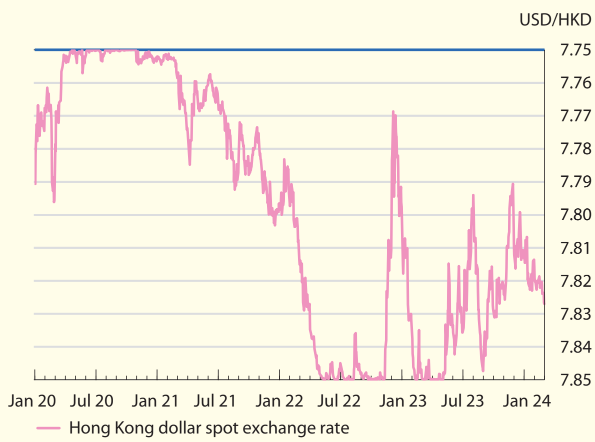
4. Monetary and financial conditions

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

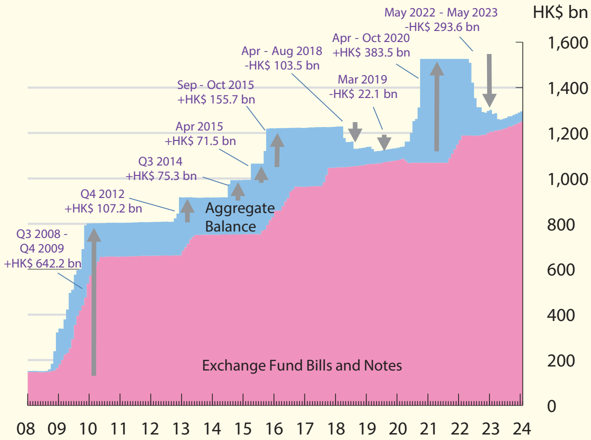
The HKD strengthened between September and November 2023, mainly driven by corporate funding needs, buying flows on firmer HKD interest rates and net buying flows through the Southbound Stock Connect. It remained broadly stable in December 2023 but moderated in early 2024 amid softened liquidity. During 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



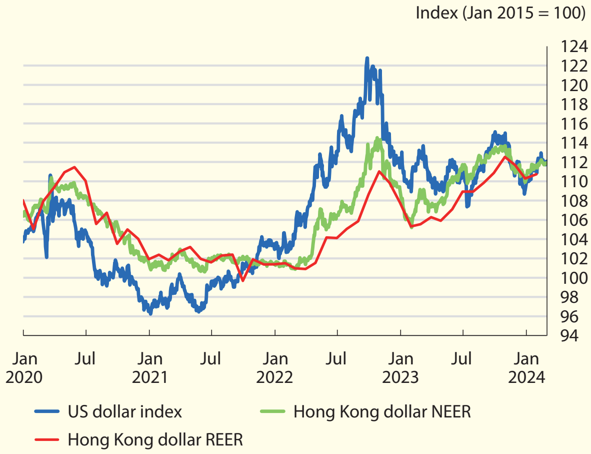
Source: HKMA.

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.

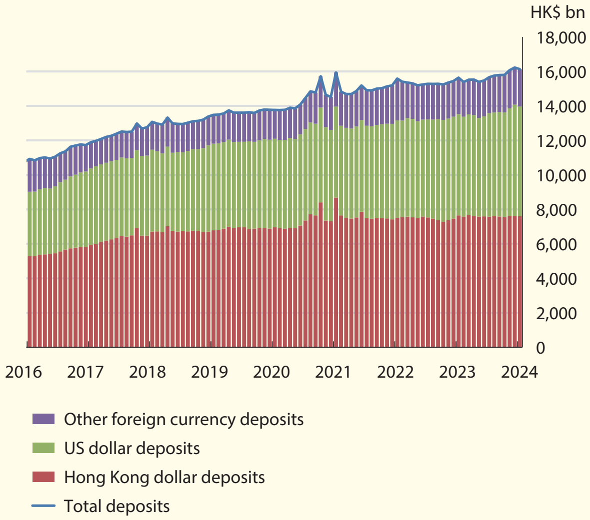
Going forward, fund flows would remain influenced by uncertainties surrounding the outlook for the US policy rate, global economic environment and geopolitical tensions. However, with the ample foreign reserves position and a robust financial system, Hong Kong is able to withstand the volatilities in 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.

