



HONG KONG MONETARY AUTHORITY
香港金融管理局

Briefing to the Legislative Council Panel on Financial Affairs

6 February 2023

Discussion Topics



Updates on

- Financial and Economic Environment
- Currency Stability
- Banking Stability
- Financial Infrastructure
- Hong Kong as an International Financial Centre
- Investment Environment and Performance of the Exchange Fund
- The Hong Kong Mortgage Corporation Limited



Financial and Economic Environment

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Global economic growth forecasts

Real GDP Growth

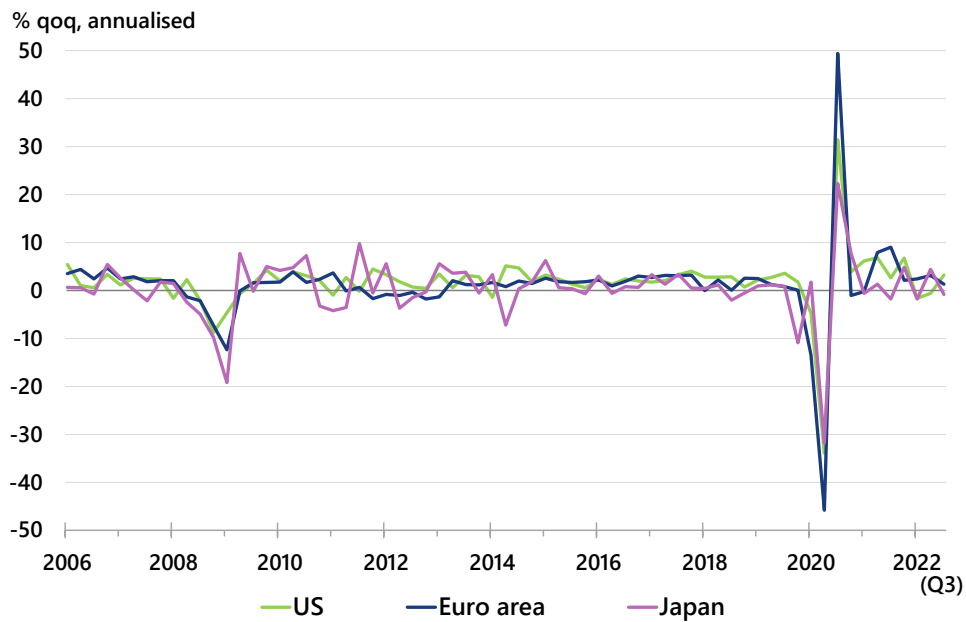
(% year-on-year)

	2021	2022 Forecasts	2023 Forecasts
US	5.9	2.0	0.3
Euro area	5.3	3.3	0.0
Japan	1.7	1.2	1.2
Asia (ex-Japan)	7.2	3.7	4.4
Mainland China	8.1	2.9	4.6
Hong Kong	6.3	-2.9	2.8

Source: January 2023 Consensus Forecasts

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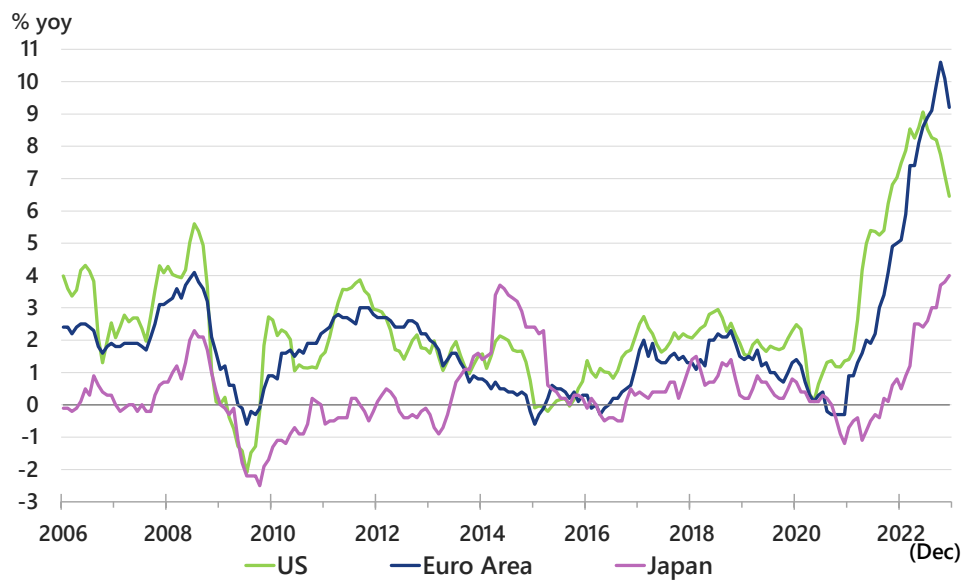
Real GDP growth in selected major economies



Source: CEIC

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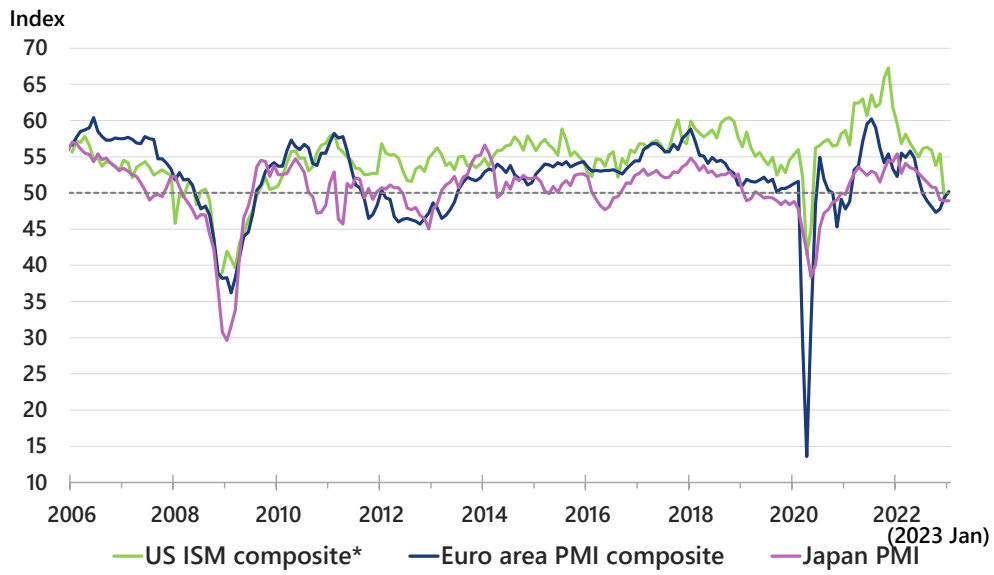
Headline inflation in selected major economies



Source: CEIC

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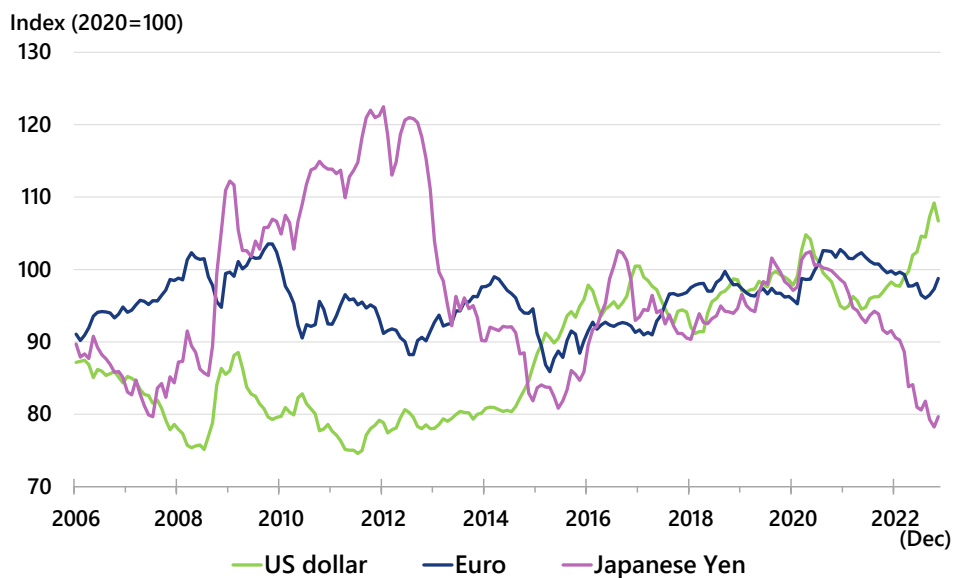
Purchasing Managers' Index in selected major economies



* Weighted average of the ISM Manufacturing and Services PMIs
Source: CEIC

7

Nominal effective exchange rate index of selected major currencies



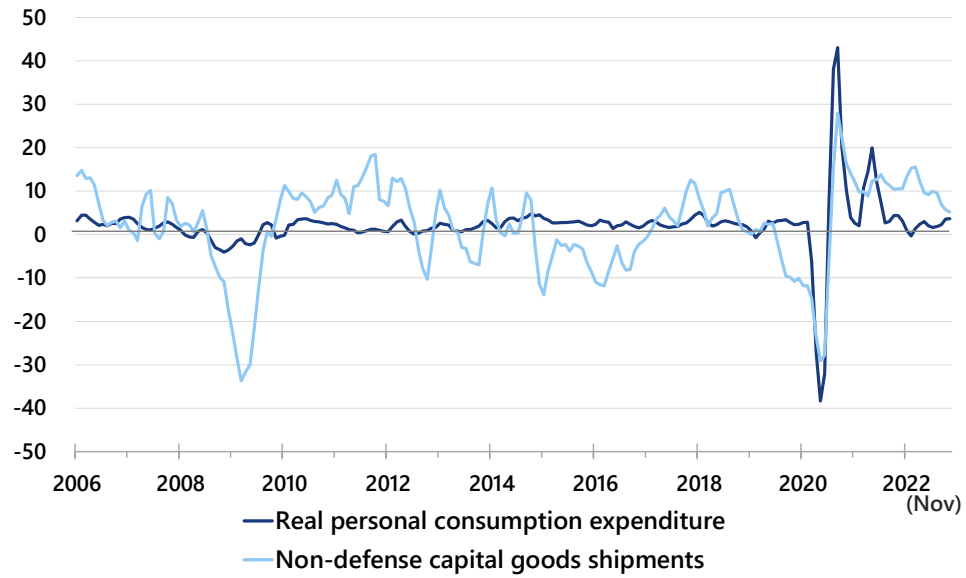
Source: CEIC

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US: Consumption growth and business investment activity



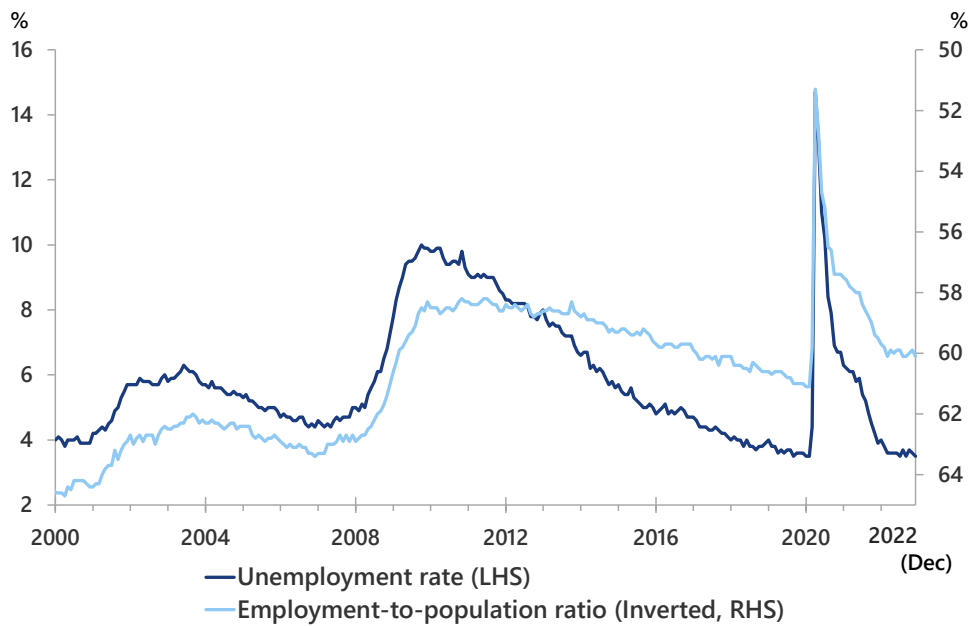
% 3m-on-3m, annualised



Source: CEIC

9

US: Labour market situation



Source: CEIC

10

US: Labour force participation rate



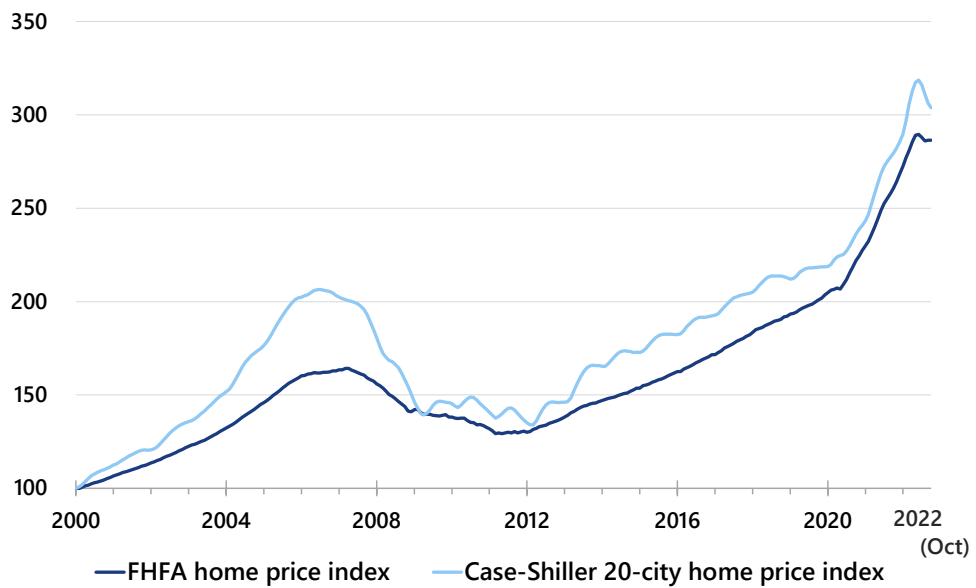
Source: CEIC

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US: Home prices



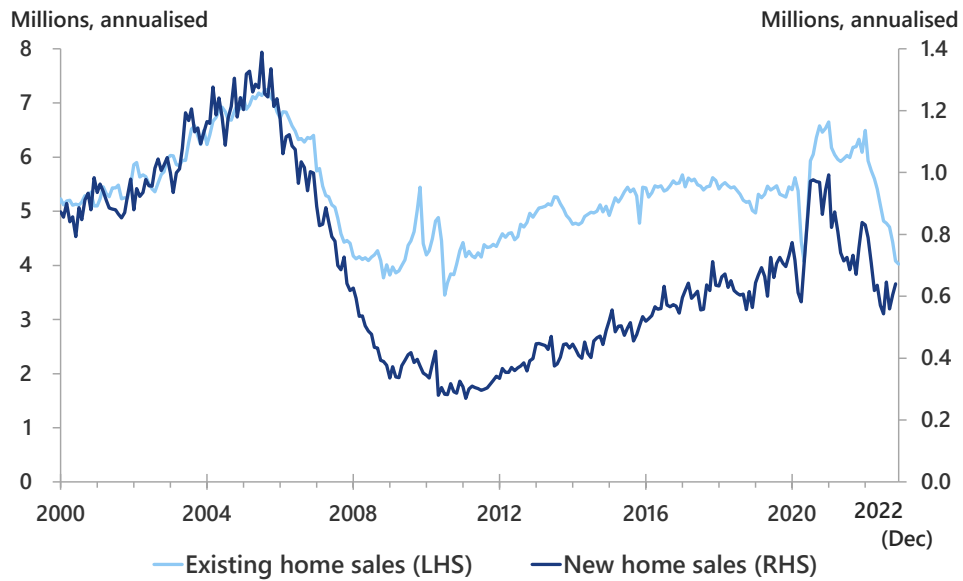
Index (Jan 2000=100)



