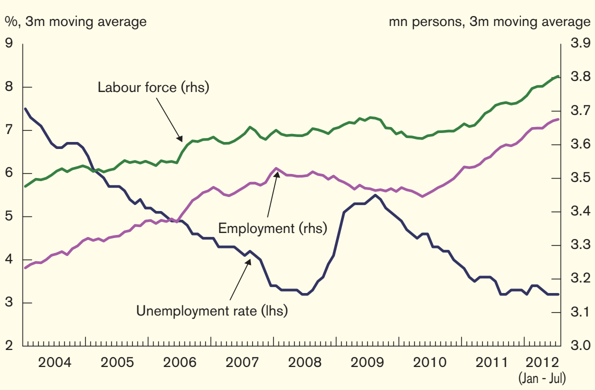

Source: C&SD.

The short-term prospects for Hong Kong's exports will remain restrained by the weak external demand conditions, in particular the worsening of the economic situation in Europe and softening momentum in the US and Mainland China. The latest QBTS shows deteriorating business conditions for traders of goods, and the HKTDC Export Index has remained in negative territory since 2011 Q3. Among professional analysts and forecasters, the outlook consensus is for merchandise exports to increase by 2.7% in nominal terms in 2012, down from 10.1% in 2011. This projection is likely to be even lower if cast in real terms. On the services side, growth in inbound tourism is likely to soften with the Mainland economy moderating. This, together with receding demand for trade-related and transportation services, will weigh on services exports. Imports of goods and services are expected to grow at a measured pace amid the slowdown in domestic demand and regional trade flows.

## *3.4 Labour market conditions*

Despite strong external headwinds, labour market conditions remained tight. The seasonally adjusted three-month moving-average unemployment rate remained at a low of 3.2% in July, averaging 3.3% for the first seven months of 2012 (Chart 3.9). Employment edged up further to a record high of 3.68 million by July from 3.63 million in January, with the overall labour force participation rate edging up to 60.9% from 60.4% over the same period. The current state of full-employment is broad-based for both higher-skilled and lower-skilled segments. In particular, employment in retail, accommodation and food services, and finance, insurance, professional and business services stayed at a high level after reaching a multi-quarter high in Q1. Box 2 analyses the reasons behind the tight labour market and assesses its outlook.

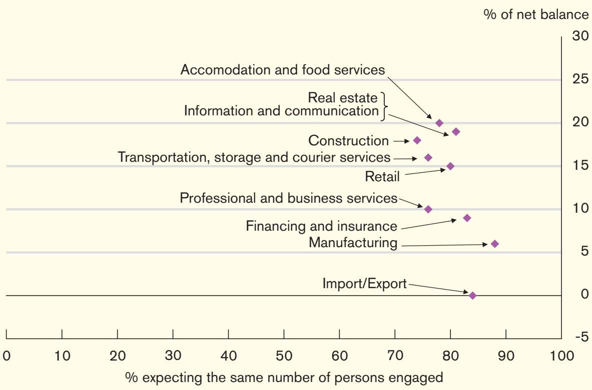
**Chart 3.9**
**Labour market conditions**




Source: C&SD.

In the near term, the new batch of school leavers will continue to boost labour supply. Whether the increase can be absorbed by the market will largely depend on the resilience of the domestic economy against the external shocks. The latest QBTS for 2012 Q3 shows that respondents from almost all sectors expect employment to expand in the near term, suggesting that labour demand is likely to stay buoyant (Chart 3.10). Nonetheless, the hiring sentiment is sensitive to business conditions and economic outlook, which are clouded by the mounting uncertainty in the external economic environment.

**Chart 3.10**
**Quarterly business tendency survey for 2012 Q3: employment**




Notes:
1. Net balance refers to the difference between the percentage points of respondents expecting a rise over those expecting a decline.
2. Sectors are classified according to the new Hong Kong Standard Industrial Classification Version 2.0 (HSIC V2.0).

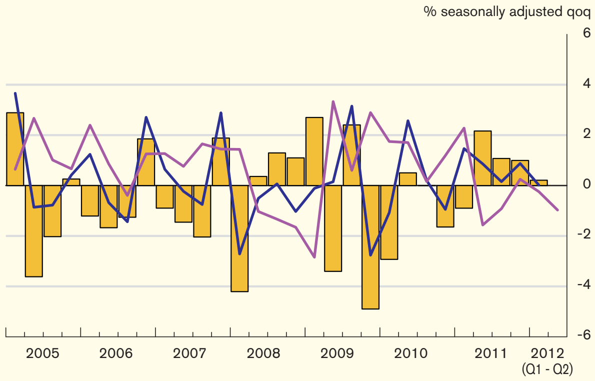
Source: C&SD.

While the potential output continued to expand in the first half due to the increased labour force participation, the deceleration in the growth of actual output amid the weak aggregate demand has significantly closed the output gap and might have turned it from positive to negative in the first half of 2012. Nevertheless, the closing output gap appears to have little impact on the labour market, with the unemployment rate staying at a relatively low level.

Labour cost pressures remained elevated amid the tight market conditions. Real payroll per person in 2012 Q1 and 2011 Q4 registered an increase of 1% over the previous six-month period (Chart 3.11). The faltering momentum in economic growth has weighed on labour productivity. As a result, real unit labour costs were up by 0.2% and 1% quarter on quarter in 2012 Q1 and 2011 Q4 respectively.

In the near term, the domestic economic output is likely to stay below its potential against the background of the fragile global economic conditions. The output gap may decline further, depending on the resilience of the domestic economy to the external shocks. Nevertheless, the weakening demand may help contain rising pressures in labour costs in the tight market conditions.

**Chart 3.11**
**Unit labour cost and labour productivity**

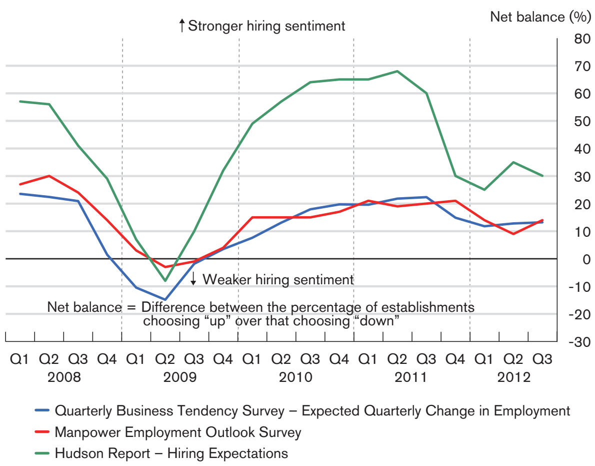



Sources: C&SD and HKMA staff estimates.

## Box 2
## The tight labour market puzzle: will it remain resilient?

It is puzzling that despite the lacklustre economic performance since 2011 Q2, Hong Kong's unemployment rate has continued to hover at low levels of around 3.2%. While the still-positive hiring sentiment might have cushioned the labour market against the slowdown (Chart B2.1), a closer look at the statistics suggests that some longer term structural factors may also have played a role in increasing the resilience of the market over time. This box sheds some light on these structural factors, and discusses their implications for future labour market performance.

**Chart B2.1**
**Hiring sentiment**



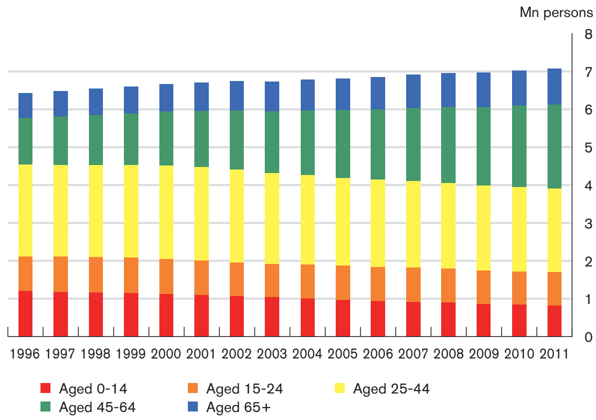

Sources: C&SD, Manpower Services (Hong Kong) Limited and Hudson.

*Structural labour supply and demand factors*

Both supply and demand factors appear to be at work in increasing labour market resilience, particularly in the lower-skilled segment, which accounts for over 60% of the labour force.[14]

On the supply side, demographic changes have restrained the supply of lower-skilled labour in the economy. With an ageing population and low fertility rate, the size of the young cohort population (aged 15 - 24) has been declining over time (Chart B2.2). In addition, the increased availability of tertiary education has had a further impact on the labour force, as more young people choose to stay in school.[15] With the increased education levels facilitating entry into the higher-skilled segment of the labour market, there has been a corresponding decline in the supply of young people into the lower-skilled segment (Chart B2.3).[16]

**Chart B2.2**
**Age structure of the population**



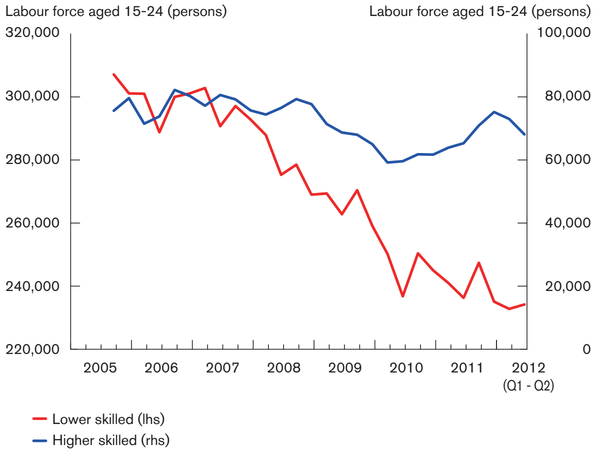

Sources: CEIC and HKMA staff estimates.

14 We classify: (a) managers, administrators, professionals and associate professionals as belonging to the higher-skilled segment; and (b) clerks, service workers, shop sales workers, craft and related workers, plant and machine operators and assemblers, and elementary occupations as belonging to the lower-skilled segment.

15 Education statistics indicate that the number of students enrolled in post-secondary education increased by about 78,000 during 2006 - 2011, closely matching the decrease in the young cohort labour force of about 70,000 registered over the same period.

16 The lower-skilled labour force expanded by only 73,000 people over the period 1996 Q2 - 2012 Q2, far below the addition of 529,000 people in the higher-skilled labour force in the same period.

**Chart B2.3**
**Young cohorts' labour force**




Sources: CEIC, C&SD and HKMA staff estimates.

**Table B2.B**
**Labour intensity of different sectors**

| | Labour intensity (no. of employed persons/mn GDP in 2009 - 2011) | Average output growth rate in 2004 - 2011 (%) |
|---|---|---|
| Manufacturing | 4.9 | -0.8 |
| Construction | 4.8 | -0.4 |
| Import/export trade | 1.5 | 8.1 |
| Wholesale and retail | 4.9 | 8.5 |
| Accommodation and food services | 5.0 | 6.3 |
| Transport, storage, postal and courier services | 3.0 | 5.3 |
| Information and communications | 2.3 | 3.6 |
| Financing and insurance | 0.8 | 11.1 |
| Real estate | 1.7 | 0.7 |
| Professional and business services | 3.3 | 5.0 |
| Public administration, social and personal services | 3.1 | 1.8 |

Sources: CEIC, C&SD and HKMA staff estimates.

On the demand side, the implementation of the individual visit scheme since 2003 has strengthened the demand for lower-skilled labour. This can be seen from the observation that most jobs in the tourism-related sectors, such as retail, accommodation and food services, are biased towards the lower-skilled segment (Table B2.A).[17] These tourism-related sectors are also comparatively labour intensive, in the sense that more labour inputs are required to produce each unit of output in terms of value added (Table B2.B). Along with the rapid expansion in these sectors, the demand for lower-skilled labour picked up.

**Table B2.A**
**Labour demand in different sectors**

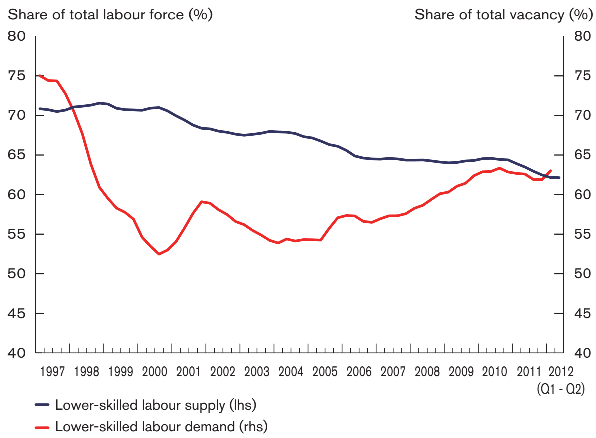
| Composition of labour demand | Higher skilled (%) | Lower skilled (%) |
|---|---|---|
| Manufacturing | 23 | 77 |
| Construction | 0 | 100 |
| Import/export trade, wholesale | 49 | 51 |
| Retail | 9 | 91 |
| Accommodation and food services | 3 | 97 |
| Transportation, storage, postal and courier services | 29 | 71 |
| Information and communications | 85 | 15 |
| Financing and insurance | 77 | 23 |
| Real estate | 46 | 54 |
| Professional and business services | 43 | 57 |
| Social and personal services | 42 | 58 |

Sources: C&SD and HKMA staff estimates.

*Implications for overall labour market conditions*

With restrained labour supply and strengthened demand (Chart B2.4), the lower-skilled segment of the labour market has tightened. In particular, the vacancy-to-unemployment ratio, which measures the ease of the unemployed in finding a job, has trended upwards in the lower-skilled segment since 2003, signalling tightening labour market conditions (Chart B2.5).

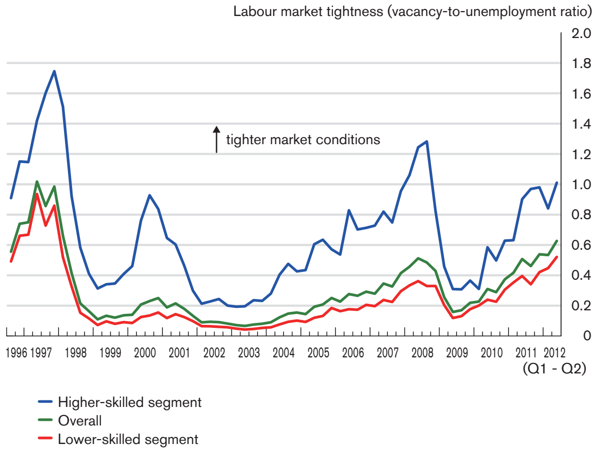
**Chart B2.4**
**Demand and supply of lower-skilled labour**




Sources: CEIC, C&SD and HKMA staff estimates.

[17] We approximate the demand for higher-skilled and lower-skilled labour in each sector based on the sector's proportion of higher-skilled and lower-skilled vacancies during the period 2009 Q1 - 2012 Q1.

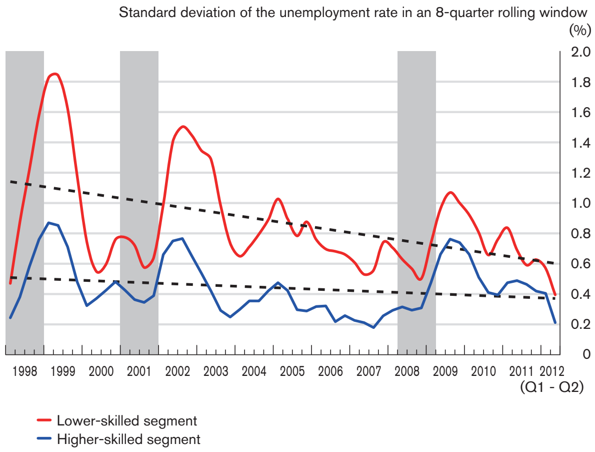
### Chart B2.5
### Labour market tightness




Sources: CEIC, C&SD and HKMA staff estimates.

These supply and demand dynamics might have explained the increasing resilience of the low-skilled segment in recent years. Chart B2.6 shows that during previous downturns in the late 1990s and early 2000s, the volatility of unemployment rate in the lower-skilled segment was much higher and contributed much to the rise in the overall unemployment rate. However, its volatility has declined over the past decade. During the recent global financial crisis, the lower-skilled segment was found to have become more resilient, although the fact there was no widespread business bankruptcy might also have helped cushion any impact on the labour market.

### Chart B2.6
### Volatility of the unemployment rate




Note: Shaded areas correspond to periods of recession.

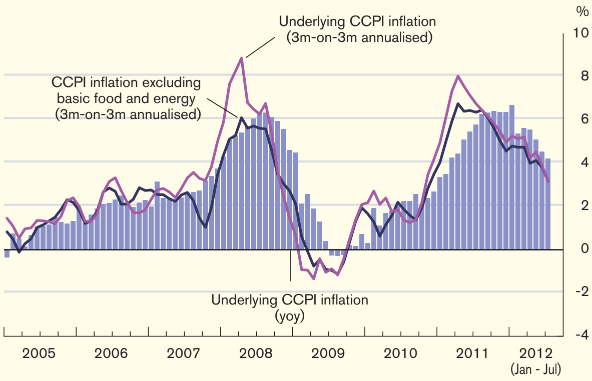
Sources: CEIC, C&SD and HKMA staff estimates.

With the lower-skilled segment representing the major share of the labour market, the increasing resilience of this segment may help reduce the vulnerability of the overall labour market in future. Barring any major shocks that lead to widespread bankruptcy or a sharp reduction in inbound tourism, the unemployment rate is unlikely to increase to levels experienced during the late 1990s and early 2000s.

## 3.5 Consumer prices

Local inflationary pressures trended downwards during the first seven months of 2012. On an annualised three-month-on-three-month basis, the underlying inflation rate drifted down to 3.1% in July from 5.3% in January (Chart 3.12). Excluding the volatile components of basic food and energy, the core underlying inflation rate also dropped, reflecting that the downward trend in inflationary pressures may persist for a while. Helped by moderation in the sequential momentum, the year-on-year underlying inflation rate also fell to 4.2% in July from its peak of 6.7% in January.

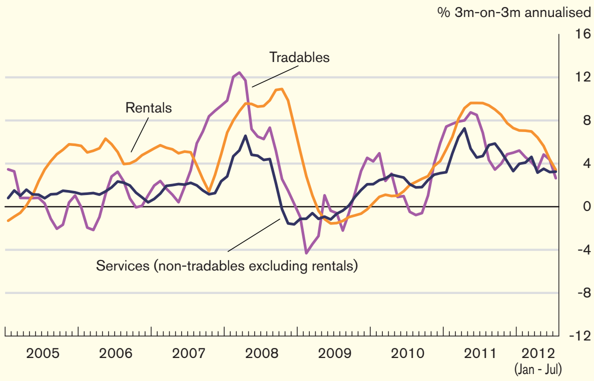
**Chart 3.12**
**Different measures of consumer price inflation**




Sources: C&SD and HKMA staff estimates.

The decline in inflation momentum was broad based, with all major CCPI components registering some moderation. In particular, the rental component inflation declined further, as the pace of the pass-through of increased residential rentals continued to slow (Chart 3.13). The inflation rate of the tradable component also slowed from 5.2% in January to 2.6% in July, largely reflecting the volatile nature of the basic food inflation.

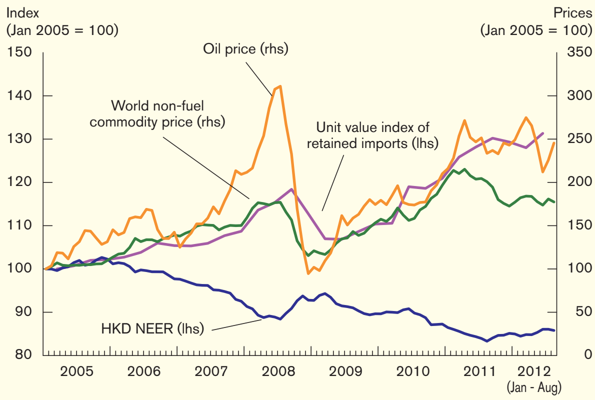
**Chart 3.13**
**Consumer price inflation by broad component**




Sources: CEIC and HKMA staff estimates.

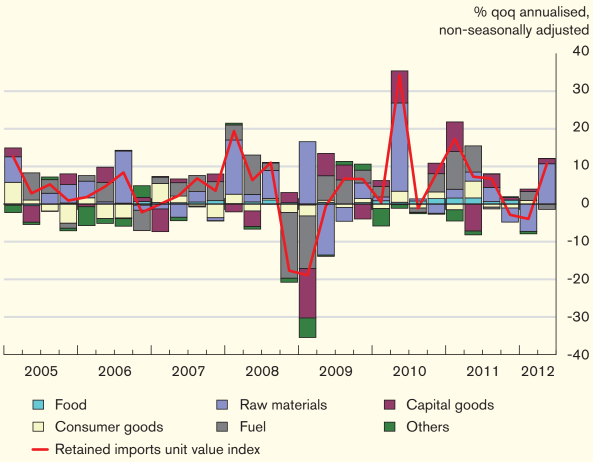
Import price inflation picked up despite moderating inflation on the Mainland and sluggish global growth prospects (Chart 3.14). The quarter-on-quarter annualised inflation rate of import prices rebounded to 10.7% in Q2, after dropping to -3.9% in Q1 from -2.9% in 2011 Q4. Analysed by end-use category, import price inflation was mainly driven by raw material import prices (Chart 3.15).