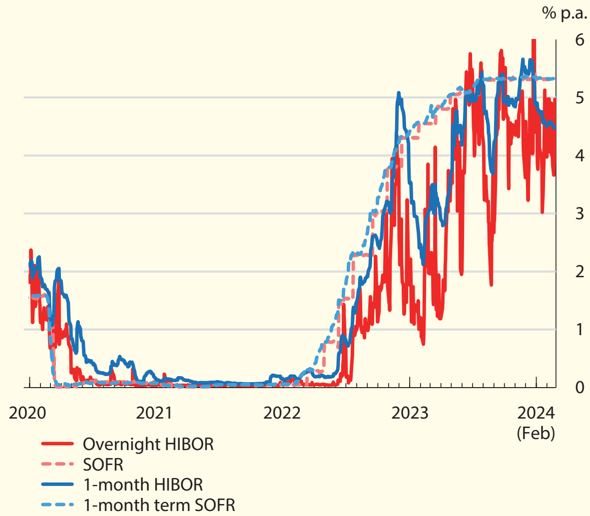
During the seven-month period since end-June 2023, total deposits with authorized institutions (AIs) increased by 4.3%. Among the total, HKD and foreign currency deposits increased by 0.1% and 8.3% respectively (Chart 4.4). It should be noted that monetary statistics are subject to volatility due to 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.

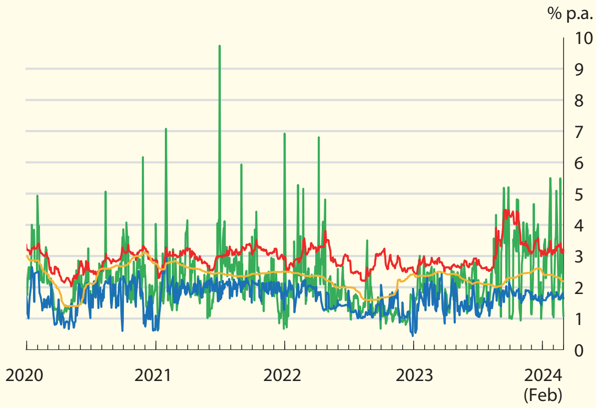
In the near term, the HKD interest rates may stay at relatively high levels. The HKMA continues to closely engage with banks, reminding them to properly manage their liquidity, including keeping in close contact with their large clients to understand their HKD funding plans and arrangements. This helps 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

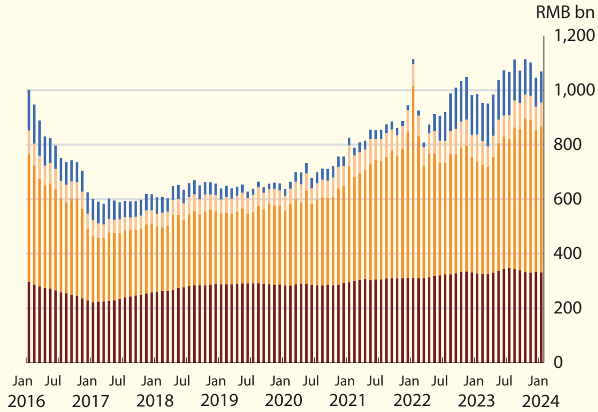


Source: CEIC and Treasury Market Association.

