HONG KONG MONETARY AUTHORITY
香 港 金 融 管 理 局

HALF-YEARLY MONETARY AND FINANCIAL STABILITY REPORT

September 2011

This Report reviews statistical information between the end of February 2011 and the end of August 2011.

Half-Yearly Monetary and Financial Stability Report
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1. Summary and overview

Risks to global financial stability increased dramatically in the first half of 2011. Against a very volatile external environment, financial markets in Hong Kong were orderly and financial institutions remained healthy. The Hong Kong dollar was not under any significant upward or downward pressure. Nevertheless, banks' latent credit and liquidity risks could be rising amid the continued fast growth of credit and property prices.

In the baseline case of subdued growth and continued expansionary monetary policies in major advanced economies, inflationary pressures on assets and consumer prices in Hong Kong will remain. Such prospects point to the importance for financial institutions to continue to practise stringent underwriting standards. The restraint on further leveraging of the economy should also help it better positioned to face negative shocks associated with the more adverse scenario of a double-dip recession and disorderly resolution of the sovereign debt crisis in the advanced economies.

The external environment

The global recovery is losing steam. The US economy could be hitting its stall speed amid a myriad of structural imbalances, commodity price shocks, and looming fiscal consolidation; and the European sovereign debt problem has now spread from small peripheral to major core economies. The recent sharp sell off and volatility in global equity markets on renewed fears of recessions serve as a timely reminder of the global economy's fragile status. A prolonged period of sub-par growth in the advanced economies now seems likely, and the increasingly limited policy buffer renders them vulnerable to future shocks in an increasingly uncertain global environment.

However, growth momentum in the East Asian emerging economies, including Mainland China, stayed resilient in the first half of the year. Central banks in the region have continued to normalise monetary conditions amid increasing inflationary pressures, particularly food price inflation. Box 1 of the Report argues that monetary conditions in Mainland China are still supportive of growth after continued efforts by the People's Bank of China to tighten its policy stance. While weaker growth prospects from the advanced economies will lower export growth, the economic outlook for the region is expected to remain broadly favourable on the back of solid domestic demand and given their available policy space to cushion shocks.

Reflecting concerns over the growth prospects for the advanced economies and the possibility of a disorderly resolution of the sovereign debt crisis, global financial market conditions have been turbulent. Equity markets plunged; flight to safety fuelled the demand for safe-haven currencies and gold, pushing prices up to unprecedented levels; and bonds, especially US Treasuries, surged to new highs, despite the US sovereign rating downgrade by Standard & Poor's. Funding strains faced by European banks became more acute, reflecting the spread of risks from the sovereign to the banking sector through their holdings of government bonds.

Economic performance in the US and Europe for the remainder of the year, and new policy initiatives to resolve the European debt crisis will be the key determinants dictating the directions of capital flows and currency movements. The expectation of continued low interest rates is likely to continue to encourage a search for yield that can lead to a further build-up of financial imbalances in emerging market economies. On the other hand, in a downside scenario of double-dip recession in the major advanced economies and a disorderly resolution to the sovereign debt crisis, small open emerging market economies could be hard hit by a slump in exports and disruptive capital outflows.

The domestic economy

Building on the solid growth momentum from 2010, Hong Kong's economic growth accelerated to 3.1% in the first quarter on a quarter-on-quarter basis. However, the economy contracted slightly by 0.5% in the second quarter amid a sizable drag on exports, reflecting in part the supply chain disruption in Japan. Nevertheless, domestic demand remained robust.

Labour market conditions continued to tighten, with the seasonally adjusted three-month moving-average unemployment rate staying at low levels of around 3.5% for much of the first half of 2011. Job creation remained robust amid strong local economic activity. The output gap is estimated to have risen moderately in the first six months, indicating that the economy is operating above its potential.

Inflationary pressures have become more notable in the economy. On an annualised quarter-on-quarter basis, the underlying inflation rate rose from 4.2% in the fourth quarter of 2010 to 7.3% in both Q1 and Q2 this year. The pressure is expected to remain in the near term, despite a more uncertain outlook for import prices. In particular, increased residential market rentals are expected to continue to pass through into the CCPI rental component for the rest of 2011. Business cost pressures have also increased amid rising retail rentals and wages, which could further drive up inflation if the growth momentum of domestic demand continues. Box 2 of the Report examines in more detail how domestic cost pressures will affect consumer price inflation.

Domestic demand is likely to remain robust on the back of the favourable labour market conditions and continued support from business capital spending and public construction works. However, the outlook for exports has become more uncertain. Overall, the economy is expected to expand at around its trend rate in the second half of the year. The latest consensus forecasts project growth for 2011 as a whole at 5.4%, while the Government maintains its growth projection of 5 - 6%. Nevertheless, downside risks to the outlook have risen, reflecting the heightened uncertainty in the external environment.

Monetary conditions and capital flows

The Hong Kong dollar spot exchange rate weakened towards the middle of the Convertibility Zone in the first quarter. As the Convertibility Undertakings were not triggered, the Monetary Base remained stable. The weaker demand for the Hong Kong dollar in the first quarter reflected a repatriation of equity-related funds and reduced equity fund-raising activities.

In April, as the US dollar depreciated against other major currencies and equity fund-raising activity became more buoyant in Hong Kong, the Hong Kong dollar spot exchange rate strengthened, along with a rise in Hong Kong dollar deposits and the net foreign currency assets of the AIs. Thereafter, the Hong Kong dollar spot exchange rate generally weakened in May and June, as market sentiment was weighed down by a number of factors including renewed concerns about the US growth prospects and the European sovereign debt situation.

The interbank interest rates stayed low amid the second round of quantitative easing in the US. Yields of longer-term Exchange Fund paper declined alongside their US dollar counterparts, resulting in a flattening and downward shift in the Hong Kong dollar nominal yield curve towards the end of June. At the retail level, banks tightened their mortgage interest rates and slightly raised their Hong Kong dollar deposit interest rates to meet their increased funding demand.

Total loans and advances continued to grow briskly in the first half of the year, with foreign currency lending and loans for use outside Hong Kong rising much faster than Hong Kong dollar lending and loans for use in Hong Kong. The expansion in domestic loans was broad-based, with banks having gradually raised their share of lending to the corporate sector in their domestic loan portfolios. Relative to the rapid growth in loans, Hong Kong-dollar broad money M3 expanded at a slower pace.

In line with the pattern of loan growth, Hong Kong dollar deposits increased at a much slower rate than foreign currency deposits in the first half of the year. Apart from credit growth, the surge in renminbi deposits in Hong Kong was another important factor behind the fast growth in foreign currency deposits. Renminbi deposits rose from RMB314.9 billion at the end of December 2010 to RMB553.6 billion at the end of June 2011, reaching 18.4% of total foreign currency deposits. The growth in renminbi deposits was mainly driven by a net increase in renminbi receipts by corporate customers through cross-border trade settlement. Renminbi trade settlement conducted through Hong Kong banks reached around RMB800 billion in the first half of 2011, more than doubling the 2010 total.

Short-term Hong Kong dollar interest rates will remain low, as the US Federal Reserve has indicated that current economic conditions would warrant exceptionally low levels for the federal funds rate at least through mid-2013. However, while the overnight Hong Kong dollar interest rates, by design of the Linked Exchange Rate System, will closely follow the federal funds rates in the US, other longer-term interest rates, including commercial bank deposit and lending rates, could differ to various degrees from their US dollar counterparts. As global capital flows are likely to remain volatile in the period ahead, longer-term Hong Kong dollar interest rates could also be subject to abrupt changes. In the foreign exchange market, the Hong Kong dollar exchange rate is expected to move in an orderly manner within the Convertibility Zone, but larger volatility within the Zone cannot be ruled out if global financial market conditions worsen significantly.

Asset markets

Global equities went into a tailspin during the summer, as the world economic outlook deteriorated sharply. Amid a global sell off, equity markets in the Asia-Pacific region including Hong Kong were hit hard. The Hang Seng Index plummeted to a 15-month low and its implied volatility rose sharply. Market sentiment is likely to remain fragile in view of the uncertainties over the external environment, particularly the prospect of a double-dip recession in the US and the spillover of the European debt crisis to the core members of the euro area. Although the corporate earnings announced so far were generally stronger than expected, their sustainability is increasingly questionable given a much weaker global economy.

A bright spot in financial markets has been the rapid development of the offshore renminbi bond market in Hong Kong. The RMB70.8 billion new issuance during the first eight months of 2011 already exceeded the RMB35.8 billion recorded in the whole of 2010. The robust growth of the market reflects a confluence of favourable factors, particularly the rapid build-up of renminbi deposits in Hong Kong which provides a key driver for the demand for offshore renminbi bonds. The continuing expectation of a stronger renminbi also increased the attractiveness of renminbi bonds to Hong Kong dollar-based investors. On the supply side, the lower cost of funding in the offshore market offers an incentive for Mainland entities to issue bonds. Further expansion in the use of RMB for foreign direct investment into the Mainland is expected to stimulate further growth in RMB bond issuance in Hong Kong.

The residential property market remained relatively buoyant in the first half of the year, but appeared to be consolidating in recent months. Residential property prices increased by 14.8% in the first six months of 2011, but fell 1.7% from June in July. Residential property trading activities have slowed since the end of 2010, following the introduction of the Special Stamp Duty and earlier rounds of macro-prudential measures. Sale and purchase agreements averaged about 9,200 a month during the first half, down almost 20% from last year and speculative activities also softened, with confirmor transactions showing a noticeable decline.

Nevertheless, rising property prices continued to erode housing affordability, with the income-gearing and price-to-income ratios pushing towards their 1997 peaks. Against this background, in June the HKMA undertook another round of tightening of the loan-to-value (LTV) ratio limits for residential properties valued at HK$7 million and above. In addition, for cases where the mortgage payment is not supported by income from Hong Kong sources, the LTV caps were lowered by at least another 10 percentage points. Reflecting the impact of the multiple rounds of macro-prudential measures so far, the average loan-to-value ratios of new mortgages fell by four percentage points from 2010, to 56% in the first half of the year.

In contrast to the slowing home buying activities, the commercial and industrial property markets experienced strong transaction volumes and fast-rising prices. Sale and purchase agreements in the non-residential property market in the first half of the year increased by 12% from 2010, with speculative activities rising alongside. Prices also surged 14 - 23% year-to-date, depending on the type of properties, pushing the total price increase from the mid-2009 trough to over 100%. Box 3 of the Report explores the underlying dynamics that have shaped the recent developments in the non-residential property markets. In view of the segment's buoyancy, the HKMA has extended the macro-prudential measures for mortgage lending to cover non-residential properties, reducing the LTV ceiling to 50%. The LTV cap for net worth-based mortgages, a common form of financing for non-residential properties, has also been lowered to 40%.

Banking sector performance

The banking sector has been resilient to the various global shocks in the first half which, so far, have had only a limited impact on domestic interbank liquidity. With capital positions well above international standards and sound liquidity, the sector continued to register increased profits, and a further improvement in the asset quality of their loan portfolios. The net interest margin, however, continued its downward trend of recent years, falling to 1.19% in the second quarter of 2011, from 1.26% in 2010 Q4.

The continued rapid growth of bank loans and a relatively slower increase in customers' deposits in the first half resulted in a significant rise in the Hong Kong dollar loan-to-deposit ratio by approximately six percentage points to 84.3%. The all-currency loan-to-deposit ratio also headed higher to 66.8% at the end of June, from 61.6% at the end of 2010. This clearly indicated a change in domestic liquidity conditions, from previously an overly abundant level to a more normal level. Box 4 of the Report assesses the effects of a higher Hong Kong dollar loan-to-deposit ratio on HIBORs, time deposit rates and effective mortgage rates. The results generally suggest that a further significant increase in the ratio could lead to apparent upward pressures on time deposit rates and mortgage rates. Therefore, even if US interest rates stay at their current unusually low levels for an extended period, borrowers and banks should still assess the implications of a sudden change in local liquidity conditions for their interest rate risks.

With bank lending continuing to grow at a brisk pace, the latent credit risk of rapid credit expansion, particularly in property-related lending and Mainland exposure, needs to be closely monitored. Box 5 of the Report explores the possible impact of rapid loan growth on latent credit risk by using evidence from the past credit cycle in Hong Kong. The finding confirms there is a significant positive relationship between fast lending growth and latent credit risk. Adopting a forward-looking approach to credit risk management, and upholding sound underwriting standards are, therefore, critically important in the current environment.

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

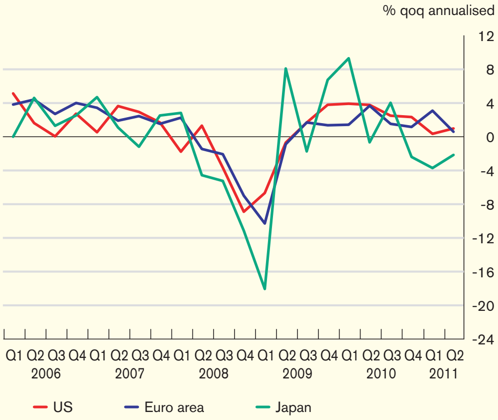
2. Global setting and outlook

External environment

Growth momentum tapered off amid rising core inflation in advanced economies in the first half of 2011. While this unfavourable outcome was due, in part, to temporary shocks, it could also reflect the fragility of the underlying recovery in the face of structural growth constraints, and the side-effect of global excess liquidity on commodity price inflation.

The economic slowdown, together with the US sovereign credit rating downgrade and renewed sovereign debt concerns in Europe, triggered a sharp sell-off in global equity markets, increasing the risk of a recession in advanced economies. Asian economies also slowed on the back of faltering exports, although domestic demand remained robust and continued to put pressure on headline inflation.

Chart 2.1
US, euro area, and Japan: Real GDP



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

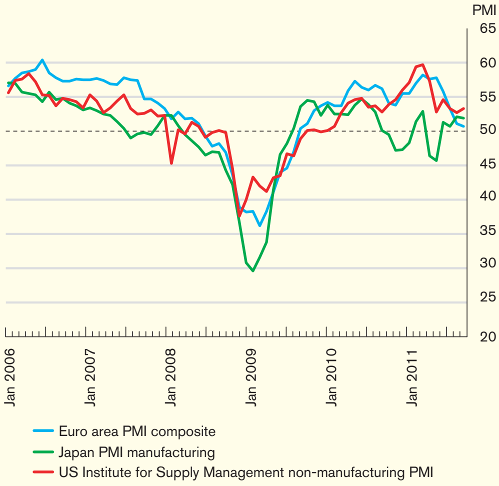
2.1 Real activities and trade

Advanced economies grew at a sluggish pace during the first half of 2011 with growth dragged down by temporary factors such as spikes in food and energy prices, extreme weather conditions and the global supply chain disruptions caused by Japan's natural disasters and nuclear crisis. The latest GDP figures show the economies of the US and the euro area grew by 1% and 0.6% respectively, while the Japanese economy contracted by 2.1% in 2011 Q2 (Chart 2.1).[1]

The slowdown in economic activities was notable in the US with growth almost coming to a standstill in Q1 and only recovering slightly to a lacklustre pace in Q2, mainly due to growth in consumer spending virtually grinding to a halt. Growth in the euro area started strongly in Q1, driven by the German and French economies, but moderated in Q2 as higher inflation started to erode income and consumption, while large-scale fiscal consolidations across the region continued to choke off economic growth, especially

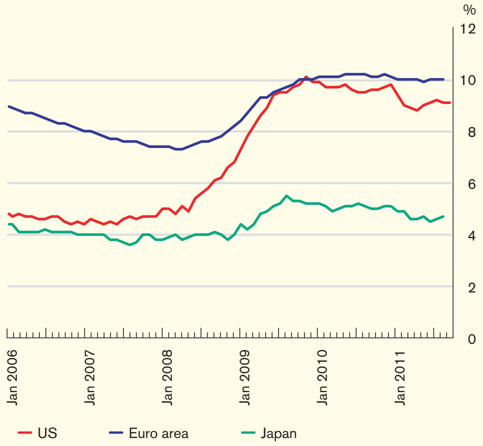
[1] For the US, euro area, Japan, and non-Japan Asia (excluding Mainland China), quarterly real GDP percentage changes are on a seasonally adjusted annualised basis, unless otherwise stated.

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



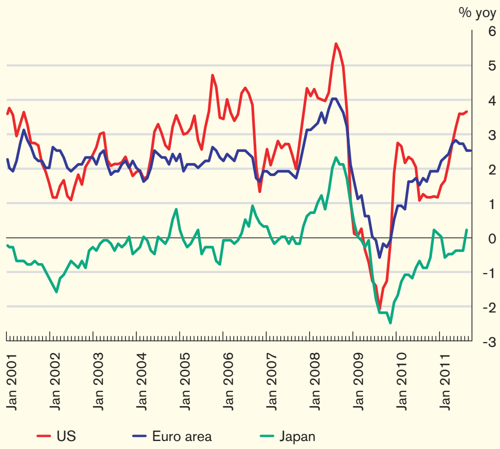
Source: Bloomberg.

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.

among the smaller countries. In Japan, growth slumped in Q2 as activities were severely hit by the continuing economic impact of the disaster. The recent declines in the Purchasing Managers' Indices across most advanced economies indicate that growth will likely continue at a moderate pace (Chart 2.2).

In addition to the temporary growth-restraining factors, structural headwinds posed major challenges to advanced economies. In particular, job creation remained slow with the unemployment rate staying at stubbornly high levels: above 9% in the US, around 10% in the euro area, and 4.7% in Japan (Chart 2.3).

Despite the high unemployment rate and excess capacity in advanced economies, headline CPI inflation in the US and euro area continued to be pushed up by surging food and energy prices. Core inflation edged higher in part due to commodity price pass-through. Nevertheless, inflation pressures were generally well contained as expectations remained anchored (Chart 2.4).

While the temporary headwinds could abate soon to enable near-term support for economic activities, the recent sharp sell-off in global equity markets on concerns about the US credit rating downgrade and renewed sovereign debt problems in Europe could increase uncertainties and further dampen economic activities through the wealth effect. Given that many structural weaknesses still remain unresolved, it is highly likely that advanced economies will experience a more prolonged slowdown in medium-term growth. At the same time, the effectiveness of further macroeconomic policy stimuli is also in doubt. A prolonged economic slowdown with increasingly limited policy buffers will render advanced economies vulnerable to future shocks in an increasingly uncertain global environment.

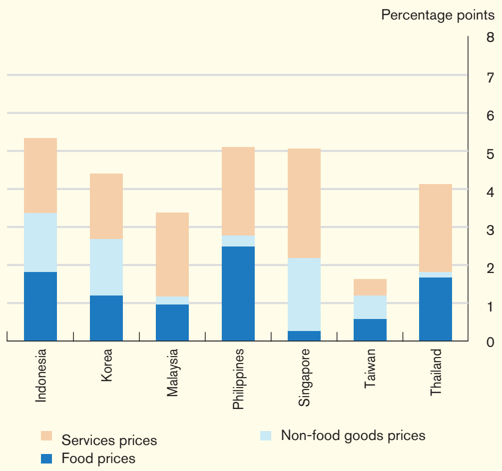
Table 2.A
Asia: real GDP growth

(% qoq, annualised)	2010 Q1	2010 Q2	2010 Q3	2010 Q4	2011 Q1	2011 Q2
NIE-3:[1]	**14.9**	**7.3**	**0.8**	**2.0**	**10.6**	**0.2**
Korea	8.7	5.7	2.6	2.0	5.4	3.4
Singapore	39.9	29.7	-16.7	3.9	27.2	-6.5
Taiwan	17.8	2.4	3.7	1.2	14.6	-3.6
ASEAN-4:[1]	**9.1**	**5.2**	**1.2**	**7.9**	**6.2**	**3.5**
Indonesia[2]	5.5	6.6	4.8	10.7	3.9	6.6
Malaysia[2]	6.8	6.2	-3.2	9.6	7.6	2.3
Philippines	17.2	7.2	0.6	2.0	8.0	2.5
Thailand	12.1	0.7	-1.5	5.3	8.1	-0.8
East Asia:[1]	**12.1**	**6.3**	**1.0**	**4.9**	**8.5**	**1.8**

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

Sources: IMF, CEIC and HKMA staff estimates.

Chart 2.5
Asia: contributions to consumer price inflation



Note: Average of three months ended July 2011.
Sources: CEIC and HKMA staff estimates.

Table 2.B
Asia: Policy interest rates

	Policy interest rate[1]			Cumulative rate hike
	31 Aug 2011 (%)	Lowest since 12 Sep 2008 (%)	12 Sep 2008 (before the bankruptcy of Lehman Brothers) (%)	Percentage points
Indonesia	6.75	6.50	9.25	0.25
Korea	3.25	2.00	5.25	1.25
Malaysia	3.00	2.00	3.50	1.00
Philippines	4.50	4.00	6.00	0.50
Taiwan	1.875	1.250	3.625	0.625
Thailand	3.50	1.25	3.75	2.25

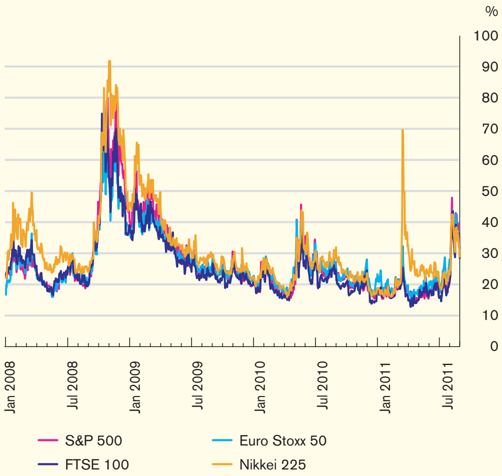
Note:
1. Indonesia: BI rate; Korea: overnight call rate; Malaysia: overnight policy rate; The Philippines: overnight reverse repo rate; Taiwan: discount rate; Thailand: one-day repo rate.

Sources: Bloomberg and HKMA staff estimates.

The growth momentum of the East Asian economies has shown signs of moderating, amid the fragile pace of recovery in developed markets. For the seven economies in the region, the aggregate real GDP increased by 1.8% (quarter-on-quarter annualised) in Q2, after rising by 8.5% in Q1 (Table 2.A). Moderating export growth, which was in part due to supply-chain disruptions caused by the natural disasters and nuclear crisis in Japan, has been a common factor in the slowdown in growth in many regional economies, while domestic demand has remained robust.

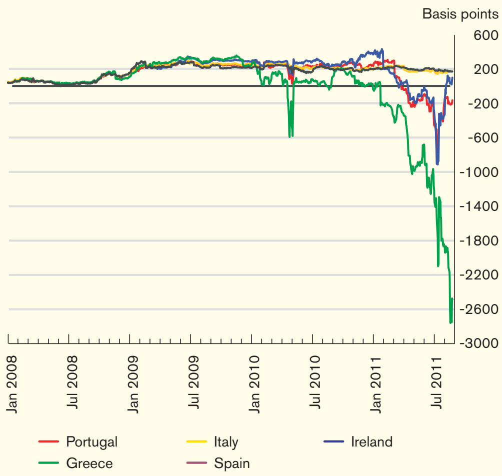
The recent increases in commodity prices, particularly food prices, have driven up consumer price inflation in many East Asian economies. Economies with a greater food component weight in the CPI basket (for example, Indonesia, the Philippines and Thailand) have, in general, registered higher inflation. In some other regional economies, inflation has increasingly been driven by domestic demand pressures, as evidenced by larger contributions from services prices (Chart 2.5). Headline inflation accelerated to an average year-on-year rate of 4.1% in July. With regional economies now operating closer to full capacity and monetary conditions remaining relatively accommodative, there is a risk that the sharp rise in food prices may raise inflation expectations and feed into wage growth. In fact, nominal wages have already increased visibly in some regional economies, particularly Indonesia, Singapore and Thailand. As such, central banks in the region have continued to tighten monetary conditions, with many raising their policy interest rates multiple times during the review period (Table 2.B).

Chart 2.6
Implied volatilities of major stock markets



Source: Bloomberg.

Chart 2.7
Credit curves of government bond yields of the European highly indebted countries



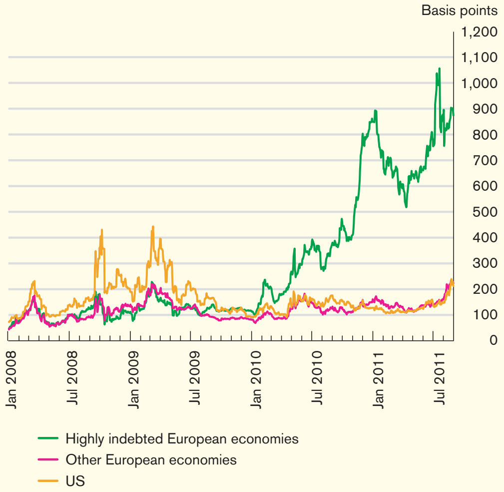
Note: 10-year yield minus 2-year yield.
Sources: Bloomberg and HKMA staff calculations.

Although the weakened outlook for the major advanced economies has increased the downside risks to the region, the East Asian economies are expected to be supported by solid domestic demand. Therefore, inflation is likely to stay relatively high with pressures increasingly arising from the domestic front. The latest consensus forecasts surveyed in early August suggest the region's GDP will grow by 5.0% in 2011, compared with 7.8% in 2010. The CPI is forecast to increase by 4.1% on average in 2011, following a rise of 3.1% in 2010. The subdued growth prospects in the advanced economies and volatility in global financial markets continue to be the key risks surrounding the broadly favourable economic outlook for East Asia.

2.2 Global financial conditions

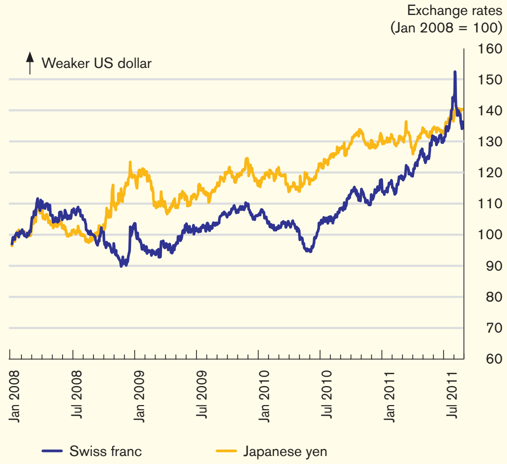
Over the past six months, global financial markets have weathered a sequence of major shocks, causing a significant reappraisal of risk and considerable turbulence. Global equities plunged after the Japanese earthquake in March, with implied volatilities rising sharply (Chart 2.6). While the markets quickly recovered from the quake-triggered nuclear crisis, the European sovereign debt crisis intensified. Amid a series of sovereign credit rating downgrades, government bond yields of the troubled countries rocketed, with yield curves becoming sharply inverted (Chart 2.7). As a result, funding costs for banks in these countries mounted and their credit default swap (CDS) spreads

Chart 2.8
Five-year median CDS spreads of banks in Europe and the US



Source: HKMA staff estimates.

Chart 2.9
Exchange rates of Swiss franc and Japanese yen against the US dollar

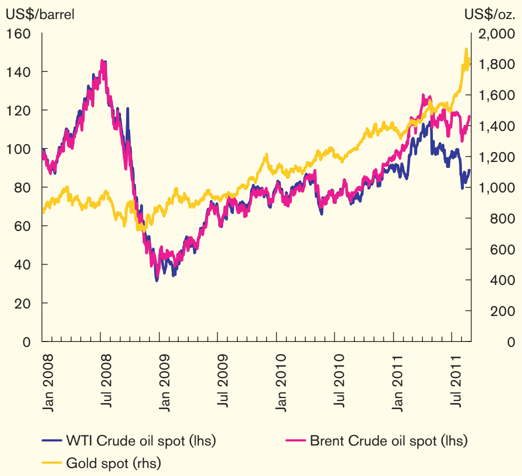


Sources: Bloomberg and HKMA staff calculations.

widened markedly relative to their counterparts in the US and other parts of Europe (Chart 2.8). While fears subsided somewhat following the latest European Union bailout programme, financial markets were not given any breathing space as focus shifted quickly to the deadlock over the debate on the US debt ceiling. Although the last-minute political deal averted a sovereign default, it could not prevent the country from losing the highest credit rating.

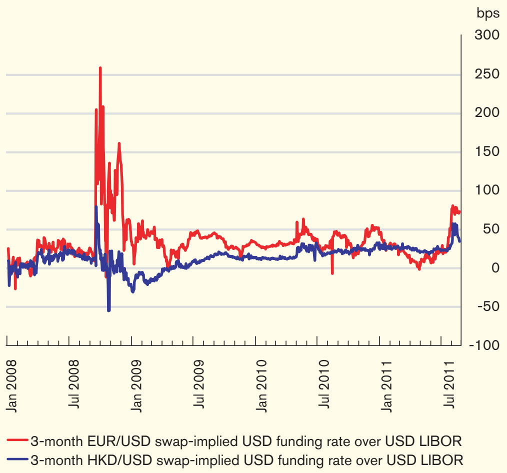
While there is probably no imminent danger of a major crisis in Japan, Europe or the US at present, the recent developments do not augur well for the global economy. To a considerable extent, major economies are more constrained now than two years ago by both their monetary and fiscal capacity to stimulate economic activity. Policy constraint, coinciding with a series of worse-than-expected economic releases (especially the second quarter GDP figures for the US, France and Germany), led to a major risk appraisal in financial markets. Equity markets were thus sold off heavily towards the end of the review period, while prices of safe-haven assets rose to record levels amid a flight to safety. Long-term government bonds of major economies rose to historical highs, with the 10-year US Treasury yield falling to a record low. The Swiss franc and Japanese yen surged to their historical peaks of 0.71 and 76 against the US dollar in the review period respectively, forcing the central banks to intervene (Chart 2.9). And, gold prices hit an all-time high (Chart 2.10).

Chart 2.10
Oil and gold prices



Source: Bloomberg.

Chart 2.11
Implied US dollar funding cost over US dollar LIBOR: Europe and Hong Kong



Sources: Bloomberg and HKMA staff calculations.

In the period ahead, global financial conditions may well be more volatile. The US sub-prime mortgage crisis saw governments and central banks hastily bail out financial institutions and cushion real activities with extraordinarily accommodative fiscal and monetary policies. While these policy responses were able to restore confidence in financial markets and provide breathing space to the economy, they delayed long-awaited policy reforms by burying deeply-rooted economic problems in fiscal and monetary laxity. In Europe, in particular, despite the latest rescue package, financial markets remain unconvinced and concerns over potential contagion continued to keep counterparty risks elevated among banks. The resulting spillover to the foreign exchange swap market pushed the premium of the implied US dollar funding cost over LIBOR to the highest level since the Lehman episode, an effect that can also be felt locally (Chart 2.11).[2]

With the issue of policy sustainability and credibility coming to a head in the recent episode, there are quite likely to be sharp and inevitable policy adjustments to follow. As these adjustments are likely to be unco-ordinated, capital flows can be erratic and global financial markets will face turbulent times ahead.

[2] See Box 5 in *Half-Yearly Monetary and Financial Stability Report*, June 2009 for an explanation of how the effects of counterparty risks spill over to the foreign exchange market.

Mainland China

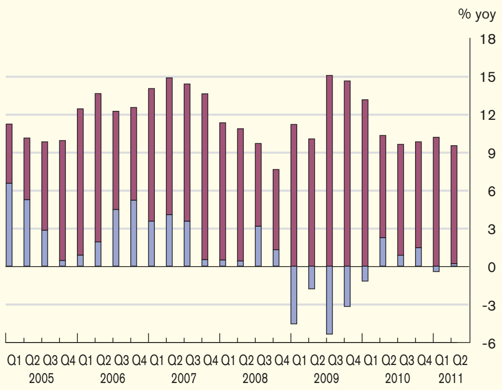
Economic growth has remained stable amid continued efforts to normalise monetary conditions. The elevated inflationary pressures are expected to subside as the effects of the monetary policy work through the system. Investor sentiment has been subdued in the asset markets. Risks in the banking system have increased due to exposures to local government financing platforms and the property markets, but are being actively managed by the authorities. Growth is expected to remain resilient despite increased downside risks in the external environment.

2.3 Output growth and inflation

Output growth

Economic growth in Mainland China stayed solid despite continued monetary tightening. GDP rose by 2.1% and 2.2% on a sequential basis in Q1 and Q2 respectively, and by 9.6% year on year in the first half. Domestic demand was the major driver for output growth, while the contributions by net exports were negligible (Chart 2.12).

Chart 2.12
Mainland China: contributions by domestic demand and net exports to GDP growth



Sources: CEIC, National Bureau of Statistics and HKMA staff estimates.

Both consumption and investment performed well, while external trade slowed. On a year-on-year comparison, consumption grew at a faster pace in the first half of 2011 than in the second half of 2010. Investment grew at a robust, albeit moderating, pace year-on-year due mainly to a softening of infrastructure investment activities. Export volume growth trended down on a year-on-year basis, reflecting the sluggish recovery in the advanced economies and, to some extent, the adverse impact of the natural disasters and nuclear crisis in Japan. Growth in import volume fell notably in Q2 following a revival in the earlier part of Q1, partly reflecting the effect of monetary tightening on domestic demand. The trade balance recorded a slight deficit in Q1 and returned to a surplus in Q2.

