

4. Monetary and financial conditions

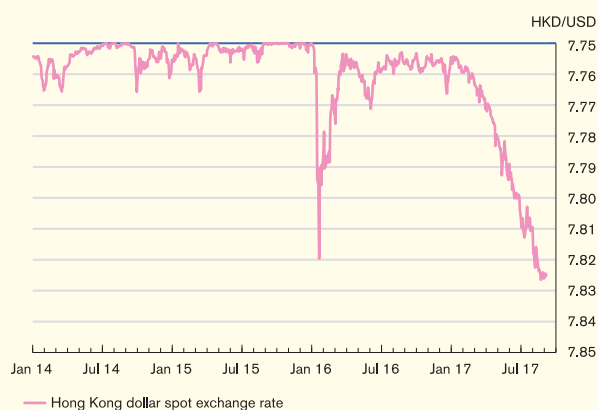
Exchange rate, capital flows and monetary developments

The Hong Kong dollar interest rates remained soft given the ample liquidity in the banking system and despite rises in US dollar interest rates. The Hong Kong dollar spot exchange rate eased gradually amid widening negative HIBOR-LIBOR spreads. Underpinned by low funding costs and improved economic conditions, loan growth accelerated during the first half. Looking ahead, the Hong Kong dollar exchange rate may ease during the US monetary policy normalisation process, which is a natural process under the currency board system.

4.1 Exchange rate and capital flows

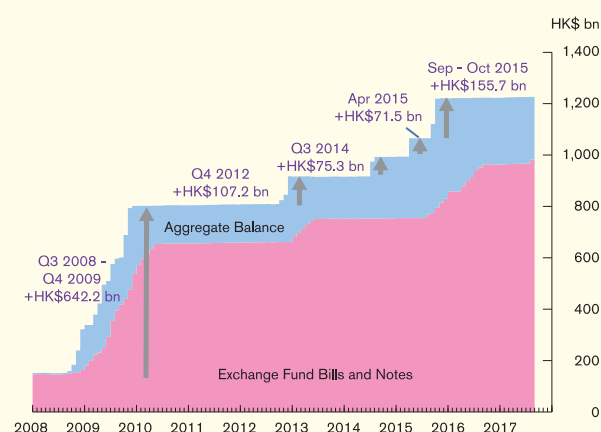
The Hong Kong dollar spot exchange rate eased gradually between February and August, and surpassed the 7.80 mark in June (Chart 4.1). The easing was driven primarily by interest rate arbitrage activities amid the widening of negative HIBOR-LIBOR spreads. Specifically, the spread continued to widen during the review period as abundant Hong Kong dollar liquidity kept Hong Kong interest rates, particularly those at the short-end, soft, while the Fed made three interest rate hikes from December 2016 to June 2017. During the review period, the Convertibility Undertaking (CU) was not triggered (Chart 4.2).

Chart 4.1
Hong Kong dollar exchange rate



Source: HKMA.

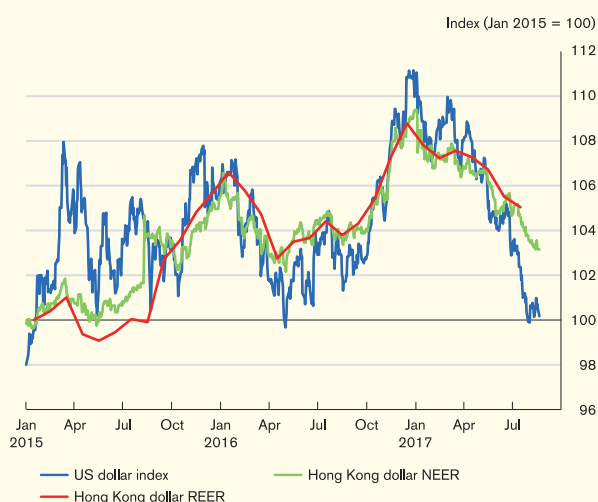
Chart 4.2
Fund flow indicators



Source: HKMA.

Due to the weakening in the US dollar, the Hong Kong dollar nominal effective exchange rate index (NEER) decreased by 6.4% between January and August (Chart 4.3). The Hong Kong dollar real effective exchange rate index (REER) continued to move closely with the NEER, given the small inflation differential between Hong Kong and its trading partners, which had a limited impact on the movement of the REER.

Chart 4.3
Nominal and real effective exchange rates



Note: REER is seasonally adjusted and only available on a monthly basis.
Sources: C&SD and HKMA staff estimates.

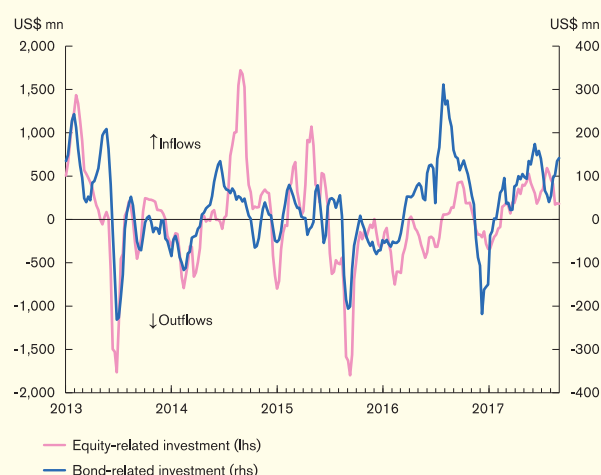
Portfolio investment saw inflows by non-residents in the first half of 2017. According to the latest Balance of Payments (BoP) statistics, there were debt portfolio investment inflows by both residents and non-residents in the first quarter amid improved market sentiment towards Asian bond markets since the beginning of the year (Table 4.A).⁷ Data based on a survey from global mutual funds suggest that bond inflows remained robust going into the second quarter (Chart 4.4). While the BoP statistics for equity investment showed large outflows by residents in the fourth quarter of 2016 and the first quarter of 2017, there were equity inflows by non-residents in the first quarter of 2017, the same trend as other Asian market. And, data from a mutual funds survey pointed to continued equity inflows in the second quarter.

Table 4.A
Cross-border portfolio investment flows

	2014	2015	2016				2017
(HK\$ bn)			Q1	Q2	Q3	Q4	Q1
By Hong Kong residents							
Equity and investment fund shares	-318.2	-420.2	22.5	-45.6	-9.4	-198.8	-64.1
Debt securities	42.1	-241.0	111.6	-19.9	-262.1	40.6	108.0
By non-residents							
Equity and investment fund shares	136.7	-329.7	-48.5	41.4	37.2	-10.9	14.2
Debt securities	75.0	20.0	-0.9	5.2	20.6	-8.6	44.9

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

Chart 4.4
Market survey of equity and bond-related flows



Note: Data refer to moving four-week sums.
Source: EPFR Global.

Looking ahead, interest rate arbitrage activities are expected to lead to the easing of the Hong Kong dollar exchange rate as the US monetary policy normalisation process continues. The possibility of triggering the weak-side CU should not be ruled out. This is a natural process under the currency board system.

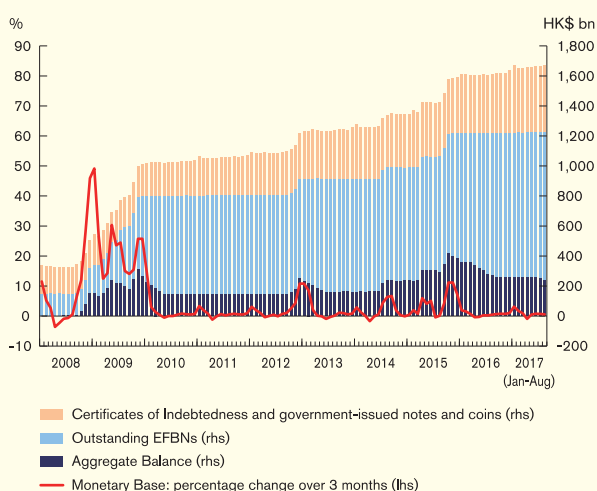
Nevertheless, the direction of the Hong Kong dollar fund flows will not only depend on the pace of US interest rate normalisation and any potential impact stemming from the Fed's balance sheet normalisation, but also on non-residents' demand for Hong Kong dollar financial and real assets.

⁷ At the time of writing, the second-quarter BoP statistics were not yet available.

4.2 Money and credit

Hong Kong's monetary environment remained accommodative in the first half of 2017, despite concerns about the US interest rate hikes and the Fed's plan to reduce its balance sheet. The Hong Kong dollar Monetary Base increased modestly by 1.7% during the first half, mainly due to the increases in Certificates of Indebtedness for banknote issuances (Chart 4.5). While the Hong Kong dollar eased gradually against the US dollar, the weak-side CU was not triggered. As a result, the total of the Aggregate Balance and the outstanding Exchange Fund Bills and Notes (EFBNs) remained stable, closing at HK\$1,225.6 billion at the end of June.⁸

Chart 4.5
Monetary Base components



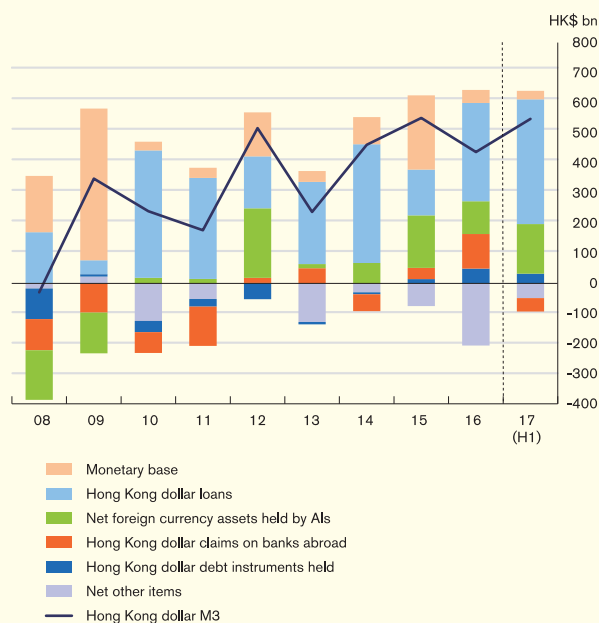
Source: HKMA.

Notwithstanding the slight increase in the Monetary Base, the Hong Kong dollar monetary aggregate expanded at a relatively fast pace. In particular, growth in the Hong Kong dollar broad money supply (HK\$M3) accelerated further to

⁸ On 9 August, the HKMA announced issuances of additional Exchange Fund Bills in August and September, totalling HK\$40 billion to meet banks' increased demand for liquidity management. This is consistent with Currency Board Principles, representing a change in the composition of the Monetary Base from the Aggregate Balance to the outstanding EFBNs. The interbank liquidity remained abundant after the additional issuances of the Exchange Fund Bills.

8.9% in the first half of 2017 from 6.5% in the second half of 2016. As the major component of HK\$M3, Hong Kong dollar deposits grew faster by 9.2% in the first half (Chart 4.7) on the back of strengthened economic activities as well as equity-related money demand amid improved market sentiment. Analysis by the asset-side counterparts suggests the growth in HK\$M3 was mainly due to money creation through credit expansion and net Hong Kong dollar inflows into the non-bank private sector. This was reflected by the growth in Hong Kong dollar lending and banks' net foreign currency assets respectively (Chart 4.6).