**Chart 3.14**
**Commodity and import prices**



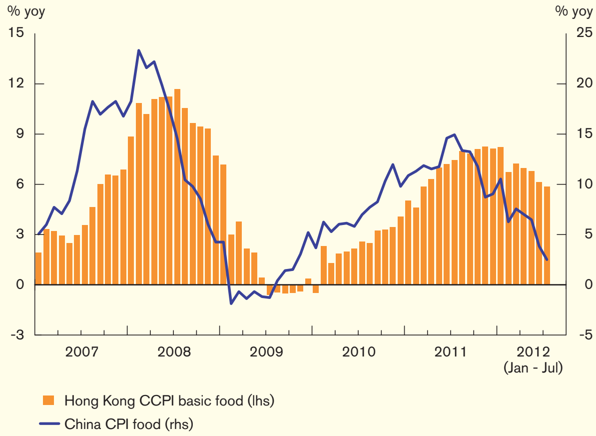

Sources: C&SD and IMF.

**Chart 3.15**
**Contributions to import price inflation**




Sources: C&SD and HKMA staff estimates.

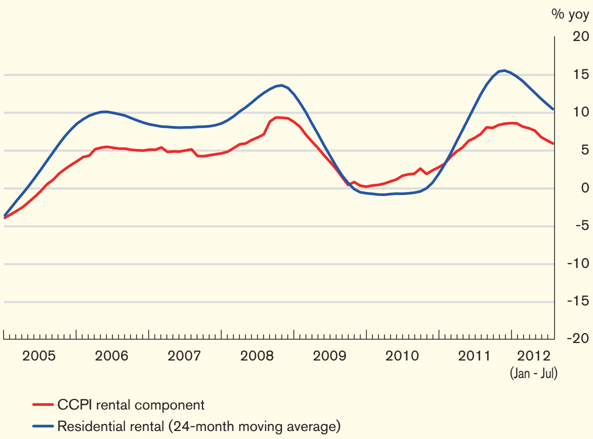
**Chart 3.17**
**Hong Kong and Mainland China's food inflation**




Sources: C&SD, Wind and HKMA staff estimates.

Inflationary pressures are likely to moderate further. The output gap, which is estimated to have turned negative in Q2, is expected to restrain labour cost pressures, while the pace of the pass-through of the earlier increases in residential rentals into the CCPI rental component is expected to continue to slow (Chart 3.16). The moderated food inflation on the Mainland is also likely to help dampen local food inflation in the near term (Chart 3.17). For 2012 as a whole, the Government forecast the headline and underlying inflation rates to be 3.7% and 4.3% respectively, while the latest market consensus for the headline inflation rate is 4.1%.

**Chart 3.16**
**CCPI rental component and market rentals**




Note: CCPI rental component excludes the effects of one-off special relief measures.
Sources: Rating and Valuation Department (R&VD), C&SD and HKMA staff estimates.

The inflation outlook is subject to some risks. Unstable weather conditions in major food-producing countries, such as the recent drought in the US, may stimulate global food and commodity prices, posing upside risks to the import prices outlook. The monetary easing in advanced economies, particularly an implementation of further quantitative easing in the US, may also add some upward pressures on global commodity and asset prices. In addition, the recent upward momentum in the local property market may continue, which will eventually raise domestic inflationary pressures at some point in the future. On the downside, the European sovereign debt crisis may worsen further, posing negative risks to global economic activity and consequently local inflationary pressures.

# 4. Monetary and financial conditions

## Exchange rate, interest rates and monetary developments

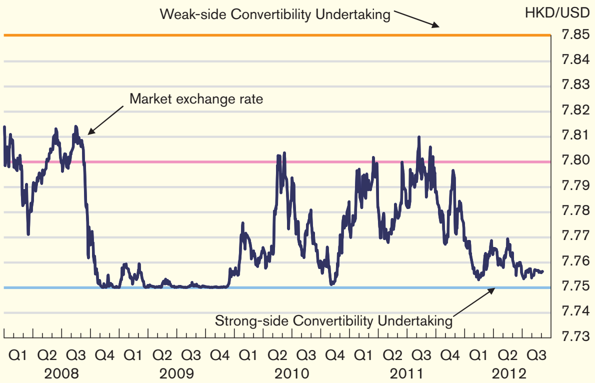
*The Hong Kong dollar spot exchange rate moved within a narrow band, and the money market operated in an orderly fashion despite the volatile external environment. Net fund flow pressures on the Hong Kong dollar continued to be muted. Interbank interest rates, retail-level interest rates and the composite interest rate all stayed at low levels. Domestic credit recorded only mild growth amid the slowing domestic economy, and Hong Kong's offshore renminbi business developed further, particularly in respect of renminbi financing activities.*

### 4.1 Exchange rate and interest rates

The Hong Kong dollar-US dollar spot exchange rate has so far traded within a narrow range in 2012, despite the heightened uncertainty surrounding the global macro-financial environment (Chart 4.1). It strengthened slightly during the first two months, reflecting a respite from the euro area crisis and a buoyant local equity market. The spot exchange rate then softened through mid-May with local stock market corrections and renewed concerns over the European sovereign debt crisis and global prospects. Thereafter, bolstered by some signs of progress in addressing the crisis, the rate strengthened to 7.7558 on 31 August, slightly stronger than the level at the end of 2011.

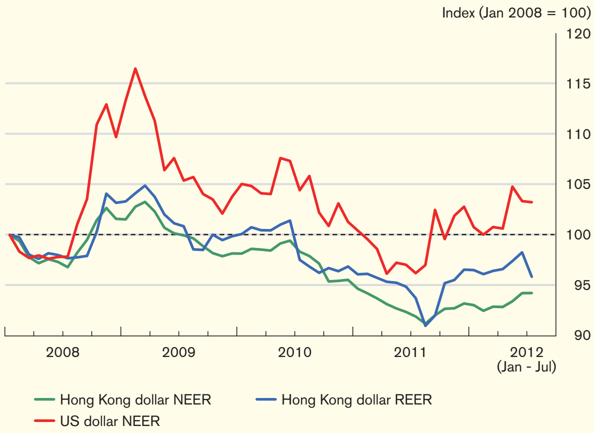
The trade-weighted nominal effective exchange rate index of the Hong Kong dollar strengthened by 1.1% during the first half of 2012, as the US dollar appreciated against most major currencies (Chart 4.2). Much of the US dollar appreciation was due to risk-off behaviour and increased capital flows to safe-haven assets, particularly towards the second quarter amid fears of a global slowdown and renewed concerns over the sovereign debt situation in Europe. The real

**Chart 4.1**
**Hong Kong dollar exchange rate**




Source: HKMA.

**Chart 4.2**
**Nominal and real effective exchange rates**

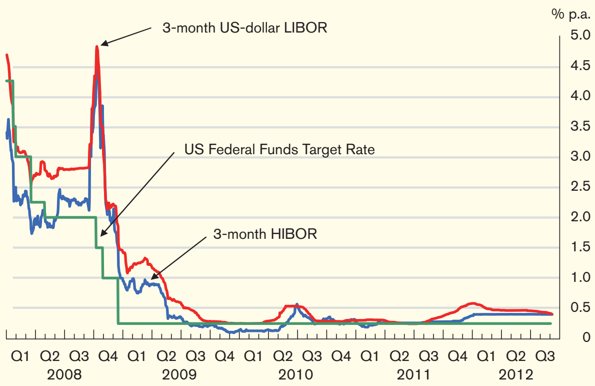



Note: Real effective exchange rate index is seasonally adjusted.
Sources: C&SD, CEIC and HKMA staff estimates.

effective exchange rate index of the Hong Kong dollar strengthened at a slightly faster pace than the nominal effective exchange rate index due to slightly higher inflation in Hong Kong relative to its trading partners.

The low interest rate environment continued in the first half of 2012. With the US Federal Funds Target Rate staying at 0 - 0.25%, the Base Rate under the Discount Window operated by the HKMA was held unchanged at 0.5%. In the money market, Hong Kong dollar interbank offered rates (HIBORs) also remained at low levels (Chart 4.3). The overnight HIBOR fixing edged down early this year and then stayed around 0.11% for the rest of the first half. For maturities of three months and beyond, the interbank rates, however, increased slightly, in tandem with similar movements of the US dollar interbank offered rates (LIBORs).

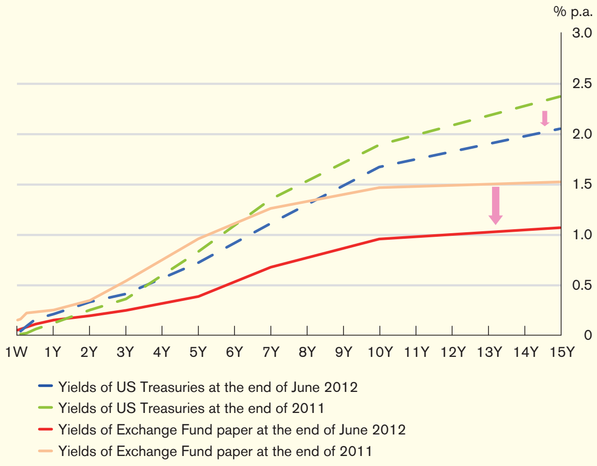
**Chart 4.3**
**Interest rates of the Hong Kong dollar and US dollar**




Source: CEIC.

In contrast, the nominal yield curve of Exchange Fund papers shifted downward and flattened across the term structure during the first half (Chart 4.4). This mainly reflected increased demand for high-quality Hong Kong dollar assets and the flattening of the US Treasuries yield curve. However, short-dated Treasuries yields increased as a result of the Maturity Extension Programme (also known as "Operation Twist"). As a result, during the first half, the yield spread between Exchange Funds papers and US Treasuries turned negative for tenors of five years or below, while the prevailing negative spread widened further for other tenors.

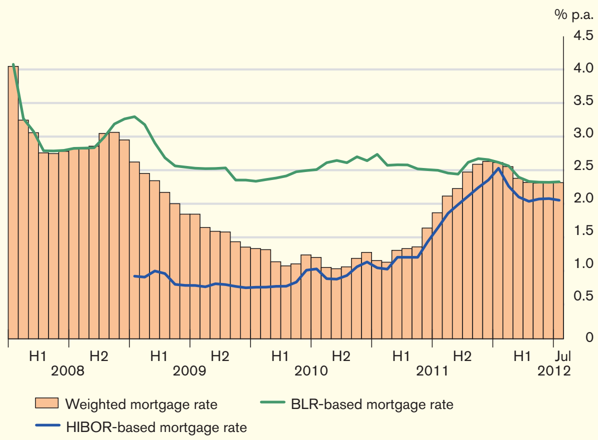
**Chart 4.4**
**Yield curve movements in the first half of 2012**




Source: HKMA.

At the retail level, Hong Kong dollar interest rates stayed low and eased back slightly. While the Best Lending Rates (BLR) remained unchanged at 5.00% or 5.25%, the average mortgage interest rate fell by 32 basis points to 2.32% during the first half with the easing in banks' funding costs and a return of keen competition in the mortgage market (Chart 4.5). The weighted deposit rate offered by retail banks decreased by

**Chart 4.5**
**Mortgage interest rates for newly approved loans**

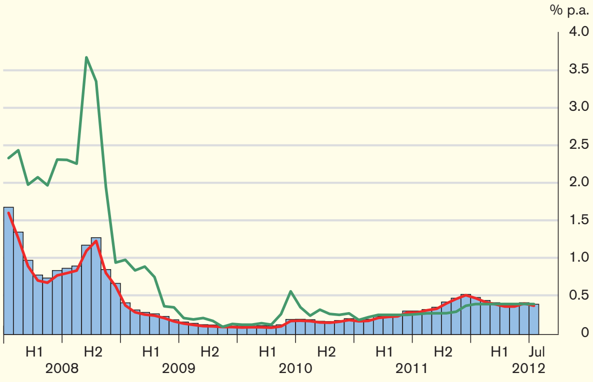



Note: The share of HIBOR-based mortgage plans was small in 2008. All mortgage rates are estimates only.

Source: HKMA staff estimates.

11 basis points to 0.41% (Chart 4.6). The composite interest rate, which reflects the average cost of funds for banks, also declined by 11 basis points to 0.42%.

**Chart 4.6**
**Deposit interest rates and the average cost of funds**



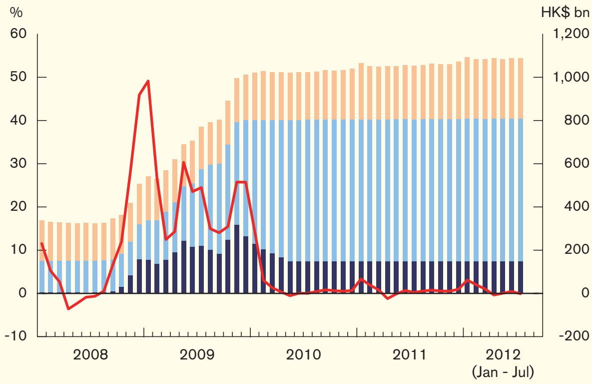

Sources: HKMA and CEIC.

The interest rate environment just described remained broadly unchanged moving into Q3, with the interbank rates, retail-level rates and the composite rate all staying at low levels. This is against the backdrop of the US Federal Reserve's forecast of exceptionally low levels for the federal funds rate at least through mid-2015. As implied by the term structure, the HIBORs and swap rates for future periods will pick up very slowly at least in the next two years. The latest consensus estimates project the three-month HIBOR to stay unchanged over the next 12 months. At the retail level, lending and deposit rates will continue to be affected by changes in the demand for loans and supply of deposits in the banking system.

## 4.2 Money and credit

During the first half, both monetary aggregates and bank lending grew at a moderating pace. The Monetary Base increased slightly, mainly reflecting a rise in outstanding Certificates of Indebtedness (Chart 4.7). Other Monetary Base components, including the Aggregate Balance, outstanding value of Exchange Fund paper, and the amount of government-issued currency notes and coins in circulation, were little changed.

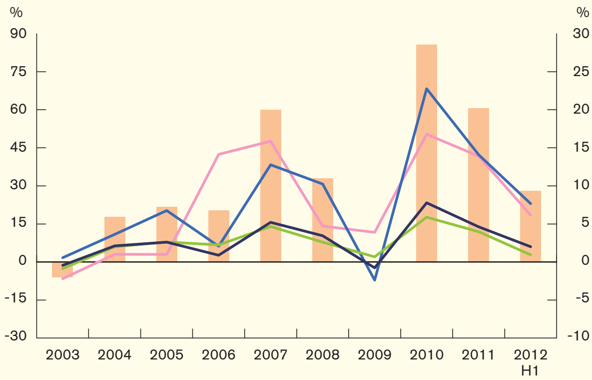
**Chart 4.7**
**Monetary Base components**




Source: HKMA.

On the credit side, total loan and advances grew by 4.7% (or an annualised 9.3%) in the first half, much slower than the 20.2% growth for the whole of 2011 (Chart 4.8).[18] Most of the growth was driven by foreign currency loans and loans for use outside Hong Kong. In contrast, Hong

**Chart 4.8**
**Loan growth**



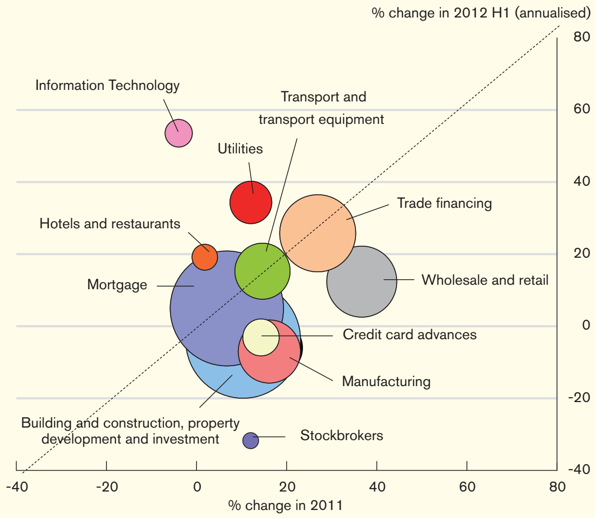

Note: Growth rates in 2012 H1 are annualised.
Source: HKMA.

18 The annualised rate of change is prorated based on the year-to-June rate.

Kong dollar loans and domestic credit increased slightly by an annualised 2.8% and 6.0% respectively.[19] In addition, if only considering domestic credit originated in local currency, there was just a sluggish annualised growth of 1.0%, much slower than Hong Kong's nominal GDP growth during the period.

Analysed by economic use, most categories of domestic credit recorded only mild growth in the first half (Chart 4.9). A few exceptions were trade financing and loans to the wholesale, retail, hotel and restaurant sectors that recorded double-digit growth. Loans to utilities and the information technology sector also increased at a remarkable pace, likely for financing capital investment. On the other hand, property-related loans were flat overall, despite a rebound in mortgage loans in Q2. Loans for other domestic use were also sluggish. In particular, loans to stockbrokers and financial concerns declined notably amid turbulent financial market developments. Credit card advances edged down, reflecting slowing private consumption.

**Chart 4.9**
**Loans for use in Hong Kong by sector**



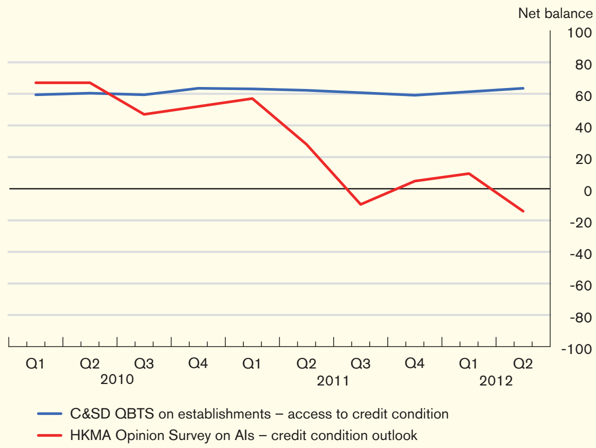

Note: In this bubble chart, the size of the bubble shows the outstanding loan amount to each sector. The 45-degree line divides those sectors showing faster loan growth in 2012 H1 than in 2011.

Source: HKMA.

[19] Domestic credit refers to loans for use in Hong Kong including trade finance originated in any currencies.

It is likely that credit demand will weaken further in the near term amid slow growth in the domestic economy. According to the latest results of the HKMA Opinion Survey on Credit Condition Outlook, 19% of the surveyed AIs expect domestic loan demand to be lower in the next three months, as opposed to 5% who expect demand to be higher. As a result, the net balance (the difference between the proportion of "ups" and that of "downs") turned to a negative 14 in Q2, compared with a positive 10 in Q1 (Chart 4.10). Credit supply, on the other hand, is expected to remain accommodative with the continuation of the low interest rate environment. The latest Quarterly Business Tendency Survey (QBTS) also indicated no signs of deterioration in firms' credit access.

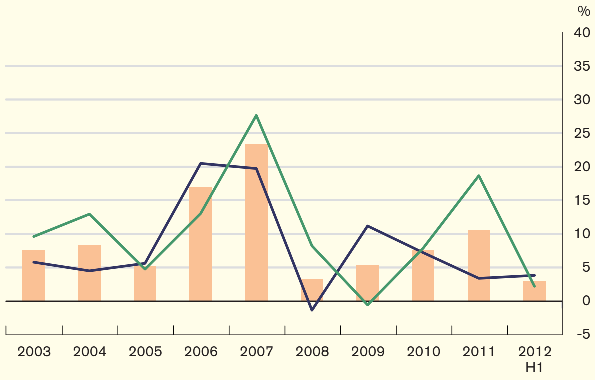
**Chart 4.10**
**Surveys on credit demand and credit access**




Sources: HKMA and C&SD.

The Hong Kong dollar monetary aggregates also recorded a modest increase, with M1 (seasonally adjusted) and M3 rising by 5.2% and 2.4% respectively during the first half. Representing the main components of Hong Kong dollar money supply, Hong Kong dollar deposits grew by a modest 1.9% in the first half, with growth occurring entirely in Q1 (Chart 4.11). Demand and savings deposits increased at the expense of the less-liquid time deposits. Foreign currency deposits only recorded a slight increase of 1.1% mainly due to an offset from lower renminbi deposits (to be discussed in greater detail in the next few paragraphs).

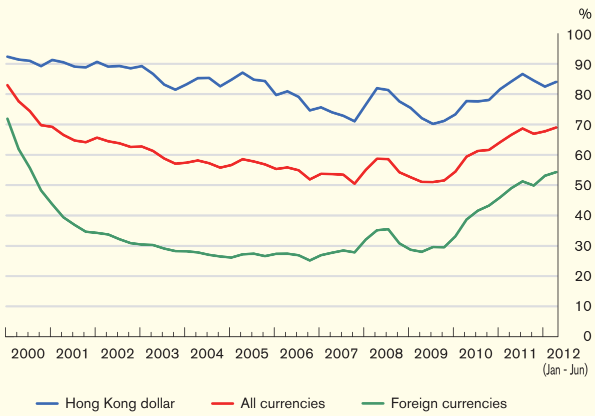
**Chart 4.11**
**Deposit growth**




Note: Growth rates in 2012 H1 are annualised.
Source: HKMA.