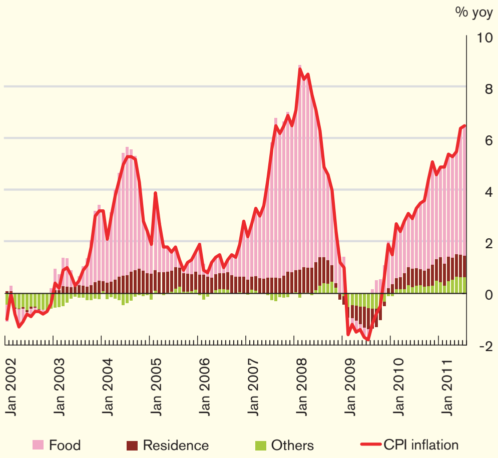
The economic outlook remains broadly favourable for the remainder of the year. Despite elevated inflationary pressures, household consumption will continue to be underpinned by positive income conditions and the still solid consumer confidence. While monetary tightening will dampen manufacturing and private housing investment, public housing investment is set to accelerate in the second half. External demand will likely soften given the increased uncertainties surrounding growth prospects for the advanced economies and tightening bias in most emerging market economies. The official purchasing manager's index has remained in the expansionary territory over the review period and rose slightly in August after declining for four consecutive months.

Nevertheless, the largely favourable outlook for the Mainland economy is subject to some risks. Uncertainties surrounding the property market have surfaced with continued monetary tightening and administrative controls. Externally, vulnerabilities are building up in the global financial system, particularly to the sovereign debt crisis in Europe. Any significant adverse developments in these factors could weaken the Mainland's growth prospects, particularly in view of the increasing openness of the economy.

Inflation

Inflationary pressures increased further over the review period. The year-on-year headline CPI inflation rate averaged 5.4% in the first half and reached a three-year high of 6.5% in July (Chart 2.13). Food prices remained the major driver for aggregate inflation. Meat and poultry prices, in particular, increased rapidly in the past few months, reflecting the impact of supply-side shocks as well as demand pressures. Non-food price inflation has also been trending up across the board. The year-on-year growth in residence costs stayed above 6.0% for the sixth consecutive month in June before edging down in July, while inflation in other non-food components picked up, partly reflecting the pass-through of upstream price pressures. The PPI inflation rate hovered around 7.0% year on year during the first half and climbed to 7.5% in July, mainly reflecting the movements in raw materials and manufacturing goods prices.

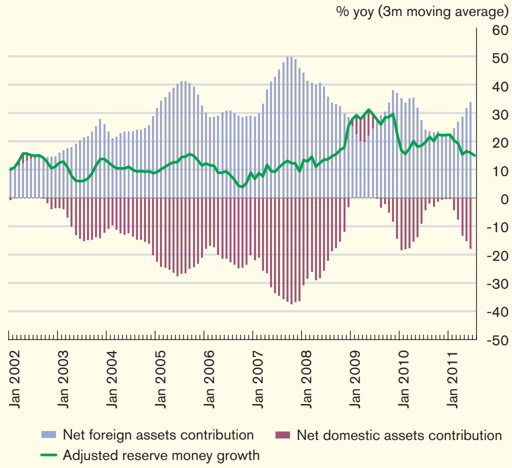
Chart 2.13
Mainland China: contributions to CPI inflation



Sources: CEIC and HKMA staff estimates.

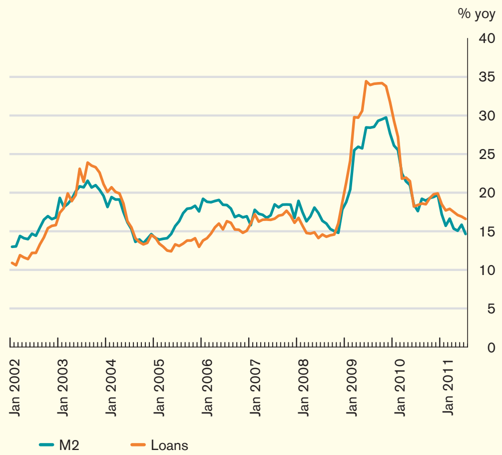
Inflationary pressures are expected to taper off as the effects of the monetary policy work through the system, although the pace of such easing is subject to

Chart 2.14
Mainland China: contributions to reserve money growth



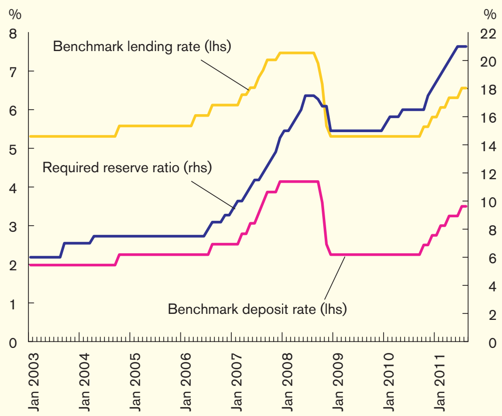
Note: Total reserve money is adjusted for the changes in the reserve requirement ratio.
Sources: CEIC and HKMA staff estimates.

Chart 2.15
Mainland China: broad money and loan growth



Sources: CEIC and HKMA staff estimates.

Chart 2.16
Mainland China: reserve requirement ratio and benchmark interest rates



Source: CEIC.

uncertainties. Continued monetary tightening, together with a moderation in the growth momentum, should dampen demand pressures. The favourable labour market conditions and rising minimum wages may push up production costs, but solid gains in labour productivity will lessen their impact on inflation. While upside risks to import price inflation still remain amid expansionary monetary policy in the advanced economies, increased uncertainties over the global economic growth prospects may reduce upward pressures on commodity prices in the period ahead.

2.4 Monetary and financial conditions

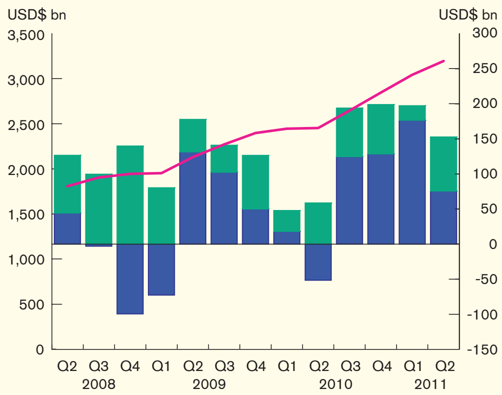
Monetary conditions

The People's Bank of China (PBoC) maintained a tightening bias in monetary policy amid elevated inflationary pressures. Reserve money growth, although still high by historical standards, has trended down year on year (Chart 2.14). Both broad money (M2) growth and outstanding loan growth have also trended downwards (Chart 2.15), reflecting mainly the impact of credit controls. Since the beginning of 2011, the PBoC has raised the reserve requirement ratio (RRR) six times, by 50 basis points each, to record highs, while the one-year benchmark lending and deposit rates have been raised three times by 75 basis points in total over the same period (Chart 2.16).[3]

These measures have helped tighten money market liquidity conditions, while overall monetary conditions appear to be largely accommodative. Market interest rates trended up in the past few months reflecting the impact of monetary tightening as well as other factors, including market expectations of future policy moves. On the other hand, the impact of the RRR moves on money expansion has been less significant than generally perceived, as the RRR hikes have mainly been aimed at draining the liquidity released from maturing central bank bills and sterilising the expansionary effect of

[3] The PBoC notified commercial banks in late August that the RRR would apply to margin deposits by clients to secure the issuance of banker's acceptance, letters of guarantee and letters of credit. This policy change will be implemented by phases.

Chart 2.17
Mainland China: external capital flows



Sources: CEIC and HKMA staff estimates.

central bank's foreign exchange purchases as a result of capital inflows (Chart 2.17). Sources of funding other than bank loans, such as funds raised in financial markets, have been solid. However, it is reported that small firms have been hit hard by the monetary tightening. Structural reforms, rather than monetary policy, appear to be the key to solving this problem (see Box 1 for more discussion on Mainland monetary conditions).

Banking risks

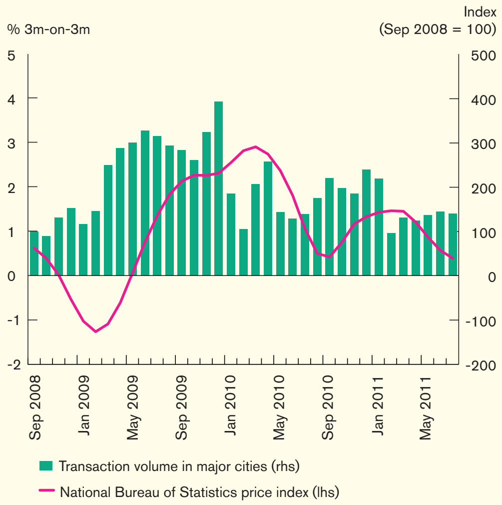
Concerns have re-emerged among investors over the impact of local government debt on the banking sector's asset quality. Local government debt rose significantly in the past two years following the launch of the big stimulus package. According to the National Audit Office, outstanding local government debt increased by about 62% year on year in 2009 and reached RMB10.7 trillion at the end of 2010, with local government financing vehicle debts accounting for about 46% of total local government debt. While the recent drop in land sale revenues for some local governments has already weakened their ability to repay loans, continued monetary tightening could add to the borrowers' debt repayment pressures by increasing the difficulties in refinancing their maturing debts. The risk of a fully-fledged default appears to be remote in the light of the sound fiscal position of the central government and broadly favourable asset positions of public sectors. However, the risks could become a source of instability if there is a sharp correction in the property market, resulting in a vicious cycle of rising bad loans, declining property prices and a credit crunch. Such a cycle would develop not only through the direct exposure of banks to property market lending, but also through the collateral value and the interconnectedness among different sectors of the economy. In part reflecting market concerns over the impact of local government debts on banks' asset quality, the stock prices of major banks have been under pressure. Nevertheless, these risks are being recognised by the authorities and appear to be actively managed.

Asset prices

The Mainland equity markets remained lacklustre and will continue to face some headwinds in the near term.

The stock market underperformed most of the major markets, reflecting concerns over monetary tightening and worries about the prospects of banks' asset quality. Benchmark equity indices rebounded somewhat in late June on the back of better-than-expected corporate earnings, but declined again in late July. Market valuations appear to be low from an historical perspective, as the aggregate price-earnings ratio of Shanghai A shares has been around 16 since late June, compared with the 3-year average of about 20 and 10-year average of about 30. However, downside risks to the stock market are expected to remain in view of the softening growth momentum, the persistent tightening bias of monetary policy, and market concerns over the potential impact of local government debt on banks' asset quality.

Chart 2.18
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. National Bureau of Statistics price index is the simple average of the price indices for 70 cities.

Sources: CEIC, WIND and HKMA staff estimates.

The policy measures to stabilise the property market, especially the purchase restrictions, appear to have had a cooling effect. Growth in overall property prices has been trending down in the past few months on a three-month-on-three-month basis (Chart 2.18), while 25% of the 70 large and medium-sized cities have seen a month-on-month decline in home prices during the three months ended July, compared with 17% during the preceding three months. Transaction volumes have also been moderate compared with the previous review period.

While most factors will continue to support house prices, downside risks appear to have surfaced. The broadly positive expectations and the lack of alternative channels for households to diversify their investment will continue to underpin property prices, while elevated inflationary pressures could also help sustain the demand for real assets. The proposed plans for massive construction of social housing will significantly increase the housing supply,[4] but it remains to be seen to what extent this will draw away demand from the private housing market. However, the slowdown in property market transactions, combined with credit controls, has put the balance sheets of some developers under stress.

[4] In March 2011, the National People's Congress passed the 12th five-year plan of 2011-2015, in which the Central Government pledged to build 36 million units of public housing in the next five years (of the total, 10 million units are to be built in 2011).

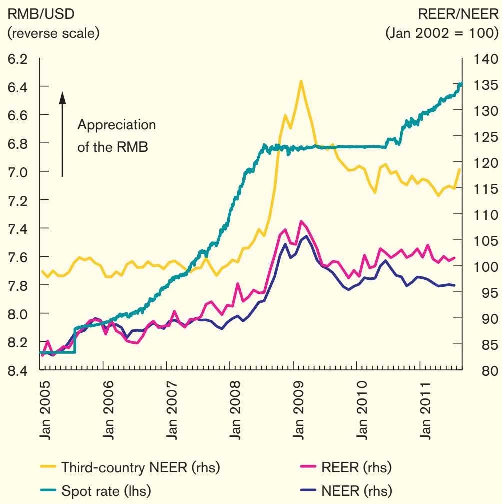
This could affect their pricing power and, in turn, weaken market confidence. Meanwhile, concerns over local government debts and the banking sector's asset quality, if not alleviated in a timely manner, could spread to the asset markets and add to the risk of an adjustment in property prices.

The renminbi exchange rate

The renminbi continued to strengthen against the US dollar, but was generally stable in effective terms. In the first eight months of 2011, the renminbi appreciated by 3.5% against the US dollar (Chart 2.19), while the spreads between the onshore and offshore RMB/USD exchange rates have generally narrowed amid increasing liquidity in the offshore renminbi market. The nominal effective exchange rate (NEER) and real effective exchange rate (REER) both remained largely stable in recent months. Meanwhile, the third-country NEER, which partly reflects China's external competitiveness in foreign markets vis-à-vis other economies, strengthened in August following a downward trend since mid-2010.

Market observers generally expect the renminbi to appreciate further against the US dollar in view of the persistent trade surplus, elevated capital inflow pressures as well as the relatively optimistic growth prospects. Consensus forecasts in early August suggest the renminbi will appreciate by about 4 - 5% annually in the coming two years.[5] However, the forward exchange rates imply a much slower pace, with both the onshore deliverable forward and offshore non-deliverable forward rates indicating an appreciation of about 1.5% in 12 months, while the offshore deliverable forward rate implies a rise of slightly above 0.5% (Chart 2.20). It should be noted that in addition to market expectations on the prospects for the renminbi, these forward rates also reflect short-term market behaviour.

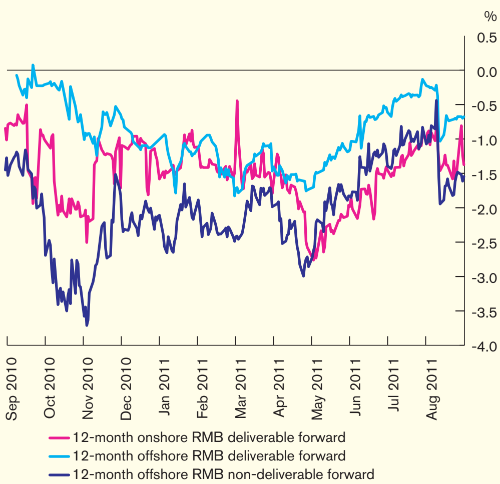
Chart 2.19
Mainland China: renminbi exchange rates



Note: A higher effective exchange rate index indicates a stronger renminbi. The third-country 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.

Chart 2.20
Mainland China: expected appreciation of the renminbi



Note: The expected rate of appreciation of the renminbi is calculated as the percentage difference between the spot rate and the forward rates. A negative number implies an appreciation of the renminbi against the US dollar.

Sources: Bloomberg and HKMA staff estimates.

[5] The consensus forecasts surveyed in early August 2011 indicate the market expects the RMB/USD exchange rate to appreciate to 6.123 by the end of August 2012 and 5.926 by end of August 2013.

Box 1
How tight are monetary conditions in Mainland China?

There has been much talk about monetary conditions in Mainland China against the backdrop of consecutive hikes in the reserve requirement ratio (RRR) and benchmark interest rates, as well as tightened controls over loan growth. For instance, it has been reported that some small enterprises are facing an unusually difficult financing environment. This box discusses monetary conditions in Mainland China by taking into account the special characteristics of its monetary policy framework.

Quantity and price indicators should both be used for monitoring the Mainland's monetary conditions due mainly to the structural impediments of a transitional economy.[6] This differs from mature market economies where monetary conditions are typically gauged with price tools, including interest rates and exchange rates. Although interest rate liberalisation has seen notable progress in the past decade, quantitative tools are still as important in conducting monetary policy on the Mainland. Therefore, this analysis starts with the quantity indicators (the RRR, money and credit, and total social financing) and then looks at price indicators (effective lending rate, corporate bond yields, market interest rates and real exchange rates).

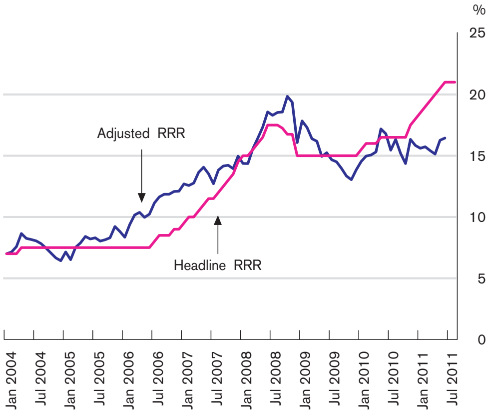
Our analysis shows that overall monetary conditions are still broadly accommodative, although money market liquidity conditions have tightened. Different sectors have been disproportionally affected by the monetary tightening, with structural reforms, rather than monetary policy, being the key to solving the problem.

The message from quantity indicators

The impact of the RRR increases on money expansion has been less significant than suggested by headline figures. The RRR (an important quantitative policy tool

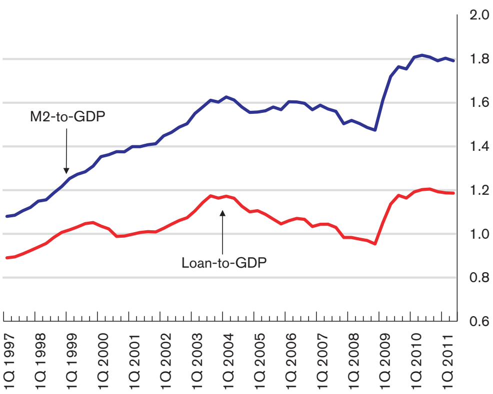
[6] For instance, bank lending and deposit rates are still partially controlled by the authorities. For more details, see "Dual-track interest rates and the conduct of monetary policy in China" by D. He and H. Wang, *Hong Kong Institute for Monetary Research Working Paper No 21/2011*.

Chart B1.1
Headline and adjusted reserve requirement ratios



Sources: CEIC and HKMA staff estimates.

Chart B1.2
Ratios of broad money and loans to GDP



Note: M2-to-GDP is the ratio of M2 to the four-quarter rolling sum of nominal GDP, and loan-to-GDP is the ratio of renminbi loans to the four-quarter rolling sum of nominal GDP.

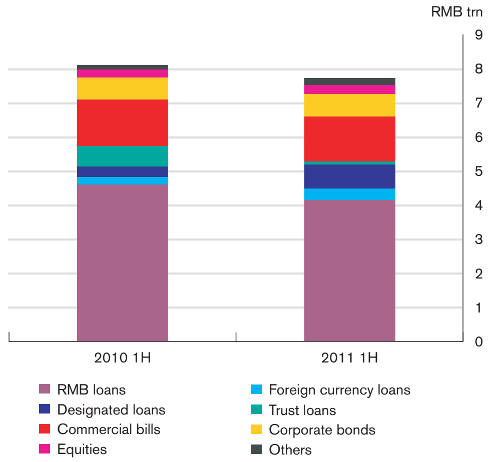
Sources: CEIC and HKMA staff estimates.

in Mainland China) has been raised 12 times since January 2010 to a record high of 21% on average. In fact, the RRR moves have been mainly aimed at draining the liquidity released from maturing central bank bills and sterilising the expansionary effect of the central bank's foreign exchange purchases. Our analysis shows that the RRR adjusted for these factors has basically been stable in the past one year and was only 16.4% on average in June 2011 (Chart B1.1), suggesting the impact of the RRR moves on money supply has been much smaller than perceived.

Money and credit have remained solid relative to real economic activities by historical standards. Broad money continued to expand at a solid, albeit moderating, pace in the first seven months of 2011. In tandem, the year-on-year growth in financial institution loans stayed close to its pre-crisis ten-year average level in July. Following the rapid expansion of money and loans in the past two years, the M2-to-GDP ratio and loan-to-GDP ratio are both noticeably higher than their pre-crisis levels (Chart B1.2).

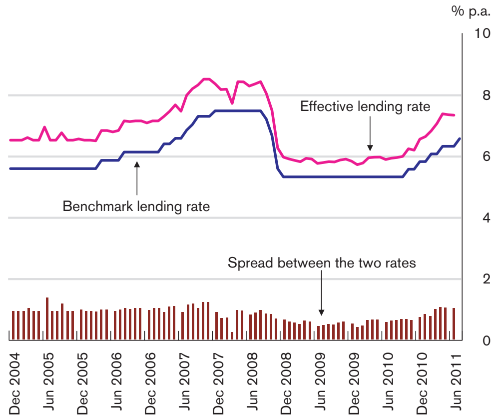
Meanwhile, total social financing (the overall financing of private sectors from society) in the first half of 2011 has only declined marginally from an historical high recorded a year ago. Social financing includes banks' renminbi loans, foreign exchange lending, off-balance sheet credit,

Chart B1.3
Total social financing



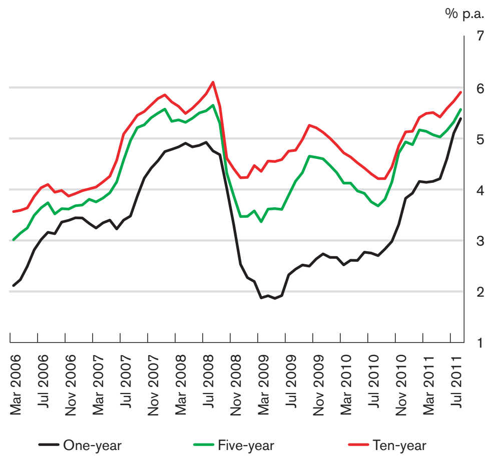
Sources: CEIC and HKMA staff estimates.

Chart B1.4
Effective and benchmark lending rates



Sources: CEIC and HKMA staff estimates.

Chart B1.5
Corporate bond yields



Note: These are the corporate bonds with AAA rating.
Sources: CEIC and WIND.

commercial bills and funds raised from the capital markets. As shown in Chart B1.3, new bank loans and trust loans have declined, whereas designated loans, and corporate bond and equity issuance have increased. The increases in non-bank loan funds could partly be attributed to the tightened controls over credit expansion as investors tried to seek funds through other channels.

In summary, quantity indicators appear to suggest monetary conditions are still supportive of growth, at least from an historical perspective. As this is only part of the picture, the following analysis based on price indicators will provide some supplementary information and help us form a comprehensive judgement of monetary conditions on the Mainland.

The message from price indicators

The largely stable spreads between the effective bank lending rate and the benchmark rate suggest bank credit supply has not been quite out of line with demand.[7] As the ceiling for lending rates was removed in 2004, banks may determine lending rates according to demand and supply conditions subject to the regulated floor rate. As a result, the spreads between the effective lending rate and benchmark lending rate reflect, to some extent, the relative strength of demand and supply. In other words, the spreads could have increased more significantly if demand was much larger than supply. As shown in Chart B1.4, while the effective lending rate has risen along with the benchmark rate, the spreads between the two have only risen gradually from their lows during the global financial crisis and are still below the peaks in 2007. This appears to indicate that bank credit supply has not quite lagged behind demand.

The rising corporate bond yields indicate higher funding costs for the private sector in financial markets. Corporate bond yields, which can help us understand the private sector's financing conditions from the perspective of broad financial markets, continued to trend up in the review period (Chart B1.5). The rises in bond yields can partly be due to the rising risk premium, as evidenced by the widening spreads between corporate bond yields and

[7] The effective rate is the weighted average of the lending rates of major financial institutions.

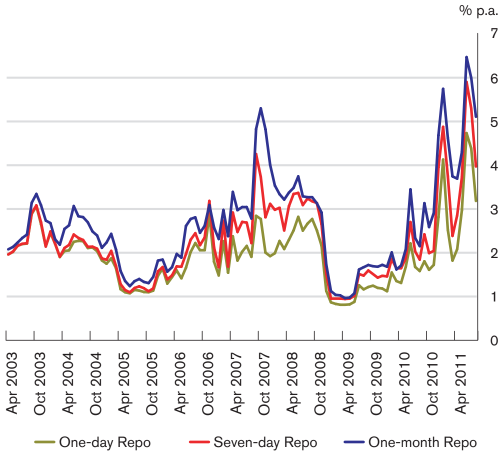
Chart B1.6
Spreads between corporate bond yields and Treasury bond yields

Note: These are the corporate bonds with AAA rating.
Sources: CEIC and WIND.

Chart B1.7
Real effective lending rate

Sources: CEIC and HKMA staff estimates.

Chart B1.8
Money market rates



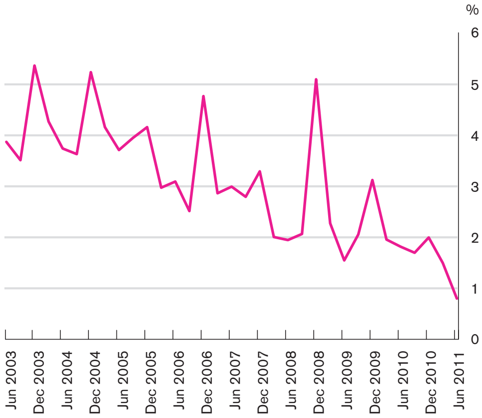
Sources: CEIC and WIND.

treasury bond yields (Chart B1.6). For instance, the spreads for the one-year corporate bond rose from a trough of 0.79 percentage points in June 2010 to 1.72 percentage points in August 2011, while those for the five-year corporate bond increased from 1.28 percentage points to 1.72 percentage points over the same period. As bond issuance accounted for only about 8.0% of total social financing in the first half (compared with 54% for bank loans), the rises in corporate bond yields do not necessarily indicate a significant tightening in overall monetary conditions. In addition, elevated inflationary pressures have kept the private sector's funding costs low in real terms. For instance, the real interest rate has been declining persistently since mid 2009 (Chart B1.7).[8]

Money market liquidity conditions have tightened somewhat, as shown by the upward trend of the short-term market interest rates (Chart B1.8). The RRR increases have contributed to changes in money market rates as banks' excess reserve ratio declined to an

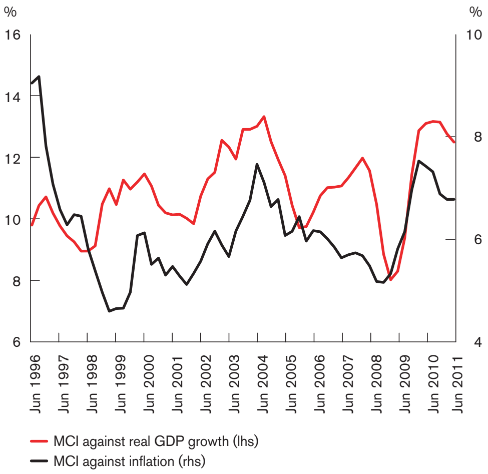
[8] Real interest rate is measured with the effective lending rate minus the year-on-year CPI inflation rate of the same period.

Chart B1.9
Excess reserve ratio



Source: CEIC.

Chart B1.10
Monetary Conditions Indexes



Note: A rise (decline) in the MCI indicates a loosening (tightening) in monetary conditions.
Sources: CEIC and HKMA staff estimates.

historically low level (Chart B1.9). Other factors may have also played a role. For instance, the regulation that companies must pay their operational income tax for last year by the end of May increased the demand for money and pushed up money market rates accordingly.

In summary, price indicators suggest that money market liquidity conditions have tightened, but bank credit supply has been broadly in line with demand, and the private sector's funding costs are still supportive of economic growth. The real effective exchange rate of the renminbi has also been stable, adding little pressure to exports (see Chart 2.19 in Chapter 2.4). This appears to suggest overall monetary conditions have been largely accommodative.

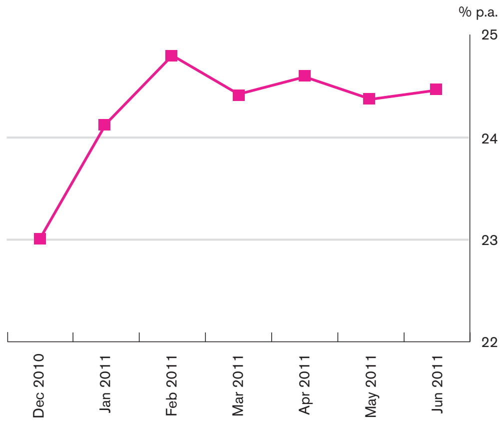
The message from quantity and price indicators combined

For a more complete picture of monetary conditions, we compile two Monetary Conditions Indexes (MCIs) based on both quantity and price indicators, including real money growth,[9] the real interest rate and the real effective exchange rate. The first MCI measures the extent to which monetary conditions support growth, and the second measures the extent to which monetary conditions support inflation.

Our estimates show that monetary conditions have been tightening in the past few quarters, but are still accommodative by historical standards. To be precise, current monetary conditions are consistent with an output growth rate of about 12% year on year, higher than the implied ten-year average of 11.3% (Chart B1.10). They are also consistent with a year-on-year CPI inflation rate of close to 7%, compared with the implied ten-year average of 6.2%.

9 Real money growth is measured with nominal year-on-year growth in M2 minus the year-on-year CPI inflation rate of the same period.

Chart B1.11
Private lending rates in Wenzhou



Source: Various reports of the Wenzhou Government.

Why have small enterprises been hit hard?

While overall monetary conditions have stayed broadly accommodative, different sectors have been affected disproportionally by the monetary tightening. Large and state-owned enterprises have easier access to bank loans and bond markets, but it has been reported that smaller corporations are relying heavily on informal financial markets subject to much higher funding costs. According to various reports of the Wenzhou Government, for instance, private lending rates have been above 24% per annum in the past few months (Chart B1.11), significantly higher than their previous peaks of about 16% in January 2005 and April 2008.

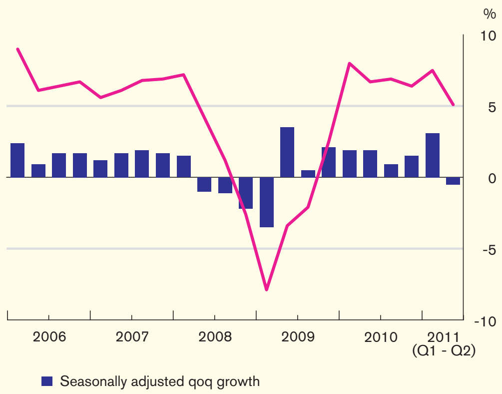
Monetary tightening has not likely been the root cause for this phenomenon, although it could worsen the financing conditions for small firms. These firms inherently have some disadvantages in financing compared with larger corporations due to their financial weaknesses, such as less qualified collaterals. As the big banks are mainly owned by the state, it is easier for state-owned enterprises to secure bank loans with explicit or implicit guarantees by the government. This phenomenon could be particularly obvious during tightening periods when credit rationing is more serious. As a result, structural reforms, rather than monetary policy, are the key to solving the problem.

3. Domestic economy

Demand

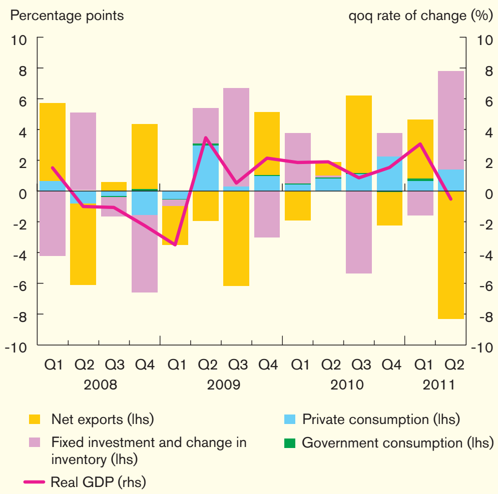
After an exceptionally strong first quarter, the Hong Kong economy weakened slightly in the second through a sizeable drag from the external sector, although the domestic economic environment remains largely favourable. In the near term, domestic demand is expected to remain robust, while the external outlook has become more uncertain. The key source of fragility to this outlook would be a worsening of the growth prospects for the advanced economies and global financial market conditions.

Chart 3.1
GDP at constant market prices



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

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



Sources: C&SD and HKMA staff estimates.

3.1 *Aggregate demand*

Real GDP contracted by 0.5% in Q2 on a seasonally adjusted quarter-to-quarter comparison, moderating from an above-trend growth of 3.1% in Q1 (revised from the earlier estimate of 2.8%) (Chart 3.1). In particular, net exports subtracted 8.3 percentage points from output growth as overseas demand fell, to some extent, led by disruptions to the regional supply chains arising from Japan's natural disasters and nuclear crisis. On the other hand, private consumption and overall investment spending increased noticeably. As a whole, domestic demand added 7.8 percentage points to output growth in Q2, although it failed to offset the sizeable drag from net exports (Chart 3.2). Despite the weakening sequential momentum, GDP growth remained impressive on a year-on-year profile. In the first half of 2011, real GDP expanded by 6.3% over a year earlier, far higher than the annual average growth of 4.1% over the past ten years.

Looking ahead, the domestic economic environment is expected to be largely favourable despite the decline in Q2. Domestic demand is expected to remain solid, although likely to lose some strength in the quarters ahead towards its trend rate, after growing 18% since mid-2009 – the fastest two-year period of expansion in almost 20 years. Local private consumption is expected to hold up reasonably well on the back of a robust labour market. Business capital spending and public construction works will also provide continued support to output growth.