Chart 4.6
Changes in the HK\$M3 and the asset-side counterparts



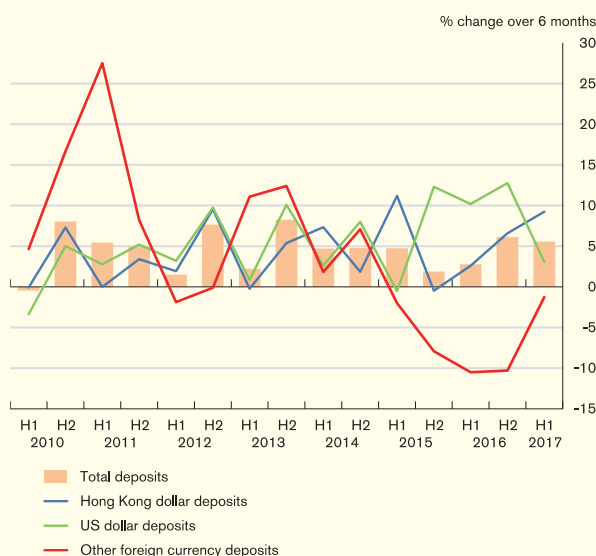
Note: The HK\$M3 in the monetary survey has been adjusted to include foreign currency swap deposits and to exclude government deposits and Exchange Fund deposits with licensed banks.

Source: HKMA staff estimates.

By contrast, growth in foreign currency deposits decelerated, mainly through slower growth in US dollar deposits. In the first half, US dollar deposits grew by 3.0% compared with a stronger increase of 12.8% in the preceding half-year period (Chart 4.7), along with the US dollar depreciation against most major currencies. Other foreign currency deposits continued to decline but at a slower pace of 1.2%, reflecting signs of stabilisation in renminbi deposits,

particularly during the second quarter. On the whole, total deposits with authorized institutions (AIs) grew at a roughly steady pace of 5.6% in the first half, compared with 6.2% in the second half of 2016.

Chart 4.7
Deposit growth



Despite the rise in US dollar interbank interest rates and the upward adjustment of the HKMA Base Rate⁹, the Hong Kong dollar interbank interest rates trended downwards partly reflecting ample liquidity in the banking system. For instance, the overnight and three-month HIBOR fixings decreased by 36 and 26 basis points over the first eight months, closing at 0.30% and 0.76% respectively at the end of August (Chart 4.8). As such, the negative spreads between the Hong Kong dollar and the US dollar interbank rates widened. Against this background, Box 3 analyses the fundamental drivers of the Hong Kong dollar-US dollar interbank interest rate spreads and how they can explain the recent widening of the negative spreads.

⁹ During the first half of 2017, the HKMA Base Rate was adjusted upwards by 50 basis points from 1.00% at the end of 2016 to 1.50% at the end of June. The increase in the Base Rate followed an upward shift totalling 50 basis points in the target range for the US federal funds rate during the period, in accordance with the revised formula announced on 26 March 2009.

Meanwhile, the long-term Hong Kong Government Bond yields experienced bigger drops in comparison with their US counterparts, with yield of the 10-year Hong Kong Government Bond falling by 56 basis points to 1.38% at the end of August (Chart 4.9).¹⁰

Chart 4.8
Hong Kong dollar and US dollar interbank interest rates

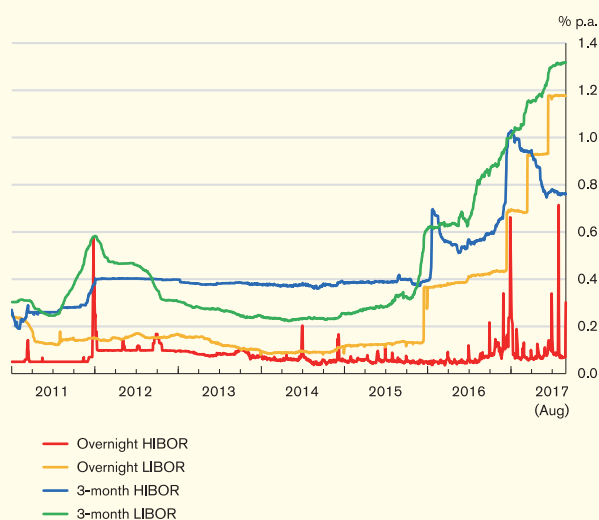
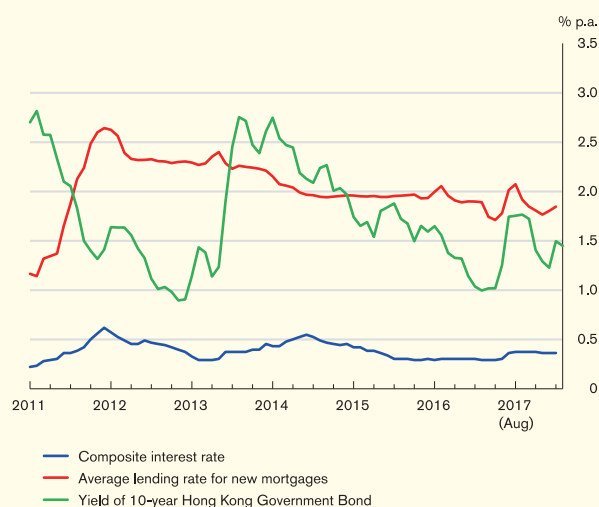


Chart 4.9
Yield of the 10-year Government Bond, the composite interest rate, and the average lending rate for new mortgages



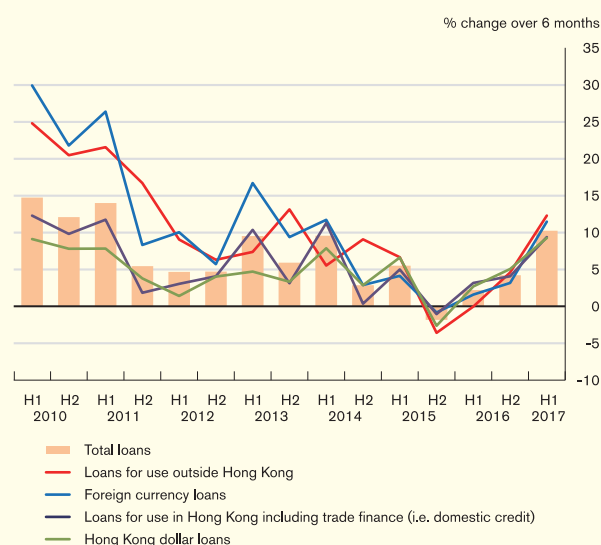
¹⁰ During the same period, the 10-year US Treasury yield declined slightly by 33 basis points to 2.12% at the end of August.

As the Hong Kong dollar interbank rates continued to stay low and the deposit base remained sizeable, there was no noticeable upward pressure on retail-level interest rates. The composite interest rate, as an indicator of retail banks' Hong Kong dollar funding cost, remained steady at a low level of around 0.31% over the first seven months of 2017 (Chart 4.9). As for mortgage interest rate, banks' average lending rate for new mortgages gradually declined from 2.01% in December 2016 to 1.76% in May amid low funding costs and fierce competition in the mortgage market. The average mortgage rate edged up to 1.85% in July as some banks increased the pricing spreads of HIBOR-based mortgages after the eighth round of prudential measures for mortgage lending was announced on 19 May.

Looking ahead, Hong Kong dollar interest rates will eventually face more significant upward pressure as US monetary policy normalisation continues. The pace and magnitude of rises in the Hong Kong dollar interest rates would hinge on the pace of US monetary policy normalisation, the pattern of fund flows and the tightness in domestic liquidity conditions.

Bank credit grew rapidly, underpinned by the low funding costs and improved economic environment. Total loan growth accelerated to 10.2% (or an annualised 20.5%) in the first half of 2017 from 4.2% in the preceding half-year period (Chart 4.10), with Chinese banks being particularly active in the loan business. The strong growth in total loans was broad-based, with both loans for use in and outside Hong Kong registering strong growth. Analysed by currency, both Hong Kong dollar and foreign currency loans picked up strongly by 9.3% and 11.5% respectively.

Chart 4.10
Loan growth

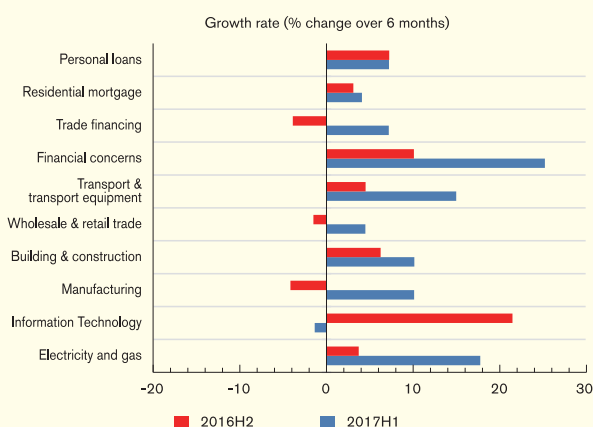


Source: HKMA.

Specifically, loans for use in Hong Kong (including trade finance) expanded by an accelerated 9.4% in the first half, with loans to most of the major business sectors witnessing faster growth (Chart 4.11). Loans to financial concerns registered a notable 25.2% rise in the first half, in part reflecting increased funding demand for business expansion amid better prospects in the local financial services industry. Loans to building, construction and property development also expanded faster, partly reflecting strong financing activities for land acquisitions and property development projects.¹¹ Growth in trade finance and loans to manufacturing, wholesale and retail trade reverted to positive territory along with the continued improvement in the value of merchandise trade and retail sales.

¹¹ In view of recent development that some property developers used high gearing to finance land acquisition and development projects, the HKMA announced on 12 May measures to strengthen banks' credit risk management for loans to property developers. For construction financing, since 1 June, AIs are required to lower the financing caps respectively to 40% of the site value and 80% of the construction cost, with an overall cap lowered to 50% of the expected value of the completed properties.

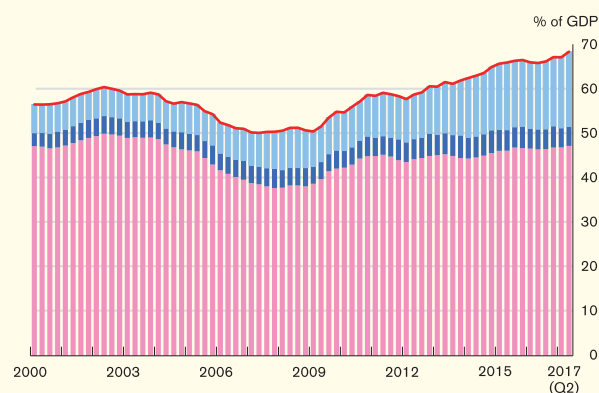
Chart 4.11
Growth in domestic loans by selected sectors



Source: HKMA.

Despite seeing a moderate expansion relative to loans to business sectors, household debt grew by an accelerated 5.0% in the first half following a 4.3% increase in the preceding half-year period. Within the household debt, personal loans (which comprise credit card advances and loans for other private purposes) continued to record robust growth of 7.2%, partly reflecting better economic and financial environment (Chart 4.11). With mortgage interest rates still at low levels and strong property market sentiment particularly since March, growth in residential mortgage loans quickened from 3.1% in the second half last year to 4.1% in the first half of 2017. Reflecting the fast growth in household loans, the household debt-to-GDP ratio climbed higher to 68.3% in the second quarter of 2017 from 67.1% in the fourth quarter of 2016 (Chart 4.12).

