HONG KONG MONETARY AUTHORITY
香港金融管理局

HALF-YEARLY MONETARY AND FINANCIAL STABILITY REPORT

March 2024

This Report reviews statistical information between the end of August 2023 and the end of February 2024.

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

The impact of monetary tightening is increasingly being felt, with global economic growth slowing while inflation rates are easing further from their recent peaks. Nevertheless, the timing and pace of future interest rate cuts remain uncertain, and the "high for longer" scenario should not be discounted prematurely, particularly given the sticky services inflation in some advanced economies, especially the US.

Hong Kong's exchange rate and interbank market continued to trade in a smooth and orderly manner. Total deposits increased in the seven months since end-June 2023, while bank credit declined, reflecting subdued credit demand in part driven by higher borrowing costs. Meanwhile, the residential property market remained soft before showing some signs of stabilisation after the relaxation of policy measures in late-February 2024.

In the period ahead, the Hong Kong banking sector is expected to face challenges from a number of risk factors arising from uncertainties over the future path of US monetary policy, global growth prospects, and geopolitical tensions. Banks should remain vigilant against the impact of these risk factors on the asset quality of their loan portfolios.

The external environment

During the review period, global growth showed notable regional divergences following the steepest interest rate hiking cycle in decades, with the US economy displaying greater-than-expected resilience but the Euro area economy stagnating amidst soft domestic and external demand. Global inflation rates eased further from their recent peaks, encouraging investors to shift their attention to the timing and pace of future interest rate cuts. Looking ahead, global growth is likely to remain subpar, with the US economy expected to decelerate and growth in the Euro area to remain subdued, while moderating inflation should open the door for major central banks to pursue policy-easing plans. However, while financial markets have rallied since late 2023 on rate cut expectations, the timing and pace of future interest rate cuts remain uncertain, given that the still-resilient US labour market may render core US inflation stickier than expected. Indeed, markets have recently pared back their rate cut expectations, which are now broadly in line with major central banks' forward guidance. The high global interest rate environment, should it persist, may pose headwinds to debt sustainability and interest-rate-sensitive sectors such as commercial real estate.

In Emerging Asia, economies saw continued economic growth in the second half of 2023 driven by robust domestic demand. Meanwhile, the recent exports recovery has benefited semi-conductors' exporters, while many regional economies continued to see sluggish export growth, suggesting that more time is likely needed for a broader-based trade recovery. Bond fund outflows from the region moderated amid rising US rate cut expectations in late 2023. Whilst inflation eased gradually along with lower energy prices, some economies continued to face the challenge of sticky service inflation, while the ongoing El Niño climate phenomenon could disrupt staple food production. Looking ahead, interest rate outlook in the region remains uncertain, with any rate cut potentially raising pressures on exchange rate and fund flows stability. Box 1 assesses the effect of the environmental, social and governance (ESG) attribute on mitigating fund outflows in response to macro-financial shocks. On the other hand, if high interest rates were to persist, the repayment capability of indebted firms and households could erode further. Borrowers who found it difficult to secure traditional financing sources (e.g. bank loans) might seek funding from private credit (i.e. non-bank financial intermediaries (NBFIs)). Box 2 studies the development and potential risks of private credit in the region.

In Mainland China, real gross domestic product (GDP) recorded slightly faster year-on-year growth in the fourth quarter of 2023 on improved overall investment activities, a reduced drag from net exports and a favourable base effect. In particular, the authorities strengthened fiscal policy supports to boost infrastructure investment by raising the 2023 budget deficit from 3% to around 3.8% of GDP, and vowed to satisfy the reasonable financing needs of property developers, regardless of their ownerships. For the outlook, the economic growth target for 2024 is set at about 5% for the second consecutive year, likely bolstered by stronger fiscal supports from the Central Government and better coordination of fiscal and monetary policies. However, the near-term economic outlook continues to face various challenges which include weak global growth, an uncertain geopolitical environment, a soft domestic housing market and lingering concerns about the local government financing vehicle debt risks.

The domestic economy

Economic activities in Hong Kong continued to pick up in the second half of 2023, although the momentum has slowed down somewhat compared to the first half of the year. The continued recovery was driven by the robust revival of inbound tourism and strong private consumption supported by a resilient labour market and various support measures rolled out by the Government. Investment spending increased against a low base of comparison, while sluggish merchandise exports remained the main drag on GDP. For 2023 as a whole, the economy resumed a positive growth of 3.2% after experiencing a contraction of 3.7% in the previous year.

Looking ahead, the domestic economy is expected to continue its recovery at a moderate pace. In addition to the ongoing revival of inbound tourism, the public infrastructure projects will also provide support to the economy. Meanwhile, private consumption would remain stable amid a steady labour market. Both private investment and merchandise exports are likely to stabilise, with the former being supported by the Government's campaigns on attracting businesses to Hong Kong and the latter picking up alongside the expected global tech cycle recovery. Against this background, the Government forecasts real GDP growth for the whole of 2024 in the range of 2.5%–3.5%. The cautiously optimistic outlook is subject to a number of uncertainties and risks, including those stemming from the US policy rate path, the prospects for global economic growth, the recovery pace of the global tech cycle, and heightened geopolitical tensions.

The labour market remained resilient, with the unemployment rate staying low at 2.9% in February 2024. Looking ahead, further improvement in the domestic economy is expected to render support to labour demand, while the various labour importation and talent attraction schemes launched by the Government would help address manpower shortages.

Local inflation remained moderate over the past few months as external price pressures receded. In the near term, local inflation pressures will likely stay mild, even though domestic costs may face further upward pressures as the economy improves, and the housing rental component may gradually pick up.

Monetary conditions and capital flows

The Hong Kong dollar (HKD) strengthened between September and November 2023, mainly driven by seasonal corporate funding needs, buying flows on firmer HKD interest rates and net buying flows through the Southbound Stock Connect. It remained broadly stable in December 2023 but moderated in early 2024 amid softened liquidity. As the Convertibility Undertakings have not been triggered since May 2023, the Aggregate Balance of the banking system remained little changed, closing at HK$44.8 billion at the end of February 2024, and the day-to-day interbank operations and settlement activities among banks have continued to operate in a smooth and orderly manner.

Hong Kong's interbank market also continued to trade in a smooth and orderly manner. The Hong Kong Interbank Offered Rates (HIBORs) headed higher in September 2023, partly reflecting corporate funding needs by the quarter end, and receded slightly stepping into 2024 as the seasonal demand for HKD funding faded. On the retail front, with the US Federal Reserve (Fed) maintaining its policy rate unchanged since July 2023, local banks kept their Best Lending Rates unchanged. At the end of the review period, the Best Lending Rates in the market ranged from 5.875% to 6.375%. Meanwhile, the average lending rate for new mortgages increased from 3.57% in July 2023 to 4.13% in January 2024, partly reflecting the increase in the cap of HIBOR-based mortgage rates.

Hong Kong's offshore renminbi (CNH) liquidity pool consolidated during the review period, with the total outstanding amount of renminbi customer deposits and certificates of deposit increasing to RMB1,068.8 billion at the end of January 2024. Both the amounts of outstanding renminbi loans and renminbi trade settlement continued to grow steadily. The average daily turnover of the renminbi Real Time Gross Settlement (RTGS) system stayed high at RMB2,063.6 billion in 2023.

Moving forward, the continuing development of Hong Kong's CNH ecosystem will further reinforce Hong Kong's role as the leading CNH business hub. On liquidity, the enhanced Currency Swap Agreement between the HKMA and the People's Bank of China (PBoC) enables the HKMA to provide the necessary liquidity support to the offshore market through its renminbi liquidity facilities. This provides a favourable environment for financial institutions to expand their renminbi-related activities and services. On products, the continuous efforts to upgrade and expand the family of Connect schemes between the Mainland and Hong Kong will widen the spectrum of renminbi products and tools for asset allocation and risk management, enabling two-way traffic between the two markets. The financial infrastructure is also being upgraded with the Central Moneymarkets Unit (CMU) undergoing a major overhaul to enhance its operational capacity and product offerings, with the aim of better supporting the growth of renminbi bond issuances and associated custodian services. The Multiple Central Bank Digital Currency Bridge (mBridge) project and Faster Payment System (FPS) linkage with digital renminbi (e-CNY) are making progress, with the aim to improve cross-border payment and settlement efficiency for commercial and retail users. With these developments, Hong Kong will continue to play a unique role in supporting Mainland's capital account opening, the development of the green finance market, as well as the Belt and Road and the Guangdong-Hong Kong-Macao Greater Bay Area initiatives.

Asset market

The global equity markets experienced a roller coaster ride during the review period. The MSCI World Index first declined in September and October 2023 amid the sustained high interest rates in major economies and the escalating geopolitical tensions, before registering a broad-based recovery on the back of prospective interest rate cuts by central banks in major advanced economies in 2024. In contrast to the rise in global equity prices, the local equity market declined during the review period, with the Hang Seng Index decreasing by 10.2% from the end of August 2023 to the end of February 2024.

In the debt market, the 10-year US Treasury yield reached a 16-year high of 5% in October 2023 on the back of strong economic data and persistent inflation pressure, before moving down amid signs of easing inflation in the US. Bond yields in Hong Kong have also moved lower from their recent peaks. Despite fluctuations in interest rates, new issuance in the Hong Kong debt market continued to register stable growth in 2023.

Looking ahead, both the local equity and debt markets will remain susceptible to uncertainties over the interest rate paths in major advanced economies, while the near-term economic performance of the Mainland and expectations on policy stimulus measures to prop up the economy will remain key drivers of sentiments in the local equity market.

During the review period, policy initiatives were introduced to foster the development of the debt market in Hong Kong. These include the issuance of a new batch of retail green bonds and the second digital green bond issuance under the Government Green Bond Programme, the issuance of the Hong Kong International Airport Retail Bonds, the Hong Kong dollar benchmark bonds issued by the Hong Kong Mortgage Corporation Limited, and the signing of a memorandum of understanding between the National Development and Reform Commission and the HKMA to strengthen communication and cooperation, and to facilitate the cross-border financing activities of Chinese enterprises, including bond issuance, by leveraging on Hong Kong's unique strengths in financial and professional services.

The residential property market remained soft in the second half of 2023 amid tightened financial conditions and deteriorated market sentiment. For 2023 as a whole, the total transaction volume declined by 4.5% from 2022 to a record-low of 43,002 units, while housing prices recorded a decrease of 6.9%.

Having considered prudently the overall situation, the Government has successively announced the adjustment of the demand-side management measures for residential properties in October 2023, and the cancellation of these measures in late-February 2024. In tandem, the HKMA also suitably adjusted the countercyclical macroprudential measures for property mortgage loans and other related supervisory requirements on property loans, after detailed analyses and having considered that there was room to make these adjustments, while continuing to maintain banking stability and ensuring the proper risk management of property lending by banks. The HKMA will continue to monitor market developments closely and introduce measures to safeguard banking stability as conditions in the property market evolve. Following all the above policy adjustments, the housing market saw signs of stabilisation in March.

With the downward adjustments in housing prices, the estimated number of residential mortgage loans (RMLs) in negative equity increased to 25,163 cases at end-December 2023. These cases were related to bank staff housing loans or RMLs under the Mortgage Insurance Programme (MIP), and hence have in general a very low delinquency ratio given MIP's strict requirements on the applicants' repayment ability. In a wider context, the HKMA's macroprudential measures introduced since 2009 have helped contain household leverage and strengthen banks' risk management for mortgage loans. With these measures, the average loan-to-value (LTV) ratio for new RMLs remained largely stable at about 59% in January 2024 and the corresponding debt servicing ratio (DSR) also stayed at around 40%. In addition, over half of the private housing units do not carry any outstanding mortgages as of end-2023. Overall, the systemic risks relating to banks' RMLs are properly managed on various fronts.

The residential property market outlook is subject to a number of uncertainties and risks. On one hand, factors such as the elevated mortgage rates, accumulated private housing supply, and an uncertain external economic outlook may continue to exert pressures on the market in the near term. On the other hand, the removal of the demand-side management measures for residential properties, coupled with the expectation of interest rate cuts by the US Fed this year and the Government's policies to attract businesses and talents, may render support to the market. Box 3 presents an initial analysis on the impact of climate change on Hong Kong housing prices.

The commercial real estate market remained sluggish in the second half of 2023. Along with reduced transaction volume, the prices for office spaces, retail premises, and flatted factories subsided amid tightened financial conditions. The leasing market showed mixed performance, with rentals of retail premises edging up, while rentals of office spaces remaining under pressure amid high vacancy rates and a challenging external environment. After detailed analyses, the HKMA also adjusted the countercyclical macroprudential measures for non-residential property mortgage loans with effect from 28 February 2024.

Looking ahead, the commercial real estate market's outlook varies across segments. On one hand, the retail segment is expected to benefit from the improving domestic consumption and inbound tourism, although the strong recovery of outbound tourism may partly offset the benefit. On the other hand, the capital values of offices may remain under pressure due to high vacancy rates amid the completions of new upcoming supply. That said, the inclusion of commercial real estate as a permissible investment in the Government's new Capital Investment Entrant Scheme (CIES) might provide some support to the market.

Banking sector performance

The profitability of retail banks continued to improve, with the return on assets rising to 0.99% in the second half of 2023 compared with 0.80% in the same period of 2022. The improvement in profit was mainly contributed by increases in net interest income and income from investments held for trading. This was partly offset by an increase in loan impairment charges.

Reflecting subdued credit demand in part driven by higher borrowing costs, total loans and advances of all authorized institutions (AIs) decreased by 3.6% for the year 2023 as a whole. On a half-yearly basis, bank credit declined by 3.1% in the second half of 2023, which was driven by decreases in both domestic loans (comprising loans for use in Hong Kong and trade financing) and loans for use outside Hong Kong. Meanwhile, the classified loan ratios of all AIs slightly increased during the second half of 2023, but remained at a healthy level.

Overall, the Hong Kong banking sector continued to be resilient, underpinned by the robust capital and liquidity positions. The consolidated total capital ratio of locally incorporated AIs stood high at 21.1% at the end of December 2023, well above the international minimum requirement of 8%. The average Liquidity Coverage Ratio of category 1 institutions and the average Liquidity Maintenance Ratio of category 2 institutions were 178.6% and 65.7% respectively in the fourth quarter of 2023, well above their statutory minimum requirements.

Given the significant cross-border lending of the Hong Kong banking sector, particularly to the Asia-Pacific region, it is important to examine the debt servicing ability of corporates in the region under the current macro-financial environment. Findings in Box 4 suggest that the additional cash buffers accumulated by corporates in the region during the pandemic have played an important role in mitigating the credit risk impact arising from higher funding costs and lower economic growth. This may help explain why corporate defaults in the region have not increased notably so far. However, signs of depletion in cash buffers have appeared. More corporates in the region may see repayment difficulties if the high interest rate and weak economic growth environment persist. Banks should therefore remain vigilant and carefully assess the possible negative impacts on their corporate loan portfolios.

Going forward, the Hong Kong banking sector is expected to face challenges from a number of risk factors arising from uncertainties over the future path of US monetary policy, global growth prospects, and geopolitical tensions. Banks should remain vigilant against the impacts of these risk factors on the asset quality of their loan portfolios.

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

Following the steepest interest rate hiking cycle in decades, global inflation subsided and market attention shifted to the timing and pace of future rate cuts. Global growth is likely to remain subpar in 2024 as the lagged effect of monetary tightening is increasingly felt, while moderating inflation should allow major central banks to pursue some policy easing. That said, upside risks to services inflation in major advanced economies (AEs) amid tight labour markets suggest that the "high for longer" scenario remains a possibility. The high global interest rate environment, should it persist, may pose headwinds to debt sustainability and interest-rate-sensitive sectors such as commercial real estates (CRE).

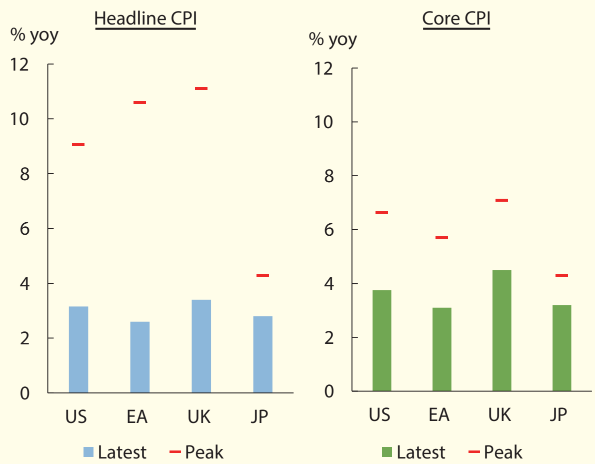
In emerging Asia, foreign exchange (FX) depreciation and fund outflow pressures subsided in late 2023 along with the rising rate cut expectations in the US. Nevertheless, headwinds such as weak external demand and uncertainty over the interest rate path will continue to weigh on regional economies.

In Mainland China, the economy saw slightly faster year-on-year growth in the fourth quarter of 2023 on improved overall investment activities, a reduced drag from net exports and a favourable base effect. In particular, the authorities strengthened fiscal policy support to boost infrastructure investment, and vowed to satisfy the reasonable financing needs of property developers regardless of their ownerships. The official economic growth target for 2024 is set at about 5% for the second consecutive year, likely bolstered by stronger fiscal support from the Central Government and better co-ordination of fiscal and monetary policies. However, the near-term economic outlook continues to face various challenges which include weak global growth, an uncertain geopolitical environment, and a soft domestic housing market.

2.1 External environment

Global economic activity displayed notable regional differences in late 2023 in the face of aggressive global monetary tightening. While the US economy continued to see solid job growth, the Euro area economy stagnated in the fourth quarter of 2023 amidst subdued domestic and external demand. Headline inflation rates in major AEs have eased considerably from their recent peaks, although core inflation rates have been stickier on the back of still-tight labour market conditions (Chart 2.1).

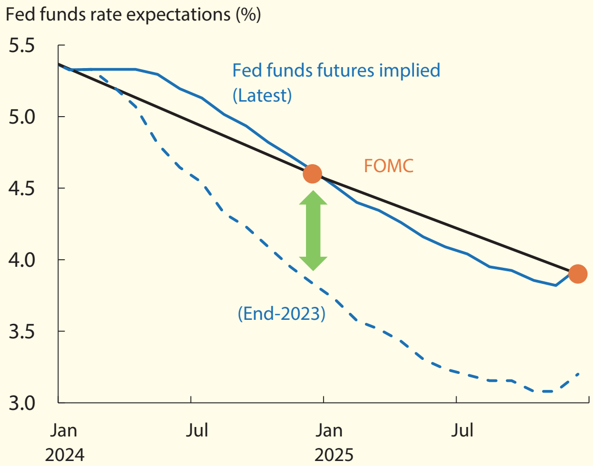
Chart 2.1
Headline and core consumer price index (CPI) inflation in selected major AEs



Notes: EA = Euro area, JP = Japan. Latest data as of February 2024.
Source: CEIC.

As global inflation softened, markets increasingly viewed global rates to have peaked, and shifted their attention to the timing and pace of future rate cuts. By end-2023, markets had priced in as many as six rate cuts by the US Federal Reserve (Fed) in 2024 (dotted blue line, Chart 2.2). Rate cut expectations, in turn, supported a broad-based rally in AE equity and bond markets since late 2023.

Chart 2.2
Market vs Federal Open Markets Committee (FOMC) predictions of the US Fed Funds target



Notes: Latest market expectations as of 21 March 2024. Market expectations are derived from Fed funds futures, while those of FOMC refer to their "dot plot" predictions.
Sources: Bloomberg and US Fed.

Looking ahead, global growth is likely to remain subpar as the impact of monetary tightening is increasingly felt. In January 2024, the International Monetary Fund (IMF) forecast global growth to hold steady at 3.1% in 2024, the same as in 2023, even though the headline projection masks considerable heterogeneity across regions. The US economy, in particular, is expected to decelerate amidst the lagged effects of monetary policy tightening and likely fiscal retrenchment, while growth in the Euro area economy is also expected to remain subdued. Moreover, the global outlook is clouded by a number of uncertainties.

First, the timing and pace of future US Fed rate cuts remain uncertain, given that the speed of the "last mile" of disinflation in the US will depend on the continued rebalancing of the labour market and a durable slowdown in shelter inflation, both of which have yet to show sufficient progress. Indeed, the US Fed has struck a more cautious tone, with its latest (March 2024) "dot plot" implying only three rate cuts in 2024 (orange dots, Chart 2.2) and more recent US Fed communications also pushing back against market expectations of early rate cuts. As a result, markets have recently pared back their rate cut expectations, and are now realigning the expected interest rate trajectory with the US Fed's forward guidance (Chart 2.2, solid blue line).

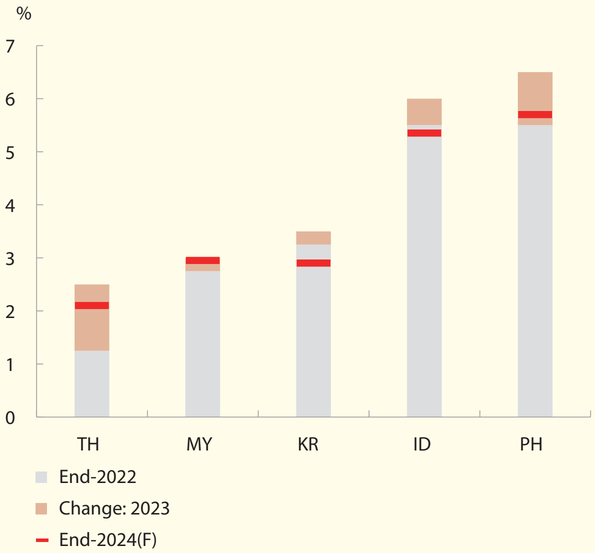
Should a slower-than-expected pace of disinflation constrain the leeway of global monetary easing, hidden vulnerabilities in the financial system that were accumulated during the earlier low-interest-rate environment could be exposed. For one, the global CRE sector has been under pressure in the midst of rising interest rates and post-pandemic structural changes such as a shift towards hybrid working and online shopping. In the US, the delinquency ratio of commercial mortgage-backed securities (CMBS) has already been on the rise since early 2023. Given small US banks' high degree of exposure to CRE loans, a sharper-than-expected CRE downturn might lead to renewed concerns over their capital adequacy. Moreover, corporates and sovereigns that accumulated debt during the earlier low-interest-rate environment could struggle to refinance.

Emerging Asian economies saw continued economic growth in the second half of 2023 driven by robust domestic demand. The recent recovery of electronics exports from key semi-conductor exporters in the region (i.e. South

Korea) suggested that the tech down cycle might have started to turn. Nevertheless, many Asian economies continued to see sluggish growth in goods exports, indicating that more time is likely needed for a wider trade recovery to be seen.

The region saw moderated bond fund outflows along with a stabilising exchange rate in late 2023, supported by lower long-term US Treasury bond yields amid rising US rate cut expectations. In 2023, most regional currencies had weakened by less than 5%, with even slight appreciation being seen in economies that maintained a wider positive policy interest rate differential vis-à-vis the US (IDR and PHP) (Chart 2.3).

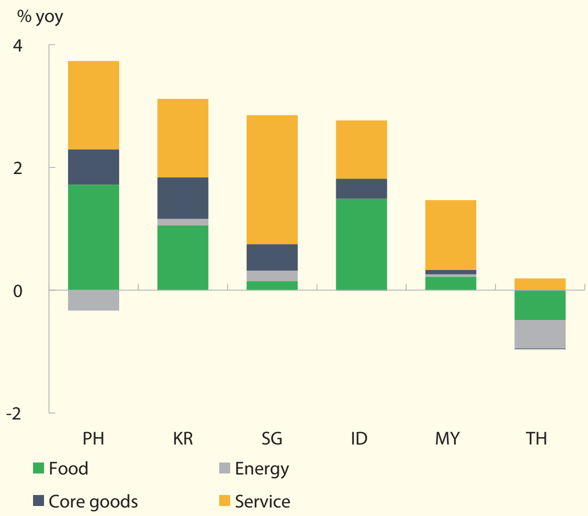
Chart 2.3
Emerging Asia: Policy rates



Note: Latest policy rate forecasts are taken in early Mar 2024.
Source: Bank for International Settlements, Bloomberg and HKMA staff calculations.

Inflation eased gradually across most of the region, mainly due to lower energy prices. However, regional AEs continued to face the challenge of sticky service inflation amid a tight labour market (i.e. South Korea and Singapore), while some regional economies saw elevated food inflation (e.g. the Philippines). Given that the ongoing El Niño phenomenon is expected to last at least until the second quarter, the potential disruption to agricultural staple food production (e.g. rice) will continue to cloud the regional inflation outlook, especially for those regional emerging market economies (EMEs) where food represents relatively higher weights in their CPI baskets (Chart 2.4).

Chart 2.4
Emerging Asia: Consumer price index (CPI) inflation by component



Note: For Malaysia and Singapore, the CPI data refer to Jan 2024; for other economies, the data refer to Feb 2024.
Source: CEIC and HKMA staff calculations.

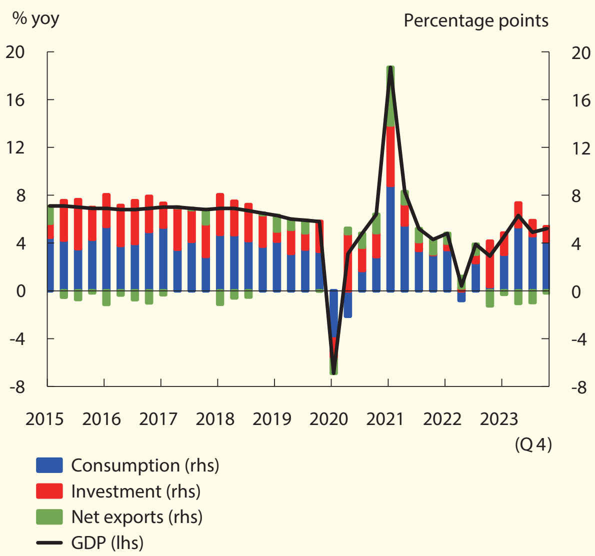
Looking ahead, the regional interest rate outlook remains uncertain as (1) inflation could be persistent due to a tight labour market and the El Niño climate phenomenon, and (2) concerns about FX depreciation and fund outflows will linger along with the uncertain US interest rate and global economic outlooks. Box 1 assesses the effect of the environmental, social and governance (ESG) attribute on mitigating fund outflows in response to macro-financial shocks. If high interest rates and tight financial conditions were to persist, indebted firms and households could face financing difficulties. Borrowers who found it difficult to secure traditional financing sources (e.g. bank loans) might seek funding from private credit (PC) (i.e. non-bank financial intermediaries (NBFIs)). Box 2 studies the development and potential risks of PC in the region.