Sources: CEIC and Datastream

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US: Home sales



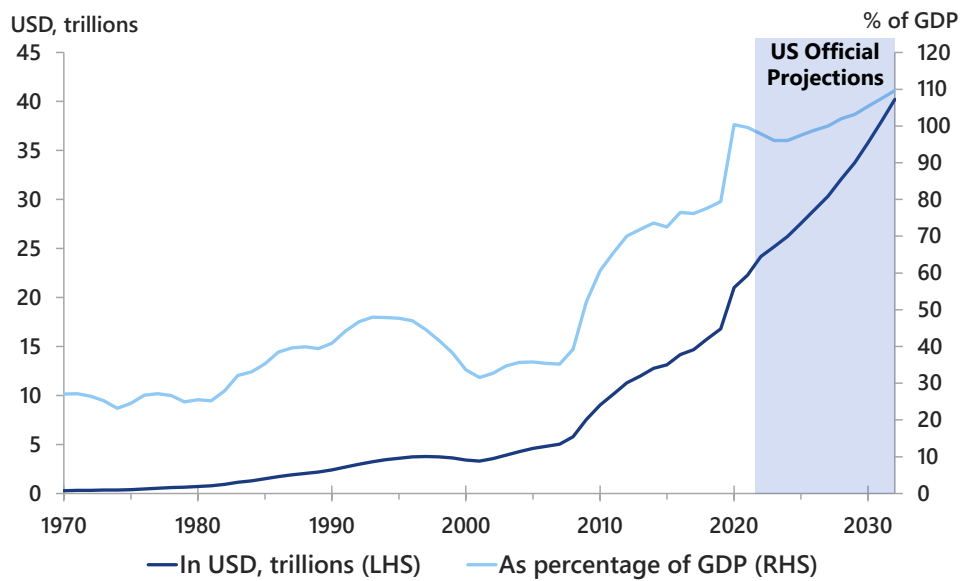
Sources: CEIC and Datastream

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US: Federal government debt



US federal debt held by the public



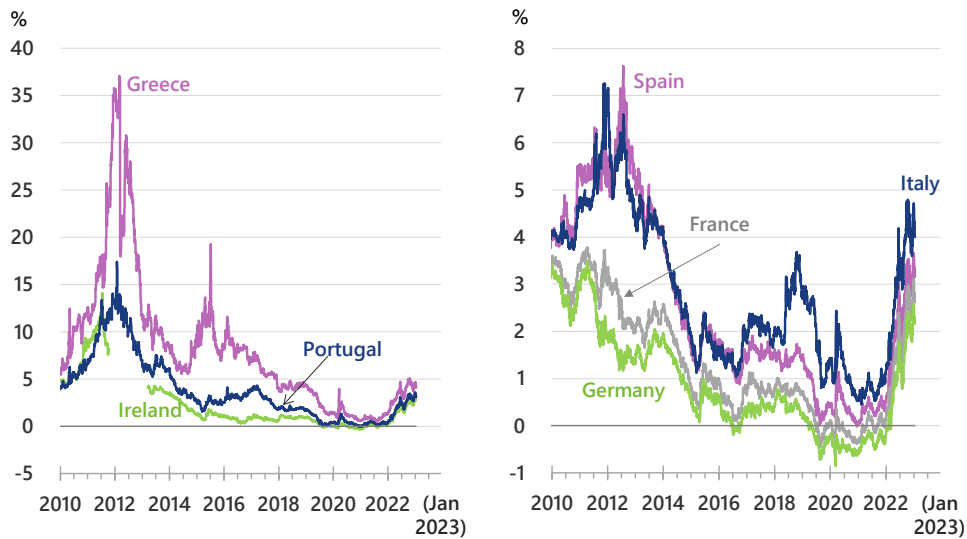
Sources: CEIC and Congressional Budget Office

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Euro area: Sovereign bond yields

10-year sovereign bond yield

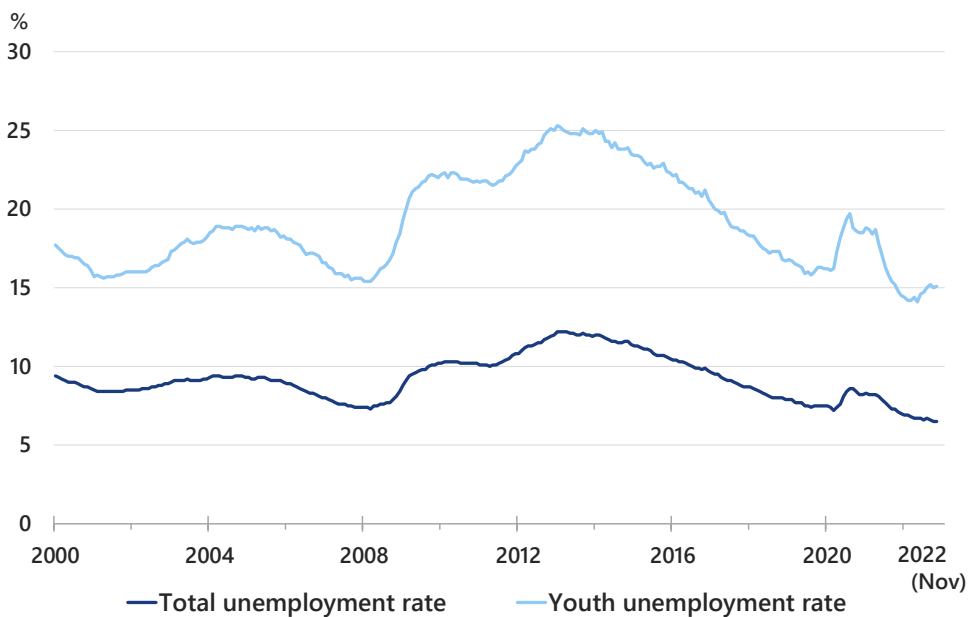


Note: 10-year Irish sovereign bond yield data is not available between 12 October 2011 and 14 March 2013.
Source: Bloomberg

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Euro area: Unemployment rate

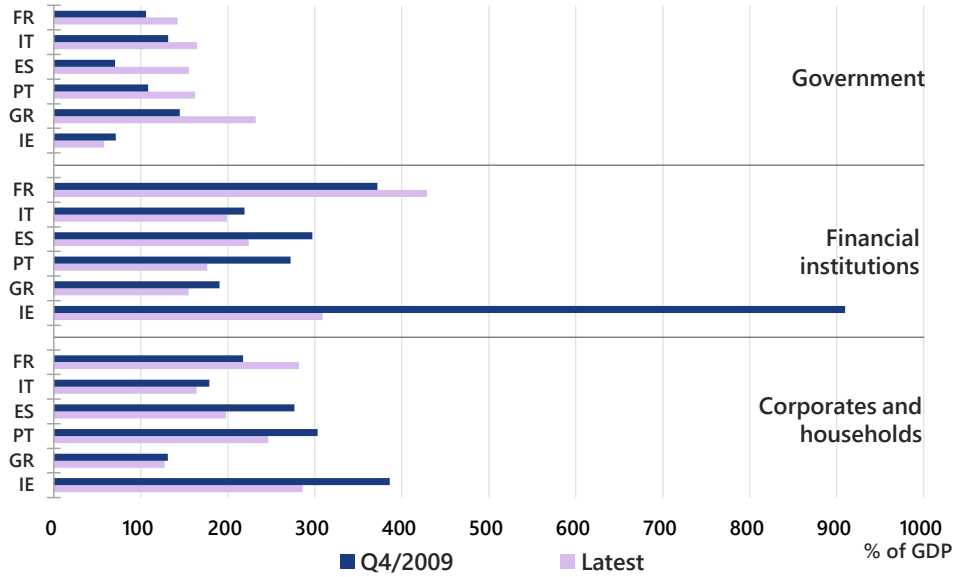


Source: Bloomberg

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Euro area: Overall indebtedness

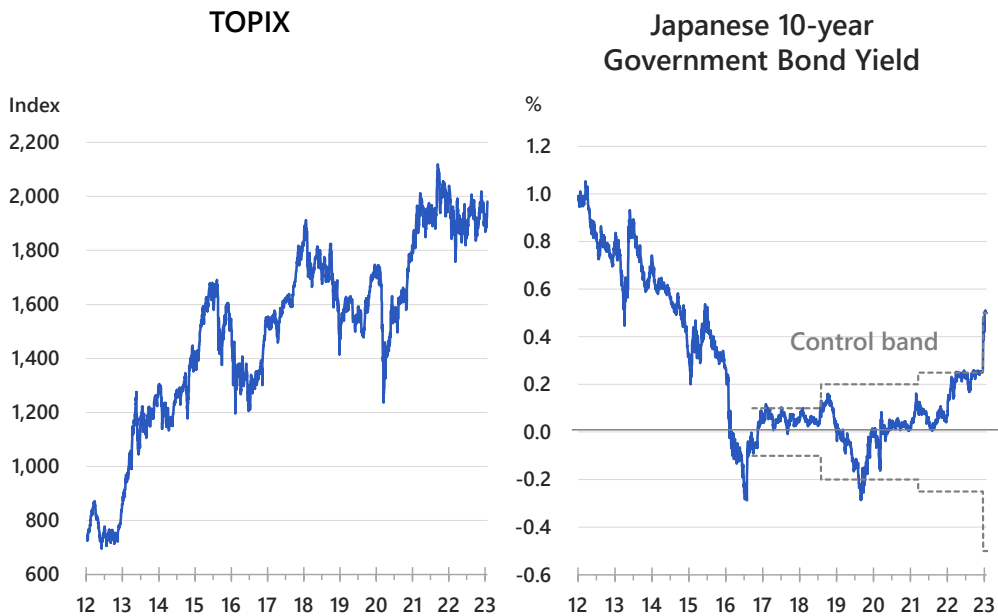


Note: FR – France, IT – Italy, ES – Spain, PT – Portugal, GR – Greece, IE – Ireland
The latest figures are up to Q3/2022 for financial institutions, whilst the rest are up to Q2/2022.
Source: European Central Bank

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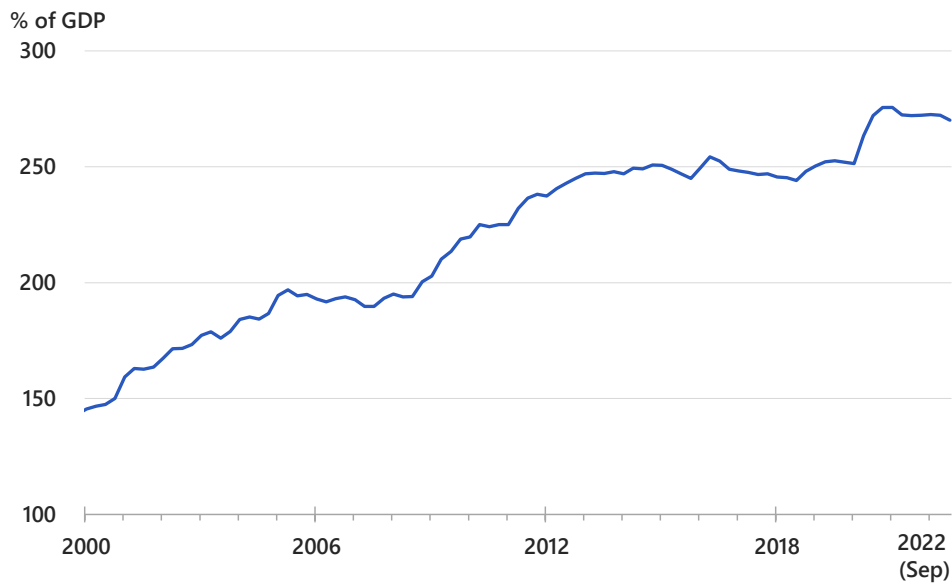
Japan: Financial markets



Source: Bloomberg

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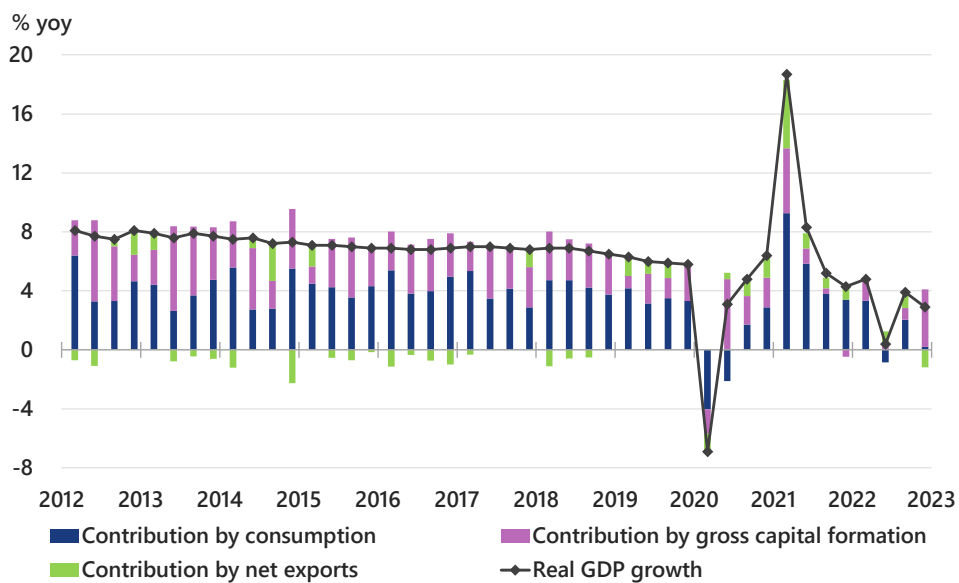
Japan: Public debt



Sources: Bank of Japan and CEIC

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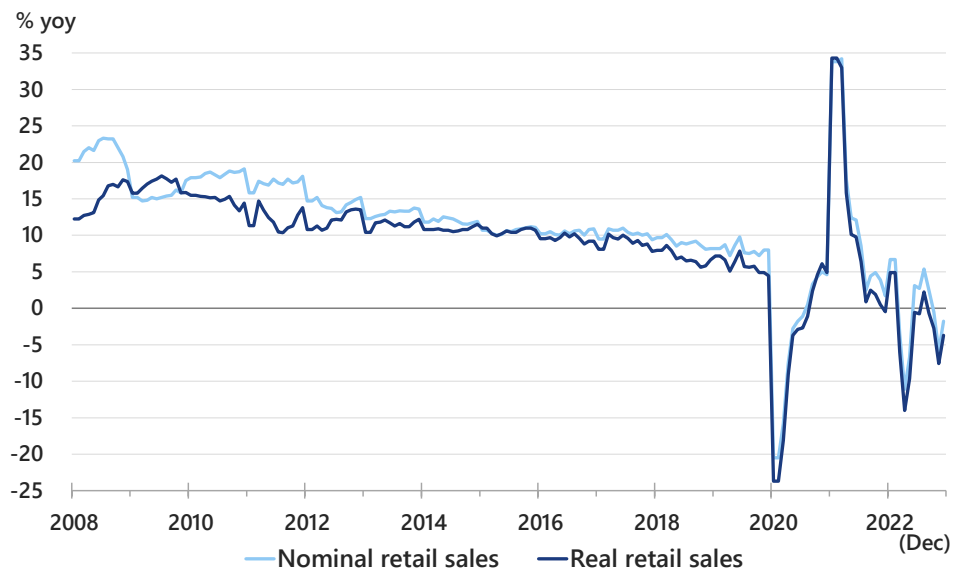
Mainland China: Real GDP growth



Source: CEIC

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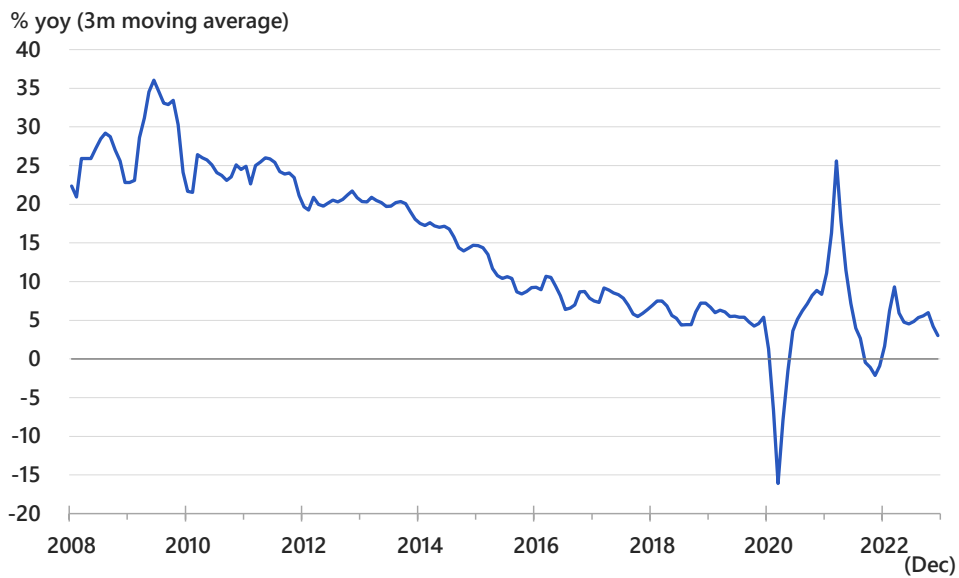
Mainland China: Retail sales



Note: January and February figures are the average annual growth rate for the first two months of the year.
Sources: WIND and HKMA staff estimates

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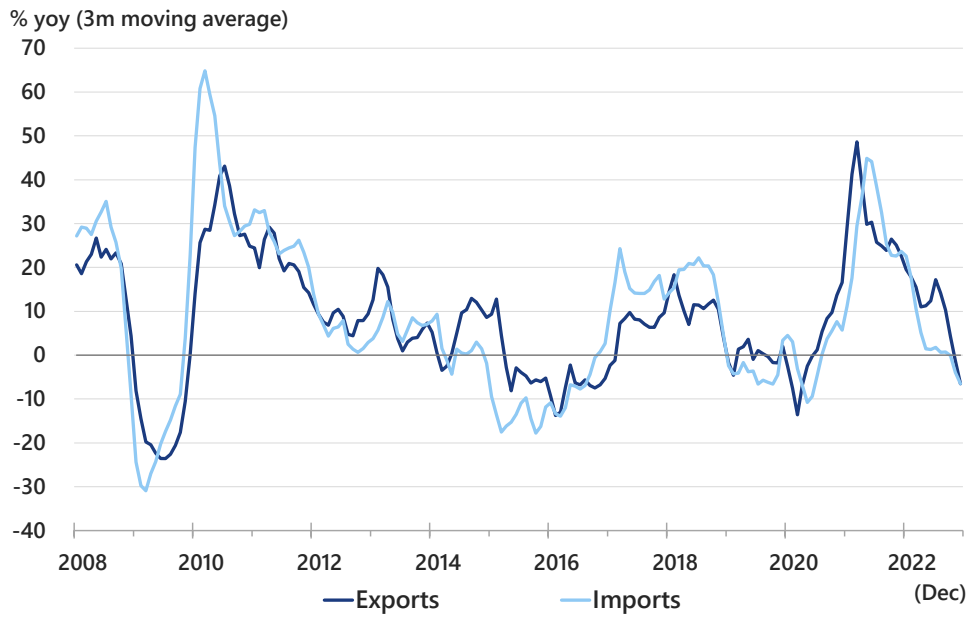
Mainland China: Fixed asset investment