Chart 4.12
Household debt-to-GDP ratio and its components



Loans for other private purposes
Credit card advances
Residential mortgage
Total household debt

Note: Only borrowings from AIs are covered.
Source: HKMA.

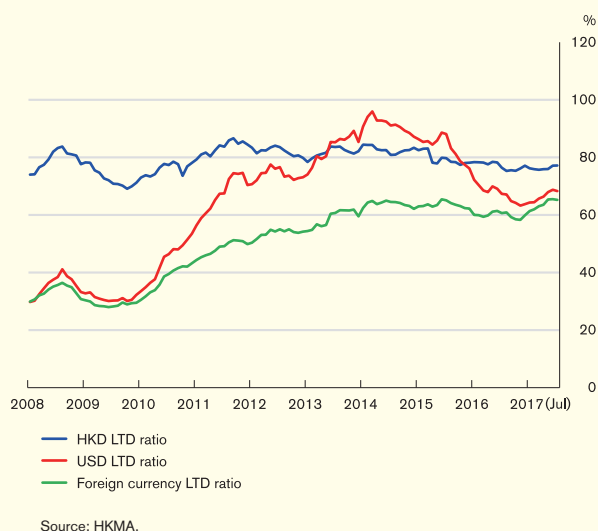
Loans for use outside Hong Kong rose notably faster by 12.3% during the first half due to increases in funding demand from domestic and multinational corporations amid the improved external environment.

Funding demand from Mainland enterprises picked up significantly during the review period. For the banking sector as a whole¹², Mainland-related lending grew faster by 11.9% in the first half compared with 3.6% in the preceding half-year period. Despite the concerns about rapid credit growth, the credit risk associated with Mainland-related lending should be manageable as 76% of borrowers were Mainland state-owned enterprises and non-Mainland multinational companies. Although lending to Mainland private entities rose significantly during the first half of 2017, the majority of loans were secured by collaterals and/or guarantees. Nevertheless, in view of the fast credit growth, banks should continue to maintain prudent underwriting standards and strengthen risk management for their Mainland-related lending.

¹² Including AIs' Hong Kong offices, Mainland branches and subsidiary banks in Mainland China.

Banks' funding conditions were broadly stable underpinned by a large deposit base, despite the strong credit growth. As Hong Kong dollar loans and deposits expanded roughly at the same pace, the Hong Kong dollar loan-to-deposit (LTD) ratio stayed virtually unchanged at 77.1% at the end of June compared to six months ago (Chart 4.13). On the other hand, the overall foreign currency LTD ratio moved up from 59.9% at the end of 2016 to 65.5% at the end of June as foreign currency loans grew faster than deposits. Although the US dollar LTD ratio picked up from 63.8% to 68.8% during the same period, the level remained low compared with the high of over 90% in 2014.

Chart 4.13
LTD ratios



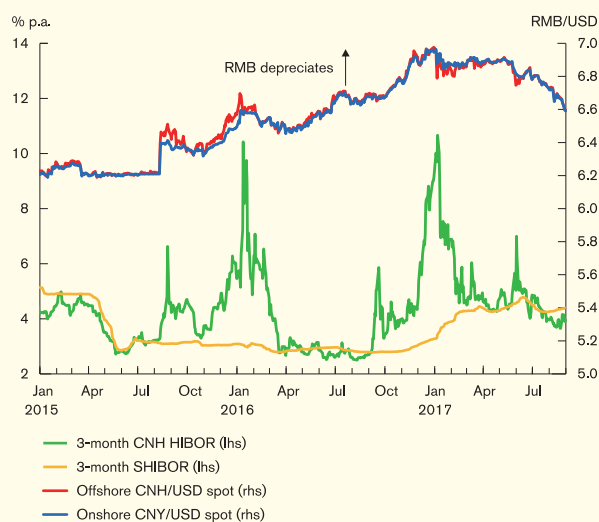
Looking ahead, loan growth momentum may continue to be supported by the improving domestic and external environment as well as potential funding needs for infrastructure investments. According to the HKMA Opinion Survey on Credit Condition Outlook, banks expect to be more neutral on the growth of credit demand in the near term (see Table 5.A in Chapter 5).

Offshore renminbi banking business

The offshore (CNH) and the onshore (CNY) renminbi exchange rate strengthened against the US dollar (Chart 4.14), in part reflecting the improved economic conditions in Mainland China and the weakening of the US dollar against most major currencies. However, with some momentary tightening of liquidity in the offshore market, the CNH strengthened more than the CNY in late May, as indicated by notable positive CNY-CN H spreads. The tight liquidity conditions largely eased moving into the third quarter and the spread narrowed significantly.

Consistent with the recent improvement in liquidity in the offshore market, the three-month CNH HIBOR fixings fell from the high of 7.00% in June to 3.97% at the end of August. Some retail banks also reduced their preferential renminbi deposit rates.

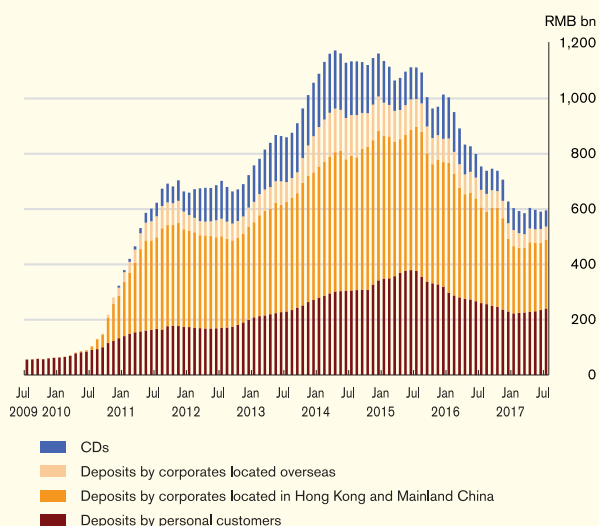
Chart 4.14
CNY and CNH exchange rates and interbank interest rates



Clouded by cautious sentiment in the renminbi exchange rate movements earlier, the offshore renminbi liquidity pool in Hong Kong continued to face downward pressure in early period of 2017, although some signs of stabilisation were seen in the second quarter. Compared with the preceding half-year period, the total outstanding amount of renminbi customer deposits and certificates of deposit (CDs) declined at a slower pace of 5.8% in the first half of 2017 to RMB588.7 billion at the end of June (Chart 4.15 and Table 4.B). Among the total, after falling by 7.2% in the first quarter, renminbi customer deposits reverted to a modest 3.7% increase in the second quarter along with the stabilisation of the renminbi exchange rate, with both personal and corporate customer deposits picking up in the second quarter. On the other hand, outstanding CDs dropped by 20.1% for the first half as a whole, mainly attributable to a relatively large amount of CDs reaching maturity towards the end of June.

Chart 4.15

Renminbi deposits and CDs in Hong Kong

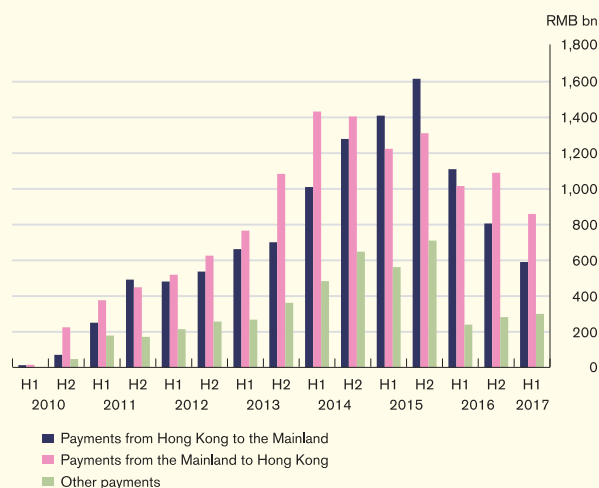


Source: HKMA.

Other renminbi banking business also consolidated during the first half of 2017. The outstanding amount of renminbi bank loans declined significantly by 30.0% to RMB206.3 billion at the end of June. Renminbi trade settlement handled by banks in Hong Kong declined to RMB1,749.3 billion in the first half, down 19.6% from the second half of 2016, with outward trade remittances to Mainland China dropping more than inward trade remittances to Hong Kong (Chart 4.16).

Chart 4.16

Flows of renminbi trade settlement payments



Source: HKMA.

Nevertheless, the size of the renminbi liquidity pool remained adequate to support a large amount of renminbi payments and financial transactions. The average daily turnover of the renminbi real time gross settlement system continued to stay high at RMB886.2 billion in the first half of 2017, compared with RMB869.0 billion in the same period in 2016.

The development of offshore renminbi business in the period ahead will continue to depend on market expectations of the renminbi exchange rate movements and Mainland's economic prospects, amongst other factors. Hong Kong's offshore renminbi business will likely be supported by the increasing use of renminbi-denominated assets through the ongoing initiatives of Mainland's capital account liberalisation.¹³ In addition, with increasing regional and international co-operation under the Belt and Road Strategy, it is expected that Hong Kong could benefit from the international use of the renminbi through renminbi business links with other regions. Against the background of continued renminbi internationalisation, Box 4 analyses to what extent the renminbi has been perceived as a safe-haven currency over the past few years.

Table 4.B
Offshore renminbi banking statistics

	Dec 2016	Jun 2017
Renminbi deposits & certificates of deposit (CDs) (RMB bn)	625.1	588.7
Of which:		
Renminbi deposits (RMB bn)	546.7	526.1
Share of renminbi deposits in total deposits (%)	5.2	4.9
Renminbi certificates of deposit (CDs) (RMB bn)	78.3	62.6
Renminbi outstanding loans (RMB bn)	294.8	206.3
Number of participating banks in Hong Kong's renminbi clearing platform	210	207
Amount due to overseas banks (RMB bn)	69.0	87.8
Amount due from overseas banks (RMB bn)	91.6	132.8
	Jan - Jun 2017	
Renminbi trade settlement in Hong Kong (RMB bn)	1,749.3	
Of which:		
Inward remittances to Hong Kong (RMB bn)	859.5	
Outward remittances to Mainland China (RMB bn)	590.3	
Turnover in Hong Kong's RMB RTGS system (Daily average during the period; RMB bn)	886.2	

Source: HKMA.

¹³ These include the recent launch of Bond Connect and the expansion of Hong Kong's RQFII quota, which facilitate overseas investors to participate in the Mainland financial markets through Hong Kong's platforms.