2.2 Mainland China

Economic performance and policy responses

Mainland China's year-on-year real GDP growth quickened slightly to 5.2% in the fourth quarter of 2023 from 4.9% in the third quarter, due to improved overall investment activities amid rounds of policy support, a reduced drag from net exports, and a favourable base effect (Chart 2.5). In particular, market sentiment improved after the government announced in October 2023 the additional issuance of Central Government bonds worth RMB1 trillion to support natural disaster prevention, post-disaster reconstruction and related construction projects, thereby raising the 2023 budget deficit from 3% to around 3.8% of GDP. On an annual basis, real economic growth recovered from 3.0% in 2022 to 5.2% in 2023, meeting the official growth target of around 5%.

Chart 2.5
Mainland China: Contribution to GDP growth by demand component



Sources: CEIC, NBS and HKMA staff estimates.

In the near term, Mainland's economic recovery is expected to continue in 2024 on the back of supportive measures, especially strengthened fiscal support from the Central Government and better coordination of monetary and fiscal policies.[1] Nevertheless, the pace of recovery may be uneven. Domestically, the lacklustre real estate sector, lingering concerns about distressed property developers and the risks associated with local government financing vehicle debts could continue to exert pressure on domestic demand. Externally, exports are still facing headwinds from uncertain global growth outlook and heightened geopolitical tensions, although "New Three" products[2] may still record fast export growth and provide some support to overall trade performance. The official growth target for 2024 is set at around 5% for the second consecutive year, and the latest consensus forecasts project the Mainland economy to expand by 4.7% in 2024.

The headline CPI inflation was slightly below zero for most of the second half of 2023, mainly reflecting the decline in food (especially pork) prices from a high base and, to a lesser extent, a moderation in energy prices. However, the core inflation, which excludes food and energy prices, remained steadily positive[3]. Meanwhile, the headline unemployment rate was largely stable at around 5%, with those for 16–24 and 25–29 age groups (excluding students) standing at 14.9% and 6.1% respectively in December 2023[4].

1 The annual Central Economic Work Conference (CEWC) held in December 2023 and the Two Sessions held in March 2024 stressed the importance of policy coordination and vowed to strengthen the cross-cyclical and counter-cyclical adjustments of macro policies. The meetings also urged to stabilise expectations, growth and employment, and called for efforts to "pursue progress while ensuring stability, promote stability through progress, and prioritise development before addressing problems". In addition, the PBoC cut the required reserve ratio (RRR) for commercial banks by 50 basis points on 5 February 2024, which is expected to inject RMB1 trillion of liquidity into the market.

2 The so-called "New Three" products are, namely, electric vehicles, lithium batteries and solar cells.

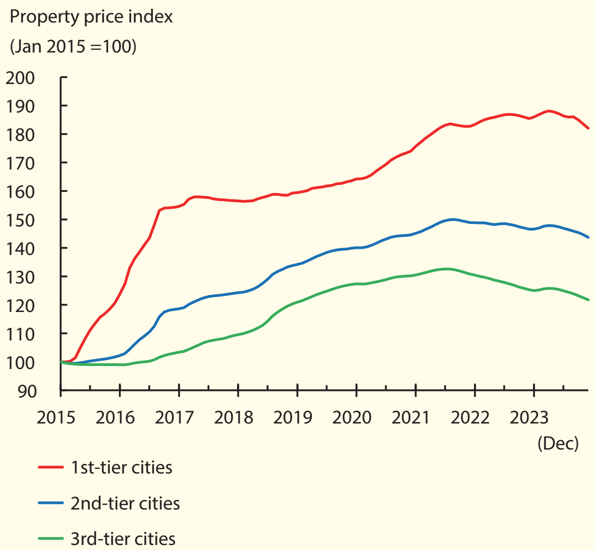
3 Pan Gongsheng, Governor of the PBoC, recently mentioned that since food prices will not fall persistently, the headline CPI inflation is expected to rise moderately going forward.

4 Note that the National Bureau of Statistics has refined its data compilation methodology and the new youth unemployment rate series started from December 2023.

Asset and credit markets

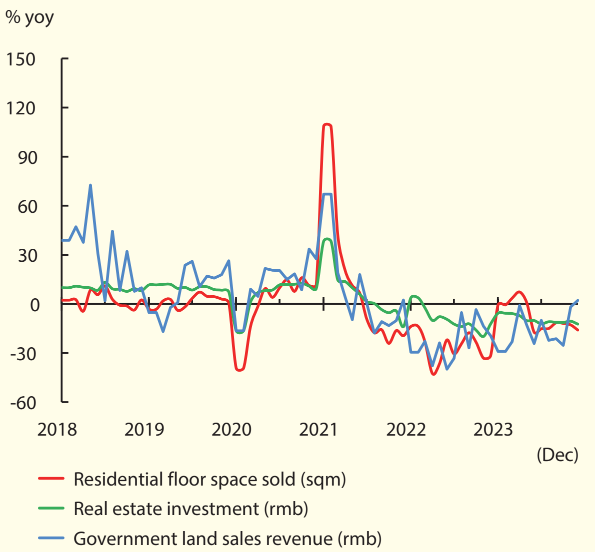
The Mainland property market remained sluggish in the second half of 2023, with housing prices seeing continued declines across all tiers of cities (Chart 2.6). Partly reflecting the fragile housing market sentiment, the contractions in residential floor space sold and real estate investment deepened, while the land sales revenue improved slightly (Chart 2.7).

Chart 2.6
Mainland China: Residential property prices by tier of cities



Sources: CEIC and HKMA staff estimates.

Chart 2.7
Mainland China: Property market activities



Sources: CEIC and HKMA staff estimates.

In light of the new demand and supply conditions in the property market, the authorities reiterated their supportive policy stance to stabilise the property market[5]. This included lowering the key mortgage rate[6] and urging financial institutions to meet the reasonable financing needs of property developers, regardless of their ownership types. Some concrete measures were rolled out accordingly, such as the "Three No-lowers" requirements for banks' real estate loans to developers and homebuyers,[7] the permission to provide uncollateralised bank loans to developers, and the approval to issue operating property loans to qualified developers. In addition, to promote the establishment of a new development model for the property sector in the long run, the authorities proposed the "Three Major Projects"[8]. The central bank's Pledged Supplementary Lending (PSL) facility, a tool established in 2014 for shantytown renovations, was relaunched to help finance the projects, with the outstanding amount of PSL reaching a three-year high of RMB3.4 trillion as of February 2024. At the city level, local governments continued to introduce city-specific policies to support basic and upgrading housing demand, such as reducing the districts where purchase restrictions apply and lowering the down payment ratio for first and second homes. In addition, some local governments have established a property financing coordination mechanism to meet the reasonable financing needs at the project level. This mechanism

5 As stressed in the twice-a-decade Central Financial Work Conference in October 2023 and the annual CEWC in December 2023.

6 The five-year Loan Prime Rate (LPR) was lowered by 25 basis points to 3.95% on 20 February, the largest reduction since 2019.

7 The "Three No-lowers" requirements are: (i) the growth rate of real estate loans of a bank is not lower than the industry average; (ii) the growth rate of loans to non-state-owned developers is not lower than the growth rate of the bank's average real estate loan; and (iii) the growth rate of residential mortgage loans of non-state-owned developers' properties is not lower than the growth rate of the bank's average mortgage loan.

8 The "Three Major Projects" refer to building affordable housing, renovating urban villages and constructing public facilities for both leisure and emergency uses.

includes the creation of a whitelist, which recommends eligible real estate projects for bank financing[9].

The overall risk in the Mainland banking sector remained manageable. The non-performing loan (NPL) ratios of state-owned banks stayed low and edged down to 1.26% in December 2023 from 1.29% in June 2023, while the NPL ratios of rural commercial banks picked up slightly but stayed at a manageable level (Table 2.A). The provision coverage ratio of large Mainland banks decreased slightly to 248% in December 2023 from 250% six months earlier, though still well above the regulatory requirement.

Table 2.A
Mainland China: non-performing loan (NPL) ratio by bank type

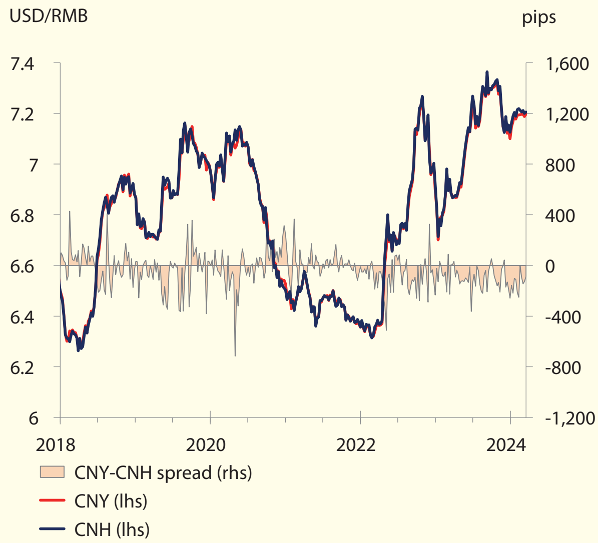
NPL ratio (%)	Dec 2022	Jun 2023	Dec 2023
State-owned commercial banks	1.31	1.29	1.26
Joint-stock commercial banks	1.32	1.29	1.26
City commercial banks	1.85	1.90	1.75
Rural commercial banks	3.22	3.25	3.34

Source: CEIC.

Exchange rate and fund flow indicators

While the onshore renminbi (CNY) depreciated against the US dollar in general for the first ten months of 2023, it strengthened in mid-November 2023 and stabilised within the range of 7.0–7.2 thereafter. The stabilisation of the CNY was supported by the US dollar weakness amid the expectation of policy rate cuts by the Fed in 2024, and the Mainland's gradual economic recovery and continued trade surplus. During the same period, the offshore renminbi (CNH) followed a similar pattern and traded slightly lower than its onshore counterpart (Chart 2.8). As for the indication of fund flows, the Northbound Stock Connect saw outflows in August 2023 but has since stabilised. For 2023 as a whole, there was a modest inflow into Mainland China under the Northbound Stock Connect (Table 2.B). More recently, the Northbound Stock Connect recorded the first monthly net inflow in February 2024 following a six-month net outflow. The onshore Mainland bond market also recorded sizeable inflows in the second half of 2023 under different schemes, with increased holdings by foreign investors (Table 2.B).

Chart 2.8
Mainland China: Onshore and offshore renminbi exchange rates against the US dollar



Sources: Bloomberg and HKMA staff estimates.

Table 2.B
Mainland China: Foreign fund flow indicators

(RMB bn)	H1 2023	H2 2023	2023	Oct 2023	Nov 2023	Dec 2023
Northbound Stock Connect	183	–140	44	–45	–2	–13
Northbound Bond Connect	104	284	388	46	114	87
CIBM Direct and QFI	447	700	1147	159	249	143
Change in foreign holdings in the interbank market	–111	393	282	42	251	181

Notes: Fund flows are measured by net buying flows for the Northbound Stock Connect, the Northbound Bond Connect and the CIBM Direct and QFI. "CIBM Direct and QFI" refers to the China Interbank Bond Market Direct Scheme and the Qualified Foreign Investor Scheme.
Sources: Wind, CFETS and HKMA staff estimates.

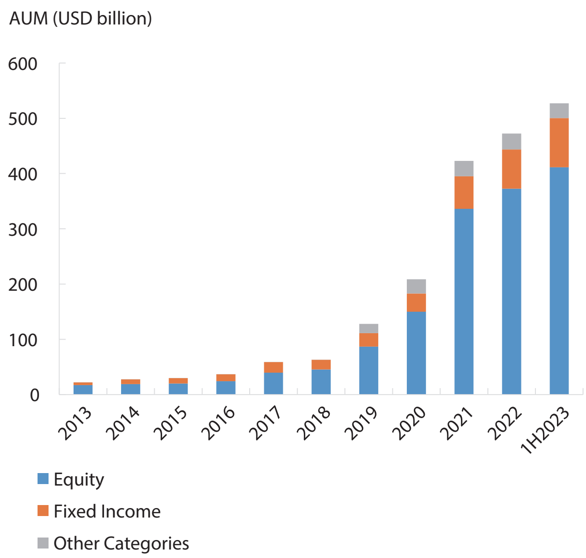
9 A total of 276 cities in 31 provinces had reportedly set up such mechanism as of late February, under which 162 projects in 57 cities have received bank financing totalling RMB29.4 billion by 20 February.

Box 1
ESG fund flows under shocks: Are they more resilient against macro-financial shocks?

Introduction[10]

Since the establishment of the Paris Agreement in 2015, ESG-focused investment products have become increasingly popular with investors. For example, the total assets under management (AUM) of ESG exchange traded funds (ETFs) have seen a multi-fold increase since 2019 (Chart B1.1).

Chart B1.1
The AUM of global ESG ETFs by category



Note: ESG ETFs are classified as alternative, commodity, equity, fixed income, mixed allocation, money market, private equity, real estate and speciality.
Sources: Bloomberg and HKMA staff estimates.

Along with the rising prominence of ESG as an investment attribute, researchers have become more interested in the potential differences ESG elements could make to investment performance, especially during periods of market turmoil. Previous studies showed that the ESG funds performed better than non-ESG funds during market crashes (Albuquerque et al., 2020; Pastor and Vorsatz, 2020). However, there is a lack of quantitative assessment that compares the ESG funds' sensitivity to macro-financial shocks to that of non-ESG funds. To fill this gap, this box uses fund-level data of global equity ETFs to estimate the response of fund flows to macro-financial shocks.

Data and methodology

We investigate the effect of the ESG attribute on fund flows in relation to macro-financial shocks. The sample includes 8,681 global equity ETFs listed on 51 domicile markets (developed markets: 73.9%; emerging markets: 26.1%)[11] with exposures to investment recipient economies across a wide spectrum of economic development (invest in AEs: 49.1%; invest in EMEs: 16.9%; hybrid investment: 34.0%)[12].

10 For details, please refer to Wang, Y., Chan, S. and Xiao, M., (2023): "ESG fund flows under shocks: Are they more resilient against macro-financial shocks?", HKMA Research Memorandum, No. 2023/06.

11 Our classification of developed markets follows the definition adopted in Fama and French (2012), which includes Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom and the United States. This definition has a high degree of overlap with the economy coverage of the MSCI World Index.

12 The information on geographical exposure is derived from the ETF prospectus, which describes the geographic area where the fund intends to invest in. Our classification of AEs and EMEs follows the IMF's classification.

We use a difference-in-differences regression specification (Equation 1) to estimate the effect of the ESG attribute on fund flows in response to macro-financial shocks:

$$FundFlow(\%)_{i,t} = \alpha_0 + \beta_1 ESG_i + \beta_2 Shocks_* + \beta_3 ESG_i \times Shocks_* + X_{i,t} + \gamma_i + \gamma_* + \epsilon_{i,t} \quad (1)$$

where $FundFlow(\%)_{i,t}$ is net fund flows of fund i at time t, in terms of share of the fund's total net assets (TNA) in the last period; ESG_i is a binary variable equals to one if fund i is classified as an ESG ETF, and equals zero otherwise; $Shocks_*$ represents three different types of shocks, namely market stress shock ($MktVol_{i,j,t}$), economic policy uncertainty shock ($stdEPU_{i,k,t}$), and global monetary condition shock (MPS_t)[13]; and $X_{i,t}$ represents a series of time-varying fund-specific controls, including ln(TNA), NAV, $Return$, and ln($OutShare$). The model controls for fund fixed effects (γ_i) with the category dummies allowing for unobserved fixed fund attributes, and γ_* that represents three different types of fixed effects[14]. The standard errors $\epsilon_{i,t}$ are clustered at the fund level. Our regression has the following three specifications:

- Specification with *market stress* ($MktVol_{i,j,t}$) compares the response of ESG and non-ESG fund flows in response to *market shocks* to the fund-domiciled market.

- Specification with *economic policy uncertainty* ($stdEPU_{i,k,t}$) compares the response of ESG and non-ESG fund flows in response to *economic shocks* to the fund-investing economy.

- Specification with *global monetary condition* (MPS_t) estimates the potential differences in the response of ESG and non-ESG fund flows to *monetary shocks* to all markets and economies.

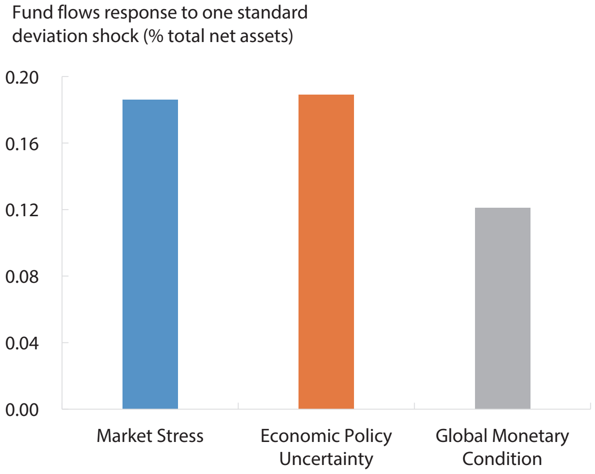
Empirical results

The coefficients (β_2) on $MktVol$ (-0.021), $stdEPU$ (-0.067), and MPS_{SPF} (-0.134) are all negative and statistically significant, suggesting that an increase in any type of macro-financial shocks could induce fund outflows. However, in the face of macro-financial shocks, the ESG attribute could mitigate fund outflows (Chart B1.2). The coefficients (β_3) on $ESG_i \times Shocks_*$ suggest that: (1) when *market stress* increases by one standard deviation, ESG funds could reduce 0.186% of fund outflows, compared to non-ESG funds; (2) when *economic policy uncertainty* increases by one standard deviation, the ESG attribute could reduce fund outflows for ESG funds by 0.189%, compared to non-ESG funds; (3) when *global monetary condition* increases by one standard deviation, the ESG attribute could reduce fund outflows for ESG funds by 0.121%, compared to non-ESG funds.

13 $MktVol_{i,j,t}$ represents *market stress* for fund i that is domiciled in market j at time t; $stdEPU_{i,k,t}$ represents economic policy uncertainty for fund i that has exposure to economy k at time t; and MPS_t represents global monetary condition at time t.

14 Depending on the $Shocks_*$, each estimation includes specific additional fixed effect variables. We control exposure-year fixed effect ($\gamma_{k,y}$) for market stress, domicile-year fixed effect ($\gamma_{j,y}$) for economic policy uncertainty, and exposure, domicile, year fixed effects ($\gamma_k + \gamma_j + \gamma_y$) for global monetary condition.

Chart B1.2
The "stabilising effect" of ESG attribute in response to shocks



Note: The chart shows the response of ESG funds to different types of macro-financial shocks compared to non-ESG ETFs. They are derived from the estimated coefficients of a fixed-effect regression.

Source: HKMA staff estimates.

We also examine the heterogeneity of the ESG's "stabilising effect" and found that the ESG's "stabilising effect" is more pronounced for emerging market-domiciled or EME-exposed ETFs, which can be explained by the fact that ESG plays a more important role in a market/economy where funds are younger with shorter performance track records.

Conclusion and implications

This study shows that ESG funds mitigate fund outflows compared to non-ESG funds under all three types of macro-financial shocks. By visualising the interconnectivity of fund flows via ETFs and ESG ETFs, we find that ESG ETFs across APAC economies[15] have a density that is significantly lower than the network of developed markets (Chart B1.3A and Chart B1.3B). Based on our findings, a higher density of ESG ETFs represents a more resilient network against macro-financial shocks, which means that the APAC region has a lower ESG-derived resilience against macro-financial shocks. This calls for more policy efforts in promoting ESG development in the region.

In addition, as the stabilising effect of the ESG attribute is more pronounced for both emerging market-domiciled and EME-exposed ETFs, and the APAC region consists of (1) numerous emerging markets and (2) a developed market that has significant exposure to EMEs, the marginal benefit from ESG investment promotion on financial stability could arguably be even larger for the APAC region than that for developed markets.

[15] APAC economies refer to Australia, Mainland China, Hong Kong, Indonesia, Japan, South Korea, Malaysia, New Zealand, the Philippines, Singapore and Thailand.

Chart B1.3A
Fund Flow Network for all equity ETFs in the first half of 2023

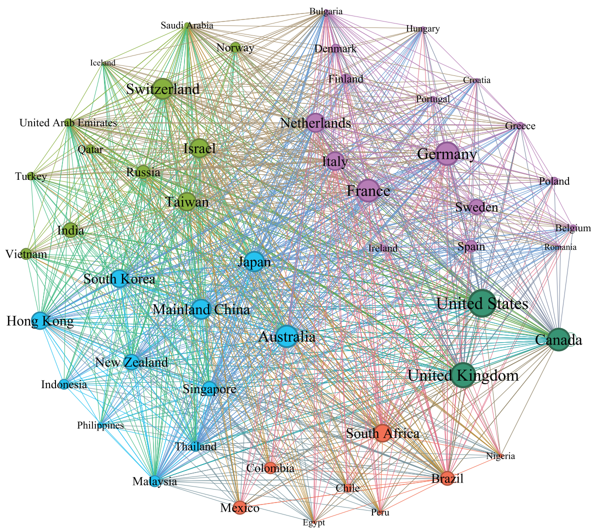
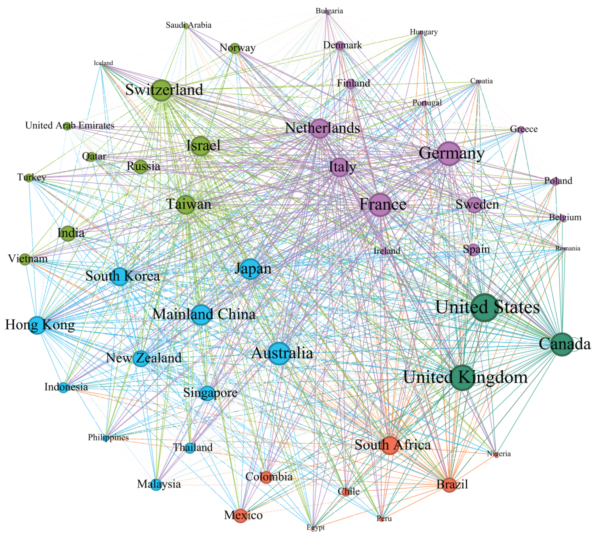


Chart B1.3B
Fund Flow Network for ESG equity ETFs in the first half of 2023



Note: Economies are grouped into five areas: United States-United Kingdom-Canada (in dark green), European Union (in purple), APAC (in blue), Eurasia (in yellow green), and Africa and Latin America (in orange).

Sources: Bloomberg and HKMA staff estimates.

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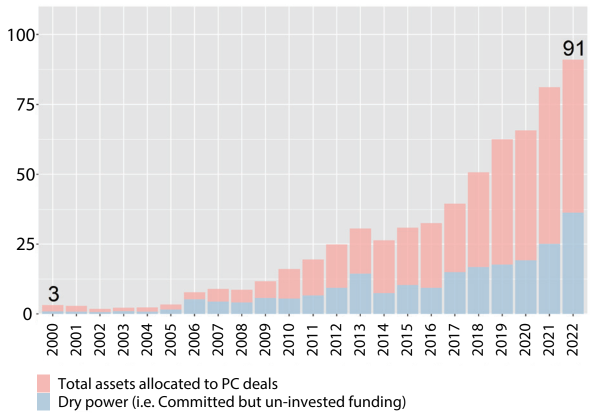
Pastor, L. and Vorsatz, M. B., (2020): "Mutual fund performance and flows during the COVID-19 crisis", The Review of Asset Pricing Studies, 10 (4), 791–833.

Box 2
The financial stability implications of the private credit sector in Asia-Pacific

Introduction[16]

The PC[17] sector in Asia-Pacific[18] (APAC) has grown rapidly. Its total assets under management are estimated to have grown rapidly by 30 times in the past two decades to US$91 billion in 2022 (Chart B2.1). The advent of PC provides an alternative financing channel for some businesses that may find it difficult to obtain sufficient funding from traditional financial sectors such as banks. However, these borrowers usually have higher credit risks, e.g. start-ups. Also, as most of the PC are floating-rate loans, the current high interest rate environment might put pressure on the repayment ability of these borrowers. The default risks of PC and the potential spillover risks to the broader financial system may cause financial stability concerns. Against this background, this box examines the systemic risks of the PC sector in APAC.

Chart B2.1
Total assets under management of APAC PC funds (USD billion)

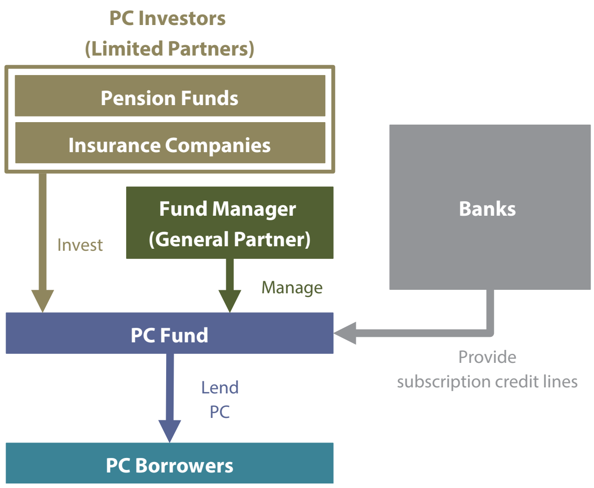


Note: The stacked bar chart depicts the APAC PC funds' assets allocated to PC deals (pink) and dry powder (blue) over years, which are summed into total assets under management.
Sources: Preqin Ltd and HKMA staff estimates.

Assessing systemic risks for the PC sector in APAC

We first briefly introduce the typical operation of the PC sector. In a typical PC deal (Chart B2.2), a PC firm sets up a PC fund for lending operation and serves as its general partner to find and execute loan deals. The majority of investment in PC funds is provided by other investors, such as pension funds and insurance companies, which serve as limited partners and are, in general, not involved in lending decisions. Banks may be involved by providing credit lines to PC funds for liquidity management.[19]

Chart B2.2
PC market structure



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16 For details, please refer to Wong et al. (forthcoming): "The Financial Stability Implications of the Private Credit Sector in Asia-Pacific", HKMA Research Memorandum.

17 Private credit (PC) refers to the provision of credit to small- and mid-sized companies by PC firms on a bilaterally negotiated basis (IOSCO, 2023).