Sources: CEIC and HKMA staff estimates

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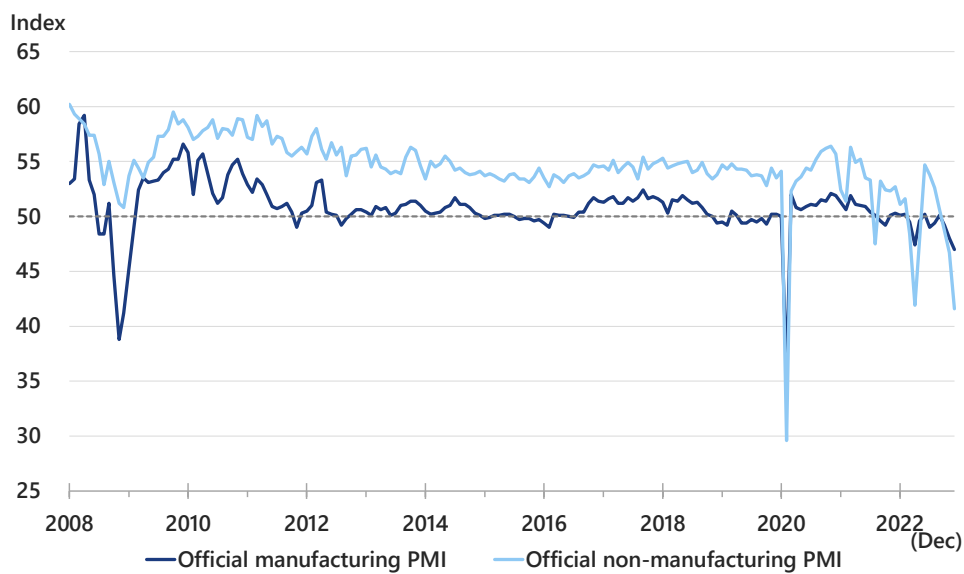
Mainland China: Import and export growth



Sources: CEIC and HKMA staff estimates

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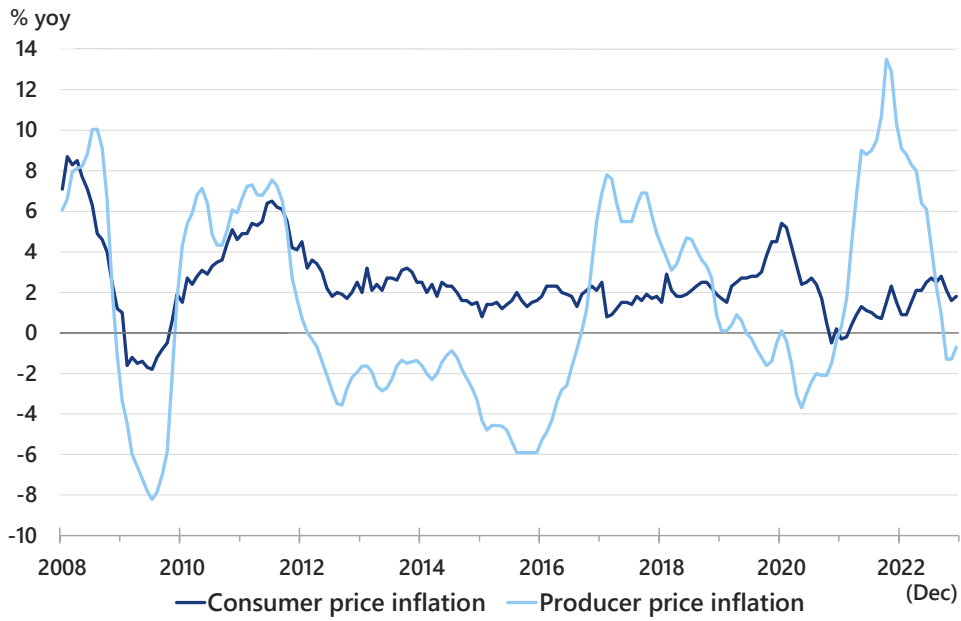
Mainland China: Purchasing Managers' Index



Source: CEIC

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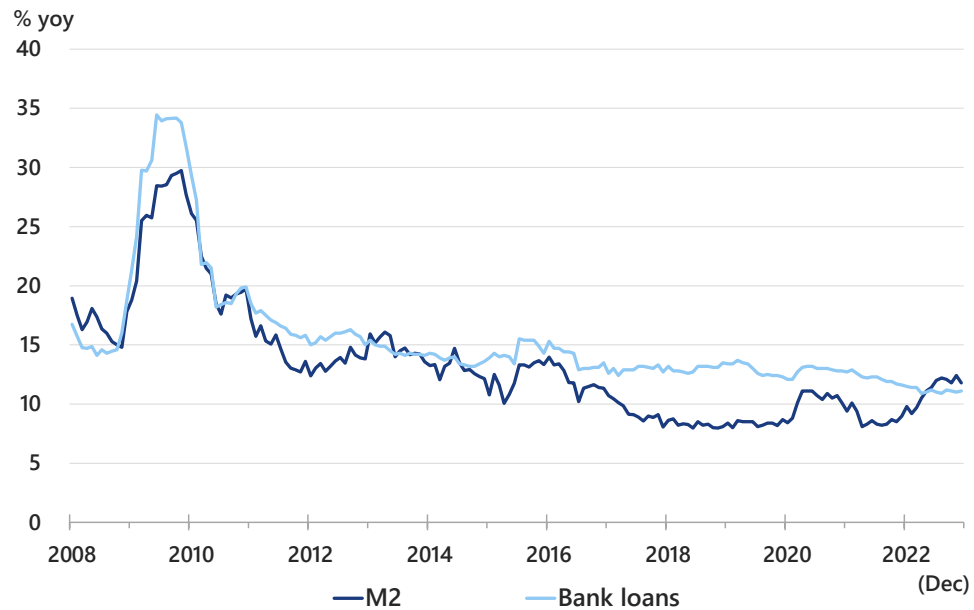
Mainland China: Inflation



Source: CEIC

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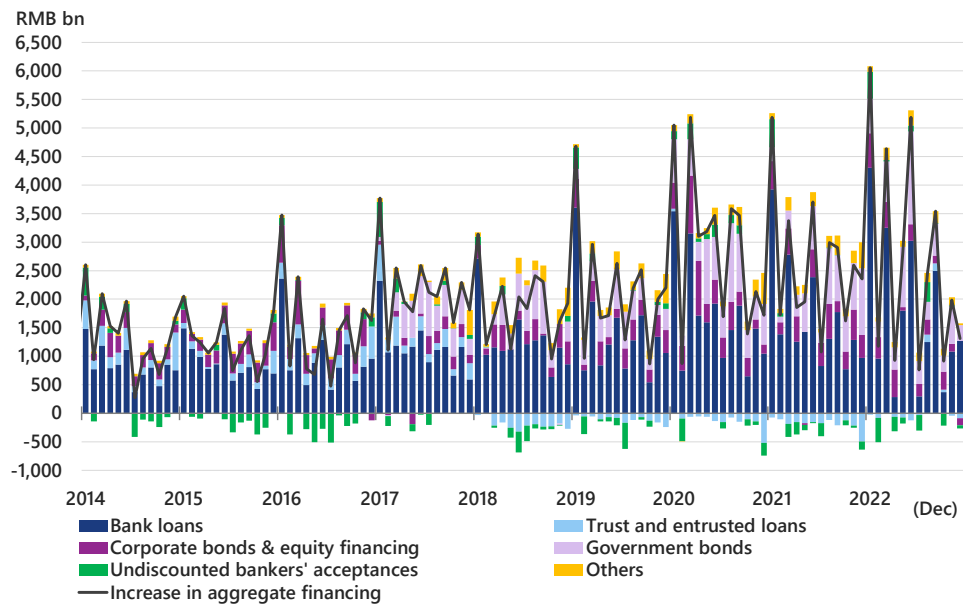
Mainland China: Money and loan growth



Source: CEIC

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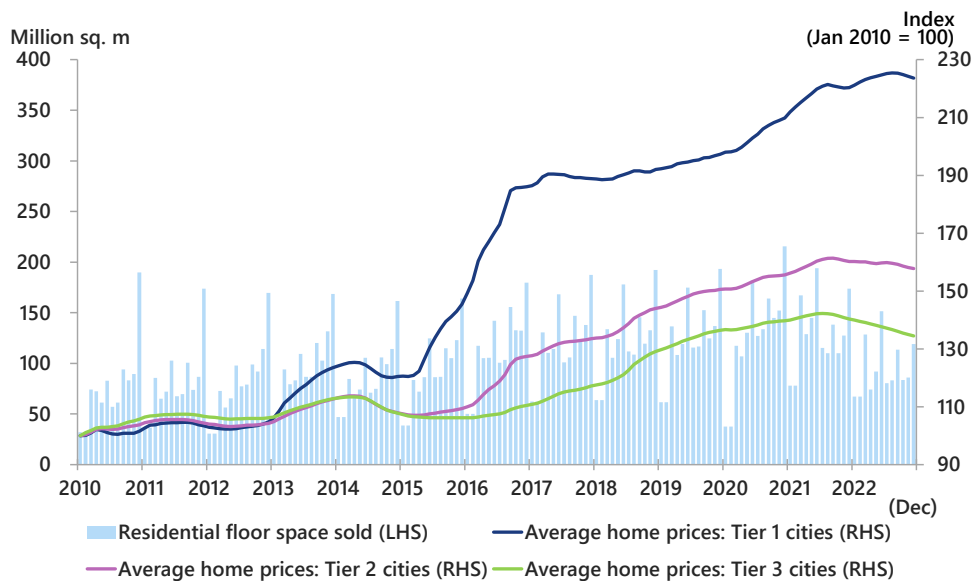
Mainland China: Aggregate financing flow



Note: "Others" primarily include loans written off and asset-backed securities of depository financial institutions.
Sources: CEIC and HKMA staff estimates

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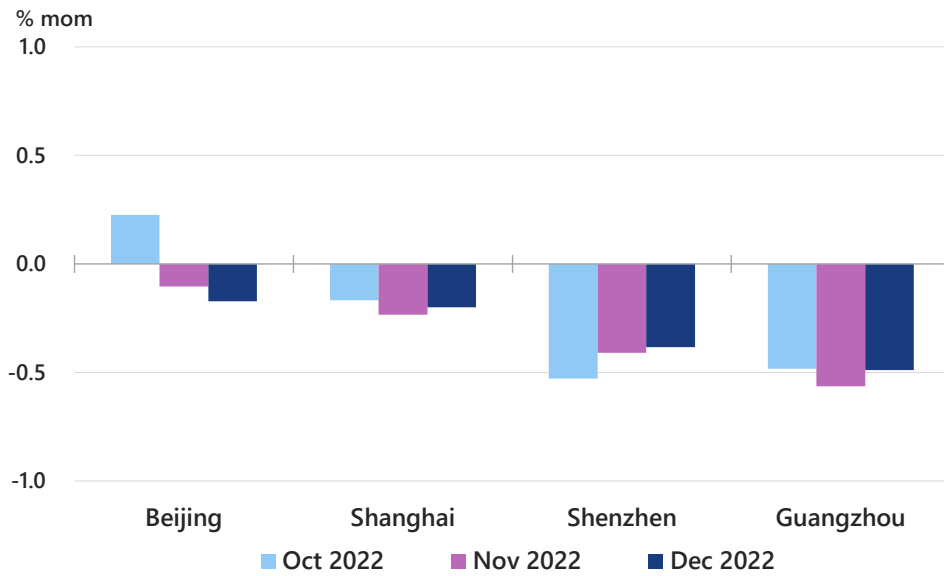
Mainland China: Property price and transaction volume



Sources: CEIC and HKMA staff estimates

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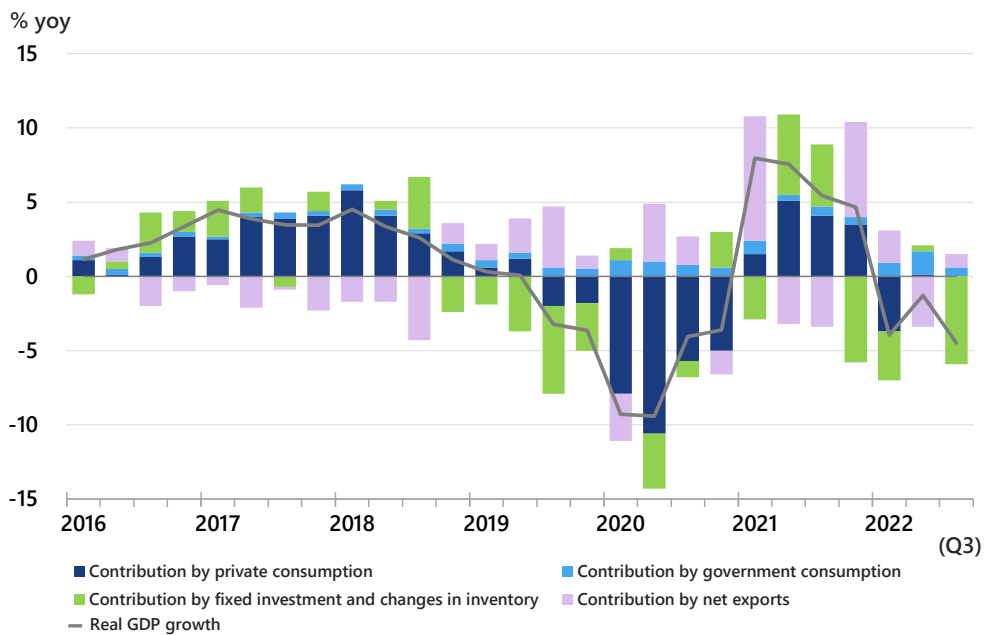
Mainland China: Housing price changes in major cities



Sources: CEIC, WIND and HKMA staff estimates

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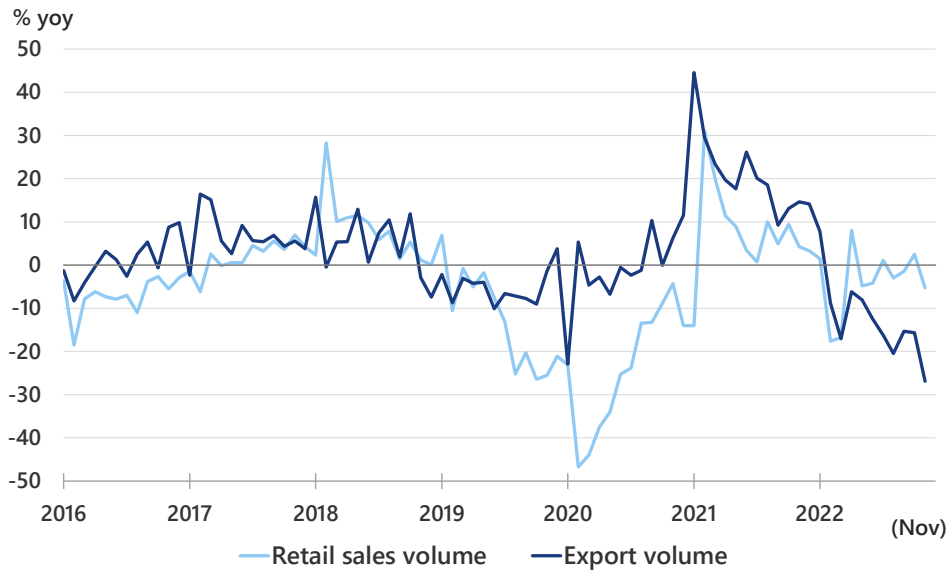
Hong Kong: Real GDP growth



Source: C&SD

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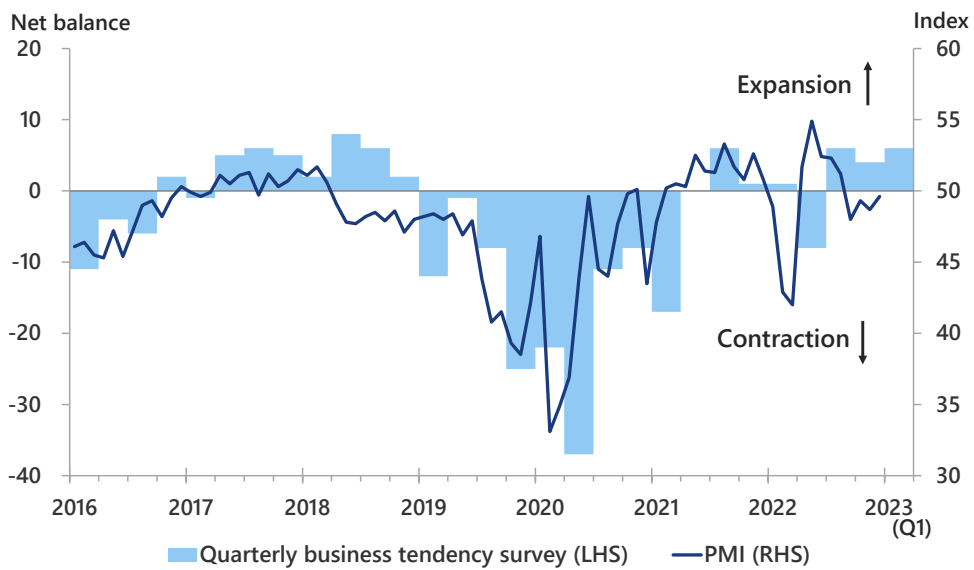
Hong Kong: Economic activity



Source: C&SD

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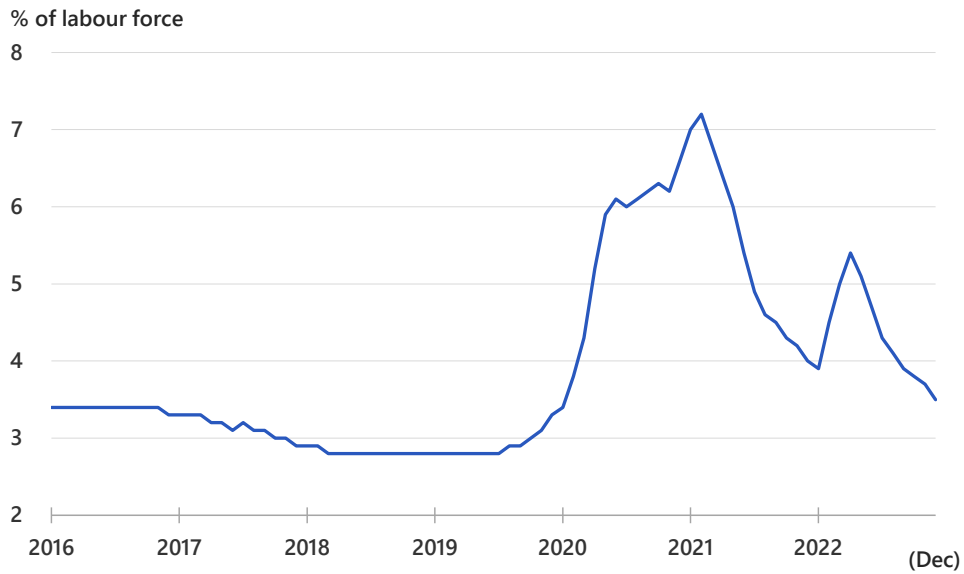
Hong Kong: Business outlook