As total loans increased slightly faster than total deposits for the whole banking sector, the overall loan-to-deposit ratio increased to 69.0% at the end of June 2012 (Chart 4.12). The foreign currency loan-to-deposit ratio increased to 54.3%, but the Hong Kong dollar counterpart edged down slightly to 84.0%.

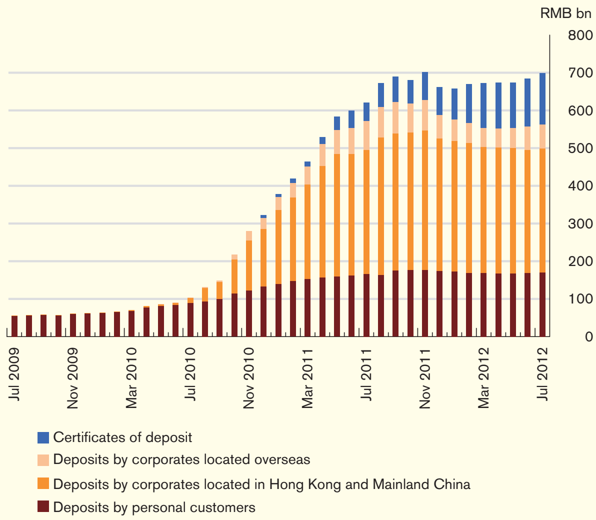
**Chart 4.12**
**Loan-to-deposit ratios**




Source: HKMA.

The funding structure of renminbi business in Hong Kong banks has evolved. With more banks deploying the issuance of certificates of deposit (CDs) as a means of tapping renminbi funds, the outstanding amount of renminbi CDs rose by 72.7% from six months ago to RMB126.1 billion at the end of June (Chart 4.13). In view of the diversion to CDs, renminbi deposits dropped by 5.2% to RMB557.7 billion and accounted for 17.5% of total foreign currency deposits in Hong Kong.

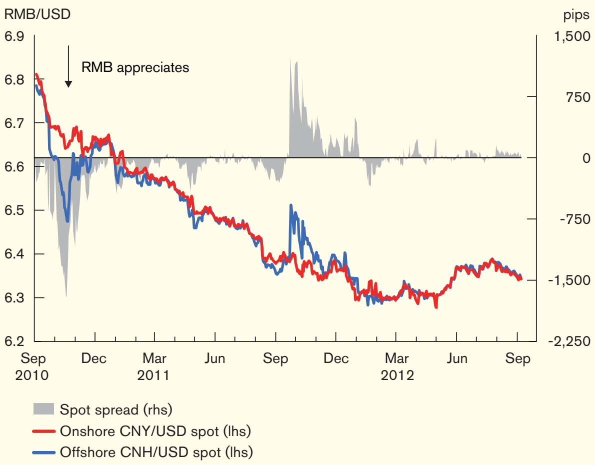
**Chart 4.13**
**Renminbi deposits and outstanding certificates of deposit in Hong Kong**




Source: HKMA.

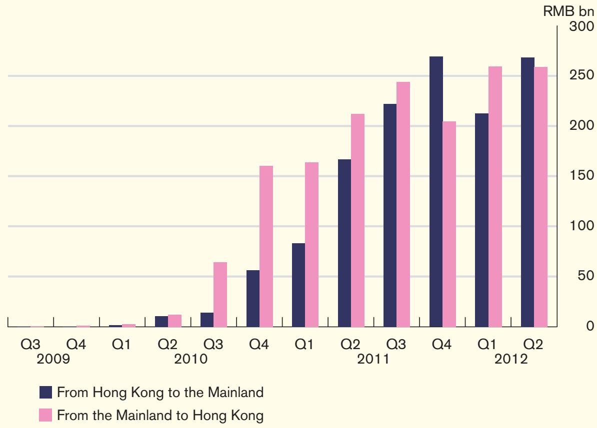
The offshore renminbi exchange rate in Hong Kong (CNH) has so far this year moved broadly in tandem with the onshore exchange rate (CNY) (Chart 4.14), leaving their spreads in a tight and relatively stable range. Both the CNH and CNY weakened until July and then strengthened slightly in the following months. The one-year CNH and CNY deliverable forwards, although not as tightly related, have been on a slight decline, probably reflecting eroding expectations of renminbi appreciation.

**Chart 4.14**
**Onshore and offshore renminbi exchange rates**




Source: Bloomberg.

**Chart 4.15**
**Flows of renminbi trade settlement payments**




Source: HKMA.

Cross-border use of the renminbi has continued to grow despite lower expectations of renminbi appreciation. Cross-border renminbi trade settlement conducted through Hong Kong banks amounted to RMB1,213.1 billion during the first half, representing a 9.2% increase over the preceding half-year period. While outward renminbi remittances fell relative to inward remittances in Q1, they bounced up again in Q2. As such, the remittance flows were more or less balanced in the first half (Chart 4.15). Renminbi financing activities in Hong Kong continued to be vibrant, with outstanding loans climbing by 73.3% from six months ago to RMB53.4 billion at the end of June 2012. A total of RMB161.3 billion worth of debt securities, including the CDs, were issued in the first half, almost double the RMB85.2 billion recorded during the same period in 2011. The renminbi debt securities market also saw more divesified base of issuers and investors from around the globe.

There are clear indications that banks worldwide are using the robust platform and large liquidity pool of Hong Kong to offer renminbi services to their customers at home. At the end of June 2012, 195 banks were participating in Hong Kong's renminbi clearing platform. Of these, 172 were subsidiaries and branches of overseas banks and overseas presence of Mainland banks. At the same time, some 1,227 renminbi correspondent accounts were maintained by overseas banks with banks in Hong Kong. The amount due to, and due from, such overseas banks amounted to RMB126.5 billion and RMB140.3 billion respectively.

Box 4 studies the determinants of the distribution of offshore deposits among different offshore banking centres and draws lessons for further development of offshore renminbi business in Hong Kong.

## Box 3
## Gauging the safehavenness of the Hong Kong dollar[20]

Over the past five years, there have been several bouts of financial turbulence, causing sharp changes in risk assessment globally, with international investors fleeing risky assets, such as high-yielding currencies, to safe havens (for example, US Treasury securities, gold and the Japanese yen). Every time this happened, the resulting capital flows were enormous, as reflected in the large swings in the foreign exchange market.

This box assesses the safehavenness of currencies with the aim of providing a better understanding of how capital flow tends to react to a sharp increase in global risk aversion in times of financial crisis. It focuses on how the currencies, especially the Hong Kong dollar, are perceived by international investors or, more specifically, whether they are seen as a safe haven or risky currencies.

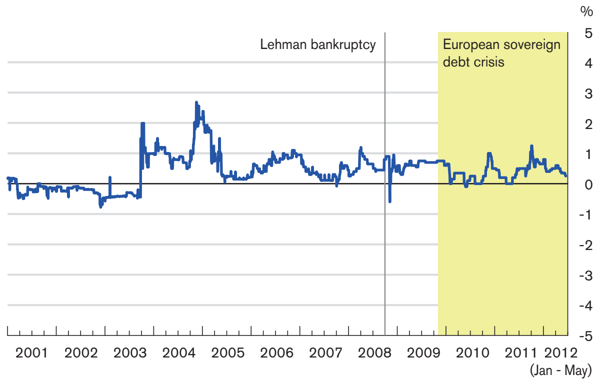
### *Risk reversal as a yardstick of safehavenness*

A currency option is a financial instrument commonly used to hedge against exchange rate risk. A call option gives the right to buy the currency at a certain price and a put option the right to sell. Hence, the buyer of a call bets on the currency to appreciate above the strike price within a certain period, while the seller thinks it is unlikely and accepts a payment for taking the risk. A put option works exactly the other way round. The price difference between the two (call minus put), often known as the risk reversal, measures how market participants are willing to pay more to insure against the crash risk of a currency, a risk of loss resulting from a large and sudden movement of the exchange rate in one direction, than the other of an equal magnitude.[21]

When risk in global financial markets increases or is perceived to be higher, investors flee currencies that are regarded risky to those that are perceived to be safe havens. Therefore, if risk reversal is of any use in assessing such investor behaviour, it should bear a positive relationship with risk aversion if the currency is thought to be safe or a negative relationship if it is considered risky.[22]

Chart B3.1 shows the risk reversal of the Hong Kong dollar. It stayed negative in the early 2000s, attributable to the poor economic performance of Hong Kong (with the SARS epidemic inflicting further pain on the economy in 2003), causing downward expectations on its currency. Towards the end of 2003, the economy rebounded strongly. This, coupled with increasing expectations of a revaluation of the renminbi, led to expectations of an appreciation of the Hong Kong dollar, hence lifting its risk reversal. Since then, the risk reversal has generally remained positive.

**Chart B3.1**
**Risk reversal of the Hong Kong dollar**




Source: Bloomberg.

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20 The term "safehavenness" refers to the degree of a financial asset playing the role of a safe haven, or the extent to which a financial asset is regarded by investors as a safe haven.

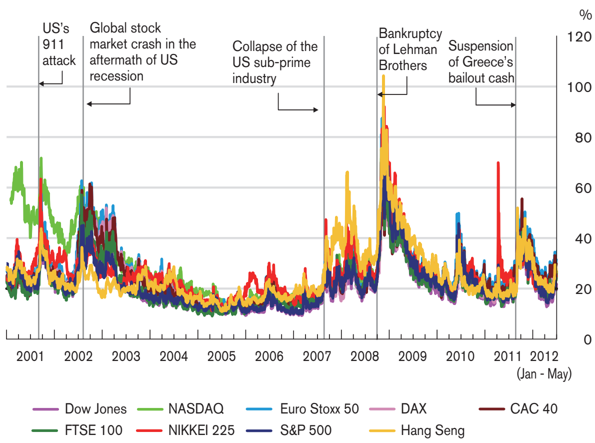
21 Detailed studies are in M.K. Brunnermeier et al. (2009), "Carry trades and currency crashes", Chapter in *NBER Book NBER Macroeconomics Annual 2008*, Vol. 23; and C.H. Hui and T.K. Chung (2011), "Crash risk of the euro in the sovereign debt crisis of 2009–2010", *Journal of Banking & Finance*, Vol. 35(11), pages 2945 - 2955.

22 See an example in M. Kohler (2010), "Exchange rates during financial crises", *BIS Quarterly Review*, March, pages 39 - 50.

### *Estimating safehavenness in crisis times*

To find out whether and how well risk reversal can serve as an indicator of safehavenness, we test empirically how investors react to changes in market conditions in terms of how risk reversal behaves in times of crisis or market turbulence. In the test, we examine the relationship between the three-month 25-delta risk reversals of a number of currencies (and gold for reference), and a global fear index from 1 January 2001 to 30 May 2012. The global fear index is proxied by major stock market volatility indices which, often dubbed as investors' fear gauge, are probably the most widely used indicator of risk aversion in financial markets, as they tend to spike in times of crisis (see Chart B3.2).[23]

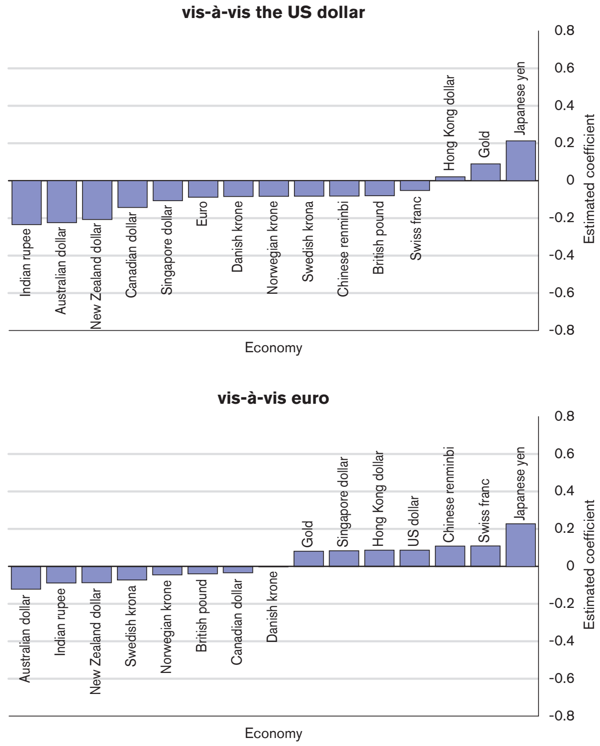
**Chart B3.2**
**Stock market volatility indices**




Source: Bloomberg.

The relationship is estimated by means of quantile regression, an econometric technique that allows us to capture the relationship under extreme market conditions, in other words, the tail risk. Estimated coefficients are depicted in Chart B3.3. The upper panel of the chart shows that most of the coefficients of the currency risk reversals vis-à-vis the US dollar are negative, suggesting that these currencies are regarded riskier by dollar-based investors when financial market volatility increases. The exceptions are gold, the Hong Kong dollar and the Japanese yen, reflecting their safe-haven status as perceived by dollar-based investors. In the lower panel, the coefficients of half of the currency risk reversals vis-à-vis the euro are positive, with that of the Japanese yen again being the most significant, followed by those of the Swiss franc, the US dollar, and the Hong Kong dollar. This suggests that in times of market turmoil these currencies are regarded as safe havens by euro-based investors.

**Chart B3.3**
**Responsiveness of risk reversal to the global fear index**




Source: HKMA staff estimates.

23 The global fear index is proxied by the first principal component constructed by nine major stock market volatility indices comprising the S&P 500 (VIX), Dow Jones Industrial Average, NASDAQ, Euro Stoxx 50, DAX, CAC 40, FTSE 100, NIKKEI 225 and Hang Seng index (VHSI).

### *Conclusion*

The finding that the Hong Kong dollar is perceived by euro-based investors as a safe haven relative to most other currencies may be due to the fact that the US dollar is widely looked upon as a safe haven and that international investors tend to use the Hong Kong dollar as a proxy of the US dollar, which may in turn be attributable to the Linked Exchange Rate system. In addition, during the US sub-prime crisis, the Hong Kong banking system was judged by dollar-based investors to be safer than its US counterpart in terms of lower default risk.[24] Consistent with the above analysis, Hong Kong, notwithstanding its openness, has not experienced large capital outflows despite a series of international financial crises in recent years.

[24] See C.H. Hui et al. (2011), "Funding liquidity risk and deviations from interest-rate parity during the financial crisis of 2007-2009", *International Journal of Finance and Economics*, Vol. 16, pages 307 - 323.

## Box 4
## The distribution of eurodollar deposits: pointers for offshore renminbi business

Hong Kong has rapidly developed as the global hub for offshore renminbi business. But this rapid development raises a number of questions, not the least being, how will its future evolve? And, what determines the relative competitive advantages of different offshore banking centres? As the history of renminbi internationalisation is still short, we draw insights from the eurodollar market to answer these questions.

By way of background, according to BIS data, offshore foreign currency deposits[25] totalled US$17.3 trillion at the end of March 2012. The US dollar accounted for over half (53.6%) of these deposits. Nearly one third were placed in the UK (Table B4.A). Other major destinations are developed markets in Western Europe and the Asia-Pacific region.

**Table B4.A**
**Major destinations of offshore deposits denominated in foreign currencies**

| | Mar 2012 US$ bn | Share (%) | Annual Growth (%) Dec 2000 – Mar 2012 |
|---|---|---|---|
| All countries | 17,290.7 | 100 | 8.6 |
| UK | 5,405.8 | 31.3 | 10.0 |
| Euro area | 3,408.2 | 19.7 | 6.2 |
| Cayman Islands | 1,502.2 | 8.7 | 6.4 |
| Japan | 932.4 | 5.4 | 9.6 |
| Singapore | 932.1 | 5.4 | 7.2 |
| Switzerland | 667.8 | 3.9 | 1.0 |
| Hong Kong | 618.6 | 3.6 | 7.3 |
| Bahamas | 588.8 | 3.4 | 6.7 |
| Australia | 546.3 | 3.2 | 16.9 |
| Sweden | 459.3 | 2.7 | 17.0 |

Note: Figures for euro area only cover 13 BIS-reporting euro area members, while the data for Estonia, Malta, Slovakia and Slovenia are not covered.

Source: BIS.

### *Determinants of the distribution of eurodollar deposits*

To learn from the eurodollar market, our statistical analysis is focused on the determinants of the worldwide distribution of eurodollar deposits.

In principle, the time zone should be an important factor in affecting the location of offshore deposits. For example, home bias means US residents tend to place US dollar deposits closer to the US. In addition, markets of similar time zones usually have overlapping trading hours, thus facilitating cross-market financial transactions. However, country risk diversification suggests that considerable amounts of US dollar deposits could be held in regions far away from the US.[26]

We also consider GDP share, since a larger economy tends to receive more deposits. An economy's share of US total trade is also included to capture its economic linkage with the US. Other determinants (institutional quality, portfolio inflows and foreign exchange turnover) are location-specific, measuring various aspects of the deposit recipient country that may attract eurodollar deposits.

### *Key results of statistical analysis*

A cross-country panel data model is used to analyse the determinants of the distribution of eurodollar deposits. The sample consists of 29 BIS-reporting economies (excluding the US) for the period 1995-2010.[27] We found that time zone is one of the most important determinants (Table B4.B). Specifically, as the number of time zones from New York City of these centres increases, their market shares of eurodollar deposits decrease, and vice versa. In other words, the findings suggest that the benefits of similar

25 While the statistical analysis reported here uses data of offshore US dollar deposits of individual countries, these data are not disclosed here since the BIS classifies them as "restricted", which are only for the internal use of central banks. However, since the US dollar is the dominant currency, the pattern of foreign currency deposits still provides a useful backdrop.

26 Note that in some financial centres, notably those in emerging market countries, eurodollar deposits are largely held by non-US residents.

27 For details, see D. Leung and J. Wong (2012), "Determinants of the distribution of eurodollar deposits in offshore financial centres", *HKMA Research Note 01/2012*.

time zones (for example, overlapping trading hours) outweigh those of far-away time zones.

**Table B4.B**
**Major results of the econometric analysis**

| Explanatory variables | Dependent variable: market share of external US dollar liabilities of banks from foreign entities: All sectors | Banking sector | Non-bank sector |
|---|---|---|---|
| Time zone | -0.2278 ** | -0.2204 ** | -0.2082 ** |
| GDP share | 0.2221 ** | 0.4959 ** | 1.0120 ** |
| Trade with the US | 0.2548 ** | 0.2451 ** | 0.2241 ** |
| Legal and regulatory quality | 0.1201 ** | 0.1316 ** | 0.1221 ** |
| Portfolio investment inflows | 0.2249 ** | 0.3886 ** | 0.1060 * |
| FX market turnover | 0.3192 ** | 0.1578 ** | 0.3627 ** |
| Constant | 0.9691 | 0.5460 | 0.4021 |
| | | | |
| Adjusted R squared | 0.4338 | 0.3661 | 0.6371 |
| Number of observations | 766 | 766 | 766 |

* Statistically significant at 90%.
** Statistically significant at 95%.
Source: HKMA staff estimates.

The share of foreign exchange market turnover is found to be another important determinant. Better quality of the legal and regulatory framework and greater portfolio inflows also result in larger eurodollar deposit market shares. In addition, trade linkage between the US and the offshore financial centre in question is important.

### *Conclusion*

Our findings help us understand the distribution of offshore deposits. In the case of the eurodollar market, London and the Cayman Islands are the two largest destinations of these deposits. We can interpret that what works well for the Cayman Islands is being in the same time zone as New York City, and what works well for London is being the most important foreign exchange market.

Applying this to Hong Kong, its competitive position as an offshore renminbi centre is strengthened by being in the same time zone as the Mainland, speaking the same language, and having intimate knowledge of and maintaining extensive connections with the Mainland. But Hong Kong's ability to attract renminbi liquidity also hinges on its ability to consolidate its position as a business centre for global financial institutions across a wide range of time zones and for agglomeration of transactions in other major currencies. In this regard, the recent extension of the operating hours of the renminbi Real Time Gross Settlement (RTGS) system[28] is significant, since it enables clients in Europe to use the Hong Kong platform to settle renminbi transactions during most of the trading day. It also covers part of the morning session of New York City. Also, the launch of the cross-border collateral management service in June 2012 is crucial since it facilitates cross-border renminbi funding activities.[29] Meanwhile, the strong economic links between Hong Kong and the Mainland will continue to benefit the development of renminbi business in Hong Kong.

[28] Starting from 25 June 2012, the daily operating hours of the renminbi RTGS system have been extended by five hours to 8:30 - 23:30 (Hong Kong Time).