18 APAC PC funds refer to the PC funds in which fund managers are located in 12 APAC economies, including Australia, Mainland China, Hong Kong, India, Indonesia, Japan, South Korea, Malaysia, New Zealand, the Philippines, Singapore and Thailand.

19 There could be other financial institutions involved, such as private equity funds and banks. For simplicity, we show a simple case only.

The growing and complex linkages of PC funds with the broader financial system could add to the build-up of systemic risks. To examine the extent of such risks in APAC, we assess by (i) asset size, (ii) liquidity mismatch risks, (iii) leverage risks of PC funds, and (iv) their interconnectedness with APAC investors. The four strands of analysis are detailed below.

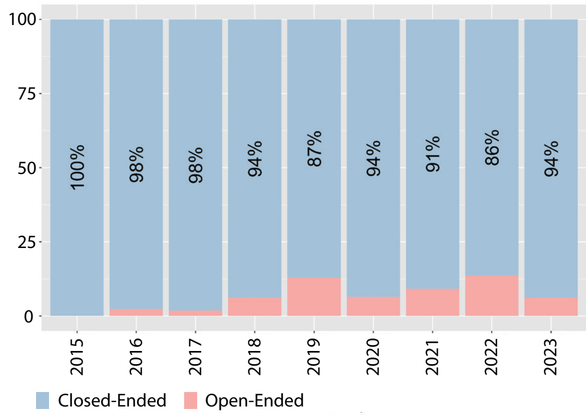
1) Fund size

Despite the rapid growth of the APAC PC funds, they remained relatively small. Their total size is compared to only 0.2% of the NBFIs or 0.1% of bank assets in the region at the end of 2022.[20] In terms of asset size, the APAC PC funds may not cause imminent systemic risks, although its rapid growth may be a concern.

2) Liquidity mismatch risks

Open-ended fund managers could face liquidity stress as their funds may need to meet large redemption demand at short notice. This could trigger fire sales of assets by the managers and propagate financial strains to the broader financial system. However, the open-ended structure is not common for APAC PC funds, as 95% are closed-ended in our sample. As such, the risks of liquidity mismatch should currently be at a low level. However, in more recent years there appears to be a rising trend of launching open-ended PC funds (Chart B2.3), though how sustained this trend is has yet to be observed.[21] These open-ended PC funds would face much higher liquidity risks than their closed-ended counterparts.

Chart B2.3
Proportion of new APAC PC funds by redemption mechanism (%)



Notes:
(i) The stacked bar chart depicts the proportion of closed-ended (blue) and open-ended (pink) funds among APAC PC funds over vintages; and
(ii) The proportion is calculated by the number of funds launched.
Sources: Preqin Ltd and HKMA staff estimates.

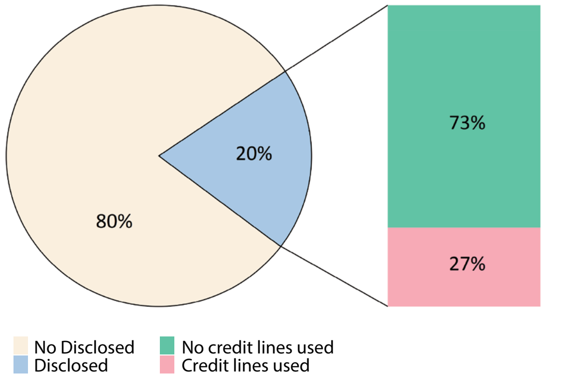
3) Leverage risks

There could be multiple layers of leverage in a PC deal. First, the use of leverage by PC funds could be taken in the form of subscription credit lines from banks. In the event of a systemic default on PC funds, credit losses could be incurred by banks that have provided credit lines to these funds. Despite huge data gaps, available data reveal that 73% of APAC PC funds do not use credit lines from banks (Chart B2.4). Yet, a closer monitoring may be warranted, as there seems to be more APAC PC funds using credit lines from banks more recently (Chart B2.5).

20 The total assets of NBFIs and banks are estimated to be US$43 trillion and US$82 trillion respectively in APAC in 2022 (FSB, 2023).

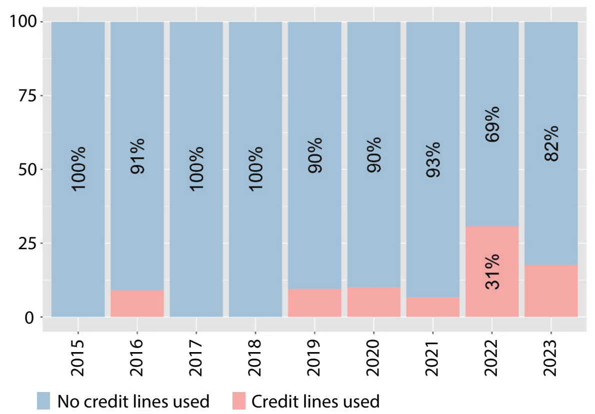
21 The proportion is measured by the number of PC funds.

Chart B2.4
Proportion of APAC PC funds by use of credit lines (%)



Notes:
(i) The pie chart depicts the proportion of APAC PC funds disclosing and not disclosing their use of credit lines in 2023; and
(ii) For the disclosing funds, the bar chart depicts the proportion of users and non-users of credit lines in 2023.
Sources: Preqin Ltd and HKMA staff estimates.

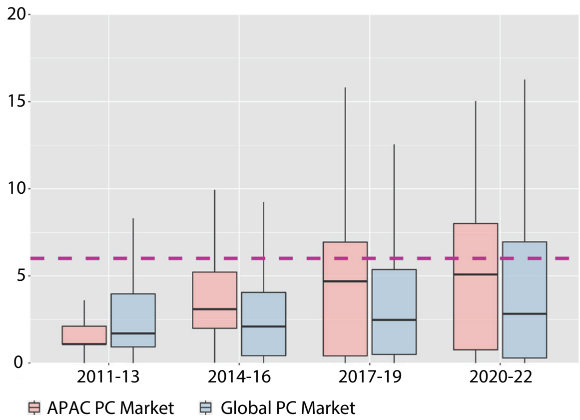
Chart B2.5
Proportion of new APAC PC funds by use of credit lines (%)



Notes:
(i) The stacked bar chart depicts the proportion of credit line non-users (blue) and users (pink) among APAC PC funds over vintages; and
(ii) The proportion is calculated by the number of funds launched.
Sources: Preqin Ltd and HKMA staff estimates.

Another layer of leverage in a PC deal could be at the PC borrower level. There is a rising share of borrowers with a debt-to-EBITDA[22] ratio higher than six (the dotted line, Chart B2.6), which is a loose cap set on bank lending in some economies for loan underwriting. This indicates that PC funds have become more likely to lend to companies which may not be able to borrow from banks due to their high leverage. Such loosening underwriting standards could add to credit risk for PC funds, especially those in APAC.

Chart B2.6
Debt-to-EBITDA ratio of PC borrowers of PC deals (times)



Notes:
(i) The boxplots depict the distribution of debt-to-EBITDA ratio of APAC PC funds' borrowers (pink) and global PC borrowers (blue) over PC deal years;
(ii) The median value is represented by a horizontal line inside the box, with 50% of the values falling in the 25th and 75th percentile range shown by the box. The upper and lower end points of the thin vertical lines show the 90th and 10th percentiles;
(iii) The dotted line represents a loose cap on banks in some economies (i.e. 6 times); and
(iv) The sample covers 60% of global PC borrowers.
Sources: S&P Capital IQ, Preqin Ltd and HKMA staff estimates.

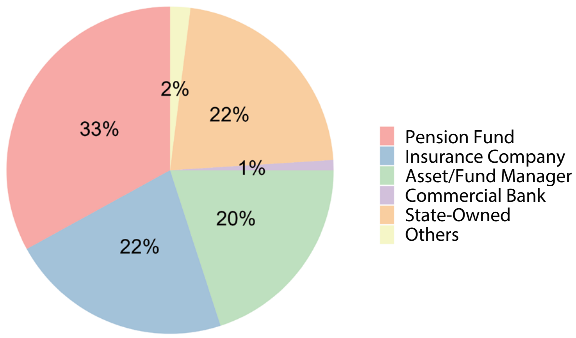
4) <u>Interconnectedness</u>

The above analyses evaluate vulnerabilities that lie in PC funds. Yet, the extent to which a shock (e.g. an economic recession) on PC funds would be propagated to the broader financial system may hinge on the exposure of other sectors to PC, e.g. investment to PC funds. The larger the exposure, the higher the contagion risks are, and vice versa.

Based on available data, pension funds, insurance companies and asset managers are found to be the key PC investors in APAC, contributing 75% of total PC investments by investors in the region (Chart B2.7). Meanwhile, commercial banks do not appear to actively invest in PC funds.

[22] EBITDA refers to earnings before interest, taxes, depreciation and amortisation.

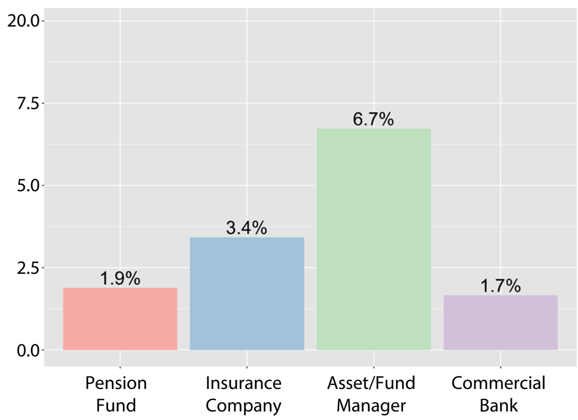
Chart B2.7
The proportion of APAC PC investors by investor type (%)



Notes:
(i) The pie chart depicts the proportion of APAC PC investors by investor type in 2023; and
(ii) The proportion is calculated by the amount of PC investments.
Sources: Preqin Ltd and HKMA staff estimates.

However, for these APAC investors, their PC investments are estimated to account for a small part of their whole portfolio (Chart B2.8). Hence, the contagion risks from the PC market to APAC investors appear to be limited.

Chart B2.8
Total PC investments of APAC investors (% of total assets)



Note: The bar chart depicts the total PC investments of APAC investors including pension funds (pink), insurance companies (blue), asset or fund managers (green) and commercial banks (purple) in 2023, in terms of their total assets.
Sources: Preqin Ltd and HKMA staff estimates.

Conclusion and implications

Taken together, the systemic risks in the PC sector may remain contained so far. Nonetheless, some developments may warrant further monitoring as they may evolve and increase the vulnerabilities, including the trend of launching open-ended PC funds and the growing popularity of new PC funds that use credit lines.

Meanwhile, we may need to stay alert to the strong ties between the rapid growth of PC funds and the trend of lower underwriting standards. This is particularly so given the PC market has yet to experience a full credit cycle, and hence the resilience of the PC market to stress, e.g. high interest rates and a severe recession, has not been tested.

Finally, partly reflecting the opacity in the PC sector, our analysis is inevitably based on partial data. While robustness checks have been conducted by comparing our assessment results with other sources of information (e.g. surveys conducted by market participants), readers should interpret our results with caution due to data gap issues.

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3. Domestic economy

Hong Kong's economy continued to recover moderately in the second half of 2023 amid the robust revival of inbound tourism and consumption demand. Looking ahead, the economy is expected to recover further at a moderate pace, and the growth outlook is subject to increased external uncertainties relating to the US policy rate path, dimmer global economic prospects, the recovery pace of the global tech cycle, and evolving geopolitical tensions. In tandem, various talent attraction and labour importation schemes will continue to help alleviate labour shortages across industries, while local inflation should remain largely in check despite some upward pressures from increasing labour and rental costs.

3.1 Real activities

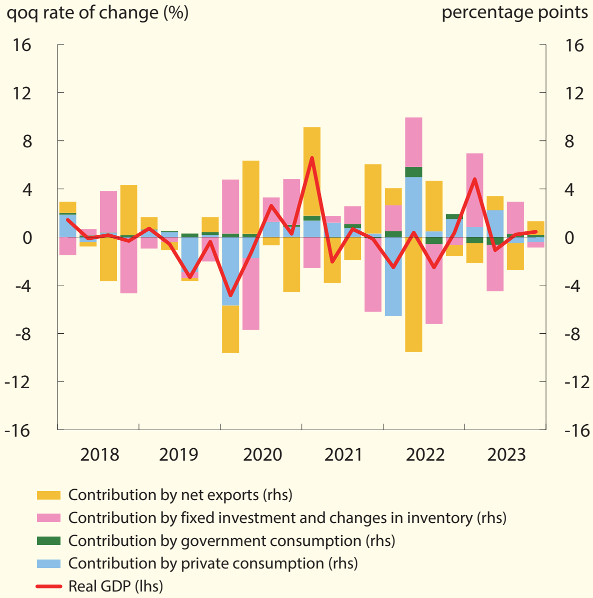
Hong Kong's economy continued its recovery in the second half of 2023, although at a moderated pace compared to the first half. On a year-on-year basis, real GDP grew by 4.1% and 4.3% respectively in the last two quarters of 2023 against a low base of comparison (Table 3.A). For 2023 as a whole, real GDP expanded by 3.2% after a 3.7% contraction in the preceding year.

Table 3.A
Real GDP growth

		Year-on-year growth rate (%)	Seasonally adjusted quarter-on-quarter growth rate (%)
2022	Q1	–4.0	–2.5
	Q2	–1.4	0.4
	Q3	–4.9	–2.5
	Q4	–4.3	0.3
2023	Q1	2.9	4.8
	Q2	1.5	–1.1
	Q3	4.1	0.2
	Q4	4.3	0.4

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

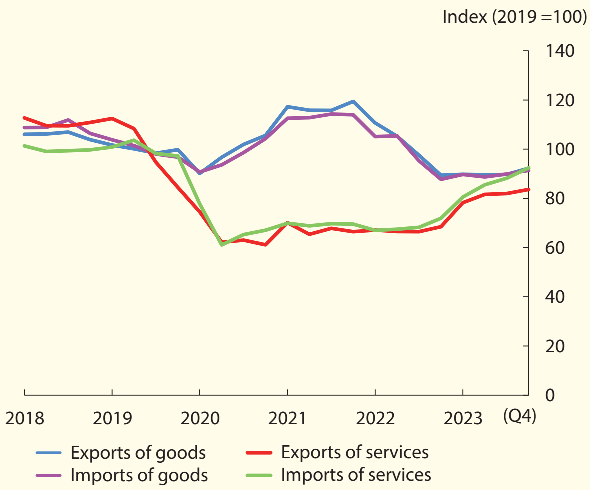
Chart 3.1
Real GDP growth and contribution by major expenditure component



Note: Growth rates are seasonally adjusted.
Sources: C&SD and HKMA staff estimates.

Inbound tourism and consumption demand continued to be the major growth drivers in the second half of 2023 (Chart 3.1). Domestically, private consumption remained robust following a notable expansion in the first two quarters of 2023, thanks to the resilient labour market and the Government's various support measures[23]. Despite the cautious business sentiment amid tightened financial conditions[24], investment spending turned to an increase against a low base of comparison. Externally, Hong Kong's exports of services continued to be resilient on the back of the robust revival of inbound tourism (Chart 3.2). Specifically, total visitor arrivals reached around 34 million in 2023, equivalent to over 60% of the pre-pandemic level in 2019.[25] In contrast, merchandise exports remained sluggish amid weak external demand. Overall, net trade continued to be a drag on real GDP growth in the second half of 2023.

Chart 3.2
Export and import volume



Note: The data are seasonally adjusted.
Source: C&SD.

In 2024, Hong Kong's economy is expected to recover further at a moderate pace, with the Government forecasting real GDP to grow by 2.5% – 3.5% for the entire year.[26] Inbound tourism is expected to be supported by further improvement in Hong Kong's handling capacity and the steady growth of the Mainland China's economy, and local consumption will be underpinned by a resilient labour market. In addition, public infrastructure projects will also render support to the economy. Private investment is likely to stabilise alongside the Government's efforts on attracting businesses into Hong Kong, and merchandise exports may be supported by the expected global tech cycle recovery. That said, the growth outlook is fraught with risks and uncertainties as discussed in previous chapters, especially those relating to the US policy rate path, the prospects for global economic growth, the recovery pace of the global tech cycle, and heightened geopolitical tensions.

23 Including the disbursement of the second instalment of consumption vouchers in July 2023, and a series of promotional campaigns.

24 The Purchasing Managers' Index (PMI) stayed in the contractionary zone (below 50) from July to October 2023, and hovered around 50 between November 2023 and February 2024.

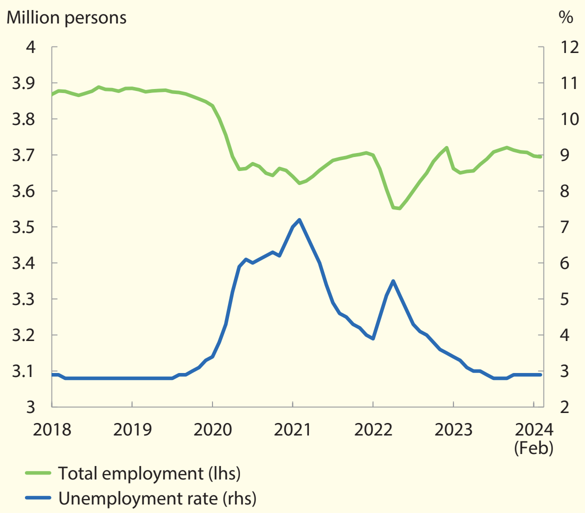
25 On a year-to-date basis (up to end-February 2024), the total number of visitor arrivals amounted to 63.3% of the level in the same period in 2019.

26 The average growth forecasts by private-sector analysts was 2.8%.

3.2 Labour market conditions

The labour market remained resilient in the second half of 2023 and early 2024. The seasonally adjusted unemployment rate stayed low at 2.9% in February 2024, while total employment flattened somewhat and still fell short of its pre-pandemic level (Chart 3.3). Partly reflecting the tight labour market conditions, labour earnings[27] saw an accelerated year-on-year growth of 3.5% in the third quarter of 2023. In response to the manpower shortages across sectors, the Government has introduced various talent attraction initiatives[28] and labour importation schemes. Looking ahead, these measures will help alleviate the manpower shortages across industries[29], while the ongoing economic recovery should continue to support labour demand.

Chart 3.3
Labour market conditions

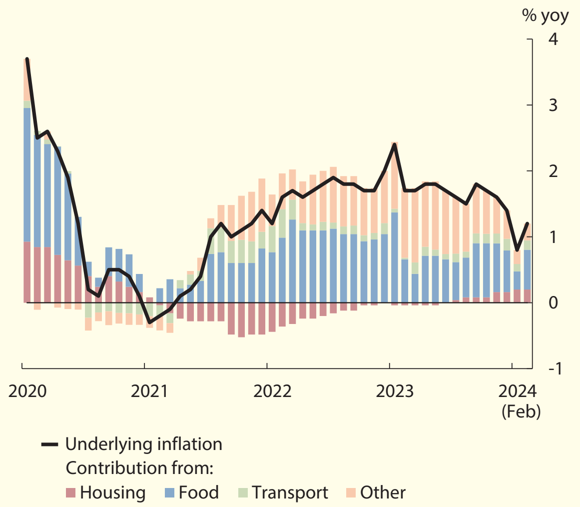


Source: C&SD.

3.3 Inflation

Consumer price inflation remained moderate over the past few months. Netting out the effects of all Government's one-off relief measures, the underlying composite consumer price index (CPI) increased mildly by 1.6% in both the third and fourth quarters of 2023, and by 1.2% in February 2024 (Chart 3.4).[30] Analysed by component, inflation momentum of energy-related items decelerated as international fuel prices retreated, while the price of meals out and takeaway food continued to see visible increases. The housing rental component also showed signs of bottoming out amid the feed-through of rising fresh-letting residential rentals (Chart 3.5). Meanwhile, labour cost pressures increased in recent quarters as the labour market remained tight, whereas imported inflation remained steady (Chart 3.6).

Chart 3.4
Underlying consumer price inflation and its drivers



Sources: C&SD and HKMA staff estimates.

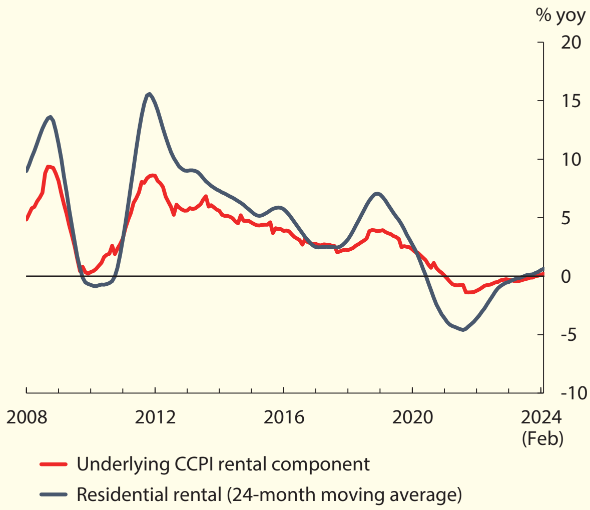
27 Measured by the nominal index of payroll per person engaged.

28 In the 2023 Policy Address, the Chief Executive announced further measures to attract and retain talents, including (i) expanding the list of eligible universities under the Top Talent Pass Scheme (TTPS), (ii) introducing the new Capital Investment Entrant Scheme (CIES), (iii) launching the Vocational Professionals Admission Scheme (VPAS), and (iv) temporarily exempting non-local full-time postgraduate students from the restrictions on taking up part-time jobs in Hong Kong.

29 Over 220,000 applications under these talent admission schemes were received in 2023, out of which over 130,000 have been approved with about 90,000 talents having arrived in Hong Kong.

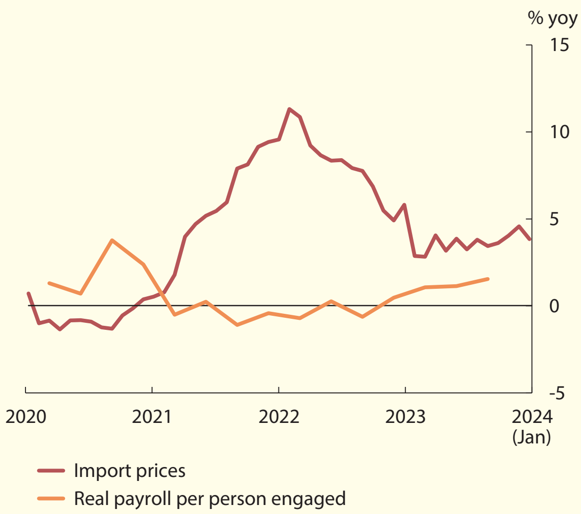
30 Inclusive of the effects of the Government's relevant one-off relief measures, the year-on-year headline inflation rate was 1.9% and 2.6% in the third and fourth quarters of 2023 respectively, and 2.1% in February 2024.

Chart 3.5
Composite consumer price index rental component and housing rentals



Sources: C&SD and Rating and Valuation Department (R&VD).

Chart 3.6
Labour cost and import prices



Source: C&SD.

In the near term, overall inflation may edge up but remain mild. Domestic business costs may continue to face some upward pressures as the economy further recovers, while rising housing rentals will also gradually pass through to consumer price inflation. In contrast, external price pressures are likely to remain modest. The Government projects the underlying and headline inflation rate to be 1.7% and 2.4% respectively in 2024.[31]

[31] The market consensus forecasts of the headline inflation rate for 2024 was 2.2%.

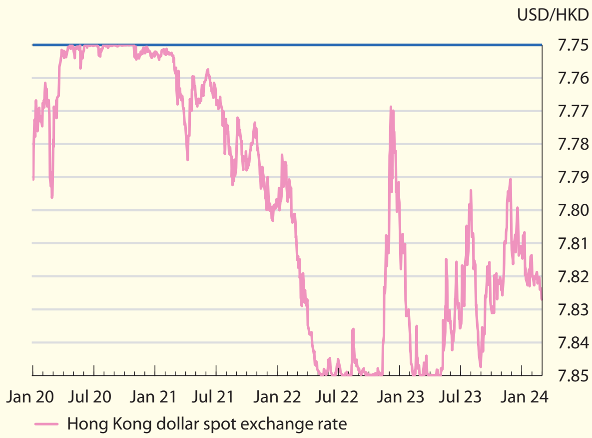
4. Monetary and financial conditions

The HKD strengthened between September and November 2023, mainly driven by seasonal corporate funding needs and buying flows through the Southbound Stock Connect. It remained broadly stable in December 2023 but moderated in early 2024 amid softened liquidity. Hong Kong Interbank Offered Rates (HIBORs) generally tracked their USD counterparts while also being affected by local supply and demand. HIBORs headed higher in September 2023 and receded slightly stepping into 2024. Total deposits increased in the seven months since end-June 2023, while bank credit declined, reflecting subdued credit demand in part driven by higher borrowing costs. Overall, the HKD exchange and money markets continued to trade in a smooth and orderly manner. Looking ahead, uncertainties surrounding the US monetary policy outlook, global economic environment and the lingering geopolitical tensions may heighten fund flow volatility. Nonetheless, with the ample foreign reserves position and a robust financial system, Hong Kong is able to withstand the volatilities in fund flows without compromising its financial stability.

4.1 Exchange rate and capital flows

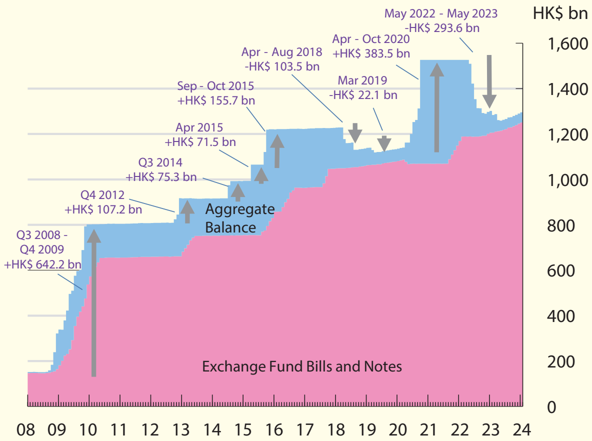
The HKD strengthened between September and November 2023, mainly driven by corporate funding needs, buying flows on firmer HKD interest rates and net buying flows through the Southbound Stock Connect. It remained broadly stable in December 2023 but moderated in early 2024 amid softened liquidity. During the review period, the HKD traded within a range between 7.7906 and 7.8432 against the USD (Chart 4.1). As the CUs have not been triggered since May 2023, the Aggregate Balance of the banking system remained little changed, closing at HK$44.8 billion at the end of February 2024, and the day-to-day interbank operations and settlement activities among banks continued to operate in a smooth and orderly manner (Chart 4.2).