Box 3

Analysis on the determinants of HIBOR-LIBOR spreads

The US Fed has increased the target range for the federal funds rate since 2015, but HIBORs have not closely followed. As a result, the HIBOR-LIBOR spreads have generally widened. The overnight HIBOR in particular stayed close to zero, resulting in a much wider negative HIBOR-LIBOR spread than its longer-tenor counterparts. Against this backdrop, this Box studies the determinants of the HIBOR-LIBOR spreads and helps provide a conceptual understanding of the underlying mechanism.¹⁴

Determinants of HIBOR-LIBOR spreads

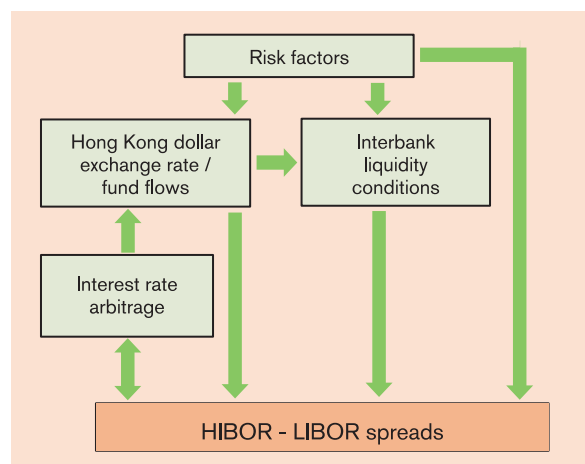
Conceptually, HIBOR-LIBOR spreads are affected by four categories of interacting factors as shown in Chart B3.1. A larger interest rate gap may induce arbitrage activities consistent with the automatic interest rate adjustment mechanism under the Linked Exchange Rate System (LERS) to subsequently narrow the interest rate gap. During the process, if the Hong Kong dollar exchange rate touches the CU and banks trigger the CU, there will be changes in the Aggregate Balance and hence interbank liquidity conditions. Since the Aggregate Balance is a key determinant of the level of HIBORs, arbitrage activities will provide a fundamental force that drives the HIBOR-LIBOR spreads.

Even without arbitrage activities, the interest rate spread could fluctuate due to several transient factors. Specifically, the spread could be affected by variations in domestic interbank liquidity conditions alone. For instance, a higher Hong Kong dollar LTD ratio could raise liquidity pressure in the interbank market and affect HIBORs.

The Hong Kong dollar exchange rate or fund flows could also influence the HIBOR-LIBOR spreads. Under the uncovered interest rate parity conditions, the spreads should be linked to the expectation of the movement in the Hong Kong dollar exchange rate against the US dollar. Besides this direct channel, more Hong Kong dollar inflows could lead to a triggering of the strong-side CU, resulting in looser domestic interbank liquidity conditions. This, in turn, drives the HIBORs down and temporarily widens their spreads with the LIBORs.

Finally, risks that are specific to Hong Kong could also lead to higher HIBORs and larger HIBOR-LIBOR differentials both directly and indirectly through their impact on interbank liquidity conditions and the Hong Kong dollar exchange rate and fund flows. For example, negative shocks leading to a loss in confidence in the Hong Kong dollar would raise the risk premium and result in a rise in the HIBORs directly. At the same time, it could also lead to the selling of Hong Kong dollars and a tightening of interbank liquidity, thereby increasing the HIBOR-LIBOR spreads.

Chart B3.1
Theoretical determinants of HIBOR-LIBOR spreads



Source: HKMA staff illustration.

¹⁴ A longer version of the analysis can be found in the paper by Cheung et al. (2017), "Analysis on the determinants of HIBOR-LIBOR spreads", *Research Memorandum 07/2017*, Hong Kong Monetary Authority.

Table B3.A lists the indicators of the determinants of the HIBOR-LIBOR spreads that we employ in our empirical analysis. Based on this table, we review some of these indicators and their relationship with the interest rate spreads in greater detail below.

Table B3.A
Indicators of the theoretical determinants

Underlying determinants	Indicators
1. Interest rate arbitrage	HIBOR-LIBOR spread (lagged values)
2. Interbank liquidity conditions	Hong Kong dollar LTD ratio
3. Hong Kong dollar exchange rate and fund flows	HKMA's (net) foreign exchange operations Monthly equity returns differential – Hang Seng Index vs S&P 500 Index HKD/USD exchange rate expectation – information from option prices
4. Risk factors	Standard deviation of daily equity returns – Hang Seng Index vs S&P 500 Index

Source: HKMA staff.

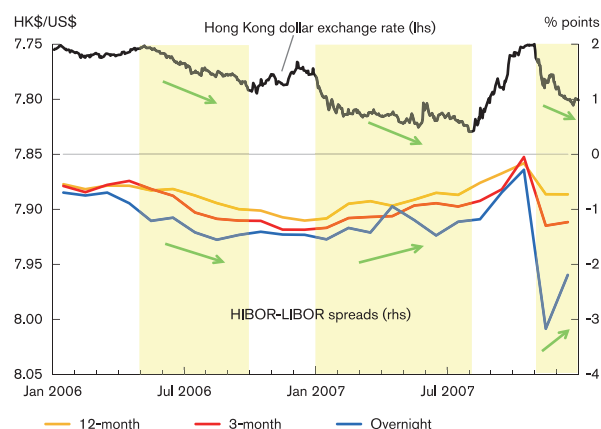
Interest rate arbitrage

Under the automatic interest rate adjustment mechanism of the LERS, a larger HIBOR-LIBOR spread can subsequently induce interest rate arbitrage activities that are conducive to the narrowing of the spreads. Such activities, in a narrow sense, feature the triggering of the CU with a corresponding change in the Aggregate Balance. Nevertheless, experience during 2006–2007 showed that when interest carry trade occurred, the negative HIBOR-LIBOR spreads had a tendency to narrow (Chart B3.2). However, the Hong Kong dollar spot exchange rate would weaken, but not necessarily touch the weak-side CU in the short run.

In light of the experience, our empirical analysis defines interest rate arbitrage activities in a broader sense which does not necessarily involve the triggering of the CU. Specifically, we capture the impact of arbitrage activities on the current HIBOR-LIBOR spreads by including the lagged values of the spreads in our empirical model. If arbitrage activities are present, the coefficient should lie between zero and one, meaning that the spreads have a tendency to narrow over time,

other things being equal. That said, our model may not fully capture the arbitrage dynamics. For example, regulatory changes that limit the risk-taking capacity of banks after the global financial crisis may have increased the level of HIBOR-LIBOR spreads required for the same level of arbitrage activities to take place.

Chart B3.2
Reported episodes of interest carry trade in 2006–2007



Note: The highlighted areas represent periods of reported interest carry trade.
Sources: CEIC and HKMA.

Hong Kong dollar loan-to-deposit ratio

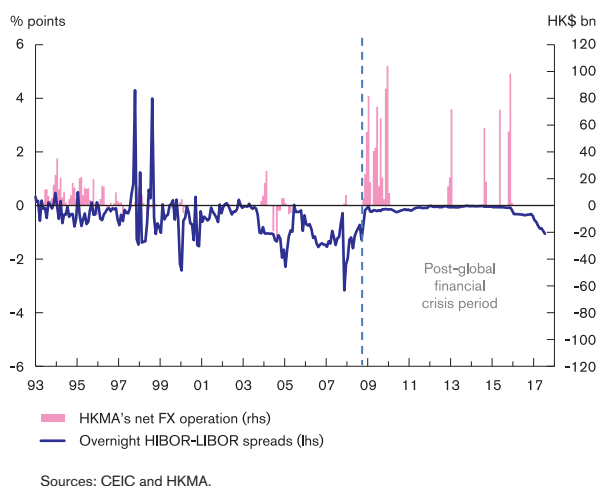
Interbank liquidity conditions, as measured by the Hong Kong dollar LTD ratio, appear to be positively correlated with the HIBOR-LIBOR spreads. For example, even though the US dollar interest rate is unchanged, tighter domestic interbank liquidity – due perhaps to increased funding needs arising from bank clients' loan demand – will exert upward pressure on local interbank rates to increase the HIBOR-LIBOR spreads.

Foreign exchange operations by the HKMA

With the strengthening of the currency board arrangements over the years, the foreign exchange operation by the HKMA has become largely passive, mainly in response to banks' triggering of the CU. These operations could affect the HIBOR-LIBOR spreads through their influence on the supply of domestic interbank

liquidity. An increase in the supply of domestic interbank liquidity caused by the HKMA's foreign exchange operation could have a knock-on effect on HIBORs and therefore decrease the HIBOR-LIBOR spreads (Chart B3.3). However, the negative relationship between the foreign exchange operation and the HIBOR-LIBOR spread has become much weaker following the global financial crisis due to abundant interbank liquidity and interest rates heading towards zero.

Chart B3.3
Interest rate spreads and HKMA's foreign exchange operations



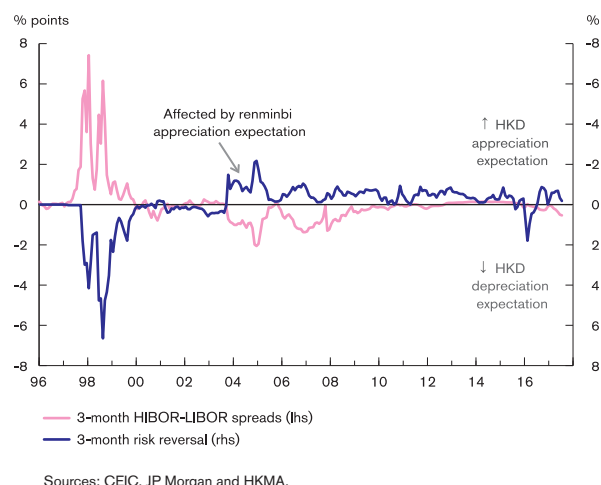
Equity return differences between Hong Kong and the US

The difference in the performances of the Hong Kong and US equity markets could generate short-term Hong Kong dollar flows of funds that temporarily affect HIBOR-LIBOR spreads. More specifically, a strong appetite for Hong Kong dollar assets tends to induce Hong Kong dollar inflows into the non-bank private sector and helps keep the HIBORs relatively low. Indeed, the HIBOR-LIBOR spreads and the difference between the monthly returns of the Hang Seng Index and the S&P 500 Index are negatively correlated.

Hong Kong dollar exchange rate expectation

Historical evidence indicates that the Hong Kong dollar-US dollar exchange rate expectations appear to be highly correlated with the HIBOR-LIBOR gaps (Chart B3.4). Theoretically, the uncovered interest parity postulates that, at equilibrium, the interest rate differential reflects the expected exchange rate movement. In reality, the expectation that the Hong Kong dollar would be allowed to follow the renminbi to appreciate against the US dollar was an important contributor to the large negative HIBOR-LIBOR spreads that emerged between 2003 and 2005.

Chart B3.4
Interest rate spreads and Hong Kong dollar exchange rate expectations



Risk factors

A large risk premium specific to the Hong Kong economy (e.g. macro-financial risks, etc.) could lead to a surge in HIBORs relative to LIBORs. The Asian financial crisis was a case in point. Taking into account coverage and data availability, we use the realised volatility (i.e. standard deviation of daily equity returns) of the Hang Seng Index relative to the S&P 500 Index as a proxy for the risk premium.

Empirical models

We estimate an autoregressive model to examine empirically the effect of different drivers on the HIBOR-LIBOR spreads for different tenors.¹⁵ Estimation results show that the above-mentioned variables (or indicators) have explanatory power over the HIBOR-LIBOR spreads. Their coefficients generally have the expected signs and many of them are statistically significant (Table B3.B). In particular, the estimated coefficients on the lag term of the HIBOR-LIBOR spread (between zero and one) suggest that the interest rate spread had a tendency to narrow over time, partly reflecting the force of arbitrage. Tighter interbank liquidity conditions as indicated by a higher Hong Kong dollar LTD ratio as well as a higher risk premium are found to be associated with an increase in the HIBOR-LIBOR spreads. More Hong Kong dollar inflows as suggested by higher equity market return in Hong Kong relative to the US, as well as Hong Kong dollar exchange rate appreciation expectations tend to decrease the spreads. The foreign exchange operation by the HKMA could also decrease the spreads, but this relationship became much weaker after the global financial crisis. This result lends support to the claim that in the interbank money market, the supply curve now intersects the demand curve on the flat portion of the demand curve so that changes in the supply (e.g. the Aggregate Balance) exert little impact on the HIBOR-LIBOR spreads.