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

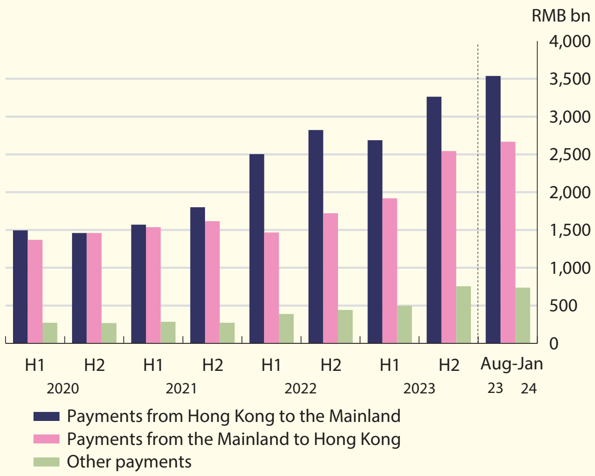
	Dec 2022	Jan 2024
Renminbi deposits & CDs (RMB bn)	981.7	1,068.8
Of which:		
Renminbi deposits (RMB bn)	835.9	954.7
Share of renminbi deposits in total deposits (%)	6.1	6.4
Renminbi CDs (RMB bn)	145.8	114.1
Renminbi outstanding loans (RMB bn)	191.7	469.3
Number of participating banks in Hong Kong's renminbi 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.

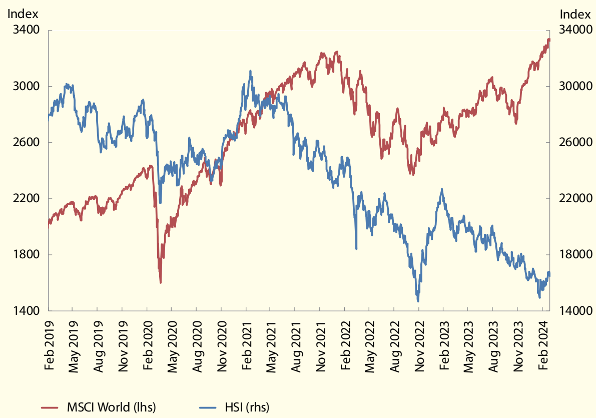
4.3 Equity market

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]

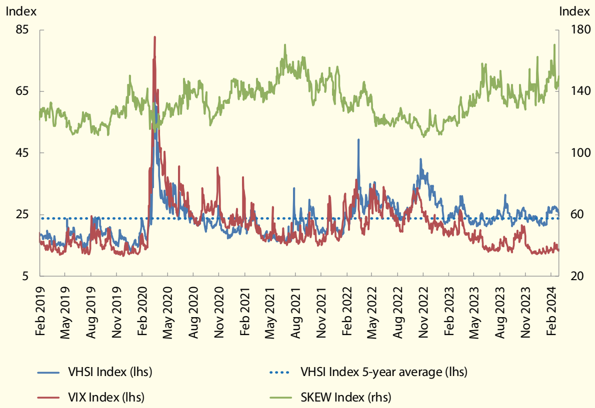
Chart 4.9
The Hang Seng Index and the MSCI World Index



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.

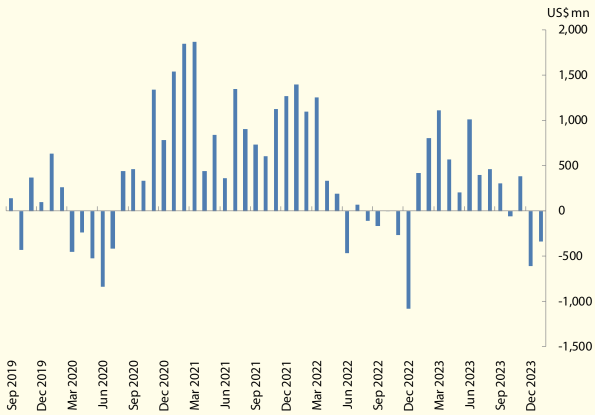
Chart 4.10
Option-implied volatilities of the Hang Seng Index and the S&P 500 Index, and the SKEW Index



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).