However, external sector growth is likely to be moderate given the fading global inventory re-building cycle and weaker prospects for global growth. Overall, Hong Kong's real GDP is expected to resume growth during the second half of 2011 and revert towards its trend rate. The latest market consensus forecasts a real GDP growth of 5.4% for 2011, and the Government has maintained its forecast in the 5 - 6% range.

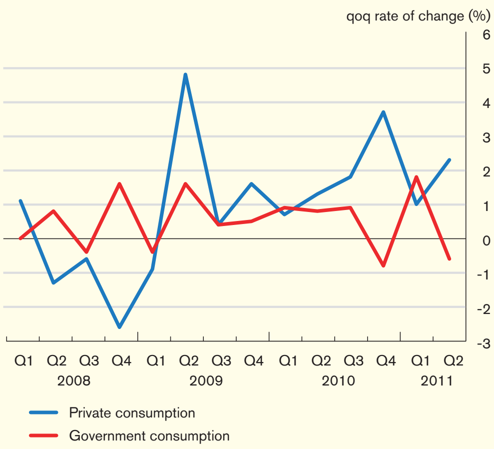
While the outlook for the Hong Kong economy is largely favourable in the baseline, downside risks have risen in light of the latest global developments. The predominant external uncertainties continue to be related to the fragility of the US recovery and its fiscal position, and the lingering sovereign debt problem in the euro zone, which have heightened financial market volatilities more recently. A further deterioration in the US outlook or the global financial conditions could generate strong spillovers to the domestic economy through trade and financial channels, as well as on confidence. On the other hand, strong growth in private consumption and investment, if continued unabated, would increase the risk of overheating in the domestic economy.

3.2 Domestic demand

Consumption

Private consumption rose strongly by 1.0% quarter-on-quarter in Q1 and 2.3% in Q2, buoyed by solid real income growth, buoyant labour market developments and strong consumer sentiment (Chart 3.3). Demand for consumer goods, in particular durable goods, strengthened notably, while service consumption increased steadily. With support from continued improvement in the labour market, local private consumption is expected to hold up reasonably well for the remainder of the year; but the pace of growth is likely to moderate after quarters of above-trend expansion. Real income growth and consumer sentiment remain favourable, although the latter has slightly softened more recently. Retail sales data also suggest that consumption growth momentum remains in place, albeit displaying some signs of moderating. The market consensus now projects private consumption growth to rise slightly from 6.2% in 2010 to 6.7% in 2011.

Chart 3.3
Private and government consumption



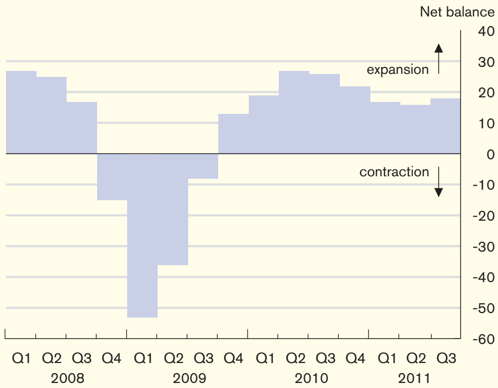
Source: C&SD.

Government consumption dropped by 0.6% in Q2, in part due to a high base effect in the previous quarter. However, government consumption is expected to resume growth in forthcoming quarters as outlined in the Budget, where the recurrent part of public expenditure is projected to increase by 6.5% in real terms in the 2011/12 fiscal year, higher than the 3.8% increase in 2010/11.[10]

Investment

Overall investment spending (gross fixed investment and changes in inventory combined) bounced back in Q2, contributing 6.4 percentage points to output growth. In particular, there was a notable increase in gross fixed investment, bolstered by a sharp revival in business capital spending and a sustained increase in public construction works. Private construction activities, however, remained subdued. For the remainder of 2011, business capital spending and public construction works are expected to provide continued support to output growth. The latest results of the Quarterly Business Tendency Survey point to positive near-term business prospects, solid financial positions and improving credit access (Chart 3.4). These favourable conditions are expected to shore up new business investment and replacement demand. However, with increasing uncertainty over the fragile global recovery, business capital investment is not likely to accelerate further. Private construction activities will continue to lag behind as building permits (that is, consent to commence work issued by the Buildings Department) are still trending downwards. On the other hand, there will be a sustained high level of public construction works as a number of major infrastructure projects are still underway. Overall, the latest market consensus sees a 5.0% increase in gross fixed investment in 2011.

Chart 3.4
Quarterly Business Tendency Survey

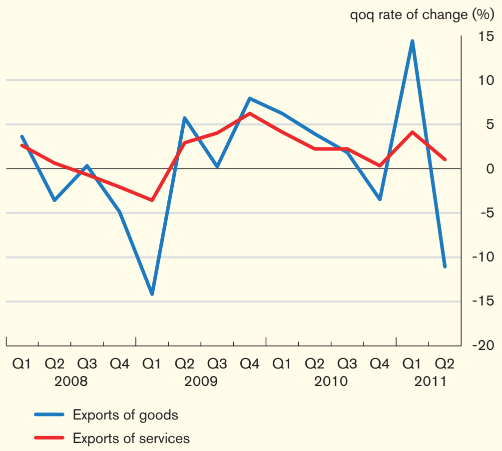


Source: C&SD.

Inventories continued to rise in Q2, although the pace of stocking has started to show signs of decelerating from a very high rate. This normalisation trend is expected to remain for the rest of 2011.

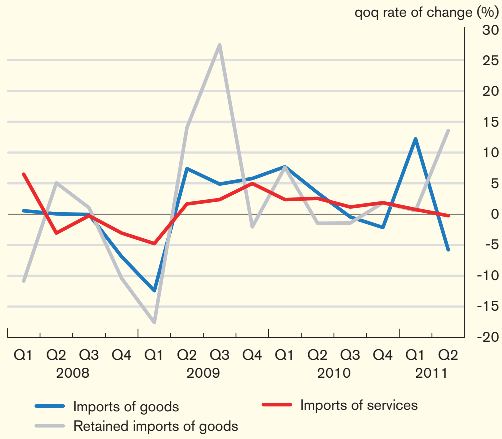
[10] The 3.8% increase in recurrent public expenditure in 2010/11 is based on the 2010/11 Budget projections.

Chart 3.5
Exports of goods and services



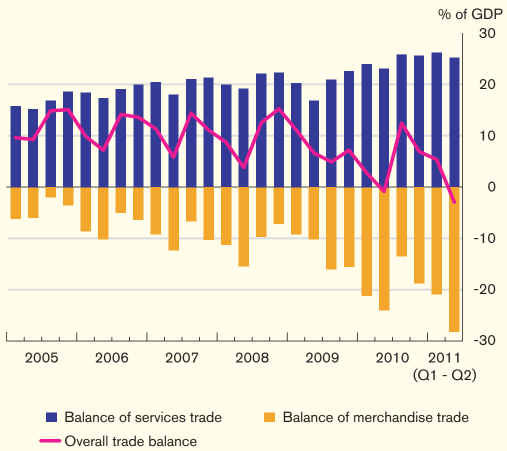
Source: C&SD.

Chart 3.6
Imports of goods and services



Sources: C&SD and HKMA staff estimates.

Chart 3.7
Trade balance by component (in nominal terms)



Source: C&SD.

3.3 External trade

After an exceptionally strong first quarter, external demand weakened considerably in Q2. Exports of goods fell sharply by 11.1% quarter on quarter, erasing most of the increase in Q1. Demand from advanced economies faltered due to sluggish economic recovery and the waning of the global inventory re-building cycle. Demand from the Mainland and other Asian markets also weakened visibly, due to dwindling processing trade for final consumption in the advanced economies and disruptions to the regional supply chains stemming from Japan's earthquake. The growth in Hong Kong's overall exports of services slowed to a quarter-on-quarter 1.0% in Q2 because overseas demand for trade-related services (mainly offshore trade) weakened in tandem with the fall in exports of goods (Chart 3.5). On the other hand, inbound tourism and exports of transportation and financial services grew at a faster pace.

Hong Kong's imports of goods dropped by 5.9% in Q2 due to the fall in re-export-induced demand. However, imports for domestic use and consumption strengthened amid resilient domestic demand. Retained imports of goods are estimated to have resumed growth at 13.3% in Q2 after staying virtually flat in Q1. Imports of services dropped modestly by 0.4% in Q2 due to a fall in trade-related services and financial services (Chart 3.6) that offset the strength of outbound tourism.

Overall, net exports turned from a driver of output growth in Q1 to a significant drag in Q2 by taking off 8.3 percentage points. In value terms, the seasonally unadjusted overall trade balance recorded a deficit of HK$12.8 billion (equivalent to 2.9% of GDP) in Q2 (Chart 3.7).

For the remainder of this year, it is likely that Hong Kong's exports of goods will pick up slightly from the low base of Q2 as the disruptions to the regional supply chains dissipate. Indeed, recent trade data suggest that some improvement is underway. Merchandise export growth is expected to be moderate, given the weakened underlying external support due to the fading global inventory re-building cycle, the heightened anxiety over the fragile US recovery and its fiscal position, and the euro zone debt problem. The market consensus now projects nominal merchandise exports to grow by 11.1% in 2011, down from 22.8% in 2010, implying an expectation of a 7.4% year-on-year growth in the second half. Renewed growth in offshore trade and robust inbound tourism are expected to give support to service exports. In anticipation of a gradual slowdown in domestic demand, imports of goods and services are forecast to increase at a more measured pace.

Labour market conditions and output gap

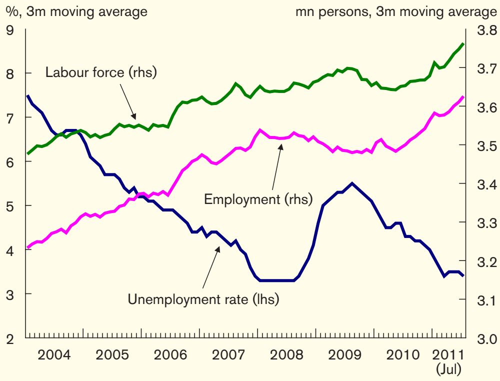
Labour market conditions improved in the first half, with the unemployment rate decreasing to 3.4% in July. Job creation remained robust amid strong economic growth, and the output gap is estimated to have risen moderately.

3.4 Labour market conditions and output gap

Labour market conditions

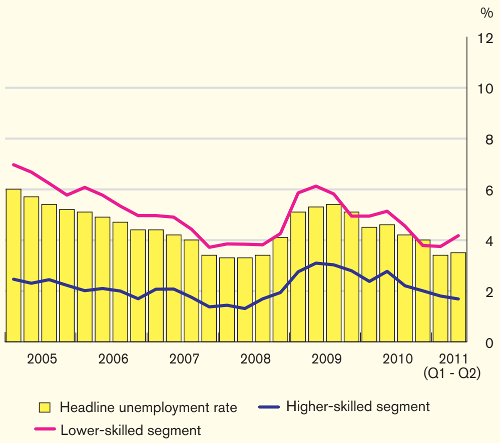
Labour market conditions continued to improve in the first half of 2011 amid strong domestic economic performance. Employment grew robustly, reaching a record-high of 3.63 million in July. The seasonally adjusted three-month-moving-average unemployment rate dropped steadily in Q1, decreasing to 3.4% in July (Chart 3.8). Detailed unemployment data indicated that the high-skilled segments of the labour market have tightened in recent months, with the unemployment rate for workers in the higher-skilled segment edging down to 1.7% in 2011 Q2, compared with 2.0% in 2010 Q4 (Chart 3.9). Meanwhile, the unemployment rate for workers in the lower-skilled segment remained low, despite edging up slightly from 3.8% in 2010 Q4 to 4.2% in 2011 Q2. These changes reflected a continued improvement in the labour market on the back of the economy's robust growth momentum.

Chart 3.8
Labour market conditions



Source: C&SD.

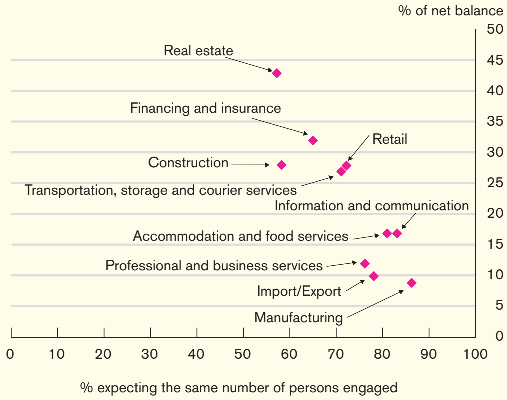
Chart 3.9
Unemployment rates in the higher and lower-skilled segments



Sources: C&SD and HKMA staff estimates.

On the labour demand side, job creation remained healthy in the past couple of quarters. The implementation of the Minimum Wage Ordinance in May 2011 appeared to have limited impact on labour demand, with employment in many major business sectors staying at high levels in Q2. Hiring sentiment in financing, insurance, real estate, professional and business services improved on rising domestic demand, while demand for workers in the construction sector stalled. Labour supply has risen since February 2011, with the overall labour force participation rate edging up to 60.5% in June.

Chart 3.10
Quarterly business tendency survey for 2011 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.

The near-term outlook for the labour market continues to be broadly favourable given the robust growth of the domestic economy. The latest Quarterly Business Tendency Survey indicates that all surveyed sectors expected their employment to increase in the third quarter (Chart 3.10). However, the increasing downside risks to the external environment, particularly the subdued economic growth in the US and the heightened uncertainty over the European debt crisis, may weigh on the hiring sentiment in the near term.

Output and unemployment gap

The economy was operating above its potential during the first half. Helped by an enhanced labour force participation rate, the pace of expansion in labour input quickened during the first two quarters of 2011, buoying the potential output growth rate. In fact, the actual output growth rate was even higher in the same period. Thus, the output gap of the economy is estimated to have risen to above 1% during the first half of the year, from close to zero in the second half of 2010.

The widening of the output gap also translated into a further improvement in labour market conditions. In particular, at an average of 3.5% in the first half of 2011, the actual unemployment rate has already fallen below the estimated non-accelerating inflation rate of unemployment (NAIRU), underscoring the tightness in the labour market.

The local economy is still expected to expand in the second half. This may keep labour market conditions tight and push up labour costs further, strengthening inflationary pressures in the months ahead. However, the outlook has become less certain compared with six months ago, as the movement of the output and unemployment gap is now subject to more uncertainty due to the increased downside risks to the global economic environment.

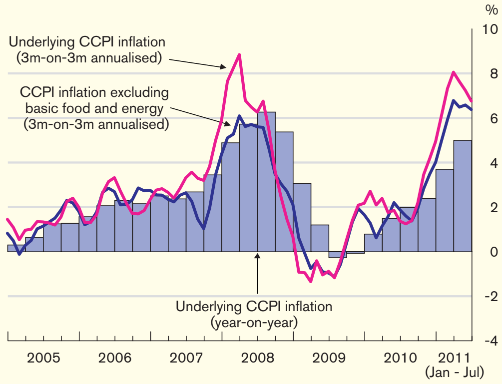
Prices and costs

Inflationary pressures have become more intense as import prices, rentals and labour costs continued to pick up amid increased global commodity prices, a buoyant property market and tightening in the labour market. If these developments continue, inflationary pressures will remain high in the near future.

3.5 Consumer prices

Inflationary pressures were more notable in the first half of 2011. On a three-month-on-three-month annualised basis, the underlying inflation rate rose from 5.0% in January to 8.1% in April (Chart 3.11). Excluding the more volatile components of basic food and energy, the broad trend in price pressures was largely similar, suggesting that rising inflation in the first half might be more persistent; and increased food prices, particularly those from the Mainland, and high energy prices are not the only reasons. On the other hand, signs of moderation in the inflation momentum emerged after April, with the underlying inflation rate dipping sequentially to 6.8% in July. This moderation, if sustained, could help restrain the upward trend in the year-on-year underlying inflation rate later in the year, which rose steadily from 2.4% in 2010 Q4 to 3.7% in 2011 Q1, 5.0% in Q2, and 5.8% in July.

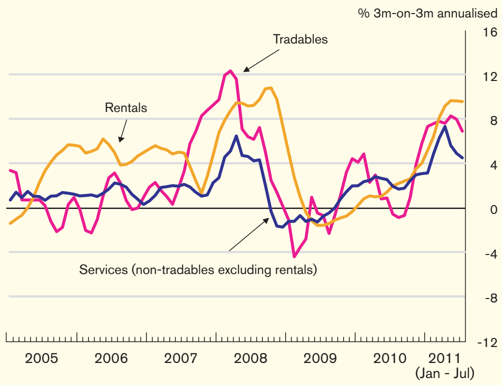
Chart 3.11
Different measures of consumer price inflation



Sources: C&SD and HKMA staff estimates.

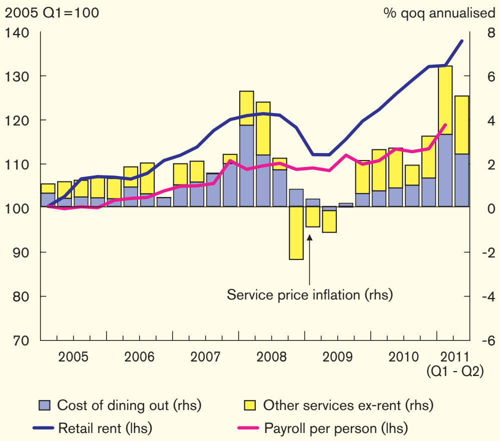
The increase in inflationary pressures was broad-based, as the inflation rate of all major components have picked up further. Among tradable, non-tradable and rentals, the increase in the inflation rate of the rental component was particularly notable, rising from 5.3% in January to 9.8% in May, and reaching 9.7% in July (Chart 3.12). This was largely expected, as the sharp rise in residential market rentals since early 2009 eventually passed through into the rental component. The inflation rate of the tradable component fluctuated around 8.0%, while that of the non-tradable component peaked at 7.4% in

Chart 3.12
Consumer price inflation by broad component



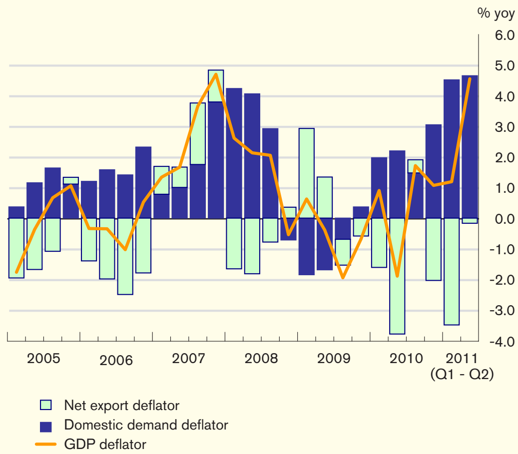
Sources: C&SD and HKMA staff estimates.

Chart 3.13
Service price inflation excluding rent



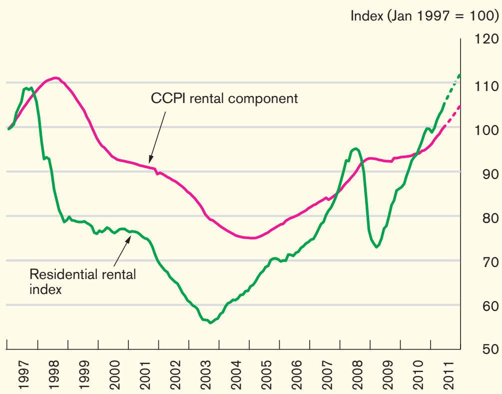
Sources: Rating & Valuation Department (R&VD), C&SD and HKMA staff estimates.

Chart 3.14
GDP deflator and broad components' inflation



Sources: C&SD and HKMA staff estimates.

Chart 3.15
CCPI rental component and market rentals



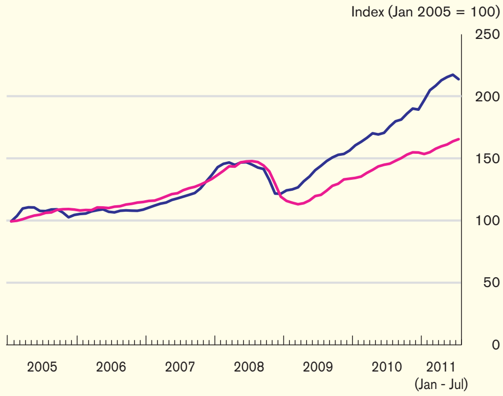
Note: CCPI rental component is excluding the effects of one-off special relief measures
Sources: R&VD, C&SD and HKMA staff estimates.

April, and edged down to 4.6% in July, despite the accelerated increase in retail rental costs and the pick-up in labour costs in Q2 (Chart 3.13).

From the national account perspective, the rise in inflationary pressures mainly reflected that of the domestic demand component (Chart 3.14). The contribution of the net exports inflation, which measures the relative inflation of export to import prices, was negative, as any faster pace of increase in import prices relative to export prices were not offset by the larger weight of the export component relative to the import component in the gross output figures.

High inflationary pressures are expected to stay in the near term. Externally, food prices are likely to remain at elevated levels for some time. However, the outlook for other import price pressures is uncertain as the prospects for oil and other commodity prices have become more volatile, supported by the unrest in the Middle East and North Africa (MENA) on one hand, while dampened by the worsening global economic outlook on the other. Domestically, the pass-through of increased residential market rentals into the CCPI rental component are likely to continue for the rest of 2011 (Chart 3.15), as the 24-month and 12-month moving averages of market rentals, which approximate the movement of the CCPI rental component, continue to rise in the absence of any sharp correction in market rentals. In a similar vein, increased retail market rentals have already pushed up business cost pressures, which will be exacerbated by rising wages in a tightened labour market, if the domestic growth momentum continues. Box 2 addresses the impact of domestic cost pressures on inflation in Hong Kong.

Chart 3.16
Residential property price and rental indices



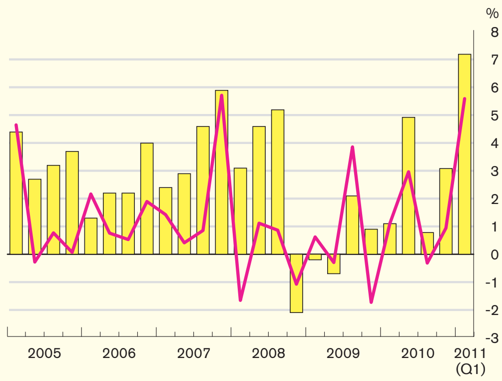
Source: R&VD.

3.6 Rental costs

As residential property prices rose further during the review period, residential property rentals also continued to edge up. In particular, residential property rentals rose by 7.8% in July over six months ago, during which residential property prices increased by 8.6% (Chart 3.16). With a cumulative increase of 46.1% from their recent trough, property rentals in July had already surpassed their pre-crisis level by 11.9%, and were just 2.2% below their peak in 1997.

Following a further tightening in the loan-to-deposit ratio in June, residential property prices showed some signs of stabilising, according to the Centa-City leading index. With the overheating sentiment in check, the pace of increase in residential property rentals may experience some slowdown. However, heightened residential rentals have not yet completed their pass-through into the CCPI rental component, and this will likely continue to drive inflationary pressures in the near term.

Chart 3.17
Nominal payroll per person

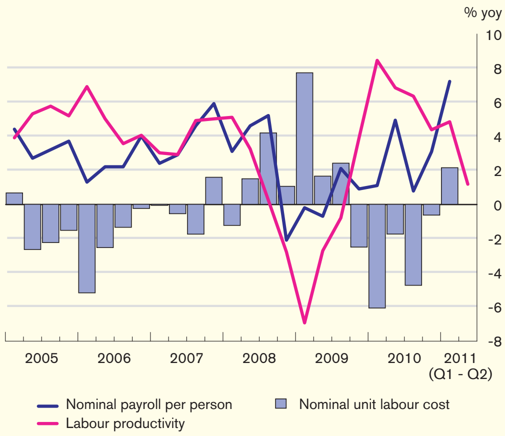


Source: C&SD.

3.7 Labour costs

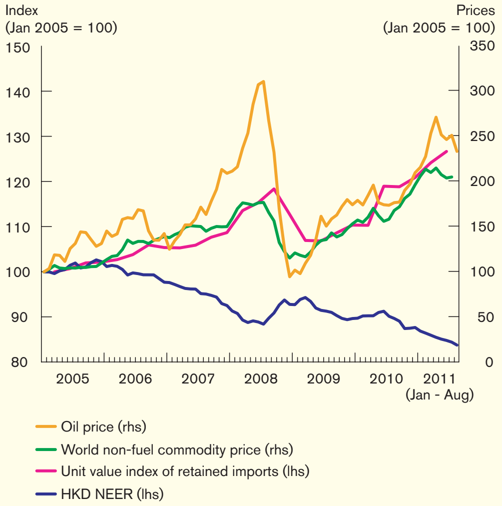
Labour cost pressures have become more visible with the tightened labour market conditions. In particular, the year-on-year increase in the nominal wage rose further from 2.4% in 2010 Q3 to 3.3% in Q4 and 4.9% in 2011 Q1. Taking into account irregular bonus and overtime allowance, the pick-up in labour cost pressures was even sharper, with the year-on-year increase in nominal payroll per person accelerating from 0.8% in 2010 Q3 to 3.1% in Q4 and 7.2% in 2011 Q1 (Chart 3.17). After discounting for price changes, the payroll per person still recorded year-on-year increases of 0.3% in 2010 Q4 and 3.2% in 2011 Q1, underscoring the build-up of labour cost pressures in the economy. Looking at the seasonally adjusted quarterly figures, real payroll per person was little changed in the six-month period (from 2010 Q4 to 2011 Q1) compared with the last review period, as the decline in 2010 Q4 was offset by the increase in 2011 Q1.

Chart 3.18
Unit labour cost and labour productivity



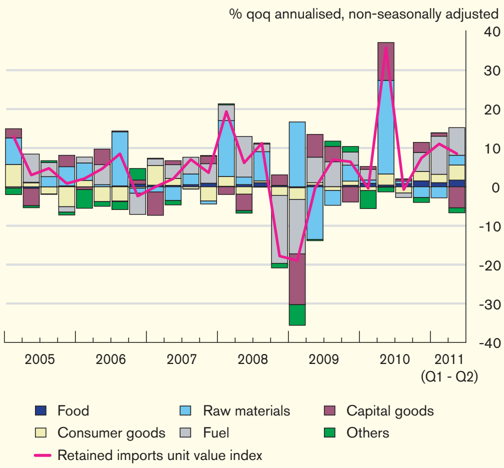
Sources: C&SD and HKMA staff estimates.

Chart 3.19
Commodity and import prices



Sources: C&SD and IMF.

Chart 3.20
Contributions to import price inflation



Sources: C&SD and HKMA staff estimates.

As the year-on-year increase in nominal payroll per person was somewhat sizable in Q1, which also outpaced the strong labour productivity growth recorded during the quarter, the year-on-year growth rate in nominal unit labour costs is estimated to have returned to positive in Q1 (Chart 3.18). This turnaround again reaffirms the presence of labour cost pressures in the economy.

If the domestic growth momentum is not significantly slowed by the increased downside risks to the external economic environment, the unemployment rate is expected to hover below the NAIRU in the near future and the labour market is likely to remain tight. This means labour cost pressures may become more intense. Thus, rising labour costs could turn out to be another important source of inflationary pressures, which warrants closer monitoring.

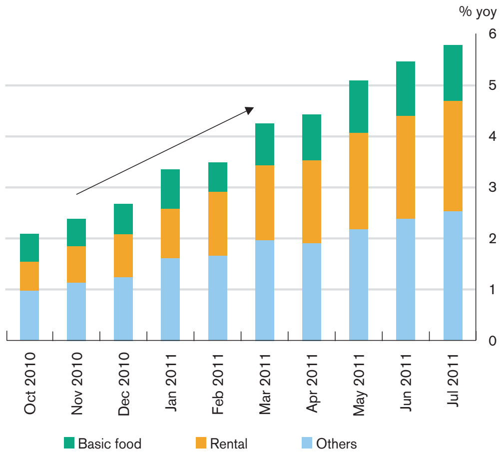
3.8 Commodity and import prices

Overshadowed by unrest in the MENA region, import prices continued to climb during the first half of 2011. The quarter-on-quarter annualised inflation rate of import prices accelerated to 11.0% in Q1 on the back of increased global commodity prices, particularly for oil (Chart 3.19). The rate of increase then slowed to 8.5% in Q2, as commodity prices fell from their peaks during the quarter. This was due to the interplay of a number of factors, such as concerns about the global economic outlook, and the ending of the second phase of quantitative easing in June. A breakdown by end-use category of import prices confirmed that fuels were mainly responsible for the fluctuation in overall import price inflation in both Q1 and Q2 (Chart 3.20).

The outlook for import prices remains uncertain, although food prices are likely to remain elevated in the near term, due to repeated shocks to the global food supply chain. On the other hand, oil prices may be dampened by the worsening global economic outlook despite the supply disruptions because of the unrest in the MENA region.

Box 2
Impact of domestic cost pressures on inflation in Hong Kong

Chart B2.1
Components' contributions to the underlying inflation rate



Sources: C&SD and HKMA staff estimates.

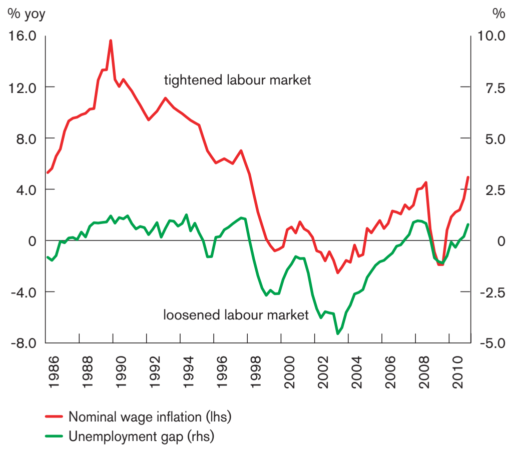
Inflationary pressures in the Hong Kong economy have been rising steadily since late 2010. This upward trend has mainly been attributed to the pass-through of increased residential rentals into the CCPI rental component and global food prices into the CCPI basic food component. However, the contribution of other components (accounting for about 60.4% of the CCPI basket) has also started to pick up in recent months as inflationary pressures have become more broadly based (Chart B2.1). Such developments may reflect the impact of rising domestic cost pressures as the other CCPI components, which comprise mainly service constituents of the CCPI, are likely to be more heavily influenced by domestic costs like labour and rental costs. This box analyses how domestic cost pressures will affect Hong Kong's inflation.

Role of domestic cost pressures in driving up inflation

There is evidence that cost pressures have been building up in the local economy, particularly in the labour and rental markets.

In the labour market, strong local economic activity over the past few quarters has stretched the size of the positive output gap. The unemployment rate has fallen below our estimated non-accelerating inflation rate of unemployment (NAIRU) since 2010 Q4, underscoring the tightness in the local labour market and the rising wage pressures in the economy. If the unemployment rate were to continue to stay below the NAIRU, labour cost pressures may build up more easily to higher-than-expected levels, similar to the situation in the 1990s (Chart B2.2). Signalling the rise in labour cost pressures, the year-on-year growth in unit labour costs returned to positive territory in Q1, after remaining negative for five consecutive quarters.

Chart B2.2
Labour market conditions and wage inflation[1 & 2]

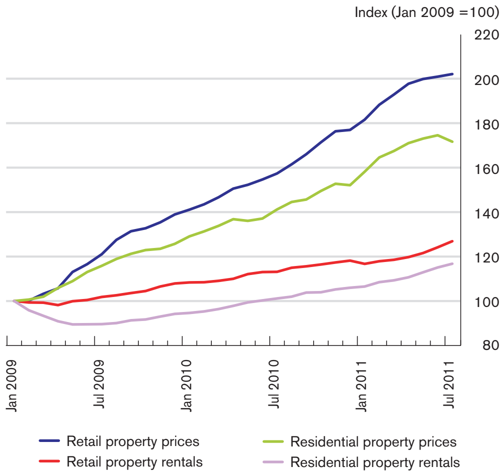


Notes:

1. The unemployment gap is calculated as the difference between the NAIRU and the actual unemployment rate.
2. Prior to 2004, the nominal wage index was compiled based on the Hong Kong Standard Industrialisation Classification Version 1.1 (HSIC V1.1), while after 2004, the index was compiled based on HSIC V2.0. Thus, caution needs to be taken in interpreting the nominal wage inflation rate before and after 2004.

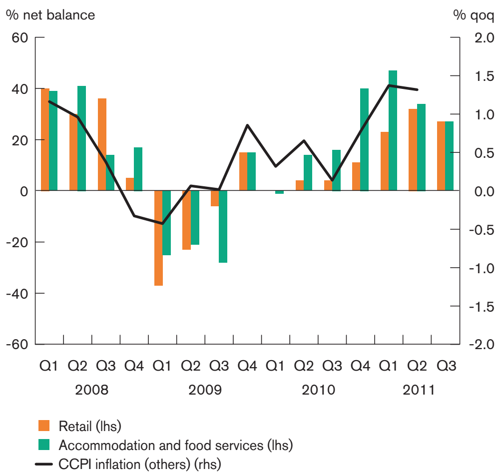
Sources: C&SD and HKMA staff estimates

Chart B2.3
Property prices and rentals



Source: R&VD.