Table B3.B

Estimation results from the autoregressive models

Model: $\text{spread}(t) = \text{average spread} + \alpha \text{ spread}(t-1) + \beta \text{ variables}(t) + \varepsilon(t)$				
Explanatory variables	Overnight model	1-month model	3-month model	12-month model
HIBOR-LIBOR spread (lag)	0.43	0.38	0.54	0.74
Net FX operation by HKMA (Jan 1996 – Oct 2003)	–	–	–	–
(Nov 2003 – Sep 2008)	≈ 0	–	–	–
(Oct 2008 – Now)	≈ 0	≈ 0	≈ 0	≈ 0
HKD LTD ratio	+	+	+	+
HK-US stock return diff.	–	–	–	–
HKD/USD expectation	–	–	–	–
Risk premium	+	+	+	+

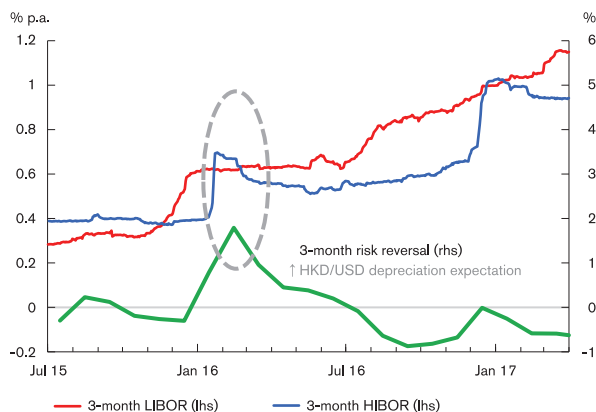
Note: Grey entries indicate statistically insignificant estimates.

Source: HKMA staff estimates.

Our model can help explain why the HIBOR-LIBOR spreads could fluctuate in the absence of any change in the Aggregate Balance or foreign exchange operations by the HKMA. For example, decomposition results from our models suggest that the fluctuations in term HIBOR-LIBOR spreads following the US rate hikes in late-2015 and late-2016 were driven by swings in the Hong Kong dollar-US dollar exchange rate expectations amid a stable Aggregate Balance (Chart B3.5). In particular, this expectation variable explained over 70% of the predicted increase in the 3-month HIBOR-LIBOR spread in the first two months of 2016. Similar decomposition results were found in the December 2016 episode when the HIBOR-LIBOR spreads also increased rapidly, although anecdotal evidence suggests that ad hoc factors including the anticipation of US money market reform and year-end funding demands also had an impact.

¹⁵ For more details on the autoregressive models and estimation results, see Cheung et al. (2017).

Chart B3.5
The impact of Hong Kong dollar expectations
on the recent movements in the HIBOR-LIBOR
spreads



Sources: CEIC, JP Morgan and HKMA.

Concluding remarks

This Box provides a conceptual understanding of the fundamental drivers of the HIBOR-LIBOR spreads. The size of the HIBOR-LIBOR spreads is found to be affected not only by interest rate arbitrage activities, but also interbank liquidity conditions, the Hong Kong dollar exchange rate and fund flows, and risk factors. In particular, although arbitrage activities could narrow the HIBOR-LIBOR spreads, such a process does not necessarily involve triggering the CU in the short run and hence the foreign exchange operations by the HKMA. We then apply the model to explain the recent fluctuations of HIBORs despite a stable Aggregate Balance, and illustrate that movements in the term HIBOR-LIBOR spreads during 2016 were, in part, driven by swings in the Hong Kong dollar-US dollar exchange rate expectations.

Box 4

Saf havenness of the Chinese renminbi¹⁶

Introduction

Following a quarter of phenomenal growth, Mainland China has become the world's largest trading nation, accounting for more than 12% of world exports and 10% of imports. This, coupled with a more-than-twofold expansion of foreign direct investment in Mainland China from 2005 to 2015, has made the renminbi one of the most commonly used currencies for international payments.¹⁷ With its inclusion in the IMF's Special Drawing Right (SDR) basket in October 2016, the renminbi is now widely recognised as an international currency. Against this backdrop, we assess how safe this currency is as a financial asset.

What is safe havenness and how is it measured?

By "safe havenness", we refer to the extent to which a currency plays the role of a safe haven from the perspective of the investor. A safe haven usually relates to a place or shelter which can provide protection from being hurt in disastrous or catastrophic situations, such as wars and natural calamities. A safe-haven currency generally means one that retains its purchasing power in times of financial turmoil.

We use the currency option market to gauge the safe havenness of a currency, as it can provide the investor with a fast and efficient means of taking a position in a currency or hedging against the exchange rate risk of a foreign investment. However, it is imperative to note that the price of a call or put option alone cannot indicate

whether a currency is safe or risky. The reason is that in times of turbulence the prices of both the call and the put are likely to increase, as volatility rises. Therefore, we focus on the price difference between a call and a put option, which is known as the risk reversal of a currency. The risk reversal increases if there is heavier betting for the currency to rise, and *vice versa*. We argue that a currency is regarded as a safe haven when the risk reversal of the currency increases in market turmoil.

Methodology

When risk in global financial markets increases, investors will flee currencies regarded as risky to those perceived to be safe havens; and when risk reduces, investors will find it relatively more comfortable in holding assets denominated in riskier currencies. Therefore, the risk reversal of a currency should bear a positive relationship with risk aversion if the currency is thought to be safe (or its downside risk is lower) or a negative relationship if it is considered risky (or its downside risk is higher). We estimate this relationship by quantile regression, which can capture the relationship under extreme market conditions, i.e., a scenario of tail risk.¹⁸ Specifically, the empirical model is defined as:

$$\Delta RR_{it} = \text{const} + \beta_i \Delta \text{RiskAversion}_t + \gamma_i \Delta RR_{i,t-1} + \varepsilon_{it}$$

where RR_{it} is the risk reversal of currency i at time t , RiskAversion is the index of risk aversion, coefficient β_i measures the responsiveness of investors to an index of risk aversion, const and ε

¹⁶ The box is based on Fong and Wong (2017) "Safe havenness of the Chinese Renminbi", *HKMA Research Memorandum* No.10/2017.

¹⁷ Based on the Society for Worldwide Interbank Financial Telecommunication (SWIFT)'s December 2015 report, the renminbi ranks as the world's fifth most-used payment currency.

¹⁸ Specifically, the quantile level q is chosen to be either 0.95 or 0.05, depending on the sign of β_i estimated additionally by the ordinary least squares (OLS) method. If the sign of the OLS coefficient is significantly positive (negative), q will be set to be 0.95 (0.05). In the case of insignificance, q will be chosen to be the one giving a larger β_i in absolute value when estimating the quantile regression.

denote the constant and error term respectively. The Δ is the first difference operator, and the lag of ΔRR_{it} is used to control for serial correlation.

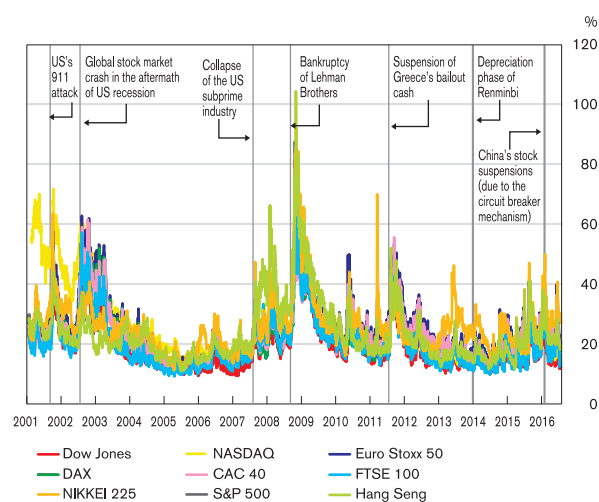
Data

Our data consist of the risk reversal for the twenty most-traded currencies (and gold for reference).¹⁹ These currencies include the five in the SDR basket, i.e., US dollar, euro, British pound, Japanese yen, and Chinese renminbi CNY as well as CNH.²⁰

The index of risk aversion is constructed by taking the first principal component of nine major stock market volatility indices for the S&P 500, Dow Jones Industrial Average, NASDAQ, Euro Stoxx 50, DAX, CAC 40, FTSE 100, NIKKEI 225, and Hang Seng index (Chart B4.1).

This study covers the sample period from 27 July 2011 (constrained by data availability) to 31 March 2017.²¹

Chart B4.1
Stock market volatility indices



Source: Bloomberg.

Empirical results

Chart B4.2 sums up the empirical results about the responsiveness of risk reversal (vis-à-vis the US dollar) to the risk aversion index for the whole sample period. With the notable exception of the Japanese yen, all currencies are regarded as riskier than the US dollar by dollar-based investors, as their estimated coefficients are negative.²² The Chinese renminbi is the safest among the riskier currencies for the whole period.

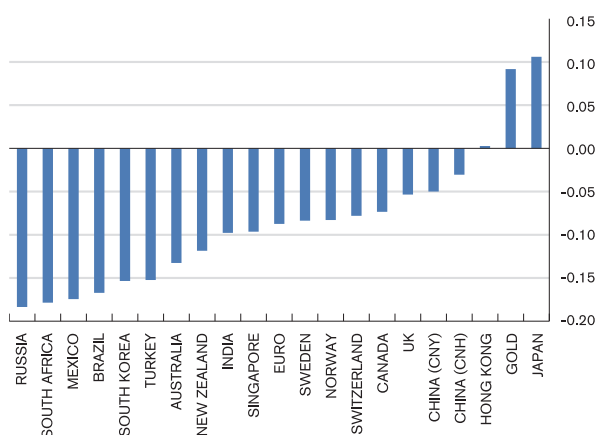
¹⁹ We use the three-month 25-delta risk reversal of each currency. An option with 25-delta moneyness level means that its price will move 25% for a 100% movement in the exchange rate of the underlying currency.

²⁰ Others include African rand, Australian dollar, Brazilian real, Canadian dollar, Hong Kong dollar, Indian rupee, Korean won, Mexico peso, New Zealand dollar, Norwegian krone, Russian ruble, Singapore dollar, Sweden krona, Swiss franc, and Turkish lira. The selection of these currencies is based on the currencies' daily average turnover in the 2016 *Triennial Central Bank Survey of FX and Over-the-counter Derivatives Markets* published by the Bank for International Settlements.

²¹ Within this period, the renminbi was broadly on an appreciating trend until the end of 2013, but since about the beginning of 2014, it has been on a depreciating trend. Fong and Wong (2017) also divide the sample period into two but the results are very similar.