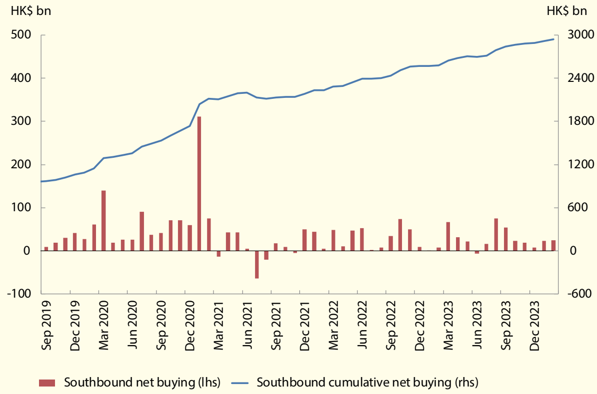
Chart 4.11
Equity market fund flows into Hong Kong



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.

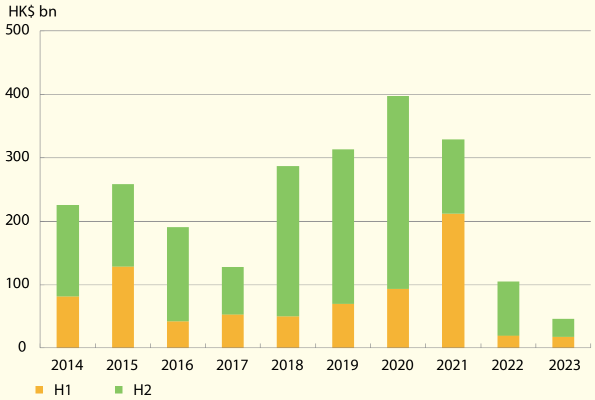
The uncertainties surrounding global economic and interest rate environments have continued to weigh on the global primary equity market activities, with the amount of capital raised through IPOs in reporting stock exchanges worldwide falling by 59.3% year-on-year in 2023 according to the World Federation 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.

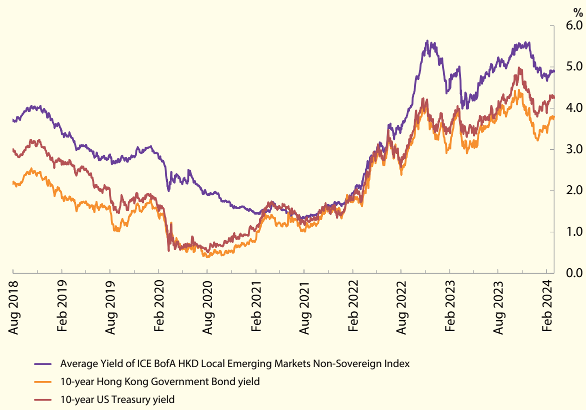
The outlook of the local equity market will be subject to a number of factors. On the global front, in spite of the expectation of interest rate cuts in 2024 in major AEs, their interest rate paths remain highly uncertain. This, together with the persistent geopolitical tensions around the world, will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



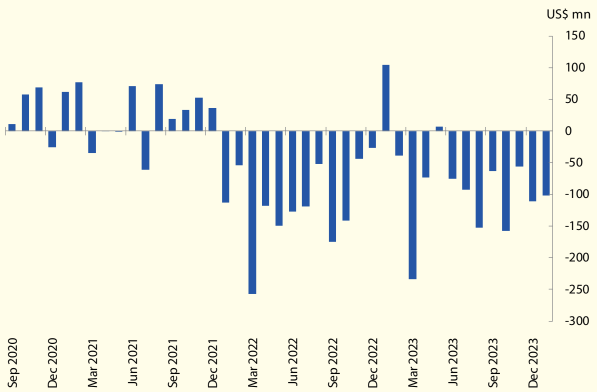
Note: The ICE BofA HKD Local Emerging Market Non-Sovereign Index, which covers Hong Kong dollar bonds issued by corporates and quasi government entities, captures the movement in yields of Hong Kong dollar corporate bonds.
Sources: ICE Data Indices, Bloomberg and HKMA.