Chart B2.4
Inflation and QBTS (selling prices)[1]



Note:
1. Net balance refers to the difference between the percentage points of respondents expecting a rise over those expecting a decline.

Sources: C&SD and HKMA staff estimates.

In the rental market, the buoyant local property market has resulted in rises in both residential rentals and retail rentals (Chart B2.3). The latter, if it continues, could lead to a further substantial jump in business costs. (Box 3 analyses the non-residential property market, including the retail market, in greater detail).

As wages and retail rentals represent significant components in business operating costs, firms are under pressure to pass the higher costs to consumers by raising the price of their products. As found in the latest Quarterly Business Tendency Survey (QBTS), firms in the retail, accommodation and food services sectors, expect their selling prices to continue to rise in Q3 compared with Q2 (Chart B2.4). This indicates the rise in wages and retail rentals is already feeding into consumer prices. Additional pass-throughs from further increases in these costs in the near future are still possible, particularly if the domestic growth momentum continues.

Quantitative impact analysis

To quantify the impact of rising wages and rental costs on inflation, we use a Vector Autoregressive Model (VAR), involving the following variables: the unemployment gap, nominal wage inflation, retail rentals inflation and underlying CCPI inflation (others).[11 & 12] We include the unemployment gap into the VAR, in order to examine the influence of labour market conditions on wage inflation. In particular, as wage pressures might build up more easily in a period when the unemployment gap is positive (that is, the actual unemployment rate is lower than the NAIRU) and the labour market conditions are tight, we split the unemployment gap into two different variables in the VAR: (a) the unemployment gap when the sign of the gap is positive, and zero otherwise; and (b) the unemployment gap when the sign of the gap is

[11] The inflation rates used in the VAR are all measured on a year-on-year basis.

[12] In addition, we also include unit retained import value inflation in the VAR as an exogenous variable to control for the influence of import prices on local inflation.

negative, and zero otherwise.[13] Impulse response analysis was then carried out.[14] Here, we focus on the average impact over the first four quarters (a one-year horizon).

Several interesting features in our estimation results are worth highlighting: (1) when the unemployment gap is positive, a percentage point increase in the gap will lead to about a 2.2 percentage-point increase in the wage inflation rate. When the unemployment gap is negative, the corresponding figure is much smaller at about 0.6 percentage points. Thus, our results are consistent with concerns about the impact of the current tight labour market conditions on labour cost pressures; (2) a percentage point increase in the wage inflation rate will lead to about a 0.5 percentage-point increase in the underlying CCPI inflation rate (others), while the impact of the retail rentals inflation rate is about 0.1 percentage points. Judging from the magnitudes alone, these numbers are far from sizable. Nevertheless, the possible sharp pick-up in wage and retail rentals inflation in the current economic climate means these numbers will still have important implications for the near-term inflation outlook.

To illustrate this, we perform a sensitivity analysis surrounding the plausible rising paths for the wage and retail rental inflation rates in 2011. Specifically, by assuming the increases in the two rates range from 1.0% to 4.0%, and using the impact estimates based on the VAR model (that is, 0.5 and 0.1), we obtain some ball-park estimates on the resulting increase in the annual underlying CCPI inflation rate (others) in 2011.[15] The results are summarised in Table B2.A, which shows that

Table B2.A
Sensitivity analysis
Impact on the underlying CCPI inflation rate (others)

Increase in retail rentals inflation (Percentage points)	Increase in nominal wage inflation (Percentage points)			
	1.0	2.0	3.0	4.0
1.0	0.6	1.1	1.6	2.1
2.0	0.7	1.2	1.8	2.3
3.0	0.9	1.4	1.9	2.4
4.0	1.0	1.5	2.0	2.5

Source: HKMA staff estimates.

13 All variables are first-differenced to ensure their stationarity, and our VAR is estimated with quarterly data from 1988 Q1 to 2011 Q1. Six lags of each variable are included in the VAR, based on the likelihood ratio test statistics.

14 Our impulse responses are calculated using the generalised impulse response technique, which is robust to the ordering of variables in the VAR. For more details, see H. Pesaran and Y. Shin (1998): "Generalized impulse response analysis in linear multivariate models", Economics Letters 58, pages 17 - 29.

15 The wage inflation rate and the retail rental inflation rate in 2010 were 2.5% and 10.9% respectively. With the assumption in the sensitivity analysis, the figure for 2011 is around 3.5 - 6.5% for the wage inflation rate and 11.9 - 14.9% for the retail rental inflation rate. These numbers surround the plausible rising paths of the wage inflation rate and the retail rental inflation rate for the rest of 2011, as the wage inflation rate in 2011 Q1 was 4.9%, and the retail rental inflation rate for the first seven months of 2011 was 9.2%.

the increase in the inflation rate will range from 0.6 to 2.5 percentage points. Given that this CCPI measure (others) accounts for about 60% of the overall CCPI basket, the increase in the overall underlying inflation rate in turn amounts roughly to 0.4 to 1.5 percentage points, which is far from negligible.

Conclusion

If weaker growth prospects in the advanced economies and uncertainties in the external environment do not significantly slow the domestic growth momentum, inflation is likely to be driven not only by food prices and housing rentals, but also increasingly by the impact of domestic cost pressures on other CCPI components. In particular, the tight labour market may push up wages, while the buoyant property market may raise rental costs to elevated levels. These pressures could contribute significantly to the inflationary pressures in 2011.

Box 3
Recent developments in the non-residential property markets in Hong Kong

Hong Kong's non-residential property markets have picked up strongly since the global financial crisis, with both prices and trading volume rising rapidly. Speculative activity has also intensified, as reflected in increasing confirmor transactions. In the leasing market, the effective rentals for fresh leases of non-residential properties also climbed solidly, but lagged considerably behind the strong surge in sales prices. Rental yields have hence fallen to historical lows. This box explores the underlying dynamics that have shaped the recent developments in these property segments.

Recent Developments

The non-residential property markets in Hong Kong quickly recovered from the global financial crisis, and have either approached or overtaken the previous highs in both price and sales volume measures.

Prices roughly doubled from the crisis trough (around mid-2009) for office space, commercial space (mainly for retail business) and flatted factories according to the Rating and Valuation Department (R&VD) (Table B3.A). Prices for office space in core districts rose even faster, by almost 130%. Indeed, the rally in non-residential property markets has been even more prominent than that in the housing market, where prices rose by 76% during the same period.

Table B3.A
Recent trends in property prices and rentals

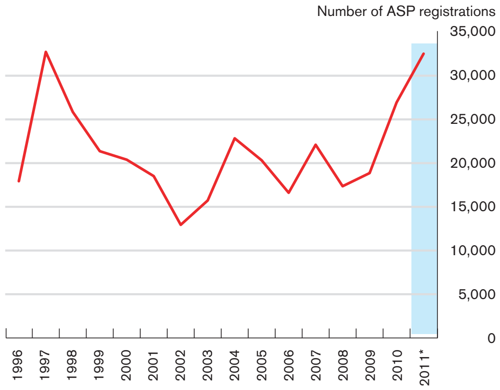
Period change (%)

	2009	2010	2011 Year- to-Jul	Trough (mid-2009) to Jul 2011	2008 Peak to Jul 2011
Property Prices					
Residential	+28.5	+21.0	+13.8	+75.6	+45.3
Flatted Factories	+20.4	+31.6	+18.7	+107.7	+59.3
Office	+25.2	+24.8	+16.4	+104.3	+46.1
Core Districts	+34.1	+29.6	+10.8	+126.6	+31.3
Commercial	+32.7	+27.4	+13.0	+102.3	+59.6
Effective Rentals					
Residential	+12.1	+15.7	+4.2	+46.1	+11.9
Flatted Factories	+0.8	+9.3	+3.9	+25.3	+7.5
Office	-9.8	+12.5	+6.6	+30.6	+6.1
Grade A	-14.4	+13.5	+7.2	+30.7	+3.2
Central / Sheung Wan	-20.7	+18.6	+11.9	+45.8	+1.9
Grade B	-4.9	+10.5	+6.0	+30.0	+4.5
Grade C	+2.1	+10.8	+4.3	+32.6	+14.0
Commercial	+5.1	+9.5	+2.9	+29.3	+17.1

Source: R&VD.

Property trading activities also picked up strongly, reaching a level well above the long-term average (Chart B3.1). The total number of agreement for sale and purchase (ASP) registrations for all types of non-residential properties increased by 9% and 43% in 2009 and 2010 respectively. And, at the current rate seen in the first eight months of the year, the total number of transactions for 2011 will almost reach the 1997 record of 32,750. Disaggregate data from the Centaline Property Agency Limited show that the buoyant trading activities

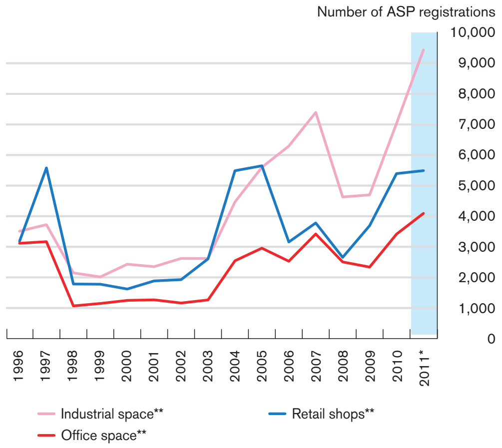
Chart B3.1
Non-residential property transactions based on agreements for sale and purchase registrations



* Annualised figure based on the available data for the first eight months of 2011.

Source: Land Registry.

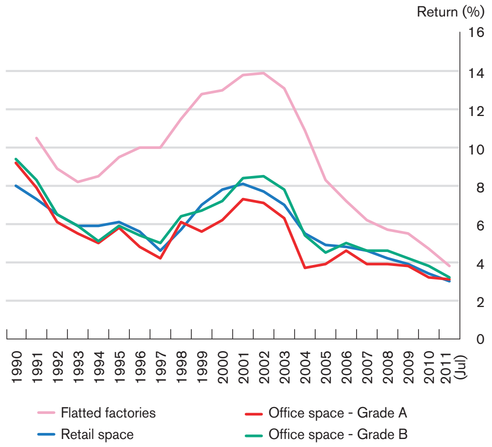
Chart B3.2
Transactions of selected property types based on ASP registrations and Centaline classification



* Annualised figure based on the available data for the first eight months of 2011.
** Property types classified by Centaline Property Agency Limited using Land Registry data.

Source: Centaline Property Agency Limited.

Chart B3.3
Rental yields of non-residential properties



Source: R&VD.

have been mainly driven by transactions of industrial space, with sales of office space and retail shops also rising strongly (Chart B3.2).

Bank lending related to non-residential properties has gained strong momentum. At the end of June 2011, outstanding loans made available for the non-residential property development and investment sector have surged by 32.1% from two years ago. Mortgage registration data from Centaline Real Estate Agency also suggest a strong rise in non-residential mortgages.

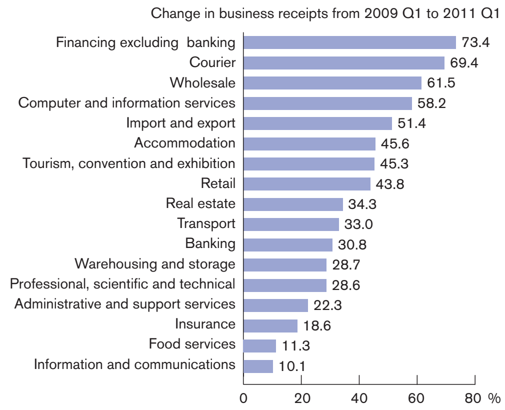
In the leasing market, effective market rentals for fresh leases of non-residential properties also climbed at a solid pace, but lagged behind the surge in sales prices by a wide margin. According to the R&VD, there was an increase of 25 - 31% in the effective market rentals for office space, flatted factories, and commercial space from the crisis trough in mid-2009 to July 2011, with prime areas such as Grade A office space in the central business district showing an even higher increase. With rents increasing at a much slower pace than prices, rental yields of non-residential properties have fallen to historical lows at around 3 - 4%, according to the R&VD (Chart B3.3).[16]

Underlying dynamics

The strong momentum of the non-residential property markets has in part reflected favourable demand conditions, and the limited and inelastic supply of floor space. The much steeper surge in sales prices relative to rentals, however, may not be fully explained by fundamental factors, hinting at risks of overheating in the markets.

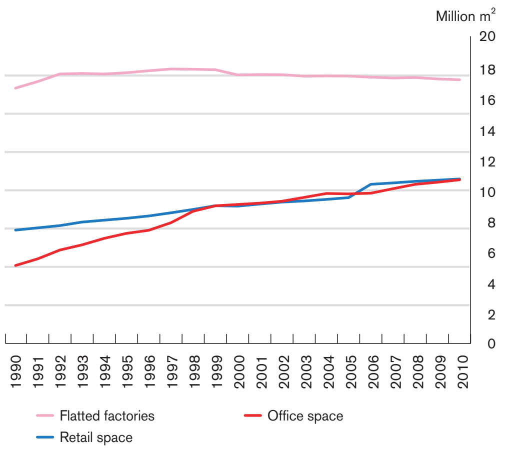
[16] Real estate agents and consultancy firms, on the other hand, reported a much faster increase in non-residential rentals than indicated by R&VD data. The discrepancy is due to methodological differences. Agents and consultancy firms generally adopt a valuation approach, different from R&VD's transaction-based approach, to assess rentals with reference to the prevailing market conditions. They also focus only on a fixed sample of landmark buildings and prime locations, hence their rental data do not reflect the possible substitution effect from tenants moving to locations of lower rentals, but not in their sample. Agents and R&VD also differ in the timing of data, with the former reporting the new rental rate starting from the lease signing date, but the latter referring to the lease's effective start date. Overall, R&VD data have the advantage of covering all market transactions, although agents' data may provide more timely information about market trends.

Chart B3.4
Business receipts of service sectors



Source: C&SD.

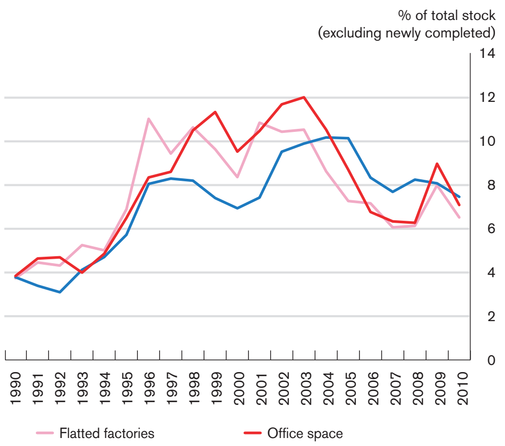
Chart B3.5
Stock of non-residential properties (floor space)



Note: The floor space figures for retail space include properties owned by The Link REIT from 2006 onwards.

Source: R&VD.

Chart B3.6
Vacancy rates of non-residential properties



Source: R&VD.

(a) Leasing market

In the leasing market, robust growth in domestic demand and the favourable business outlook have been important driving forces behind the solid demand for non-residential rentals. In nominal terms, the overall business receipts for most service industries in Hong Kong have risen by at least 30% since 2009 Q1 (Chart B3.4). Strong job creation and corporate hiring sentiment (see Section 3.4) have also underpinned the growing demand for non-residential floor space. However, the supply of floor space has been limited, with office and retail shop units registering slow increases and flatted factory space falling in recent years (Chart B3.5). Hence, vacancy rates fell to 6.5 - 7.5% for the key non-residential segments towards the end of 2010 (Chart B3.6). Vacancies might have decreased even further during the first half of 2011, according to agents and consulting firms.

Contributing also to the trend of rising rentals is landlords' strong market power vis-à-vis tenants. In Hong Kong, the supply of non-residential units is concentrated in the hands of a few key players. Large relocation costs faced by tenants, particularly retail businesses for which location familiarity is a main customer drawing power, give landlords an even stronger bargaining position. Rising rentals have pushed up the cost of doing business and squeezed retailers' profit margin in Hong Kong. Possible pass-throughs from non-residential property rentals to consumer price inflation are discussed in Box 2 of the Report.

(b) Sales market

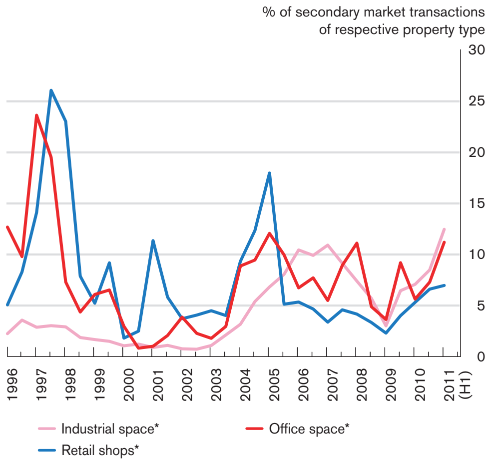
In the sales market for non-residential properties, the same factors that pushed up rentals, such as robust economic growth, favourable business outlook and limited supply of floor space, also lifted property prices through rental capitalisation.

In addition, non-residential property values might have been further boosted by urban renewals and redevelopment opportunities. For example, given that factories typically fetch much lower rentals than hotel properties, a conversion of an industrial building for hotel use, subject to approval, could considerably raise the future rental income associated with the property and, therefore, boost its current sales price.[17] Similarly, urban renewals could increase the customer drawing power of a location, thus lifting the rental prospects and commercial values of properties nearby.

The current low interest rate environment, which has lowered the carrying cost for asset purchases, might also have helped push up non-residential property prices.

Nevertheless, these factors alone might not be able to fully explain the very substantial deviation in the pace of increase between rentals and prices – with the former lagging behind the latter by more than 70 percentage points over the past two years. The deviation between rental and price increases is even much higher than that seen in the housing market. Rental yields of non-residential properties have been declining, reaching historical lows – a possible suggestion of property investors' strong appetite for risk-taking. It should be noted that in the run-up to the 1997/98 property market crash, there was also a sizable deviation in rental and price trends, leading to depressed rental yields (Chart B3.3).

Chart B3.7
Confirmor transactions of selected non-residential properties



* Property types classified by Centaline Property Agency Limited using Land Registry data.

Source: Centaline Property Agency Limited.

Indeed, speculative demand may have played an important role in the current price boom. While still below the 1997 peaks, confirmor transactions (sub-sale activities) as a percentage of secondary market transactions increased significantly from around 3% in early 2009 to 11% for office space, 7% for retail shops, and 12% for industrial space during the first half of 2011, according to Centaline Property Agency Limited (Chart B3.7).

In view of the market buoyancy and potential overheating risks, the HKMA has extended the macro-prudential measures for mortgage lending to cover non-residential properties, reducing the ceiling on the loan-to-value (LTV) ratio to 50%. In addition, effective from June 2011, the LTV cap for net worth-based mortgages, which are a common form of financing for non-residential properties, has been lowered to 40%.

[17] Conversions are encouraged by the Government's plan to revitalise existing industrial buildings as announced in late 2009.

4. Monetary and financial conditions

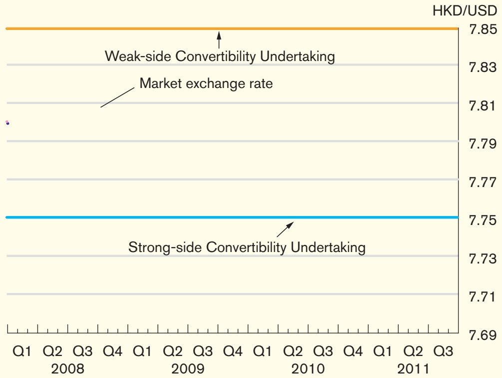
Exchange rate, interest rates and monetary developments

The Hong Kong dollar spot exchange rate moved within a narrow range despite a volatile external environment. Interbank interest rates stayed low, but retail-level lending and deposit interest rates rose. Credit growth continued to be strong and across the board. In view of the rapid loan growth, the HKMA required banks to reassess their business plans and funding strategies for the rest of 2011 and imposed further prudential measures for residential mortgage loans in June.

4.1 Exchange rate and interest rates

The foreign exchange market functioned normally in the first half of 2011 despite the political unrest in the Middle East and North Africa, the natural disasters and nuclear crisis in Japan, and the renewed concerns about the sovereign debt problems in the euro area. Continuing the weakening trend in the last two months of 2010, the spot exchange rate softened from around 7.77 to 7.80 between January and March 2011 alongside some outflows of equity-related funds. As the US dollar depreciated against other major currencies, the Hong Kong dollar spot exchange rate strengthened in April and early May. From mid-May to June, the spot exchange rate weakened again amid lacklustre performance on the local stock market, and as lingering worries about the European sovereign debt problems weighted on market sentiment. Overall, the spot exchange rate traded within a narrow range between 7.7618 and 7.8016 (Chart 4.1).

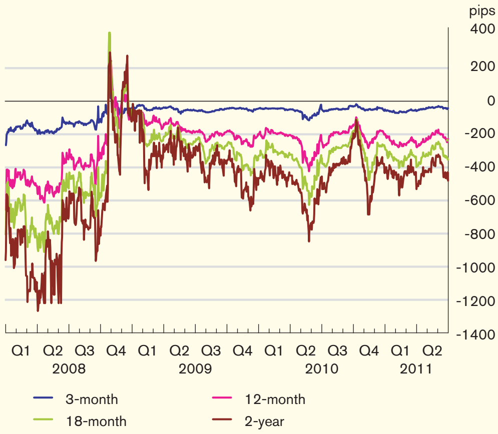
Chart 4.1
Hong Kong dollar exchange rate



Source: HKMA.

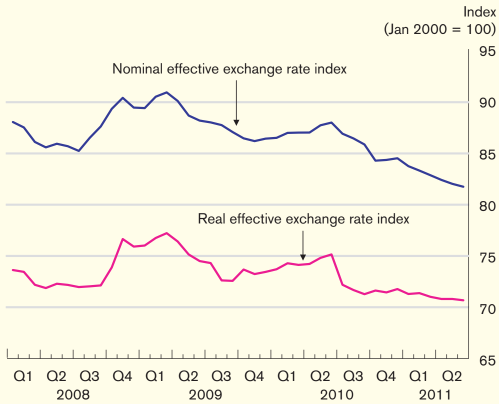
In July and August, the Hong Kong dollar spot exchange rate weakened somewhat to close at 7.7951 on 31 August. The market remained orderly in the aftermath of the US sovereign credit rating downgrade. Meanwhile, the market consensus in August suggests the spot exchange rate will strengthen slightly to around 7.78 by the end of August 2012.

Chart 4.2
Hong Kong dollar forward exchange rates



Sources: HKMA and Bloomberg.

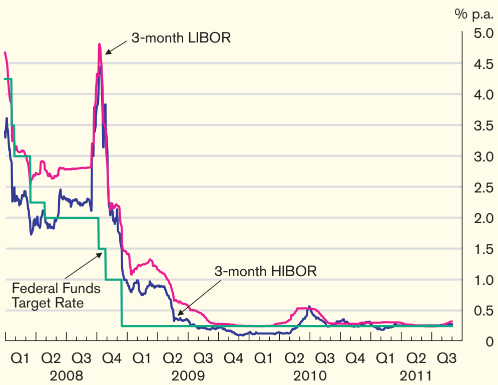
Chart 4.3
Nominal and real effective exchange rates



Note: Monthly average figures. Real effective exchange rate index is seasonally adjusted.

Sources: C&SD and HKMA staff estimates.

Chart 4.4
Interest rates of the Hong Kong dollar and US dollar



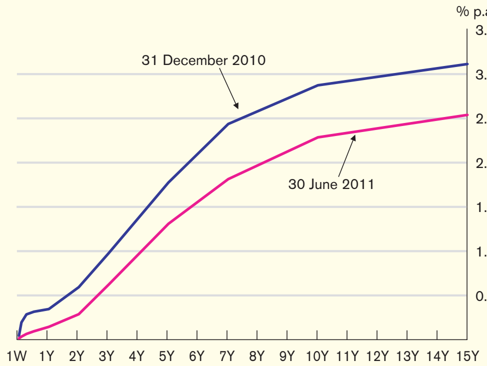
Source: CEIC.

While the second round of quantitative easing in the US led to a widening of the Hong Kong dollar forward discounts in October and early November 2010, the forward discounts narrowed shortly afterwards and fluctuated within a narrow range in the first six months of 2011 (Chart 4.2). The Hong Kong dollar forward discounts appear to bear little correlation with the forward exchange rates of either the onshore or offshore renminbi.

During the first half of 2011, the trade-weighted nominal and real effective exchange rate indices of the Hong Kong dollar declined by 3.3% and by 1.5% respectively (Chart 4.3). The decreases in the effective exchange rates occurred as the US dollar weakened amid easy monetary conditions in the US. In May, the US dollar had fallen in effective terms to a new low since early 2008. The real exchange rate index declined at a slower rate relative to the nominal index reflecting the higher headline inflation rate in Hong Kong than the average of its trading partners since early this year.

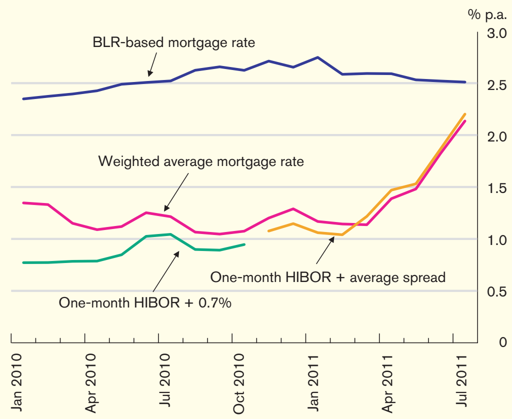
The money market was stable in a low interbank interest rate environment, with small fluctuations associated with occasional increases in IPO-related demand. The 3-month HIBOR continued to stay below 1%, underpinned by a stable US policy interest rate and ample liquidity in the local interbank market (Chart 4.4). The interest rate differentials between the Hong Kong dollar and the US dollar narrowed slightly as the LIBORs edged down amid the second round of quantitative easing in the US, thereby moving closer to their Hong Kong dollar counterparts.

Chart 4.5
Yield of Exchange Fund paper



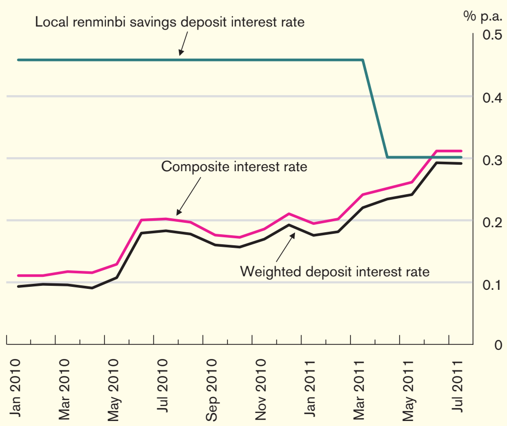
Source: HKMA.

Chart 4.6
Mortgage interest rates for newly approved loans



Source: HKMA staff estimates.

Chart 4.7
Deposit interest rates and the average cost of funds



Source: HKMA.

At the longer end, yields of longer-term Exchange Fund paper declined alongside their US dollar counterparts. During the second quarter, US government bond yields trended down as uncertainty about the global outlook grew. Compared with six months ago, the Hong Kong dollar nominal yield curve at the end of June has generally shifted down and flattened out (Chart 4.5).

At the retail level, there were indications banks raised their Hong Kong dollar lending interest rates by charging borrowers a higher spread over the HIBORs even though the interbank rates continued to be stable at low levels. In particular, banks have tightened their mortgage interest rates for new customers since February. Major banks raised their HIBOR-based mortgage rates to around HIBOR plus 1.5 - 2.3%, compared with HIBOR plus 0.7 - 0.9% at the beginning of the year (Chart 4.6). Partly reflecting this, survey data indicate the proportion of newly approved mortgage loans priced with reference to HIBOR declined to 80% in June from 90% six months earlier. However, the best lending rate (BLR)-based mortgage interest rates were roughly stable, in line with the steady BLRs at either 5.0% or 5.25%. Overall, the weighted average interest rates for newly approved mortgage loans increased.

The Hong Kong dollar deposit interest rates offered by retail banks also increased slightly due to banks' stronger funding demand associated with credit growth. (Box 4 analyses the potential effects of rising loan-to-deposit ratios on domestic interest rates.) Because of the pick-up in deposit interest rates, the composite interest rate, which reflects the average cost of funds of banks, also rose steadily from 0.21% at the end of 2010 to 0.31% at the end of June 2011 (Chart 4.7). In contrast, banks lowered their renminbi deposit interest rates offered to customers in April, as the renminbi clearing bank in Hong Kong cut the renminbi interest rate it paid to other banks from 0.865% to 0.629%. The lowering of the local renminbi interest rates followed immediately a similar action by the PBoC, which lowered the offshore renminbi clearing interest rate by 27 basis points to 0.72% on 1 April, matching the interest rate paid on excess reserves in Mainland China.

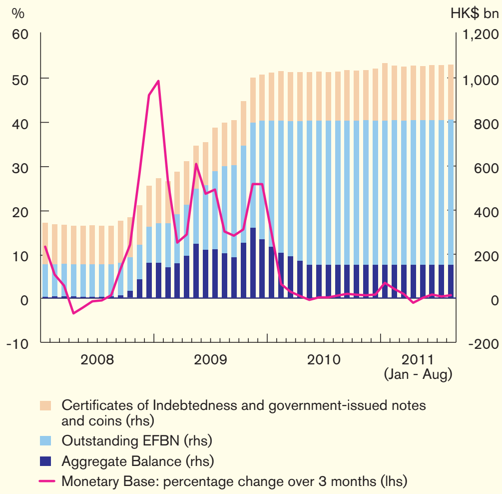
The latest data indicate the HIBORs remained at low levels, partly reflecting the US Fed's signal to keep the policy interest rate at 0 - 0.25% through mid-2013. Longer-term yields of Exchange Fund paper declined alongside those of the US government bonds. The consensus forecasts in August 2011 also project little change in the three-month HIBOR over the next 12 months. Hong Kong dollar lending and deposit interest rates will continue to be affected by changes in the supply of deposits and demand for loans in the banking system. Upward pressure on these interest rates is likely to persist in the near future.

4.2 Money and credit

During the first half of 2011, the Monetary Base was little changed, with small fluctuations due to seasonal demand for banknotes. The Aggregate Balance was stable at around HK$148.6 billion, accounting for about 15% of the Monetary Base (Chart 4.8).

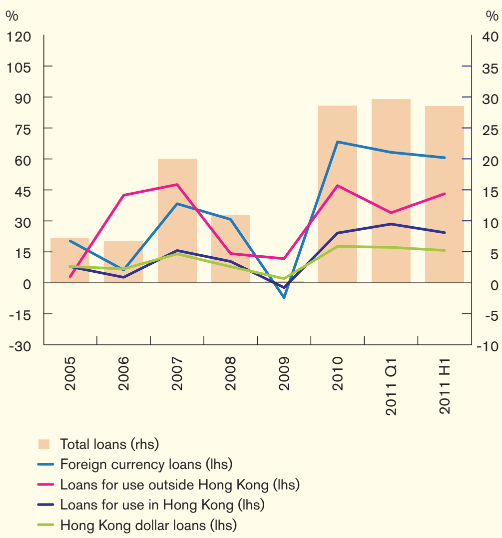
Continuing the strong growth momentum in 2010, total loans and advances grew at a brisk pace during the first half of 2011 (Chart 4.9). On an annualised basis, total loans grew by 29.6% in the first quarter of 2011 and by a slightly slower pace of 28.5% in the first six months. Fast credit growth was supported by a number of factors, including robust economic growth, low interest rates, a buoyant property market, strong Mainland-related loan demand and occasional funding needs associated with IPOs. Strong Mainland-related credit demand was evidenced by rapid increases in foreign currency lending and loans for use outside Hong Kong, which expanded much faster than Hong Kong dollar lending and loans for use in Hong Kong.

Chart 4.8
Monetary Base components



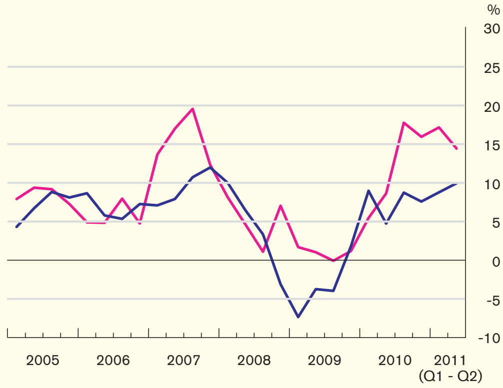
Source: HKMA.

Chart 4.9
Loan growth



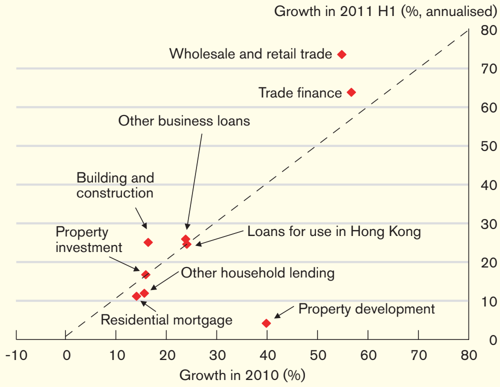
Note: Growth rates in 2011 are annualised.
Source: HKMA.