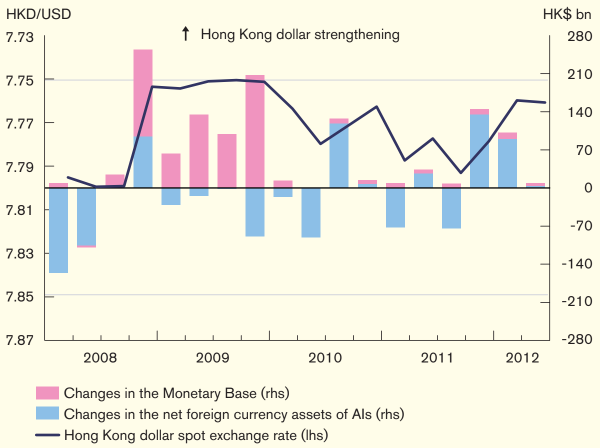
[29] The new service enables international financial institutions to use securities held with Euroclear Bank or J.P. Morgan as collateral in triparty repo transactions with members of the HKMA's Central Moneymarkets Unit to access liquidity from Hong Kong, in particular the Hong Kong dollar and offshore renminbi. For details, see the Tripartite Media Release issued by the HKMA, Euroclear Bank and J.P. Morgan on 20 June 2012.

## 4.3 Capital flows

### *Demand for Hong Kong dollar assets*

Demand for the Hong Kong dollar increased in 2012 Q1, according to both price and quantity indicators. In particular, the Hong Kong dollar spot exchange rate against the US dollar strengthened to an average of 7.7598 in Q1 from 7.7785 in 2011 Q4 (Chart 4.16). For the quarter as a whole, the net foreign currency assets of the authorized institutions (AIs) also expanded, signalling some inflows of funds in the non-bank private sector.[30] Hong Kong dollar deposits rose by around HK$80 billion despite stagnant outstanding Hong Kong dollar loans. In any event, the Hong Kong dollar buying pressure was modest as the strong-side Convertibility Undertaking was not triggered and the spot exchange rate traded within a very narrow range between 7.753 and 7.770.

**Chart 4.16**
**Fund flow indicators (quarterly)**

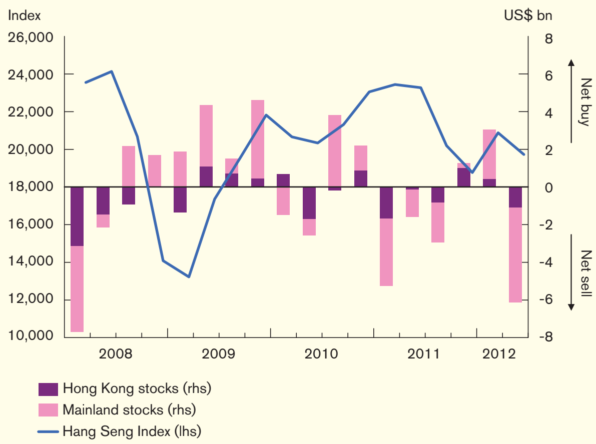



Note: A positive change in the Monetary Base or the net foreign currency assets of AIs signals inflows.

Source: HKMA.

The stronger demand for the Hong Kong dollar emerged in Q1 as market sentiment and risk appetite improved amid a respite from the euro area crisis, an appreciation in the regional currencies and a sharp rebound in the local stock market. In this connection, part of the Hong Kong dollar demands was equity-related. A survey of fund managers indicated some net foreign buying of Hong Kong equities and Mainland-related stocks including H-shares in Q1 (Chart 4.17). By contrast, fund-raising activity in the stock market was in the doldrums, failing to give extra impetus to the Hong Kong dollar demand.

**Chart 4.17**
**Market survey of equity-related flows**



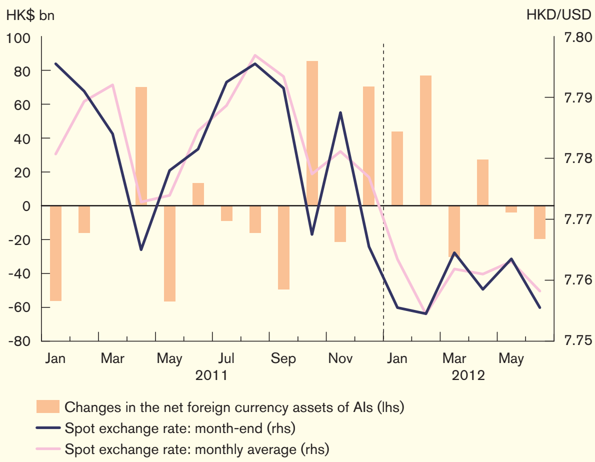

Note: "Mainland stocks" include H-shares, red-chips listed on the Hong Kong Stock Exchange and those shares listed on the Mainland stock markets.

Sources: CEIC and EPFR Global.

The second quarter of 2012 saw fluctuations in the demand for the Hong Kong dollar, characterised by some buying pressure in April, but mixed patterns in May and June (Chart 4.18). For the quarter as a whole, the Hong Kong dollar was not under any substantial pressure. The Hong Kong dollar spot exchange rate against the US dollar averaged 7.76 in Q2, little changed from Q1. The net foreign currency assets of the AIs also did not show any significant quarterly change.

30 It should be noted that changes in the net foreign currency assets of the AIs, or the equivalent of their net Hong Kong dollar liabilities, include the effects of valuation changes like price and exchange-rate changes, and, therefore, are only a proxy for net Hong Kong dollar fund flows.

**Chart 4.18**
**Fund flow indicators (monthly)**




Note: A positive change in the net foreign currency assets of AIs signals inflows.
Source: HKMA.

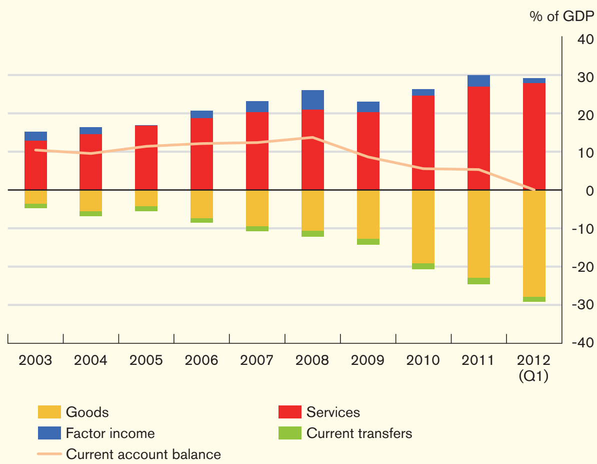
The monthly variations in the Hong Kong dollar demand between April and June were partly driven by shifts in risk sentiment and the evolving global outlook. Reportedly reflecting some risk-on sentiment, the Hong Kong dollar spot exchange rate strengthened a little in April, but thereafter softened through mid-May on concerns about the flare-up of the euro area crisis and early signs of more fragile US and Mainland growth. While the decline in the net foreign currency assets of the AIs in May and June pointed to some Hong Kong dollar selling pressure, the spot exchange rate remained firm, supported by a number of factors including real commercial demands derived from dividend payment needs by some locally-listed Mainland companies.

## *Balance of Payments and cross-border capital flows*

The latest Balance of Payments statistics indicated that reserve assets expanded at a robust pace in 2012 Q1, by HK$48.2 billion (10% of GDP) compared with an average quarterly increase of HK$27.9 billion (6% of GDP) in 2011. The expansion was caused by purchases of foreign currencies with Hong Kong dollars, incomes from foreign currency assets and increases in Certificates of Indebtedness. Recent HKMA data revealed that foreign currency reserve assets of the Exchange Fund grew further in Q2.

Alongside a slight year-on-year deterioration in the terms of trade, the first quarter of 2012 recorded a contraction in the current account surplus, broadly continuing its narrowing trend since 2009 (Chart 4.19). The services trade surplus, although expanding, was only slightly larger than the deficit in the trade of goods account in Q1. The current account surplus shrank to a record low of HK$57 million (0.01% of GDP). This was mainly due to the combined result of shrinking external demand and resilient domestic spending. National income data pointed to further deterioration in the current account in Q2.

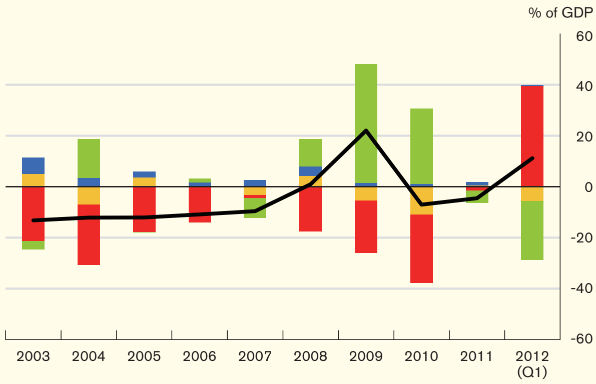
**Chart 4.19**
**Current account surplus**




Source: C&SD.

There were some net private capital inflows in Q1, apparently reversing the pattern of net outflows in 2010 and 2011 (Chart 4.20). Indeed, HK$52.7 billion (11% of GDP) of net private capital inflow was recorded, with net portfolio investment inflows exceeding net direct investment outflows and net other outflows relating to loans and deposits.

**Chart 4.20**
**Cross-border capital flows**




Note: A positive value indicates inflows.
Source: C&SD.

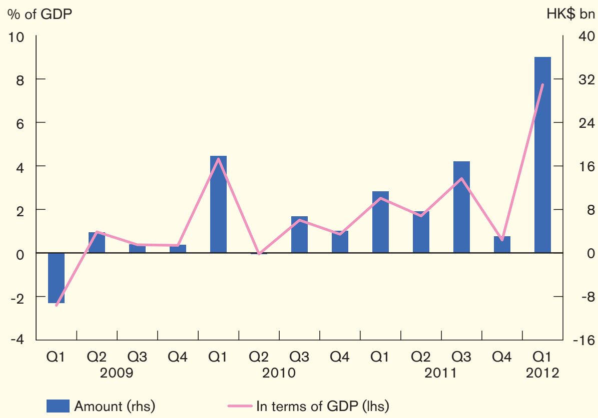
The net portfolio investment inflows in Q1 were broad-based and sizeable (Table 4.A). Non-residents purchased more Hong Kong equities, amid stronger demand for the Hong Kong dollar and the local stock market rally. Their holdings of Hong Kong debt securities also increased notably, in part related to local enterprises turning more to overseas bond markets to satisfy longer-term funding needs (Chart 4.21). Local residents reduced their holdings of non-resident equities. However, their holdings of non-resident debt securities picked up.

**Table 4.A**
**Cross-border portfolio investment flows**

| | 2011 | | | | 2012 |
|---|---|---|---|---|---|
| (HK$ bn) | Q1 | Q2 | Q3 | Q4 | Q1 |
| By Hong Kong residents | | | | | |
| Equity securities | -51.5 | -96.0 | -154.9 | 21.7 | 84.1 |
| Debt securities | 60.3 | -11.6 | 25.5 | 63.2 | -8.1 |
| By non-residents | | | | | |
| Equity securities | -2.5 | 37.2 | 18.2 | 23.9 | 74.4 |
| Debt securities | 11.4 | 7.6 | 16.8 | 3.0 | 36.1 |

Note: A positive value indicates capital inflows.
Source: C&SD.

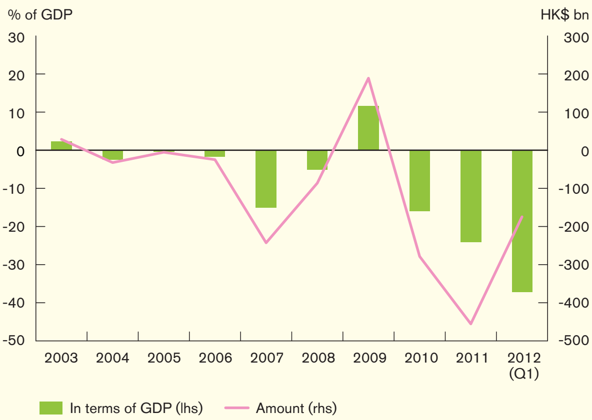
**Chart 4.21**
**Debt portfolio investments by non-residents**




Note: A positive value indicates inflows.
Source: C&SD.

Part of the net investment outflows relating to deposits and loans in the first quarter were attributable to deposit and loan outflows by Hong Kong residents. As in 2010 and 2011, there were also considerable outflows of loans extended by local banks to non-residents (Chart 4.22). Some of these loan outflows were Mainland-related, supported by low US dollar and Hong Kong dollar interest rates.

**Chart 4.22**
**Loans extended by local banks to non-residents**




Note: A negative value indicates outflows.
Source: C&SD.

### *Outlook for capital flows*

Recurrent concerns about the euro area crisis and heightened macro-financial uncertainties in the advanced economies and Mainland China have subjected financial market conditions to substantial volatility and will continue to do so for some time to come. On the upside, further monetary easing in the advanced economies or other successful crisis-fighting measures in Europe could induce capital inflows in the region. The ECB's Longer-Term Refinancing Operations earlier this year apparently helped lift net equity-related inflows into emerging market economies and this once again illustrates the sensitivity of fund flows and exchange rate movements in the region to global financial conditions and investors' risk appetite. On the downside, further deterioration in the European sovereign debt crisis or a synchronised downturn across the globe could undermine investor sentiment and induce large capital outflows from the region.

Overall, the direction and size of fund flows could be volatile for the remainder of 2012. Nevertheless, net fund flow pressures are not expected to be large. Box 3 analyses the safe-havenness of currencies and finds that the Hong Kong dollar is generally perceived as a safe haven relative to most other currencies, as evidenced by the risk reversal of the currency in times of financial turbulence.

# Asset markets

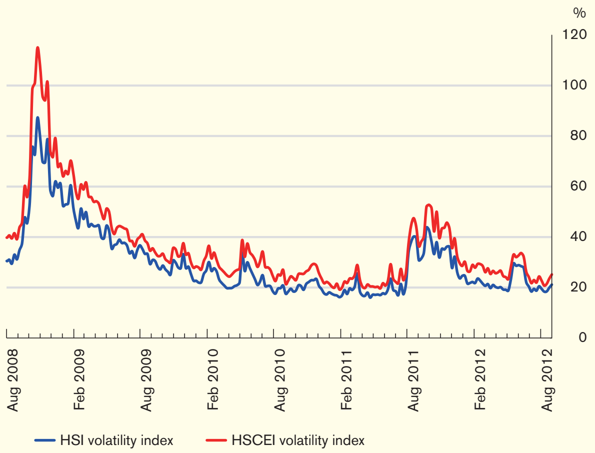
*Local equity prices came under pressure as the European sovereign debt crisis intensified and the global economy slowed further. However, the domestic debt market continued to grow. The issuance of offshore renminbi debt securities increased at a brisk pace, with renminbi certificates of deposit rising sharply in response to increasing demand for short-term liquidity.*

*Property market activities revived notably and prices have risen sharply. However, with continuing low interest rates and tight supply conditions, the risks and incentives to take on excessive leverage still exist, and this requires vigilance from the public and warrants continued supervisory restraint on bank credit.*

## 4.4 Equity market

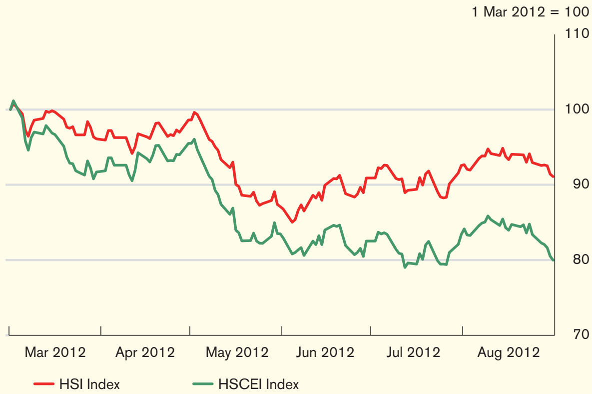
The Hong Kong equity market came under pressure amid the deteriorating external environment following the intensification of the European sovereign debt crisis, slowing growth in the US and weaker than expected growth on the Mainland. Problems in the European banking system also showed no signs of abating. The combination of financial and economic woes led to a significant increase in risk aversion in the local equity market, prompting sizable falls in equity prices. The implied volatilities of the Hang Seng Index (HSI) and Hang Seng China Enterprises Index (HSCEI) surged to a six-month high in May (Chart 4.23), with the HSI and HSCEI declining by 10.1% and 21.5% respectively in the past six months, and the average daily turnover dwindling to the lowest level since 2008. Given the concerns over the economic slowdown on the Mainland, the divergence between the HSI and HSCEI continued to widen (Chart 4.24).

**Chart 4.23**
**Weekly volatility indices of the Hang Seng Index and Hang Seng China Enterprises Index**




Sources: Bloomberg and HKMA staff estimates.

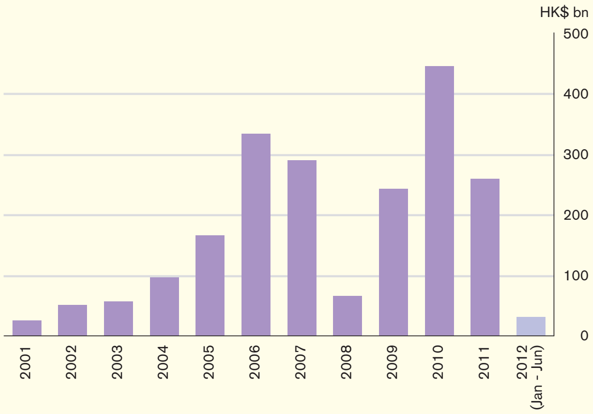
**Chart 4.24**
**The Hang Seng Index and Hang Seng China Enterprises Index**




Source: Bloomberg.

Reflecting weaknesses in the external environment and increasingly volatile market conditions, fund-raising activities in the Hong Kong initial public offerings (IPO) market slowed substantially. Mainland enterprises were traditionally the largest source of Hong Kong IPOs. And, as some Hong Kong-listed Mainland private enterprises encountered auditing problems, investors have become cautious about the quality of the Mainland private enterprises in general. Against this backdrop, the IPO market in Hong Kong recorded its worst half-yearly performance since 2009 with just HK$30.8 billion raised in the first half of 2012, an 82.3% decline compared with the same period in 2011 (Chart 4.25).

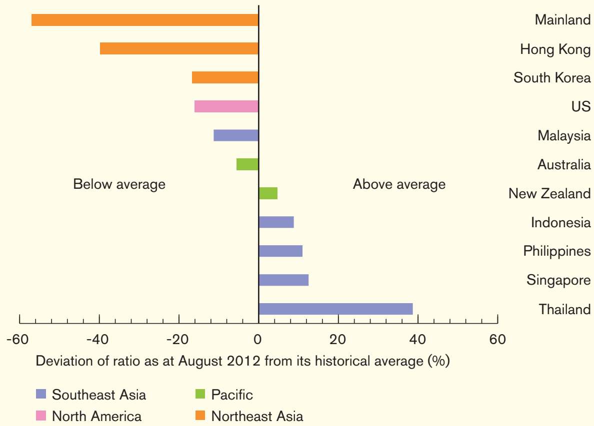
### Chart 4.25
### The IPO market in Hong Kong




Source: CEIC.

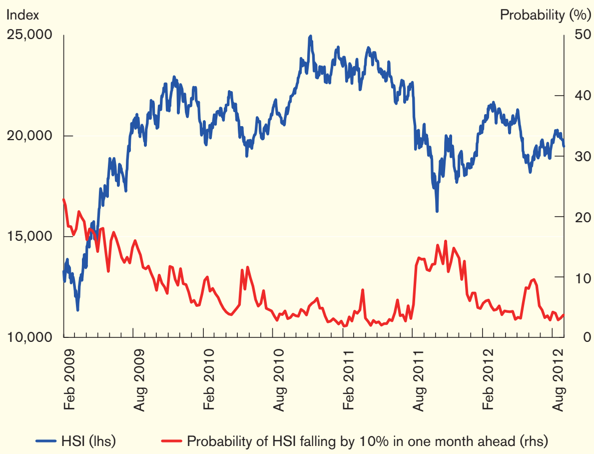
Looking ahead, the local equity market will continue to be affected significantly by external market conditions. Given the current price-earnings ratios of stocks in Hong Kong and the Mainland (Charts 4.26 and 4.27), investors may arguably be more receptive to potential positive developments, such as the implementation of more pro-growth measures by Mainland authorities and effective measures by the ECB and the US Federal Reserve. However, in view of increased uncertainties over the global outlook — especially as to how, and how well, policymakers can deliver their balancing act in the US, Europe and the Mainland — the local equity market is likely to remain volatile in the second half of 2012.

### Chart 4.26
### Price-earnings ratios of US and Asian Pacific markets (excluding Japan)




Sources: Bloomberg and HKMA staff estimates.