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).

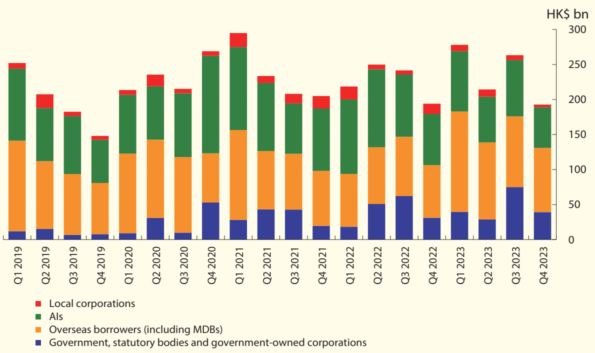
Chart 4.15
Bond market fund flows into Hong Kong



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).

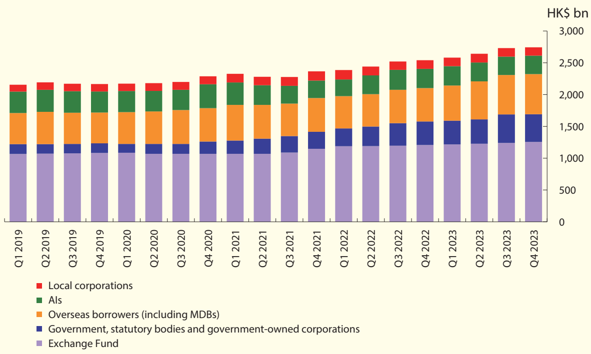
Chart 4.16
New issuance of non-Exchange Fund Bills and Notes Hong Kong dollar debt securities



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.

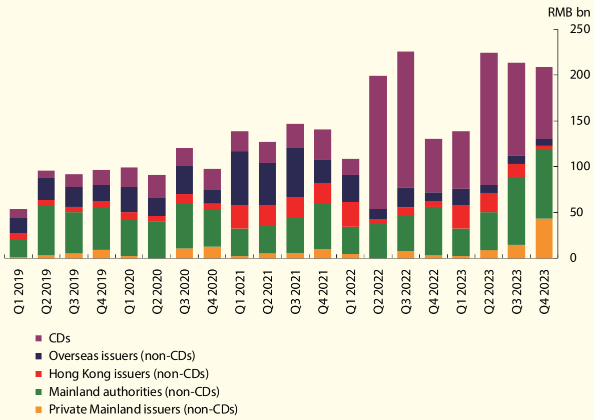
Chart 4.17
Outstanding Hong Kong dollar debt securities by issuer



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.

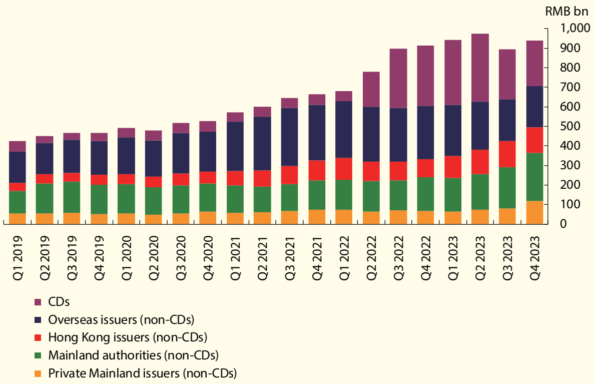
Chart 4.18
New issuance of CNH debt securities in Hong Kong



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.