Chart 4.10
Nominal GDP and loans for use in Hong Kong (local currency only)



Sources: HKMA and C&SD.

Chart 4.11
Loans for use in Hong Kong by sector



Note: Other business loans exclude trade finance. Other household lending excludes residential mortgages.

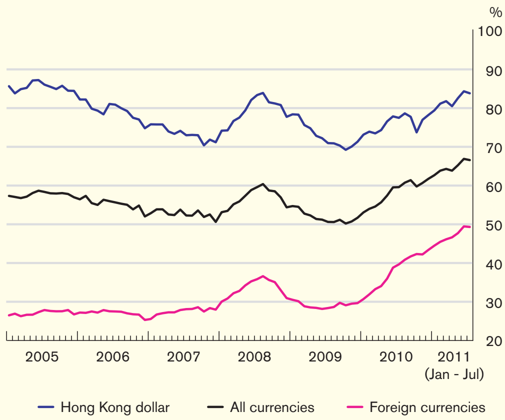
Source: HKMA.

Loans for use in Hong Kong denominated in the local currency continued to grow faster than nominal GDP in the first half of 2011, with the associated loan-to-GDP ratio rising to a record high level (Chart 4.10). Analysed by economic use, the expansion in loans for use in Hong Kong (including all currencies) were broad-based, with property-related loans, trade finance and loans to wholesale and retail trade being the major contributors. As banks gradually raised the proportion of business lending in their domestic loan portfolios, credit growth in the corporate sector generally increased while that in the household sector slowed (Chart 4.11). Compared with 2010, growth in residential mortgage lending declined, but loan growth for building, construction and property investment remained strong. Trade finance continued to increase markedly, partly driven by Mainland-related business. Growth in loans to wholesale and retail trade also accelerated, benefitting from vibrant retail sales due to strong local consumption demand and tourist spending.

According to the enhanced HKMA Opinion Survey of Credit Condition Outlook in March 2011, banks remained optimistic about the loan demand in the second quarter.[18] The majority of the surveyed AIs reported that loan demand was expected to increase in sectors such as trade finance, lending to non-bank Mainland entities and wholesale and retail trade, but the demand for residential mortgage lending was projected to be somewhat lower. In addition, AIs expected liquidity conditions would be an increasingly important factor in their review of credit loans and facilities, as the cost of funding was expected to be somewhat higher. However, survey data in June indicate growth in credit demand was expected to weaken in the third quarter, with the proportion of the surveyed AIs expecting loan demand to "increase somewhat or considerably" declining to 38% in June from 62% in March.

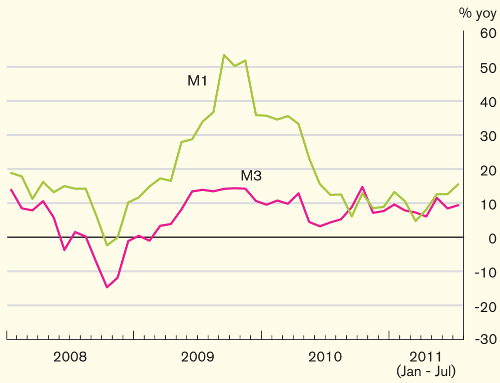
18 As indicated by an increase in the net respondents which refer to the percentage of respondents expecting loan demand to increase minus the percentage expecting loan demand to decline.

Chart 4.12
Loan-to-deposit ratios



Source: HKMA.

Chart 4.13
Year-on-year growth in Hong Kong dollar monetary aggregates

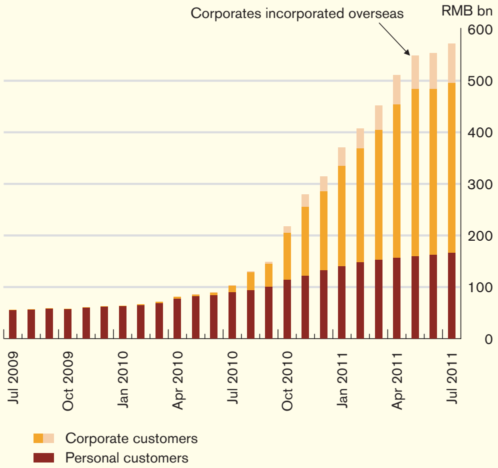


Note: Hong Kong dollar M1 is seasonally adjusted.
Source: HKMA.

In view of strong credit growth, the HKMA issued a circular on 11 April requiring banks to reassess their business plans and funding strategies for the rest of 2011, and introduced a fourth round of prudential measures for residential mortgage loans on 10 June. In a crisis-prone environment of global excess liquidity and heightening domestic overheating pressures, the rapid pace of credit growth raised concerns about the potential stress on banks' liquidity positions and credit risk controls. For example, both the Hong Kong dollar and foreign currency loan-to-deposit ratios rose notably over the past 18 months (Chart 4.12). It is therefore important that banks' business and funding plans remain prudent. The additional measures to induce stricter underwriting standards for mortgage loans, together with the introduction of positive mortgage data sharing, should help safeguard banking stability in case of adverse property market developments (see also Section 4.5).

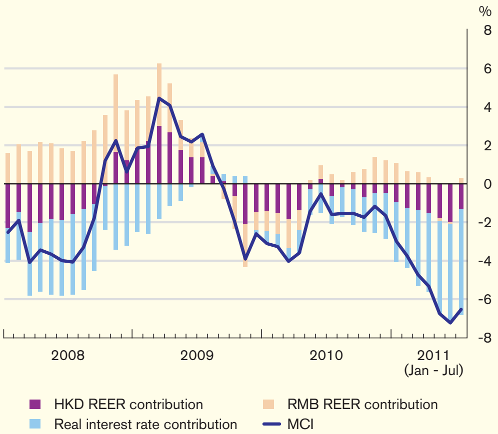
During the first half of 2011, Hong Kong dollar monetary aggregates expanded at a slower pace than loans, with year-on-year growth in M3 and the seasonally adjusted M1 averaging 8.4% and 10.2% respectively (Chart 4.13). Analysed by the asset-side counterpart of Hong Kong dollar M3, growth in broad money was mainly driven by an increase in domestic credit.

Chart 4.14
Renminbi deposits in Hong Kong



Source: HKMA.

Chart 4.15
Monetary Conditions Index



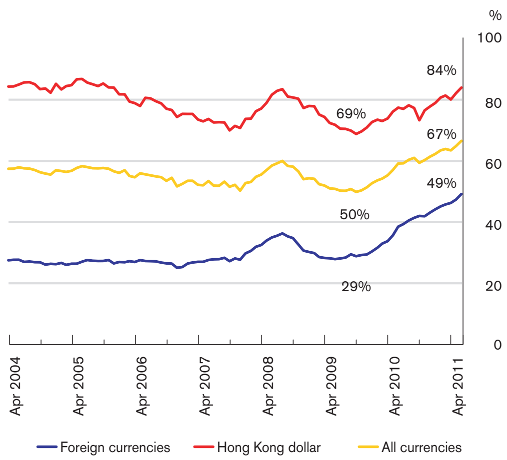
Note: MCI is a weighted sum of the real interest rate and the four-quarter changes in the Hong Kong dollar and renminbi real effective exchange rates.
Source: HKMA staff estimates.

In line with the pattern of loan growth, Hong Kong dollar deposits increased at a much slower rate than foreign currency deposits in the first half of the year. Apart from credit growth, the surge in renminbi deposits in Hong Kong was another crucial factor behind the fast growth in foreign currency deposits. Renminbi deposits rose from RMB314.9 billion at the end of December 2010 to RMB553.6 billion at the end of June 2011, driven by a net increase in renminbi receipts by corporate customers through cross-border trade settlement (Chart 4.14). Renminbi trade settlement conducted through Hong Kong banks reached around RMB800 billion in the first half of 2011, more than doubling the RMB370 billion in 2010. In terms of the size of bilateral renminbi flows associated with cross-border trade settlement, inward remittances from the Mainland to Hong Kong were larger than outward remittances from Hong Kong to the Mainland, but the pattern has become more balanced in recent months. In the first half of 2011, the ratio of inward to outward remittances was 1.5, compared with 3.2 in the second half of 2010.

Monetary conditions continued to be expansionary in the first half of 2011, as indicated by the declining Monetary Conditions Index (MCI) (Chart 4.15). The decrease in the MCI was caused by a softening of Hong Kong dollar REER and a lower real interest rate resulting from higher domestic inflation.

Box 4
Effects of the loan-to-deposit ratio of the Hong Kong banking sector on domestic interest rates

Chart B4.1
Loan-to-deposit ratio of all AIs

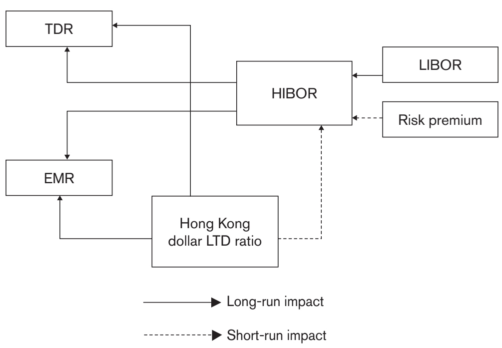


Source: HKMA.

The loan-to-deposit (LTD) ratio of the Hong Kong banking sector has risen significantly in recent quarters, with the all-currency LTD ratio rising from 50% in October 2009 to 67% in June 2011. The rise has been particularly strong in the foreign-currency component, which increased from 29% to 49%, reflecting largely strong demand for US dollar loans. The Hong Kong dollar LTD ratio also rose, albeit at a less rapid pace, from 69% to 84% during the same period (Chart B4.1).

The recent rise in the LTD ratios reflected a change in domestic liquidity conditions, from previously an overly abundant level to a more normal level. The impact on the different types of domestic interest rates varied significantly. While HIBORs remained soft and followed broadly their US counterparts, there were upward pressures on Hong Kong dollar time deposit rates, reflecting keener competition for retail funding among banks. Banks also raised their mortgage rates by charging higher spreads for HIBOR-based plans and promoting more actively their BLR-based mortgages. Against this background, this box investigates the potential effect of a higher Hong Kong dollar LTD ratio on different domestic interest rates, including HIBORs, the weighted time deposit rate (TDR) and effective mortgage rates (EMR).[19]

Chart B4.2
Main determinants of domestic interest rates



Source: HKMA.

Under the Linked Exchange Rate System (LERS), HIBORs should closely track their US counterparts (LIBORs) in the long term. Short-term deviations between HIBORs and LIBORs reflect the risk premium (in particular, the exchange rate risk) of the Hong Kong dollar over the US dollar, and domestic liquidity conditions. For TDR and EMR, while their values are in part determined by US interest rates through their impact on HIBORs, local market conditions, including liquidity and loan demand, also play significant roles. Determinants of domestic interest rates are illustrated in Chart B4.2. Empirical

[19] In this study, we examine the impact of the Hong Kong dollar LTD ratio on the effective approval rates for BLR-based mortgages, but not the HIBOR-based rate, as a sufficiently long data series is only available for the former. However, the estimation results should also be applicable for HIBOR-based EMR.

Table B4.A
The models for HIBORs, TDR and EMR and empirical results

Variables	Main determinants
HIBORs (including overnight, 1-month, 3-month and 12-month HIBORs)[(1) & (2)]	i. **LIBORs** are estimated to have both long- and short-run impacts on HIBORs with the same maturity. A long-run relationship is found that HIBORs tend to converge to LIBORs. In the short run, a 1% increase in LIBORs would be followed by a rise in HIBORs by less than 1%. ii. **Hong Kong dollar LTD ratio** is estimated to affect HIBORs positively and non-linearly in the short term, with an increasingly larger effect when the ratio is initially at a higher region. The effect is statistically significant only when the ratio exceeds 90%. Any effect arising from the ratio is found to be transitory.
Time deposit rate (TDR) (Represented by weighted time deposit rate)	i. **3-month HIBOR** is found to have positive long- and short-run impacts on TDR. A 100 basis-point rise in the HIBOR, arising either from changes in the LIBOR or risk premium, would increase TDR by 36 basis points in the short run and by 76 basis points in the long run. ii. **HKD LTD** ratio is estimated to have a positive long-run relationship with TDR.
Effective BLR-based mortgage rate (EMR)	i. **3-month HIBOR** is estimated to have long- and short-run effects on EMR. A rise in the HIBOR by 100 basis points would lead EMR to increase by 78 basis points in the long run and by 9 basis points in the short run. ii. **HKD LTD** ratio is found to be a significant long-run determinant of EMR, with a higher LTD ratio being associated with a higher EMR. iii. **Property market sentiment**, measured by property prices in the logarithm form, is found to be a long-run factor determining EMR. Higher property prices would exert upward pressures on EMR.

Notes:
(1) For modelling the overnight HIBOR, the Effective Federal Funds Rate is used instead of overnight LIBOR, as a longer time series is available for the former.
(2) A dummy variable, AFC, defined as one for the period September 1997 to September 1998 and zero otherwise, is also included in the models to control for the volatile movement of HIBORs during the Asian financial crisis.
Source: HKMA staff estimates.

models are specified to examine the determinants of local interest rates. The estimation results are presented in Table B4.A. The models are estimated using the Engle-Granger method based on monthly data for the period August 1996 to March 2011. The empirical results generally indicate that tighter liquidity conditions, measured by a higher Hong Kong dollar LTD ratio, will exert upward pressure on local interest rates, but the impact will differ across the interest rates:

1. Specifically, the impact on HIBORs is estimated to be tangible only when the Hong Kong dollar LTD ratio is already in the region of over 90%.[20] With this pre-condition, a rise in the ratio will generate a transitory effect on HIBORs, which in general lasts for less than six months. In other words, HIBORs will initially rise in response to an increase in the ratio, even when there is no movement in their US counterparts, but the increase will reverse with HIBORs returning close to their original levels.[21] In addition, the impact is estimated to be non-linear with an increasingly larger effect when the LTD ratio is initially in a higher region.

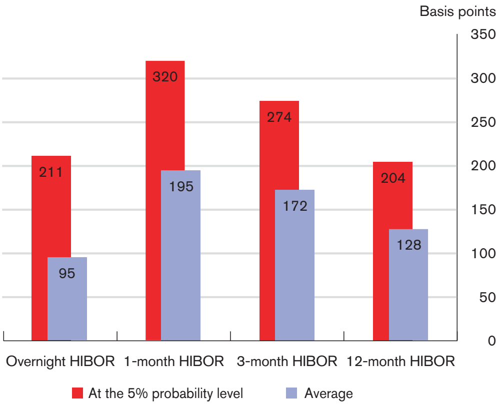
2. Unlike HIBORs, the TDR and EMR will respond to tighter domestic liquidity at all levels of the ratio, and the impact is estimated to be sustainable, reflecting the relatively less tight relationship between domestic retail deposit and lending rates and their US counterparts.

To gauge how a tightening of domestic liquidity conditions will affect local interest rates, the impact of an increase in the Hong Kong dollar LTD ratio by 10 percentage points on HIBORs, TDR and EMR is

[20] In other words, when there is plenty of liquidity, with the Hong Kong dollar LTD ratio at below 90%, an increase in the ratio would not have a tangible effect on the interbank rates. It should be stressed that the 90% threshold of the Hong Kong dollar LTD ratio for HIBORs to start responding to any further tightness of liquidity reflects the fact that its impact only then becomes tangible. It simply suggests that if there is an abundance of liquidity, a move to a less liquid situation would not have much effect on HIBORs, which track closely the interbank rates of the US dollar. The finding should not be interpreted as indicating a Hong Kong dollar LTD ratio of over 90% is alarming.

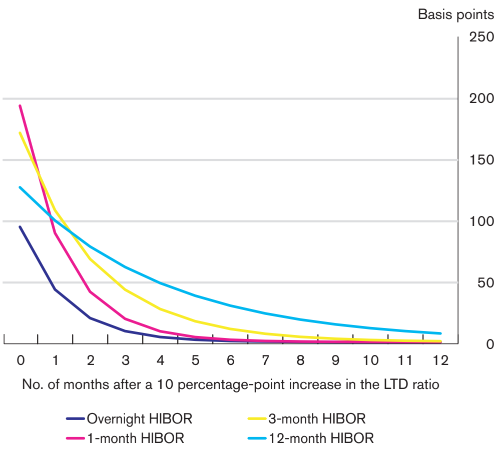
[21] The time the rates would take to reverse back differs by their maturities.

Chart B4.3
Estimated short-run impact of a 10 percentage-point increase in Hong Kong dollar LTD ratio on HIBORs (assuming an initial ratio = 90%)



Source: HKMA staff estimates.

Chart B4.4
Estimated long-run impact of a 10 percentage-point increase in Hong Kong dollar LTD ratio on HIBORs (assuming an initial ratio = 90%)



Source: HKMA staff estimates.

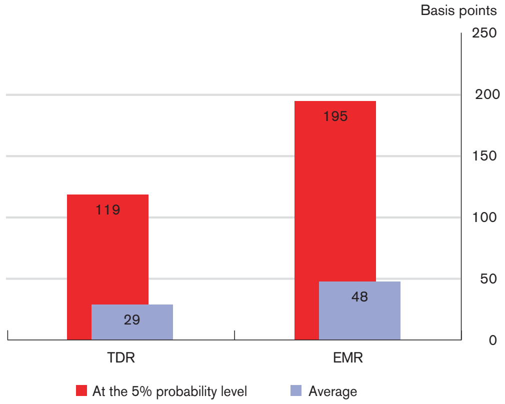
examined using the estimated models. This analysis assumes an initial value of the Hong Kong dollar LTD ratio at 90%. This initial value is selected because (a) our estimation result shows there will be apparent upward pressure on HIBORs when the LTD ratio exceeds 90%, and (b) the chance for the ratio to reach 90% in the medium term is not insignificant given that it currently stays at 84%. The assessment results are summarised as follows:

1. The estimated expected impact on HIBORs and the one-sided 95% confidence level of the estimates are presented in Chart B4.3. The results indicate the expected short-term impact on interbank interest rates ranges from a 95 basis-point rise in the overnight HIBOR to a 195 basis-point increase in the 1-month HIBOR.

2. The one-sided 95% confidence level of the estimates indicates there is a material chance the impact will be significantly larger than the expected estimates. For instance, the short-term impact on the 1-month HIBOR at a 5% likelihood level will be a rise of 320 basis points.

Nevertheless, any effect on HIBORs will only be transitory, as the LERS will bring the HIBORs back to their long-run equilibrium levels with their US counterparts (Chart B4.4). For illustration, when the Hong Kong dollar LTD ratio increases from 90% to 100%, the 1-month HIBOR will rise by 195 basis points in the same month, but will gradually soften back to the original level in around six months.

Chart B4.5
Estimated permanent impact of a 10 percentage-point increase in Hong Kong dollar LTD ratio on TDR and EMR



Sources: HKMA staff estimates.

For TDR and EMR, the permanent expected impacts are estimated to be 29 and 48 basis points respectively (Chart B4.5). In an extreme scenario, there will be an increase of TDR and EMR by 119 and 195 basis points respectively. Therefore, the latent interest rate risks should not be dismissed lightly.

In conclusion, the empirical results generally suggest that a further significant tightening of local liquidity conditions could lead to apparent upward pressure on domestic interest rates. While the effects on HIBORs are estimated to be transitory under the LERS, the impact on time deposit rates and mortgage rates is found to be permanent. Therefore, even if US interest rates stay at their unusually low levels for an extended period, borrowers and banks should assess the implications of a sudden change in local liquidity conditions for their interest rate risks.

Capital flows

Net fund flow pressures have remained subdued. The demand for the Hong Kong dollar weakened in the first quarter reflecting some equity-related outflows, but showed more fluctuations in the second quarter in the face of a volatile external environment. With heightened uncertainties about the global economic environment and financial conditions, fund flows will likely remain volatile for the remainder of 2011.

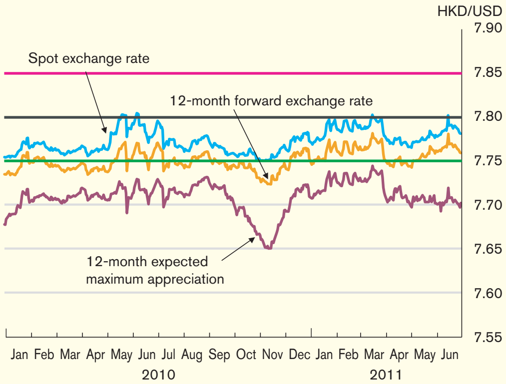
4.3 Capital flows

Demand for Hong Kong dollar assets

The demand for the Hong Kong dollar weakened in the first quarter, as shown by various price indicators. First, the Hong Kong dollar spot exchange rate against the US dollar softened from 7.7715 on 3 January to 7.7818 on 31 March. Secondly, while the Hong Kong dollar forward discounts traded within a narrow range during the quarter, they were much narrower than the discounts seen in October and early November 2010 when the market was expecting further quantitative easing in the US. Thirdly, the expected rate of maximum appreciation calculated based on currency option prices also revealed a shift of market sentiment towards a weaker Hong Kong dollar (Chart 4.16). However, the Hong Kong dollar selling pressures were mild as the weak-side Convertibility Undertaking was not triggered and the Hong Kong dollar spot exchange rate seldom softened beyond the middle of the Convertibility Zone.

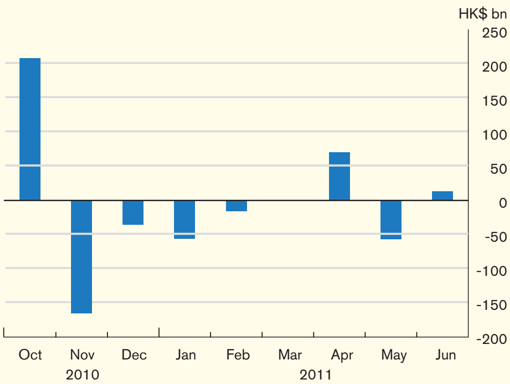
The weaker demand for the Hong Kong dollar was also reflected in the changes in the net Hong Kong dollar liabilities of the banking system. Despite rapid loan growth, Hong Kong dollar deposits contracted slightly by about HK$10 billion, or 0.3%, in the first quarter. The net foreign currency assets of the AIs also declined, continuing the downward trends in late 2010 (Chart 4.17).[22] The Hong Kong dollar selling pressures

Chart 4.16
Exchange rates and expected maximum appreciation of the Hong Kong dollar based on currency option prices



Sources: Bloomberg, JP Morgan and HKMA staff estimates.

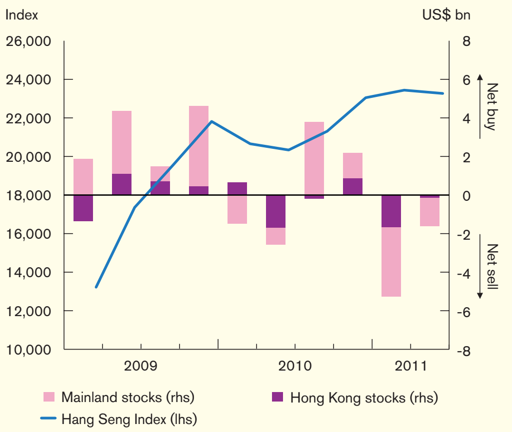
Chart 4.17
Changes in the net foreign currency assets of the AIs



Note: A positive value indicates inflows.
Source: HKMA.

[22] 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.

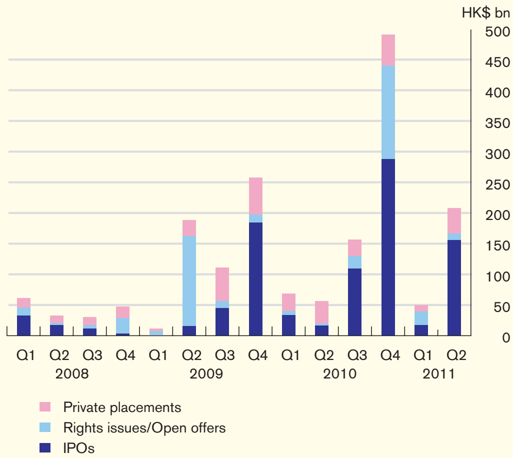
Chart 4.18
Market survey of equity-related flows



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

Sources: CEIC and EPFR Global.

Chart 4.19
Equity funds raised in Hong Kong



Note: Figures exclude warrants exercised, consideration issues and share option schemes.

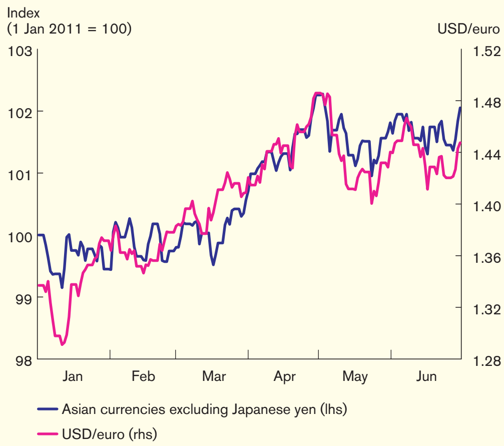
Source: Hong Kong Exchanges and Clearing Limited.

appeared to have diminished towards the end of March, however, as the fall in the net foreign currency assets tapered off.

A repatriation of equity-related funds and reduced equity fund-raising activities might partly explain the weaker demand for the Hong Kong dollar in the first quarter. In late 2010 and early 2011, investors were increasingly concerned about rising inflation and the prospective policy tightening in emerging market economies, and the social unrest in the Middle East and North Africa region. At about the same time, growth prospects of some major advanced economies improved due to a series of positive data releases. As a result of the shift in the global outlook, equity-related inflows to the emerging market economies reversed. Against this backdrop, profit taking and asset reallocation prompted some investors to repatriate funds from the local stock market during the first quarter (Chart 4.18). Reduced equity fund-raising activities were another possible factor behind the weaker demand for the Hong Kong dollar. The amount of capital raised in the local equity market declined markedly in the first quarter compared with the previous two (Chart 4.19).

During the second quarter, the demand for the Hong Kong dollar showed more fluctuations, with some buying pressure in April, but selling pressure in May and June. For the quarter as a whole, the Hong Kong dollar spot exchange rate was little changed, closing at 7.7825 on 30 June compared with 7.7817 on 1 April. The Hong Kong dollar forward discounts and the expected rate of maximum appreciation calculated based on currency option prices moved within a narrow range. Hong Kong dollar deposits expanded slightly by around HK$10 billion or 0.3% and the net foreign currency assets of the AIs also rose.

Chart 4.20
Exchange rates in 2011



Note: Bloomberg-JP Morgan Asia Dollar Index. A higher index value represents a general appreciation of Asian currencies excluding Japanese yen.

Source: Bloomberg.

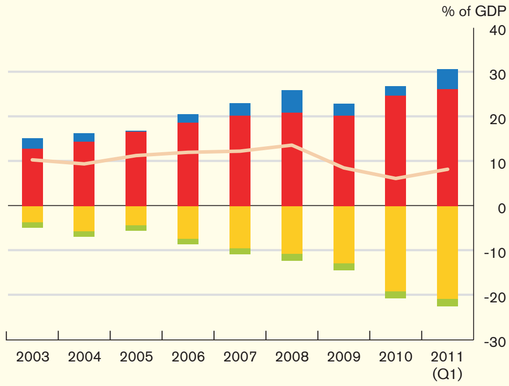
The fluctuations in the Hong Kong dollar demand were largely driven by a volatile external environment. The Hong Kong dollar spot exchange rate strengthened in April as the US dollar depreciated against other major currencies due to a downward revision of US growth prospects (Chart 4.20). The increased demand for the Hong Kong dollar was also reflected in the rise in Hong Kong dollar deposits and the net foreign currency assets of the AIs during that month. More IPO activities might also have supported the Hong Kong dollar demand (Chart 4.19). In contrast, the Hong Kong dollar spot exchange rate generally weakened in May and June, as market sentiment was undermined by renewed concerns about the European sovereign debt problems, the fiscal worries in the US and a possible hard-landing for the Mainland economy. For the two months as a whole, Hong Kong dollar deposits and the net foreign currency assets of the AIs contracted.

Data up to the end of August showed the demand for the Hong Kong dollar continued to be volatile. The downgrade of the US sovereign rating and the subsequent plunge in the stock markets across the globe weighed on investor sentiment. The Hong Kong dollar spot exchange rate weakened as a result, closing at 7.7951 on 31 August.

Balance of Payments and cross-border capital flows

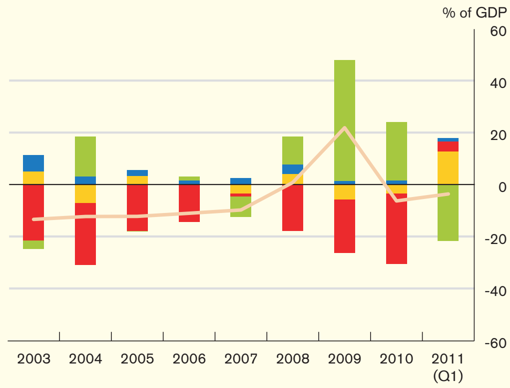
The latest Balance of Payments statistics showed a continued expansion in reserve assets in the first quarter. Driven by an increase in Certificates of Indebtedness and incomes from foreign currency assets, reserve assets rose by HK$18.7 billion in 2011 Q1. In terms of GDP, the increase in reserve assets was similar to that in 2010, at 4.1%. This is in contrast to an average of 24.8% in 2008 and 2009 when exceptionally strong inflows prompted the HKMA to buy US dollars against Hong Kong dollars in the foreign exchange market, resulting in a surge in reserve assets.

Chart 4.21
Current account surplus



Source: C&SD.

Chart 4.22
Cross-border capital flows



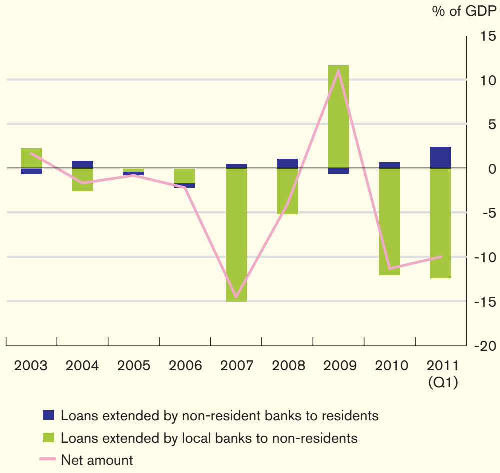
Note: A positive value indicates inflows.
Sources: C&SD.

After narrowing in 2009 and 2010, the current account surplus widened to 9.0% of GDP, or HK$40.6 billion, in 2011 Q1 (Chart 4.21). This improvement was due to a widening of the service trade surplus and an expansion in factor income, which exceeded an increase in the merchandise trade deficit. The larger surplus in service trade was supported by financial and travel services. On the other hand, the merchandise trade deficit deteriorated because of faster growth in the nominal value of imports amid a decline in the terms of trade.

Following inflows during the global financial crisis in 2008 and 2009, net private capital outflows resumed in 2010 and 2011 Q1, yet in terms of GDP their magnitude was smaller than the average during 2003-07 (Chart 4.22).[23] The first quarter of 2011 saw a net private capital outflow of HK$15.5 billion, representing 3.4% of GDP. In terms of composition, Hong Kong recorded the net outflow because the net investment outflow relating to loans and deposits (other investment) exceeded net direct and portfolio investment inflows.

23 As Hong Kong records sizable current account surpluses over the years, it is natural for Hong Kong to have net private capital outflows if reserve assets are little changed.

Chart 4.23
Cross-border flows relating to bank loans



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

Table 4.A
Cross-border portfolio investment flows

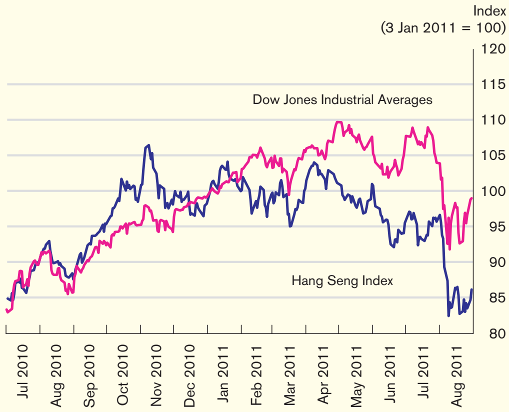
	2010				2011
(HK$ bn)	Q1	Q2	Q3	Q4	Q1
By Hong Kong residents					
Equity securities	-89.6	-145.4	-13.8	-112.5	-51.5
Debt securities	-10.6	80.3	-86.1	-140.1	60.3
By non-residents					
Equity securities	6.0	-31.5	-17.7	65.0	-2.5
Debt securities	8.7	-4.5	12.0	7.0	11.4

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

In the first quarter, the net investment outflow relating to deposits and loans was partly driven by loans extended by local banks to non-residents. Following a sharp contraction during the global financial crisis in 2009, foreign loans by Hong Kong banks rebounded sharply in 2010 and 2011 Q1, leading to fast growth in loans for use outside Hong Kong and sizable cross-border loan outflows (Chart 4.23). As evidenced by sizable increases in Hong Kong banks' external claims on Mainland customers, part of these loan outflows was Mainland-related, underpinned in part by low US dollar and Hong Kong dollar interest rates.