Sources: C&SD and S&P Global

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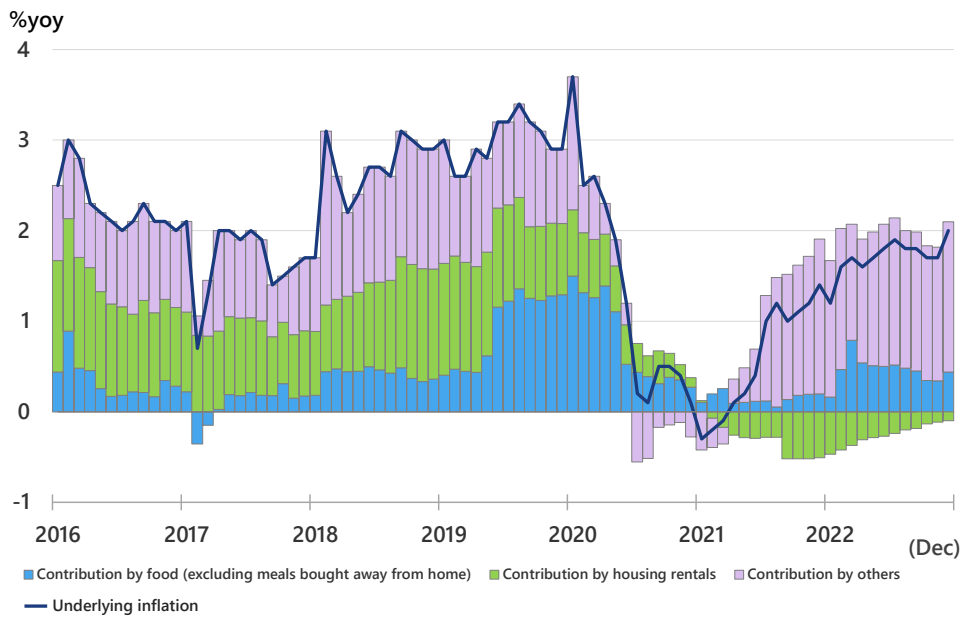
Hong Kong: Unemployment rate



Source: C&SD

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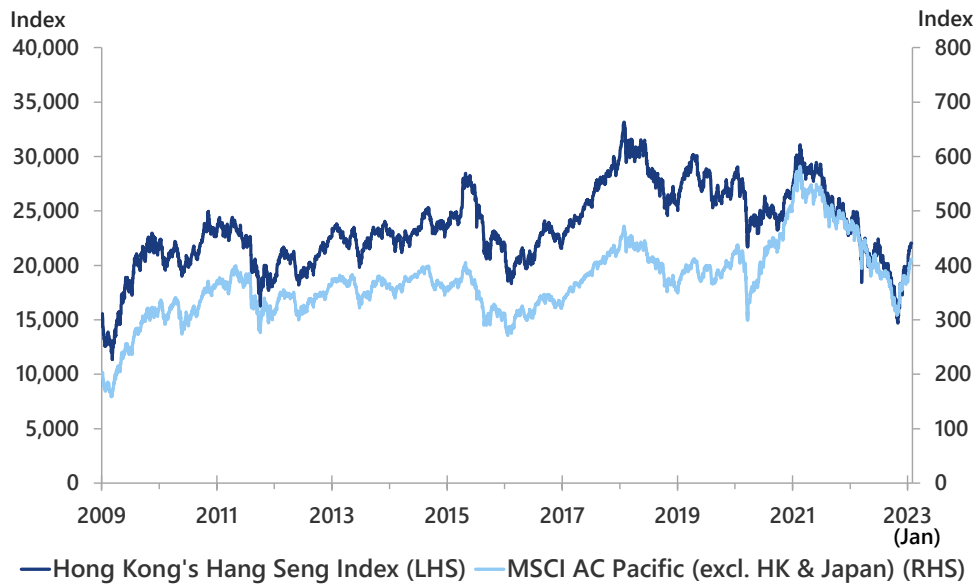
Hong Kong: Inflation



Sources: C&SD and HKMA staff estimates

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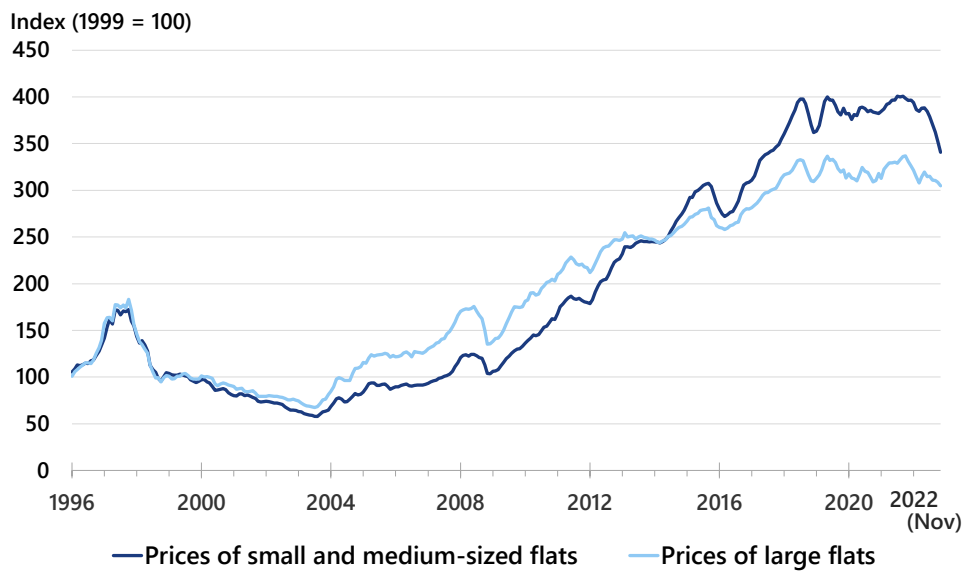
Hong Kong: Equity market



Source: Bloomberg

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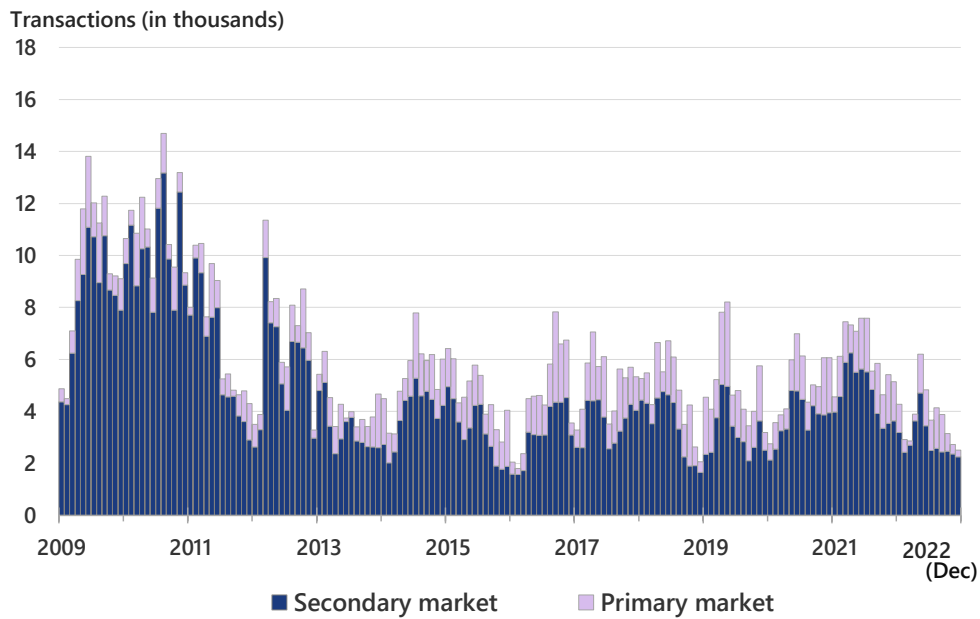
Hong Kong: Residential property prices



Source: Rating and Valuation Department

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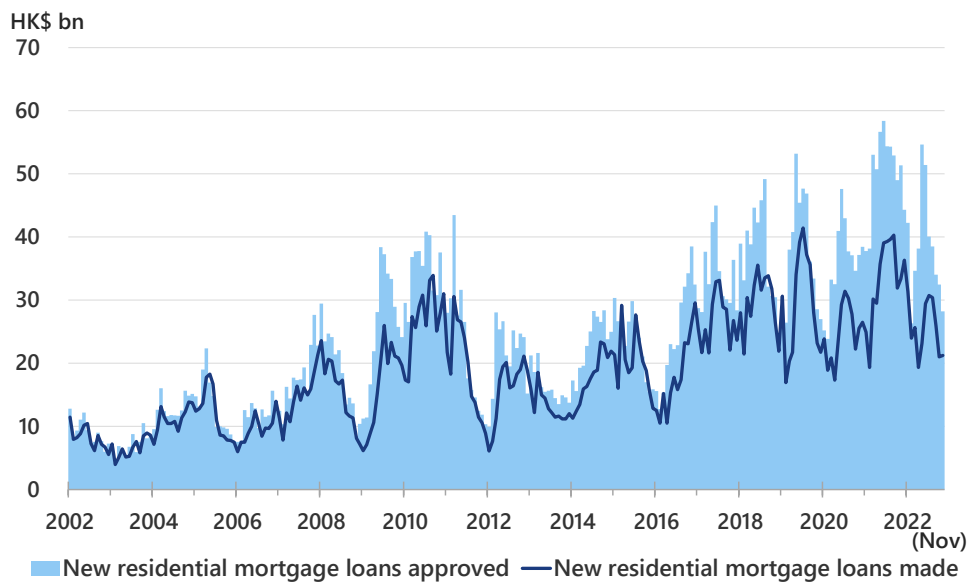
Hong Kong: Transaction volume in the primary and secondary residential property markets



Source: The Land Registry

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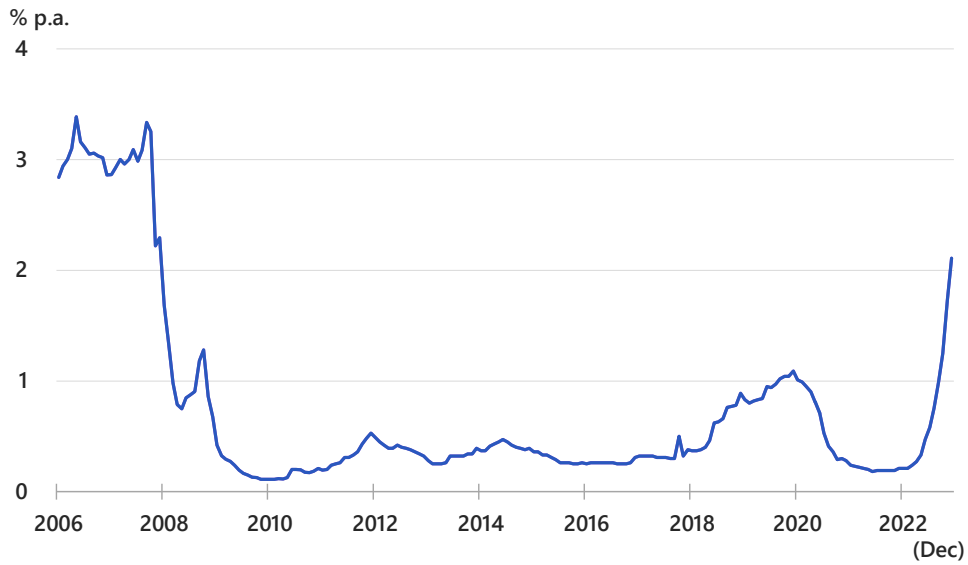
Hong Kong: New residential mortgage loans



Source: HKMA

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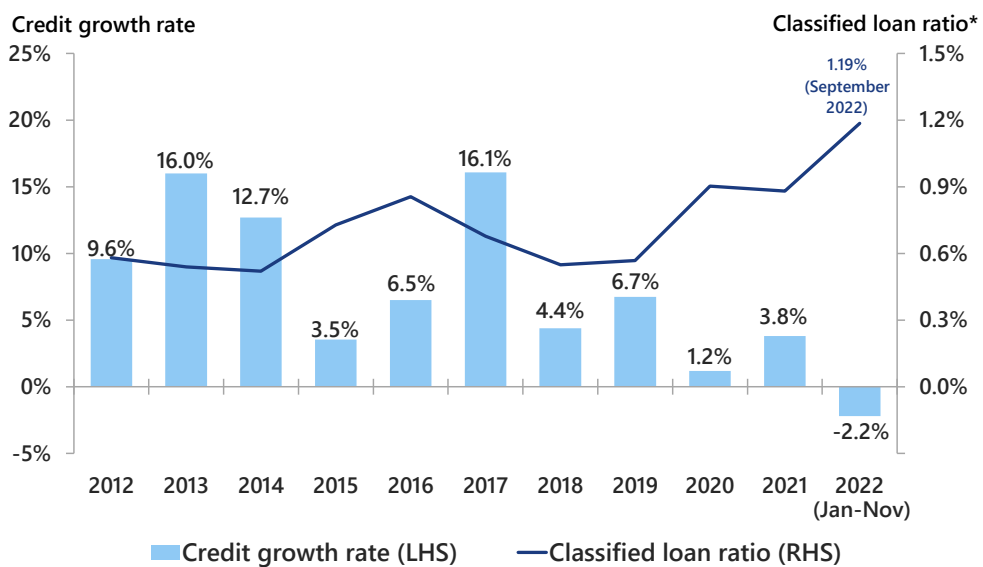
Hong Kong: Composite interest rate



Source: HKMA

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Hong Kong: Loan growth and asset quality



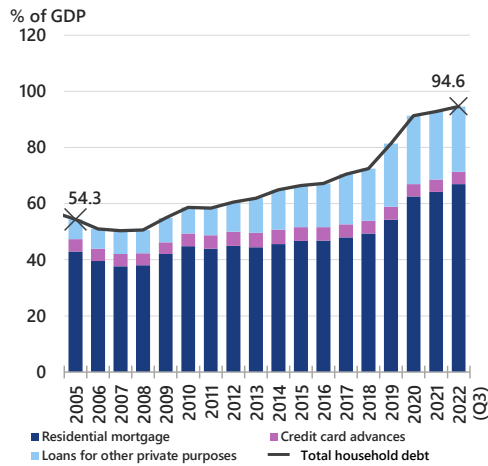
* Classified loan ratio of all authorized institutions
Source: HKMA

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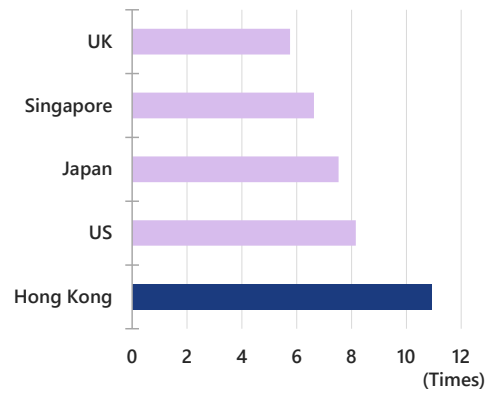


Hong Kong: Household debt

Gross household debt



Household net worth-to-liabilities ratio



Note: Around 90% 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.
Source: HKMA

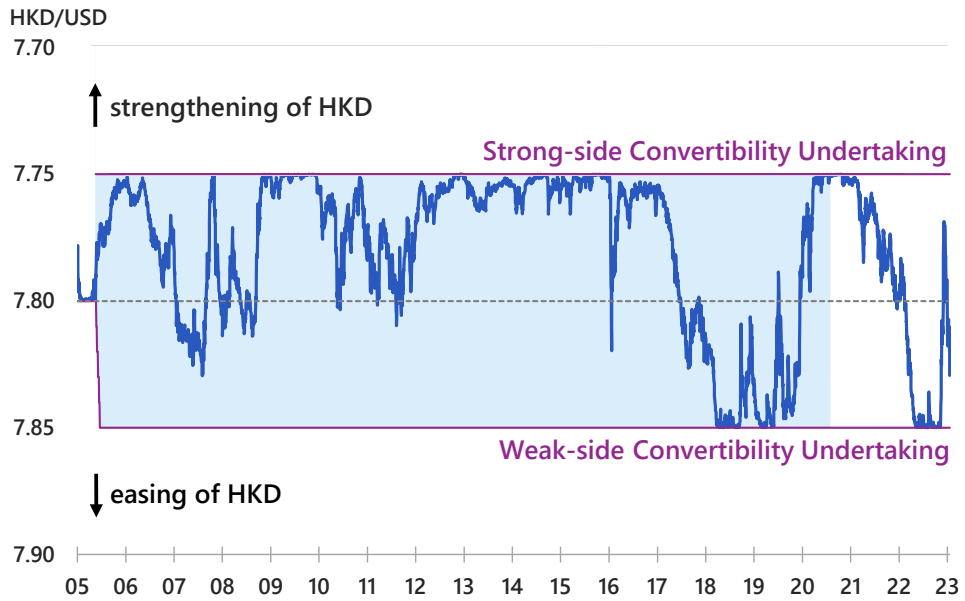
Notes: (1) Household net worth (or net household assets) is the difference between gross household assets and gross household liabilities. (2) The figure for Japan refers to that at end-2020, while the figures for the other economies (including Hong Kong) refer to those at end-2021.