### Chart 4.27
### Hang Seng Index and its option-implied probability of falling by 10% in one-month

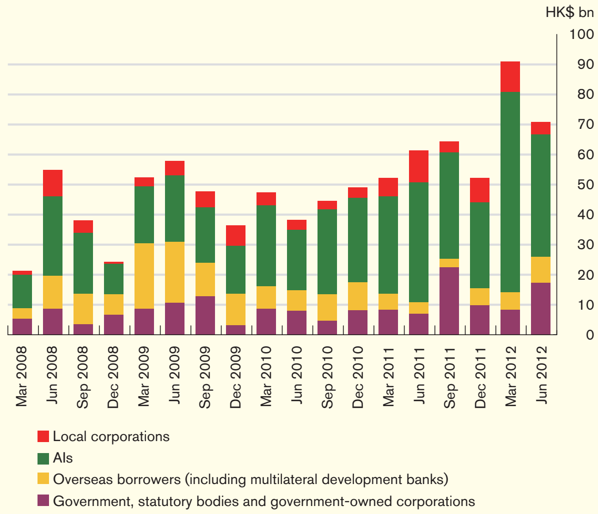



Sources: Bloomberg and HKMA staff estimates.

## 4.5 Debt market

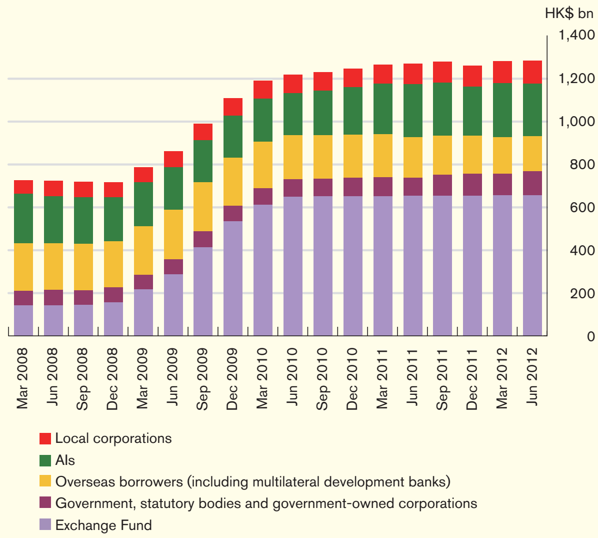
The Hong Kong dollar debt market continued to be resilient despite the volatile and uncertain external environment. In the first half of 2012, new debt issuance increased by 5.3% year on year to HK$1,079.9 billion. The Exchange Fund remained the key issuer, followed by AIs and the Government (Chart 4.28).[31] This growth more than compensated for the maturing debt, and the total outstanding amount of Hong Kong dollar debt increased, albeit marginally, by 1.0% year on year to a record HK$1,282.1 billion at the end of June (Chart 4.29).[32] Overseas borrowers, who issued more new debt, however, saw their outstanding debt fall by 15.1% year on year. This reflects that overseas borrowers continued to face difficulties in raising funds in international capital markets, including Hong Kong, amid bleak global economic conditions and the deterioration of the European sovereign debt crisis. The weighted average tenor of private-sector issuances declined from three years to 2.5 years between 2012 Q1 and Q2, indicating conditions were also more favourable for raising shorter-term funds.

**Chart 4.28**
**New issuance of non-Exchange Fund Bills and Notes Hong Kong dollar debt**




Source: HKMA.

**Chart 4.29**
**Outstanding Hong Kong dollar debt**




Source: HKMA.

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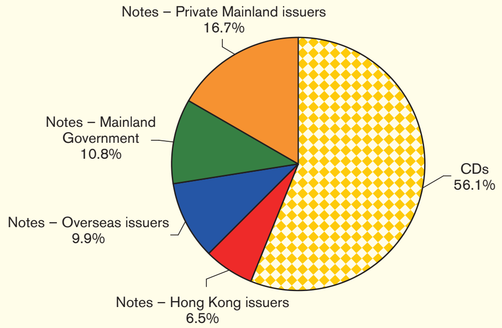
31 The Exchange Fund accounted for 85.0% of new issuances. Debt issued by AIs and overseas borrowers jumped by 49.1% and 53.8% to HK$107.7 billion and HK$14.4 billion respectively. The Government issued HK$9.5 billion worth of bonds to institutional investors under the Institutional Bond Issuance Programme and sold another HK$10.0 billion worth of three-year inflation-linked bonds to retail investors in June.

32 This was equivalent to 30.9% of the Hong Kong dollar M3 or 25.4% of Hong Kong dollar denominated assets of the entire banking sector.

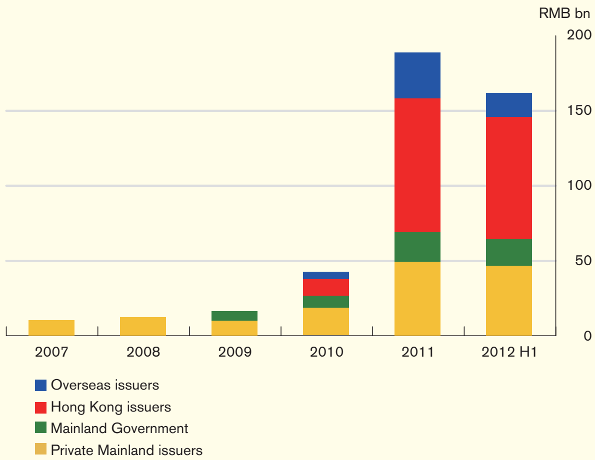
Issuances in the Hong Kong offshore renminbi debt securities market remained vibrant.[33] A total of RMB161.3 billion worth of debt securities were issued in the first half, almost double the RMB85.2 billion recorded during the same period in 2011 (Chart 4.30). The range of issuers continued to increase further. While Mainland issuers accounted for the majority of the issues prior to 2011, Hong Kong issuers accounted for almost half of the new issuances in 2012 H1.[34] Short-term CDs issued by AIs formed a majority of these new issuances (Chart 4.31), reflecting increasing demand for short-term liquidity.

**Chart 4.31**
**Distribution of new issuance of offshore renminbi debt securities by nationality in 2012 H1**




Sources: Newswires and HKMA staff estimates.

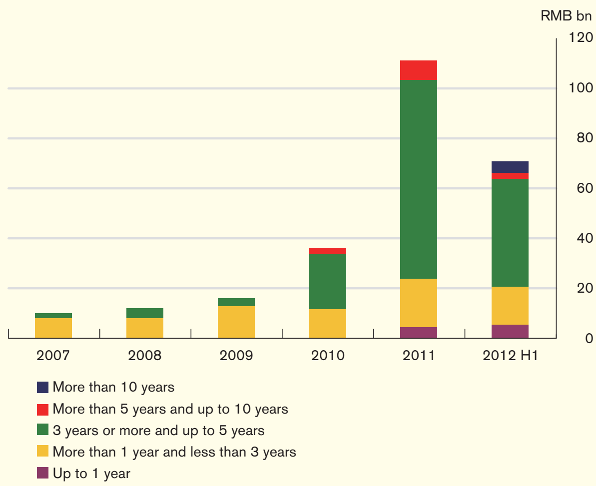
**Chart 4.30**
**New issuance of offshore renminbi debt securities**




Sources: Newswires and HKMA staff estimates.

The offshore renminbi debt securities market is also developing as a platform for raising long-term funds. Excluding CD issuances, the weighted average maturity of newly-issued debt securities increased from 2.2 years to 3.8 years between 2007 and 2012 H1 (Chart 4.32). The lengthening of maturities is, to a large extent, attributable to the issuance of longer-term notes — often with a maturity of 10 years or more — by the Mainland Government and state-owned banks. These issuances have provided useful benchmarks for corporate issuers to price their long-term issuances. Separately, issuances by overseas issuers grew by 12.3% year on year, reflecting sustained international interest in raising renminbi funds in Hong Kong.

**Chart 4.32**
**New issuance of non-CD offshore renminbi debt securities by tenor**



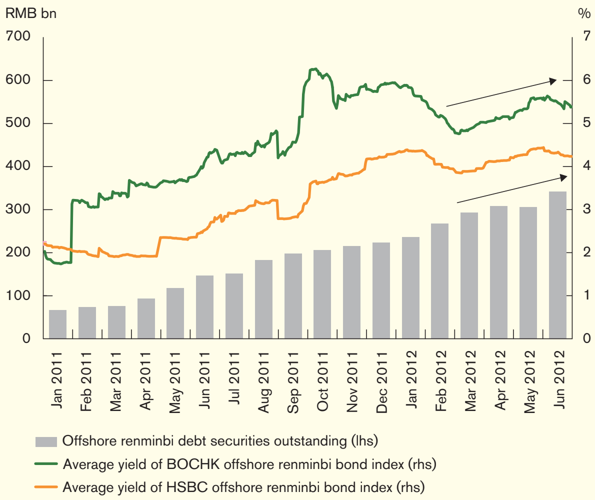

Sources: Newswires and HKMA staff estimates.

33 Debt securities include both medium and long-term notes, CDs and commercial papers.

34 Hong Kong issuers include Hong Kong Government agencies, government-owned corporations, and financial and non-financial corporations with predominant operations in Hong Kong. Private Mainland issuers refer to both financial and non-financial corporations with predominant operations in Mainland China. Overseas issuers include multilateral development banks, financial and non-financial corporations with predominant operations outside Hong Kong and Mainland China. Each issuer's predominant area of operation is determined based on the location of its headquarters.

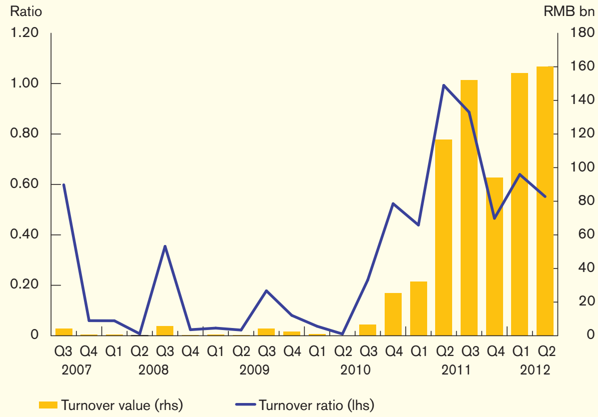
With the rise in issuances, the outstanding amount of renminbi debt securities increased to a record RMB342.6 billion by the end of June 2012 (Chart 4.33). This has, in part, led to increasing costs of borrowing for offshore renminbi bond issuers as competition for funds grew and investors demanded higher yields (Chart 4.33). At the same time, the secondary market continued to develop, with total turnover reversing the earlier declines registered in 2011 (Chart 4.34). Market liquidity, measured by the turnover ratio, tightened in the past year, but this may prove to be an aberration given the large volume of newly-issued debt.[35]

**Chart 4.33**
**Offshore renminbi debt securities outstanding and offshore renminbi bond yield**




Sources: Bloomberg, Newswires and HKMA staff estimates.

**Chart 4.34**
**Turnover in the secondary market**




Note: The turnover values and ratios calculated pertain only to debt securities lodged and traded through the HKMA's Central Moneymarkets Unit. While this provides a good proxy for the trends emerging in the market, it does not represent the secondary market in its entirety.

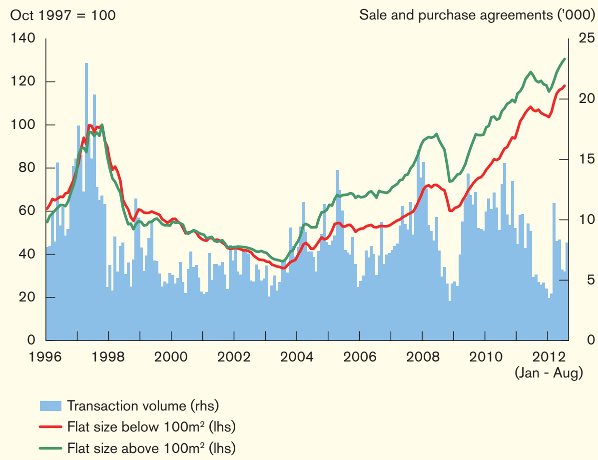
Source: HKMA staff estimates.

## 4.6 Property markets

### *Residential property market*

Following some modest consolidation from mid-2011 to early this year, residential property market activities have strengthened, in part owing to improving sentiment, rising income, a slight easing in mortgage rates, and expectation of continued tightness in supply. Flat prices on average rose by 13.1% to record-high levels in the first seven months (Chart 4.35). According to

**Chart 4.35**
**Residential property prices and transaction volumes**




Sources: R&VD and Land Registry.

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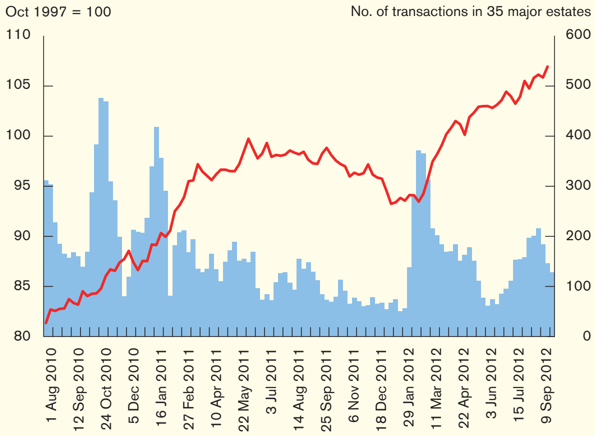
[35] The turnover ratio is calculated by dividing total turnover in a quarter by the average amount of debt securities outstanding in the quarter.

anecdotal transaction reports, flat prices continued to surge more recently (Chart 4.36). This time, however, flat prices recorded stronger increases of 13.2% in the first seven months in the small and medium-sized segment (flats with a saleable area below 100 square metres), than in the upper-middle and luxury segment (over 100 square metres) of 10.3%.

**Chart 4.36**
**Residential property prices and transaction volumes estimated by realties**

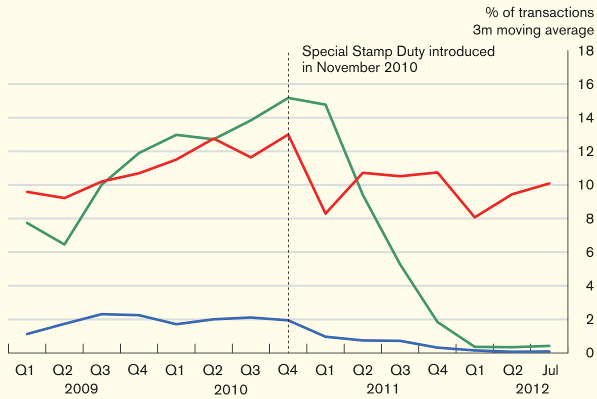



Midland volume index (rhs)
Centa-City leading index – housing prices (lhs)

Sources: Midland Realty and Centaline Property Agency Limited.

On the transaction side, about 41,000 sale and purchase agreements were lodged with the Land Registry in the first half of 2012, representing a 41% increase from the low base in the preceding half-year period, but a 25% decline from a year ago. As such, the transaction volume remained below the normal activity level by historical standards, but a stronger pick up in activity appeared to take hold in July and August, according to provisional records. On the other hand, with the Special Stamp Duty in place, speculative activities seem to have remained generally quiet according to some ex-post indicators. For instance, both confirmor transactions and flipping trade (selling within 12 months of holding) have hovered at extraordinarily low levels. However, company holdings have increased moderately in recent months, signalling stronger investment demand (whether as short or long-term plans), warranting closer monitoring in the period ahead (Chart 4.37).

**Chart 4.37**
**Confirmor transactions, flipping trade and company holdings**

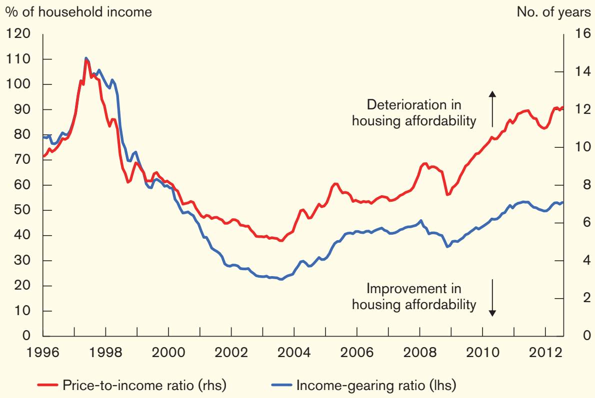



Flipping trade
Confirmor transactions
Company holdings

Source: Centaline Property Agency Limited.

Housing affordability deteriorated further as income growth failed to catch up with that of flat prices. Relevant indicators, including the income-gearing ratio and price-to-income ratio, all rose to recent highs and were well above their 10-year long-term average levels (Chart 4.38).[36] Regarding tenure choice, the rise in the cost of owning a flat continued to outpace that of renting one. As a result, the buy-rent gap has recently climbed to a 4½-year high.[37] Meanwhile, the average flat rental yield fluctuated around record lows of 3%.

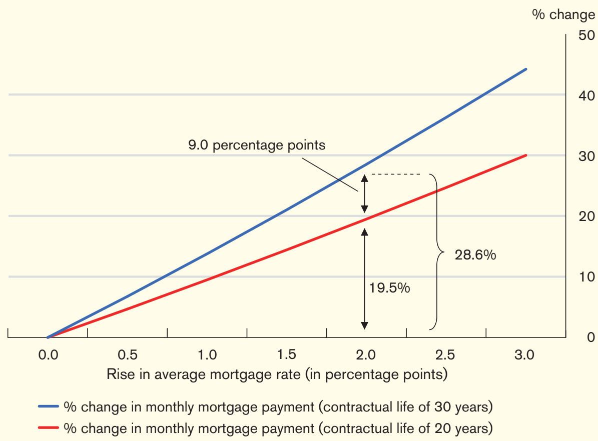
**Chart 4.38**
**Indicators of housing affordability**




Sources: R&VD, C&SD and HKMA staff estimates.

Growth in mortgage loans has visibly slowed, recording only a 2.5% increase during the first half of 2012. There are, however, signs of a pick up, according to recent mortgage application statistics. In the face of rising flat prices and the low interest rate environment, mortgagors apparently have lengthened the mortgage contractual life, from an average of 20 years in 2007 to nearly 25 years in 2012 Q2. However, the longer amortisation period increases the interest rate risk. For example, in a stressed scenario of a two-percentage-point rise in the interest rate, the monthly mortgage payment could increase by 20% under a 20-year mortgage, but by almost 30% under a 30-year mortgage (Chart 4.39).

**Chart 4.39**
**Sensitivity analysis of mortgage payment in the event of interest rate risks**



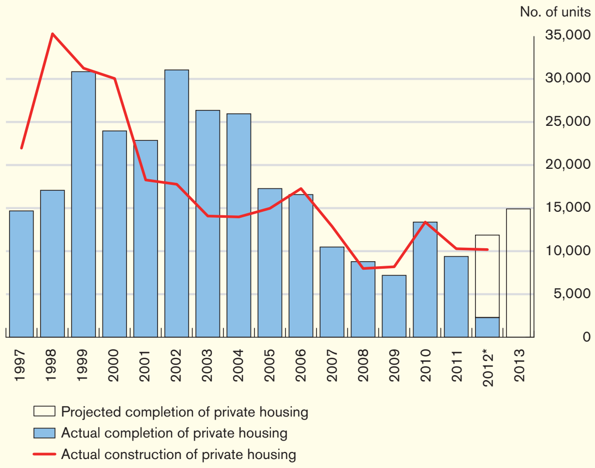

Note: The loan-to-value ratio is assumed to be 70%.
Source: HKMA staff estimates.

The near-term outlook for the residential property market is uncertain, as it is caught in a tug-of-war between two opposing forces. On the one hand, upward pressures on housing prices could persist with continued tight supply conditions (Chart 4.40) and low interest rates. On the other hand, a weaker global outlook would weigh down housing prices. Income growth may also moderate along with the slowing economy. A worsening of the sovereign debt and banking crisis in the euro area could even reverse the upward trend in an abrupt manner. In view of this, the HKMA introduced on 14 September a new round of measures to further strenghten risk management in property mortgage lending business, including tightened underwriting criteria for loans to borrowers with multiple property mortgages and a newly introduced ceiling for loan tenors (Table 4.B).

[36] The income-gearing ratio compares the amount of *mortgage payment* for a typical flat of 50 square metres (under a 20-year mortgage scheme with a 70% loan-to-value ratio) to the median income of households living in private housing. Alternately, the price-to-income ratio measures the *average price* of a typical 50 square-metre flat relative to the median income of households living in private housing.

[37] The buy-rent gap estimates the cost of owner-occupied housing (under a 20-year mortgage scheme with a 70% loan-to-value ratio) relative to rentals.

### Chart 4.40
### Construction and completion of private residential units




* Actual completion and construction figures for 2012 are up to the end of June only.

Sources: Transport and Housing Bureau and R&VD.