Chart 4.1
Hong Kong dollar exchange rate



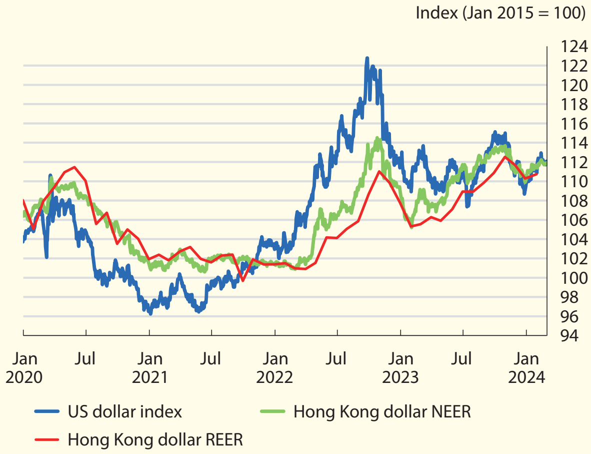
Source: HKMA.

Chart 4.2
Aggregate balance and exchange fund bills and notes (EFBNs)



Source: HKMA

Chart 4.3
Nominal effective exchange rate index (NEER) and real effective exchange rate index (REER)



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

Broadly tracking the movements of the US dollar, the Hong Kong dollar nominal effective exchange rate index (NEER) strengthened between September and end-October 2023, but softened thereafter and closed with little change for the whole review period (Chart 4.3). The Hong Kong dollar real effective exchange rate index (REER) generally followed the movement of the NEER.

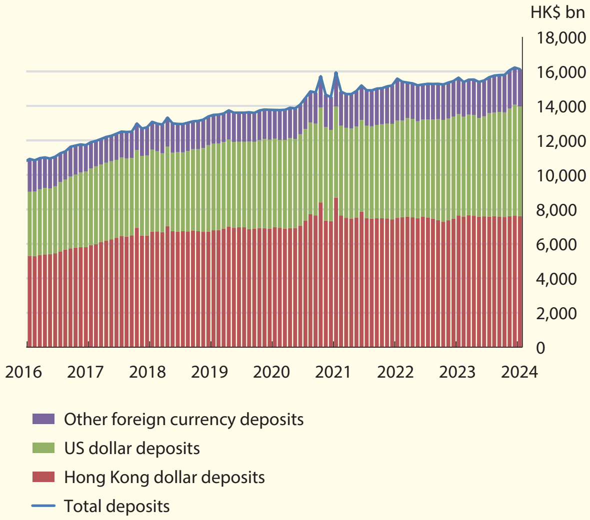
Going forward, fund flows would remain influenced by uncertainties surrounding the outlook for the US policy rate, global economic environment and geopolitical tensions. However, with the ample foreign reserves position and a robust financial system, Hong Kong is able to withstand the volatilities in fund flows without compromising its financial stability.

4.2 Monetary environment and interest rates

Hong Kong's monetary environment stayed accommodative during the review period. The HKD Monetary Base remained sizeable and broadly stable, at HK$1,909.6 billion as at the end of February 2024.

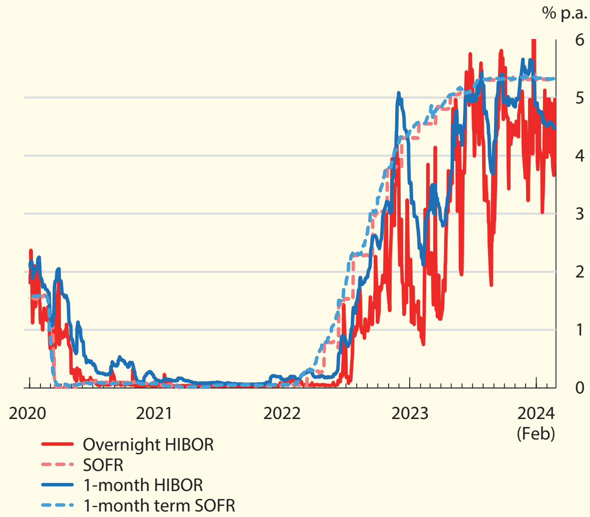
During the seven-month period since end-June 2023, total deposits with authorized institutions (AIs) increased by 4.3%. Among the total, HKD and foreign currency deposits increased by 0.1% and 8.3% respectively (Chart 4.4). It should be noted that monetary statistics are subject to volatility due to a wide range of transient factors, such as seasonal and initial public offering (IPO) related funding demand as well as business and investment related activities. Therefore, it is more appropriate to observe the longer-term trends.

Chart 4.4
Deposits with authorized institutions (AIs) by currency



Source: HKMA.

Chart 4.5
Hong Kong Interbank Offered Rates (HIBORs) and US dollar Secured Overnight Financing Rates (SOFRs)



Sources: Bloomberg and HKMA.

Overall, Hong Kong's interbank market continued to trade in a smooth and orderly manner during the review period. In accordance with the expectation and the design of the Linked Exchange Rate System, the HKD interbank interest rates generally tracked their US dollar counterparts[32] while also being affected by local supply and demand. The HIBORs headed higher in September 2023, partly reflecting corporate funding needs by the quarter end, and receded slightly stepping into 2024 as the seasonal demand for HKD funding faded. (Chart 4.5).

On the retail front, with the US Federal Reserve (Fed) maintaining its policy rate unchanged since July 2023, local banks kept their Best Lending Rates unchanged. At the end of the review period, the Best Lending Rates in the market ranged from 5.875–6.375%. Meanwhile, the average lending rate for new mortgages increased from 3.57% in July 2023 to 4.13% in January 2024, partly reflecting the increase in the cap of HIBOR-based mortgage rates.

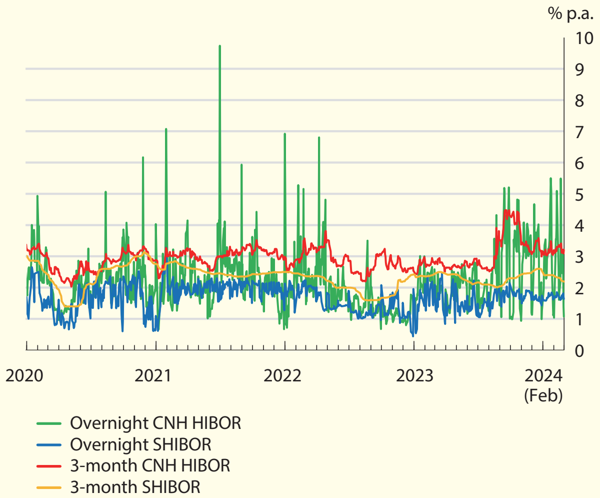
In the near term, the HKD interest rates may stay at relatively high levels. The HKMA continues to closely engage with banks, reminding them to properly manage their liquidity, including keeping in close contact with their large clients to understand their HKD funding plans and arrangements. This helps banks to plan and avoid any hoarding of HKD. The HKMA has also reminded banks not to be concerned about the perceived "stigma effect" of tapping into its liquidity facilities. Indeed, banks should feel free to use the HKMA's various liquidity facilities whenever required. The recent use of the Discount Window shows that banks are adapting to changing market developments and are willing to make good use of these liquidity facilities.

[32] The USD London Interbank Offered Rate (LIBOR) has been discontinued since 1 July 2023 and replaced by the Secured Overnight Financing Rate (SOFR) as its alternative reference rate.

Offshore RMB banking business

The offshore renminbi (CNH) interbank market continued to function normally during the review period.[33] The three-month CNH HIBOR rose above 4% during September and October 2023 due to an increase in short-term funding demand, before easing to 3% at the end of 2023 as demand softened. While the overnight CNH HIBOR witnessed some fluctuations, it mostly traded below 5% (Chart 4.6). The liquidity conditions in the CNH interbank market remained broadly stable over the review period.

Chart 4.6
Overnight and 3-month offshore renminbi (CNH) HIBOR fixings

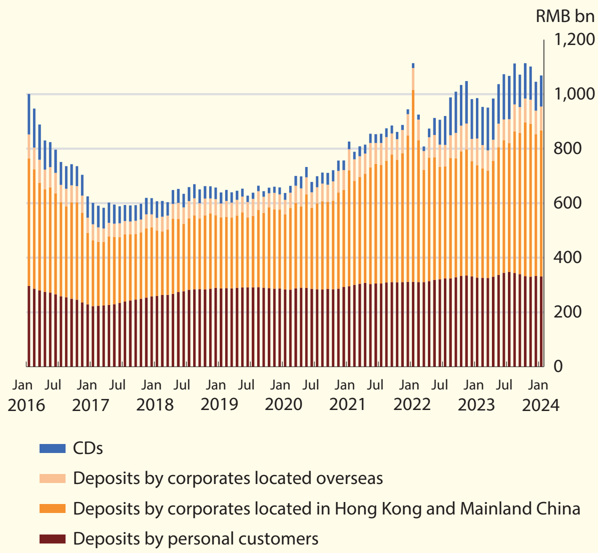


Source: CEIC and Treasury Market Association.

Following the expansion in the first half of 2023, Hong Kong's CNH liquidity pool consolidated during the review period. The total outstanding amount of renminbi (RMB) customer deposits and certificates of deposit (CDs) increased modestly by 0.2% in the six-month period since the end of July 2023 to RMB1,068.8 billion at the end of January 2024 (Chart 4.7 and Table 4.A).

Among the total, RMB customer deposits grew by 5.2% in total, but its contribution to the liquidity pool was partially offset by a contraction in the outstanding amount of CDs, which saw a decline of 28.3% during the same period. The growth of RMB customer deposits was contributed by corporate customers, which grew by 11.3%.

Chart 4.7
Renminbi customer deposits and certificates of deposits (CDs) in Hong Kong



Source: HKMA.

Table 4.A
Offshore renminbi banking statistics

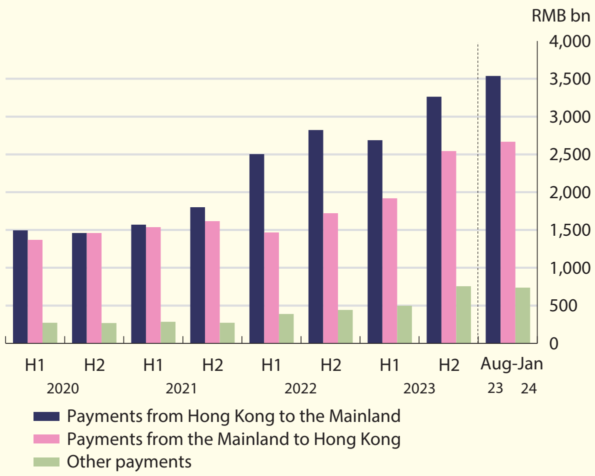
	Dec 2022	Jan 2024
Renminbi deposits & CDs (RMB bn)	981.7	1,068.8
Of which:		
Renminbi deposits (RMB bn)	835.9	954.7
Share of renminbi deposits in total deposits (%)	6.1	6.4
Renminbi CDs (RMB bn)	145.8	114.1
Renminbi outstanding loans (RMB bn)	191.7	469.3
Number of participating banks in Hong Kong's renminbi clearing platform	211	207
Amount due to overseas banks (RMB bn)	130.8	138.7
Amount due from overseas banks (RMB bn)	138.8	112.5
	2022	**2023**
Renminbi trade settlement in Hong Kong (RMB bn)	9,342.1	11,668.6
Of which:		
Inward remittances to Hong Kong (RMB bn)	3,188.5	4,462.9
Outward remittances to Mainland China (RMB bn)	5,324.1	5,951.2
Turnover in Hong Kong's RMB real time gross settlement (RTGS) system (Daily average during the period; RMB bn)	1,654.0	2,063.6

Source: HKMA.

33 See Chapter 2.2 for the development of offshore and onshore renminbi exchange rates.

Other CNH business continued to grow. The outstanding aggregate amount of renminbi loans expanded by 40.7% in the six-month period since July 2023. Hong Kong's renminbi trade settlement also continued to pick up. Transactions handled by banks in Hong Kong amounted to RMB6,943.1 billion for the period between end-July 2023 and end-January 2024 (Chart 4.8), up by 42.6% compared with RMB4,867.4 billion during the same period last year, with inward trade remittances to Hong Kong increasing more than outward trade remittances to the Mainland. The deep renminbi liquidity pool in Hong Kong and the capability and extensive network of Hong Kong banks continued to support a large volume of renminbi payments and financing transactions. For 2023 as a whole, the average daily turnover of the renminbi RTGS system stayed high at RMB2,063.6 billion, compared with RMB1,654.0 billion recorded in 2022.

Chart 4.8
Flows of renminbi trade settlement payments



Source: HKMA.

Moving forward, the continuing development of Hong Kong's CNH ecosystem will further reinforce Hong Kong's role as the leading CNH business hub. On liquidity, the enhanced Currency Swap Agreement between the HKMA and the People's Bank of China (PBoC) enables the HKMA to provide the necessary liquidity support to the offshore market through its renminbi liquidity facilities. This provides a favourable environment for financial institutions to expand their renminbi-related activities and services. On products, the continuous efforts[34] to upgrade and expand the family of Connect schemes between the Mainland and Hong Kong, including the Swap Connect, the two-way Stock, Bond, and Cross-boundary Wealth Management Connects, will widen the spectrum of renminbi products and tools for asset allocation and risk management, enabling two-way traffic between the two markets. As to financial infrastructure, the Central Moneymarkets Unit is also undergoing a major overhaul to enhance its operational capacity and product offerings, to better support the growth of renminbi bond issuances and associated custodian services. The Multiple Central Bank Digital Currency Bridge (mBridge) project and Faster Payment System (FPS) linkage with digital renminbi (e-CNY) are making progress, with the aim to improve cross-border payment and settlement efficiency for commercial and retail users. With these developments, Hong Kong will continue to play a unique role in supporting Mainland's capital account opening, the development of the green finance market, as well as the Belt and Road and the Guangdong-Hong Kong-Macao Greater Bay Area initiatives.

[34] The HKMA and the PBoC recently announced six policy measures to deepen financial cooperation. For details, see the press release "The HKMA and the PBoC announce measures to deepen the financial cooperation between Hong Kong and the Mainland" on 24 January 2024 (https://www.hkma.gov.hk/eng/news-and-media/press-releases/2024/01/20240124-3/).

Asset markets

In contrast to the rise in global equity market on the back of prospective interest rate cuts by central banks in major advanced economies (AEs) in 2024, the local equity market declined during the review period. Despite fluctuations in interest rates, new issuance in the Hong Kong debt market continued to register stable growth in 2023. Both the residential property and commercial real estate markets remained soft, but market sentiment has stabilised following the relaxation of policy measures in late-February 2024.

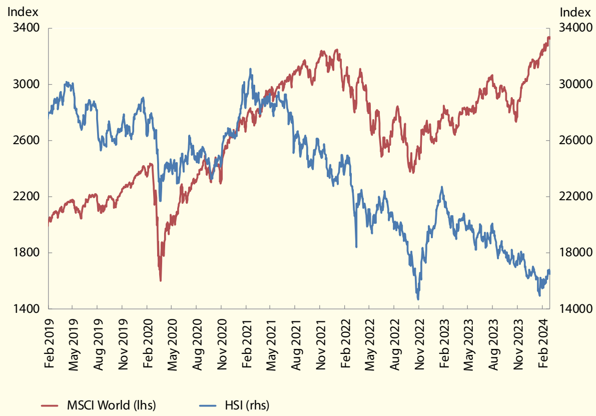
4.3 Equity market

The global equity markets experienced a roller coaster ride during the review period. The MSCI World Index first declined in September and October 2023 amid the sustained high interest rates in major economies and the escalating geopolitical tensions, before registering a broad-based recovery on the back of prospective interest rate cuts by central banks in major AEs in 2024. In contrast, the local equity market declined during the review period. Overall, the MSCI World Index increased by 11.8% from the end of August 2023 to the end of February 2024, while the Hang Seng Index declined by 10.2% during the same period (Chart 4.9).

In tandem with the global equity price movement, equity market volatility as measured by the option-implied volatilities of the S&P 500 Index rose noticeably in September and October 2023 before easing afterwards (Chart 4.10).

Volatility in the local equity market hovered around its average level in the past five years amid a relatively sluggish performance. Meanwhile, the SKEW Index remained at a higher level with occasional spikes, reflecting investors' caution about abrupt equity market corrections and hence a higher willingness to pay for downside protection.[35]

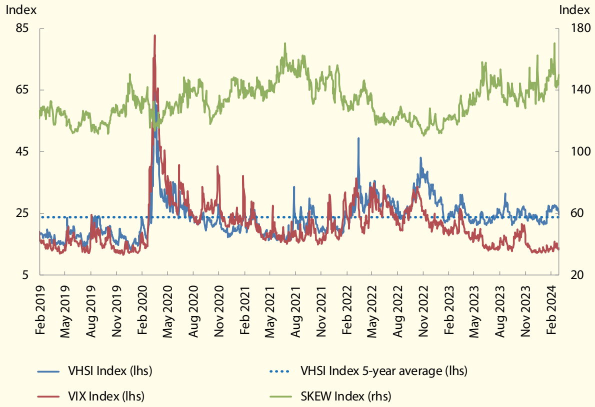
Chart 4.9
The Hang Seng Index and the MSCI World Index



Source: Bloomberg.

[35] The SKEW Index is calculated by the Chicago Board Options Exchange from the prices of the S&P 500 out-of-the-money options. A SKEW value of 100 means that the probability of outlier negative returns on a 30-day horizon is negligible. As the 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 has become more significant. For details, see https://www.cboe.com/products/vix-index-volatility/volatility-indicators/skew.

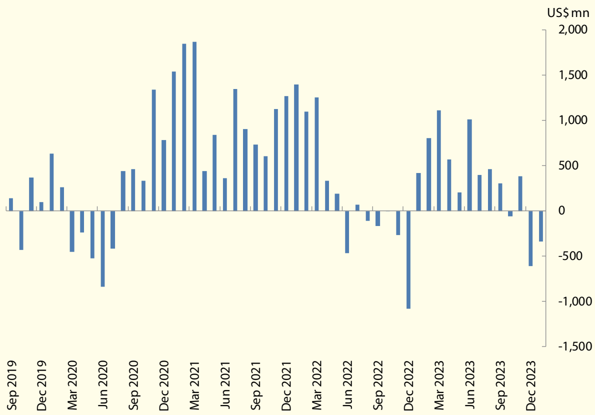
Chart 4.10
Option-implied volatilities of the Hang Seng Index and the S&P 500 Index, and the SKEW Index



Source: Bloomberg.

The local equity market continued to record net inflows through equity market funds between August 2023 and January 2024, with the amount of net inflows totalling US$143.3 million (Chart 4.11).

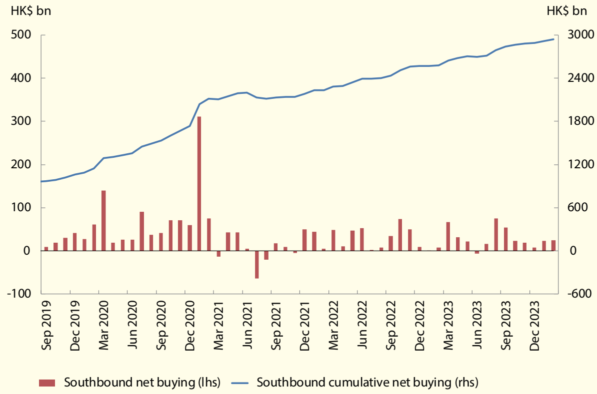
Chart 4.11
Equity market fund flows into Hong Kong



Source: EPFR Global.

The Southbound Stock Connect also registered steady net inflows during the review period, with the net buying by Mainland investors amounting to HK$151.2 billion from the end of August 2023 to the end of February 2024 (Chart 4.12). The cumulative net buying amount increased by 5.4% to HK$2937.9 billion during the review period.

Chart 4.12
Net buying through southbound Stock Connect over time



Note: Southbound net buying is the sum of such buying on the Shanghai-Hong Kong Stock Connect and the Shenzhen-Hong Kong Stock Connect.

Sources: CEIC and HKMA staff estimates.

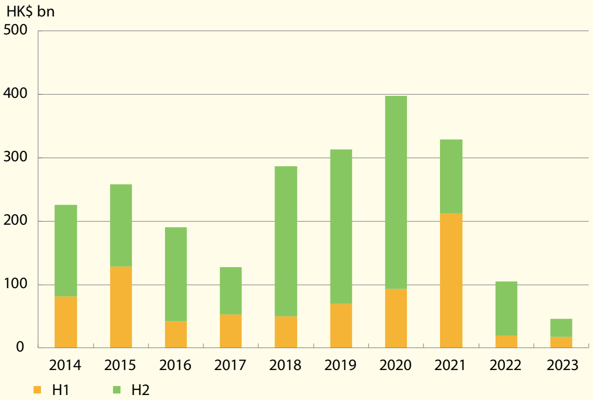
The uncertainties surrounding global economic and interest rate environments have continued to weigh on the global primary equity market activities, with the amount of capital raised through IPOs in reporting stock exchanges worldwide falling by 59.3% year-on-year in 2023 according to the World Federation of Exchanges. In Hong Kong, the total amount raised through IPOs amounted to HK$46.3 billion in 2023, dropping by 55.8% compared with the previous year (Chart 4.13).

Looking ahead, the launch of the Hong Kong Exchanges and Clearing Limited (HKEX)'s new digital IPO settlement platform "Faster Interface for New Issuance" ("FINI") in November 2023[36] and the Growth Enterprise Market (GEM) listing

[36] FINI, which shortens the time between the pricing of an IPO and the trading of shares from five business days ("T+5") to two business days ("T+2"), is expected to reduce the risk of pre-IPO price volatility and enhance overall market operational efficiency.

reform that came into effect on 1 January 2024[37] are expected to enhance the efficiency and attractiveness of equity listings in Hong Kong.

Chart 4.13
Initial public offering market in Hong Kong



Source: HKEX.

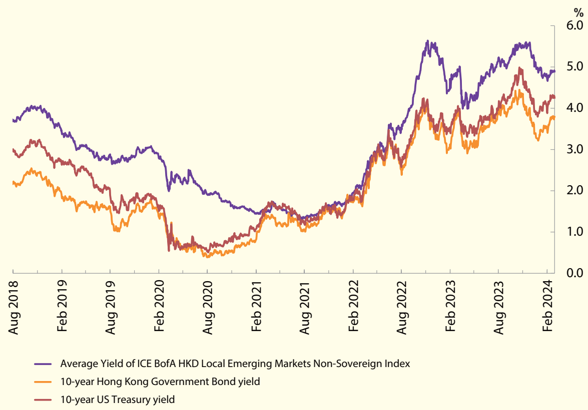
The outlook of the local equity market will be subject to a number of factors. On the global front, in spite of the expectation of interest rate cuts in 2024 in major AEs, their interest rate paths remain highly uncertain. This, together with the persistent geopolitical tensions around the world, will continue to cloud the performance of global financial markets, including the Hong Kong equity market.

Meanwhile, the near-term economic performance of the Mainland and expectations on policy stimulus measures to prop up the economy will remain key drivers of sentiments in the local equity market.

4.4 Debt market[38]

In spite of the US Fed's decision to pause interest rate hikes, the US government bond yields continued to rise in September and October 2023 on the back of strong economic data and persistent inflation pressure, with the 10-year US Treasury yield reaching a 16-year high of 5% in October. The 10-year US Treasury yield has since trended downward amid sign of easing inflation pressure in the US (Chart 4.14). In Hong Kong, both Government and corporate bond yields followed suit and moved lower from their recent peaks.

Chart 4.14
Yields of 10-year US Treasury, 10-year Hong Kong Government Bond, and Hong Kong dollar corporate bonds



Note: The ICE BofA HKD Local Emerging Market Non-Sovereign Index, which covers Hong Kong dollar bonds issued by corporates and quasi government entities, captures the movement in yields of Hong Kong dollar corporate bonds.

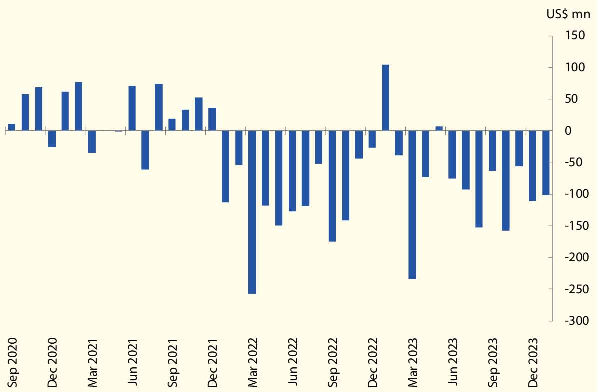
Sources: ICE Data Indices, Bloomberg and HKMA.

37 The key elements of the reform include i) introducing a new streamlined transfer listing mechanism, ii) introducing a new alternative "market capitalisation/ revenue/ research and development test" for an initial listing on GEM that targets high growth enterprises heavily engaged in research and development activities, iii) reducing the post-IPO lock-up period, and iv) removing mandatory quarterly reporting requirements and aligning other continuing obligations of GEM with those of the Main Board. These adjustments are expected to enhance GEM's attractiveness to small and medium-sized enterprises seeking a listing and help reduce compliance costs for current GEM issuers, whilst at the same time upholding market quality and investor protection.

38 Debt securities statistics reported in this section include bills, bonds, notes, negotiable certificates of deposit, commercial paper, debentures, asset-backed securities, and similar instruments normally traded in the financial markets that serve as evidence of a debt. Figures are subject to revisions.

Amid the fluctuations in interest rates, bond funds registered net outflows from Hong Kong between August 2023 and January 2024 (Chart 4.15).

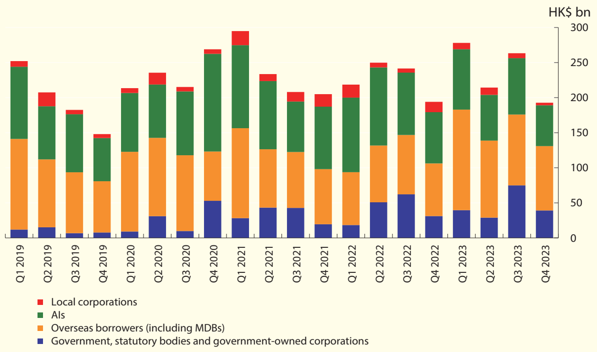
Chart 4.15
Bond market fund flows into Hong Kong



Source: EPFR Global.