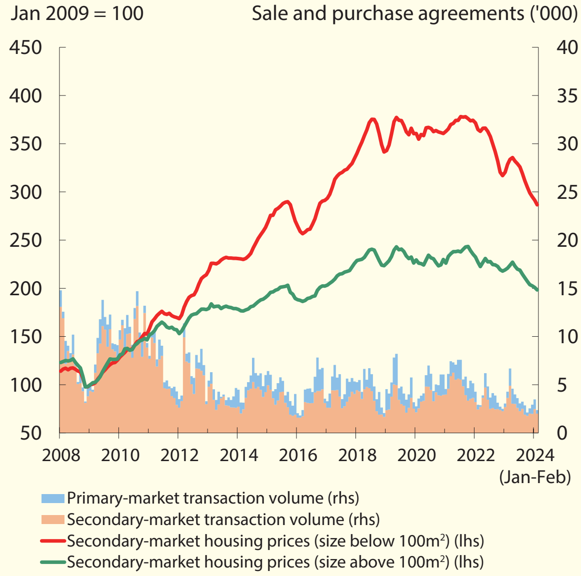
Besides bond issuances, the National Development and Reform Commission (NDRC) and the HKMA signed a memorandum of understanding at the third Belt and Road Forum for International Cooperation on 18 October 2023 under which the NDRC and the HKMA agree to strengthen communication and cooperation, and to 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]

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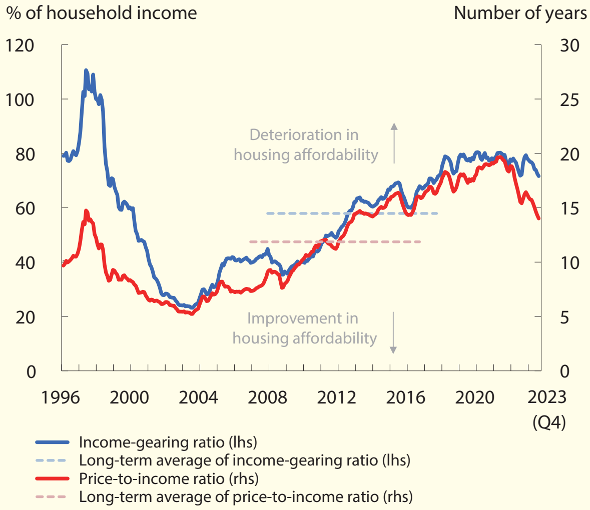
40 For details, please refer to "The Chief Executive's 2023 Policy Address" delivered on 25 October 2023 and "The 2024 – 2025 Budget" delivered on 28 February 2024.

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]

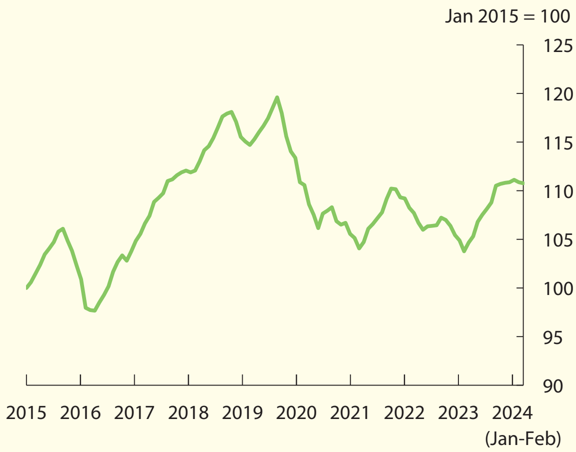
Housing affordability remained stretched, despite improving somewhat during the second half of 2023. Along with the downward adjustment of housing prices and the improvement in household income, the housing price-to-income ratio retreated to 14.2, which was still comparable to the high level in 1997. 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