### Table 4.B
### Highlights of the fifth round of prudential supervisory measures for mortgage lending announced on 14 September 2012

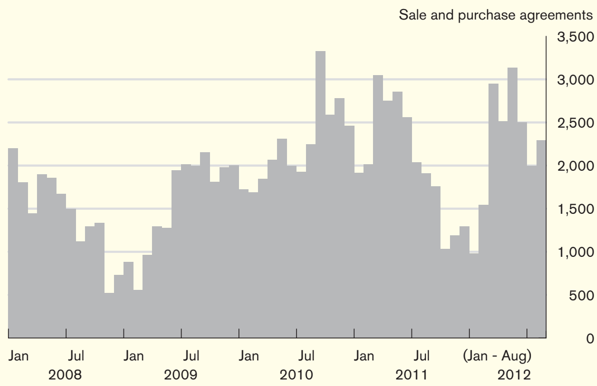
1. For all borrowers, the maximum loan tenor is limited to 30 years.
2. For borrowers with multiple properties under mortgage:
   (a) The debt servicing ratio (DSR) limit is lowered by 10 percentage points to 40%, while the maximum stressed DSR is lowered to 50%;
   (b) The maximum loan-to-value (LTV) ratio is lowered by 10 percentage points to 30% if mortgage loans are assessed based on borrowers' net worth; and
   (c) The applicable LTV ratio is lowered by 20 percentage points if borrowers' principal income is derived from outside Hong Kong.

Source: HKMA.

## *Commercial and industrial property markets*

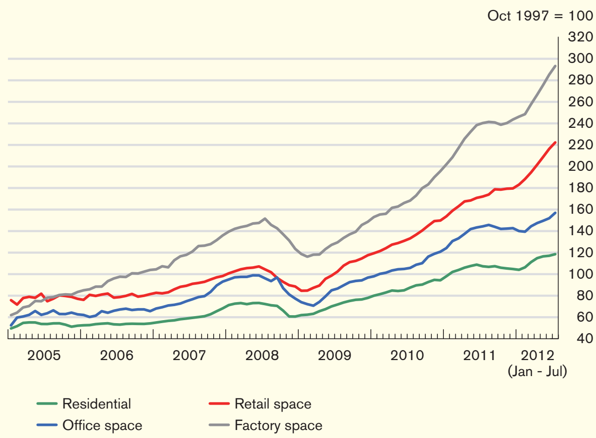
Non-residential markets also revived this year, with trading activities turning buoyant and property prices rising markedly. Overall, 13,600 sale and purchase agreements were registered in the first half of 2012, a 48% increase from the preceding half-year period and well above the long-term average activity level (Chart 4.41). Speculative activities also remained notable by historical standards. Prices for flatted factories and retail space, already at relatively high levels, climbed further by 20 - 24% in the first seven months (Chart 4.42), while prices for office space increased at a relatively slower pace of 10%. In comparison, increases in rentals for non-residential properties ranged from 3 - 10%. As a result, rental yields were around record-low levels. Looking ahead, despite support from the low interest rate environment, the rapid upsurge in prices and rentals could be hampered by the weaker global economic outlook and business prospects.

### Chart 4.41
### Transaction volume of non-residential properties




Source: Land Registry.

### Chart 4.42
### Price indices by property type




Source: R&VD.

# 5. Banking sector performance

*Despite the unfavourable external environment, the local banking sector continued to grow healthily, characterised by strong capital positions by international standards, sound liquidity and an appreciable increase in earnings, as well as a general improvement in asset quality. As the European sovereign debt and banking crisis intensified, banks in Hong Kong have managed their exposure to Europe prudently. With the Mainland economy slowing, banks' credit risk in respect of their Mainland exposure could also be rising, but the banks should be well positioned to manage such risks.*

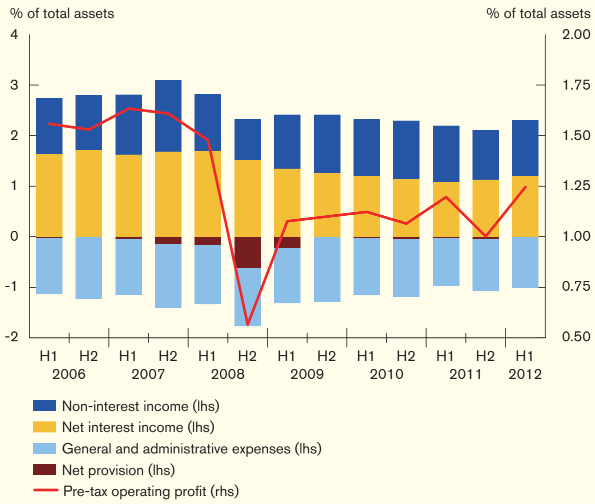
## 5.1 Profitability and capitalisation

### Profitability

Despite the prolonged European sovereign debt crisis and a slowdown in the Mainland economy, retail banks[38] registered an appreciable improvement in earnings, with aggregate pre-tax profits growing strongly by 26.9% in the first half of 2012, from the second half of 2011. The improvement reflected higher net interest and non-interest income as well as lower operating costs and lower net charges for provisions. As a result, the return on assets rose from 1% to 1.25% in the same period (Chart 5.1).

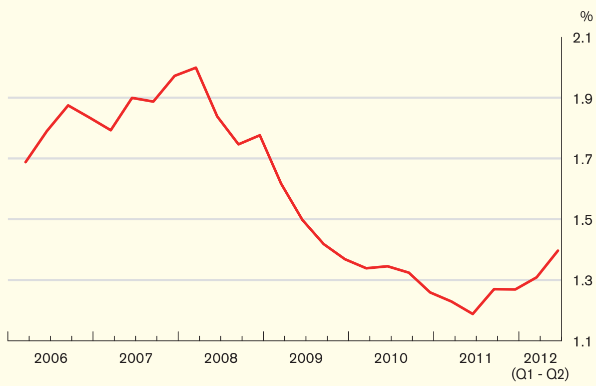
The net interest margin of banks improved further in 2012 H1 to an average of 1.35% (Chart 5.2), from 1.27% in 2011 H2 and 1.21% in 2011 H1. This was partly due to an easing of

**Chart 5.1**
**Profitability of retail banks**




Note: Semi-annually annualised figures.
Source: HKMA.

**Chart 5.2**
**Net interest margin of retail banks**

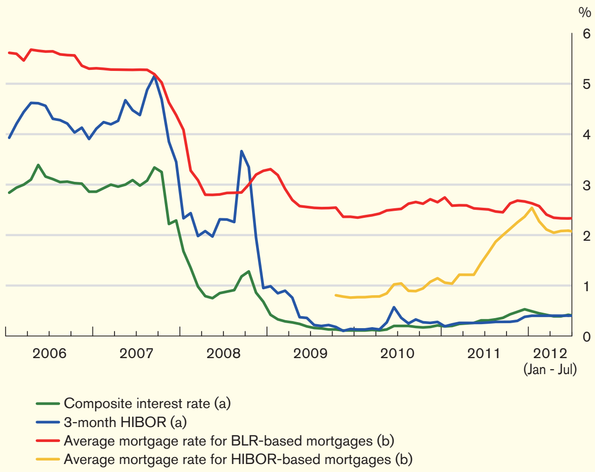



Note: Quarterly annualised figures.
Source: HKMA.

38 Throughout this chapter, figures for the banking sector relate to Hong Kong offices only, except where otherwise stated.

banks' funding pressures, as indicated by the composite interest rate, which decreased by 13 basis points in January - July 2012 (Chart 5.3).

**Chart 5.3**
**Interest rates**



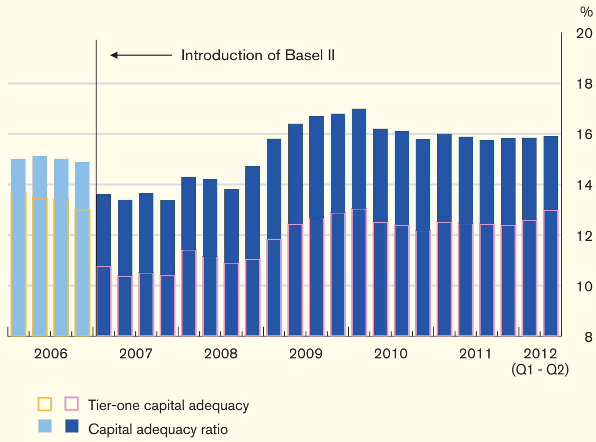

Notes:
(a) End of period figures.
(b) Period-average figures for approved loans. All mortgage rates are estimates only.
Sources: HKMA and staff estimates.

As funding costs in general softened and competition continued to be keen in the mortgage market, both BLR-based (best lending rate-based) and HIBOR-based mortgage rates declined on average by 33 and 30 basis points respectively in January - July 2012 (Chart 5.3). Meanwhile, the share of BLR-based mortgages amongst newly approved mortgage loans increased further to 92.1% in 2012 H1 and 93.4% in July 2012, from 59.7% in 2011 H2.

### *Capitalisation*

Capitalisation of the banking sector remained well above minimum international standards. The consolidated capital adequacy ratio of locally incorporated AIs remained steady at 15.9% at the end of June 2012, up slightly from 15.8% at the end of December 2011 (Chart 5.4), and the tier-one capital adequacy ratio (the ratio of tier-one capital to total risk-weighted assets) increased to 13%, from 12.4%.

**Chart 5.4**
**Capitalisation of locally incorporated AIs**




Notes:
1. Consolidated positions.
2. With effect from 1 January 2007, a revised capital adequacy framework (Basel II) was introduced for locally incorporated AIs. The capital adequacy ratios from March 2007 onwards are therefore not directly comparable with those up to December 2006.

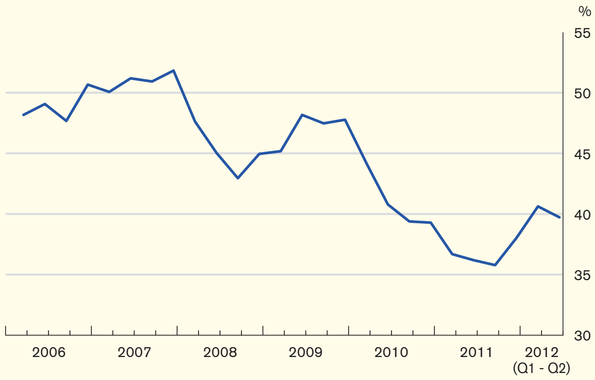
Source: HKMA.

The Basel III framework is scheduled to phase in from 1 January 2013. Data regularly collected by the HKMA indicate that local AIs are well capitalised, traditionally placing significant reliance on common equity to meet regulatory capital requirements. Further, most of the Basel III regulatory adjustments are already required to be deducted from banks' capital base under Hong Kong's existing capital rules. Therefore, Hong Kong banks should be relatively well positioned to meet the higher capital requirements of Basel III.

## 5.2 *Liquidity and funding*

Liquidity conditions within the banking system remained sound, with the average liquidity ratio of retail banks rising to 39.7% at the end of June 2012, from 38% at the end of December 2011 (Chart 5.5), and continuing to be well above the regulatory minimum of 25%.

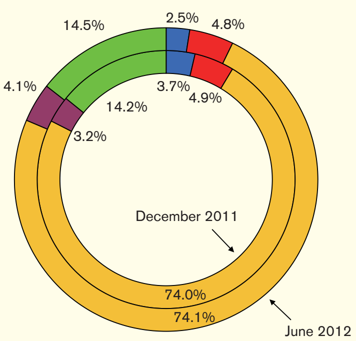
**Chart 5.5**
**Liquidity ratio of retail banks**




Note: Quarterly average figures.
Source: HKMA.

Customer deposits, which are typically less volatile than other funding sources, continued to be the primary funding source for retail banks. At the end of June 2012, the share of customer deposits to banks' total liabilities rose marginally to 74.1%, from 74% at the end of December 2011 (Chart 5.6).

**Chart 5.6**
**Liabilities structure of retail banks**



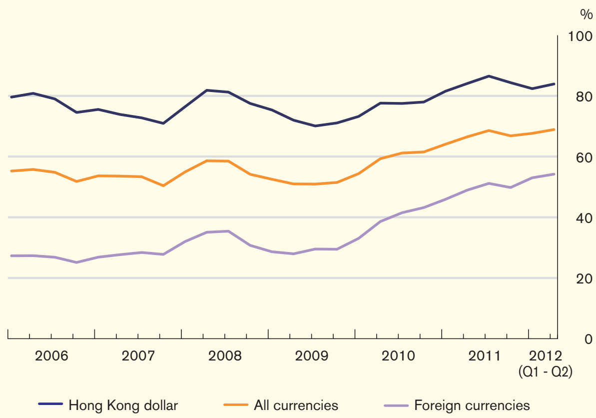

Notes:
1. Figures refer to the percentage of total liabilities (including capital and reserves).
2. Debt securities comprise negotiable certificates of deposit and all other negotiable debt instruments.

Source: HKMA.

While the share of customers' deposits remained steady, the share of time deposits to total customer deposits edged down to 42% in June 2012 from 43.3% in December 2011, and stayed significantly lower than the corresponding share of over 50% in 2008 and the years prior to that. This suggests the average maturity of deposits in retail banks may be relatively lower than in previous periods and hence their liquidity could potentially be more affected by the impact of capital outflows.

Meanwhile, the Hong Kong dollar loan-to-deposit (LTD) ratio of all AIs edged down to 84% at the end of June 2012, compared with 84.5% at the end of December 2011. In contrast, both the all currency and foreign currency LTD ratios rose significantly by 2.1 and 4.4 percentage points to 69% and 54.3% respectively at the end of June (Chart 5.7), due to a relatively stronger demand for foreign currency loans outpacing the moderate growth of foreign currency deposits. The lacklustre growth of foreign currency deposits was partly due to the decline of renminbi deposits[39] during the first half of 2012.

**Chart 5.7**
**Loan-to-deposit ratios of all AIs**

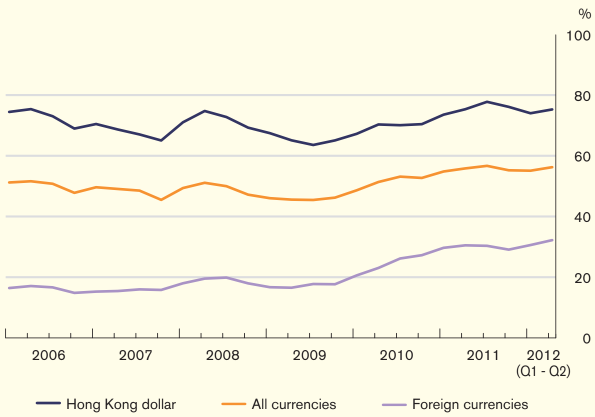



Source: HKMA.

[39] For details, see Section 4.2.

For retail banks, a similar pattern could also be observed. While the Hong Kong dollar LTD ratio edged down to 75.4% in June 2012 from 76.2% in December 2011, the all currency LTD ratio increased to 56.3% from 55.3%, and the foreign currency LTD ratio rose from 29.1% to 32.2% (Chart 5.8). Given heightened uncertainties in the external environment and the already relatively high LTD ratios, continued vigilance is warranted regarding the risk of a liquidity tightening arising from an abrupt outflow of funds.

**Chart 5.8**
**Loan-to-deposit ratios of retail banks**




Source: HKMA.

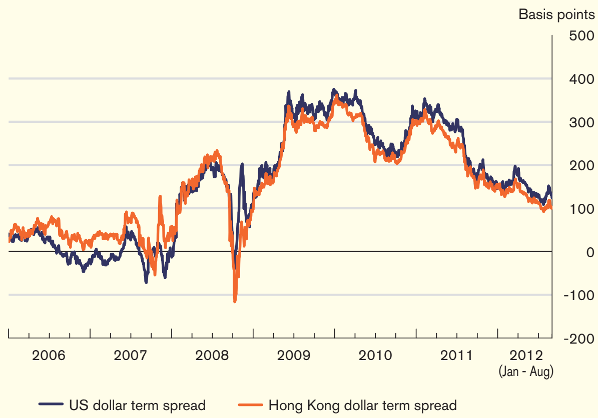
### *Foreign currency position*

The banking sector's capability to repay liabilities denominated in foreign currencies can be assessed by reference to the aggregate net open position of AIs for all foreign currencies. This position amounted to HK$46 billion at the end of June 2012, which was equivalent to 0.3% of total assets of AIs, indicating that the overall exposure of AIs to foreign exchange risks may not be of significant concern.

## *5.3 Interest rate risk*

The spreads between the long and short-term interest rates for the US dollar and Hong Kong dollar narrowed further in January - August 2012 (Chart 5.9), suggesting that the incentive for banks' search-for-yields activities by borrowing short-term funds to purchase long-term interest-bearing assets may have reduced.

**Chart 5.9**
**Term spreads of Hong Kong and US dollars**




Note: Term spreads are defined as 10-year swap rates minus three-month money market rates of the respective currencies.

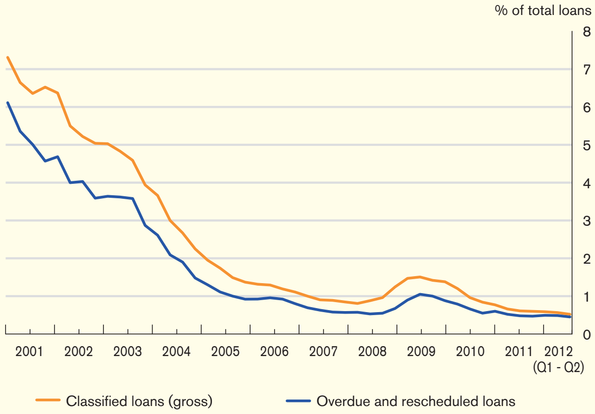
Source: HKMA staff estimates based on data from Bloomberg.

Nevertheless, given that the spreads remained significantly above the levels prevailing prior to the global financial crisis, banks should be watchful in monitoring and managing the potential mark-to-market loss for their financial investments, which could arise from changes in the yield spreads.

## 5.4 Credit risk

The asset quality of retail banks' loan portfolios improved in general during the first half of 2012, with the classified loan ratio falling further to 0.52% at the end of June 2012 from 0.59% at the end of December 2011, and the ratio of overdue and rescheduled loans edging down to 0.45% from 0.49% (Chart 5.10).

**Chart 5.10**
**Asset quality of retail banks**




Notes:
1. Classified loans are those loans graded as "sub-standard", "doubtful" or "loss".
2. Figures related to retail banks' Hong Kong office(s) and overseas branches.

Source: HKMA.

As economic activities slowed, credit growth within the Hong Kong banking sector moderated further to 4.7% in 2012 H1, from 5.4% in 2011 H2. The growth was largely contributed by foreign currency components, which expanded by a rapid 10%, while Hong Kong dollar loans rose by only 1.4%. Property-related lending[40] increased marginally by 0.2%, compared with a rise of 2.4% in the second half of last year. However, its share to total domestic lending remained high at over 46%. Looking ahead, credit may continue to grow at a slow pace in the second half of 2012. The results of the HKMA Opinion Survey on Credit Condition Outlook in June revealed that a majority of surveyed AIs expected loan demand to remain the same in the subsequent three months, while about one-fifth of them anticipated it to be somewhat lower (Table 5.A).

**Table 5.A**
**Expectation of loan demand in the next three months**

| (% of total respondents) | Sep 2011 | Dec 2011 | Mar 2012 | Jun 2012 |
|---|---|---|---|---|
| Considerably higher | 0 | 0 | 0 | 0 |
| Somewhat higher | 14 | 19 | 19 | 5 |
| Same | 62 | 67 | 71 | 76 |
| Somewhat lower | 19 | 10 | 10 | 19 |
| Considerably lower | 5 | 5 | 0 | 0 |
| Total | 100 | 100 | 100 | 100 |

Note: Figures may not add up to 100% because of rounding.

Source: HKMA.

### *Household exposure*

The growth of household loans[41] slowed slightly to 2.6% in the first half of 2012, from 2.7% in 2011 H2. Within this, reflecting a more buoyant residential property market, mortgage lending went up by 2.5% in the first half[42] following a 1.2% increase in 2011 H2, while other loans for private purposes registered a growth of 5.1% after picking up by 3.8% (Table 5.B). Meanwhile, the level of household debt leverage, as measured by the ratio of household loans to GDP, remained steady at 58.7% at the end of June 2012, compared with 58.3% at the end of December 2011.

**Table 5.B**
**Half-yearly growth of loans to households of all AIs**

| | 2009 | | 2010 | | 2011 | | 2012 |
|---|---|---|---|---|---|---|---|
| (%) | H1 | H2 | H1 | H2 | H1 | H2 | H1 |
| Mortgages | 1.7 | 5.6 | 5.1 | 8.6 | 5.5 | 1.2 | 2.5 |
| Credit cards | -9.6 | 5.7 | -0.9 | 17.9 | -1.4 | 15.9 | -1.6 |
| Other loans for private purposes | -8.1 | 8.9 | 7.9 | 6.6 | 9.4 | 3.8 | 5.1 |
| Total loans to households | -0.8 | 6.1 | 5.1 | 8.9 | 5.6 | 2.7 | 2.6 |

Source: HKMA.

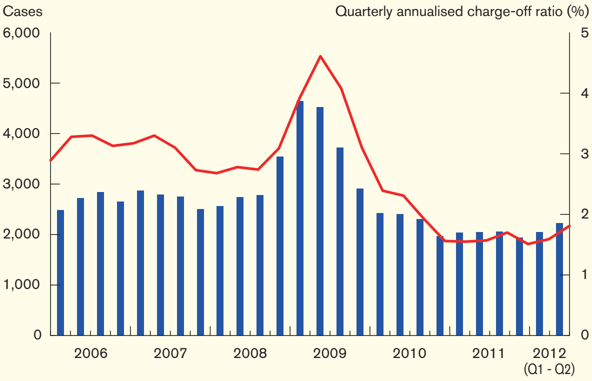
[40] Property lending includes mortgage loans and credit for building, construction and property development and investment.