On the other hand, the portfolio investment account recorded a net inflow in the first quarter, mainly driven by debt portfolio investment inflows which more than offset equity portfolio investment outflows (Table 4.A). According to the Balance of Payments statistics, Hong Kong residents reduced their holdings of non-resident bonds and notes amounting to about HK$107 billion in 2011 Q1, resulting in substantial debt portfolio investment inflows. The banking sector's balance sheet data also showed that AI's holdings of floating rate notes and government debts issued outside Hong Kong declined. As investors' risk appetite improved in January and early February, some funds might have shifted from the bond markets to other higher risk investments. Partly reflecting this, long-term government bond yields in major advanced economies increased over the same period.

Chart 4.24
Stock market performance



Source: CEIC.

With Hong Kong residents buying non-resident equities and non-residents reducing their holdings of Hong Kong equities, net equity portfolio investment outflows continued in the first quarter (Table 4.A). The net equity outflow reportedly reflected profit-taking motives and portfolio reallocation decisions against the backdrop of the improved outlook for advanced economies and growing concerns about policy tightening in some of the regional economies. As such, equity funds might have shifted from the local stock market to other equity markets in the advanced economies, as suggested by survey data that indicate net selling of Hong Kong equities and Mainland-related stocks during the quarter. In this context, the US equity market outperformed the local stock market (Chart 4.24).

Outlook for capital flows

The downgrade of the US sovereign credit rating, weakened growth prospects in the advanced economies and recurrent concerns about the European sovereign debt problems have contributed to the recent turmoil in the global equity markets and more volatile global financial conditions ahead. Prospects for the emerging market economies are also clouded by overheating pressure domestically. As such, the direction and size of fund flows will be highly uncertain and depend heavily on the evolving global outlook for the rest of 2011.

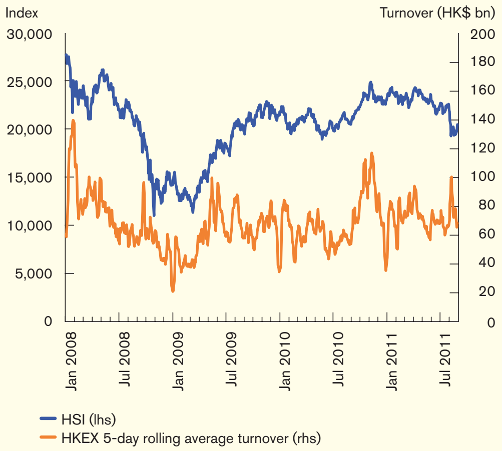
Asset markets

Asset markets have weathered a number of major shocks over the past six months. The local equity market, which was initially locked within a tight range, plunged towards the end of the review period amid a global sell off with implied volatility rising sharply. The domestic debt market continued to expand. In particular, reflecting a confluence of factors, the issuance of offshore RMB bonds increased markedly. This trend is likely to sustain with further expansion in the use of RMB for foreign direct investment into the Mainland.

The residential property market appears to be consolidating, following multiple rounds of stabilising policy measures, weaker market sentiment and uncertainties over the global outlook. The boom in the commercial and industrial property markets, however, continued with intensifying speculative activities during the review period.

4.4 Equity market

Chart 4.25
Equity index and average turnover in Hong Kong



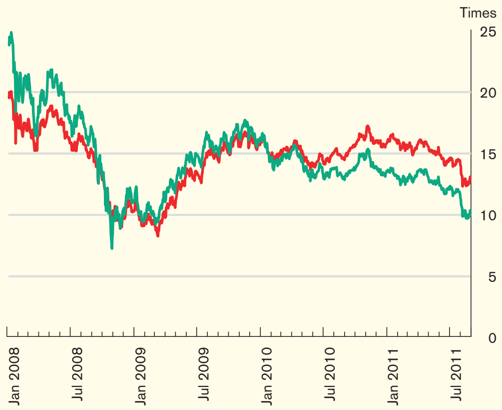
Source: Bloomberg.

The Hong Kong equity market initially demonstrated unusual resilience despite a deteriorating external environment, but finally gave in amid a global sell off during the summer months. Trading was held within a tight range following the knee-jerk reaction to the Japanese earthquake. Attention subsequently shifted to the deadlock over the US debt ceiling in summer.

The last minute deal struck between President Obama and Congressional leaders averted a sovereign default, but not the downgrade of the country's sovereign rating by Standard & Poor's. This, coupled with tightened liquidity conditions of European banks amid an intensification of the European debt crisis, triggered a global sell off in risky assets. The Hang Seng Index (HSI) plunged to its lowest level of 19,330.7 in 15 months (Chart 4.25). Although bargain hunting emerged subsequently – as reflected by a rebound in turnover – the market failed to recoup its earlier loss.

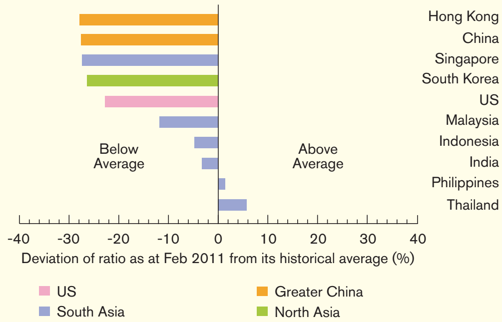
Overall, the HSI and the Hang Seng China Enterprises Index (HSCEI) (also known as H-shares index) fell by 12.2% and 13.3% respectively from March to August. Among the sub-indices, the Finance sector slumped by 18.5%, reflecting an expected weaker performance by

Chart 4.26
Cyclically adjusted price-earnings ratios of the Hang Seng Index and Hang Seng China Enterprises Index



Source: Bloomberg.

Chart 4.27
Price-earnings ratios of US and Asian markets (excluding Japan)



* China is proxied by H-shares since foreign investors cannot freely invest in Mainland A-shares. The Mainland B-shares market is not used due to its small market capitalisation and illiquidity.

Note: Historical averages are median values over sample periods that vary from one market to another, the longest started in 1980 and the shortest in 2003.

Sources: Bloomberg, CEIC and HKMA staff calculations.

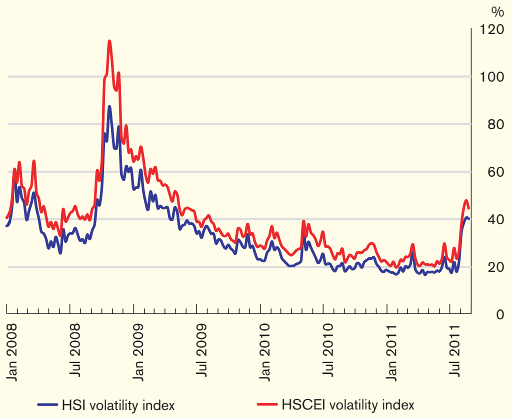
financial institutions in a global downturn. Benefiting from its safe haven nature, the Utilities sector bucked the trend, rising by 13.5%. Consistent with the expectations of a weaker macroeconomic picture, small-cap stocks (15.8% loss) were hit harder than mid-cap (13.3%) and large-cap (9.9%) stocks during the review period.

Market sentiment is likely to remain fragile in view of the increased uncertainties over the global outlook, particularly whether the US economy will slide into another recession and whether the European debt crisis will spread to core members of the euro area. Investors appeared highly cautious despite the considerably lower valuation now, with the cyclically adjusted price-earning ratios of HSI and H-share index constituent stocks declining to 13.1 and 10.3 times (Chart 4.26). At the end of August, most Asian markets registered below average price-earning ratios after the recent sharp downward adjustment. And, within the region, the Hong Kong market is among those with the lowest ratios relative to their own historical averages (Chart 4.27).

The high degree of investor cautiousness can also be seen in the option-implied volatilities of the HSI and HSCEI, which surged to a 29-month high (Chart 4.28). This is consistent with a sharp rebound in the option-implied downside risk of the market – measured in terms of a 10% fall in the HSI within the next month – to 13.0% from an average of 5.0% in the review period (Chart 4.29).

Activities remained buoyant in the primary market in the first seven months of 2011 as total funds raised increased by 16.8% from the same period last year to HK$335.6 billion (Chart 4.30). However, given a more uncertain outlook, it will be challenging for the market to sustain such strong growth in the period ahead.

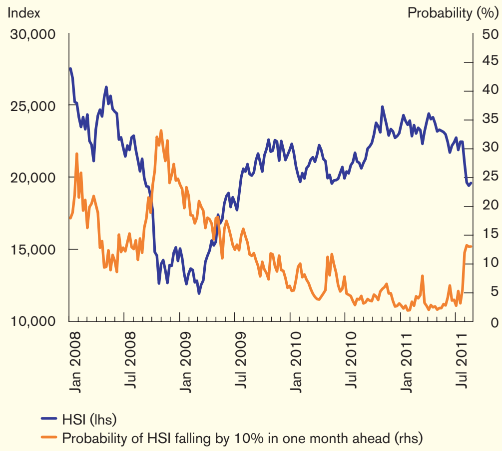
Chart 4.28
Volatility indices of the Hang Seng Index and Hang Seng China Enterprises Index



Note: HSI volatility index is calculated by Hang Seng Indexes Company Limited while HSCEI volatility index is estimated by HKMA staff.

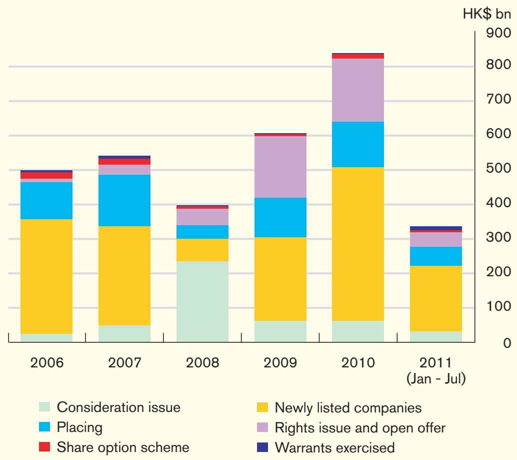
Sources: Bloomberg and HKMA staff estimates.

Chart 4.29
Option-implied probabilities of a 10% fall in the Hang Seng Index in one month ahead



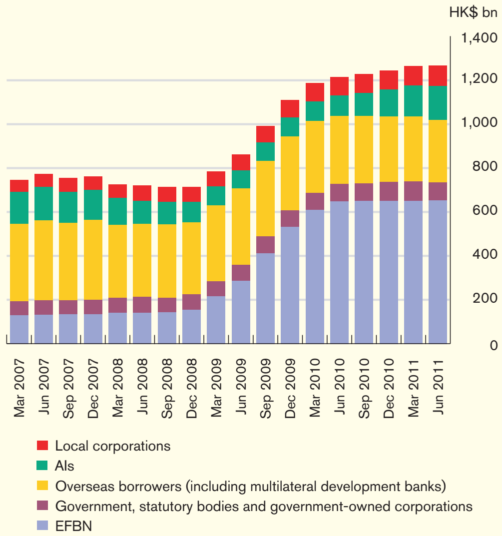
Sources: Bloomberg and HKMA staff estimates.

Chart 4.30
Equities funds raised in Hong Kong



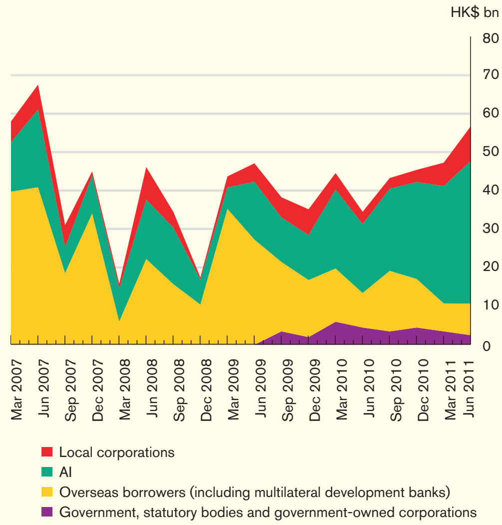
Sources: CEIC and HKMA staff calculations.

Chart 4.31
Outstanding Hong Kong dollar debt



Source: HKMA staff estimates.

Chart 4.32
New Issuance of Non-EFBN Hong Kong dollar debt



Source: HKMA staff estimates.

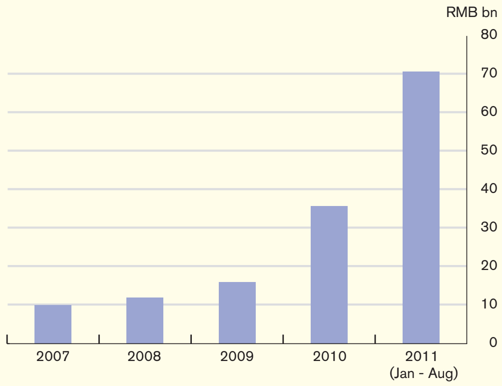
4.5 Debt market

The Hong Kong dollar debt market has grown steadily over the past year. The total outstanding amount of Hong Kong dollar debt increased 4.3% year-on-year to a record level of $1,269.7 billion at the end of June 2011, equivalent to 32.5% of Hong Kong dollar M3 or 25.2% of Hong Kong dollar denominated assets of the entire banking sector. Exchange Fund Bills and Notes (EFBN) accounted for 51.5% of the outstanding total. The remaining was attributable to AIs, local corporations and government, statutory bodies and government-owned corporations (Chart 4.31). Reflecting the decline of US Treasury yields across the spectrum, the EFBN yield curve also moved downwards.[24]

The expansion of the market was driven by new issues, which increased 4.7% year-on-year in the first half of 2011 to $1,025.7 billion. EFBN accounted for 88.9% of the new issues as the HKMA continued to raise the supply of short-term papers to meet banks' demand for liquidity management. In addition, under the Government Bond Programme, HK$6 billion worth of 2-year and 5-year bonds were issued in the first half of 2011 for institutional investors. Private-sector issuance was active, with new issues by AIs and local corporations posting a year-on-year growth of 75.8% and 101.6% respectively during the first half of 2011. Altogether they accounted for 72.9% of non-EFBN new issues (Chart 4.32).

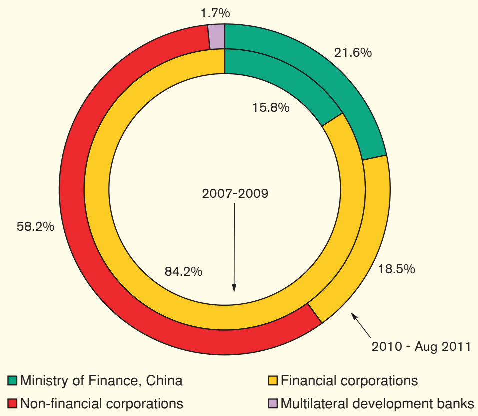
[24] See Section 4.1 for more details.

Chart 4.33
Offshore RMB bonds new issuance



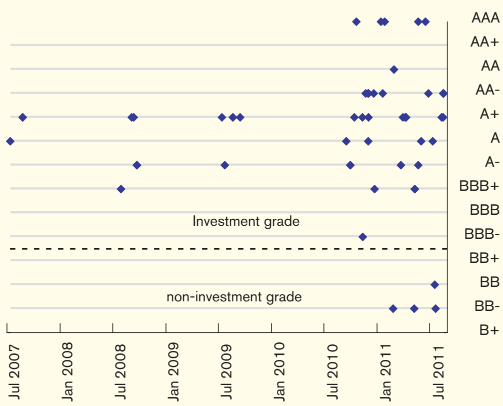
Source: HKMA staff estimates.

Chart 4.34
Offshore RMB bonds issuer types



Source: HKMA staff estimates.

Chart 4.35
Credit ratings of offshore RMB bond issues

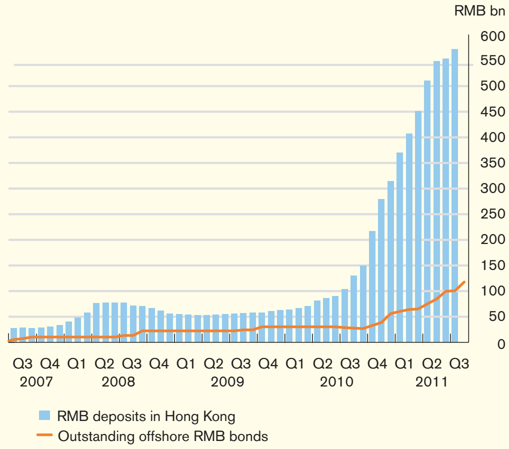


Source: Dealogic.

Alongside the Hong Kong dollar debt market, an offshore RMB bond market has been growing robustly in Hong Kong. Its RMB70.8 billion new issuance during the first eight months of 2011 almost doubled the RMB35.8 billion recorded in the whole of 2010 (Chart 4.33). Compared with earlier years, issuer types have become increasingly diversified, covering not only financial corporations and the Ministry of Finance, but also non-financial corporations and multilateral development banks (Chart 4.34). As a result, the credit ratings of rated offshore RMB bonds issued in Hong Kong, which account for over 60% of the total issue size, have become more widespread (Chart 4.35) compared with the early years when the ratings fell within a much tighter range from BBB+ to A+ (based on Standard & Poor's rating scale).[25]

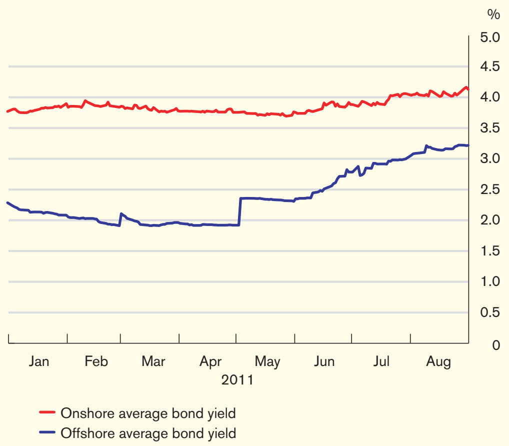
[25] It is useful to note that unrated issues are not necessarily of lower credit quality. Issuers who have high credit ratings often do not seek credit ratings for some of their issues due to cost considerations, especially for shorter-maturity issues or small tranches.

Chart 4.36
Offshore RMB bonds outstanding and RMB deposits in Hong Kong



Sources: HKMA and HKMA staff estimates.

Chart 4.37
Onshore and offshore RMB bond yields



Note: The average yields of the HSBC Offshore Renminbi Bond Index and the HSBC Asia Local Bond Index-China are used as proxies for the offshore and onshore bond funding respectively.

Source: Bloomberg.

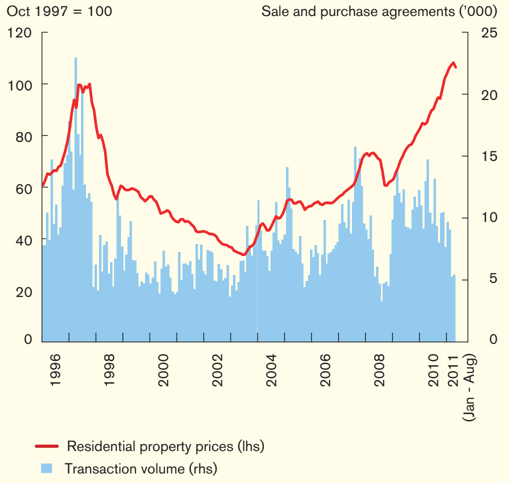
The robust growth of the offshore RMB bond market reflected a confluence of favourable factors. In particular, the rapid build-up of RMB deposits in Hong Kong provides a key driver of the demand for RMB bonds (Chart 4.36). The ongoing appreciation expectation of RMB also increased the attractiveness of RMB bonds to Hong Kong dollar based investors. On the supply side, the lower cost of funding in the offshore market offers an incentive for Mainland entities to issue offshore RMB bonds (Chart 4.37). Looking ahead, further expansion in the use of RMB for foreign direct investment into the Mainland is expected to stimulate further growth in RMB bond issuance in Hong Kong.

4.6 Property market

Residential property market

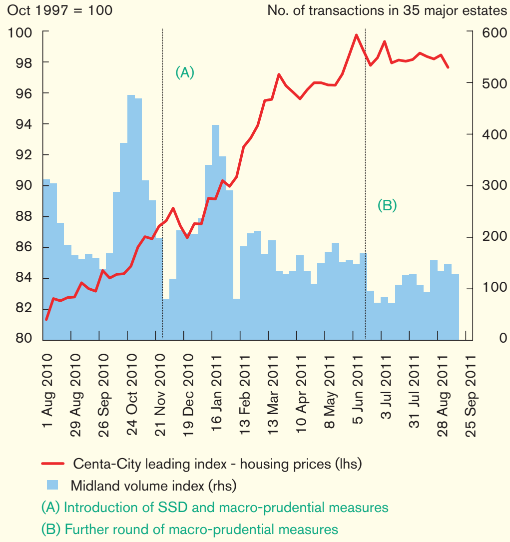
The residential property market remained relatively buoyant during the first half of 2011, but showed some signs of weakening more recently, as property investors' interest appeared to be dampened by the latest Government and HKMA housing measures in June and also by increased uncertainties over the global outlook. Residential property prices rose 14.8% during the first half, but fell 1.7% from June in July (Chart 4.38). Provisional records of major real estate agencies further suggest that residential property prices may have decreased slightly in August and early September (Chart 4.39). Meanwhile, property trading activities have slowed since last December, largely reflecting the impact of the Special Stamp Duty (SSD) and the earlier rounds of macro-prudential measures. On average, only about 9,200 sale and purchase agreements were lodged with the Land Registry each month during the first half, almost 20% lower than the monthly average in 2010. The lodging figure dropped further to 5,300 in July and to 5,400 in August. Anecdotal evidence from major real estate agents suggests that trading activities remained subdued in early September.

Chart 4.38
Residential property prices and transaction volumes



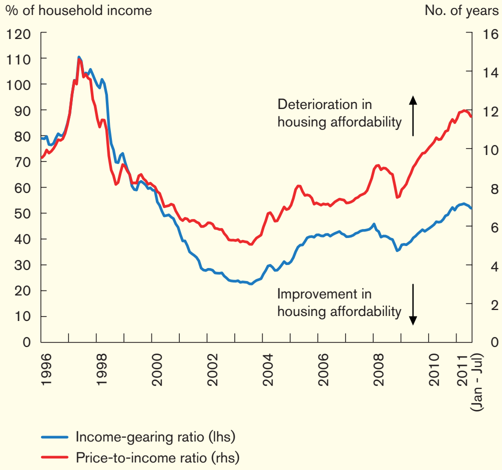
Sources: R&VD and Land Registry.

Chart 4.39
Residential property prices and transaction volumes estimated by realties



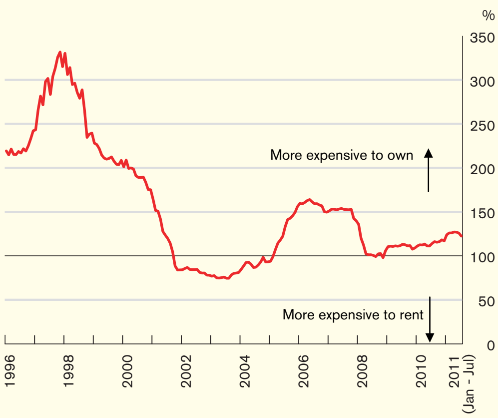
Sources: Midland Realty and Centaline Property Agency Limited.

Chart 4.40
Indicators of housing affordability



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

Chart 4.41
Buy-rent gap*



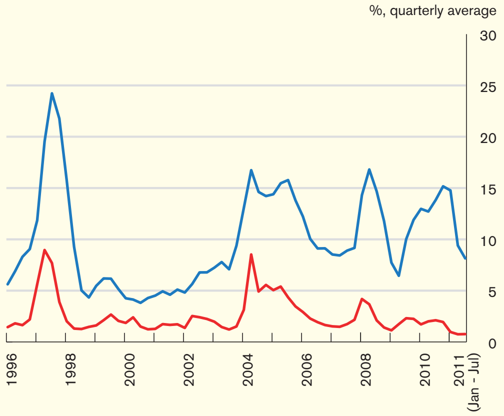
* Ratio of the cost of purchasing and maintaining a flat with that of renting it.
Sources: R&VD, C&SD and HKMA staff estimates.

Housing affordability has further deteriorated as increases in housing prices continued to outpace income growth. The HKMA's estimated income-gearing ratio (the ratio of mortgage payment for a typical 50 m² flat to the median income of households living in private housing) reached 53% in June, compared with 51% six months ago. During the same period, the housing price-to-income ratio (the ratio of the average price of a typical 50 m² flat to the median annual income of households living in private housing) rose from 11.3 to 11.9 (Chart 4.40). The corresponding income-gearing and price-to-income ratios for the luxury segment also rose.[26] Regarding tenure choice, the rise in the cost of owning a flat continued to outpace that of renting one during the first half of 2011. The buy-rent gap (the ratio of the cost of owner-occupied housing to rentals) thus picked up steadily from six months ago (Chart 4.41), although it edged down in recent months reflecting a relatively faster increase in rental costs.

Mortgage loans continued to increase at a brisk pace during the first half. At the end of June, outstanding loans rose by 16.0% from a year ago and 3.5% from the end of March. But after the introduction of tighter macro-prudential measures in early June, mortgage loan growth might have softened, as suggested by the notable decrease in new loans drawn down in July, according to the HKMA monthly residential mortgage survey. In this latest round of measures, the maximum loan-to-value (LTV) ratio was lowered to 50% for residential properties with a value of HK$10 million or above, and to 60% for those with a value between HK$7 million and HK$10 million. For cases where the mortgage payment is not supported by domestic income, the LTV cap was lowered by at least an additional 10 percentage points. The 50% ceiling on the debt servicing ratio (DSR) and the stress-testing requirements continue to apply. For net worth-based mortgages, the LTV is now capped at 40%. As an indication of the effect of the macro-prudential measures

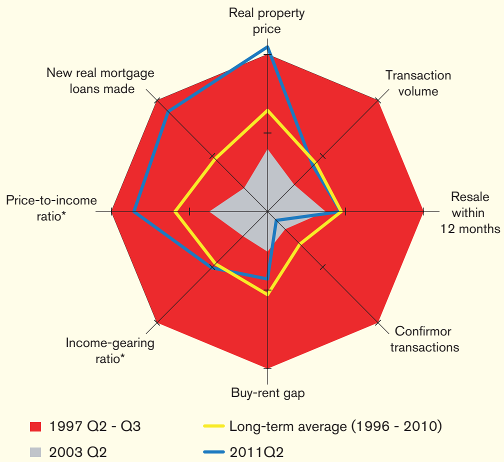
[26] The ratios for the luxury segment are calculated based on the average price of a 150 m² flat and the 95th percentile of income of households residing in private housing.

Chart 4.42
Confirmor transactions and re-sale activities with a buy-hold-and-sell period of less than 12 months



Source: Centaline Property Agency Limited.

Chart 4.43
Graphical analysis of the housing market



* Income based on median income of households residing in private housing.

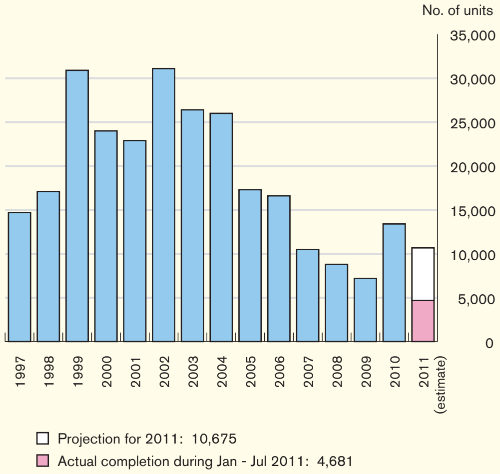
Sources: R&VD, Land Registry, C&SD, Centaline Property Agency Limited and HKMA staff estimates.

introduced thus far, the actual LTV ratio of new mortgages fell from 60.2% in 2010 to 56.1% in the first half of 2011 and 53.9% in July. In part reflecting strong loan demand from various sectors, banks have also raised the mortgage interest rates on new loans (for example, by about 110 basis points since March for HIBOR-based mortgage loans). The upward pressure on banks' lending rates is likely to continue as overall credit demand is expected to remain robust amid solid economic growth in the second half of the year.

The SSD and tighter macro-prudential measures have helped tame speculative activities in the residential property market. Confirmor transactions fell from a monthly average of 180 cases (1.6% of total secondary market transactions) in 2010 to 33 (0.6%) in July, according to the Centaline Property Agency Limited (Chart 4.42). Re-sale activities with a buy-hold-and-sell period of less than 12 months also dropped from a monthly average of 1,273 (13.7% of total secondary market transactions) to 306 (7.1%). With the SSD providing a strong deterrent, it is unlikely that confirmor transactions will show any significant pick-up in the near term.

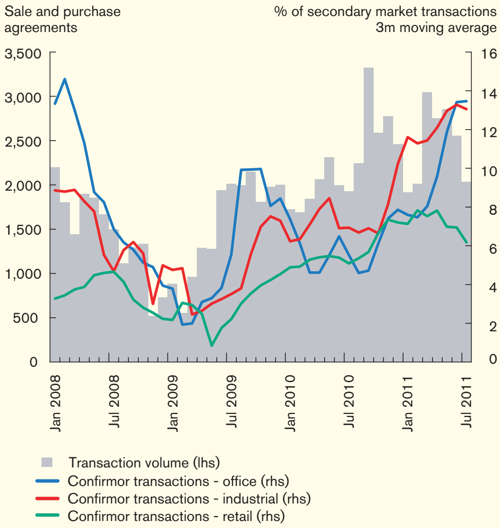
The latest property market conditions are summarised in a graphical framework covering eight housing market-related indicators. The peaks (1997 Q2 - Q3) and troughs (2003 Q2) of these indicators since 1997 and their recent developments are presented as octagons in Chart 4.43. Indicators in the top left quadrant – real property prices, new real mortgage loans made and price-income ratio were close to or have already overtaken the peak levels of 1997. Indicators to the right – transaction volume, short-term trading and confirmor transactions, however, were closer to the troughs in 2003 and the long-term averages, suggesting a relatively thin market. The carrying cost indicators – the income-gearing ratio and the buy-rent gap, were roughly in line with historical standards as high property prices were in part offset by very low interest rates.

Chart 4.44
Actual and forecast completion of new private residential units



Note: Forecast completions for the whole year of 2011 are estimates made at the beginning of the year.
Sources: Transport and Housing Bureau and R&VD.

Chart 4.45
Transaction volume and confirmor transactions



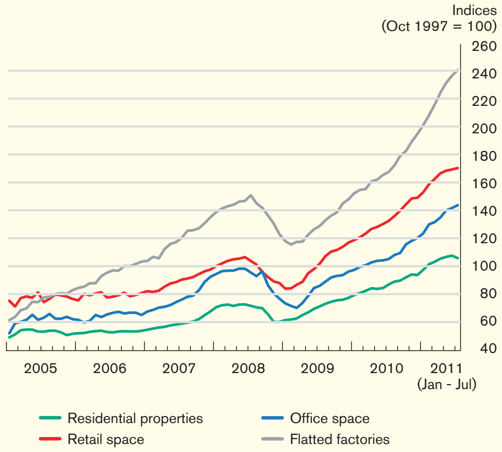
Sources: CEIC, Land Registry, Centaline Property Agency Limited and HKMA staff estimates.

The supply of new flats is expected to decrease slightly this year, but pick up gradually over the medium term. Infrequent land sales and redevelopment projects in the past few years continued to weigh on the pipeline of supply of new flats, with property developers having delivered about 4,700 units during the first seven months of the year (Chart 4.44). But over the medium term, supply is expected to pick up with the Government proactively boosting land supply by initiating land auctions and tenders to ensure a stable flow of supply. The Government has also designated more sites on the 2011/12 Application List and the Sale by Tender List, compared with 2010/11. Potential supply will likely increase further through lease modifications, land exchange and private treaty grants, particularly with the implementation of the MTR Corporation Limited's above-station projects and the Urban Renewal Authority's redevelopment plans.

Commercial and industrial property markets

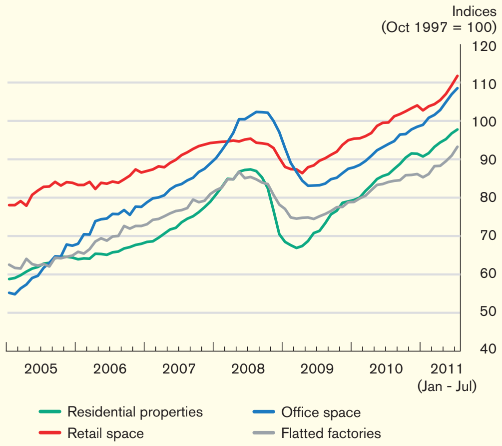
The commercial and industrial property markets continued to show upbeat developments during the first half of 2011, albeit moderating somewhat in recent months. Sale and purchase agreements of non-residential properties (mainly commercial and industrial properties) lodged with the Land Registry each month averaged 2,520 in the first half, about 12% higher than the monthly average in 2010. The lodging figure however softened in July and August (Chart 4.45). On the whole, speculative activities intensified further, with confirmor transactions rising to 14% of secondary market transactions for office space and 13% for industrial space

Chart 4.46
Price indices by property type



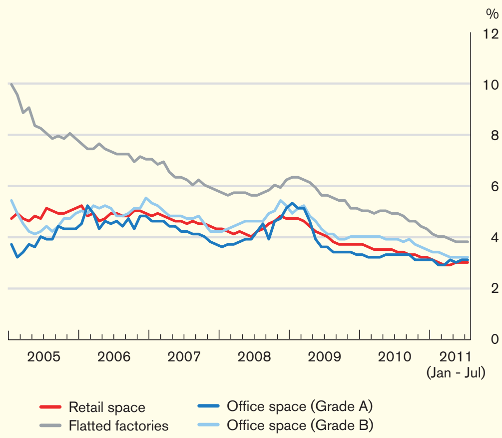
Source: R&VD.