²² The estimated coefficient of the Hong Kong dollar is very close to zero, suggesting that the currency is perceived to have similar safehavenness as the US dollar. This could be attributable to the Linked Exchange Rate System. Meanwhile, the Swiss franc ranked lower than the British pound and Canadian dollar in terms of safehavenness during our sample period. This could be due to the turmoil triggered by the Swiss National Bank's unexpected decision to abolish the franc's peg to the euro in early 2015.

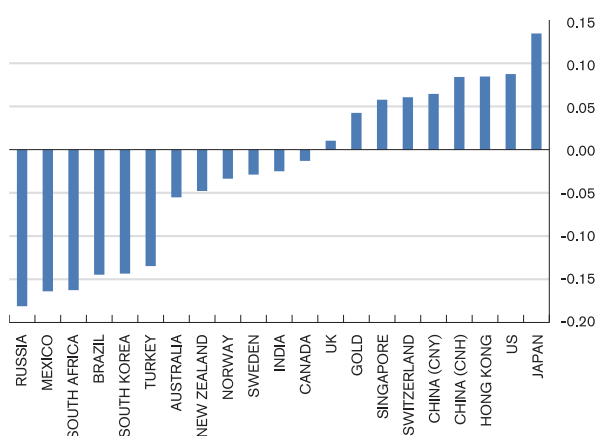
Chart B4.2
Responsiveness of risk reversal (vis-à-vis the US dollar) to risk aversion index



Source: HKMA staff estimates.

Of the risk reversals vis-à-vis the euro for the whole sample period, there are comparatively more positive coefficients, with that of the Japanese yen being the largest, followed by those of the US dollar, Swiss franc, and a few Asian currencies (Chart B4.3). This suggests that, in times of market turmoil, these currencies are regarded as safe havens by euro-based investors. Again, the Chinese renminbi is generally regarded as safer than the euro and also among the safest.

Chart B4.3
Responsiveness of risk reversal (vis-à-vis the euro) to risk aversion index

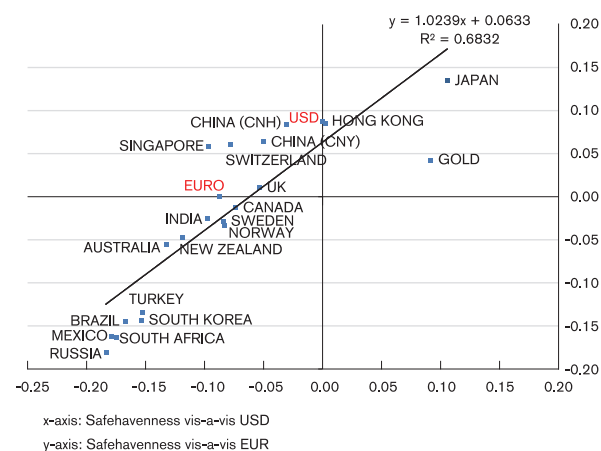


Source: HKMA staff estimates.

In addition, the CNY and CNH register very similar levels of safehavenness from the perspectives of both dollar-based and euro-based investors, despite the fragmented markets. The CNH consistently enjoys a higher safe-haven status than the CNY, albeit only marginally, which may be due to the stronger price discovery process of the offshore market.²³

Finally, in order to compare the perception of dollar-based and euro-based investors regarding the safe-haven status of the currencies, we have a scatter plot of their respective safehavenness for the whole sample period (Chart B4.4). As can be seen, the slope of the best-fitted regression line is very close to one, suggesting that the safehavenness of a currency is, on average, viewed to be about the same by both groups of investors.²⁴

Chart B4.4
Currency safehavenness vis-à-vis the US dollar against that vis-à-vis the euro



Source: HKMA staff estimates.

²³ For details, see Cheung et al.(2016), "The Renminbi Central Parity: An Empirical Investigation", *HKIMR Working Paper No.10/2016*, and Cheung et al. (2017) "The RMB Central Parity Formation Mechanism after August 2015: A Statistical Analysis", *HKIMR Working Paper No.06/2017*.

²⁴ The fact that the best-fitted regression line has a positive intercept suggests that the US dollar is regarded as safer than the euro.

Concluding Remarks

The study estimates the safehavenness of the Chinese renminbi in its onshore and offshore markets along with other most traded currencies, including those in the SDR basket, based on the behavior of their risk reversals under extreme market conditions. The empirical results found that the CNY and CNH rank consistently quite high on the scale of currency safehavenness by both dollar-based and euro-based investors. Within the SDR basket, they are regarded as riskier than the Japanese yen and US dollar, but safer than the euro and British pound.

Asset markets

Hong Kong equity prices rose further on the back of optimism about the global economy and corporate earnings. However, while volatilities hovered near all-time low levels, there are signs that investors have become more cautious about the possibility of a “black swan” event. The Hong Kong dollar debt market expanded steadily amid fund inflows, while the offshore renminbi debt market experienced further contraction. The residential property market became buoyant again, although housing price growth showed signs of moderation following the macro-prudential measures introduced in May.

4.3 Equity market

The Hong Kong equity market rose further in the review period, with the Hang Seng Index (HSI) advancing to a 27-month high in late August (Chart 4.17). The rally reflected optimism that the global economy and corporate earnings remained on track for sustained growth. In line with the bullish sentiment, the local market registered net fund inflows since February, in contrast with the preceding two years when net fund flow was largely negative (Chart 4.18). Meanwhile, the decision by the Morgan Stanley Capital International (MSCI) to include Shanghai and Shenzhen listed A-shares into its Emerging Markets Index was a milestone for global participation in Mainland stocks, although market reaction to the long-awaited news was muted.²⁵

Against the backdrop of the strong rally, market volatilities remained relatively subdued despite geopolitical risk events, such as tension on the Korean Peninsula and more frequent terrorist attacks in Europe, with the option implied volatility of the HSI (VHSI) hovering near its all-time low (Chart 4.19). However, the SKEW Index (also known as the “Black Swan Index”, a measure of the tail risk for the US market) remained well above its long-term historical average, suggesting that downside protection was in high demand.²⁶ This, in turn, implies that a tangible possibility of a black swan event has been priced into the US market. Should a shock occur, the spillover to the local market could be substantial given Hong Kong’s high degree of openness.

Overall, the HSI and the Hang Seng China Enterprises Index (HSCIEI), also known as the H-share index, increased by 17.8% and 10.1% respectively between March and August, with the VHSI staying in a relatively low range of 10% to 20%.

²⁵ MSCI Inc. announced on 20 June 2017 that it would include China A shares in the MSCI Emerging Markets Index beginning in June 2018. The 222 China A Large Cap stocks to be included would represent approximately 0.73% of the weight of the index on a pro forma basis.

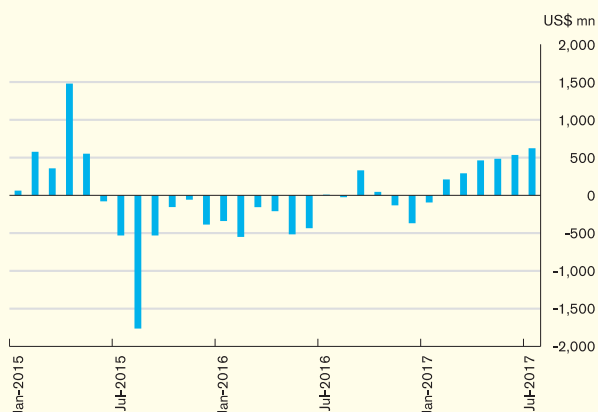
²⁶ The SKEW Index is calculated by the Chicago Board Options Exchange from the prices of S&P 500 out-of-the-money options. A SKEW value of 100 means that the probability of outlier negative returns at a 30-day horizon is negligible. As SKEW rises above 100, the left tail of the S&P 500 returns distribution acquires more weight, suggesting that the probability of outlier negative returns become more significant. For details, see <https://www.cboe.com/products/vix-index-volatility/volatility-indicators/skew>.

Chart 4.17
Equity prices in Hong Kong



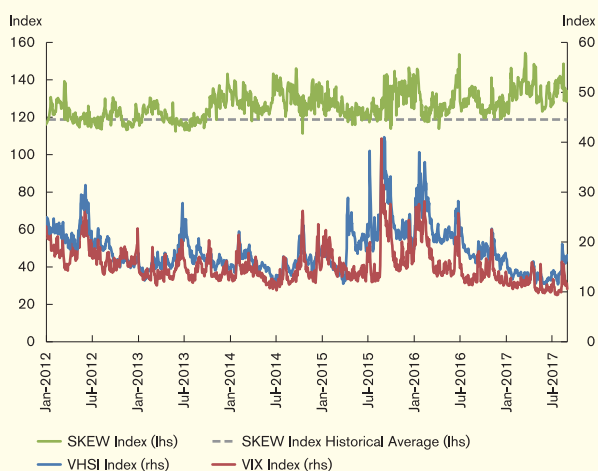
Source: Bloomberg.

Chart 4.18
Equity fund flows into Hong Kong



Source: EPFR Global.

Chart 4.19
Option-implied volatilities of the HSI and S&P 500, and the SKEW Index



Sources: Bloomberg and HKMA staff estimates.

The price discrepancy between stocks listed on the Mainland and Hong Kong markets widened moderately during the review period. By the end of August, the Hang Seng China AH Premium Index had increased by around 8.7% from the level at the end of February (Chart 4.20). The widening of the price discrepancy could be attributable to disparities in the equity valuation between Mainland and Hong Kong investors, possibly because of lingering uncertainties surrounding the Mainland economy.²⁷

Chart 4.20
Hang Seng China AH Premium Index

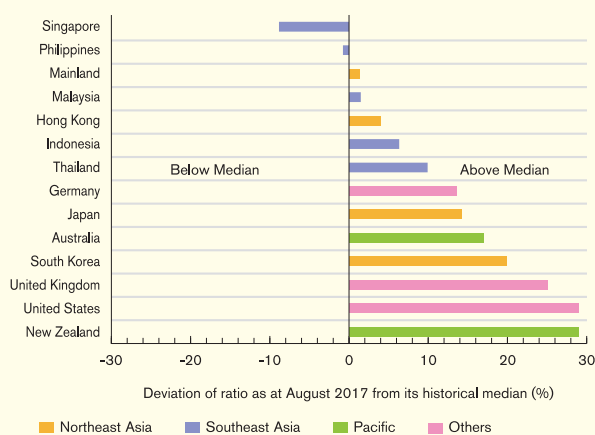


Source: Bloomberg.

²⁷ See Chung, Hui and Li (2013) "Explaining share price disparity with parameter uncertainty: Evidence from Chinese A- and H-shares", *Journal of Banking and Finance*, 37 (2013) pp1073–1083.

Driven by optimism over the economic outlook, the price-earnings ratio of Hong Kong stocks has climbed to a six-year high. However, the valuations of the Hong Kong market as measured by the cyclically-adjusted price-to-earnings (CAPE) ratio are still attractive compared with other major markets (Chart 4.21).²⁸ Looking ahead, the local equity market is expected to remain susceptible to external market conditions. In particular, in view of the SKEW index for the US, the tail risk is high for all stock markets, including Hong Kong.