The total issuance of Hong Kong dollar debt in 2023 increased by 4.3% year on year to HK$4,926.5 billion. The growth in issuance was mainly supported by overseas borrowers including multilateral development banks (Chart 4.16).

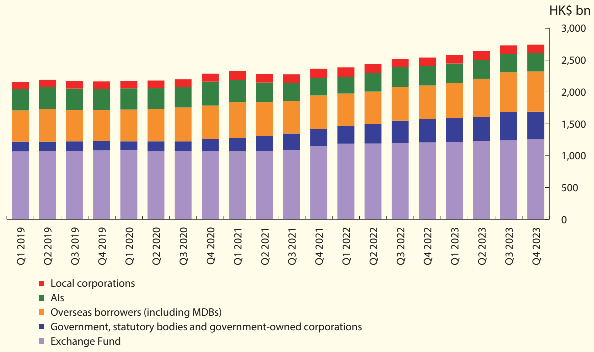
Chart 4.16
New issuance of non-Exchange Fund Bills and Notes Hong Kong dollar debt securities



Source: HKMA staff estimates based on data from Bloomberg, CMU, Dealogic and Reuters.

As a result, the outstanding amount of Hong Kong dollar debt stood at HK$2,742.9 billion at the end of 2023, up 8.0% from the end of 2022 (Chart 4.17). The amount was equivalent to 33.2% of Hong Kong dollar M3, and 27.2% of the Hong Kong dollar-denominated assets of the banking sector. The outstanding amount of non-EFBN Hong Kong dollar debt securities rose by 11.6% year on year to HK$1,487.5 billion.

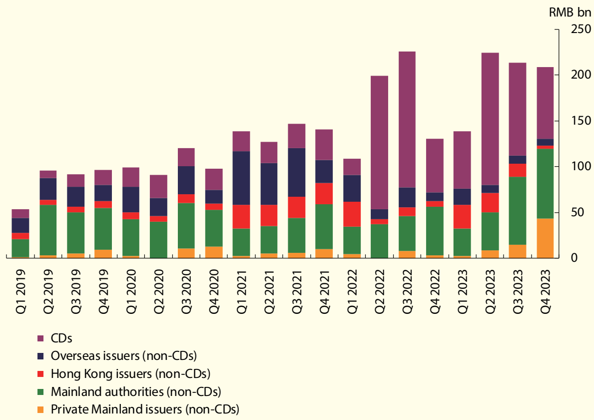
Chart 4.17
Outstanding Hong Kong dollar debt securities by issuer



Source: HKMA staff estimates based on data from Bloomberg, CMU, Dealogic and Reuters.

The issuance of CNH debt securities in Hong Kong grew by 18.2% year on year to RMB785.8 billion in 2023 (Chart 4.18). Non-CDs issued during the year amounted to RMB398.1 billion, an increase of 35.4% from 2022, while new CDs issuance increased by 4.5% to RMB387.6 billion in 2023.

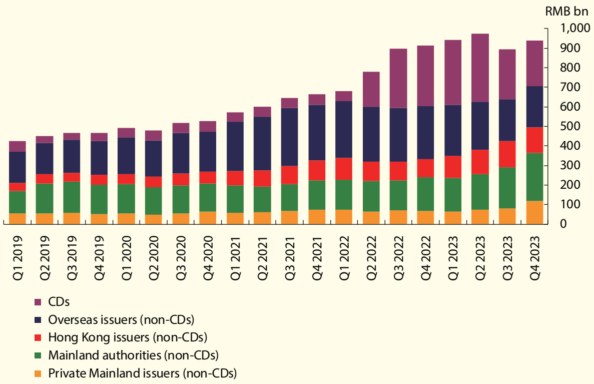
Chart 4.18
New issuance of CNH debt securities in Hong Kong



Sources: HKMA staff estimates based on data from Bloomberg, CMU, Dealogic and Reuters.

With the growth in issuance, the outstanding amount of non-CDs CNH debt securities increased by 16.8% year on year to RMB 706.3 billion at the end of December 2023. In contrast, there was a reduction in the CNH CDs outstanding by 24.6% from a year ago to RMB232.5 billion, due partly to a noticeable amount of short-term CDs that were issued and matured within 2023. Overall, the total outstanding amount of CNH debt securities issued in Hong Kong grew by 2.8% from RMB 913.2 billion at the end of 2022 to RMB 938.8 billion at the end of 2023 (Chart 4.19).

Chart 4.19
Outstanding CNH debt securities in Hong Kong



Sources: HKMA staff estimates based on data from Bloomberg, CMU, Dealogic and Reuters.

Looking ahead, the near-term outlook of the local debt market will be driven by various factors, particularly the interest rate paths in major AEs. The movements and expectations of the renminbi exchange rate could also add uncertainty to the CNH debt market activities in Hong Kong.

During the review period, several policy initiatives were introduced to foster the development of the debt market in Hong Kong. For instance, the new batch of retail green bonds under the Government Green Bond Programme was issued on 10 October 2023. The latest batch of retail green bond issuance continued to be well received by the public with the final issuance amount of HK$20 billion being higher than the target issuance size of HK$15 billion.

In addition, on 7 February 2024, the Government announced the successful offering of around HK$6 billion worth of digital green bonds denominated in Hong Kong dollar, renminbi, US dollar and euro under the Government Green Bond Programme. This green bond offering, which is the second digital bond issuance following the Government's inaugural tokenised green bond issued in February 2023, has attracted subscription by a wide spectrum of institutional investors globally, from financial institutions to non-financial institutions, and achieved new breakthroughs in a number of areas.[39]

The Hong Kong International Airport Retail Bonds (HKIA Retail Bonds) was also issued successfully during the review period. The HK$5 billion HKIA Retail Bonds, which was issued and listed on the HKEX on 6 February 2024, provides a useful reference for the financing of other large scale infrastructure projects in the future.

The Hong Kong Mortgage Corporation Limited (HKMC) also announced on 29 February 2024 the successful issuance of its triple-tranche Hong Kong dollar benchmark bonds totalling HK$12 billion, which comprises HK$8 billion 2-year, HK$3 billion 5-year and HK$1 billion 10-year bonds, under its US$30 billion Medium Term Note Programme, marking it the largest-ever Hong Kong dollar senior unsecured public bond transaction and the largest 10-year Hong Kong dollar public bond issuance in the institutional market. This triple-tranche issuance, which was well received by a diverse group of high-quality local and overseas institutional investors, not only extends the

39 These include: i) broadening investor participation via existing market infrastructure; ii) streamlining issuance process by issuing in digitally native format; iii) building in standardisation element and iv) integrating green bond disclosures with digital assets platform.

HKMC's bond issuance across the yield curve, but also sets a solid benchmark for other public sector entities and local high-grade issuers.

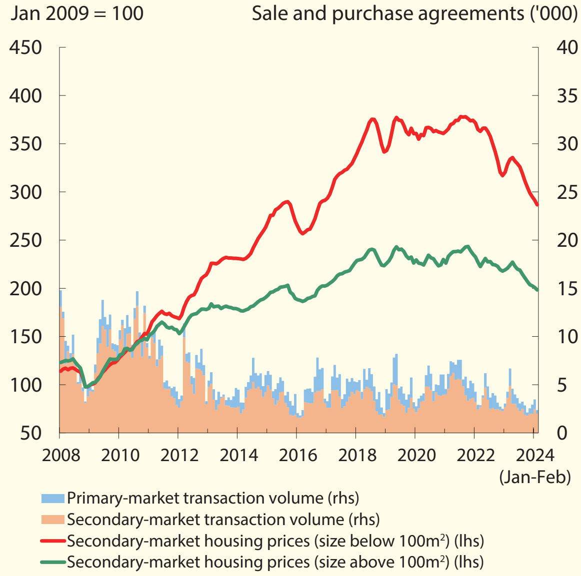
Besides bond issuances, the National Development and Reform Commission (NDRC) and the HKMA signed a memorandum of understanding at the third Belt and Road Forum for International Cooperation on 18 October 2023 under which the NDRC and the HKMA agree to strengthen communication and cooperation, and to facilitate the cross-border financing activities of Chinese enterprises, including bond issuance, by leveraging on Hong Kong's unique strengths in financial and professional services.

4.5 Property markets

Residential property market

The residential property market remained soft in the second half of 2023 amid tightened financial conditions and deteriorated market sentiment. Secondary-market flat-viewing and transaction activities were subdued, while developers also held back their new project launches. As a result, the monthly average housing transactions fell to 3,058 units in the third quarter and further down to 2,535 units in the fourth quarter (Chart 4.20). For 2023 as a whole, total housing transaction volume declined by 4.5% from 2022, reaching a record-low of 43,002 units. Secondary-market housing prices continued to soften in the second half of 2023, wiping out the gains in the first four months of 2023. Overall, residential property prices recorded a year-on-year decline of 6.9%, with large flats (with a saleable area of at least 100m^2) and small and medium-sized flats (with a saleable area of less than 100m^2) seeing similar decline in prices (Chart 4.20). Moving into 2024, housing prices decreased further by 2.9% in January to February, while transaction volume continued to stay low at a monthly average level of 2,926 units.

Chart 4.20
Residential property prices and transaction volumes



Sources: Rating and Valuation Department (R&VD) and Land Registry.

Having prudently considered the overall situation, the Government has successively announced the adjustment of the demand-side management measures for residential properties in October 2023, and the cancellation of these measures in late-February 2024.[40] In tandem, the HKMA also suitably adjusted the countercyclical macroprudential measures for property mortgage loans and other related supervisory requirements on property loans, after detailed analyses and having considered that there was room to make these adjustments, while continuing to maintain banking stability and ensuring the proper risk management of property lending by banks.[41]

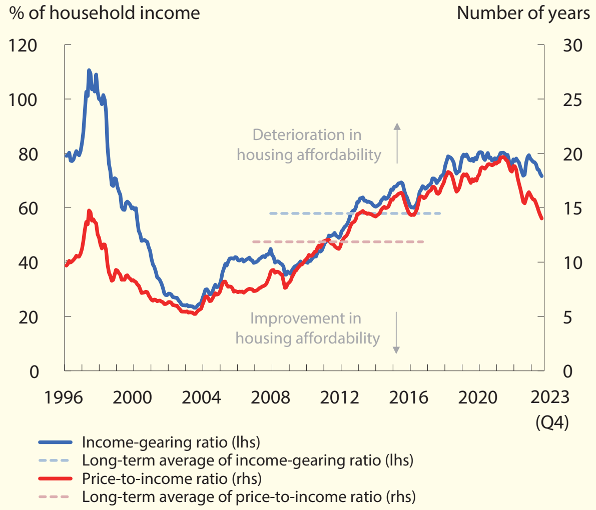
[40] For details, please refer to "The Chief Executive's 2023 Policy Address" delivered on 25 October 2023 and "The 2024 – 2025 Budget" delivered on 28 February 2024.

[41] The adjustments effective from 28 February 2024 include: (i) raising the maximum LTV ratio for both self-occupied and non-self-use residential properties; (ii) suspending the interest rate stress testing requirement for property mortgage lending that assumes a 200 bps rise in the mortgage rate; (iii) raising the financing caps for property development projects back to the pre-2017 levels, with the overall financing cap increasing from 50% to 60% of the expected value of the completed properties; and (iv) lifting the additional capital requirement on banks for exposures to property developers offering mortgage financing with high LTV ratios. For details, see the circular "Prudential Measures for Property Mortgage Loans and Other Related Supervisory Requirements" issued by the HKMA on 28 February 2024.

The HKMA will continue to monitor market developments closely and introduce measures to safeguard banking stability as conditions in the property market evolve. Following all the above policy changes, the market saw signs of stabilisation in March, with the latest real estate agencies' data pointing to an improved market sentiment and a rebound in transaction volume.[42]

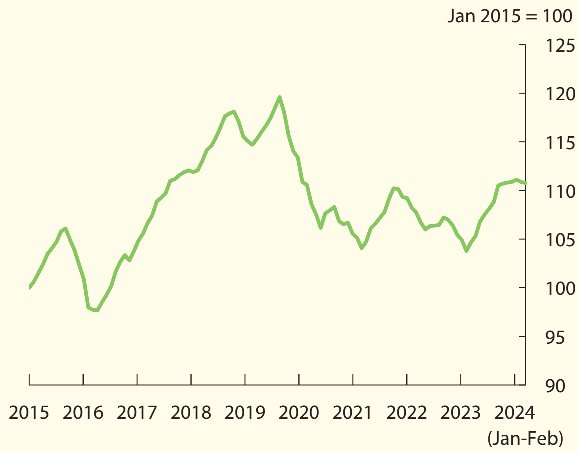
Housing affordability remained stretched, despite improving somewhat during the second half of 2023. Along with the downward adjustment of housing prices and the improvement in household income, the housing price-to-income ratio retreated to 14.2, which was still comparable to the high level in 1997. Similarly, the income gearing ratio also subsided to 72.5%, but continued to be well above the long-term average (Chart 4.21).[43] On the other hand, housing rentals saw a mild increase of 0.2% during the period from September 2023 to February 2024 (Chart 4.22). In tandem, the residential rental yield also rose modestly to 2.8% in January 2024 from 2.7% in September 2023.

Chart 4.21
Indicators of housing affordability



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

Chart 4.22
Residential property rental index



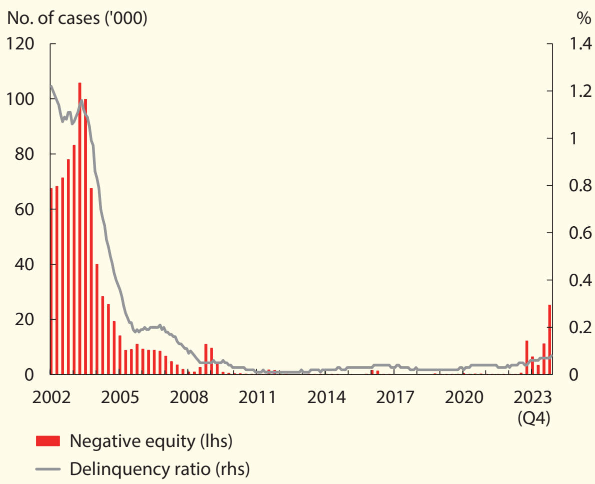
Source: R&VD.

[42] The Centa-Salesman Index (Residential Price) has rebounded to above the upper end of the critical zone of 55 since early-March 2024, while the Midland 35 Estates Transaction Volume also increased from the weekly average of 45.1 units in January – February to 122.5 units in the first four weeks of March.

[43] 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 mortgage payment for a typical 50m² flat (under a 20-year mortgage scheme with a 70% 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 DSR, which is subject to a maximum cap under HKMA macroprudential measures.

In conjunction with softening housing prices, the estimated number of RMLs in negative equity increased to 25,163 cases at end-December 2023 from 11,123 cases in end-September 2023 (Chart 4.23). These cases were related to bank staff housing loans or RMLs under MIP, which generally have a higher LTV ratio. Notably, the delinquency ratio of these mortgages remained low at 0.03% at end-December 2023, even lower than the 0.08% delinquency ratio of all the outstanding RMLs of the Hong Kong banking sector, partly reflecting the high mortgage loan quality under MIP due to its strict requirements on the applicants' repayment ability. Looking ahead, the tight labour market is anticipated to underpin households' mortgage payment capability, thereby curbing the upward pressure on the delinquency ratio of RMLs.

Chart 4.23
Residential mortgage delinquency ratio and loans in negative equity



Source: HKMA.

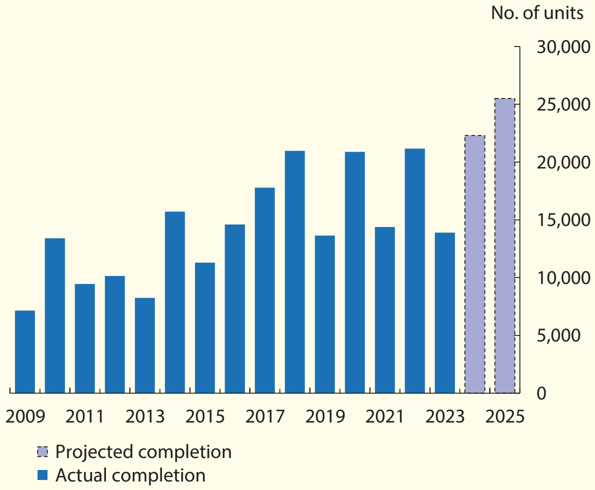
Despite the downward pressures on housing prices, the macroprudential measures introduced by the HKMA since 2009 have helped contain household leverage and strengthen banks' risk management for mortgage loans, thereby improving their resilience to interest rate and property market shocks. In particular, the average LTV ratio for new RMLs was about 59% in January 2024, below the ratio of 64% before the measures were first introduced. The average DSR also stayed at around 40%. In addition, over half of the private housing units do not carry any outstanding mortgages as of end-2023. As such, the systemic risks relating to banks' RMLs are properly managed on various fronts.

The residential property market outlook is subject to a number of uncertainties and risks as discussed in previous chapters. On one hand, factors such as elevated mortgage rates, accumulated private housing supply[44] and an uncertain external economic outlook may continue to exert pressure on housing market. On the other hand, the removal of the demand-side management measures for residential properties, coupled with the expectation of interest rate cuts by the US Fed this year and the Government's policies to attract businesses, investments and talents, may extend support to the housing market. Over the longer term, the outlook for the housing market will depend on the supply-demand gap. The Government projects that private housing completion, and thus the supply in the market, will remain high in the coming years (Chart 4.24).[45] Box 3 presents an initial analysis on the impact of climate change on Hong Kong housing prices.

[44] According to the data from the Housing Bureau, unsold units of completed projects were at a record-high level of 20,000 at the end of 2023.

[45] As estimated by the Housing Bureau in end-2023, total private first-hand residential flat supply in the coming three to four years would stay at a high level of 109,000 units.

Chart 4.24
Completions of private domestic units

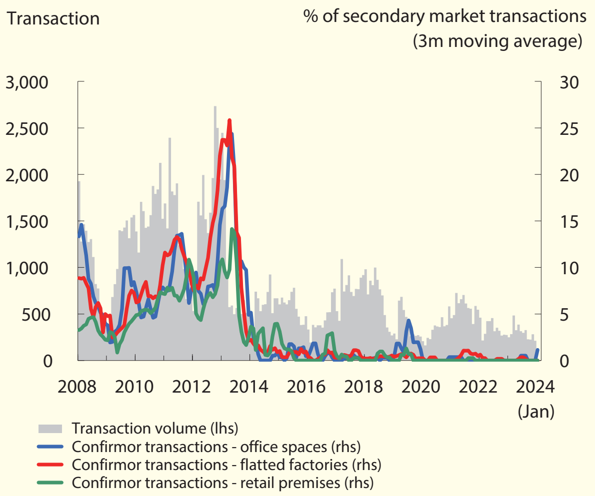


Sources: R&VD and Office of the Government Economist.

Commercial real estate market[46]

The commercial real estate market remained subdued in the second half of 2023. The average monthly transaction volume decreased to 263 units during the period from 341 units in the first half of 2023, and speculative activities remained restrained (Chart 4.25). Meanwhile, prices for office spaces, retail premises, and flatted factories softened further amid tightened financial conditions. (Chart 4.26).

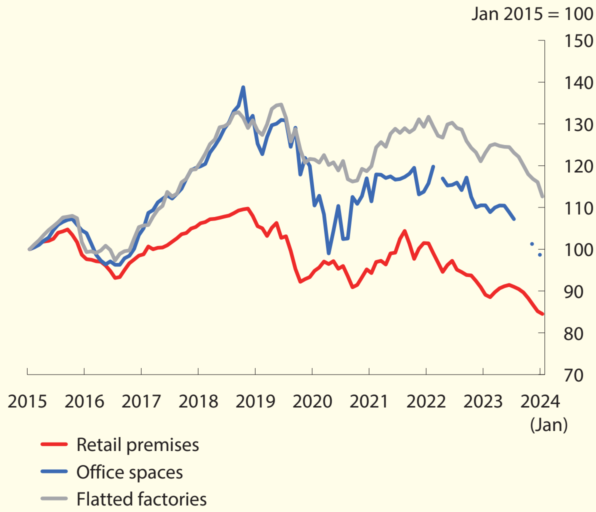
Chart 4.25
Transactions in commercial real estates



Sources: R&VD and Centaline Property Agency Limited.

[46] Commercial real estate refers to office spaces, retail premises and flatted factories.

Chart 4.26
Commercial real estate price indices



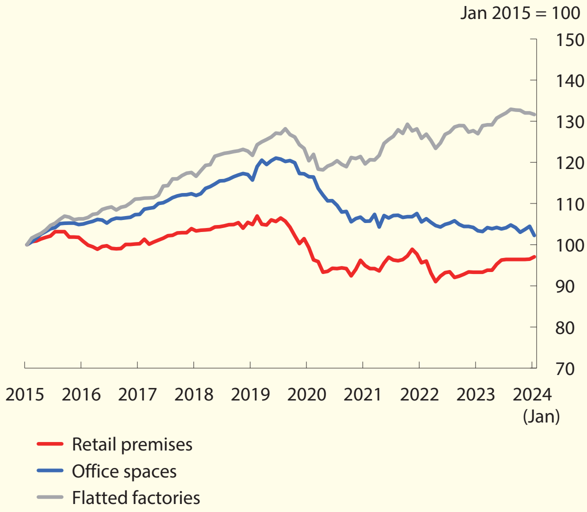
Note: The price index of office spaces cannot be compiled in March 2022, August to October and December 2023 due to insufficient transaction data for analysis.
Source: R&VD.

The leasing market of commercial real estates showed mixed performance across segments. The rentals of retail premises edged up on the back of ongoing recovery of inbound tourism and consumption demand. In contrast, the rentals of office spaces remained under pressure amid high vacancy rates and a challenging external environment (Chart 4.27).[47] Overall, the rental yields across segments slightly increased to 3.1% – 3.4% in January 2024. After detailed analyses, the HKMA also adjusted the countercyclical macroprudential measures for non-residential property mortgage loans with effect from 28 February 2024.[48]

[47] Market data from surveyor firms indicated that Grade A office vacancy increased to 12.8% in December 2023 from 12.6% in June 2023.

[48] The adjustments include: (i) raising the maximum LTV ratio for non-residential properties (including offices, retail shops and industrial buildings); and (ii) suspending the interest rate stress testing requirement for property mortgage lending that assumes a 200 bps rise in the mortgage rate. For details, see the circular "Prudential Measures for Property Mortgage Loans and Other Related Supervisory Requirements" issued by the HKMA on 28 February 2024.

Chart 4.27
Commercial real estate rental indices



Source: R&VD.

The outlook for the commercial real estate market will vary across segments. The retail segment is expected to benefit from the continuous improvements in domestic consumption and inbound tourism, although the benefit could be partially offset by the strong recovery of outbound tourism. On the other hand, the prevalence of remote working and high vacancy rates amid ample supply following higher completions in recent years may continue to weigh on the capital values of offices. That said, the Government's new Capital Investment Entrant Scheme (CIES)[49], which includes commercial real estate as a permissible investment, is expected to render some support to the market.

[49] Under the Scheme, an applicant must demonstrate that he/she has net assets of not less than HK$30 million to which he/she is absolutely beneficially entitled throughout the two years preceding the application. An applicant must make an investment of a minimum of HK$30 million in the permissible investment assets, including investing a minimum of HK$27 million in the permissible financial assets and commercial real estate, and placing HK$3 million into a new CIES Investment Portfolio.

Box 3
The impact of climate change on Hong Kong's housing prices: an initial analysis

Introduction

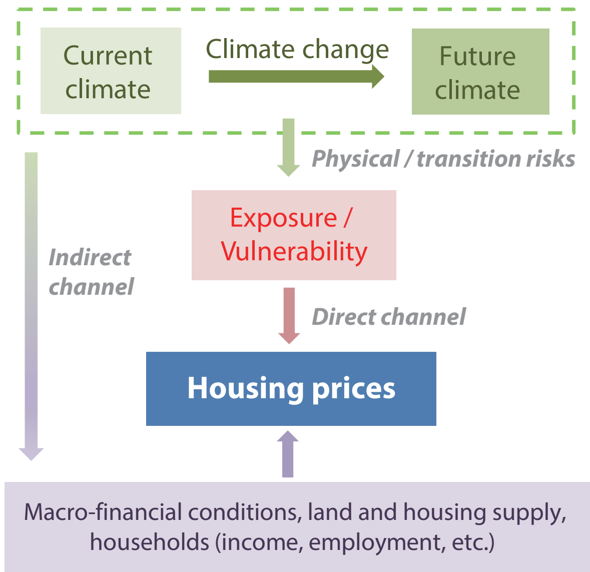
Climate change and the resultant extreme weather conditions can affect a broad range of economic activities including property trading and housing prices, which can, in turn, impact banking and financial stability via changing the collateral value of mortgages. Against this backdrop, this box offers an initial analysis on the impact of climate change on Hong Kong's housing prices, focusing on physical risks such as temperature and typhoons[51]. In doing so, our research echoes the international call for integrating climate-related risks into financial stability monitoring[52].

Major transmission channels

Conceptually, climate change can affect housing prices through direct and indirect channels as shown in Chart B3.1. Very often, climate-related risks are broadly classified into two types: physical and transition risks. Physical risks may arise from more frequent and intense extreme climate events, such as floods, storms, typhoons and extreme temperatures ("current climate"), and also from progressive changes in climate patterns, such as rising sea level or temperature due to elevated greenhouse gases (GHG) in the atmosphere ("future climate"). On the other hand, transition risks emerge from the process of adjustment towards a low-carbon economy brought by policies, regulations or technological advancements[53].

In the face of changing climate, some residential properties are more exposed or vulnerable to specific types of climate-related risks. For example, housing prices in coastal areas may have larger risk exposure and higher vulnerability to typhoons compared to inland areas. Similarly, houses in low-lying areas may more likely fall victim to heavy rainstorms and flooding. These examples illustrate the direct channels and highlight the importance of taking into account exposures and vulnerability when assessing the impact of climate-related risks. Apart from the direct channels, climate change could also affect housing prices by altering macro-financial conditions, such as land and housing supply, employment and household incomes, as well as productivity (i.e. the indirect channels). In what follows, our empirical study will focus on the direct channels, and hopefully set the scene for future research that will address the indirect channels more systematically.

Chart B3.1
Major transmission channels



Note: Simplified and for illustration only.
Sources: IMF (2020) and HKMA staff illustration.