[41] Loans to households constitute lending to professional and private individuals, excluding lending for other business purposes. Mortgage lending accounts for a major proportion of household loans, while the remainder comprises mainly unsecured lending through credit card lending and other personal loans for private purposes. At the end of June 2012, the share of household lending in domestic lending was 30.3%.

[42] The mortgage lending growth in the first half of 2012 was primarily from the second quarter, as the quarter-on-quarter growth in Q1 was only 0.1%.

The credit risk associated with unsecured household loans remained well contained, with the quarterly annualised charge-off ratio for credit card lending staying at a low level of 1.81% in 2012 Q2, albeit somewhat higher than the 1.51% in 2011 Q4 (Chart 5.11). The number of bankruptcy petitions likewise remained at a relatively low level, suggesting a relatively low credit risk environment.

**Chart 5.11**
**Charge-off ratio for credit card lending and bankruptcy petitions**

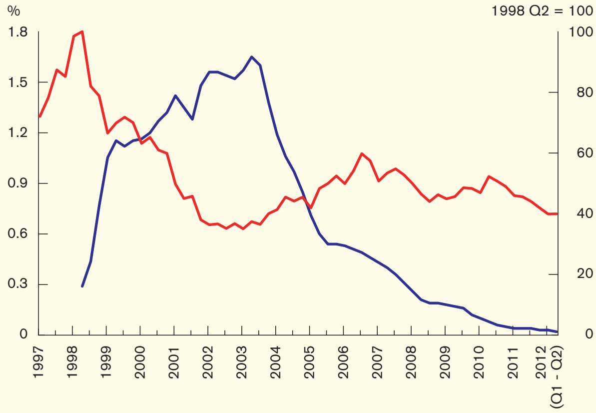



Sources: Official Receiver's Office and HKMA.

Various other indicators suggest a general improvement in the credit risk of household loans. The delinquency and rescheduled loan ratio of banks' mortgage portfolios fell further to a record low of 0.02% at the end of June 2012 (Chart 5.12), and the debt-service index of new mortgages declined to 40 in 2012 Q2 from 42 in 2011 Q4. The decline in the debt-service index mainly reflected the further increase in the contractual life of mortgage loans and the prevailing low interest rate environment.

However, with the average contractual life of new mortgage loans climbing to a high level of 295 months in June 2012 from 284 months in December 2011, the repayments of these long tenor mortgage loans have become increasingly sensitive to a rise in interest rates. How this may impact on the debt-service burden of households should be closely watched.[43]

**Chart 5.12**
**Delinquency ratio of banks' mortgage portfolios and household debt-service burden in respect of new mortgages**




Note: The calculation of the index is based on the average interest rate for BLR-based mortgages.

Sources: HKMA and staff estimates.

## *Corporate exposure*[44]

Domestic loans to corporations[45] grew at a slightly more rapid pace of 3.2% in the first half of 2012, after a 1.4% increase in 2011 H2. At the end of June, corporate loans accounted for 69.3% of domestic lending.

A number of indicators suggest a stable credit risk environment for banks' corporate lending. The number of compulsory winding-up orders of companies fell to 154 in the first half, from 170

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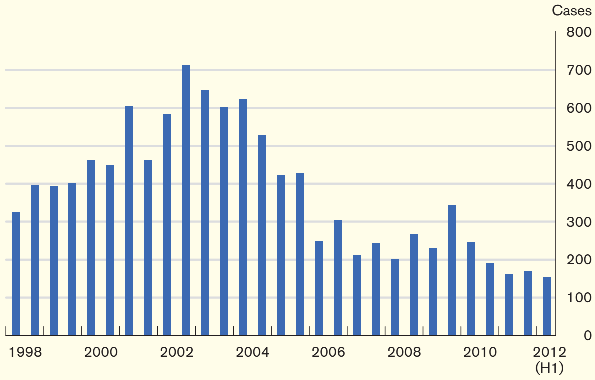
43 On 14 September 2012, new measures were introduced by the HKMA related to loan tenor and borrowers with multiple property mortgages. The former measure limits the maximum loan tenor to 30 years for all property mortgage loans. For details, see the HKMA press release "Prudential Supervisory Measures for Mortgage Lending" issued on the same date.

44 Excluding interbank exposure.

45 Loans to corporations comprise domestic lending except lending to professional and private individuals.

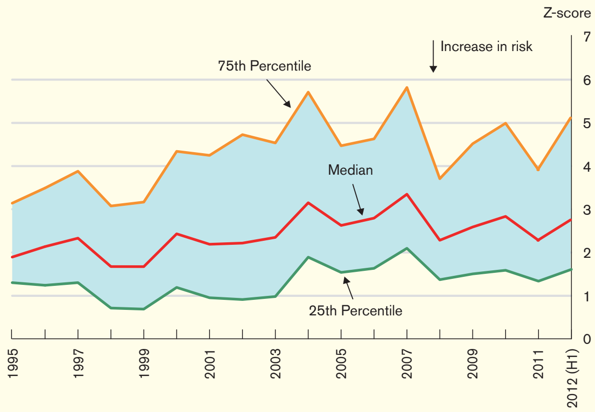
in the preceding six months (Chart 5.13). Meanwhile, the Altman's Z-score[46], a credit risk measure based on accounting data, headed higher in the first half, indicating an improvement in the financial health of the non-financial corporate sector (Chart 5.14).

**Chart 5.13**
**Number of winding-up orders of companies**




Source: Official Receiver's Office.

**Chart 5.14**
**Altman's Z-score: A bankruptcy risk indicator of listed non-financial companies**

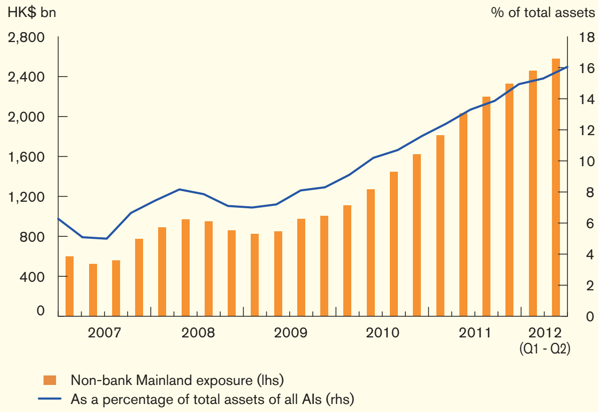



Note: A lower Z-score indicates a higher likelihood of a company default.
Source: HKMA staff estimates based on data from Bloomberg.

### *Mainland exposure*

The credit exposure of the domestic banking sector to Mainland-related business expanded further. The total non-bank Mainland exposure of all AIs reached HK$2,579 billion (16.1% of total assets) at the end of June 2012, from HK$2,330 billion (14.9% of total assets) at the end of December 2011 (Chart 5.15). Of this, retail banks' non-bank Mainland exposure[47] rose to HK$1,717 billion (16.8% of total assets) from HK$1,572 billion (15.8% of total assets).

**Chart 5.15**
**Non-bank Mainland exposure of all AIs**




Note: Figures include exposure booked in AIs' banking subsidiaries in Mainland China.
Source: HKMA.

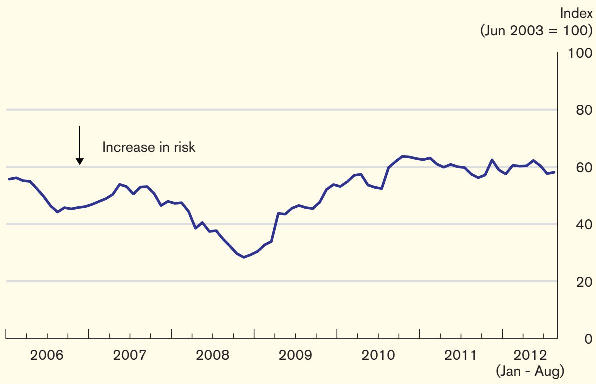
Despite a slowdown in the Mainland economy, the overall asset quality of the Mainland's corporate sector appears to have remained steady, as suggested by its aggregate distance-to-default index[48] which stayed at a more favourable level than prior to the global financial crisis (Chart 5.16).

46 Altman's Z-score is a credit risk measure based on accounting data. It is a typical credit risk measure to assess the health of the corporate sector based on an array of financial ratios reported in companies' financial statements. The accounting ratios used to derive the Z-score are working capital/total assets, retained earnings/total assets, earnings before interest and taxes/total assets, market value of equity/book value of total liabilities, and sales/total assets.

47 Including exposure booked in retail banks' banking subsidiaries in Mainland China.

48 The distance-to-default is a market-based default risk indicator based on the framework by R. Merton (1974), "On the pricing of corporate debt: the risk structure of interest rates", *Journal of Finance*, Vol. 29, pages 449 – 470, in which equity prices, equity volatility, and companies' financial liabilities are the determinants of default risk. In essence, it measures the difference between the asset value of a firm and a default threshold in terms of the firm's asset volatility.

**Chart 5.16**
**Distance-to-default index for the Mainland corporate sector**

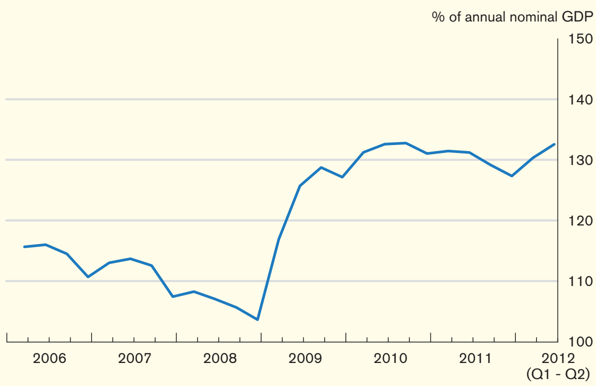



Note: Distance-to-default index is defined as the simple average of the distance-to-default values of non-financial constituent companies (i.e. excluding investment companies and those engaged in banking, insurance and finance) of the Shanghai Stock Exchange 180 A-share index.

Source: HKMA staff estimates.

While a substantial share of the non-bank Mainland exposure is backed by guarantees or collateralised, banks should be attentive to the credit risk management of their exposure in view of concerns over a possible further consolidation of the Mainland economy, its relatively high level of credit-to-GDP ratio (Chart 5.17), and the recent increase in the amount of non-performing loans in the Mainland's banking system (Chart 5.18).

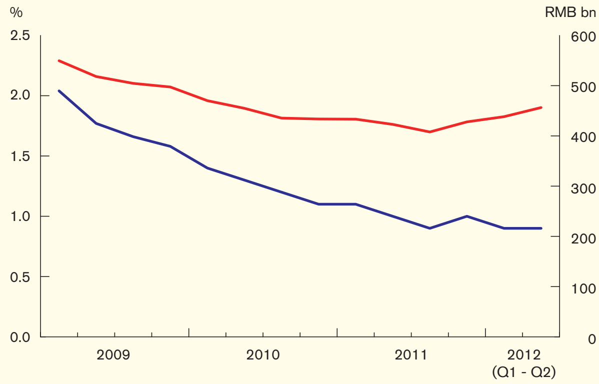
**Chart 5.17**
**Credit-to-GDP ratio in Mainland China**




Note: Credit-to-GDP ratio is defined as the ratio of claims on the private sector to the sum of quarterly nominal GDP for the latest four quarters.

Sources: IMF International Financial Statistics and CEIC.

**Chart 5.18**
**Non-performing loans in Mainland China**

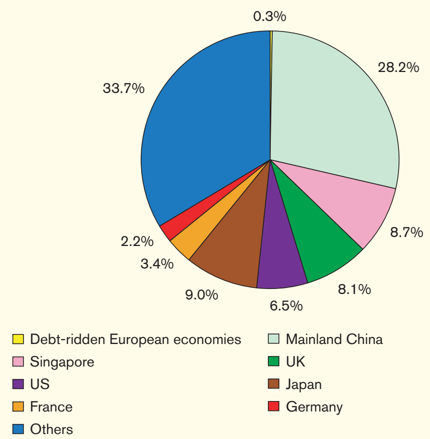



Source: China Banking Regulatory Commission.

## *Impact of the European sovereign debt crisis*

The performance of local banks will continue to be affected by the evolution of the European sovereign debt crisis. Partly reflecting the move by banks to cut their exposure, the share of external claims of the Hong Kong banking sector on the more debt-ridden European economies (Greece, Ireland, Italy, Portugal and Spain) decreased to 0.3% by the end of June 2012, from 0.8% a year earlier, while its exposure to the UK, France and Germany was lowered to 13.7% from 14.3% (Chart 5.19). Given that the exposure of

**Chart 5.19**
**External claims of the Hong Kong banking sector on major economies (all sectors) at the end of June 2012**




Notes:
1. Debt-ridden European economies refer to Greece, Ireland, Italy, Portugal and Spain.
2. Figures do not add up to 100% because of rounding.

Source: HKMA.

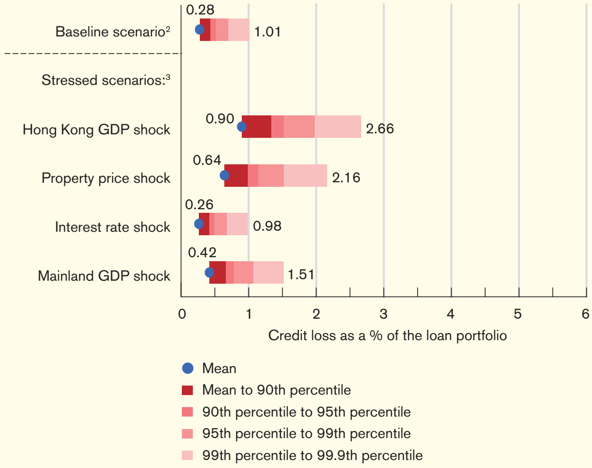
the Hong Kong banking sector to banks in the UK, France and Germany is not immaterial, and these banks in turn have significant exposure to the more debt-ridden European economies, the possible contagion risk and its implications for banks in Hong Kong merit close attention.

### *Macro stress testing of credit risk* [49 & 50]

Results of the latest macro stress testing on retail banks' credit exposure suggest that the Hong Kong banking sector remains resilient and should be able to withstand rather severe macroeconomic shocks, similar to those during the Asian financial crisis.

Chart 5.20 presents the simulated future credit loss rate of retail banks in 2014 Q2 under four specific macroeconomic shocks[51] using information up to 2012 Q2.

**Chart 5.20**
**The mean and value-at-risk statistics of simulated credit loss distributions[1]**




Notes:
1. The assessments assume the economic conditions in 2012 Q2 as the current environment. The Monte Carlo simulation method is adopted to generate the credit loss distribution for each scenario.
2. Baseline scenario: no shock throughout the two-year period.
3. Stressed scenarios:
   **Hong Kong GDP shock:** reductions in Hong Kong's real GDP by 2.3%, 2.8%, 1.6%, and 1.5% respectively in each of the four consecutive quarters starting from 2012 Q3 to 2013 Q2.
   **Property price shock:** Reductions in Hong Kong's real property prices by 4.4%, 14.5%, 10.8%, and 16.9% respectively in each of the four consecutive quarters starting from 2012 Q3 to 2013 Q2.
   **Interest rate shock:** A rise in real interest rates (HIBORs) by 300 basis points in the first quarter (i.e. 2012 Q3), followed by no change in the second and third quarters and another rise of 300 basis points in the fourth quarter (i.e. 2013 Q2).
   **Mainland GDP shock:** Slowdown in the year-on-year annual real GDP growth rate to 4% in one year.

Source: HKMA staff estimates.

The expected credit losses for retail banks' aggregate loan portfolios two years after the different hypothetical macroeconomic shocks are estimated to be moderate, ranging from 0.26% (interest rate shock) to 0.9% (Hong Kong GDP shock).

Taking account of tail risk, banks' maximum credit losses (at the confidence level of 99.9%) under the stress scenarios range from 0.98% (interest rate shock) to 2.66% (Hong Kong GDP shock), which are significant, but smaller than the loan loss of 4.39% following the Asian financial crisis.

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49 Macro stress testing refers to a range of techniques used to assess the vulnerability of a financial system to "exceptional but plausible" macroeconomic shocks. Details of the model adopted in this exercise can be found in J. Wong et al. (2006), "A framework for stress testing banks' credit risk", *Journal of Risk Model Validation*, Vol. 2(1), pages 3 - 23. An updated framework is used for the current estimations.

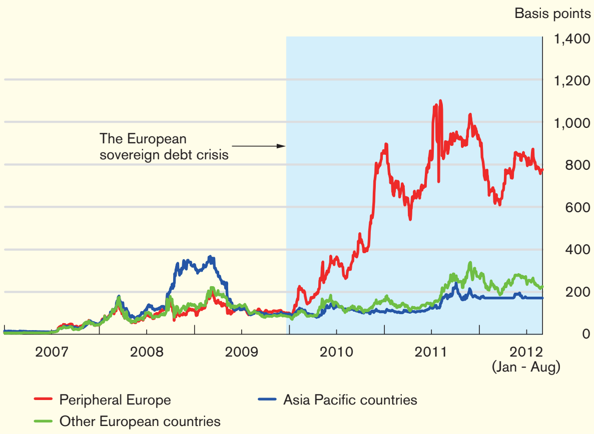
50 All estimates of credit loss for the overall loan portfolio of Hong Kong banks presented in this Report are based on a revised stress testing framework. They are not strictly comparable to those estimates from the past framework that appeared in previous Reports due mainly to different definitions of credit losses in these two frameworks. Specifically, credit losses in two years after any shock under the revised framework are measured by the estimated specific provision ratio at the end of the second year plus 50% of the estimated specific provision ratio at the end of the first year after the shock, while credit loss estimates from the past framework are derived based on an estimated delinquency ratio at the end of the second year multiplied by a loss-given-default estimate, which is determined by the simulated property price change over the two-year horizon.

51 These shocks are calibrated to be similar to those that occurred during the Asian financial crisis, except the Mainland China GDP shock.

## 5.5 Systemic risk to the banking system

While the CDS spreads for European banks widened as the European sovereign debt crisis re-intensified in the first half of 2012, the corresponding spreads for Asian banks remained low (Chart 5.21), suggesting the systemic risk of the banking sectors in Asia, so far, has not been severely affected by the sovereign debt problem in Europe.

**Chart 5.21**
**CDS spreads of banks in Europe and Asia**

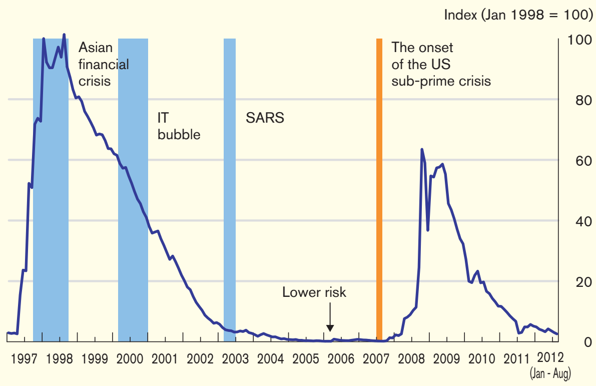



Notes:
1. Median of five-year CDS spreads of the respective groups.
2. Peripheral Europe includes Greece, Ireland, Italy, Portugal and Spain.

Source: Bloomberg.

In Hong Kong, the banking distress index, a market-based systemic risk indicator for the local banking sector, fell slightly to 2.6 in August 2012 from 4.1 in February (Chart 5.22), indicating that the risk of contagion in the banking system remained insignificant and the probability of an occurrence of multiple bank defaults is small. This optimistic market view was broadly consistent with the latest assessment result of the composite early warning system[52], which estimated that the banking distress probability remained within the range of the low fragility category, suggesting that the banking sector continued to be stable and resilient.[53]

**Chart 5.22**
**The banking distress index**




Source: HKMA staff estimates based on data from Bloomberg.

The Financial Stability Board has recently identified shadow banking as a potential source of systemic risk. Box 5 provides an overview of shadow banking in Hong Kong and assesses the issue by examining the lending activities of listed non-bank companies. The assessment suggests that while a rising trend of lending by domestic non-bank lenders exists, the scale remains small, with no material concerns on their leverage, funding structure and interconnectedness with the local banking sector. Nevertheless, continuous monitoring is required, since the situation may evolve amid rapid regulatory changes in the global financial system.

*Key performance indicators of the banking sector are provided in Table 5.C.*

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52 The composite early warning system is designed to estimate banking distress probability based on 10 leading indicators. These include macroeconomic fundamentals, currency crisis vulnerability, default risk of banks and non-financial companies, asset price misalignments, credit growth, and the occurrence of banking distress in other Asia-Pacific economies. For details, see J. Wong et al. (2010), "Predicting banking distress in the EMEAP economies", *Journal of Financial Stability*, Vol. 6(3), pages 169 - 179.