Chart 4.21
Cyclically-adjusted price-earnings ratios of Asia Pacific and other major markets



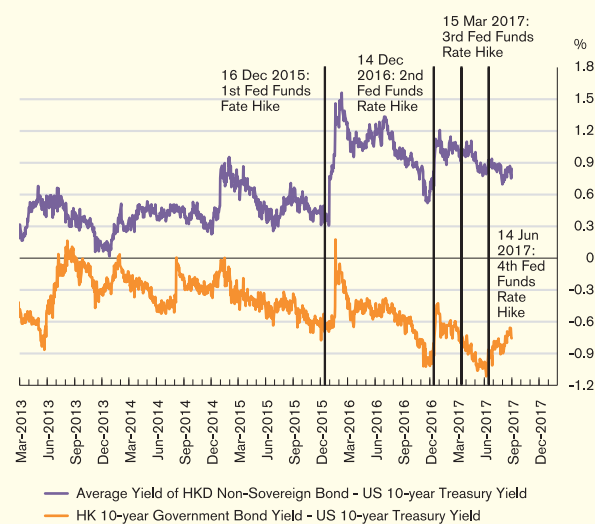
Sources: Bloomberg, CEIC and HKMA staff estimates.

4.4 Debt market

The Hong Kong dollar debt market registered a steady expansion in the first half of 2017, amid narrowing yield spreads and continued fund inflows since the beginning of the year. As the two hikes in the US federal funds rate target range so far this year were well anticipated by the market, the Hong Kong dollar bond market remained calm with the credit spread over US

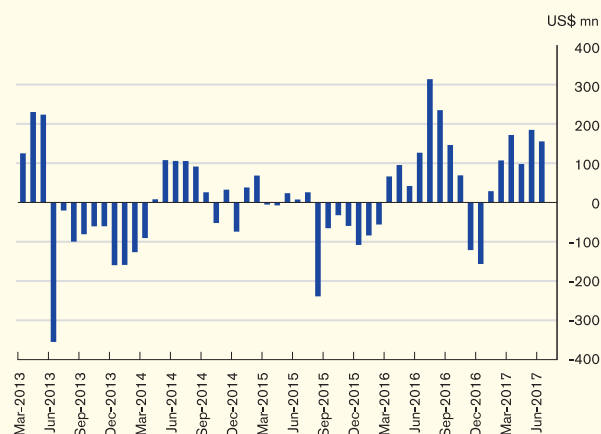
Treasury yields generally trending downwards (Chart 4.22). Against this backdrop, the Hong Kong bond market saw continued fund inflows during the first half of this year (Chart 4.23).

Chart 4.22
Hong Kong dollar yield spreads with the US 10-year Treasury yield



Sources: HKMA, Bank of America Merrill Lynch and Bloomberg.

Chart 4.23
Bond fund flows into Hong Kong



In view of the narrowing yield spreads and continued inflows, total Hong Kong dollar debt issuance increased by 7.4% year on year to HK\$1,621.4 billion. The 9.2% growth registered by the public sector and the 4.0% growth by overseas borrowers (including MDBs), more than offset the 11.3% decline by the domestic private

²⁸ The CAPE ratio is based on Campbell and Shiller (1988) "Stock prices, earnings, and expected dividends", *Journal of Finance*, 43(3), pp661–676. Unlike the conventional price-to-earnings ratio, the CAPE ratio uses a 10-year moving average of real earnings in the denominator to smooth out the cyclical effect on corporate earnings and provides a more consistent estimate on stock valuations over time.

sector (Chart 4.24). On the back of the continued increase in issuance, the total amount of Hong Kong dollar debt outstanding rose by 5.9% to HK\$1,751.6 billion at the end of June 2017, equivalent to 25.6% of Hong Kong dollar M3 or 22.1% of Hong Kong dollar denominated assets of the entire banking sector (Chart 4.25). The Exchange Fund remains the largest contributor to the growth, with debt outstanding rising by 5.8% to HK\$965.6 billion.

Chart 4.24
New issuance of non-Exchange Fund Bills and Notes Hong Kong dollar debt

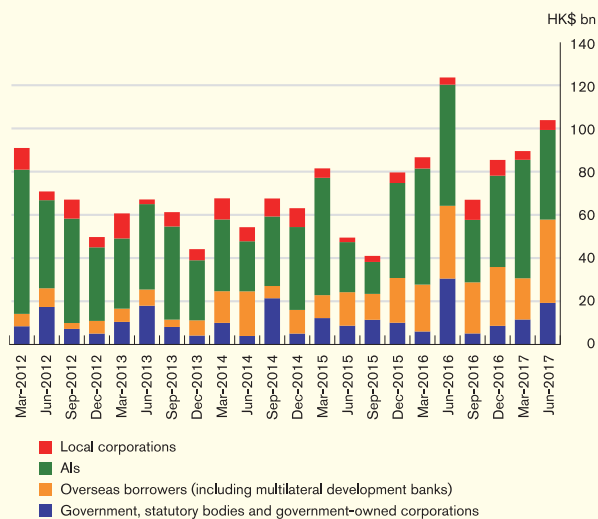
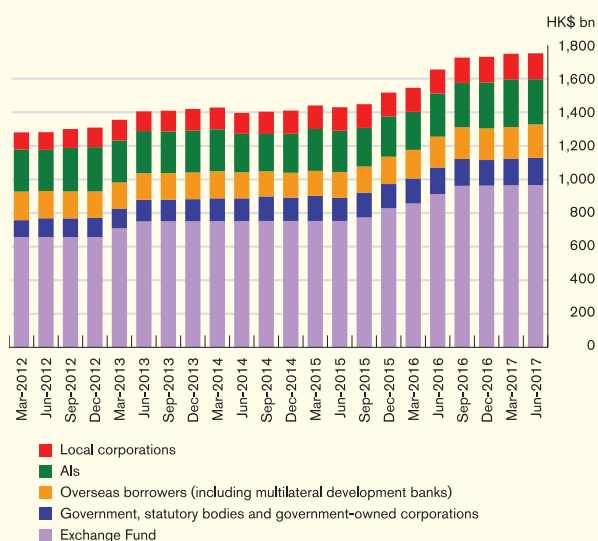


Chart 4.25
Outstanding Hong Kong dollar debt



The offshore renminbi debt market in Hong Kong continued to shrink, amid sizable decreases in CD issuance, and non-CD debt issuance by overseas issuers. In the first half of 2017, total offshore renminbi debt issuance amounted to RMB74.3 billion, declining by 40.1% year on year (Chart 4.26). Within the total, new non-CD debts issued by Mainland private issuers, Hong Kong issuers and overseas issuers dropped by 58.3%, 24.0% and 47.4% to RMB0.3 billion, RMB7.4 billion and RMB27.6 billion respectively. This was partly due to the persistently lower funding costs onshore (Chart 4.27).

Chart 4.26
New Issuance of offshore renminbi debt securities

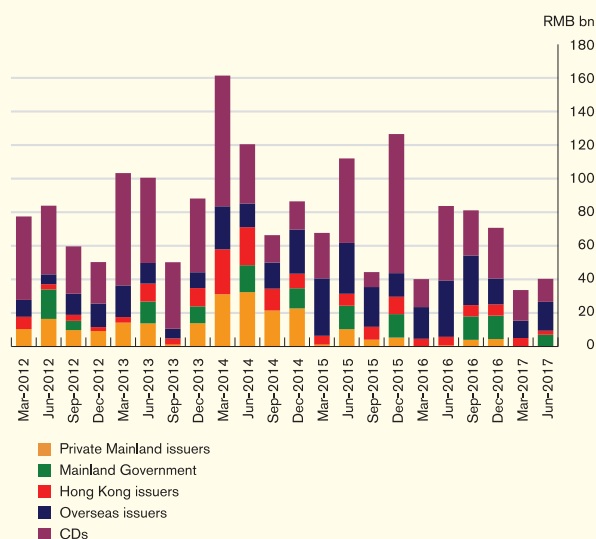
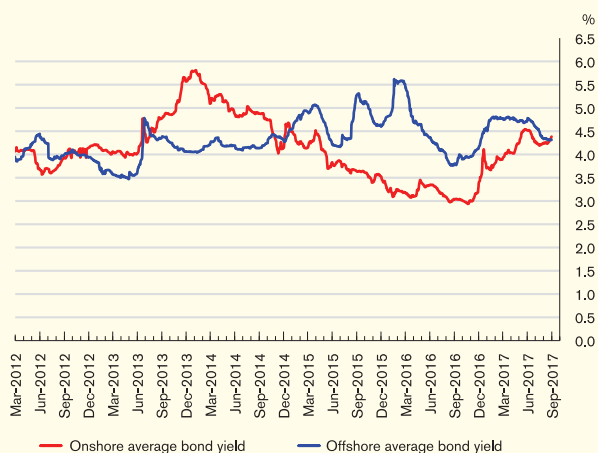


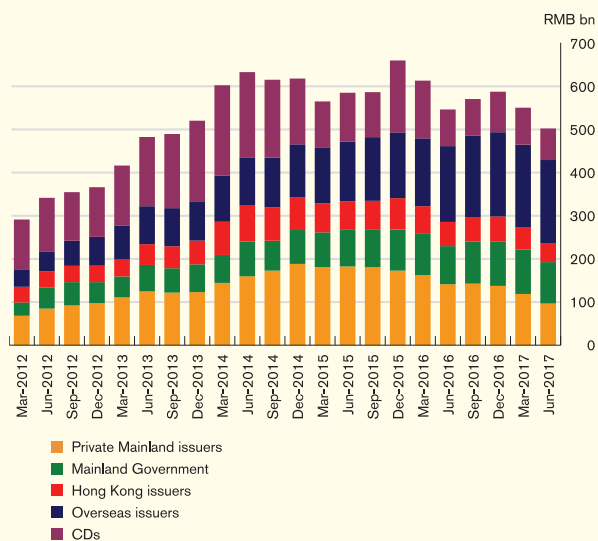
Chart 4.27
Average yields of onshore vs. offshore renminbi bond indices



Sources: Bloomberg, Hang Seng Indexes Company Ltd, and China Central Depository & Clearing Co., Ltd.

As a result of the decline in new debt issuance, offshore renminbi debt securities outstanding in Hong Kong contracted by 8.1% year on year to RMB502.2 billion at the end of June 2017 (Chart 4.28). The decrease in non-CD debt outstanding by private Mainland issuers and Hong Kong issuers together with the reduction in CDs outstanding more than offset the increase in outstanding debt by overseas issuers and the Mainland Government.

Chart 4.28
Outstanding amount of offshore renminbi debt securities by remaining tenor



Sources: Newswires and HKMA staff estimates.