Sources: HKMA staff estimates and statistical agencies or central banks of selected economies



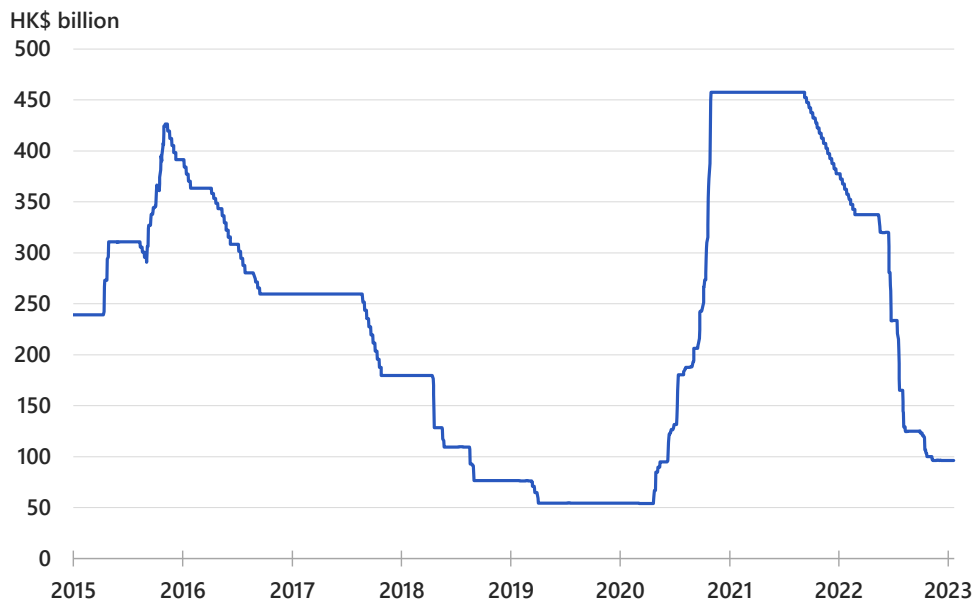
Currency Stability

Hong Kong dollar spot exchange rate



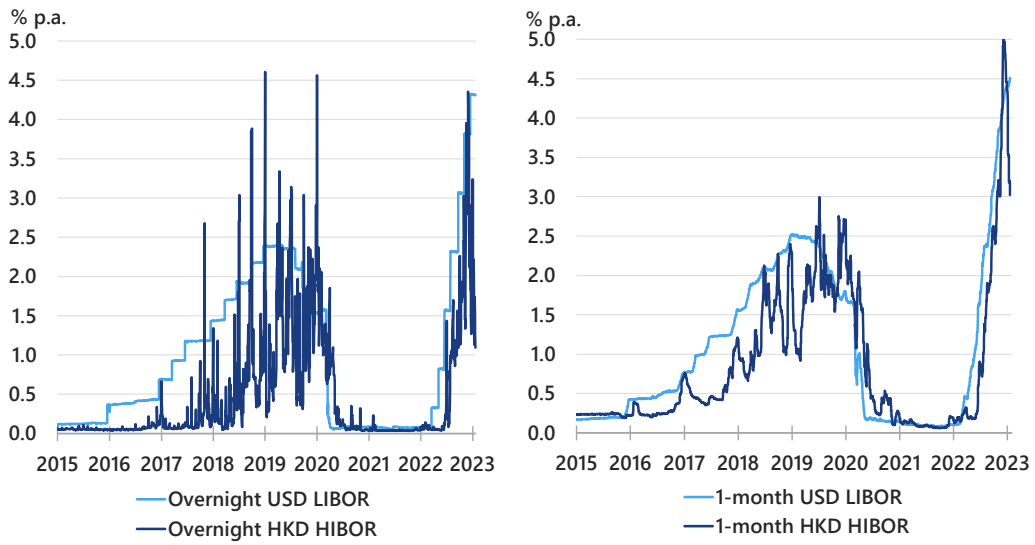
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Aggregate Balance



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Interbank rates



12-month Hong Kong dollar forward points



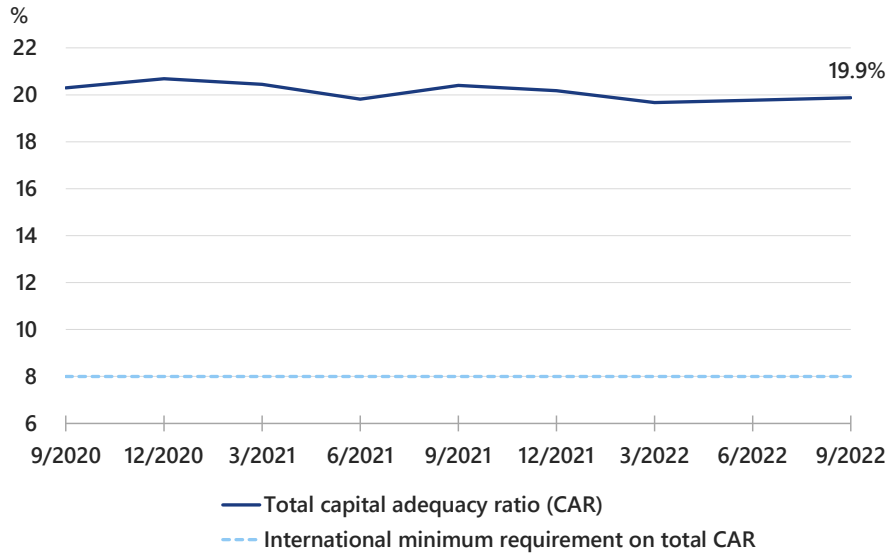


Banking Stability

Banking sector performance



Locally incorporated authorized institutions (AIs)
remain well capitalised



Source: HKMA

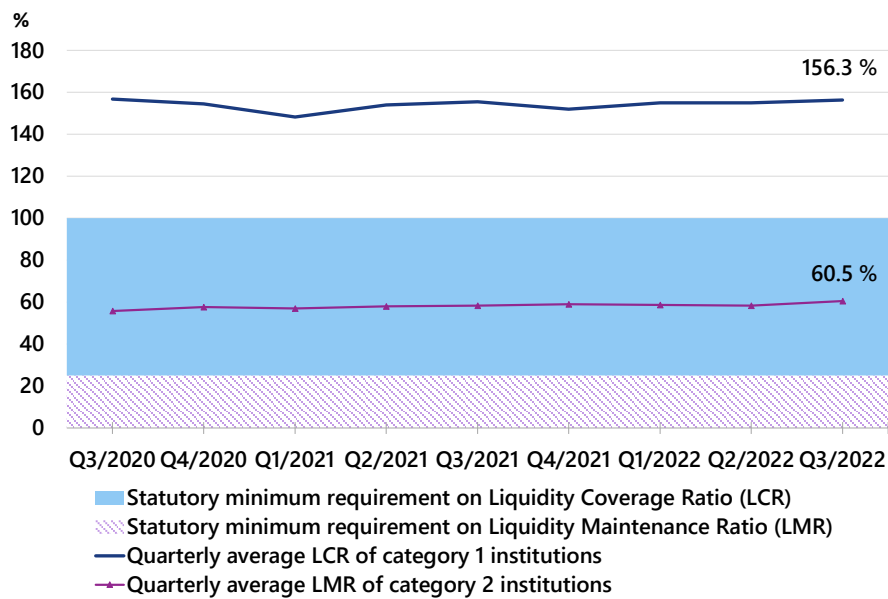
48

- The banking sector remains well capitalised. The consolidated total CAR of locally incorporated AIs stood at 19.9% at end-September 2022, well above the international minimum requirement of 8%.

Banking sector performance



Liquidity position remains strong



Source: HKMA

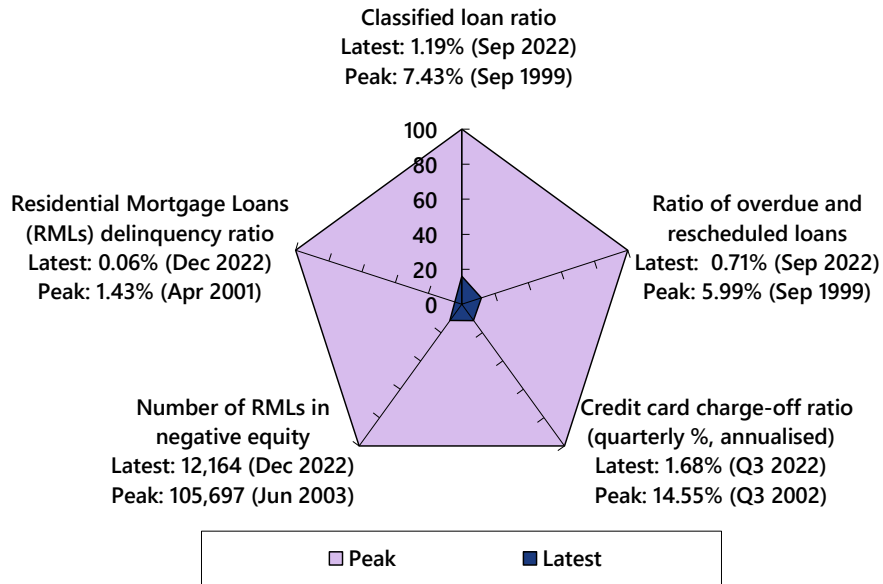
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- In the third quarter of 2022, the quarterly average LCR of category 1 institutions was 156.3%, well above the statutory minimum requirement of 100%. For category 2 institutions, their quarterly average LMR was 60.5% during the same period, also well above the statutory minimum requirement of 25%.

Banking sector performance



Asset quality stays healthy



Source: HKMA

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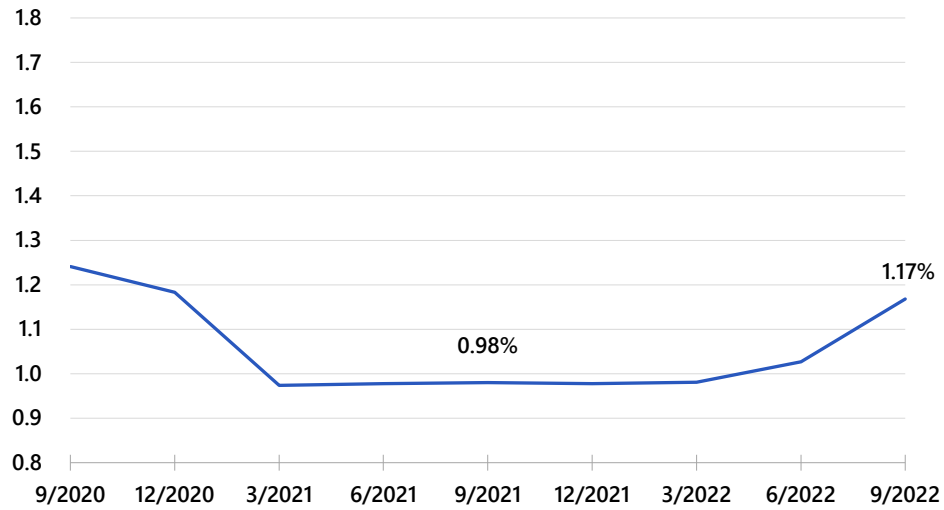
- The classified loan ratio of the banking sector rose to 1.19% at end-September 2022 from 1.10% at end-June 2022. The overall asset quality of banks stays healthy.

Banking sector performance



Net interest margin (NIM) widened

% (year-to-date annualised)



Source: HKMA

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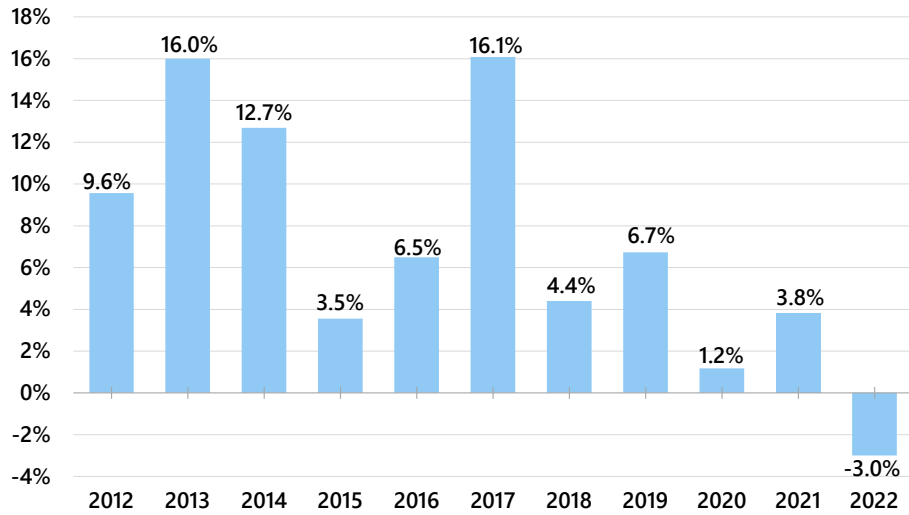
- The NIM of retail banks' Hong Kong businesses widened to 1.17% in first three quarters of 2022 compared with 0.98% in the same period in 2021.

Banking sector performance



Loan demand weakened

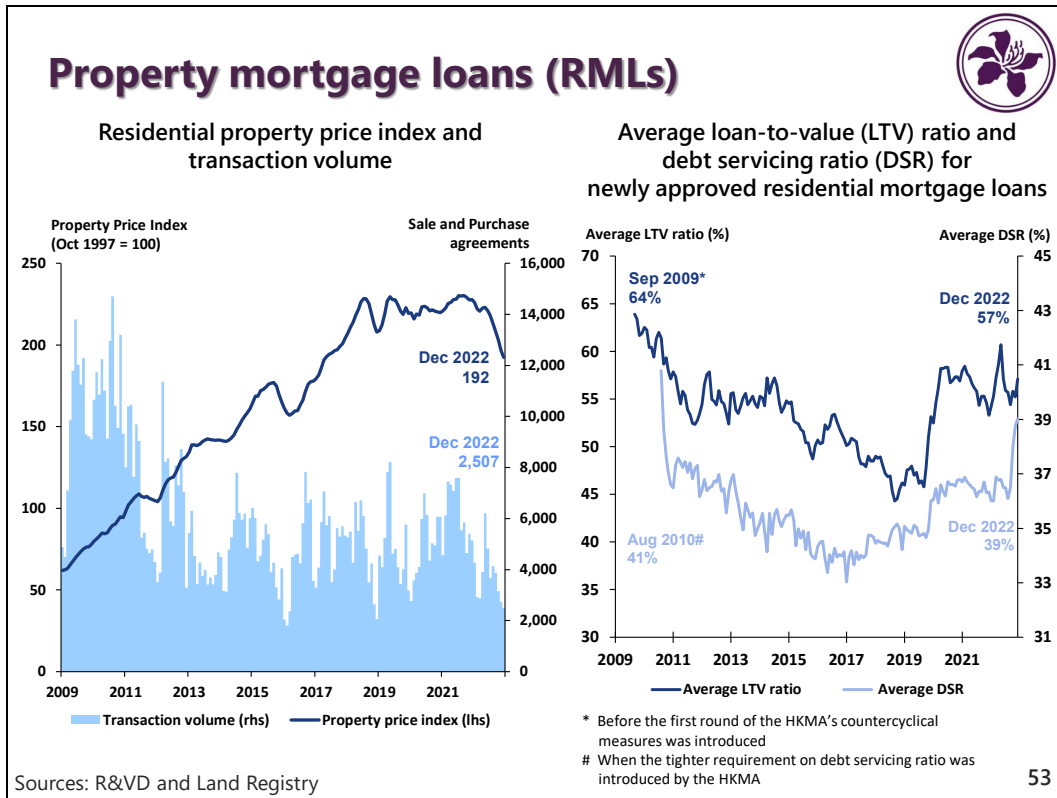
Credit growth rate



Source: HKMA

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- Total loans decreased by 3% in 2022, amid uncertainties in the external environment and rising interest rates, causing loan demand to weaken.



Latest statistics on RMLs

	Monthly average in 2021	Monthly average in 2022	Jul 2022	Aug 2022	Sep 2022	Oct 2022	Nov 2022	Dec 2022
Number of sale and purchase agreements	6,191	3,754	3,671	4,137	3,875	3,148	2,731	2,507
Number of new RML applications	14,060	9,524	9,497	10,907	8,727	7,280	7,792	7,510
Number of new RMLs approved	10,121	7,413	7,901	7,857	6,994	6,341	5,840	5,255

Latest statistics on residential property prices

Property price index		Period	Property price index
Rating and Valuation Department (10/1997=100)	Latest position	12/2022	192.3
	Recent peak	9/2021	230.2
	Peak in 1997	10/1997	100.0
Centaline (6/7/1997=100)	Latest position	15/1/2023	157.9
	Recent peak	8/8/2021	191.3
	Peak in 1997	19/10/1997	103.5

Supporting SMEs



Pre-approved Principal Payment Holiday Scheme

- As announced in October 2022, the Scheme was further extended by six months to July 2023
- Enhanced the partial principal repayment arrangement by introducing an additional two-year, 50% principal repayment option
- Participation rate of eligible corporates further dropped to around 2% from 16% when the Scheme was launched

International standards implementation



Basel III final reforms

- Adjustment of implementation timelines
- Q2 2023: Amendments to Banking (Capital) Rules and Banking (Disclosure) Rules

Consequential and other updates

- Q2 2023: Amendments to Banking (Exposure Limits) Rules and Banking (Liquidity) Rules

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Basel III final reforms

- The HKMA has decided (after consultation with the banking industry) to further adjust the target effective dates of certain capital standards in the Basel III final reforms:
 - those on credit risk, operational risk, leverage ratio, as well as an output floor (for the use of internal models) will take effect “no earlier than 1 January 2024” (revised from 1 July 2023);
 - those on market risk and credit valuation adjustment risk will take effect on 1 January 2024 (revised from 1 July 2023) initially for reporting purposes only, and no earlier than 1 January 2024 for the actual capital requirements (as previously communicated); and
 - the corresponding disclosure requirements will follow the effective dates of their associated capital standards.
- The above proposed adjustment of implementation timelines takes into consideration the intentions of an increasing number of jurisdictions to defer implementation in view of competing priorities to deal with operational challenges related to COVID-19, geopolitical issues, etc.
- Nonetheless, the HKMA will still aim to complete the rule-drafting early for the amendment rules to be submitted to LegCo within the second quarter of 2023. This will provide banks with more time to ready their systems for implementation.