Chart 4.47
Rental indices by property type



Source: R&VD.

Chart 4.48
Rental yields by property type



Source: R&VD.

in Q2. Prices for commercial and industrial properties also increased rapidly (Chart 4.46). In particular, prices for office, retail and factory space surged by 14 - 23% during the first seven months of the year. Rentals also picked up, but at a slower pace (Chart 4.47), pushing down rental yields for commercial and industrial properties to a low level of around 3 - 4% (Chart 4.48). In view of the buoyant market, the HKMA has extended the macro-prudential measures for mortgage lending to cover non-residential properties, reducing the ceiling on the LTV to 50%. Also, effective from June 2011, the LTV cap for net worth-based mortgages, which are a common form of financing for non-residential properties, has been lowered to 40%.

Box 3 gives a more detailed overview on the recent developments in the non-residential property market.

5. Banking sector performance

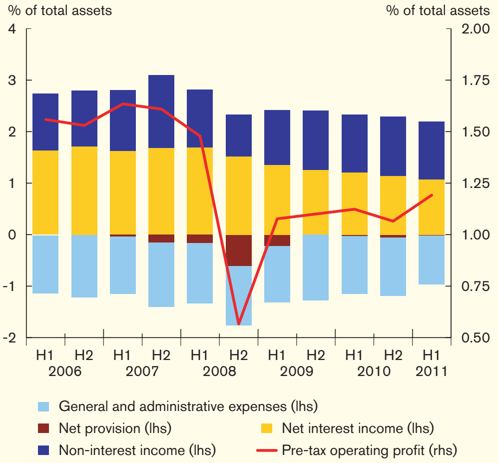
With capital positions well above international standards and sound liquidity, retail banks continued to register increased profits and a further improvement in the asset quality of their loan portfolios. The banking sector has so far been resilient to a number of external shocks, including the European sovereign debt crisis, a slowdown in the US economy and the US sovereign credit rating downgrade. However, given heightened uncertainties in the external environment and increased volatility in financial markets, continued vigilance is required about possible spillover effects of the debt crisis on the global banking system and the risk of a sudden outflow of funds. The latent credit risk of rapid loan growth over the past two years, particularly in property-related lending and Mainland exposure, needs to be closely monitored. A forward-looking approach in managing the risk and sound underwriting standards are critically important in the current environment.

5.1 Profitability and capitalisation

Profitability

The profitability of retail banks[27] improved in the first half of 2011, with the aggregate pre-tax profits growing by 22.4% compared with the second half of 2010. The return on assets also increased to 1.19% from 1.07% (Chart 5.1). The improvement was mainly due to higher fees and commission income and lower net charge for other provisions. Net interest income rose slightly as interest bearing assets grew fast enough to more than offset the effect of narrowing interest margin.

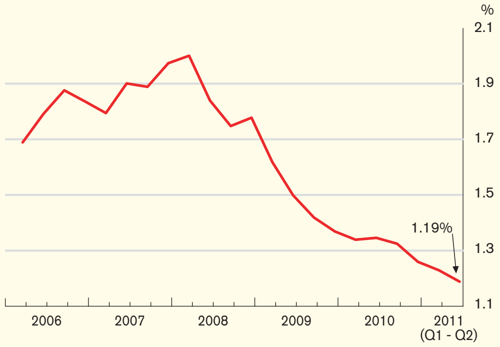
Chart 5.1
Profitability of retail banks



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

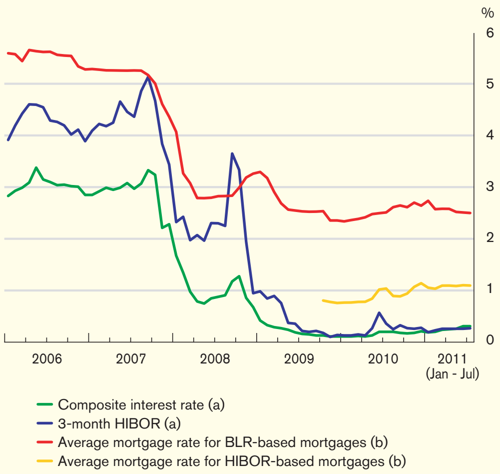
[27] Throughout this chapter, figures for the banking sector relate to Hong Kong offices only, except where otherwise stated.

Chart 5.2
Net interest margin of retail banks



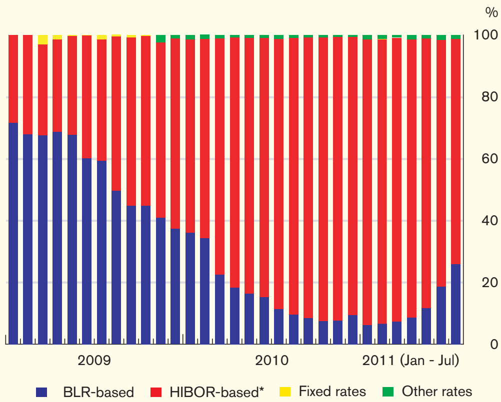
Note: Quarterly annualised figures.
Source: HKMA.

Chart 5.3
Interest rates



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

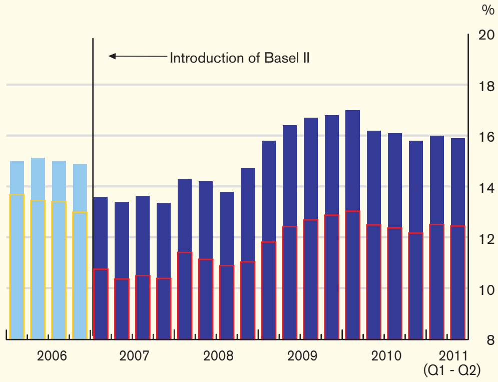
Chart 5.4
Share of newly approved mortgages by reference interest rates



* Including "Other rates" before November 2009.
Source: HKMA.

The net interest margin (NIM) continued its downward trend of recent years, falling to 1.19% in 2011 Q2, from 1.26% in 2010 Q4 (Chart 5.2). The recent move by banks to increase their HIBOR-based mortgage interest rates had a favourable impact on the NIM. However, interest margins of best lending rate-based (BLR-based) mortgages were reduced, as the composite interest rate, which reflects the average cost of funds, increased by 10 basis points in January – July 2011, while the BLR remained unchanged (Chart 5.3). The share of BLR-based mortgages in total newly approved mortgage loans increased significantly from 9.4% in December 2010 to 25.9% in July 2011 (Chart 5.4). How this will impact on the NIM is yet to be seen.

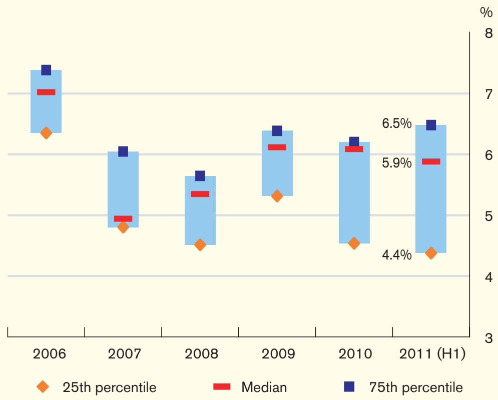
Chart 5.5
Capitalisation of locally incorporated AIs



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.

Chart 5.6
Leverage ratio of banks in Hong Kong



Notes:
1. Consolidated positions.
2. The sample contains 7 selected listed banks in Hong Kong for 2011.
3. Leverage ratio is defined as the ratio of tier-one capital to total assets.
4. A higher value indicates lower leverage.
5. For 2011, interim results are used as full-year results were not available at the time of conducting the analysis.

Sources: Bankscope and banks' annual and interim reports.

Capitalisation

Capitalisation of the banking sector remained well above international standards. The consolidated capital adequacy ratio of locally incorporated AIs edged up to 15.9% at the end of June 2011, from 15.8% at the end of 2010 (Chart 5.5), and the tier-one capital adequacy ratio (the ratio of tier-one capital to total risk-weighted assets) increased to 12.5%, from 12.2%.

The leverage ratio measured by tier-one capital to total assets, which is a supplementary measure to risk-based capital ratios, was steady during the assessment period, with a median of 5.9 % (Chart 5.6) at the end of June.

During late 2010 and the first half of this year, a number of banks successfully issued new equity to help sustain asset growth, as well as to enhance their ability to withstand external shocks and for the preparation for the new Basel III framework. More banks may do so in the near term. Such capital raising activities are subject to global equity market sentiment, which has been under pressure given heightened uncertainties in the external environment and increased volatility in financial markets. Nevertheless, the relatively strong financial position of Hong Kong banks should support their capital raising activities. In addition, according to an HKMA preliminary review[28] of the business plans submitted by banks, the pace of credit growth is expected to moderate for the remainder of 2011 after the hectic growth in the preceding year. This should reduce the need for banks to raise capital to finance their credit expansion.

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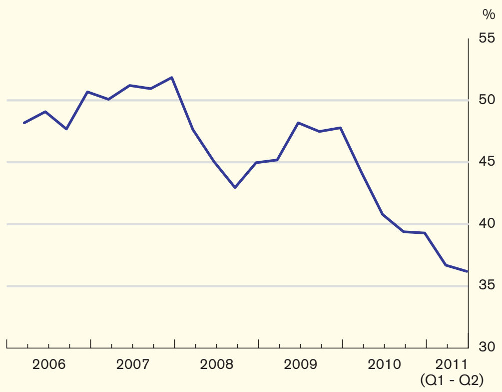
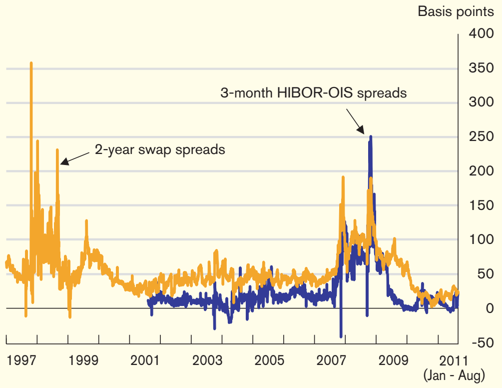
[28] For details, see "Briefing to the Legislative Council Panel on Financial Affairs: Powerpoint Presentation on 23 May 2011", which is available on the HKMA website.

Chart 5.7
Liquidity ratio of retail banks



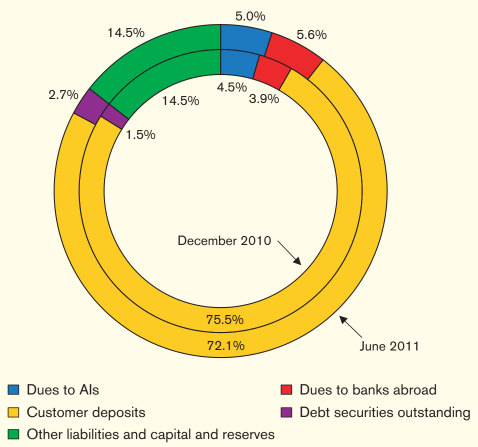
Note: Quarterly average figures.
Source: HKMA.

Chart 5.8
3-month HIBOR-OIS spreads and 2-year Hong Kong dollar swap spreads



Source: Bloomberg.

Chart 5.9
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.

5.2 Liquidity and funding

The liquidity condition of the banking system remained sound, although the average liquidity ratio fell further in the assessment period. For retail banks, the ratio decreased to 36.2% in 2011 Q2, from 39.3% in 2010 Q4 (Chart 5.7). The fall largely reflected the recent trend of banks to reallocate assets from more liquid instruments (such as interbank claims) into less liquid assets (for example, loans and advances). Nevertheless, the average liquidity ratio remained well above the regulatory minimum of 25%.

Renewed concerns about the European sovereign debt crisis, the US economic slowdown and the US sovereign credit rating downgrade by a credit rating agency, so far have had only a limited impact on domestic interbank liquidity. While the spread between the three-month HIBOR and its corresponding overnight index swap (OIS) rate[29] widened to 24 basis points by the end of August, it was still at a relatively low level compared with its historical performance (Chart 5.8). Longer-term funding liquidity remained broadly stable, with the two-year Hong Kong dollar swap spread[30] little changed at around 25 basis points.[31]

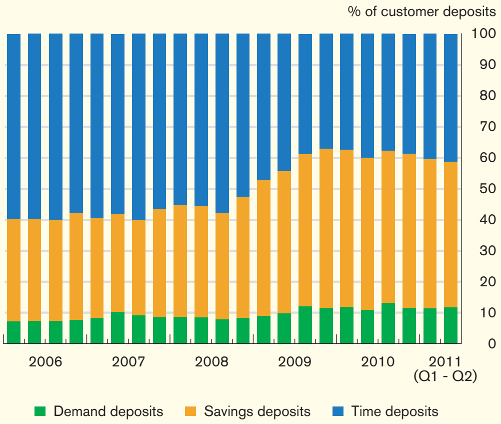
Customer deposits continued to be the primary funding source for retail banks, although their share to banks' total liabilities fell from 75.5% at the end of 2010, to 72.1% at the end of June 2011 (Chart 5.9). During the same period, there were moderate increases in the shares of other funding sources, notably the issuance of

29 An OIS is an interest rate swap in which the floating leg is linked to an index of daily overnight rates. The two parties agree to exchange at maturity, on an agreed notional amount, the difference between interest accrued at the agreed fixed rate and interest accrued at the floating index rate over the life of the swap. The fixed rate is a proxy for expected future overnight interest rates. As overnight lending generally bears lower credit and liquidity risks, the credit risk and liquidity risk premiums contained in the overnight index swap rates should be small. Therefore, the HIBOR-OIS spread generally reflects the credit and liquidity risks in the interbank market.

30 Swap spreads are differences between "fixed-for-floating" interest rate swap rates and corresponding Exchange Fund paper yields of the same maturity.

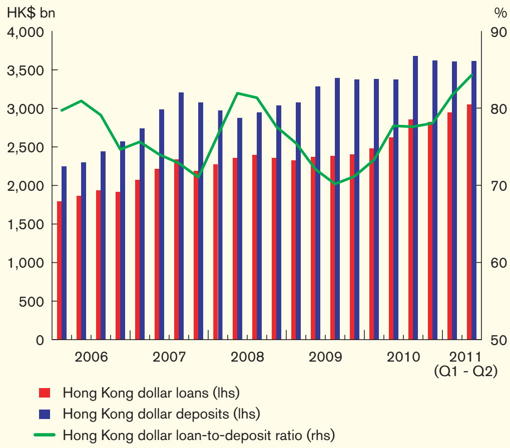
31 The determinants of variations in the Hong Kong dollar swap spreads were investigated in C. Hui and L. Lam (2008), "What drives Hong Kong dollar swap spreads: Credit or liquidity?", *HKMA Working Paper 10/2008*.

Chart 5.10
Structure of customer deposits of retail banks



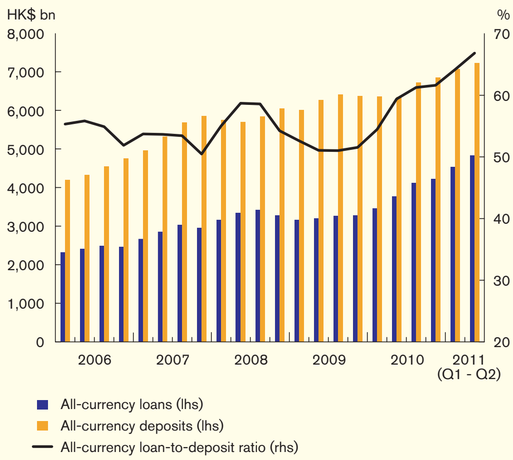
Source: HKMA.

Chart 5.11
Hong Kong dollar loan-to-deposit ratio of all AIs



Source: HKMA.

Chart 5.12
All-currency loan-to-deposit ratio of all AIs

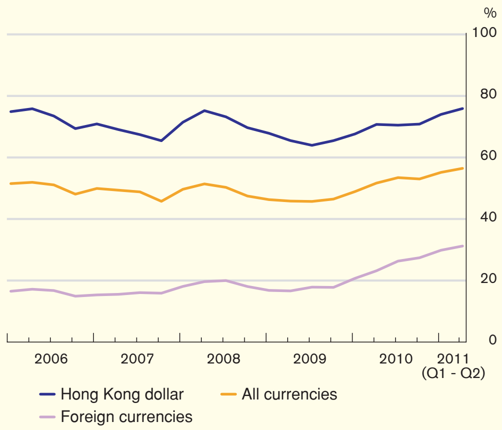


Source: HKMA.

foreign-currency debt securities. Meanwhile, the structure of customers' deposits remained steady. As banks moved to offer higher interest rates to attract longer-term deposits, the share of time deposits to total customer deposits reversed its recent downward trend, rising from 38.6% at the end of 2010 to 41.2% at the end of June 2011 (Chart 5.10). However, it remained significantly lower than the share of over 50% in 2008 and in years previous to that. This suggests the average maturity of deposits in retail banks may have remained at a relatively low level and banks' liquidity could be more affected by the impact of capital outflows.

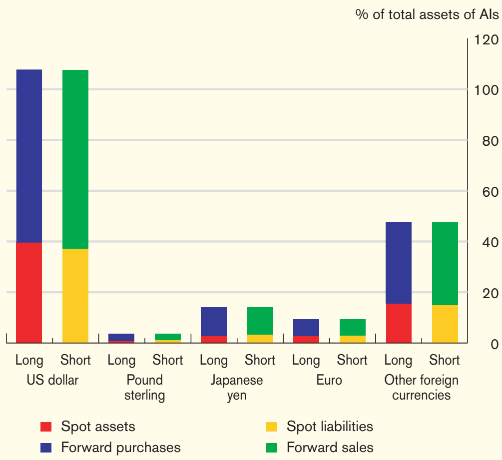
The continued rapid growth of bank loans and a slower increase in customers' deposits in the first half of 2011 resulted in a significant rise in the Hong Kong dollar loan-to-deposit ratio of all AIs by approximately six percentage points to 84.3% (Chart 5.11). The all-currency loan-to-deposit ratio increased to 66.8% at the end of June, from 61.6% at the end of 2010 (Chart 5.12). For retail banks, the ratios also rose to 75.6% and 56.2% respectively during the assessment

Chart 5.13
Loan-to-deposit ratios of retail banks



Source: HKMA.

Chart 5.14
The foreign currency positions



Note: Structural assets and liabilities, such as investment in fixed assets and premises, overseas branch capital, investments in overseas subsidiaries and related companies and loan capital, are excluded for the calculations.

Source: HKMA.

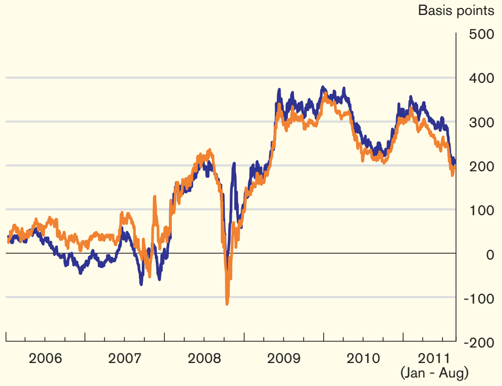
period (Chart 5.13). This has clearly indicated a change in domestic liquidity conditions, from previously an overly abundant level to a more normal level. If the recent deterioration in financial market sentiment results in a marked outflow of funds from Hong Kong, the further tightening of domestic liquidity and sharp rise in loan-to-deposit ratios could exert pressure on domestic interest rates.

Box 4 assesses the effects of a higher Hong Kong dollar loan-to-deposit ratio on HIBORs, time deposit rates and effective mortgage rates. The empirical results generally suggest that a further significant increase in the ratio could lead to apparent upward pressure on domestic interest rates. While the effects on HIBORs are estimated to be transitory under the Linked Exchange Rate System, the impact on time deposit rates and mortgage rates is found to be sustainable. Therefore, even if US interest rates stay at their unusually low levels for an extended period, borrowers and banks should still assess the implications of a sudden change in local liquidity conditions for their interest rate risks.

Foreign currency position

The banking sector's capability to repay liabilities denominated in foreign currencies can be appraised by the aggregate net open position of AIs for all foreign currencies. This position amounted to HK$21 billion at the end of May 2011, which was equivalent to 0.2% of the total assets of AIs (Chart 5.14), suggesting that the overall exposure of AIs to foreign exchange risks may not be of significant concern.

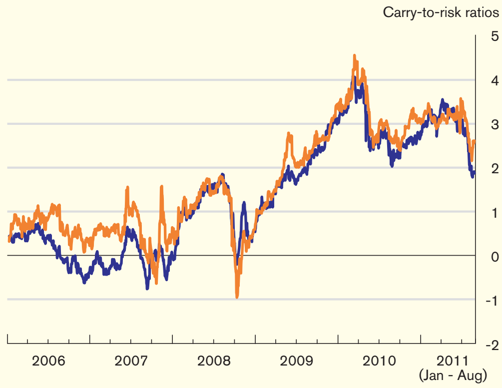
Chart 5.15
Term spreads of Hong Kong and US dollars



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

Source: HKMA staff estimates based on data from Bloomberg.

Chart 5.16
Carry-to-risk ratio of Hong Kong and US dollars



Notes:
1. Carry-to-risk ratio is defined as the differential between 10-year swap rates and three-month money market rates divided by three-month/10-year swaption-implied volatility of the respective currencies.
2. A higher value indicates a higher risk-adjusted return for borrowing short-term (e.g. three-month) funds to buy long-term (e.g. 10-year) interest bearing securities.

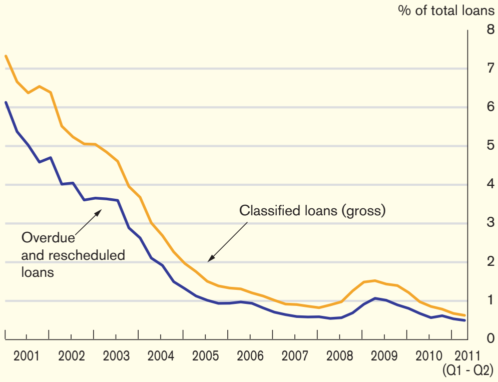
Source: HKMA staff estimates based on data from Bloomberg.

5.3 Interest rate risk

High spreads between the long- and short-term interest rates for the US and Hong Kong dollars are potential sources of interest rate risk since banks may be tempted to take higher interest rate risks by borrowing more short-term funds to acquire longer-term interest bearing assets. A low interest rate environment makes these search-for-yield activities more appealing, which can result in greater maturity mismatches and interest rate risk.

Such risk remained significant in the assessment period, as the spreads persisted at relatively high levels (Charts 5.15 and 5.16). With long-term government bond yields hovering at low levels in some developed economies, banks should be vigilant in monitoring and managing the potential mark-to-market loss for their financial investments, which could arise from changes in the yield spreads.

Chart 5.17
Asset quality of retail banks



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

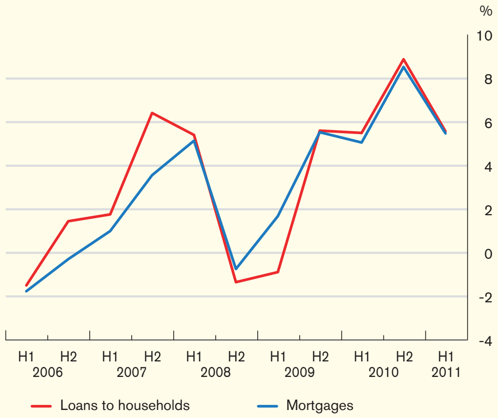
Source: HKMA.

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

(% of respondents)	Dec 2010	Mar 2011	Jun 2011
Considerably higher	9	0	0
Somewhat higher	43	62	38
Same	48	33	52
Somewhat lower	0	0	5
Considerably lower	0	5	5

Source: HKMA.

Chart 5.18
Half-yearly growth of loans to households and mortgages by AIs



Source: HKMA.

5.4 Credit risk

The asset quality of retail banks' loan portfolios improved during the assessment period, with the classified loan ratio falling to 0.61% at the end of June from 0.77% at the end of 2010, and the ratio of overdue and rescheduled loans decreasing to 0.48% from 0.60 % (Chart 5.17).

The loan growth of the Hong Kong banking sector remained robust. Domestic lending[32] by AIs increased by 12.1% in the first half of 2011, after a 10.5% growth in the preceding six-month period. Of the total, property-related lending[33] grew by 6.1%, following an 8.7% increase, and its share to total domestic lending remained high at over 47%. With increased uncertainties in the external environment and the recent slowdown in property market activities, their effect on the asset quality of banks' property lending may warrant close attention.

In view of the rapid credit growth and increasing needs to better manage credit risks, the HKMA issued a circular[34] on 11 April to all AIs, requiring them to re-assess their loan business and funding plans for the rest of the year. Looking ahead, credit growth may moderate somewhat to a healthier pace, according to the results of the HKMA Opinion Survey on Credit Condition Outlook in June 2011. The results suggest that most surveyed AIs expect domestic loan demand to either remain stable or somewhat higher in the near term, while 10% anticipate it to be somewhat lower or considerably lower (Table 5.A).

Household exposure

The growth of household loans[35] moderated to 5.6% in the first half of 2011, from 8.9% in the second half of 2010. The slowdown was primarily attributable to the moderation in mortgage lending (Chart 5.18), which

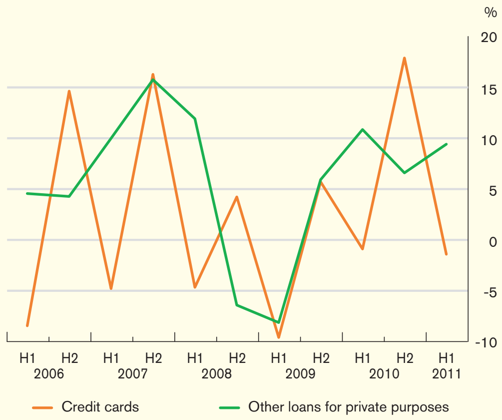
32 Defined as loans for use in Hong Kong plus trade-financing loans.

33 Property lending includes mortgage loans and credit for building, construction, property development and investment.

34 For details, see HKMA circular "Credit growth" issued on 11 April 2011, which is available on the HKMA website.

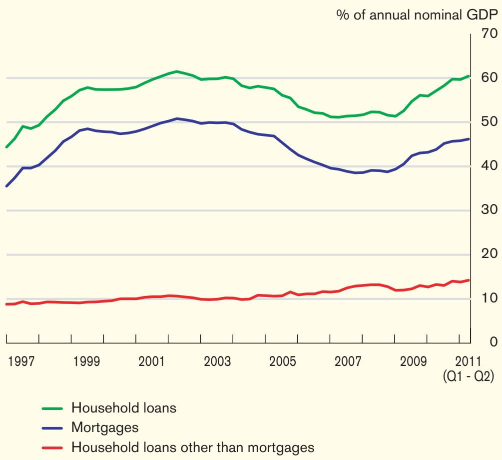
35 Loans to households constitute lending to professional and private individuals, excluding those for business purposes. Mortgage lending accounts for a major proportion of household loans, while the remainder comprises mainly unsecured lending through credit card lending and other personal loans for private purposes. At the end of June 2011, the share of household lending in domestic lending was 29.8%.

Chart 5.19
Half-yearly growth of household loans by AIs



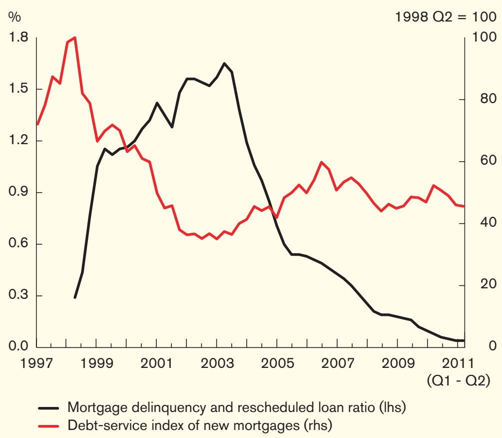
Source: HKMA.

Chart 5.20
Household debt leverage



Note: Household debt leverage is defined as the ratio of loans to the sum of quarterly nominal GDP for the latest four quarters.
Source: HKMA staff estimates.

Chart 5.21
Mortgage delinquency / rescheduled loan ratio and household debt-service burden



Note: The calculation of the index is based on the average interest rate for BLR-based mortgages.
Sources: HKMA and HKMA staff estimates.

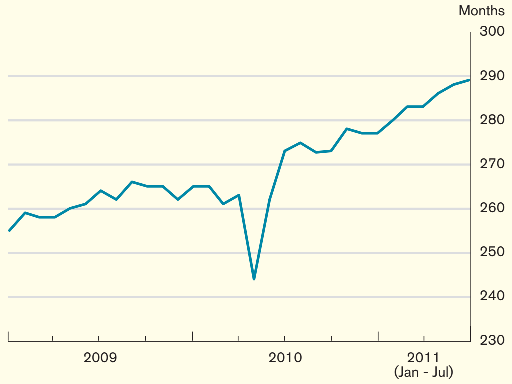
partly resulted from the move by banks to raise their HIBOR-based mortgage lending rates and the prudential measures introduced by the HKMA[36] to further tighten the underwriting standards of mortgage lending. Other types of household lending registered mixed performance. Credit card lending decreased by 1.4% in the first half, after a 17.9% growth in the second half of 2010, while other loans for private purposes maintained their growth momentum, posting a 9.5% increase after a 6.6% growth in the previous assessment period (Chart 5.19).

The level of household leverage, as measured by the ratio of household loans to GDP, edged up to 60.4% at the end of June 2011 from 59.7% at the end of 2010 (Chart 5.20).

Various indicators suggest the credit risk of household loans generally improved in the assessment period. The three-month delinquency and rescheduled loan ratio of banks' mortgage portfolios fell further to a record low of 0.04% at the end of June 2011 (Chart 5.21), and the debt-service index of new mortgages decreased to 46 in 2011 Q2 from 49 in 2010 Q4. While rising household income has contributed to the decrease in the debt-service burden, the average tenor of new mortgage

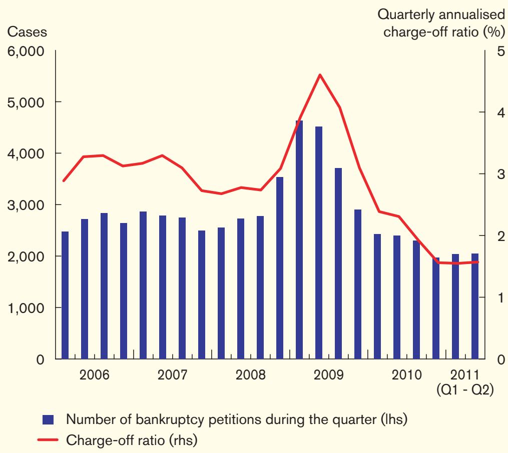
36 The HKMA introduced additional prudential measures for property mortgage loans on 10 June 2011 requiring banks to further tighten the underwriting standards of mortgage lending, subsequent to earlier measures implemented on 19 November 2010, 13 August 2010 and 23 October 2009. For details, see relevant press releases and circulars, which are available on the HKMA website.

Chart 5.22
Average contractual life of newly approved mortgages



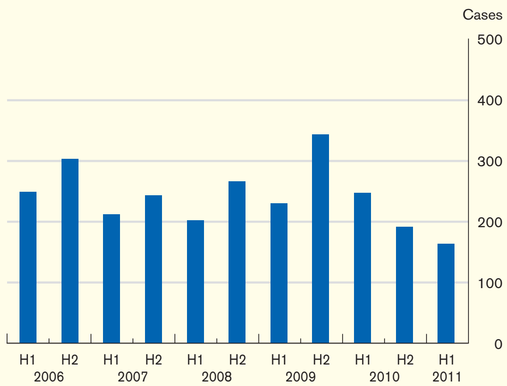
Source: HKMA.

Chart 5.23
Charge-off ratio for credit card lending and bankruptcy petitions



Sources: Official Receiver's Office and HKMA.

Chart 5.24
Number of winding-up orders of companies



Source: Official Receiver's Office.

loans has been on an upward trend in recent years (Chart 5.22). The monthly repayments of these longer tenor mortgage loans are more sensitive to an increase in interest rates, which would, in turn, increase the household debt-service burden.

The credit risk of unsecured household loans continued to be well-contained, with the quarterly annualised charge-off ratio for credit card lending little changed at 1.57% in 2011 Q2, compared with 1.56% in the fourth quarter of 2010 (Chart 5.23). The number of bankruptcy petitions remained at a relatively low level, also suggesting a low credit risk.

In summary, the credit risk of household loans remained low. The implementation of positive mortgage data sharing will further improve the risk assessment capability of banks and help contain credit risk.[37]

Corporate exposure[38]

Domestic loans to corporations[39] grew faster in the first half of 2011, increasing by 15.2%, after an 11.2% increase in the second half of 2010. They accounted for 69.8% of domestic lending at the end of June.