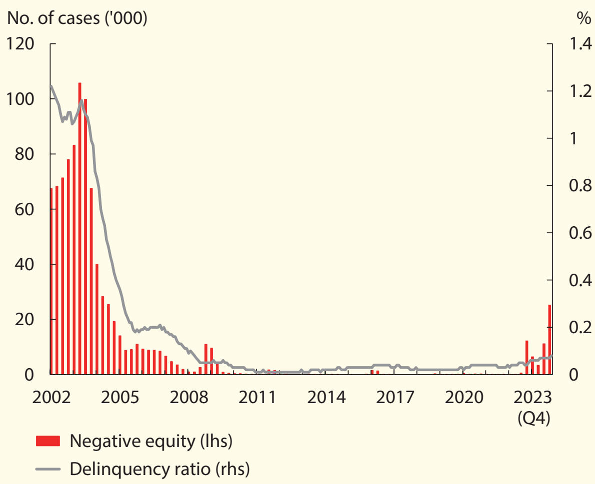
Source: R&VD.

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 50m^2 flat relative to the median income of households living in private housing. Alternately, the income-gearing ratio compares mortgage payment for a typical 50m^2 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.

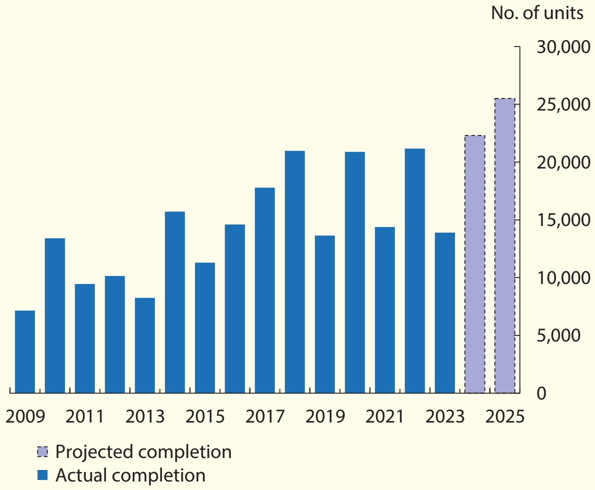
Despite the downward pressures on housing prices, the macroprudential measures introduced by the HKMA since 2009 have helped contain household leverage and strengthen banks' risk management for mortgage loans, thereby improving their resilience to interest rate and property market shocks. In particular, 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

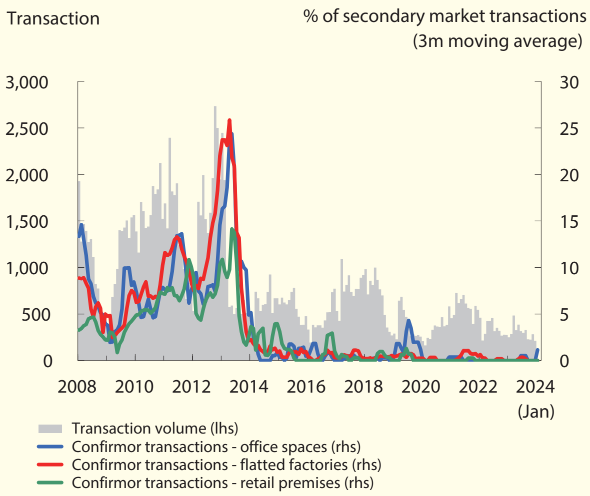


Sources: R&VD and Office of the Government Economist.

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).

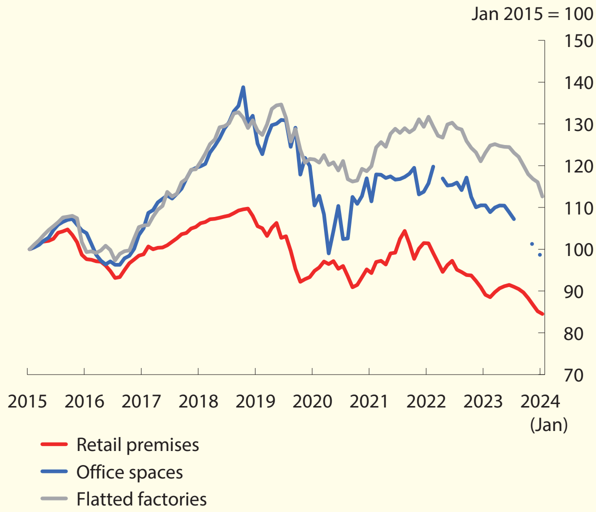
Chart 4.25
Transactions in commercial real estates