51 For details, see "The impact of climate change on Hong Kong housing prices: an initial analysis", *HKMA Research Memorandum* 05/2023.

52 Recently, the HKMA has engaged an external consultant to develop a cloud-based platform for banks to assess the impact of physical hazards on real estate in Hong Kong under different scenarios by simply inputting the address of a property in Hong Kong – one of the first banking supervisors in the world to provide this kind of utility for the banking industry.

53 As a widely-cited example, fossil fuel assets can become stranded (i.e. subject to devaluations) because new regulations by the government limit the use of fossil fuels.

Empirical strategies

We adopt a macro approach and estimate how Hong Kong-specific climate variables and the associated risk exposure would affect the average housing prices in Hong Kong. First, we use our big data of residential property transactions[54] to calculate the average transacted prices at the district level, which become the dependent variable in our empirical equation. Second, regarding the explanatory variables, we collect the relevant climate variables and the exposure measurements as shown in Table B3.A, and we multiply a climate variable by exposure measurements to generate an interaction term and include it into the empirical model. Finally, we come up with a balanced panel dataset spanning between 2000 and 2021 (at an annual frequency). In the estimation process, we also control for district fixed effects (i.e. time-invariant, unobservable district differences) and year fixed effects (i.e. year-specific unobservable factors affecting all districts).

Table B3.A
Explanatory variables

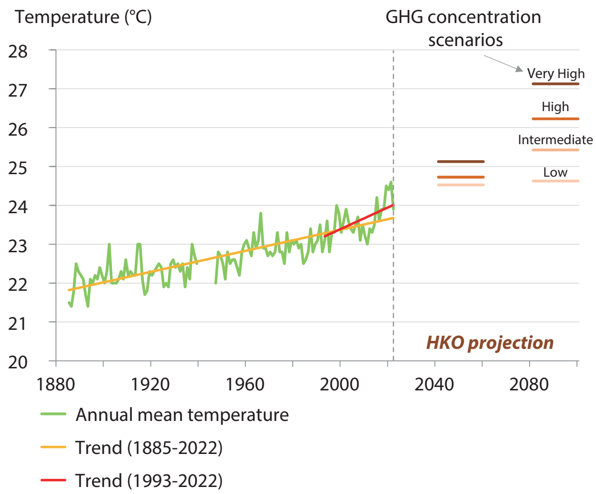
Variables	Explanation
(i) The average temperature of a district × the average age of transacted residential properties in a district	A hotter climate may lead to higher demand for utilities and higher maintenance costs (especially for older buildings or houses), thereby raising the carrying costs of owning a house or the investment cost of buy-to-let properties
(ii) The number of severe typhoons in a particular year × the number of coastal risk spots in a district	Severe typhoons can create heavy rainfall, strong winds, storm surges, overtopping waves, sea water inundation, flooding, etc., and housing prices in some high-risk coastal areas may be adversely affected
(iii) The rainfall in a district × the scale of flooding and the number of flooding blackspots in a district	Higher rainfall could cause heavy flooding and other damage to a property, and lower the amenity value. Some low-lying, inland areas, especially those with poor drainage systems or insufficient drainage capacity, would be more exposed to this risk

Source: HKMA staff.

Empirical results and projections

To give some background, Hong Kong's weather is getting hotter and its residential properties are ageing on average. Information collected by the Hong Kong Observatory (HKO) shows that the average temperature in Hong Kong has been rising over the years and the rising trend appears to have accelerated in recent decades (Chart B3.2). Under the different GHG concentration scenarios ("Low", "Intermediate", "High", "Very High") hypothesised by the HKO, the average temperature is likely to rise further beyond 2022, for instance, to over 24 degrees Celsius by 2041–2060 (say around 2050). On the other hand, our big data of housing transactions suggest that the transacted properties in Hong Kong are ageing on average, from about 14 years in early 2000s to about 26 years in 2021.

Chart B3.2
Annual mean temperature for Hong Kong and its projection



Sources: HKO and HKMA staff estimates.

[54] For more details, see "Box 4: Using transactional big data to monitor Hong Kong's residential mortgage loans offered by non-bank institutions", Half-Yearly Monetary and Financial Stability Report March 2022, the Hong Kong Monetary Authority.

Global warming can affect property prices in different parts of the world. Our estimation results suggest that it can also affect Hong Kong housing prices in the long run, but the potential impact is modest. To put our estimates into perspective, we adopt the scenario of "High" GHG concentration by the HKO so that the average temperature is projected to rise to over 24 degrees Celsius by around 2050, and assess the long term impact of rising temperatures on housing prices. By making some further assumptions on the average age of residential properties in the period ahead, we estimate that average housing prices could be affected by rising temperature and ageing properties, but the impact would be less than 1% per year even under the scenario of more aged properties.

Along with rising temperature, Hong Kong has also seen more severe typhoons in recent years that could have an impact on high-risk areas. Our estimation results suggest that, while increased frequency of severe typhoons (Signal No. 8 or higher, but not lower ones) may negatively affect housing prices especially for those higher risk areas, the estimated overall impact by around 2050 is small.

Finally, our macro study finds a very small historical impact of higher rainfall and the associated flooding on average housing prices. In addition to temperature, annual rainfall in Hong Kong has also been creeping up over the years, and the HKO has projected higher rainfall under global warming, which in turn could cause inland flooding. We use the flooding blackspots identified by the Drainage Services Department (DSD) of the Government to measure exposure. In fact, both the number of flooding blackspots and their flooding scale diminished in our sample period as assessed by the DSD. Estimation results further reveal that the impact of higher rainfall (through inland flooding) on housing prices is smaller than 1% by around 2050 even under the "Very High" GHG concentration scenario. This may in part be due to the Government's prevention strategy and improvement measures (for example, improved drainage system) over the years. The important lesson is that the adverse impact of climate-related risk can be mitigated by reducing exposure[55].

It should be noted that our results are not predictions about the actual housing prices in Hong Kong by around 2050, partly because there are other demand and supply forces at work in the housing market, and future mitigation measures (for example, Hong Kong's Climate Action Plan 2050) can mitigate the potential adverse outcomes.

[55] More recently, Hong Kong experienced a reportedly "once-in-500-years" rainstorm in September 2023, and the local drainage system was under pressure. Whether the current climate projections and the exposure assumptions should be amended may require more scientific evidence, but the projected impact of rainfall on housing prices can be larger if (i) the future annual rainfall is even higher than currently assumed due to more frequent extreme rainstorms and (ii) the relevant exposure is assessed to be larger because of the existing design of the drainage system. It would be useful to conduct some studies in the future to analyse the impact of this rainstorm on housing prices when more data are available.

Policy implications and concluding remarks

To conclude, like many places around the world, global warming and other climate changes can have an impact on Hong Kong's housing prices, in part through higher temperature and ageing properties, as well as more frequent occurrence of severe typhoons and related hazards. Nevertheless, these climate change impacts are not time-invariant; they depend on risk exposure such as the coverage of vulnerable residential areas over time. More importantly, measures can be implemented to reduce the risk exposure and mitigate the climate change impact on housing prices. Looking ahead, a faster urban renewal to replace older houses as well as green and energy-efficient buildings may help reduce the hotter climate risk, while large-scale coastal protection measures and wave wall upgrading as suggested by the Government may provide some relief to the typhoon-related hazards. From a broader perspective, a commitment to carbon neutrality and the use of green and sustainable finance to incentivise are important.

Finally, some caveats are in order. Our results are better treated as an initial analysis, as some climate projections by the HKO will be revised over time, and more climate variables or exposure data may become available in the future.

References

International Monetary Fund (IMF) (2020). "Chapter 5: Climate change: Physical risk and equity prices", Global Financial Stability Report April 2020, the International Monetary Fund.

5. Banking sector performance

Retail banks registered higher profits in the second half of 2023 compared with the same period in 2022 mainly due to higher net interest income. However, partly reflecting subdued credit demand driven by higher borrowing costs and weak global growth prospect, total bank credits decreased moderately in the second half. The classified loan ratio (CLR) also increased during the second half of 2023, albeit remaining at a healthy level. Overall, the Hong Kong banking sector remained robust and resilient, underpinned by strong capital and liquidity buffers. Going forward, the Hong Kong banking sector is expected to face challenges from a number of risk factors arising from uncertainties over the future path of US monetary policy rate, global growth prospects, and geopolitical tensions. Banks should remain vigilant against the impacts of these risk factors on the asset quality of their loan portfolios.

5.1 Profitability and capitalisation

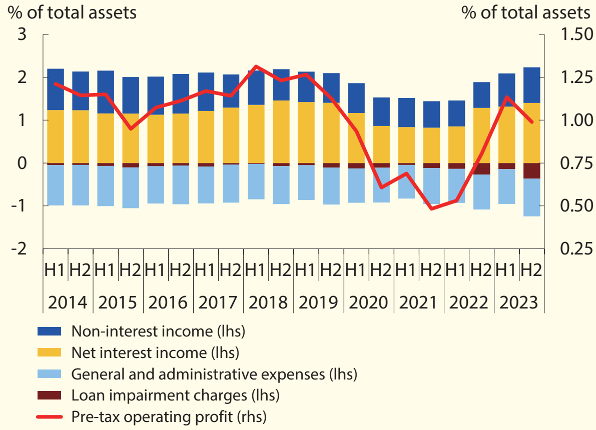
Profitability

The aggregate pre-tax operating profit of retail banks[56] increased further by 25.8% in the second half of 2023 compared with the same period in 2022, while the return on assets rose to 0.99% from 0.80% (Chart 5.1). The improvement in profit was mainly contributed by increases in net interest income and income from investments held for trading. This was partly offset by an increase in loan impairment charges.

With interest rates remaining at elevated levels during the second half, the net interest margin (NIM) of retail banks widened further to 1.73% compared with 1.59% for the same period in 2022 (Chart 5.2).

For 2023 as a whole, the aggregate pre-tax operating profit of retail banks increased notably by 62.1%, while the return on assets rose to 1.06% from 0.67% in 2022.

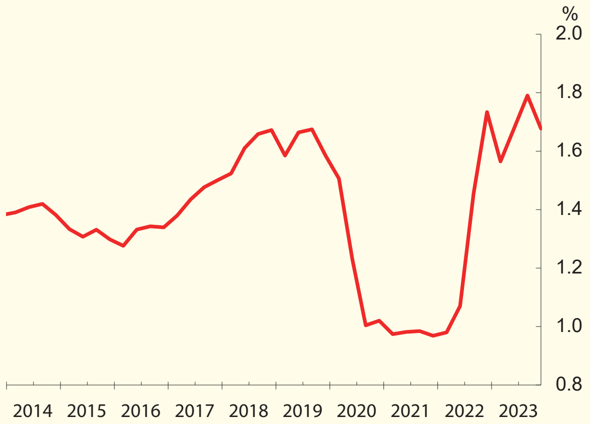
Chart 5.1
Profitability of retail banks



Note: Annualised semi-annual figures.
Source: HKMA.

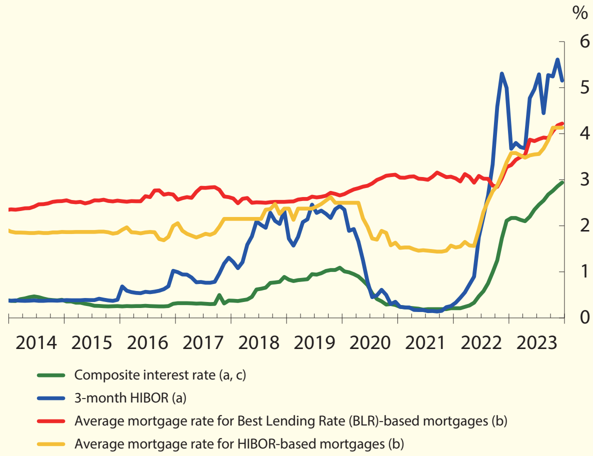
[56] Throughout this chapter, figures for the banking sector relate to Hong Kong offices only, unless otherwise stated.

Chart 5.2
Net interest margin of retail banks



Note: Annualised quarterly figures.
Source: HKMA.

Chart 5.3
Interest rates



Notes:
(a) End-of-period figures.
(b) Period-average figures for newly approved loans.
(c) Since June 2019, the composite interest rate has been calculated based on the new local "interest rate risk in the banking book" (IRRBB) framework. As such, figures from June 2019 onwards are not strictly comparable with those of previous months.

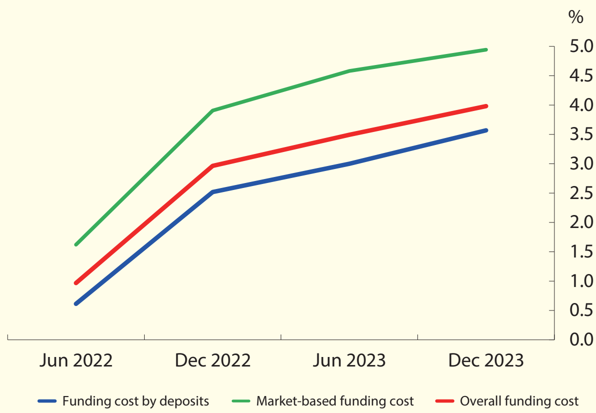
Sources: HKMA and staff estimates.

The HKD interest rates stayed at elevated levels in the second half of 2023. In the interbank market, the three-month Hong Kong Interbank Offered Rate (HIBOR) hovered around 5% throughout the second half, and stayed at 5.15% at the end of 2023 (blue line in Chart 5.3).

On the retail front, amid elevated HIBORs, banks were keen to compete for HKD time deposits by offering high time deposit rates. As depositors continued to substitute savings deposits with time deposits, this increased banks' overall deposit funding costs. Reflecting higher wholesale and retail funding costs, the composite interest rate (a measure of the average cost of HKD funds for retail banks) rose to 2.94% at the end of 2023 (green line in Chart 5.3).

More broadly, the overall HKD and USD funding cost for licensed banks in Hong Kong increased from 3.49% to 3.98% during the second half of 2023 (red line in Chart 5.4).

Chart 5.4
Hong Kong dollar and US dollar funding costs of licensed banks



Note: Since June 2019, licensed banks not exempted from the new local IRRBB framework report under the new framework, while exempted licensed banks continue to report under the existing interest rate risk exposure framework. The overall funding cost has been calculated as the weighted averages of the respective funding costs for these two groups of licensed banks. As such, figures from June 2019 onwards are not directly comparable with those of previous periods.

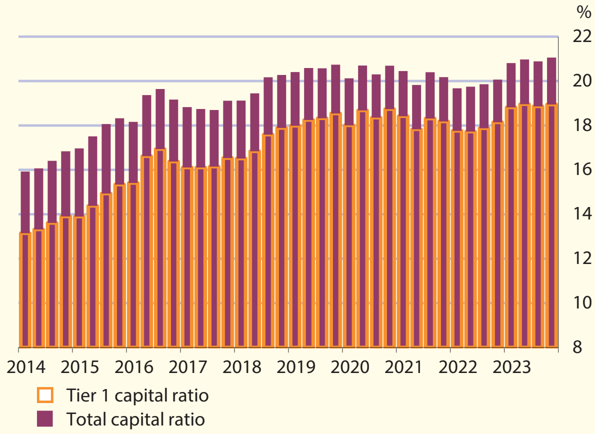
Source: HKMA.

Looking ahead, the profitability outlook of Hong Kong banks may be clouded by the uncertainties over the future path of the US monetary policy. In a "high for longer" interest rate scenario, the rising funding costs and subdued credit demand could weigh on banks' net interest income, as both loan volume and NIM may contract. Such a scenario may also weaken economic outlook, leading to lower corporate earnings and debt repayment abilities. The associated credit losses may further weigh on bank profitability.

Capitalisation

Capitalisation of the Hong Kong banking sector continued to be strong and well above international minimum standards. The consolidated total capital ratio of locally incorporated authorized institutions (AIs) stood at a high level of 21.1% at the end of 2023 (Chart 5.5), well above the international minimum requirement of 8%. The Tier 1 capital and the Common Equity Tier 1 (CET1) capital ratios were 18.9% and 17.2%, respectively. In addition, the non-risk-based Leverage Ratio (LR)[57] of locally incorporated AIs recorded a healthy level of 7.9% at the end of 2023, exceeding the statutory minimum of 3%.

Chart 5.5
Capitalisation of locally incorporated AIs



Note: Consolidated basis.
Source: HKMA.

5.2 Liquidity and interest rate risks

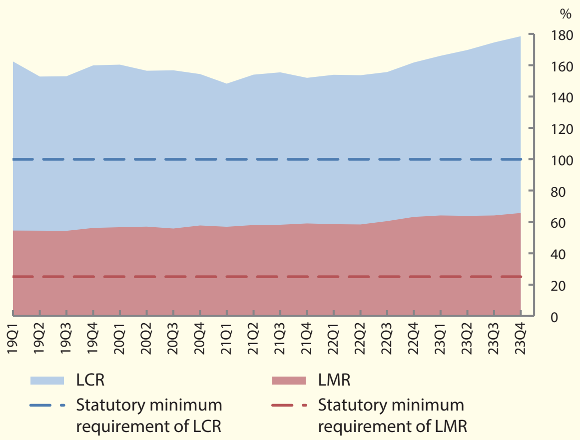
Liquidity and funding

The liquidity positions of the banking sector, as measured by the Basel III Liquidity Coverage Ratio (LCR),[58] remained sound during the review period. The average LCR of category 1 institutions and the average Liquidity Maintenance Ratio (LMR) of category 2 were 178.6% and 65.7% in the fourth quarter of 2023 respectively (Chart 5.6), staying well above their corresponding statutory minimum requirement of 100% and 25%.

[57] The Basel III non-risk-based LR requirement acts as a "backstop" to restrict the build-up of excessive leverage in the banking sector. For details, see Banking (Capital) Rules (Cap. 155L).

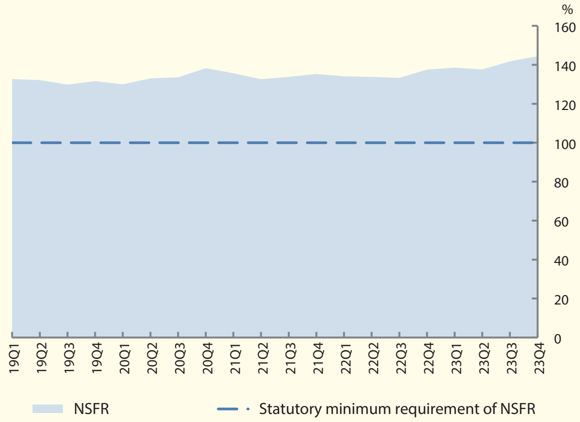
[58] The Basel III LCR requirement is designed to ensure that banks have sufficient high-quality liquid assets to survive a significant stress scenario lasting 30 calendar days. In Hong Kong, AIs designated as category 1 institutions adopt the LCR; while category 2 institutions adopt the LMR. For details, see the HKMA's Supervisory Policy Manual (SPM) LM-1, "*Regulatory Framework for Supervision of Liquidity Risk*".

Chart 5.6
Liquidity Coverage Ratio and Liquidity Maintenance Ratio



Notes:
1. Consolidated basis.
2. Quarterly average figures.
Source: HKMA.

Chart 5.7
Net Stable Funding Ratio

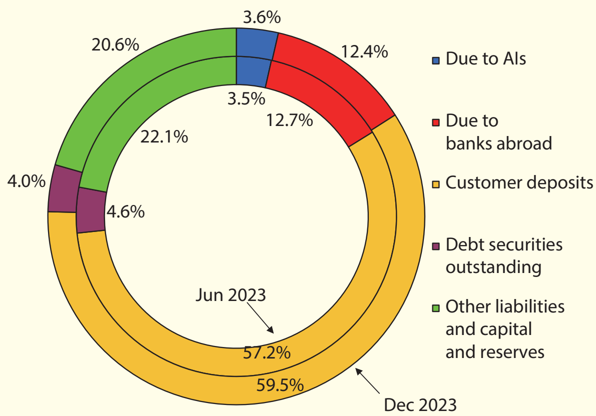


Note: Consolidated basis.
Source: HKMA.

Funding positions of AIs remained stable. The average Net Stable Funding Ratio (NSFR) of category 1 institutions remained at a high level of 144.4% in the fourth quarter of 2023 (Chart 5.7), well above the statutory minimum requirement of 100%. The average Core Funding Ratio of category 2A institutions also stayed at a high level of 169.4%, exceeding the statutory minimum requirement of 75%. The strong liquidity buffers and stable funding positions of AIs suggest that the Hong Kong banking sector is well positioned to withstand liquidity shocks.

Customer deposits continued to be the primary source of funding for AIs, underpinning a stable funding structure in the banking system.[59] At the end of 2023, the share of customer deposits to all AIs' total liabilities increased to 59.5%, compared to 57.2% six months ago (Chart 5.8).

Chart 5.8
The liability structure of all AIs

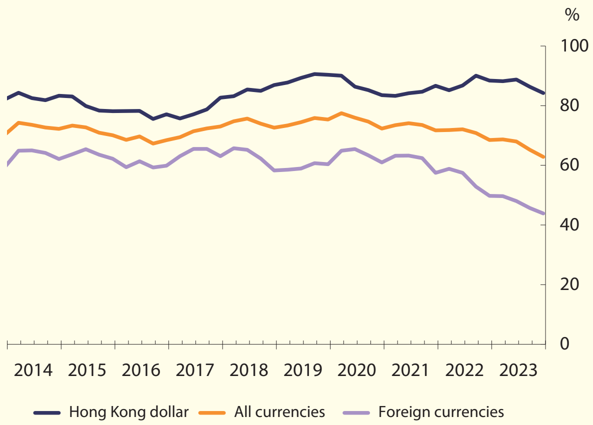


Notes:
1. Figures may not add up to total due to rounding.
2. Figures refer to the percentage of total liabilities, including capital and reserves.
3. Debt securities comprise negotiable certificates of deposit and all other negotiable debt instruments.
Source: HKMA.

59 In addition, the stable funding profile of the Hong Kong banking sector can be further enhanced by the recent proposal in raising the protection limit of the Deposit Protection Scheme.

The average all-currency loan-to-deposit (LTD) ratio of all AIs dropped from 68.0% at the end of June 2023 to 62.8% at the end of 2023 (Chart 5.9). The decrease in the ratio was attributable to a decrease in total lending arisen from subdued credit demand, while total deposits increased during the same period. The HKD and foreign-currency LTD ratios declined to 84.2% and 43.9% at the end of 2023 respectively, compared with 88.7% and 48.0% six months ago.

Chart 5.9
Average loan-to-deposit ratios of all AIs



Note: End-of-quarter figures.
Source: HKMA.

Interest rate risk

The interest rate risk exposure of banks in Hong Kong remained at a relatively low level in the fouth quarter of 2023. Under a hypothetical shock of an across-the-board 200-basis-point increase in HKD and USD interest rates,[60] the economic value of locally incorporated licensed banks' interest rate positions is estimated to decrease by an amount equivalent to 1.83% of their total capital base at the end of December 2023.[61] The relatively moderate impact suggests that banks in Hong Kong should be well positioned to withstand interest rate shocks.

5.3 Credit risk

Overview

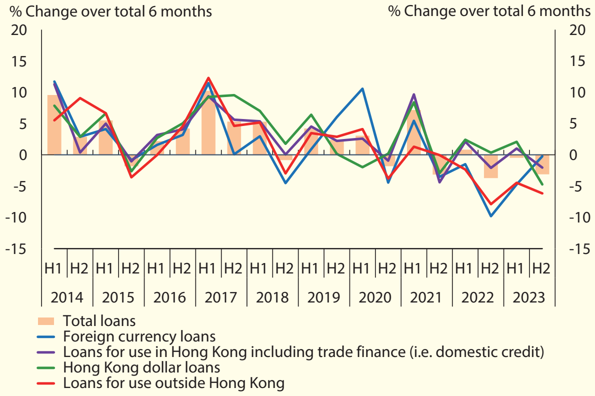
Against the background of higher borrowing costs, demand for bank credit continued to stay weak in the second half of 2023. Partly reflecting this, total lending of the banking sector contracted by 3.6% in 2023, after recording a 3.0% decrease in 2022.

On a half-yearly basis, total loans and advances of all AIs contracted by 3.1% in the second half of 2023 (Chart 5.10) driven by the decreases in both domestic loans (comprising loans for use in Hong Kong and trade financing) and loans for use outside Hong Kong. Domestic loans decreased by 2.0% after recording a 1.0% growth during the first half, while loans for use outside Hong Kong declined further by 6.2% after a 4.5% drop during the first half of 2023.

[60] The impact of the interest rate shock refers to its impact on the economic value of the banking and trading book, expressed as a percentage of the total capital bases of banks.

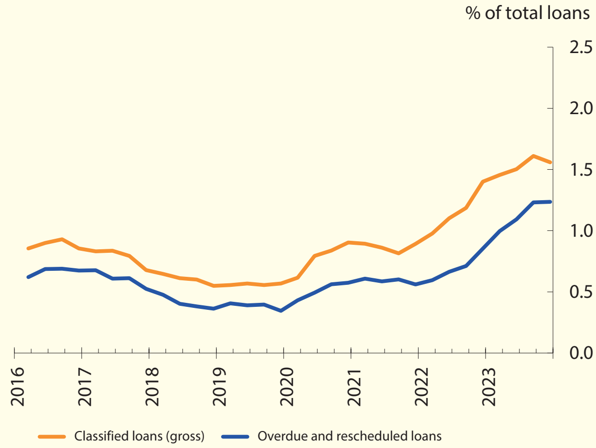
[61] This estimation does not take into account the effect of any mitigating action by banks in response to the shock. The impact will be smaller if mitigating action is taken.

Chart 5.10
Loan growth



Note: Since December 2018, figures for loans for use in or outside Hong Kong have been restated to reflect AIs' reclassification of working capital loans. The reported percentage changes over six months for 2019 and onwards are calculated based on the reclassified loan data, while the historical percentage changes until the second half of 2018 are calculated based on the data without such reclassification.
Source: HKMA.

Chart 5.11
Asset quality of all AIs



Note: Classified loans are those loans graded as "sub-standard", "doubtful" or "loss".
Source: HKMA.

The weak credit demand is expected to persist in the near future amid the higher borrowing cost environment. According to the results of the HKMA Opinion Survey on Credit Condition Outlook in December 2023, around 70% of the surveyed AIs expect the loan demand to be the same in the coming three months (Table 5.A).

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

% of total respondents	Mar-23	Jun-23	Sep-23	Dec-23
Considerably higher	0	0	0	0
Somewhat higher	37	20	20	17
Same	53	57	57	70
Somewhat lower	10	20	20	10
Considerably lower	0	3	3	3
Total	100	100	100	100

Note: Figures may not add up to total due to rounding.
Source: HKMA.