Consequential and other updates

- Following the amendments to the Banking (Capital) Rules, some consequential amendments to the Banking (Exposure Limit) Rules and the Banking (Liquidity) Rules will also be submitted in the second quarter of 2023, along with certain technical refinements to enhance clarity and better reflect the policy intent of some existing provisions.
- Miscellaneous amendments to the Banking (Capital) Rules to facilitate the implementation of a positive neutral Countercyclical Capital Buffer will also be submitted to LegCo in the second quarter of 2023 along with those meant for the Basel III final reforms implementation.

Anti-money laundering and counter-financing of terrorism (AML/CFT)



- Passage of Anti-Money Laundering and Counter-Terrorist Financing (Amendment) Bill in December 2022, aligning with the latest international standards
- Held the third AML Regtech Lab (AMLab 3) in November 2022
 - A digital response to fraud risk using network analytics
- Provided industry training in the annual AML Seminar on source of wealth requirements and updates on suspicious transaction reporting and counter-proliferation financing

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- The amended Anti-Money Laundering and Counter-Terrorist Financing Ordinance introduces a licensing regime for virtual asset service providers and a number of miscellaneous amendments to ensure alignment with the latest international standards set by the Financial Action Task Force. Amendments relevant to the banking sector will come into operation on 1 June 2023 to provide sufficient time for preparatory work. To help Authorized Institutions implement these changes, the HKMA will consult the banking sector on corresponding changes to the Guideline on Anti-Money Laundering and Counter-Financing of Terrorism (For Authorized Institutions) as well as specific guidance on topical issues.
- The HKMA continued to co-organise with Cyberport the third AMLab in November 2022. AMLab 3 builds on AMLab 1, experiencing network analytics to combat fraud risk and reduce losses from scams in association with mule account networks. To date, adoption of network analytics by retail banks is progressing well. About 60% of retail banks which are also members of the FMLIT are now deploying network analytics, twice as many as three years ago, and in the first nine months of 2022, these banks also increased their identification and reporting of suspicious accounts and networks by 127% compared to a year ago, leading to an increase of 166% in the amount of criminal proceeds restrained by law enforcement.
- The AML Seminar was held by the HKMA in December 2022 to engage with banks and to share the HKMA's in-year review and 2023 outlook. Supervisory guidance was provided by the HKMA to assist effective, risk-sensitive implementation of source of wealth and source of funds requirements. Experts from the Financial Intelligence and Investigation Bureau of the Hong Kong Police and the Commerce and Economic Development Bureau also shared feedback on suspicious transaction reporting and updates on counter-proliferation financing respectively.

Resolution regime



- As of 1 January 2023, all domestic systemically important banks (D-SIBs) complied with their applicable loss-absorbing capacity requirements, building up a new layer of resources for recapitalisation in resolution
- In Q4 2022, all D-SIBs submitted the first self-assessments against the resolution standards on operational continuity, which aim to facilitate the continued performance of critical financial functions in resolution

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- As part of the HKMA's bilateral resolution planning programmes with banks, all D-SIBs have built up a new layer of loss-absorbing capacity (LAC) resources by multiple issuances of capital and non-capital LAC debt instruments in the past five years, in order to facilitate loss absorption and recapitalisation in case of failure in line with the preferred resolution strategies.
- As of 1 January 2023, all D-SIBs complied with the applicable LAC requirements under the Financial Institutions (Resolution) (Loss-absorbing Capacity Requirements – Banking Sector) Rules (Cap. 628B), and are also making periodic public disclosures of their LAC positions and instruments, representing a milestone in enhancing the resilience and resolvability of these banks.
- The HKMA has also commenced the implementation of the Code of Practice chapter OCIR-1 on "*Resolution Planning – Operational Continuity in Resolution*" (OCIR-1), which sets out the Monetary Authority (MA)'s expectations regarding the ex-ante arrangements Als should put in place to secure the continuity in resolution of services that are essential to the continued performance of critical financial functions as well as to support post-stabilization restructuring in a timely manner.
- In Q4 2022, all D-SIBs have submitted the first self-assessments against the above expectations and developed initial work plans for addressing gaps identified in the self-assessments. The development and putting in place of adequate OCIR arrangements will be an iterative process between the HKMA and the D-SIBs as part of the bilateral resolution planning programmes.

Green and sustainable banking



- Working with experts to develop a local green classification framework to align with the Common Ground Taxonomy (CGT), and will propose the structure and core elements of the framework for consultation around early 2023
- Building a common platform, comprising a database and a tool, for banks to carry out physical risk assessment

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- We are working with experts to develop a green classification framework, and will propose the structure and core elements of the framework for a consultation, targeted around early 2023. Our work will be guided by the principles of interoperability, comparability and inclusiveness, with the aim to facilitate easy navigation among the CGT, China and the European Union's taxonomies. We will also take into account local considerations and other industry standards commonly adopted by the industry.
- To accelerate the banking sector's progress in managing climate risks, there is a need to build up banks' capacity in understanding and assessing climate risks and to improve data availability so that banks can have consistent and granular data to conduct climate risk assessments. We are building a common platform, comprising a database and a tool, to facilitate banks' assessment of the impact of physical risk on real estate. We will engage the industry to ensure that the platform is of use to banks.

Talent development in banking sector



Attract and nurture the younger generation to create talent pipeline

- Carried out various initiatives in September to December 2022 to better equip youngsters for a banking career:
 - Conducted a series of banking career talks in universities, with around 500 university students attending
 - The Future Banking Bridging Programme provided practical banking knowledge and work experience for over 200 university students
 - The Pilot Apprenticeship Programme for Private Wealth Management received around 1,300 applications in the Recruitment Day
 - The Banking Graduate Trainee Programme recruited nearly 100 graduates to work in the positions of fintech, green and sustainable finance, and Guangdong-Hong Kong-Macao Greater Bay Area business

Talent development in banking sector



Attract and nurture the younger generation to create talent pipeline (Cont'd)

- Organised a briefing session for around 2,500 high school teachers and students to help them understand banking career prospects
- Showcased the prospects of the banking sector to about 80 high school teachers in Hong Kong and the Mainland during the Life Planning Education Conference organised by the Education Bureau, so as to help them guide the career planning of their students at an early stage
- Benefitted 125 students through the Gap Year Placement Programme 2022/23 of the Fintech Career Accelerator Scheme; preparing for student recruitment of the 2023/24 edition
- Launched the Sustainable Finance Internship Initiative jointly with other agencies of the Green and Sustainable Finance Cross-Agency Steering Group (CASG) in Q4 2022 to create more internship opportunities in Hong Kong for students. Provided four training sessions to students together with other agencies in January 2023, attracting over 150 attendees to each of the session

Talent development in banking sector



Reskill and upskill the existing workforce to keep pace with digital transformation and business development

- Enhanced Competency Framework (ECF) for Banking Practitioners – To consult the banking industry on the new module on Green and Sustainable Finance in Q1 2023
- Implement the training subsidy schemes announced in the 2022-23 Budget to encourage training and attaining professional qualifications:
 - Expect the first batch of professional qualification holders under the ECF-Fintech will be available in H1 2023 and can apply for training subsidies under the Pilot Scheme on Training Subsidy for Fintech Practitioners
 - Launched the Pilot Green and Sustainable Finance (GSF) Capacity Building Support Scheme in December 2022 to provide subsidies to market practitioners, students and graduates on GSF-related training opportunities

Financial inclusion



Enhanced access to banking services for customers in need

- Completed implementation of the three industry guidelines related to financial inclusion
- Launched various barrier-free measures

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- The HKMA closely oversees and follows up with banks on their implementation of the three published guidelines in relation to financial inclusion, including the Practical Guideline on Barrier-free Banking Services, the Guideline on Banking Services for Persons with Intellectual Disabilities, and the Guideline on Banking Services for Persons with Dementia issued by the Hong Kong Association of Banks. All retail banks have completed their implementation of the guidelines to further enhance access to basic banking services for customers in need.
- The banking industry has achieved remarkable progress in implementing barrier-free measures for people with hearing, physical and visual impairments. For example, all retail bank branches are equipped with assisted listening system, essentially all retail bank branches are now accessible by wheelchairs (save for a very small number of branches which are constrained by building structures), and all automated teller machines have been equipped with protruding symbols.

Banking consumer protection



- Launched the Credit Reference Platform under the Multiple Credit Reference Agencies (CRAs) Model
- Completed a thematic review on applications for credit products through digital platforms
- Completed industry consultation on enhancements to the Code of Banking Practice

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- The HKMA has been working closely with Hong Kong Association of Banks, the Hong Kong Association of Restricted Licence Banks and Deposit-taking Companies and the Hong Kong S.A.R. Licensed Money Lenders Association Limited (collectively referred to as “Industry Associations”) to introduce more than one consumer CRA in Hong Kong, with a view to enhancing the service quality of consumer CRAs and reducing the operational risk of having only one commercially-run consumer credit information service provider in the market, particularly the risk of single point of failure. The Credit Reference Platform under the Multiple CRAs Model was launched on 28 November 2022. Participating credit providers have commenced uploading of consumer credit data onto the platform, which are being downloaded by the selected CRAs in preparation for their provision of consumer credit reference services.
- Building on its ongoing efforts to enhance consumer protection amid increasing digitalisation, the HKMA issued a circular on 20 December 2022 to share the observations and sound practices identified in a thematic review on disclosure in respect of applications for credit products through digital platforms with the banking industry. The circular serves to remind AIs of the importance of ensuring proper customer protection in the digital environment, in light of the potentially higher risks of impulsive borrowing.
- Industry consultation on proposed enhance inputs to the Code of Banking Practice was completed in mid-January 2023. Enhancement measures include further strengthening of protection to banking consumers with respect to digital banking services; supporting customers’ assessment of risks and repayment ability to promote responsible borrowing by consumers; enhancement of customers’ ability in credit management; and strengthening fair treatment of customers throughout the banking lifecycle. The consultation feedback from the industry is being studied.

Banking investor protection



- Reviewing investor protection measures on virtual assets and related products
- Completed joint mystery shopping programme with the Insurance Authority (IA) and the Mandatory Provident Fund Schemes Authority (MPFA)

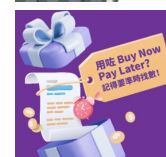
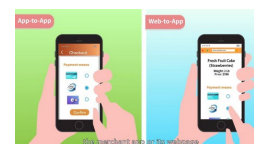
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- The Government issued a policy statement on the development of virtual assets (VAs) in Hong Kong on 31 October 2022. The HKMA is working with the Government and other financial regulators to put in place guardrails to mitigate and manage the risks, and a comprehensive regulatory framework taking into account international regulatory developments, so that the VA sector in Hong Kong can develop in a sustainable and responsible manner. In particular, in respect of investor protection, the HKMA:
 - is working with the Securities and Futures Commission to review investor protection measures;
 - has been participating in international efforts in formulating recommendations on regulation of VA activities and markets;
 - has stepped up supervision of banks' VA-related intermediary activities, e.g. offsite surveillance and reviewing banks' business proposals; and
 - will continue public education efforts around VAs.
- The HKMA together with IA and MPFA have completed the joint mystery shopping programme on selling practices of intermediaries in respect of two tax-deductible products (i.e. Qualifying Deferred Annuity Policies and Mandatory Provident Fund Tax-Deductible Voluntary Contributions), and have issued a joint circular on 23 December 2022 outlining the key findings and good practices observed.

Public education



- Through radio and social media posts featuring a rabbit mascot and a rap song, encouraged the public to give electronic lai-see and use good-as-new notes during Chinese New Year, and reminded them of issues to note about exchanging new notes
- Launched an animation video to introduce the App-to-App/Web-to-App payment function of the FPS and its benefits
- Published scam prevention series across social media channels and radio to alert the public on prevailing scam cases and the preventive measures
- Explained the features of the new installment payment product "Buy Now, Pay Later" (BNPL), and educated the public on rational spending during festive seasons, in order to enhance consumer protection



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- Through radio and light-hearted social media posts featuring a rabbit mascot and a rap song, encouraged the public to give electronic lai-see and use good-as-new notes during Chinese New Year, and reminded them of issues to note about exchanging new notes.
- Launched an animation video to introduce the App-to-App/Web-to-App payment function of the FPS and its benefits.
- Published scam prevention series across social media channels and radio to alert the public on the prevailing scam cases, such as credit card, investment, phishing and telephone scams, as well as the preventive measures.
- Explained the features of the new installment payment product BNPL and reiterated it is a loan product. Educated the public on rational spending during festive seasons, reminding them to assess their ability to repay and avoid overspending, in order to enhance consumer protection.

Deposit Protection Scheme (DPS)



Enhance public awareness and understanding on the DPS:

- Announced the results of the fifth “Hongkongers’ Sense of Security on Savings” Survey with a media briefing
- Implemented a social media campaign and participated in the 56th Hong Kong Brands and Products Expo



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- A series of publicity initiatives were executed to promote public awareness and deepen understanding on the DPS:
 - Commissioned the Hong Kong Institute of Asia-Pacific Studies of CUHK in conducting the fifth “Hongkongers’ Sense of Security on Savings” Survey studying saving habits and organised a media briefing announcing the survey findings in December 2022.
 - Rolled out the second round of “Smart Picks – Protecting Ah Chuen” social media campaign with a series of motion graphic videos and interactive games engaging the younger generation.
- Continued educational outreach activities targeting different groups:
 - Participated in the 56th Hong Kong Brands and Products Expo to engage different groups such as the homemakers and elderly visitors through interactive educational games and distribution of DPS information leaflets.



Financial Infrastructure

Financial infrastructure: overview



Payment systems

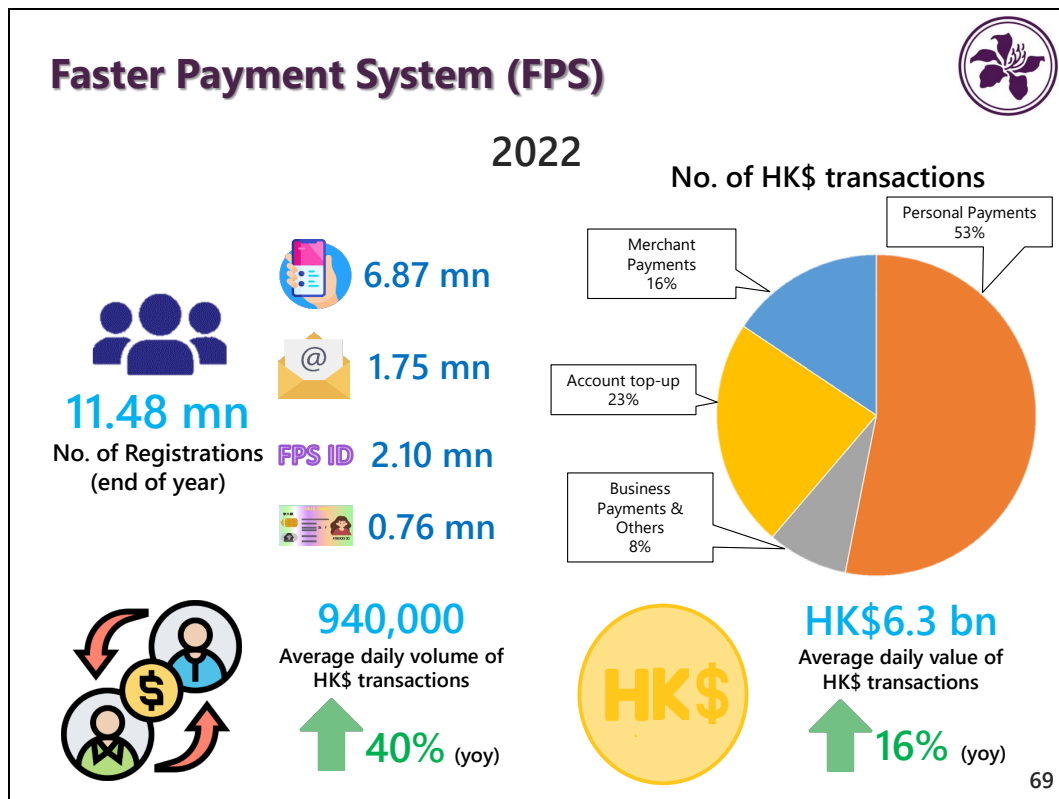
- Four Real Time Gross Settlement (RTGS) Systems for HKD, RMB, USD and Euro:
 - Average daily turnover in Q4 2022 reaching HK\$995 billion, RMB1,701 billion, US\$51 billion and €0.5 billion respectively
- Faster Payment System:
 - The number of registrations recorded 11.48 million as at end-December 2022; the average daily number of Hong Kong dollar real-time transactions in 2022 rose by 40% year on year to 940,000

Central Moneymarkets Unit (CMU)

- Providing settlement and custodian service for debt securities
 - HK\$2,781 billion equivalent outstanding debt securities lodged with CMU at end-December 2022
- Supporting Bond Connect
 - For Northbound Trading: 784 registered institutional investors at end-December 2022; RMB27.4 billion average daily turnover in December 2022

Hong Kong Trade Repository: maintains an electronic database of over-the-counter derivative transactions

- 3,956,374 outstanding transactions at end-December 2022



- The number of registrations and turnover of the FPS have been growing steadily. At end-December 2022, the FPS recorded 11.48 million registrations (including 6.87 million in mobile number, 1.75 million in email address, 2.1 million in FPS ID and 0.76 million in HKID number), up by 19% or 1.86 million registrations year on year (yoy).
- The usage of FPS has expanded gradually to merchant payments and top-up transactions from primarily P2P transactions previously.
- The turnover of the FPS continues to grow. The average number of Hong Kong dollar transactions per day in 2022 rose by 40% from 2021 to 940,000. Average daily value of Hong Kong dollar transactions also rose by 16% to HK\$6.3 billion in 2022.