Looking ahead, the near term development of the offshore renminbi bond market will be subject to the uncertainty of the renminbi exchange rate and the onshore-offshore funding cost gap. In the longer term, the offshore renminbi bond market is expected to interact more closely with the onshore market through various channels, including the Bond Connect launched in July, the first offshore futures market on Chinese sovereign bonds,²⁹ and the inclusion of onshore bonds into global indices.³⁰

4.5 Property markets

Residential property market

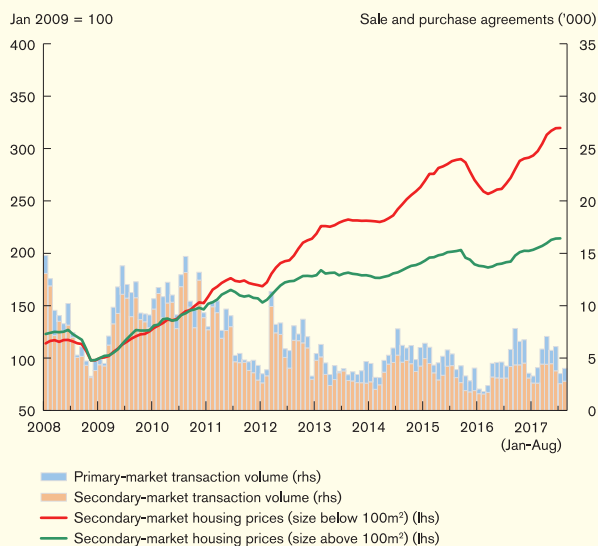
The residential property market turned buoyant again from March after a brief period of moderation at the beginning of the year. Amid strong market sentiment and intensifying competition for mortgage business among banks, average monthly housing transactions increased to about 6,200 units during March to June 2017, from 3,700 units in the first two months (Chart 4.29). In particular, transactions in the primary market increased to a level similar to that in the second half of 2016, while transactions in the secondary market also rose. Indeed, housing prices in the secondary market continued to climb, and in June surpassed the peak recorded in September 2015 by 9.9%. Prices of small and medium-sized flats (with a saleable area of less than 100m²) increased faster than that of large flats (with a saleable area of at least 100m²).

²⁹ On 24 March 2017, Hong Kong Futures Exchange Limited announced the introduction of the 5-year China Ministry of Finance Treasury Bond futures contract. The product is the first of its kind that introduces an offshore interest rate risk management tool in the renminbi fixed income market based on onshore Chinese government bonds.

³⁰ On 1 March 2017, Bloomberg launched the "Global Aggregate + China Index" and the "Emerging Market Local Currency Government + China Index" to include renminbi-denominated bonds into the global fixed income indices. On 7 March 2017, Citigroup announced that China's onshore bonds would be included in its Emerging Markets Government Bond Index, Asian Government Bond Index, and Asia Pacific Government Bond Index.

As a result of the rising property prices and the intensifying competition for mortgage business among banks, the HKMA introduced the eighth round of prudential measures for property mortgage loans on 19 May to strengthen banks' risk management and safeguard banking stability.³¹ Following these measures, housing price growth showed signs of moderation, while average transaction volume declined in July and August compared with the first half of the year.

Chart 4.29
Residential property prices and transaction volume



The recent market buoyancy renewed concerns about household affordability. The housing price-to-income ratio stood at 16.6 in the second quarter, higher than the 1997 peak of 14.6, while the income-gearing ratio reached 75.5%, much higher than the long-term average of about 50% (Chart 4.30).³² The buy-rent gap as a measure of

relative user costs remained at a high level of 176.1% as the residential rental yields remained low at 2.0–2.8% in June (Chart 4.31).³³

Chart 4.30
Indicators of housing affordability

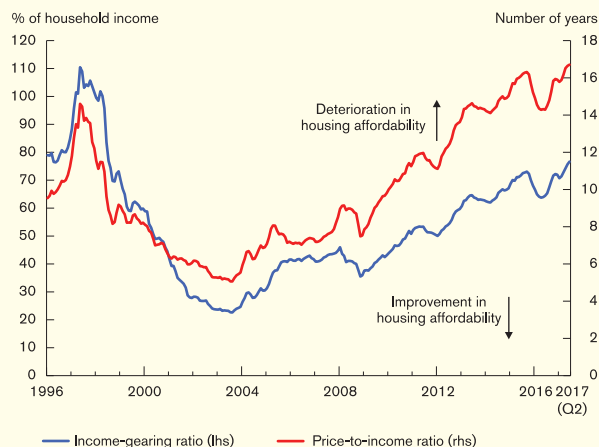
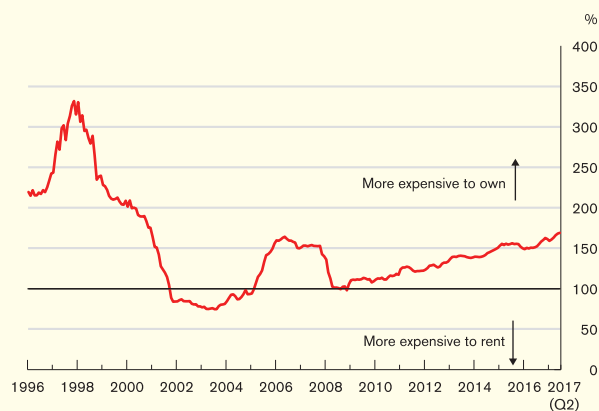


Chart 4.31
Buy-rent gap



³¹ For details, see "Circular on Prudential Measures for Property Mortgage Loans" issued by the HKMA on 19 May.

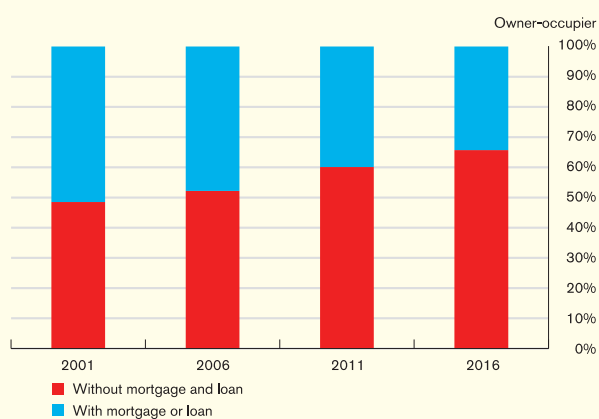
³² The price-to-income ratio measures the average price of a typical 50m² flat relative to the median income of households living in private housing. Alternately, the income-gearing ratio compares the amount of mortgage payment for a typical 50m² flat (under a 20-year mortgage scheme with a 70% loan-to-value (LTV) ratio) to the median income of households living in private housing. The income-gearing ratio is not the same as a borrower's actual debt-servicing ratio (DSR), which is subject to a maximum cap by the HKMA's prudential measures.

³³ The buy-rent gap estimates the cost of owner-occupied housing (under a 20-year mortgage scheme with a 70% LTV ratio) relative to rentals.

In general, although the stretched housing affordability environment implies a higher systemic risk arising from the excessive leverage of homebuyers, the eight rounds of macro-prudential measures for mortgage loans introduced by the HKMA since 2009 have effectively dampened such risks and strengthened banks' risk management and resilience. The average LTV ratio for new mortgages approved declined to 48% in July from 64% before the measures were first introduced, while the DSR also decreased to 34.0%.

Nevertheless, recent developments in new sources of home financing deserve careful monitoring as they could have implications when viewed from a broader financial stability perspective. Anecdotal evidence suggests that support to young homebuyers from parents has become more popular. Some young homebuyers have financed their purchases partially by the proceeds of re-mortgages or top-up mortgages of their parents' properties. While data on the number of property transactions with parental support are not available, this method of home financing is likely to have become more common because of the high property prices and the high share of owner-occupied properties without mortgages (Chart 4.32).

Chart 4.32
Share of owner-occupier with and without mortgages



Property developers have also been active in providing high-LTV first mortgages in the primary market. While the banking system is not directly exposed to such lending, there are concerns about the potential risk stemming from bank lending to these property developers. As a result, on 12 May the HKMA announced new measures to require banks to set aside adequate capital for exposures to property developers offering mortgages, by increasing the risk-weights for credit exposures to property developers offering mortgages.³⁴ While the market share of mortgages extended by property developers is currently small, the trend deserves close monitoring.

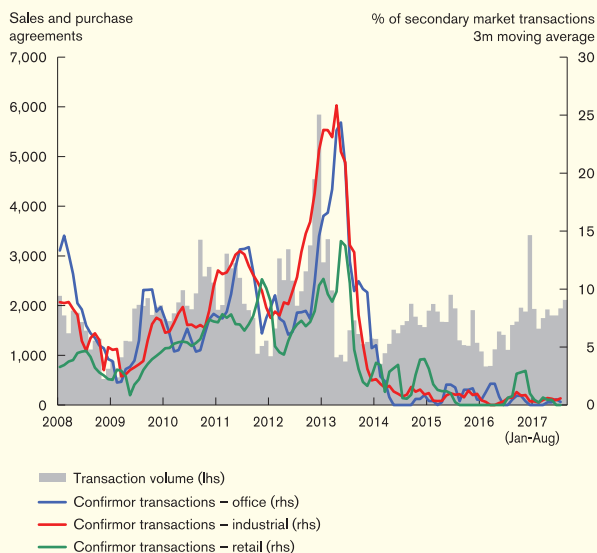
The outlook for the residential property market remains highly uncertain. In the near term, given that the expectation of low interest rates and housing shortage remain, positive market sentiment may continue to support property market. In addition, the strategies of property developers to promote sales, including offering mortgage plans for new launches with mortgage rates below the prevailing market rates, may also boost the demand. That said, the gradual improvement in housing supply might narrow the housing supply-demand gap which would contain property price growth. The potential impact of the Fed's balance sheet reduction and further US rate hikes on global and domestic financial conditions could also have a significant impact on the housing market further down the road.

³⁴ For details, see "Circular on Risk management for lending to property developers" issued by the HKMA on 12 May.

Non-residential property market

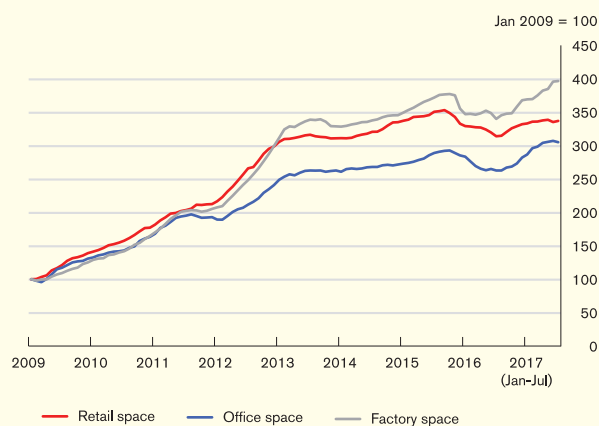
The non-residential property market saw robust activity in the first half of 2017. The average monthly transaction volume stayed at around 1,800 units, while speculative activities as indicated by confirmor transactions remained low (Chart 4.33). Analysed by segments, the price of office space increased at a fast pace of 8.8% in the first half amid strong demand for prime office locations, particularly on Hong Kong Island (Chart 4.34). Factory-space prices also picked up by 7.6% amid upbeat market sentiment in this segment, and the demand driven by private sector re-development plans. However, prices for retail premises grew slowly and fell in June despite retail sales and inbound tourism stabilising. Meanwhile, rentals of flatted factories kept pace with the respective price increase, although this was not the case with rentals of office space which lagged behind. The overall rental yields across segments declined somewhat to 2.5–2.9%.

Chart 4.33
Transactions in non-residential properties



Sources: Land Registry and Centaline Property Agency Limited.

Chart 4.34
Non-residential property price indices



Source: R&VD.

In the near future, the non-residential property market may grow steadily amid investors' continued interest in office space and flatted factories, while the attractiveness of prime retail locations may improve given the better outlook for retail sales and inbound tourism. Yet, the risk of rising domestic interest rates, uncertainties surrounding global financial conditions and capital flows could put downward pressure on the investment demand for non-residential properties. In addition, the supply of shopping centres is expected to increase in the coming two years, which could have an impact on the retail segment.