The asset quality of banks' loan portfolios deteriorated slightly in the second half of 2023. The gross CLR of all AIs rose to 1.56% at the end of December 2023 from 1.50% at the end of June 2023. Similarly, the ratio of overdue and rescheduled loans of all AIs also rose from 1.09% at the end of June 2023 to 1.24% at the end of December 2023 (Chart 5.11). Despite the slight increase in CLR, the asset quality of the Hong Kong banking sector stayed healthy.

Household exposure[62]

Household debt grew by 0.5% in the second half of 2023, visibly slower than the 2.2% and 0.7% increase in the first half of 2023 and second half of 2022 (Table 5.B). A breakdown of the data shows that the growth of residential mortgage loans moderated to 0.8% in the second half of 2023, given the lower number of residential property transactions. During the same period, personal loans reverted to a slight contraction of 0.3%, after increasing by 1.4% in the first half of 2023.

[62] Loans to households constitute lending to professional and private individuals, excluding lending for other business purposes. Mortgages account for a major proportion of household loans, while the remainder comprises mainly loans to private banking and wealth management customers secured by financial assets, credit card advances and unsecured personal loans. At the end of December 2023, household lending accounted for 36.4% of domestic lending. In this section, household debt is also referred to as loans to households.

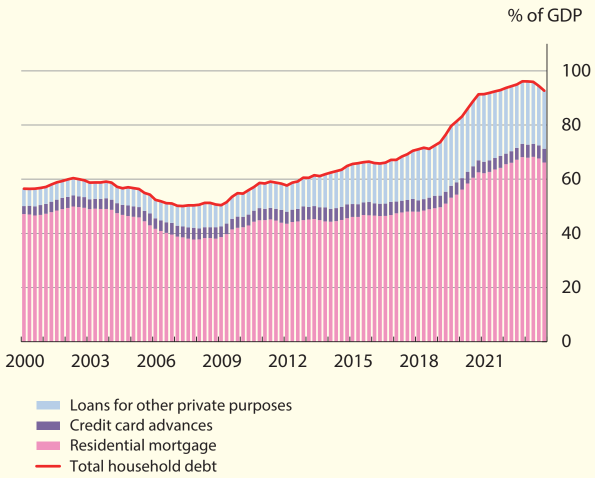
Table 5.B
Half-yearly growth of loans to households of all AIs

(%)	2020 H1	2020 H2	2021 H1	2021 H2	2022 H1	2022 H2	2023 H1	2023 H2
Residential mortgages	3.5	4.7	4.0	5.7	2.1	1.9	2.6	0.8
Personal loans	−2.4	2.2	5.3	1.6	−2.5	−2.2	1.4	−0.3
of which:								
Credit card advances	−9.0	0.0	−0.4	8.1	−5.3	14.4	0.2	10.5
Loans for other private purposes	−1.1	2.6	6.4	0.4	−2.0	−5.1	1.6	−2.6
Total loans to households	1.5	3.9	4.4	4.4	0.7	0.7	2.2	0.5

Source: HKMA.

The household debt-to-GDP ratio decreased to 92.7% in the second half of 2023 (Chart 5.12), from 95.9% in the first half of 2023. During this period, the expansion in Hong Kong's nominal gross domestic product (GDP) contributed 3.6 percentage points of the 3.2-percentage-point decrease in the household debt-to-GDP ratio, while the growth of household debt partially offset the decrease in the ratio by 0.4 percentage points.

Chart 5.12
Household debt-to-GDP and its components



Notes:
1. Only borrowings from AIs are covered.
2. GDP refers to the annualised GDP, which is the sum of the quarterly GDP in the trailing four quarters.
3. Since December 2018, the figure for household debt has been restated to reflect AIs' reclassification of working capital loans.

Source: HKMA.

It is noteworthy that the household debt-to-GDP ratio is a widely-used measure for gauging the financial soundness of households due to its simplicity. When interpreting this ratio, it is important to take into account that: (i) the denominator of the ratio uses nominal GDP as a proxy for the household income for ease of comparison across economies, and is thus not the actual income of the households with borrowings. Therefore, the household debt-to-GDP ratio does not reflect the actual debt servicing burden of households in the economy; and (ii) the numerator takes into account only the gross debts of households (instead of the net debts which take into account household assets).

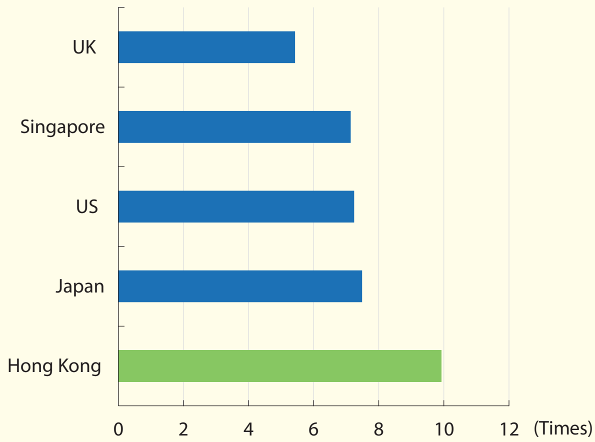
As such, a full and objective assessment of the risks associated with household debt requires the consideration of other factors, including the actual debt servicing ratio (DSR) and the asset side of the household balance sheet. In fact, the average DSR of new mortgages remained at a healthy level of 40.2% in January 2024. The household net worth has also stayed at a high level. Specifically, both the net worth-to-liabilities ratio and safe asset-to-liabilities ratio of Hong Kong's household sector remained high at 9.9 times and 2.9 times respectively in 2022 (Charts 5.13 and 5.14), which are much higher than those of most other developed economies. This suggests that Hong Kong's households, on aggregate, are financially sound and have a strong buffer to cushion potential financial and economic shocks.

The HKMA has been closely monitoring household indebtedness and regularly collects data from the banks. The majority of the household debts are residential mortgage loans, which are governed by the macroprudential policy framework, as well as collateralised loans to wealth management customers against financial assets. Coupled with the fact that household net worth has stayed at a high level, the HKMA considers that the household balance sheet remains healthy and the associated credit risk is manageable.

For residential mortgages, the average loan-to-value (LTV) ratio and average DSR of newly approved mortgage loans have stayed at healthy levels following several rounds of countercyclical macroprudential measures introduced by the HKMA since 2009. After taking into account a range of factors including recent changes in market conditions, the HKMA adjusted the countercyclical macroprudential measures and other related supervisory requirements in February 2024, which included increasing the maximum LTV ratios for both residential and non-residential properties, and suspending the interest rate stress testing requirement for mortgage loans.[63] For personal loans to wealth management customers secured by financial assets, the HKMA requires banks to adopt prudent and effective credit risk management measures on this type of business. Such measures include imposing a cap on LTV ratios for financial assets pledged as collateral, issuing prompt margin calls, and adopting forced liquidation mechanisms.

The HKMA also requires banks to adopt prudent underwriting standards for credit card advance and unsecured personal loan businesses. In reviewing credit applications, banks should understand borrowers' credit and financial conditions and carefully assess their repayment ability. As for post-lending, banks should implement effective monitoring that includes regular assessment of the asset quality of the loan portfolios.

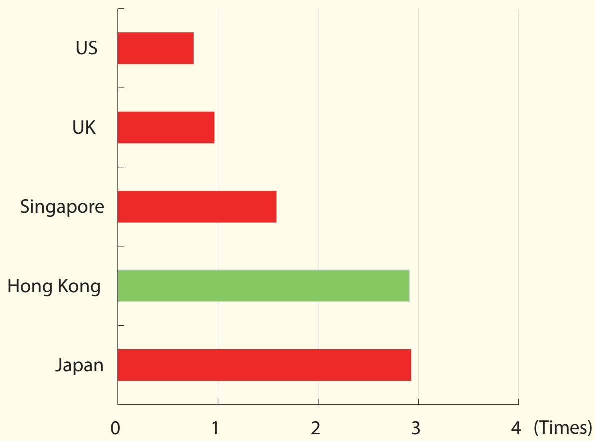
Chart 5.13
Household net worth-to-liabilities ratio for selected economies



Note: Figure for Singapore refer to that at end-2023, while figures for other economies (including Hong Kong) refer to those at end-2022.

Sources: Statistical agencies or central banks of selected economies, and HKMA staff estimates.

Chart 5.14
Safe assets-to-liabilities ratio for selected economies



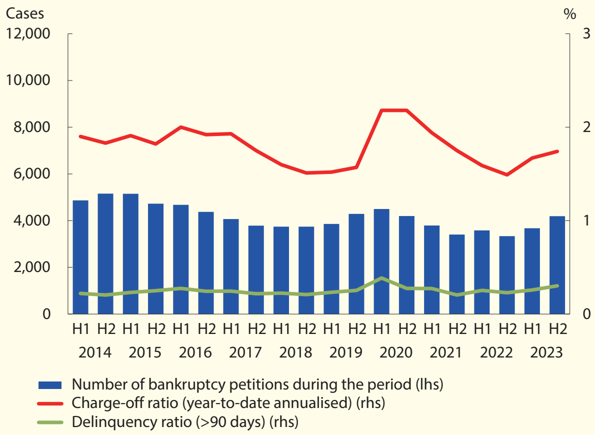
Note: Safe assets comprise deposits, as well as currencies if data is available. In the case of Hong Kong, safe assets refer to deposits only. Figure for Singapore refer to that at end-2023, while figures for other economies (including Hong Kong) refer to those at end-2022.

Sources: Statistical agencies or central banks of selected economies, and HKMA staff estimates.

63 For details, see the press release "Countercyclical Macroprudential Measures for Property Mortgage Loans" on 28 February 2024 (https://www.hkma.gov.hk/eng/news-and-media/press-releases/2024/02/20240228-3/).

For unsecured household exposure, while the associated credit risk has deteriorated slightly, it remained contained during the review period. The number of bankruptcy petitions increased by 14.1% in the second half of 2023 compared with the preceding six months. The year-to-date annualised credit card charge-off ratio increased slightly from 1.67% in the second quarter of 2023 to 1.74% in the fourth quarter of 2023, while the delinquency ratio increased slightly to 0.30% in December 2023 (Chart 5.15).

Chart 5.15
Charge-off ratio and delinquency ratio for credit card lending and bankruptcy petitions

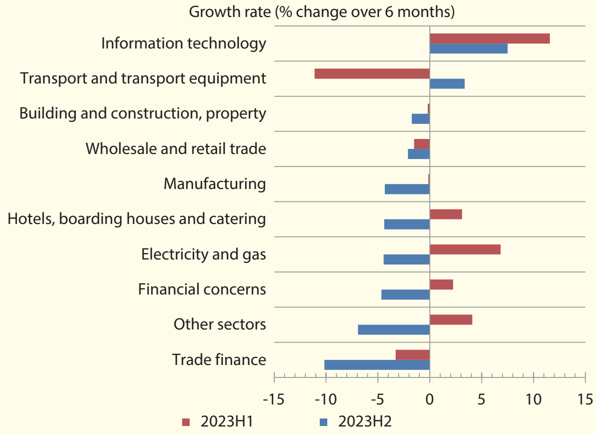


Sources: Official Receiver's Office and HKMA.

Corporate exposure[64]

Domestic corporate loans contracted by 3.4% during the second half of 2023, after registering a modest growth of 0.4% in the first half of 2023. Lending to most economic sectors recorded declines (Chart 5.16), which could be attributed to the subdued credit demand amid the high interest rate environment.

Chart 5.16
Growth in domestic corporate loans by selected sectors



Source: HKMA.

The demand-side survey on the credit conditions of small and medium-sized enterprises (SMEs) showed that SMEs' credit conditions continued to face headwinds from the high interest rate environment. The SMEs' perception of banks' credit approval stance weakened in the fourth quarter of 2023, with 31% of respondents perceiving more difficult credit approval (Chart 5.17).[65] That said, the proportion still remained within the normal range observed.

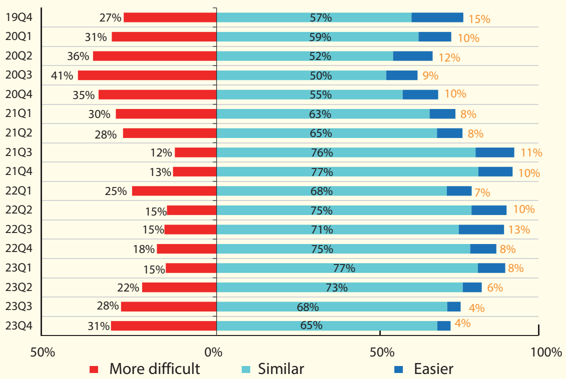
Of respondents with existing credit lines, 24% reported a "tighter" stance by banks in the fourth quarter of 2023, down from 34% in the previous quarter (Chart 5.18). As a tighter stance on existing credit lines denotes a range of possible measures or arrangements (e.g. reducing unused and used credit lines, raising the interest rate, imposing additional collateral requirements, or shortening loan tenor), respondents' indication of banks' stance on existing credit lines may not directly reflect banks' supply of credit to SMEs.

64 Excluding interbank exposure. At the end of 2023, the share of corporate loans in domestic lending was 63.6%.

65 The perception of a more difficult credit approval stance may not necessarily reflect actual difficulties faced by SMEs in obtaining bank credit as the perception could be affected by a number of factors, such as media or news reports, business conditions, and opinions of relatives and friends.

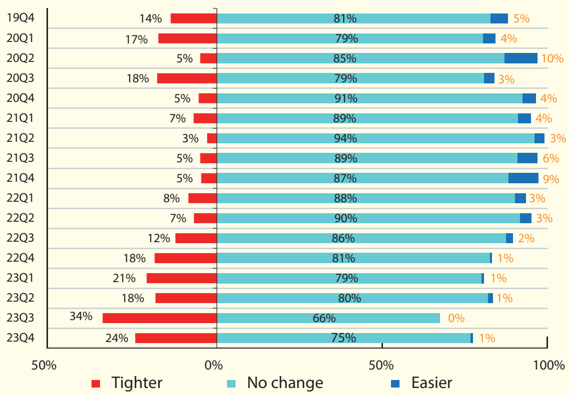
The HKMA has encouraged banks to be sympathetic in handling the funding needs of corporates which are facing cash flow pressure, subject to prudent risk-management principles. In December 2023, the HKMA issued a circular to banks setting out guidance on lending practices that seek to strike a balance between prudent risk management and supporting real economic activities.

Chart 5.17
SMEs' perception of banks' credit approval stance relative to six months ago



Note: Excluding respondents who answered "no idea/don't know".
Source: HKMA.

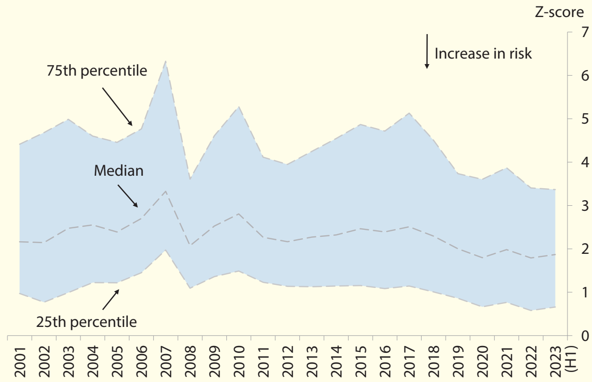
Chart 5.18
SMEs' reported change in banks' stance on existing credit lines



Note: The data covers only respondents with existing credit lines.
Source: HKMA.

The financial health of listed corporates has shown signs of stabilisation based on the latest available financial information. Based on accounting data for all non-financial corporates listed in Hong Kong up to the first half of 2023, the Altman's Z-score (a default risk measure for non-financial corporates based on accounting data) generally stabilised (Chart 5.19).

Chart 5.19
Altman's Z-score of listed non-financial corporates in Hong Kong

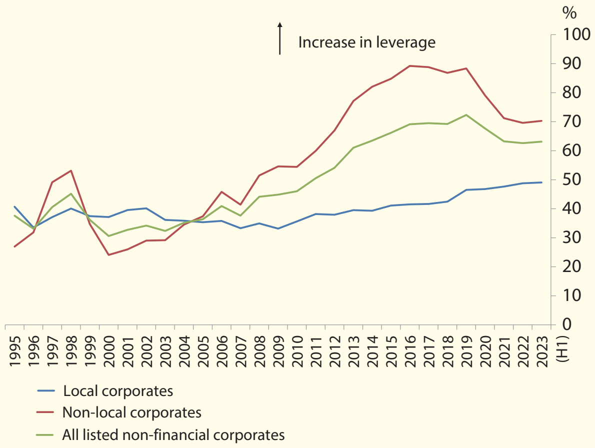


Notes:
1. All non-financial corporates listed on the Hong Kong Stock Exchange are selected.
2. Figures are calculated based on information up to late February 2024.

Source: HKMA staff calculations based on estimates compiled by Bloomberg.

In addition, the weighted average debt-to-equity ratio, a common measure of corporate leverage, remained largely stable in the first half of 2023 for listed non-financial corporates in Hong Kong (the green line in Chart 5.20), although the leverage ratio for non-local corporates edged up slightly (the red line in Chart 5.20). Meanwhile, the debt servicing ability of listed non-financial corporates, as indicated by the weighted average interest coverage ratio (ICR) (Chart 5.21), weakened slightly in the same period.

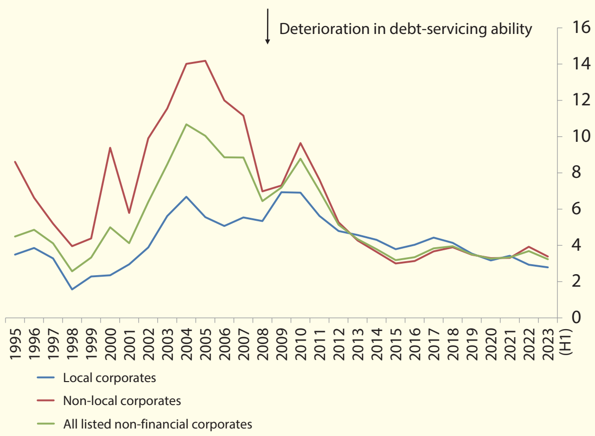
Chart 5.20
Leverage ratio of listed non-financial corporates in Hong Kong



Notes:
1. Weighted average figures.
2. The leverage ratio is defined as the ratio of debt to equity. A higher value indicates higher leverage.
3. All non-financial corporates listed on the Hong Kong Stock Exchange are selected. Local and non-local corporates refer to listed firms that are domiciled in and outside Hong Kong, respectively.
4. Figures are calculated based on information up to late February 2024.

Source: HKMA staff estimates based on data from Bloomberg.

Chart 5.21
Interest coverage ratio of listed non-financial corporates in Hong Kong



Notes:
1. Weighted average figures.
2. The ICR is calculated by dividing the earnings before interest and tax (EBIT) by total interest expenses. A lower value indicates deterioration of debt servicing ability.
3. All non-financial corporates listed on the Hong Kong Stock Exchange are selected. Local and non-local corporates refer to listed firms that are domiciled in and outside Hong Kong, respectively.
4. Figures are calculated based on information up to late February 2024.

Source: HKMA staff estimates based on data from Bloomberg.

Given the significant cross-border lending of the Hong Kong banking sector, particularly to the Asia-Pacific region, it is important to examine the debt servicing ability of corporates in the region under the current macro-financial environment. Findings in Box 4 suggest that the additional cash buffers accumulated by corporates in the region during the pandemic play an important role in mitigating the credit risk impact arising from higher funding costs and lower economic growth. This may help explain why corporate defaults in the region have not increased notably so far.

However, signs of depletion in cash buffers have appeared. More corporates in the region may see repayment difficulties if the high interest rate and weak economic growth environment persist. Therefore, banks should remain vigilant and carefully assess the possible negative impacts on their corporate loan portfolios.

Mainland-related lending and non-bank exposures

The banking sector's total Mainland-related lending decreased by 3.7% to HK$4,226 billion (13.7% of total assets) at the end of December 2023, from HK$4,390 billion (14.4% of total assets) at the end of June 2023 (Table 5.C). Other non-bank exposures increased by 6.7% to HK$2,011 billion (Table 5.D). The gross CLR of Mainland-related lending of all AIs[66] increased to 2.58% at the end of December 2023 from 2.41% at the end of June 2023.

[66] Figures cover AIs' Hong Kong offices and Mainland branches and subsidiaries.

Table 5.C
Mainland-related lending

HK$bn	Mar 2023	Jun 2023	Sep 2023	Dec 2023
Mainland-related loans	4,551	4,390	4,291	4,226
Mainland-related loans excluding trade finance	4,247	4,108	4,025	3,978
Trade finance	303	281	266	247
By type of AIs:				
Overseas incorporated AIs	1,605	1,573	1,516	1,490
Locally incorporated AIs*	2,138	2,062	2,010	1,964
Mainland banking subsidiaries of locally incorporated AIs	809	754	765	771
By type of borrowers:				
Mainland state-owned entities	1,918	1,838	1,822	1,841
Mainland private entities	1,375	1,336	1,300	1,256
Non-Mainland entities	1,258	1,216	1,169	1,128

Notes:
1. * Including loans booked in Mainland branches of locally incorporated AIs.
2. Figures may not add up to the total due to rounding.
Source: HKMA.

Table 5.D
Other non-bank exposures

HK$bn	Mar 2023	Jun 2023	Sep 2023	Dec 2023
Negotiable debt instruments and other on-balance sheet exposures	1,432	1,389	1,409	1,468
Off-balance sheet exposures	474	494	532	542
Total	**1,906**	**1,884**	**1,941**	**2,011**

Note: Figures may not add up to the total due to rounding.
Source: HKMA.

While the Mainland authorities have introduced stimulus measures to boost domestic demand, the full effects of these measures may take some time and the near-term economic performance of the Mainland economy may be subject to various challenges, including the softening domestic real estate sector and global geopolitical tensions. Banks should therefore remain vigilant in managing their related credit risks.

Macro stress testing of credit risk[67]

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 severe macroeconomic shocks. Table 5.E presents a simulated future credit loss rate of retail banks in the fourth quarter of 2025 under four specific macroeconomic shocks[68] using information up to the fourth quarter of 2023.

In stressed scenarios, the average expected credit losses two years after different macroeconomic shocks are estimated to be moderate, ranging from 1.02% (Property price shock and Interest rate shock) to 1.46% (Hong Kong GDP shock).

Taking into account tail risk, the Value-at-risk (VaR) at 99% confidence level (CL) of bank credit loss would increase in all four scenarios, ranging from 2.67% (Interest rate shock) to 3.65% (Hong Kong GDP shock).

67 Macro stress testing refers to a range of techniques used to assess the vulnerability of a financial system to "exceptional but plausible" macroeconomic shocks. The credit loss estimates presented in this report are obtained based on a revised framework presented in Box 4 of the *Half-Yearly Monetary and Financial Stability Report* published in September 2023. All estimates in the current report are not strictly comparable to estimates from previous reports.

68 These shocks are calibrated by referencing to the extreme episodes observed in the past. For instance, the Hong Kong GDP shock scenario replicates the severe economic downturn recorded between the third quarter of 2019 and the second quarter of 2020.

Table 5.E
The mean and value-at-risk statistics of simulated credit loss distributions[1]

Scenario	Estimated credit loss (% of the loan portfolio) Mean	VaR at 99% CL
Baseline[2]	0.75	1.99
Stressed scenarios[3]		
Hong Kong GDP shock	1.46	3.65
Property price shock	1.02	2.68
Interest rate shock	1.02	2.67
Mainland GDP shock	1.22	3.02

Notes:
1. The assessments assume the economic conditions in 2023 Q4 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 3.2%, 3.6%, 9.3% and 9.4% respectively in each of the four consecutive quarters starting from 2024 Q1.
   Property price shock: Reductions in Hong Kong's real property prices by an average of 12% in each of the four consecutive quarters starting from 2024 Q1.
   Interest rate shock: A rise in real interest rates by 0.1, 0.9, 1.8 and 3.2 percentage points respectively each of the four consecutive quarters starting from 2024 Q1.
   Mainland GDP shock: An average year-on-year real GDP growth rate of 2% for the four consecutive quarters starting from 2024 Q1.

Source: HKMA staff estimates.

5.4 Risks and resilience

As shown in the previous sections, the Hong Kong banking sector has remained resilient. While the systemic risk remained contained, several downside risk factors could pose challenges for the Hong Kong banking sector going forward.

First, the uncertainties over the future path of the US policy rate would be a key risk factor. While the market generally expects rate cuts in 2024, the timing and extent of rate cuts remain highly uncertain. This could pose challenges for the banking sector to manage the funding costs.

Banks should also stay alert in their credit risk management and closely monitor the financial fundamentals of corporate borrowers against downside risk factors. In particular, the possible "high for longer" interest rate scenario in major AEs, and concerns over the near-term economic performance of the Mainland economy could weigh on the global economic outlook. The resulting weaker corporate earnings and persistently high borrowing costs could put their debt repayment abilities to the test.

Rising geopolitical tensions, including the military conflicts in multiple territories, are another important risk factor that warrants a close monitoring, as any escalation of the conflicts can further amplify the downside risks to the global economy.

That said, the robust capital and liquidity positions of the Hong Kong banking sector should provide strong buffers to withstand shocks arising from these risk factors.

The countercyclical capital buffer for Hong Kong

The countercyclical capital buffer (CCyB) is part of the internationally agreed Basel III standards and is designed to enhance the resilience of the banking sector against system-wide risks. This buffer can be reduced in times of a downturn, allowing banks to continue providing credit to support the real economy. The latest applicable jurisdictional CCyB for Hong Kong, announced on 20 February 2024, is 1.0%.[69]

[69] For details, see the Announcement of the CCyB to AIs in February 2024 (https://www.hkma.gov.hk/eng/key-functions/banking/banking-legislation-policies-and-standards-implementation/countercyclical-capital-buffer-ccyb/).

In setting the CCyB, the Monetary Authority considered a series of indicators (Table 5.F), including an "indicative buffer guide" produced by the Monetary Authority's Initial Reference Calculator (IRC). The IRC is a metric providing a guide for the CCyB based on the gap between the ratio of credit-to-GDP and its long term trend, and the gap between the ratio of residential property prices to rentals and its long term trend.[70] The setting of the CCyB for Hong Kong is, however, not a mechanical exercise and the Monetary Authority will consider a broad range of reference indicators ("Comprehensive Reference Indicators") and all relevant information available in addition to the indicative buffer guide produced by the IRC.[71]

In the latest assessment based on the third quarter data of 2023, the IRC signals a CCyB of 0%. The projection based on all available data at the decision date and the new IRC formula[72] that takes into account the Positive Neutral CCyB[73] to be effective from 1 April 2024 suggests that the IRC would likely signal a CCyB of 1% when all relevant data for the fourth quarter of 2023 become available.