Development of Central Moneymarkets Unit (CMU)



- To help Hong Kong grasp the opportunities from the further opening up of the Mainland financial markets, the CMU has commenced enhancements on both system and business fronts, with a long-term objective of becoming a major international central securities depository (CSD) in Asia
- Some of the enhancements and services have been launched, and the rest would be rolled out in phases over next few years:
 - Collateralised lending service for primary issuance (launched in April 2022)
 - New CMU website (launched in July 2022)
 - New open application programming interface (API) and new user interface (to be launched in 2023)
 - New CMU platform (to be launched in 2025)

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- Being a critical financial infrastructure operated by the HKMA, CMU is a CSD providing safe, efficient and convenient clearing, settlement and custodian services for debt securities, which in turn supports the bond market development in Hong Kong.
- To seize the opportunities from Bond Connect, the HKMA has reviewed the strategic position of CMU and will gradually develop CMU into a major international CSD in Asia. To realise such goal, CMU will commercialise its business and operation to develop value-added services in two main areas:
 - **System Enhancement**
 - To improve interface with Mainland financial infrastructures (e.g. linkage with Cross-border Interbank Payment System launched in 2021);
 - To launch a new CMU website to provide the industry and public with a quick and convenient means of searching for bond market information (launched in July 2022);
 - To launch new functionalities (e.g. new open API and new user interface) in 2023 to provide CMU members with a more hassle-free experience; and
 - To introduce a new CMU system with a more flexible account structure and settlement mechanism, and enhanced collateral management function (expected to be launched in 2025).

- **Introduction of new services**

- Collateralised lending service to provide free intra-day liquidity for primary issuance (launched on 1 April 2022). Since the introduction, the service has so far been used to support RMB bond issuance with a total of RMB16.62 billion.
- Support 24-hour operation to better serve investors in different time zones (expected to be launched in 2025).

Latest fintech initiatives



Hong Kong FinTech Week 2022 (co-organised with InvestHK)

- The five-day event attracted a record high of over 30,000 visitors and over 5 million online views from over 95 economies

Central Bank Digital Currency (CBDC)

- For wholesale CBDC (mBridge): published a report in October 2022 to deliver the results and key lessons learnt of the pilot conducted in Q3 2022 on international trade settlement use cases
- For retail CBDC (e-HKD): launched e-HKD pilot programme (under Rail 2 of the 3-Rail approach) in November 2022 to invite industry participation to take deep dives into use cases

Commercial Data Interchange (CDI)

- Officially launched in October 2022 with the participation of 23 banks and 10 data providers, of which 6 key data providers with substantial SME data were ready to provide consented data access for banks

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Hong Kong FinTech Week 2022

- The event was held from 31 October to 4 November 2022. It was host to over 500 speakers, more than 600 sponsors and exhibitors, and over 30 international delegations.

Wholesale CBDC (mBridge)

- During the six-week pilot, 20 banks in four jurisdictions used the mBridge platform to conduct over 160 payment and foreign exchange transactions totalling more than HK\$171 million. It was among the first multi-CBDC projects to settle real-value, cross-border transactions on behalf of corporates.
- The HKMA and the rest of the project team will continue to work towards developing the mBridge platform into a Minimum Viable Product (MVP) and ultimately a production-ready system.

Retail CBDC (e-HKD)

- The HKMA adopts a three-rail approach to prepare for the possible implementation of e-HKD:
 - Rail 1: to lay the technology and legal foundations
 - Rail 2: runs in parallel to Rail 1; to take deep dives on application research and pilots
 - Rail 3: to consolidate the outcomes of Rails 1 and 2 and set the timeline for launching e-HKD

- A component of the Rail 2 – e-HKD pilot programme (Rail 2 Pilot) is the e-HKD sandbox, through which various stakeholders, including banks and the industry, can take deep dives into use cases, examine implementation and design issues relating to e-HKD, and gain actual experience.

CDI

- Up to end-October 2022, more than 900 SME loans, amounting to over HK\$1.8 billion, had been approved by the participating banks under the facilitation of CDI
- At this stage, the commercial data involved include e-trade declaration, e-commerce, supply chain, payment and credit reference data. The six key data providers are:
 - Dun & Bradstreet (Hong Kong) Limited
 - GS1 Hong Kong Limited
 - HKT Payment Limited
 - New World Development Company Limited (participating through its wholly-owned subsidiary River Square Company Limited)
 - QFPay Haojin Fintech Limited
 - Tradelink Electronic Commerce Limited

Stored value facilities (SVFs) and retail payment systems (RPSs)



- SVF usage continued to grow in Q3 2022:
 - Average daily transaction number: 20.47 million (+4.0% year-on-year (yoy))
 - Average daily transaction value: HK\$1,645 million (+18.1% yoy)
- Continue to supervise licensees in a risk-based manner, taking targeted supervisory actions where necessary
- Continue to oversee six designated RPSs

Regulatory development of the over-the-counter (OTC) derivatives market



- The HKMA and the SFC jointly published the consultation conclusion paper on the annual update to the Financial Services Providers (FSP) list for clearing obligations in June 2022. The revised FSP list was gazetted in December and has been effective since 1 January 2023
- As of end-December 2022, the Hong Kong Trade Repository logged a total of 3.96 million outstanding OTC derivatives trades, covering five asset classes under mandatory reporting requirements, i.e. foreign exchange, interest rate, equity, credit, and commodity derivatives

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- Under the Hong Kong OTC Derivatives Clearing Rules, Authorized Institutions (AIs) and licensed corporations (LCs) are subject to the clearing obligation of specified OTC derivative transactions. In order to capture transactions between AIs/LCs and major dealers outside Hong Kong that are not AIs or LCs, the concept of FSP was introduced by the HKMA and the SFC. Under the Clearing Rules, an entity will be designated as a FSP if the entity belongs to a firm on the Financial Stability Board's list of global systemically important banks or on the OTC Derivatives Supervisors Group's list of major dealers, and the entity is a clearing member of major central counterparties. Specific transactions between a FSP and AIs/LCs are subject to the clearing obligations. The HKMA and the SFC perform annual review and public consultation of the FSP list to ensure the list remains relevant and appropriate.

Interest rate benchmark reforms



The HKMA is:

- Actively participating in discussion in international fora and closely monitoring relevant developments;
- Working with the Treasury Markets Association to encourage the use of Hong Kong Dollar Overnight Index Average (HONIA), gauging industry views and promoting market awareness; and
- Continuing to facilitate Als' preparation for the discontinuation of the remaining US dollar LIBOR

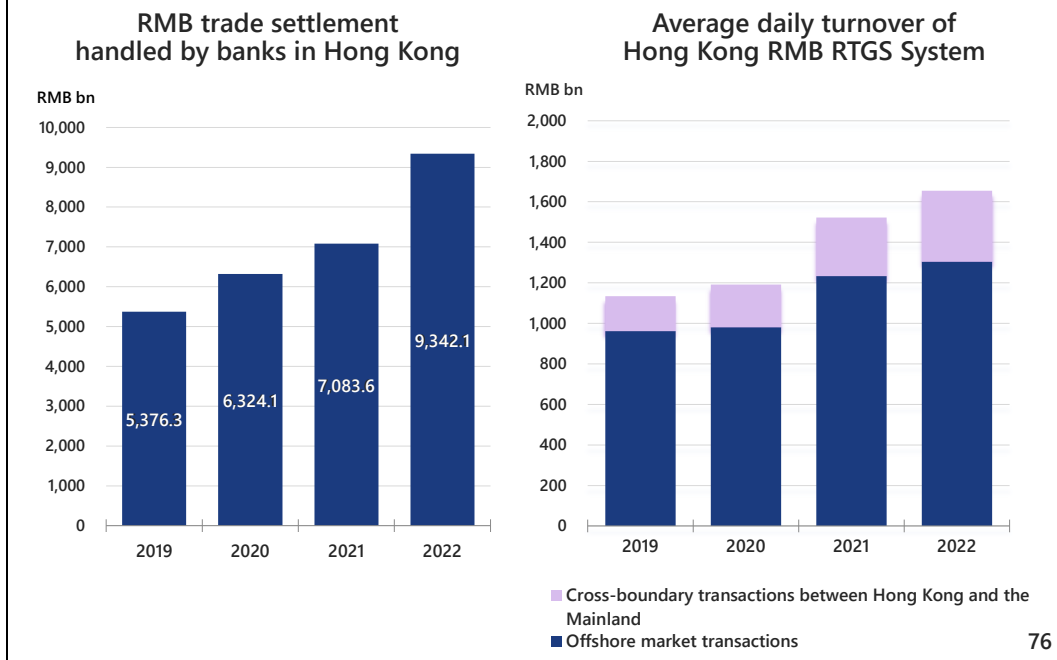
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- The UK Financial Conduct Authority (FCA) has discontinued all sterling, euro, Swiss franc and Japanese yen LIBOR settings, and the 1-week and 2-month US dollar LIBOR settings after 31 December 2021 as planned, and new contracts should use the respective alternative reference rates. Overnight, 1-month, 3-month, 6-month and 12-month US dollar LIBOR settings will continue to be published until end-June 2023.



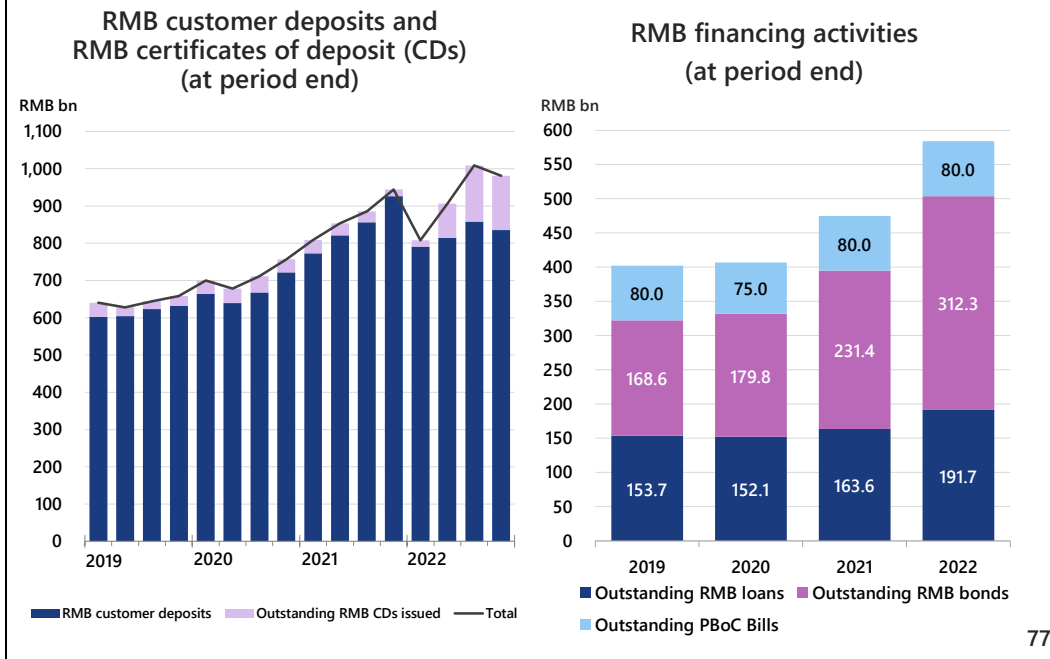
Hong Kong as an International Financial Centre

Hong Kong as offshore RMB business hub: RMB trade settlement and payment



- In 2022, renminbi (RMB) trade settlement handled by banks in Hong Kong totalled RMB9,342.1 billion.
- In 2022, the average daily turnover of Hong Kong RMB Real Time Gross Settlement (RTGS) system stood at RMB1,654.0 billion.

Hong Kong as offshore RMB business hub: RMB liquidity pool and financing activities



- As at end-2022, RMB customer deposits and outstanding RMB CDs amounted to RMB835.9 billion and RMB145.8 billion respectively, totalling RMB981.7 billion.
- As at end-2022, outstanding RMB loans amounted to RMB191.7 billion. Outstanding dim sum bonds amounted to RMB312.3 billion. Outstanding PBoC bills issued in Hong Kong amounted to RMB80.0 billion.



Mutual market connect schemes

- **Northbound Trading under Bond Connect** remained active. In 2022, average daily turnover amounted to RMB32.2 billion, up by 25% year on year. **Southbound Trading** has been smooth and well received by the market
- **Cross-boundary Wealth Management Connect** has been operating smoothly. To date, 24 eligible Hong Kong banks have launched services. Closely liaising with Mainland authorities on enhancements (e.g. expanding the scope of eligible products and improving sales arrangements)
- Preparation for **Swap Connect** under way, Northbound Trading to be launched when ready
- **Dual-counter market maker regime** to facilitate the trading of Hong Kong-listed stocks in RMB in good progress, target launch in 1H 2023
- Continue collaboration with Mainland authorities to deepen financial market connections, e.g. broadening Southbound Trading of Stock Connect and introduction of Mainland government bond futures in Hong Kong

Developing the asset and wealth management industry



- Hong Kong's private equity industry has remained robust, with over US\$195 billion of total capital under management as at end-September 2022*. The limited partnership fund regime continued to see momentum – 555 funds had been registered as at end-2022
- The family office tax concession bill was introduced into the Legislative Council on 14 December 2022 and will apply retrospectively from 1 April 2022 once passed into law

Promoting green finance (1)



- Total green and sustainable bonds and loans issued in Hong Kong quadrupled from a year ago to reach US\$57 billion in 2021*
- The Green and Sustainable Finance Cross-Agency Steering Group (CASG) co-chaired by the HKMA and the SFC has set up the Centre for Green and Sustainable Finance (GSF Centre) to strengthen the talent and data related work with a view to enhancing the capacity building on green finance of banks and financial institutions
 - In the first half of 2022, the GSF Centre launched three repositories on training information, internship opportunities and data source
 - In October 2022, the CASG launched the Sustainable Finance Internship Initiative to create more sustainable finance internship opportunities in Hong Kong for students
 - In December 2022, the CASG announced collaboration with CDP# to enhance climate data availability and sustainability reporting in Hong Kong. A Climate and Environmental Risk Questionnaire for non-listed companies/small and medium-sized enterprises was released as part of the collaboration. Besides, the Pilot Green and Sustainable Finance Capacity Building Support Scheme, administered by the GSF Centre, was launched to provide subsidies to market practitioners, students and graduates on training opportunities

* Source: HKMA staff estimates based on statistics from International Capital Market Association and LoanConnector

CDP is an international non-profit organisation that runs the global environmental disclosure system for companies

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- The CASG aims to coordinate the management of climate and environmental risks to the financial sector, accelerate the growth of green and sustainable finance in Hong Kong and support the Government's climate strategies. Other members include the Financial Services and the Treasury Bureau, the Environment and Ecology Bureau, the Hong Kong Exchanges and Clearing Limited, the Insurance Authority and the Mandatory Provident Fund Schemes Authority.

Promoting green finance (2)



- In January 2023, the HKMA assisted the Government to issue US\$5.75 billion worth of green bonds in US dollar, euro and renminbi under the Government Green Bond Programme. The triple-currency issuance was the largest ESG (environmental, social and governance) bond issuance in Asia. The renminbi tranches were doubled in size to a combined RMB10 billion due to strong investor demand, demonstrating Hong Kong's position as the leading offshore renminbi hub, and enriching offshore renminbi products selections, promoting renminbi internationalisation
- The HKMA continues to administer and promote the Green and Sustainable Finance Grant Scheme to attract more green and sustainable financing activities to Hong Kong. The scheme has been well received by the market; by end 2022 it has provided financial support for over 180 green and sustainable debt instruments issued in Hong Kong

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- To attract more green and sustainable financing activities to Hong Kong, the Government launched a three-year Green and Sustainable Finance Grant Scheme in May 2021 to cover part of the expenses on bond issuance and external review services. The scheme also encourages more financial and professional service providers and external reviewers to set up their regional hubs in Hong Kong.

Crypto-assets and stablecoins



- On 31 January 2023, the HKMA issued the consultation conclusion to the discussion paper on crypto-assets and stablecoins, summarising the feedback received in relation to the aforesaid paper and the HKMA's relevant response
- In the consultation conclusion, the HKMA confirms that it will bring certain activities relating to stablecoins into the regulatory perimeter, and sets out the expected regulatory scope and key regulatory requirements
- Respondents were supportive of regulating stablecoins with a risk-based and agile approach
- In terms of next steps, the HKMA will conduct further consultation with more details of the proposed regulatory parameters before submitting the Bill to the Legislative Council. The regulatory regime is expected to be implemented in 2023/24



Government Bond Programme

Retail bonds – outstanding as at end-November 2022

- Two iBonds, totalling HK\$35 billion
- Three Silver Bonds, totalling HK\$88.7 billion

Institutional bonds – outstanding as at end-November 2022

- 17 institutional bonds, totalling HK\$95.3 billion
- One Islamic bond, totalling US\$1 billion

Hong Kong Academy of Finance (AoF)



- **Financial Leaders Programme** – The inaugural cohort had 19 participants graduated in December 2022. The Programme has been a great success, with a lot of positive feedback received from the speakers and participants. The selection of the 2023 cohort is in progress and will be finalised in March. Programme activities will begin in April, running for nine months
- **Financial Leadership Development events** – A number of major events were held since November 2022. The AoF also conferred Fellowship on three distinguished financial leaders
- **Research and Knowledge Exchange Activities** – The Hong Kong Institute for Monetary and Financial Research (HKIMR) released an applied research report, nine working papers and completed three commissioned policy studies. In addition, the HKIMR organised a seminar and hosted its 12th Annual International Conference on the Chinese Economy

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Financial Leaders Programme

- The AoF launched the Financial Leaders Programme in November 2021 to nurture financial talents from a mix of backgrounds and expertise. The Programme is offered on a part-time basis and lasts for about nine months, from April to December 2022.
- The first year of the Programme has been a great success, with a lot of positive feedback received from the speakers and participants. The participants appreciated that the Programme offered them high-level and strategic perspectives, enriched their understanding of various financial topics and trends which enabled them to better prepare for upcoming opportunities and challenges, and expanded their professional networks.
- The inaugural cohort had 19 participants graduated in December 2022. The selection of the 2023 cohort is in progress. Application results will be finalised in March. Programme activities will begin in April, running for nine months.