53 The composite early warning system is a four-level risk rating system. A. Demirgüc-Kunt and E. Detragiache (2000), "Monitoring Banking Sector Fragility: A Multivariate Logit Approach", *World Bank Economic Review*, Vol. 14(2), pages 287 - 307, has been followed in the selection of the upper bounds of each of the four fragility classes so that type I error associated with the bounds are 10%, 30%, 50% and 100% respectively.

## Table 5.C
## Key performance indicators of the banking sector[1] (%)

| | Jun 2011 | Mar 2012 | Jun 2012 |
|---|---|---|---|
| **Interest rate** | | | |
| 1-month HIBOR[2] (quarterly average) | 0.20 | 0.33 | 0.30 |
| 3-month HIBOR (quarterly average) | 0.26 | 0.40 | 0.40 |
| BLR[3] and 1-month HIBOR spread (quarterly average) | 4.80 | 4.67 | 4.70 |
| BLR and 3-month HIBOR spread (quarterly average) | 4.74 | 4.60 | 4.60 |
| Composite interest rate[4] | 0.31 | 0.42 | 0.42 |
| | | **Retail banks** | |
| **Balance sheet developments[5]** | | | |
| Total deposits | 2.6 | 1.4 | 1.3 |
| Hong Kong dollar | 1.2 | 2.9 | 0.2 |
| Foreign currency | 4.5 | -0.5 | 2.7 |
| Total loans | 4.5 | 1.1 | 3.4 |
| Domestic Lending[6] | 4.1 [r] | 0.5 [r] | 2.9 |
| Loans for use outside Hong Kong[7] | 7.3 [r] | 4.4 [r] | 6.1 |
| Negotiable instruments | | | |
| Negotiable certificates of deposit (NCD) issued | 47.1 | 8.2 | 6.4 |
| Negotiable debt instruments held (excluding NCD) | 4.9 | 2.3 | -2.8 |
| **Asset quality[8]** | | | |
| As percentage of total loans | | | |
| Pass loans | 98.20 | 98.17 | 98.19 |
| Special mention loans | 1.19 | 1.27 | 1.28 |
| Classified loans[9] (gross) | 0.61 | 0.57 | 0.52 |
| Classified loans (net)[10] | 0.37 | 0.32 | 0.30 |
| Overdue > 3 months and rescheduled loans | 0.48 | 0.49 | 0.45 |
| **Profitability** | | | |
| Bad debt charge as percentage of average total assets[11] | 0.02 | 0.01 | 0.01 |
| Net interest margin[11] | 1.21 | 1.31 | 1.35 |
| Cost-to-income ratio[12] | 43.6 | 46.0 | 44.4 |
| **Liquidity ratio (quarterly average)** | 36.2 | 40.6 | 39.7 |
| | | **Surveyed institutions** | |
| **Asset quality** | | | |
| Delinquency ratio of residential mortgage loans | 0.01 | 0.01 | 0.01 |
| Credit card lending | | | |
| Delinquency ratio | 0.20 | 0.21 | 0.21 |
| Charge-off ratio — quarterly annualised | 1.57 | 1.59 | 1.81 |
| — year-to-date annualised | 1.53 | 1.59 | 1.67 |
| | | **All locally incorporated AIs** | |
| **Capital adequacy ratio (consolidated)** | 15.9 | 15.9 | 15.9 |

Notes:

1. Figures are related to Hong Kong office(s) only except where otherwise stated.
2. With reference to the Hong Kong dollar Interest Settlement Rates released by the Hong Kong Association of Banks.
3. With reference to the rate quoted by The Hongkong and Shanghai Banking Corporation Limited.
4. The composite interest rate is a weighted average interest rate of all Hong Kong dollar interest-bearing liabilities, which include deposits from customers, amounts due to banks, negotiable certificates of deposit and other debt instruments, and Hong Kong dollar non-interest-bearing demand deposits on the books of banks. Further details can be found in the HKMA website.
5. Quarterly change.
6. Loans for use in Hong Kong plus trade finance.
7. Includes "others" (i.e. unallocated).
8. Figures are related to retail banks' Hong Kong office(s) and overseas branches.
9. Classified loans are those loans graded as "substandard", "doubtful" or "loss".
10. Net of specific provisions/individual impairment allowances.
11. Year-to-date annualised.
12. Year-to-date figures.

[r] Revised figure.

## Box 5
## Shadow banking in Hong Kong – an overview and assessment of lending by listed finance companies

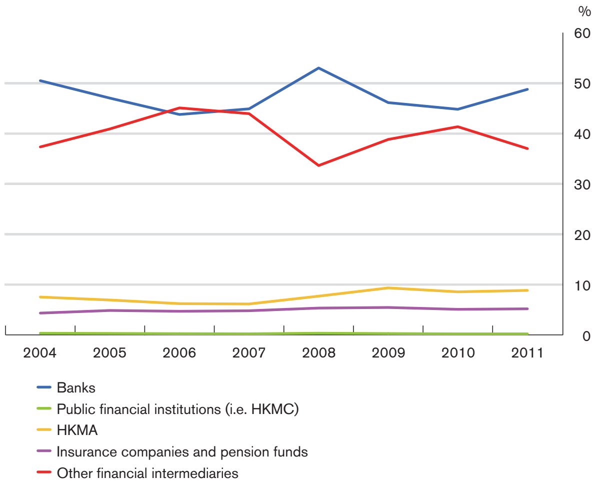
*Overview*

The Financial Stability Board (FSB) has recently identified shadow banking[54] as a potential source of systemic risk. In response, the FSB (2011)[55] introduced an annual monitoring exercise to strengthen the oversight and regulation of shadow banking. This box summarises the key findings of the 2012 monitoring exercise for Hong Kong.

The monitoring exercise requires authorities to assess the size and composition of their own financial systems (the "macro-mapping" exercise) to identify possible areas where significant non-bank credit intermediation and systemic risk may arise.

Chart B5.1 summarises the results for Hong Kong. In terms of asset size, banks remain the largest sector, accounting for around 49% of total assets of the Hong Kong financial system at the end of 2011. Other financial intermediaries (OFIs), including money market funds, hedge funds, other investment funds and finance companies[56], constituted 37% of total assets of the financial system. The remaining 14% mainly reflects assets of insurance companies, pension funds, public financial institutions and the HKMA.[57]

**Chart B5.1**
**The Hong Kong financial system by asset share of sectors**




Sources: Bloomberg, C&SD, Hong Kong Mortgage Corporation Limited (HKMC), Mandatory Provident Fund Schemes Authority, Securities and Futures Commission, financial reports of companies, HKMA and staff estimates.

The macro-mapping exercise indicates that the scale of OFIs is material. This finding, however, does not imply that OFIs are currently heavily involved in shadow banking activities, as lending does not form a major portion of their assets.[58]

54 Shadow banking refers to credit intermediation involving entities and activities outside the regular banking system.

55 Financial Stability Board (2011), "Shadow Banking: Strengthening Oversight and Regulation".

56 In this box, finance companies refer to those listed non-bank companies that are classified as "Financials" using the Global Industry Classification Standard by Bloomberg and reported to have "loan receivables" in their balance sheets. Finance companies do not include insurance companies.

57 Since data for hedge funds and insurance companies are available only up to 2010, their figures for 2011 are estimated by assuming their asset growth rates in 2011 are the same as their respective growth rates in 2010.

58 At the end of 2011, around 70% of assets of OFIs were in the form of "other investment funds" (mainly bond and equity funds), which are not directly involved in lending. For finance companies, while they are more involved in lending business, the share of lending in total assets for listed domestic finance companies is found to be small at around 2%.

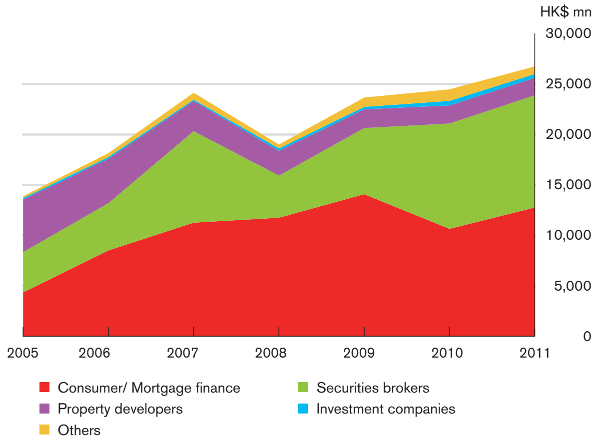
### *Lending by listed finance companies*

In order to investigate this issue further, we narrowed down the focus to credit intermediation activities by finance companies.[59] We analysed the scale and trend of lending by finance companies using data on the financial accounts of all active non-bank financial companies[60] listed in Hong Kong that are involved in credit intermediation.[61]

It was found that finance companies listed in Hong Kong contain two major groups of companies by reference to their principal places of business, namely Mainland and domestic (Hong Kong) finance companies. For Mainland finance companies listed in Hong Kong, information from their annual reports revealed that most of their lending reflects their credit portfolios on the Mainland, and banks in Hong Kong are not their major end-suppliers of funds, indicating limited implications currently for systemic risk in Hong Kong.

As for domestic finance companies, 58 listed domestic companies engaging in lending business were identified.[62] The scale of lending by these domestic finance companies remained small, amounting to less than 1% of total loans of the domestic banking sector at the end of 2011. These domestic finance companies can be categorised into five major groups according to their principal lending activities: (i) consumer/ mortgage finance companies; (ii) securities brokers; (iii) property developers; (iv) investment companies; and (v) others.[63] Chart B5.2 shows that lending[64] was mainly extended by consumer/ mortgage finance companies (for example, second mortgages, issuance of credit cards, personal loans and instalment loans) and securities brokers (mainly in the form of margin lending).

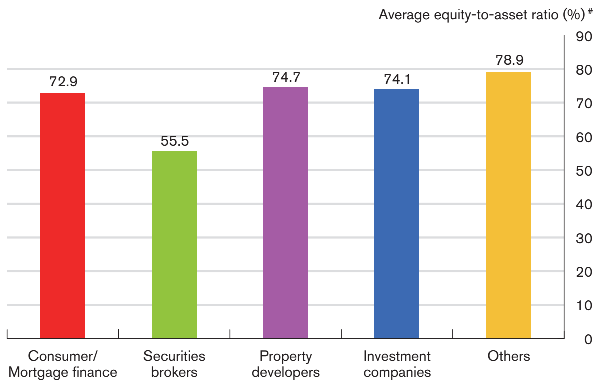
**Chart B5.2**
**Lending by listed domestic finance companies**




Sources: Bloomberg, financial reports of companies and HKMA staff estimates.

The financial risks of domestic finance companies are assessed by their leverage. Equity is found to be the major type of funding for these companies, with the average equity-to-asset ratio for the 58 domestic finance companies being 68.9% (Chart B5.3). This indicates that their leverage and funding structure may not entail particularly high systemic risk.

**Chart B5.3**
**Leverage of listed domestic finance companies**




# Simple average of companies in each type

Sources: Bloomberg, financial reports of companies and HKMA staff estimates.

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59 Finance companies accounted for around 6.2% of the total assets of the Hong Kong financial system.

60 In this box, non-bank companies refer to companies which are not AIs.

61 Owing to the lack of complete data, the assessment can only rely on data from listed non-bank financial companies in Hong Kong, which at best could only provide a partial picture of non-bank credit intermediation in Hong Kong. Therefore, caution should be exercised in interpreting the results.

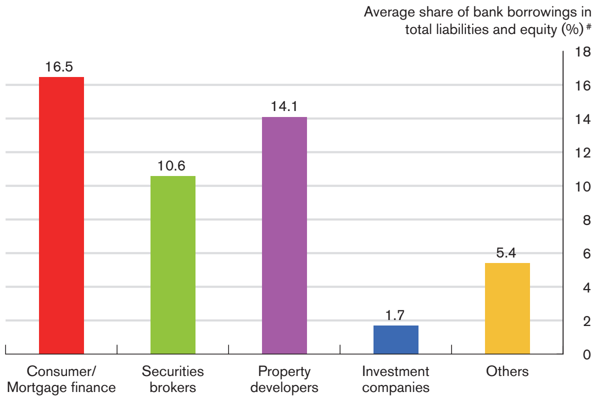
62 The number excludes companies that are subsidiaries of other domestic finance companies.

63 The classification of finance companies, however, cannot be perfectly precise because the lending activities of a number of finance companies span across different types.

64 The lending by the non-bank financial companies is proxied by "loan receivables" or similar items reported in their annual reports.

As for their interconnectedness with the Hong Kong banking sector, bank borrowings are found to be a relatively minor funding source for the domestic finance companies, with the share of bank borrowings in total liabilities (including equity) varying from 1.7% to 16.5% among different types of domestic finance companies (Chart B5.4). The aggregate bank borrowings of these domestic finance companies only accounted for around 3.5% of total loans of the Hong Kong banking sector[65], indicating that the interconnectedness between the domestic finance companies and the Hong Kong banking sector was low.

**Chart B5.4**
**Bank borrowings of listed domestic finance companies**




# Simple average of companies in each type

Sources: Bloomberg, financial reports of companies and HKMA staff estimates.

## *Conclusion*

The assessment suggests that while a rising trend of lending by domestic finance companies exists, the scale remains small, with no material concerns on their leverage, funding structure and interconnectedness with the local banking sector. Nevertheless, continuous monitoring is required, since the situation may evolve amid rapid regulatory changes in the global financial system.

65 Assuming that all domestic finance companies' bank borrowings are from banks in Hong Kong. This assumption tends to overestimate their interconnectedness with the Hong Kong banking sector.

# Glossary of terms

### *Aggregate Balance*

The sum of balances in the clearing accounts and reserve accounts maintained by commercial banks with the central bank. In Hong Kong, this refers to the sum of the balances in the clearing accounts maintained by the banks with the HKMA for settling interbank payments and payments between banks and the HKMA. The Aggregate Balance represents the level of interbank liquidity, and is a part of the Monetary Base.

### *Authorized Institution (AI)*

An institution authorized under the Banking Ordinance to carry on the business of taking deposits. Hong Kong maintains a Three-tier Banking System, which comprises licensed banks, restricted licence banks and deposit-taking companies.

### *Best Lending Rate*

A benchmark interest rate that banks use to price loans. In Hong Kong, the Best Lending Rate is used as a base for quoting interest rates on mortgage loans.

### *Certificates of Indebtedness (CIs)*

Certificates issued by the Financial Secretary under the Exchange Fund Ordinance, to be held by note-issuing banks as cover for the banknotes they issue.

### *Composite Consumer Price Index (CCPI)*

The headline consumer price index (CPI) for Hong Kong. The Census and Statistics Department compiles three separate CPI series relating to households in different expenditure ranges. The CPI(A) relates to about 50% of households in the relatively low expenditure range; the CPI(B) relates to the next 30% of households in the medium expenditure range; and the CPI(C) relates to the next 10% of households in the relatively high expenditure range. The Composite CPI is compiled based on the aggregate expenditure pattern of all of the above households taken together.

### *Composite Interest Rate*

The composite interest rate is a weighted average interest rate of all Hong Kong dollar interest bearing liabilities, which include deposits from customers, amounts due to banks, negotiable certificates of deposit and other debt instruments, and Hong Kong dollar non-interest bearing demand deposits on the books of banks. Data from retail banks, which account for about 90% of the total customers' deposits in the banking sector, are used in the calculation. It should be noted that the composite interest rate represents only average interest expenses. There are various other costs involved in the making of a loan, such as operating costs (e.g. staff and rental expenses), credit cost and hedging cost, which are not covered by the composite interest rate.

### *Convertibility Undertaking*

An undertaking by a central bank or currency board to convert domestic currency into foreign currency and vice versa at a fixed exchange rate. In Hong Kong, the HKMA operates Convertibility Undertakings on both the strong side and the weak side. Under the strong-side Convertibility Undertaking, the HKMA undertakes to buy US dollars from licensed banks at 7.75. Under the weak-side Convertibility Undertaking, the HKMA undertakes to sell US dollars at 7.85. Within the Convertibility Zone between 7.75 and 7.85, the HKMA may choose to conduct market operations consistent with Currency Board principles with the aim of promoting the smooth functioning of the money and foreign exchange markets.

### *Convertibility Zone*

The Hong Kong dollar-US dollar exchange rate band, defined by the levels of the strong- and weak-side Convertibility Undertakings, within which the HKMA may choose to conduct market operations consistent with Currency Board principles.

### *Exchange Fund Bills and Notes (EFBN)*

Debt instruments issued by the HKMA for the account of the Exchange Fund. Introduced in March 1990, the Exchange Fund Bills and Notes programme has expanded over the years, with a maturity profile ranging from three months to 15 years. These instruments are fully backed by the foreign reserves. The HKMA has undertaken that new Exchange Fund paper will only be issued when there is an inflow of funds, thus enabling the additional paper to be fully backed by the foreign reserves. Since 1 April 1999, interest payments on Exchange Fund paper have been allowed to expand the Monetary Base. Additional Exchange Fund paper is issued to absorb such interest payments. This is consistent with the Currency Board discipline since interest payments on Exchange Fund paper are backed by interest income on the US dollar assets backing the Monetary Base.

### *Liquidity Ratio*

All authorized institutions in Hong Kong are required to meet a minimum monthly average liquidity ratio of 25%. This is calculated as the ratio of liquefiable assets (e.g. marketable debt securities and loans repayable within one month subject to their respective liquidity conversion factors) to qualifying liabilities (basically all liabilities due within one month). The method of calculation and its components are specified in the Fourth Schedule to the Banking Ordinance.

### *Monetary Base*

A part of the monetary liabilities of a central bank. The monetary base is defined, at the minimum, as the sum of the currency in circulation (banknotes and coins) and the balance of the banking system held with the central bank (the reserve balance or the clearing balance). In Hong Kong, the Monetary Base comprises Certificates of Indebtedness (for backing the banknotes issued by the note-issuing banks), government-issued currency in circulation, the balance of the clearing accounts of banks kept with the HKMA, and Exchange Fund Bills and Notes.

### *Nominal and Real Effective Exchange Rate (NEER and REER)*

An indicator of the overall exchange rate value of the Hong Kong dollar against a basket of currencies of Hong Kong's principal trading partners. The nominal effective exchange rate (NEER) is a weighted average of the exchange rates between Hong Kong and its principal trading partners. The real effective exchange rate (REER) is obtained by adjusting the NEER for relative movements in the seasonally adjusted consumer price indices of those selected trading partners.

# Abbreviations

| | |
|---|---|
| **3m moving average** | Three-month moving average |
| **3m-on-3m** | Three-month-on-three-month |
| **ASEAN** | Association of Southeast Asian Nations |
| **AIs** | Authorized Institutions |
| **BIS** | Bank for International Settlements |
| **bn** | Billion |
| **BLR** | Best lending rate |
| **CCPI** | Composite Consumer Price Index |
| **CDs** | Certificates of deposit |
| **CDS** | Credit default swap |
| **CEI** | Composite index of coincident economic indicators |
| **CIs** | Certificates of Indebtedness |
| **C&SD** | Census and Statistics Department |
| **CPI** | Consumer Price Index |
| **CRB** | Commodity Research Bureau |
| **CSRC** | China Securities Regulatory Commission |
| **ECB** | European Central Bank |
| **EFBN** | Exchange Fund Bills and Notes |
| **EM** | Emerging market |
| **FSB** | Financial Stability Board |
| **GDP** | Gross Domestic Product |
| **HIBOR** | Hong Kong Interbank Offered Rate |
| **HKD** | Hong Kong dollar |
| **HKMA** | Hong Kong Monetary Authority |
| **HKTDC** | Hong Kong Trade Development Council |
| **HSCEI** | Hang Seng China Enterprises Index |
| **HSI** | Hang Seng Index |
| **IMF** | International Monetary Fund |
| **IPO** | Initial Public Offering |
| **LEI** | Composite index of leading economic indicators |
| **LGFV** | Local government financing vehicle |
| **LIBOR** | London Interbank Offered Rate |
| **lhs** | Left-hand scale |
| **LTD** | Loan-to-deposit |
| **mn** | Million |

| | |
|---|---|
| **MSCI** | Monetary Stanley Capital Index |
| **NBER** | National Bureau of Economic Research |
| **NCD** | Negotiable certificates of deposit |
| **NEER** | Nominal effective exchange rate |
| **NIE** | Newly industrialised economies |
| **NPL** | Non-performing loan |
| **OFIs** | Other financial intermediaries |
| **OMTs** | Outright Monetary Transactions |
| **p.a.** | Per annum |
| **PBoC** | People's Bank of China |
| **PMI** | Purchasing Managers' Index |
| **PPI** | Producer Price Index |
| **QBTS** | Quarterly Business Tendency Survey |
| **qoq** | Quarter-on-quarter |
| **R&VD** | Rating and Valuation Department |
| **REER** | Real effective exchange rate |
| **repo** | Repurchase agreement |
| **rhs** | Right-hand scale |
| **RMB** | Renminbi |
| **RTGS** | Real Time Gross Settlement |
| **S&P 500** | Standard & Poor's 500 Index |
| **UK** | United Kingdom |
| **US** | United States |
| **USD** | US dollar |
| **yoy** | Year-on-year |

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