Taking also into account the information drawn from the series of Comprehensive Reference Indicators and all relevant information available at the time of the decision in February 2024, the quantitative indicators suggest that overheating risks in Hong Kong are well contained. In view of the planned transition to a Positive Neutral CCyB of 1% this year, the Monetary Authority considers that it is appropriate to keep the CCyB ratio at the current level for the time being and continue to monitor the situation closely.

Table 5.F
Information related to the Hong Kong jurisdictional CCyB

	13-Jul-23	03-Nov-23	20-Feb-24
Announced CCyB rate	1.0%	1.0%	1.0%
Date effective	13-Jul-23	03-Nov-23	20-Feb-24
Indicative buffer guide	0.0%	0.0%	0.0%
Basel Common Reference Guide	0.0%	0.0%	0.0%
Property Buffer Guide	0.0%	0.0%	0.0%
Composite CCyB Guide	0.0%	0.0%	0.0%
Indicative CCyB Ceiling	None	None	None
Primary gap indicators			
Credit/GDP gap	–4.8%	–10.3%	–19.1%
Property price/rent gap	–6.7%	–10.7%	–17.2%
Primary stress indicators			
3-month HIBOR spread (percentage points)	0.49%	0.36%	0.48%
Quarterly change in classified loan ratio (percentage points)	–0.06%	0.08%	0.14%

Note: The values of all CCyB guides, the Indicative CCyB Ceiling and their respective input variables are based on public data available prior to the corresponding review/announcement date, and may not be the most recently available as of the end of each quarter (refer to SPM CA-B-1 for explanations of the variables).

Source: HKMA.

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

70 The credit-to-GDP gap is the gap between the ratio of credit to GDP and its long-term trend, while the property price-to-rent gap is the gap between the ratio of residential property prices to rentals and its long-term trend.

71 These include measures of bank, corporate and household leverage; debt servicing capacity; profitability and funding conditions within the banking sector and macroeconomic imbalances.

72 Under the new CCyB framework to be effective from 1 April 2024, the IRC will be the higher of two constituent components: a Composite CCyB Guide based on the credit-to-GDP gap and the property price-to-rent gap, and a Positive Neutral CCyB that sets a floor for the IRC.

73 Under the Positive Neutral CCyB approach, authorities aim for a positive CCyB when risks are judged to be neither subdued nor elevated. Please refer to https://www.bis.org/publ/bcbs_nl30.htm for more information.

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

	Dec 2022	Sep 2023	Dec 2023
Interest rates			
1-month HIBOR fixing[2] (quarterly average)	3.67	4.86	5.19
3-month HIBOR fixing (quarterly average)	4.75	5.03	5.34
BLR[3] and 1-month HIBOR fixing spread (quarterly average)	1.65	0.98	0.69
BLR and 3-month HIBOR fixing spread (quarterly average)	0.58	0.82	0.54
Composite interest rate[4]	2.11	2.68	2.94
		All AIs	
Balance sheet developments[5]			
Total deposits	+1.0	+2.1	+2.8
Hong Kong dollar	+1.2	–0.1	+0.5
Foreign currency	+0.9	+4.2	+4.8
Total loans	–2.3	–2.2	–1.0
Domestic lending[6]	–1.3	–1.9	–0.1
Loans for use outside Hong Kong[7]	–5.0	–2.8	–3.4
Negotiable instruments			
Negotiable certificates of deposit (NCDs) issued	+9.2	–13.1	–2.5
Negotiable debt instruments held (excluding NCDs)	+3.7	+1.3	+2.5
Asset quality			
As a percentage of total loans[8]			
Pass loans	96.58	96.49	96.41
Special mention loans	2.02	1.90	2.03
Classified loans[9] (gross)	1.40	1.61	1.56
Classified loans (net)[10]	0.81	0.87	0.83
Overdue > 3 months and rescheduled loans	0.85	1.23	1.24
Classified loan ratio (gross) of Mainland related lending[11]	2.26	2.68	2.58
Liquidity ratios (consolidated)			
Liquidity Coverage Ratio — applicable to category 1 institutions (quarterly average)	161.8	174.5	178.6
Liquidity Maintenance Ratio — applicable to category 2 institutions (quarterly average)	63.2	64.1	65.7
Net Stable Funding Ratio — applicable to category 1 institutions	137.5	141.8	144.4
Core Funding Ratio — applicable to category 2A institutions	155.7	159.2	169.4
		Retail banks	
Profitability			
Loan impairment charges as a percentage of average total assets (year-to-date annualised)	0.20	0.20	0.26
Net interest margin (year-to-date annualised)	1.31	1.68	1.68
Cost-to-income ratio (year-to-date)	48.0	38.4	38.8
		Surveyed institutions	
Asset quality			
Delinquency ratio of residential mortgage loans	0.06	0.07	0.08
Credit card lending			
Delinquency ratio	0.23	0.28	0.30
Charge-off ratio — quarterly annualised	1.50	1.88	1.98
— year-to-date annualised	1.49	1.72	1.74
		All locally incorporated AIs	
Capital adequacy (consolidated)			
Common Equity Tier 1 capital ratio	16.2	17.1	17.2
Tier 1 capital ratio	18.1	18.9	18.9
Total capital ratio	20.1	20.9	21.1
Leverage ratio	7.9	7.9	7.9

Notes:
1. Figures are related to Hong Kong offices only except where otherwise stated.
2. The Hong Kong Interbank Offered Rates are 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-rate-sensitive liabilities, which include deposits from customers, amounts due to banks, negotiable certificates of deposit and other debt instruments, and all other liabilities that do not involve any formal payment of interest but the values of which are sensitive to interest rate movements (such as Hong Kong dollar non-interest bearing demand deposits) on the books of banks. Further details can be found on the HKMA website.
5. Quarterly change.
6. Loans for use in Hong Kong plus trade finance.
7. Including "others" (i.e. unallocated).
8. Figures are related to all AIs' Hong Kong offices, as well as locally incorporated AIs' overseas branches and major overseas subsidiaries.
9. Classified loans are those loans graded as "substandard", "doubtful" or "loss".
10. Net of specific provisions/individual impairment allowances.
11. Figures are related to all AIs' Hong Kong offices, as well as locally incorporated AIs' Mainland branches and subsidiaries.

Box 4
Assessing the mitigating effects of cash buffers on corporate sector vulnerability in Asia-Pacific

Introduction[74]

Corporate debt vulnerability has long been considered as one of the key financial stability risks in the Asia-Pacific (APAC) region. Given that the region's corporate indebtedness has increased further after the pandemic, the current high interest rate environment and slower global economic growth have raised concerns about the debt servicing ability of corporates in the region. The potential rise in credit risk may in turn adversely impact the asset quality of banks' corporate exposures.

To enhance our understanding of corporate debt vulnerability in the region under the current macro-financial environment, it is important to examine firms' fundamentals and their related risk implications. In particular, there is anecdotal evidence that some firms in the region had accumulated stronger cash buffers during the pandemic, which may help them cushion the impact of higher interest expenses under the current environment. This may also help explain why corporate defaults in the region have not increased notably so far. Some studies also showed that cash holdings could play a vital role in supporting firms' operation and investment decisions during economic downturns.

Against this background, this box studies the effects of cash buffers on mitigating corporate vulnerabilities based on the accounting data of non-financial firms listed in APAC.[75] First, a panel regression model is employed to provide firm-level evidence on the effects of cash buffers on firms' operating performance and investments, based on the COVID-19 pandemic episode. Scenario analysis is then conducted to illustrate to what extent these increased cash buffers may help alleviate the credit risk for the APAC corporate sector.

Recent developments on corporate debt and cash holdings in APAC

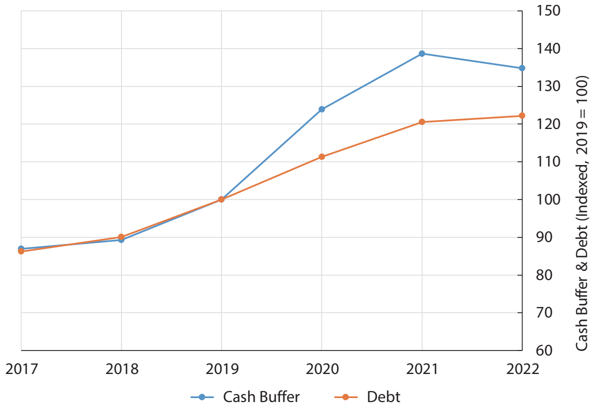
We begin our analysis by reviewing the recent trend in corporate debt and cash holdings since the outbreak of the COVID-19 pandemic, based on a sample of around 14,000 listed non-financial corporates in the APAC region.

As seen in Chart B4.1, there has been a notable rise in corporate debt amounts among our sampled firms since 2020, in part driven by the accommodative monetary conditions and the unprecedented package of support measures introduced by authorities during the pandemic. Nonetheless, the rise in corporate debt has been accompanied by a concurrent increase in corporate cash holdings (i.e. blue line in Chart B4.1), as corporates took advantage of the favourable financing terms to build up higher cash buffers amid heightened uncertainty. In addition, some firms may have stepped up their cash management strategies, such as reducing dividend payouts, scaling down investment projects, and re-scheduling cash-flow payments, to preserve additional cash holdings.

74 For details, we refer readers to Ho et al. (2023): "Corporate Sector Vulnerability and the Role of Cash Holdings during and after the COVID-19 Crisis: Evidence from Non-financial Corporates Listed in Asia-Pacific", *HKIMR Working Paper*, No.16/2023.

75 The list of APAC economies includes AU, CN, HK & MO, ID, MY, NZ, SG, KR, TH, and VN. Firms' accounting data are obtained from S&P Capital IQ.

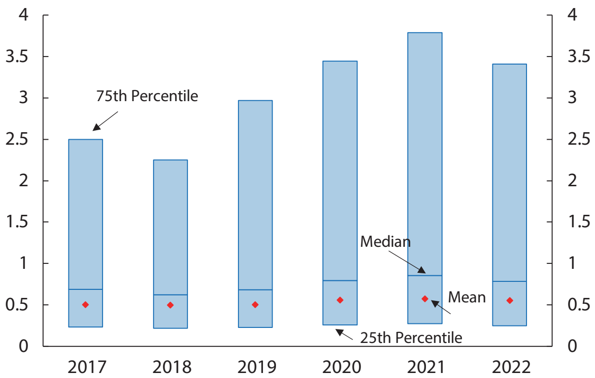
Chart B4.1:
Growth in corporate debts and cash holdings for listed firms in APAC



Source: HKMA staff estimates based on S&P Capital IQ.

Given that the extent of growth in cash holdings outweighed the growth in debts, the cash-to-debt ratio for APAC corporates generally saw a notable rise since 2019. While there has been a sign of decline in the cash-to-asset ratio in 2022, the level remained notably higher than the pre-pandemic level in 2019.

Chart B4.2:
Cash-to-debt ratio for listed firms in APAC



Source: HKMA staff estimates based on S&P Capital IQ.

Empirical analyses on the effects of cash buffers on corporate debt vulnerability

i Firm-level analysis based on a panel regression model

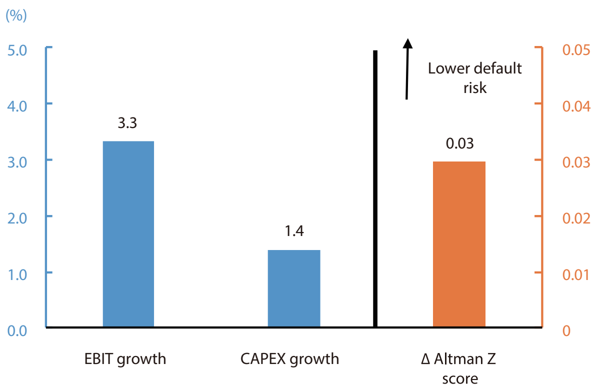
As mentioned, firms with higher cash holdings (denoted as high-cash firms) should have stronger buffers to cushion against cash flow shocks. Thus, these high-cash firms may exhibit better operational performance as compared with other firms during stress periods. To test this hypothesis empirically, the following panel regression model is applied on our samples for the period between 2020 and 2022:

$$Y_{i,j,c,t} = \alpha_0 + \beta_1 HighCash_{i,j,c} + \text{control variables} + \text{fixed effects} + \text{error term}$$

$Y_{i,j,c,t}$ denotes selected financial performance indicators for firm i in industry j and in economy c at time t. These include the annual growth rate of earnings before interest and taxes (EBIT) and capital expenditure (CAPEX). To assess the resulting effect on firm's default risk, firm's Altman z-score (an accounting-based default risk indicator of firm) is also considered as one of the dependent variables. $HighCash_{i,j,c}$ is a dummy variable which takes value of 1 if a firm's cash-to-asset ratio is higher than its industry median ratio as of end-2020. The model also includes a set of firm- and macro-level controls and various fixed effects dummies to control for heterogeneity across firms and economies.[76] The estimated coefficient, β_1, thus reveals the difference in the selected financial performance indicators between high cash firms relative to other firms during the pandemic. Chart B4.3 presents the estimation results.

[76] Firm-level controls include size (measured by logarithm of firm's total assets), leverage (measured by debt-to-equity ratio), debt servicing ability (measured by interest coverage ratio), tangibility (measured by the share of property, plant and equipment to total asset). All firm-level controls are lagged by one year. Macroeconomic controls include real GDP growth of the firm's home country. Country-specific COVID-19 stringency index, constructed by the Oxford University, is included to control for the heterogeneity in pandemic-induced restrictions among APAC economies. Finally, industry-, country-, and year-fixed effects are included in the model.

Chart B4.3:
Estimated differences in selected financial performance indicators between high-cash firms and other firms during the pandemic



Source: HKMA staff estimates.

Overall, the estimation results are consistent with our conjecture. Key findings are summarised below:

1. On average, high-cash firms tend to attain relatively higher EBIT growth of 3.3 percentage points more than that of other firms during the pandemic. This result is consistent with economic intuition that higher cash buffers allow firms to enhance financial flexibility to adjust their business operations to cope with changes in business environments. The role of cash buffers is therefore particularly important during the pandemic given the high uncertainty in business environments.

2. High-cash firms are also found to attain relatively higher CAPEX growth than their counterparts, suggesting that the investment activities of these firms were relatively less affected during the pandemic. This is because the surplus cash reserve can equip firms with more financial flexibility to invest (when good investment opportunities arise) even during economic downturns. The relatively larger capital investment undertaken by these firms could improve future growth momentum.

3. Importantly, as a result of a relatively better financial performance, high-cash firms are estimated to exhibit a lower default risk compared with other firms during the pandemic.

ii. Scenario analysis based on debt-at-risk

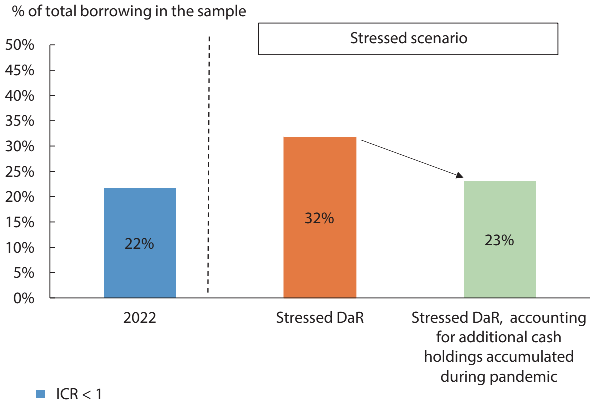
This section examines the mitigating effect of cash buffers on the credit risk of the corporate sector in the region as a whole. We conduct a scenario analysis to illustrate to what extent additional cash buffers accumulated by corporates during the pandemic may help mitigate the credit risk of the APAC corporate sector under a combination of interest rate and earnings shocks.

To measure the credit risk of the corporate sector, the debt-at-risk (DaR) indicator is employed. DaR is defined as the amount of debt from those corporates with an interest coverage ratio (ICR) lower than one (i.e. firms' EBIT lower than interest expenses) as a share of total corporate debt. A higher DaR typically implies a higher credit risk in the corporate sector.

We follow the assumptions used in the *IMF Global Financial Stability Report* (2023) to set a stressed scenario. Specifically, corporates' effective interest rate is assumed to rise notably by around 200 basis points, while corporates' EBIT is assumed to drop by 20%. These interest rate and earnings shocks are applied to the latest available accounting position of our sampled corporates.[77]

[77] The interest rate and earnings shocks are broadly in line with the similar scenario analysis conducted in the *IMF Global Financial Stability Report* (April 2023). According to IMF (2023), these shocks are calibrated to approximately match those during previous recession episodes, including inflationary recessions and the global financial crisis.

Chart B4.4
Debt-at-risk of corporate sector in APAC



Source: HKMA staff estimates based on S&P Capital IQ.

Chart B4.4 shows the DaR ratio for the APAC corporate sector at the end of 2022 (i.e. before the shocks) and the resulting stressed DaR ratios with and without accounting for corporates' additional cash buffers under the stressed scenario, respectively. It is shown that the stressed DaR ratio would rise significantly from 22% at the end of 2022 to 32%, when corporates' cash buffers are not taken into account in the calculation (i.e. the orange bar).

However, the associated credit risk impact could be mitigated significantly if the build-up of cash buffers during the pandemic is taken into account. As shown by the green bar in Chart B4.4, which assumes that firms with stressed ICR below one would utilise their additional cash buffers accumulated during the pandemic to help service the interest payment, the stressed DaR would reduce notably to 23% (which is near the pre-shock level). This shows an important role of corporate cash buffers in alleviating the credit risks.

Conclusion

This box shows that the additional cash buffers accumulated by corporates in the APAC region during the pandemic can play an important mitigating role in cushioning the credit risk impact arising from higher funding costs and lower economic growth. However, signs of depletion in cash buffers have appeared. More corporates in the region may see repayment difficulties if the high interest rate environment and weak economic growth environment persist. Therefore, banks must stay vigilant and continue to carefully assess the possible negative impacts on their corporate loan portfolios stemming from a prolonged high interest rate environment and subdued global economic growth.

Glossary of terms

Aggregate Balance
The sum of balances in the clearing accounts and reserve accounts kept with the central bank. In Hong Kong, this refers to the sum of the balances in the clearing accounts kept with the HKMA. The Aggregate Balance 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
The main 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-rate-sensitive liabilities, which include deposits from customers, amounts due to banks, negotiable certificates of deposit and other debt instruments, and all other liabilities that do not involve any formal payment of interest but the values of which are sensitive to interest rate movements (such as Hong Kong dollar non-interest bearing demand deposits) on the books of banks. Data from retail banks, which account for the majority of the Hong Kong dollar 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 (CU)
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 of the Linked Rate of 7.80. 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 (EFBNs)

Debt instruments issued by the HKMA for the account of the Exchange Fund. 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.

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 sum of the balances of the clearing accounts kept with the HKMA (the Aggregate Balance), and Exchange Fund Bills and Notes.

Money supply

The total stock of money available in the economy. Hong Kong has three measures of money supply: Money Supply definition 1 (M1) is defined as the sum of legal tender notes and coins held by the public plus customers' demand deposits placed with licensed banks. Money Supply definition 2 (M2) is defined as M1 plus customers' savings and time deposits with licensed banks plus negotiable certificates of deposit (NCDs) issued by licensed banks held outside the banking sector. Money Supply definition 3 (M3) is defined as M2 plus customers' deposits with restricted licence banks and deposit-taking companies plus NCDs issued by these institutions held outside the banking sector.

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

1m moving average	One-month moving average
3m moving average	Three-month moving average
3m-on-3m	Three-month-on-three-month
AB	Aggregate Balance
AEs	Advanced economies
AIs	Authorized institutions
APAC	Asia-Pacific
ASEAN	Association of Southeast Asian Nations
AU	Australia
AUM	Assets under Management
BAU	Business-as-usual
BIS	Bank for International Settlements
bn	Billion
BLR	Best Lending Rate
bps	basis points
CAPEX	Capital expenditure
CAR	Capital Adequacy Ratio
CBIRC	China Banking and Insurance Regulatory Commission
CPI	Consumer Price Index
CCDC	China Central Depository & Clearing Co., Ltd.
CCyB	Countercyclical capital buffer
CDs	Certificates of deposits
CET1	Common equity tier-one
CEWC	Central Economic Work Conference
CFETS	China Foreign Exchange Trade System
CFR	Core Funding Ratio
CIBM	China Interbank Bond Market
CIES	Capital Investment Entrant Scheme
CIs	Certificates of Indebtedness
CL	Confidence Level
CLR	Classified Loan Ratio

CMBS	Commercial mortgage-backed securities
CMU	Central Moneymarkets Unit
CN	Mainland China
CNH	Offshore renminbi in Hong Kong
CNY	Onshore renminbi
COVID	Coronavirus Disease
CRE	Commercial real estate
CRST	Climate Risk Stress Test
C&SD	Census and Statistics Department
CU	Convertibility Undertaking
DaR	Debt-at-risk
DI	Direct investment
DID	Difference-in-differences
DSD	Drainage Services Department
DSR	Debt-servicing ratio
DTD	Distance-to-default
EA	Euro area
EBIT	Earnings before interest and tax
EBITDA	Earnings before interest, taxes, depreciation and amortization
ECB	European Central Bank
EFBNs	Exchange Fund Bills and Notes
EM	Emerging-market
EMEAP	Executive's Meeting of East Asia-Pacific Central Banks
EMEs	Emerging Market Economies
EPS	Earnings per share
ESG	Environmental, Social and Governance
ETFs	Exchange traded funds
EU	European Union
EUR	Euro
F&B	Food and Beverage

Fed	Federal Reserve
FI	Financial Institution
FINI	Fast Interface for New Issuance
FOMC	Federal Open Market Committee
FX	Foreign exchange
GBP	British Pound Sterling
GDP	Gross Domestic Product
GEM	Growth Enterprise Market
GHG	Greenhouse gases
GICS	Global Industry Classification Standard
HIBOR	Hong Kong Interbank Offered Rate
HK	Hong Kong
HKD	Hong Kong dollar
HKEX	The Hong Kong Exchanges and Clearing Limited
HKFRS	Hong Kong Financial Reporting Standard
HKIA	Hong Kong International Airport
HKMA	Hong Kong Monetary Authority
HKMC	Hong Kong Mortgage Corporation Limited
HKO	Hong Kong Observatory
HKPC	Hong Kong Productivity Council
HK$M3	Hong Kong dollar broad money supply
HSCEI	Hang Seng China Enterprises Index
HSI	Hang Seng Index
ICR	Interest Coverage Ratio
ICSD	International Central Securities Depository
ID	Indonesia
IDR	Indonesian Rupiahs
IFC	International Finance Corporation
IIF	Institute of International Finance
IMF	International Monetary Fund
IPO	Initial Public Offering

IRRBB	Interest rate risk in the banking book
IT	Information technology
JP	Japan
JPY	Japanese Yen
KR	South Korea
LCR	Liquidity Coverage Ratio
LIBOR	London Interbank Offered Rate
LERS	Linked Exchange Rate System
LGFVs	Local Government Financing Vehicles
lhs	Left-hand side
LMR	Liquidity Maintenance Ratio
LPR	Loan Prime Rate
LR	Leverage Ratio
LTD	Loan-to-deposit
LTV	Loan-to-value
mn	Million
MDBs	Multilateral Development Banks
MIP	Mortgage Insurance Programme
MRF	Mutual Recognition of Funds
MY	Malaysia
MSCI	Morgan Stanley Capital International
NASDAQ	National Association of Securities Dealers Automated Quotations
NBFIs	Non-bank Financial Intermediaries
NBS	National Bureau of Statistics of China
NCD	Negotiable certificate of deposit
NDRC	National Development and Reform Commission
NEER	Nominal effective exchange rate
NFCs	Non-financial corporates
NFRA	National Financial Regulatory Administration
NIM	Net interest margin

NGFS	Network of Central Banks and Supervisors for Greening the Financial System
NPL	Non-performing loan
NSFR	Net Stable Funding Ratio
NZ	New Zealand
OECD	Organisation for Economic Corporation and Development
PH	The Philippines
PHP	Philippine Pesos
OIS	Overnight indexed swap
OTC	Over-the-counter
p.a.	Per annum
P2P	Peer-to-peer
PBoC	People's Bank of China
PC	Private Credit
PD	Probability of default
PMI	Purchasing Managers' Index
POEs	Private-owned enterprises
ppt	percentage point
PSL	Pledged Supplementary Lending
QFI	Qualified Foreign Investor
qoq	Quarter-on-quarter
qoqa	Quarter-on-quarter annualised
R&D	Research and development
R&VD	Rating and Valuation Department
REER	Real effective exchange rate
Repo	Repurchase operation
rhs	Right-hand side
RMB	Renminbi
RML	Residential mortgage loan
ROA	Return on assets
ROE	Return on equity

RRR	Required reserve ratio
RTGS	Real Time Gross Settlement
RWA	Risk-weighted assets
SAFE	State Administration of Foreign Exchange
SDR	Special Drawing Rights
SG	Singapore
SHIBOR	Shanghai Interbank Offered Rate
SKEW	Chicago Board Options Exchange Skew Index
SMEs	Small-to-medium-sized enterprises
SOEs	State-owned enterprises
SOFR	Secured Overnight Financing Rate
SPM	Supervisory Policy Manual
STCs	Specialist Technology Companies
S&P 500	Standard & Poor's 500 Index
TH	Thailand
th	Thousands
tn	trillion
TNA	Total net assets
TTPS	Top Talent Pass Scheme
TWI	Trade Weighted Index
UK	United Kingdom
US	United States
USD	US dollar
VAR	Vector Autoregression
VaR	Value-at-risk
VHSI	HSI Volatility Index
VIX	Chicago Board Options Exchange Market Volatility Index
VN	Vietnam
VPAS	Vocational Professionals Admission Scheme
wk	Week
WMP	Wealth management product
yoy	Year-on-year

Full text of this Report is available on the HKMA website at **www.hkma.gov.hk**.

Hong Kong Monetary Authority
55th Floor, Two International Finance Centre,
8 Finance Street, Central, Hong Kong
Telephone: (852) 2878 8196
Fax: (852) 2878 8197
E-mail: publicenquiry@hkma.gov.hk
www.hkma.gov.hk