Financial Leadership Development events

- The HKIMR-AoF Expert Speakers Series webinar featuring Dr John Greenwood, Founder and Chief Economist of International Monetary Monitor Ltd and former Chief Economist of Invesco on the topic “Inflation in the Aftermath of COVID-19: Was It Inevitable or Avoidable?” was held on 2 November 2022. Close to 200 economists joined online.
- The AoF co-organised with the HKMA the “Conversations with Global Investors” seminar on 3 November 2022, as part of the Global Financial Leaders’ Investment Summit. About 260 senior leaders in the financial, corporate and public sectors attended in person and the event was broadcast live.

- A panel discussion “Supporting Climate Actions – Collaboration, Innovation and Finance” at the Asian Insurance Forum was co-organised with the Insurance Authority on 5 December 2022.
- The AoF held a Fellowship Conferment cum Financial Leaders Programme (FLP) Graduation Ceremony on 14 December 2022, when the AoF conferred Fellowship on three distinguished leaders in the field of finance who have made outstanding contributions to Hong Kong. They are Dr Norman T.L. CHAN, GBS; Prof Edward K Y CHEN, GBS, JP; and Dr David Y.K. WONG, GBS, JP.

Research and Knowledge Exchange Activities

- A new applied research report titled “Climate Risk Measurement: The Existing Landscape and Developments in Hong Kong’s Financial Services Industry” was released by the HKIMR in December 2022.
- The HKIMR released nine working papers, completed three commissioned policy studies, and organised a seminar on monetary and financial research topics.
- The HKIMR 12th Annual International Conference on the Chinese Economy on “The Next Phase of China’s Economic Development” was held on 23 November 2022. Dr Wang Yiming, Vice Chairman and Chairman of the Academic Committee of the China Center for International Economic Exchanges gave a keynote speech. Chief China Economists from four financial institutions shared their views on recent developments, prospects and challenges of the Chinese economy. The conference attracted 75 on-site participants and over 1.18 million real time online views.



Investment Environment and Performance of the Exchange Fund

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Investment environment in 2022

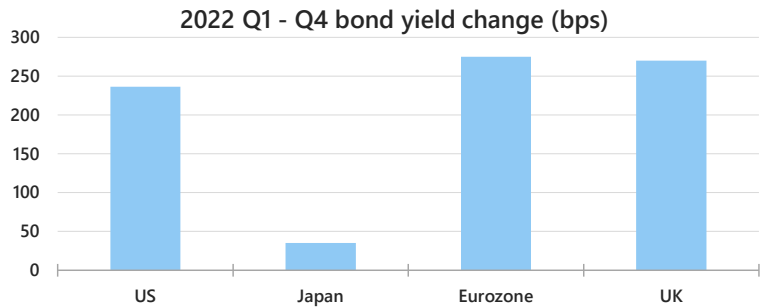
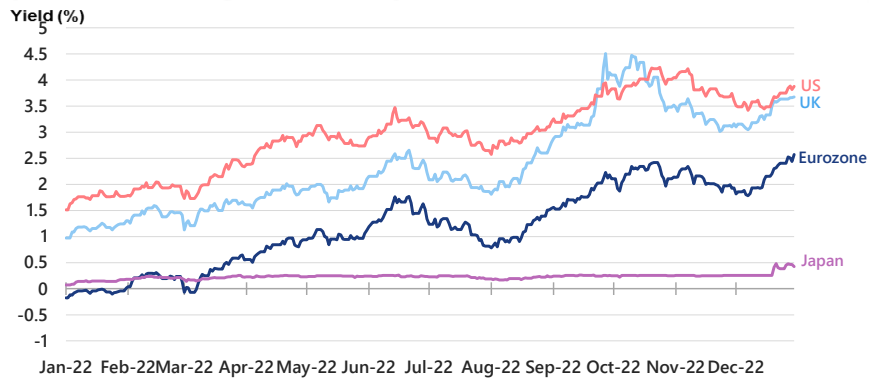
- Financial markets experienced an exceptionally volatile year, with both the bond and equity markets down notably by 16.2% and 19.8%* respectively
- **Interest rates:** Central banks around the world raised interest rates aggressively to combat inflation, triggering continued surges in major government bond yields. US 10-year treasury bond yield rose from 1.63% at the beginning of the year to above 4% in Q4, the highest level since 2008. Inversion of US treasury yield curve widened further, and the economic outlook is subject to uncertainties
- **Equity markets:** Amid soaring inflation, tightening monetary policy and slowing economic growth, major equity indices declined sharply. S&P 500 fell by 19.4% in 2022, despite a slight rebound in global equity markets nearing year end as investors believed inflation and interest rates might have peaked
- **Exchange rates:** US dollar strengthened considerably in 2022 on the back of consecutive Fed rate hikes. Other major currencies, including Euro, GBP, JPY and CNY, depreciated sharply against the US dollar

* Based on the Bloomberg Global Aggregate Total Return Index and the MSCI All Country World Index as measured in US dollar terms

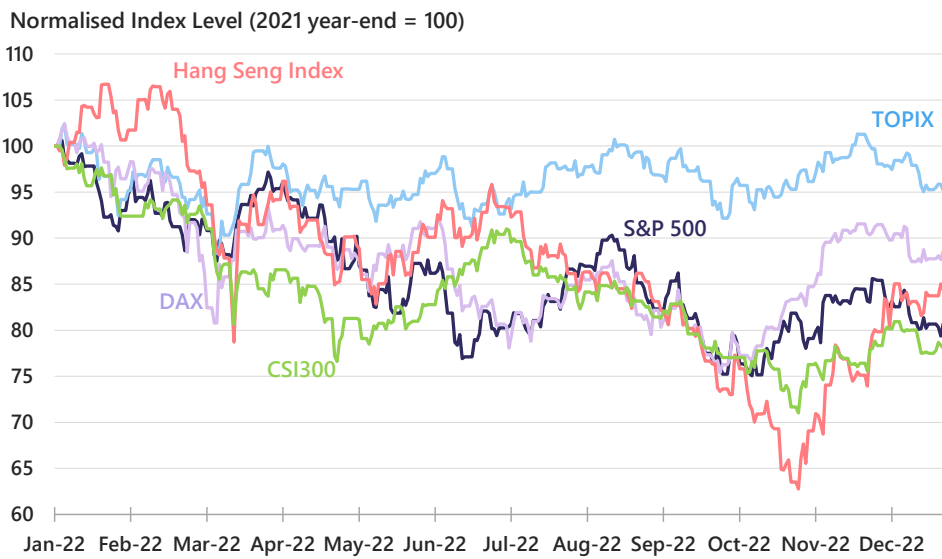
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Major sovereign bond yields soared



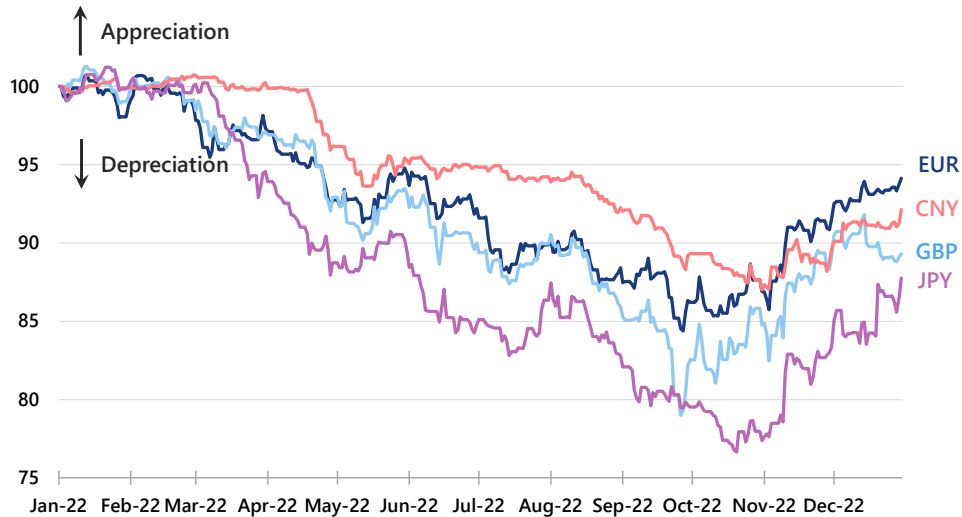
Major equity markets dipped sharply



Major currencies weakened significantly against USD



Normalised FX Level Against USD (2021 year-end=100)



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Investment income



(HK\$ billion)	2022			2021	2020
	Full year	2H	1H	Full year	Full year
	(unaudited)				
Hong Kong equities*	(19.5)	(11.0)	(8.5)	(21.0)	4.0
Other equities	(61.2)	12.0	(73.2)	68.8	69.9
Bonds	(53.3)	2.6	(55.9)	12.6	92.7
Foreign exchange#	(40.1)	(27.3)	(12.8)	16.8	9.6
Other investments@	(28.3)	(13.3)	(15.0)	114.7	59.6
Investment (loss)/income	(202.4)	(37.0)	(165.4)	191.9	235.8

* Excluding valuation changes of the Strategic Portfolio.

This is primarily the effect of translating foreign currency assets into Hong Kong dollar after deducting the portion for currency hedging.

@ Including valuation changes of private equity and real estate investments held under the Long-Term Growth Portfolio. This figure reflects the valuations at the end of September 2022. Valuation changes of these investments from October to December are not yet available.

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Income and expenditure



(HK\$ billion)	2022 (unaudited)			2021	2020
	Full year	2H	1H	Full year	Full year
Investment (loss)/income	(202.4)	(37.0)	(165.4)	191.9	235.8
Other income	0.2	0.1	0.1	0.2	0.2
Interest and other expenses	(18.7)	(14.6)	(4.1)	(6.1)	(14.6)
Net (loss)/income	(220.9)	(51.5)	(169.4)	186.0	221.4
Fee payment to Fiscal Reserves**	(35.0)	(14.6)	(20.4)	(93.0)	(69.8)
Fee payment to HKSAR Government funds and statutory bodies*	(22.1)	(11.5)	(10.6)	(16.8)	(11.5)

* The rate of fee payment is 5.6% for 2022, 4.7% for 2021 and 3.7% for 2020.

This does not include the 2022 fee payment to the Future Fund because such amount will only be disclosed when the composite rate for 2022 is available.

(The composite rate was 17.8% for 2021 and 12.3% for 2020. Fee payable to the Future Fund was HK\$58.6 billion for 2021 and HK\$37.2 billion for 2020.)

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Exchange Fund Abridged Balance Sheet



(HK\$ billion)	At 31 Dec 2022 (unaudited)	At 31 Dec 2021	Change
ASSETS			
Deposits	367.2	300.8	66.4
Debt securities	2,774.9	3,290.0	(515.1)
Hong Kong equities*	150.4	183.2	(32.8)
Other equities	470.5	561.8	(91.3)
Other assets#	248.1	234.4	13.7
Total assets	4,011.1	4,570.2	(559.1)
LIABILITIES AND EQUITY			
Certificates of Indebtedness	606.0	592.4	13.6
Government-issued currency notes and coins in circulation	13.1	13.1	-
Balance of the banking system	96.2	377.5	(281.3)
Exchange Fund Bills and Notes issued	1,200.3	1,148.6	51.7
Placements by banks and other financial institutions	99.5	-	99.5
Placements by Fiscal Reserves®	765.2	973.3	(208.1)
Placements by HKSAR Government funds and statutory bodies	449.0	394.3	54.7
Placements by subsidiaries	30.6	26.2	4.4
Other liabilities	194.8	238.0	(43.2)
Total liabilities	3,454.7	3,763.4	(308.7)
Accumulated surplus	555.5	805.9	(250.4)
Revaluation reserve	0.9	0.9	-
Total equity	556.4	806.8	(250.4)
Total liabilities and equity	4,011.1	4,570.2	(559.1)

* Including shares of the Hong Kong Exchanges and Clearing Limited in the Strategic Portfolio.

Including fund injection to Exchange Fund's investment holding subsidiaries at a carrying amount of HK\$191.7 billion at 31 December 2022 (HK\$190.1 billion at 31 December 2021).

® Including placements by the Future Fund of HK\$255.2 billion at 31 December 2022 (HK\$217.7 billion at 31 December 2021).

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Historical investment income

(HK\$ billion)

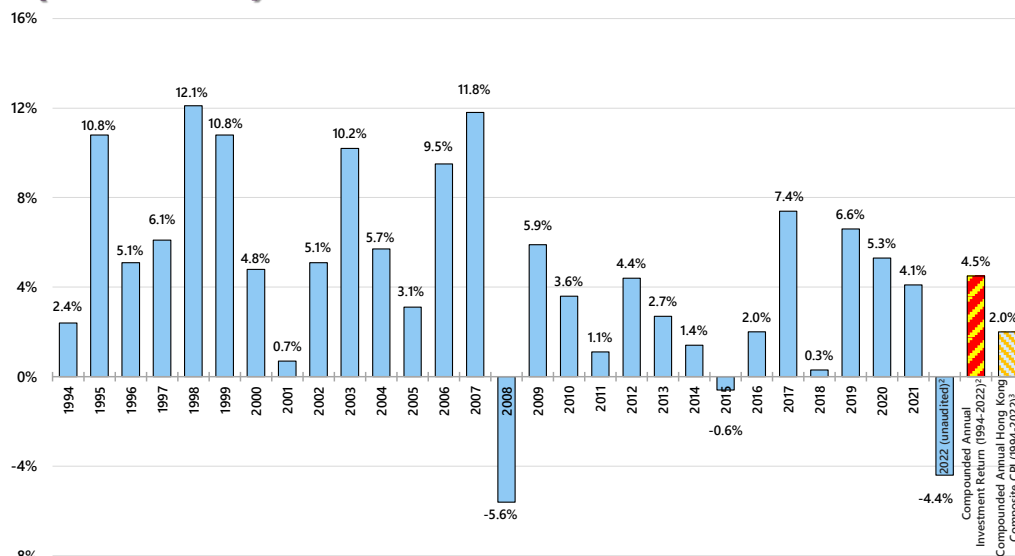
Year	Full Year	Q4	Q3	Q2	Q1
2003	89.7	33.5	8.4	41.1	6.7
2004	56.7	33.0	14.1	(7.2)	16.8
2005	37.8	7.3	19.0	13.6	(2.1)
2006	103.8	36.0	37.1	12.5	18.2
2007*	142.2	33.4	61.8	26.3	20.7
2008*	(75.0)	8.3	(48.3)	(20.4)	(14.6)
2009**	107.7	10.6	71.9	58.7	(33.5)
2010**	79.4	5.9	74.5	(12.1)	11.1
2011**	27.1	22.1	(41.4)	21.6	24.8
2012**	111.6	30.3	42.4	(5.6)	44.5
2013**	81.2	30.7	54.7	(23.3)	19.1
2014**	44.7	6.1	(17.8)	43.3	13.1
2015**	(15.8)	21.0	(63.8)	18.7	8.3
2016**	68.1	(23.3)	47.1	18.9	25.4
2017**	264.0	66.0	61.8	71.3	64.9
2018**	10.9	(33.6)	9.5	0.0	35.0
2019**	262.2	60.3	23.5	45.0	133.4
2020**	235.8	145.0	81.2	121.6	(112.0)
2021**	191.9	48.2	4.0	88.4	51.3
2022** (unaudited)	(202.4)	76.4	(113.4)	(116.6)	(48.8)

* Excluding valuation changes of the Strategic Portfolio.

** Including valuation changes of private equity and real estate investments held under the LTGP.

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Investment return of the Exchange Fund (1994-2022)¹



¹ Investment return calculation excludes the holdings in the Strategic Portfolio.

² The return includes the performance of LTGP up to the end of September 2022. The audited full year return will be disclosed in the 2022 annual report.

³ Composite CPI is calculated based on the 2019/2020-based series.

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The Hong Kong Mortgage Corporation Limited

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Mortgage Insurance Programme (MIP)

- In 2022, around 42,900 applications were approved, of which about 7,800 were under the new coverage after the MIP revisions in February 2022. Around 90% of approved applications were from first-time homebuyers
- Principal moratorium or extension of repayment schedules is available to borrowers to help reduce their repayment burden

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SME Financing Guarantee Scheme (SFGS)



Special 100% Loan Guarantee

- As of 31 December 2022, over 58,500 applications were approved, amounting to about HK\$115.2 billion. The average loan amount per application was HK\$1.97 million, and the average approved loan amount per borrower was HK\$3.30 million. Over 40,900 applications (around 70%) have chosen the principal moratorium option

80% and 90% Guarantee Products

- As of 31 December 2022, around 31,400 applications were approved, amounting to about HK\$117.7 billion. Over 2,400 applications have chosen the principal moratorium option

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100% Personal Loan Guarantee Scheme (PLGS)



- As of 31 December 2022, around 60,700 applications were approved, amounting to about HK\$4.1 billion. Average loan size per borrower was about HK\$77,000. Over 51,000 applications (around 84%) have chosen the principal moratorium option

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Reverse Mortgage Programme



As of 31 December 2022, 6,173 applications had been received:

- Average age of borrowers: 68 years old
- Average monthly payout: HK\$17,700
- Payment terms: 10-year (22.2%); 15-year (14.4%); 20-year (12.3%); life (51.1%)
- Average property value: HK\$5.9 million
- Average property age: 31 years

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HKMC Annuity Plan



Detailed business results:

	Since launch	2021	2022
No. of policies issued	17,529	4,059	3,254
Total premium amount (HK\$ billion)	12.5	3.0	2.5
Average premium amount (HK\$)	712,000	740,000	777,000

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