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



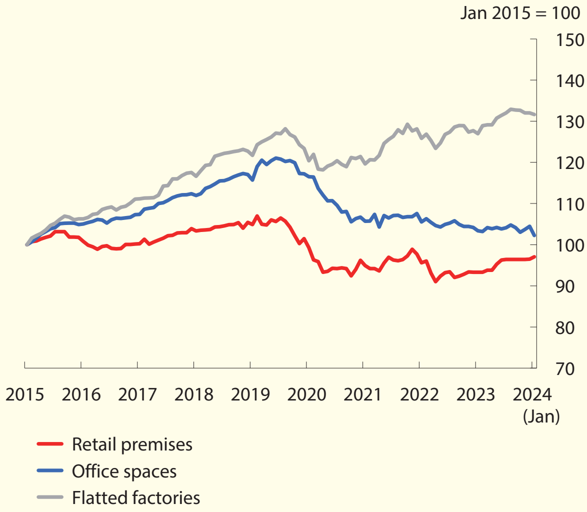
Note: The price index of office spaces cannot be compiled in March 2022, August to October and December 2023 due to insufficient transaction data for analysis.
Source: R&VD.

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

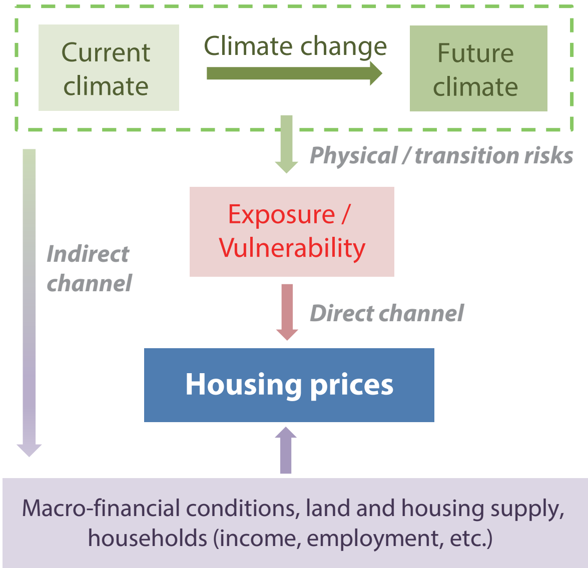
Climate change and the resultant extreme weather conditions can affect a broad range of economic activities including property trading and housing prices, which can, in turn, impact banking and financial stability via changing the collateral value of mortgages. Against this backdrop, this box offers 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

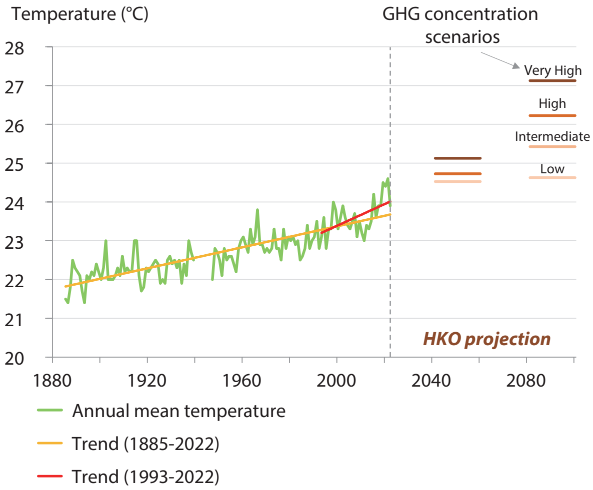
Source: HKMA staff.

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.

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.

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.