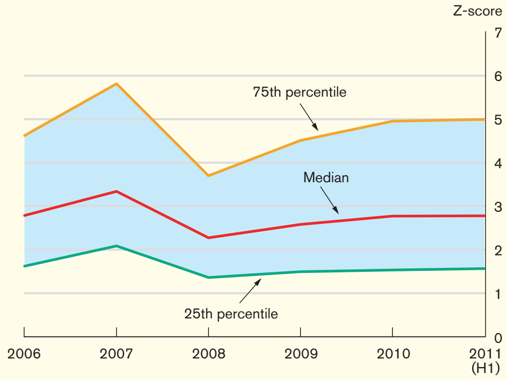
The various indicators continued to suggest improved credit risk for banks' corporate lending. The number of compulsory winding-up orders of companies decreased to 163 in the first half of 2011, representing a 14.7% decline over the preceding six-month period (Chart 5.24).

[37] The implementation of positive mortgage data sharing (PMDS) from 1 April 2011 followed revisions to the Code of Practice on Consumer Credit Data. The banking industry has been taking steps to implement PMDS for pre-existing mortgage data and new mortgage data. For details, see HKMA circular "Implementation of positive mortgage data sharing" issued on 31 March 2011, which is available on the HKMA website.

[38] Excluding interbank exposures.

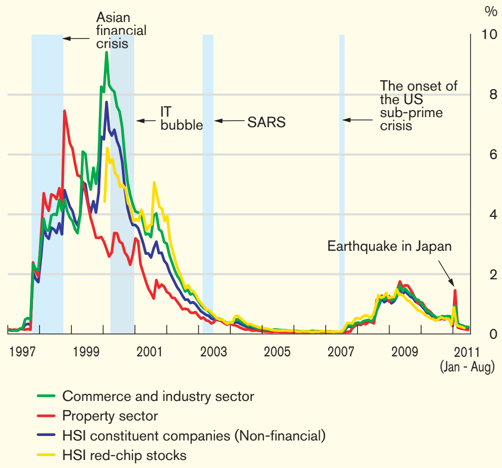
[39] Loans to corporations comprise domestic lending except lending to professional and private individuals.

Chart 5.25
Altman's Z-score: A bankruptcy risk indicator of listed non-financial companies



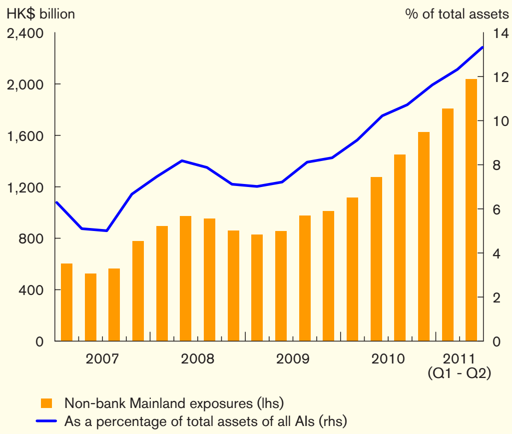
Note: A lower Z-score indicates a higher likelihood of a company default.
Source: HKMA staff estimates based on data from Bloomberg.

Chart 5.26
Estimated aggregate default probability of the HSI non-financial constituent companies



Source: HKMA staff estimates based on data from Bloomberg.

Chart 5.27
Non-bank Mainland exposures of AIs



Note: Data after September 2007 include exposures booked in the retail banks' banking subsidiaries in Mainland China.
Source: HKMA.

The Altman's Z-score[40], a credit risk measure based on accounting data, also indicated a further improvement in the financial health of the non-financial corporate sector[41] (Chart 5.25). In line with this, the estimated aggregate default probability of the HSI non-financial constituent companies, a market-based indicator of default risk for the Hong Kong corporate sector, headed lower (after a brief surge in the aftermath of Japan's earthquake in March) to 0.16% in July and 0.15% in August, from 0.51% at the end of 2010 (Chart 5.26).

Mainland exposure

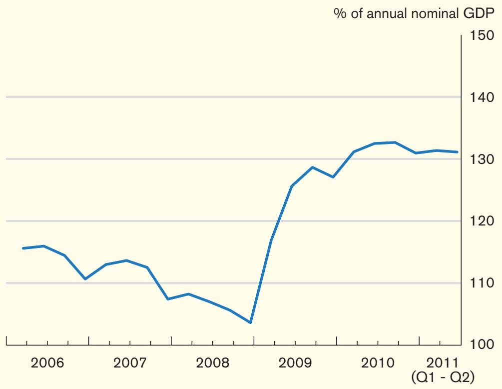
The banking sector increased its credit exposure to Mainland-related business during the assessment period. The total non-bank Mainland exposure of all AIs rose to HK$2,034 billion (13.3 % of total assets) at the end of June 2011, from HK$1,622 billion (11.6% of total assets) at the end of 2010 (Chart 5.27). Of this, retail banks' non-bank Mainland exposure[42] increased to HK$1,436 billion (14.6% of total assets) from HK$1,158 billion (12.9% of total assets).

[40] 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.

[41] Non-financial corporations refer to companies listed on the Hong Kong Main Board and the Growth Enterprise Market, excluding H-share companies, investment companies, and those engaged in banking, insurance and finance. The 2011 figures are preliminary. They are subject to revisions and should be used with caution.

[42] Including exposure booked in retail banks' banking subsidiaries in Mainland China.

Chart 5.28
Credit-to-GDP ratio in Mainland China



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

Sources: IMF International Financial Statistics and CEIC.

Chart 5.29
Distance-to-default index for the Mainland corporate sector

Notes:
1. 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.
2. A higher value of the index indicates a lower level of default risk.

Source: HKMA staff estimates.

A number of recent developments in Mainland China's banking sector may call for closer attention to banks' Mainland exposures. Credit growth on the Mainland has significantly outpaced economic expansion in the past three years (Chart 5.28), which has been partly responsible for surging property prices. After several rounds of monetary tightening, loan growth has started to moderate somewhat but inflation continued to be high, pointing to the continuation of a relatively tight policy. The credit risk of Hong Kong banks' exposure to Mainland corporations has remained stable, with the aggregate distance-to-default[43] index for the non-financial corporate sector staying at a significantly more favourable level than prior to the global financial crisis (Chart 5.29). However, the financial health of the Mainland corporate sector will continue to be influenced by the pace and magnitude of any future monetary tightening.

Given the above, the increasing exposure of local banks to Mainland-related business in recent years should be closely monitored. While the HKMA on-site examination[44] of AIs has so far not revealed any material dilution of the normal and prudent underwriting standards regarding their non-bank Mainland credit exposure, local banks should remain vigilant about credit risk management.

Impact of the European sovereign debt crisis[45]

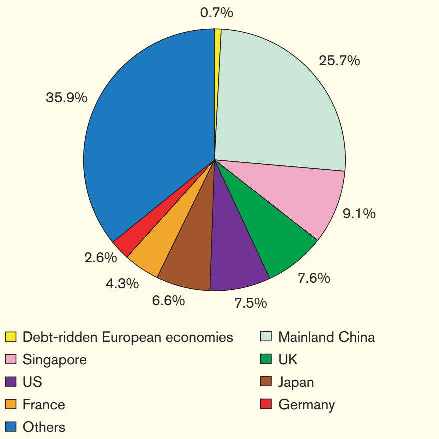
Concerns about the debt crisis continued to put pressure on European banks, with the credit default swap spreads for banks in the debt-ridden European economies

[43] 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.

[44] For details, see HKMA circular "Credit growth" issued on 11 April 2011, which is available on the HKMA website.

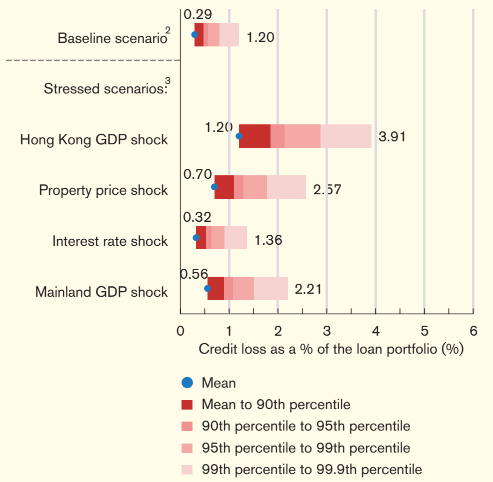
[45] The European sovereign debt crisis and its implications for banks in Hong Kong were discussed in detail in Box 4 of the September 2010 issue of the *Report*. Section 2.2 of this *Report* discusses the latest development.

Chart 5.30
External claims of the Hong Kong banking sector on major economies (all sectors) at the end of March 2011



Source: HKMA.

Chart 5.31
The mean and value-at-risk statistics of simulated credit loss distributions[1]



Notes:
1. The assessments assume the economic conditions in 2011 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 2011 Q3 to 2012 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 2011 Q3 to 2012 Q2.
   Interest rate shock: A rise in real interest rates (HIBORs) by 300 basis points in the first quarter (i.e. 2011 Q3), followed by no change in the second and third quarters and another rise of 300 basis points in the fourth quarter (i.e. 2012 Q2).
   Mainland GDP shock: Slowdown in the year-on-year annual real GDP growth rate to 4% in one year.

Source: HKMA staff estimates.

(Greece, Ireland, Italy, Portugal and Spain) widening sharply in July – August (Chart 2.8). At the same time, the spreads between Euro/USD- and HKD/USD-swap-implied US dollar funding rates and LIBORs have again moved up markedly since July (Chart 2.11). Given that the exposure of the Hong Kong banking sector to banks in the UK, France and Germany is not immaterial (Chart 5.30), and these banks in turn have significant exposures to the 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 [46 & 47]

Results of the latest macro stress testing on retail banks' credit exposure suggest 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 5.31 presents the simulated future credit loss rate of retail banks in the second quarter of 2013 under four specific macroeconomic shocks[48] using information up to the second quarter of 2011. For details of the shocks considered, see the notes under Chart 5.31.

[46] 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.

[47] 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.

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

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 0.32% (interest rate shock) to 1.20% (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 1.36% (interest rate shock) to 3.91% (Hong Kong GDP shock), which are significant but smaller than the loan loss of 4.39% following the Asian financial crisis.[49]

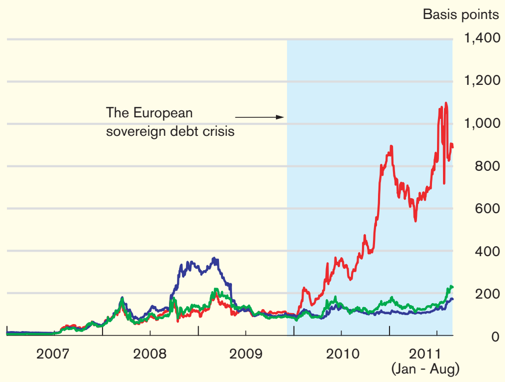
5.5 Systemic risk to the banking system

The systemic risk to Hong Kong's banking sector continued to be low in the review period, but the contagion risk of the European sovereign debt crisis and the latent systemic risk arising from the rapid credit growth in the past two years, particularly in property-related lending and Mainland exposure, merit close attention.

While concerns about the European sovereign debt crisis have triggered a sharp widening of the credit default swap spreads for European banks, the corresponding spreads for Asian banks stayed relatively low (Chart 5.32), suggesting the systemic risk to the banking sectors in Asia, so far, has not been severely affected. The US sovereign credit rating downgrade has also only had a mild impact on Asian banks.

In Hong Kong, the banking distress index, a market-based systemic risk indicator for the local banking sector, decreased further to 3 in August 2011 from 11 in February 2011 (Chart 5.33), suggesting the market remained comfortable about Hong Kong's

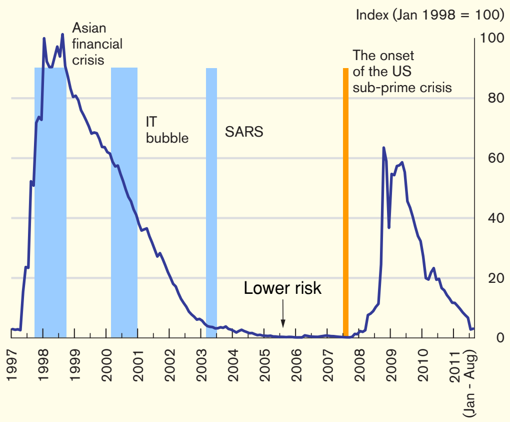
Chart 5.32
Credit default swap spreads of banks in Europe and Asia



Notes:
1. Median of 5-year CDS spreads of the respective groups
2. Peripheral Europe includes Greece, Ireland, Italy, Portugal and Spain.

Source: Bloomberg.

Chart 5.33
The banking distress index

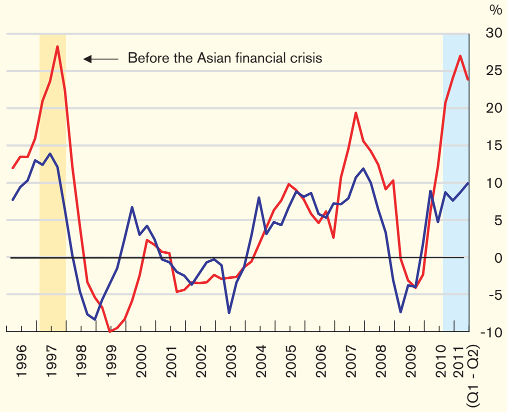


Source: HKMA staff estimates based on data from Bloomberg.

[49] The credit loss to banks two years after the Asian financial crisis was estimated to be about 4.39%.

banking stability. The optimistic market view was broadly consistent with the latest assessment result of the composite early warning system.[50] The estimated banking distress probability remained within the low fragility categories' range.[51] Strong domestic economic fundamentals continued to be a main contributor to low systemic risk.

Chart 5.34
Credit growth and nominal GDP growth in Hong Kong



Sources: C&SD and HKMA.

However, given heightened uncertainties in the external environment and increased volatility in financial markets, continued vigilance is required on possible spillover effects of the European sovereign debt crisis on the global banking system and the risk of a sudden outflow of funds. At the same time, the latent systemic impact of rapid credit expansion needs to be closely monitored, with domestic lending continuing to grow faster than nominal GDP (Chart 5.34). The strong loan growth and unusually low interest margins of banks in Hong Kong could provide incentives for excessive risk taking.

Box 5 explores the possible impact of rapid loan growth on latent credit risk by using evidence from the past credit cycle in Hong Kong. The finding confirms there is a significant positive relationship between fast lending growth and latent credit risk. Therefore, a forward-looking approach to manage the latent credit risks of loan portfolios and sound underwriting standards are critically important in safeguarding banking stability in a rapid credit expansion environment.

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

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[50] The composite early warning system is capable of estimating 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.

[51] 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 the levels of type I error associated with the bounds are 10%, 30%, 50% and 100% respectively.

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

	Jun 2010	Mar 2011	Jun 2011
Interest rate			
1-month HIBOR[2] (quarterly average)	0.18	0.16	0.20
3-month HIBOR (quarterly average)	0.25	0.23	0.26
BLR[3] and 1-month HIBOR spread (quarterly average)	4.82	4.84	4.80
BLR and 3-month HIBOR spread (quarterly average)	4.75	4.77	4.74
Composite interest rate[4]	0.20	0.24	0.31
		Retail banks	
Balance sheet developments[5]			
Total deposits	1.3	2.3	2.6
Hong Kong dollar	1.0	-0.5	1.2
Foreign currency	1.8	6.4	4.5
Total loans	7.0	6.4	4.9
Domestic Lending[6]	6.5 r	6.2 r	4.5
Loans for use outside Hong Kong[7]	11.3 r	8.2 r	7.4
Negotiable instruments			
Negotiable certificates of deposit (NCD) issued	3.7 r	39.8	47.1
Negotiable debt instruments held (excluding NCD)	-1.7	-3.7	4.2
Asset quality[8]			
As percentage of total loans			
Pass loans	97.50	98.17	98.20
Special mention loans	1.53	1.17	1.19
Classified loans[9] (gross)	0.96	0.66	0.61
Classified loans (net)[10]	0.60	0.39	0.36
Overdue > 3 months and rescheduled loans	0.66	0.52	0.48
Profitability			
Bad debt charge as percentage of average total assets[11]	0.03	0.01	0.03
Net interest margin[11]	1.34	1.23	1.21
Cost-to-income ratio[12]	49.3	46.0	43.7
Liquidity ratio (quarterly average)	40.8 r	36.7	36.2
		Surveyed institutions	
Asset quality			
Delinquency ratio of residential mortgage loans	0.03	0.01	0.01
Credit card lending			
Delinquency ratio	0.25	0.19	0.20
Charge-off ratio — quarterly annualised	2.31	1.55	1.57
— year-to-date annualised	2.30	1.55	1.53
		All locally incorporated AIs	
Capital adequacy ratio (consolidated)	16.1 r	16.0	15.9

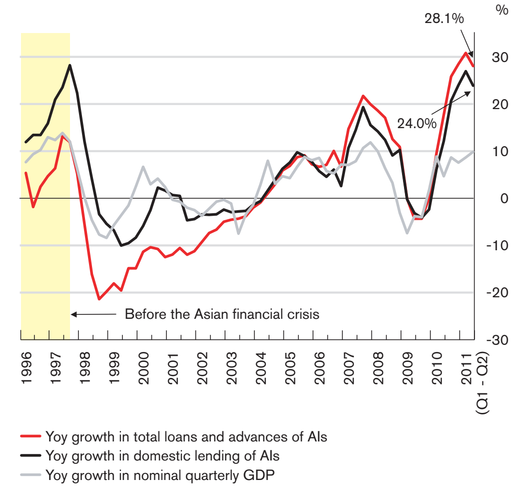
Notes:

1. Figures 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 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
The relationship between loan growth and latent credit risk: evidence from the past credit cycle in Hong Kong

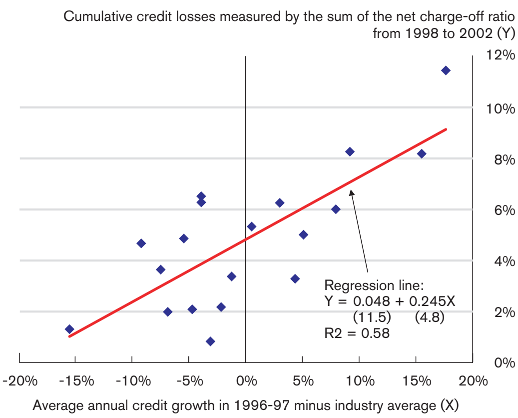
Chart B5.1
Credit growth of the Hong Kong banking sector



Note: The relatively less rapid growth in total loans during 1997-2000 than domestic lending reflected largely the sharp reduction in Euro-yen loans booked in Hong Kong.

Sources: HKMA and C&SD.

Chart B5.2
The relationship between credit growth and credit losses (measured by net charge-offs) for banks in Hong Kong



Notes:
1. Net charge-off ratio: the ratio of net charge-offs to average gross loans during financial year.
2. Figures relate to banks' consolidated positions.

Source: HKMA staff estimates based on data from Bankscope.

The Hong Kong banking sector has witnessed strong credit growth in the past two years, partly driven by buoyant asset market activity, strong demand for financing Mainland-related economic activities and abundant liquidity. Latest statistics show that total bank loans grew further by a year-on-year rate of 28.1% in June 2011, having increased by 28.6% in 2010. Domestic lending expanded by a year-on-year rate of 24.0%, after rising by 24.1% (Chart B5.1). The persistent rapid lending growth raises concerns about excessive credit expansion and the increased latent credit risk in the banking system.

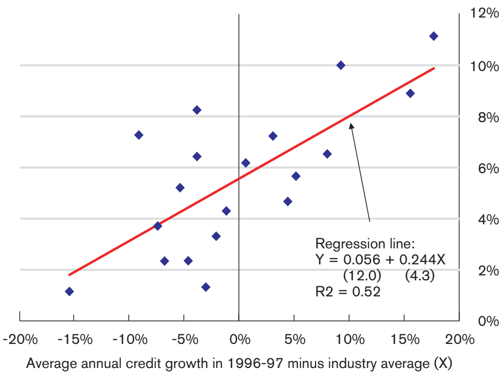
Theoretically, there are strong reasons why rapid loan growth could lead to an increase in latent credit risk. First, fast credit growth may be partially stimulated by significant rises in collateral value amid asset price booms. Should any asset price correction occur subsequently, declines in value of the collateral could result in widespread negative-equity borrowers and defaults.[52] Secondly, rapid credit growth may be driven by a relaxation of underwriting standards[53], which could lead to a deterioration in the asset quality of banks' loan portfolios in the future. Thirdly, overextension of credit could impose an excessive burden on banks' risk management, leading to a lower quality of credit risk assessments. Empirically, there has also been clear international evidence of a positive relationship between excessive credit growth and banking instability.[54]

52 See F. Allen and D. Gale (2000), "Bubbles and crises", *Economic Journal*, 110, pages 236 - 255.

53 For theoretical discussions on the relationship between underwriting standards and credit growth, see G. Dell'Ariccia et al. (2006), "Credit booms and lending standards", *Journal of Finance*, 61, pages 2511 - 2546. For empirical work, see G. Dell'Ariccia et al. (2008), "Credit booms and lending standards: evidence from the sub-prime mortgage market, *IMF Working Paper* 08/106.

54 See G. Kaminsky and C. Reinhart (1999), "The twin crises: the causes of banking and balance-of-payment problems", *American Economic Review*, 89(3), pages 473 - 500.

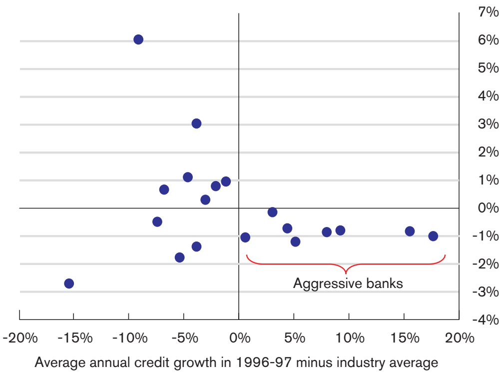
Chart B5.3
The relationship between credit growth and credit losses (measured by loan impairment charges) for banks in Hong Kong



Notes:
1. Loan impairment charge ratio: the ratio of loan impairment charges to average gross loans during financial year.
2. Figures relate to banks' consolidated positions.

Source: HKMA staff estimates based on data from Bankscope.

Chart B5.4
Credit growth and gross lending rate



Notes:
1. Gross lending rate: the ratio of gross interest income on loans to average gross loans during financial year.
2. Aggressive banks: banks with average annual credit growth in 1996 and 1997 higher than industry average.
3. Figures relate to banks' consolidated positions.

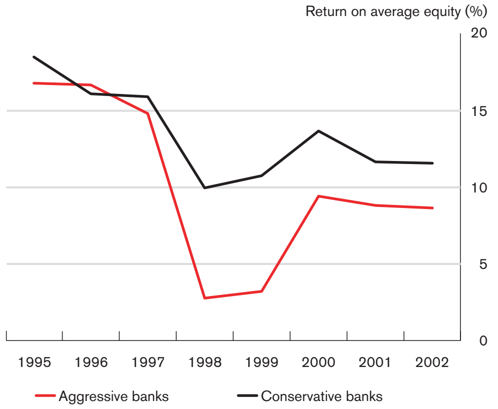
Source: HKMA staff estimates based on data from Bankscope.

Against this background, this box examines retrospectively whether there is a significant positive relationship between lending growth and latent credit risk in the Hong Kong banking sector. The analysis is based on publicly available annual financial data of 19 Hong Kong banks for the period 1995-2002, covering the boom and bust phases of the previous credit cycle in Hong Kong. Some key issues are examined, including (i) whether a clear growth-risk relationship exists for banks in Hong Kong; (ii) if so, could higher risk-taking as a result of rapid credit growth be justified in terms of risk-adjusted returns; and (iii) what are the implications for funding costs if banks overly expand their loan portfolios.

At the aggregate level, there is clear evidence of a positive relationship between loan growth and latent credit risk in the previous credit cycle in Hong Kong. Rapid growth in domestic lending in 1996-97 was followed by a significant rise in the gross classified loan ratio from a low level of 2.1% at the end of December 1997 to a peak of 10.6% at the end of September 1999. Although the recent rapid credit expansion took place after periods of slow loan growth during 2001-04 and 2008-09, and that the loan-to-value ratio for banks' mortgage lending is currently much lower than in the previous cycle, the fast credit growth still merits close attention. Bank-level data also depict a similar picture: those banks that expanded their loan portfolios faster than their counterparts in 1996-97 tended to suffer more severe credit losses as a result (Charts B5.2 and B5.3). An important question is: could such higher risk-taking be sufficiently compensated by higher returns?

To examine this, the sample banks are divided into two groups ("Aggressive" and "Conservative") by comparing individual banks' average annual credit growth in 1996 and 1997 to the corresponding industry average. "Aggressive banks" that registered faster credit growth than the industry average in the previous credit boom are commonly found to have priced their loans below the average market price (Chart B5.4), indicating that rapid credit growth in general was accompanied by low

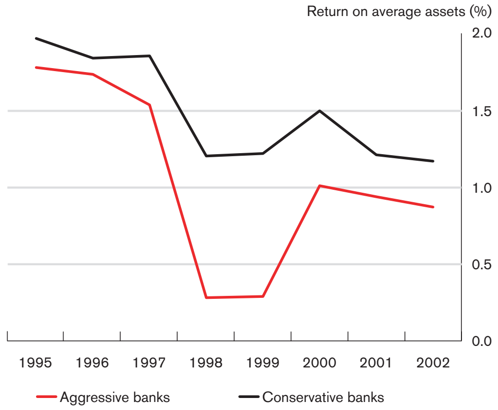
Chart B5.5
Return on average equity



Notes:
1. Return on average equity: the ratio of net income to average equity during financial year.
2. Aggressive (conservative) banks: banks with average annual credit growth in 1996 and 1997 higher (lower) than industry average.
3. Figures relate to banks' consolidated positions.

Source: HKMA staff estimates based on data from Bankscope.

Chart B5.6
Return on average assets

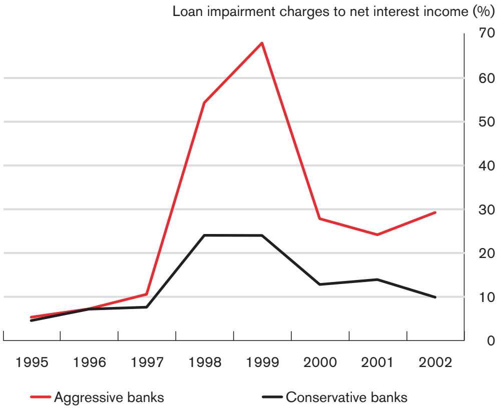


Notes:
1. Return on average assets: the ratio of net income to average total assets during financial year.
2. Aggressive (conservative) banks: banks with average annual credit growth in 1996 and 1997 higher (lower) than industry average.
3. Figures relate to banks' consolidated positions.

Source: HKMA staff estimates based on data from Bankscope.

pricing. In addition, profitability indicators (Charts B5.5 and B5.6) suggest that credit-loss expenses after the credit boom (1998-2000) cut far deeper into profits for "aggressive" banks than their more conservative counterparts. For the entire cycle, the aggregate profits of conservative banks generated from 1995 to 2002 were higher than aggressive banks. A loss-income measure, defined as the ratio of loan impairment charges to net interest income, presents a similar picture as well

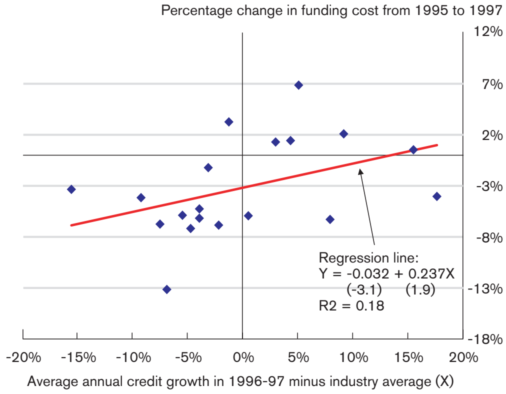
Chart B5.7
Loan impairment charges to net interest income ratios



Notes:
1. Aggressive (conservative) banks: banks with average annual credit growth in 1996 and 1997 higher (lower) than industry average.
2. Figures relate to banks' consolidated positions.

Source: HKMA staff estimates based on data from Bankscope.

Chart B5.8
The relationship between credit growth and funding cost



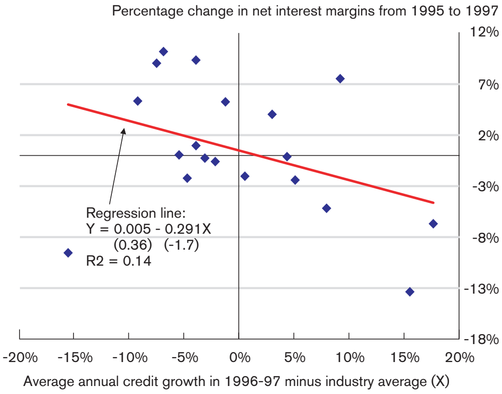
Notes:
1. Funding cost: the ratio of interest expenses to average interest-bearing liabilities during financial year.
2. Figures relate to banks' consolidated positions.

Source: HKMA staff estimates based on data from Bankscope.

(Chart B5.7), indicating that credit losses after very rapid credit growth could create a huge burden on banks' profitability for years after the boom.

Past data also indicate that rapid credit growth could exert significant pressure on funding costs, partly reflecting that banks may need to compete for additional funds to finance further credit expansion. Chart B5.8 presents the percentage change in interest costs from 1995 to 1997 for the sample banks, which shows that "aggressive banks" tended to record a larger increase in funding costs than "conservative banks". This also partly

Chart B5.9
The relationship between credit growth and net interest margins



Notes:
1. Net interest margins: the ratio of net interest revenue to average interest-earning assets during financial year.
2. Figures relate to banks' consolidated positions.

Source: HKMA staff estimates based on data from Bankscope.

explains why many "aggressive banks" registered a notable decline in their net interest margins in the same period (Chart B5.9).

Historical evidence suggests that aggressive loan growth amid credit booms could lead to a sharp increase in latent credit risk and funding costs. The subsequent credit losses could generate huge burdens on banks' profitability for years after the boom. Therefore, banks in Hong Kong, particularly for those that have registered significantly faster credit growth than their peers amid the current credit boom, should review prudently the sustainability of their business plans, including loan growth targets and funding strategies.[55]

[55] In connection with the very rapid growth of loans granted by authorized institutions (AIs), the HKMA issued a circular on 11 April 2011 to require all AIs to reassess their business plans and funding strategies for the remainder of 2011 and submit the assessment results to the HKMA for review. The circular is available on the HKMA website.

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.

Monetary Conditions Index (MCI)

An index that shows the overall monetary conditions of an economy. Usually it is defined as a weighted sum of some measures of real interest rate and real effective exchange rates, with the weights reflecting their relative effects on aggregate demand or inflation.

Mortgage Delinquency Ratio

The ratio of total amount of loans overdue for more than three months to total outstanding loans. It is obtained from the Residential Mortgage Survey, which is a monthly survey covering 23 authorized institutions.

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
ASP	Agreement for sale and purchase
BIS	Bank for International Settlements
bn	Billion
BLR	Best lending rate
CCPI	Composite Consumer Price Index
CDS	Credit default swap
CIs	Certificates of Indebtedness
C&SD	Census and Statistics Department
CPI	Consumer Price Index
DSR	Debt servicing ratio
EFBN	Exchange Fund Bills and Notes
EMR	Effective mortgage rates
GDP	Gross Domestic Product
HIBOR	Hong Kong Interbank Offered Rate
HKD	Hong Kong dollar
HKMA	Hong Kong Monetary Authority
HSCEI	Hang Seng China Enterprises Index
HSI	Hang Seng Index
IMF	International Monetary Fund
IPO	Initial public offering
LERS	Linked Exchange Rate System
LIBOR	London Interbank Offered Rate
lhs	Left-hand scale
LTD	Loan-to-deposit
LTV	Loan-to-value
MCI	Monetary Conditions Index
MENA	Middle East and North Africa
mn	Million
NAIRU	Non-accelerating inflation rate of unemployment
NCD	Negotiable Certificates of Deposit
NEER	Nominal effective exchange rate

NIE	Newly industrialised economies
NIM	Net interest margin
OIS	Overnight index swap
p.a.	Per annum
PBoC	The People's Bank of China
PMDS	Positive mortgage data sharing
PMI	Purchasing Managers' Index
PPI	Producer Price Index
QBTS	Quarterly Business Tendency Survey
qoq	Quarter-on-quarter
R&VD	Rating and Valuation Department
RAI	Risk Appetite Index
REER	Real effective exchange rate
repo	Repurchase agreement
rhs	Right-hand scale
RMB	Renminbi
RRR	Reserve requirement ratio
SSD	Special Stamp Duty
S&P 500	Standard & Poor's 500 Index
TDR	Time deposit rate
US	United States
USD	US dollar
VAR	Vector autoregression
WTI	West Texas Intermediate
yoy	Year-on-year

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