

2. Global setting and outlook

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

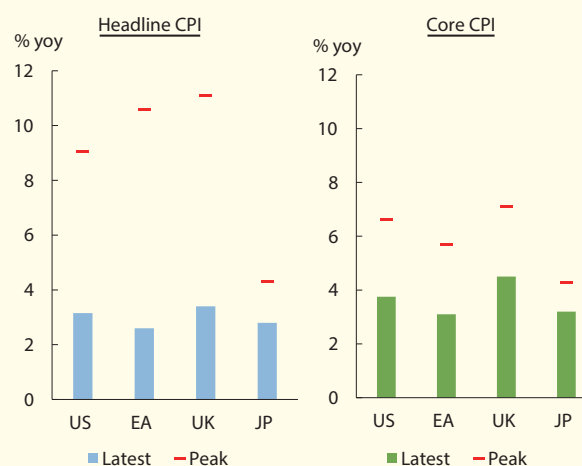
In emerging Asia, foreign exchange (FX) depreciation and fund outflow pressures subsided in late 2023 along with the rising rate cut expectations in the US. Nevertheless, headwinds such as weak external demand and uncertainty over the interest rate path will continue to weigh on regional economies.

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

2.1 External environment

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

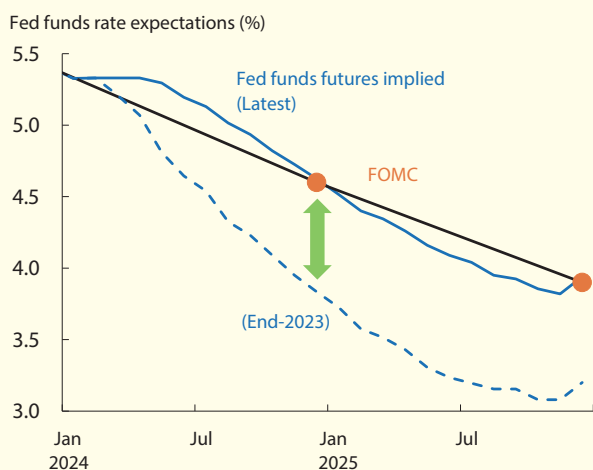
Chart 2.1
Headline and core consumer price index (CPI)
inflation in selected major AEs



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

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

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



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

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

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

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

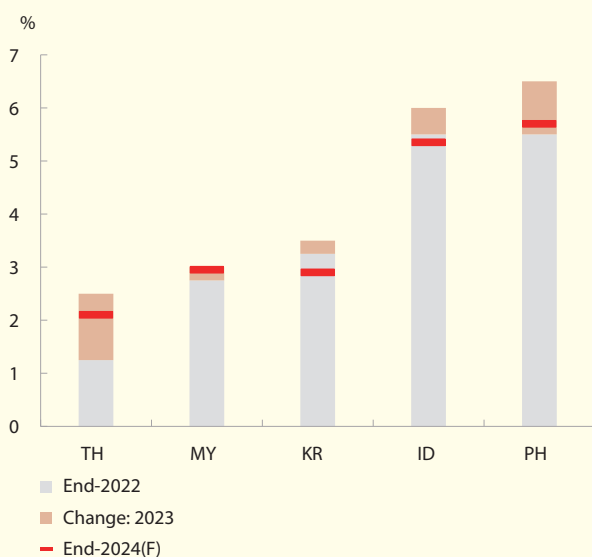
Emerging Asian economies saw continued economic growth in the second half of 2023 driven by robust domestic demand. The recent recovery of electronics exports from key semiconductor exporters in the region (i.e. South

Global setting and outlook

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

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

Chart 2.3
Emerging Asia: Policy rates

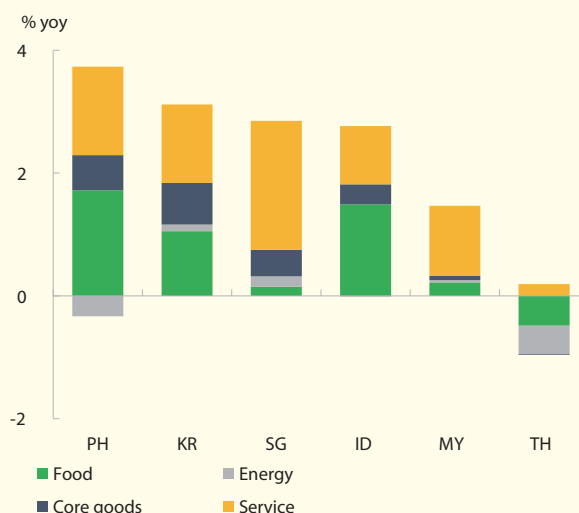


Note: Latest policy rate forecasts are taken in early Mar 2024.
Source: Bank for International Settlements, Bloomberg and HKMA staff calculations.

Inflation eased gradually across most of the region, mainly due to lower energy prices. However, regional AEs continued to face the challenge of sticky service inflation amid a tight labour market (i.e. South Korea and Singapore), while some regional economies saw elevated food inflation (e.g. the Philippines). Given that the ongoing El Niño phenomenon is expected to last at least until the second quarter, the potential disruption to agricultural staple food

production (e.g. rice) will continue to cloud the regional inflation outlook, especially for those regional emerging market economies (EMEs) where food represents relatively higher weights in their CPI baskets (Chart 2.4).

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



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

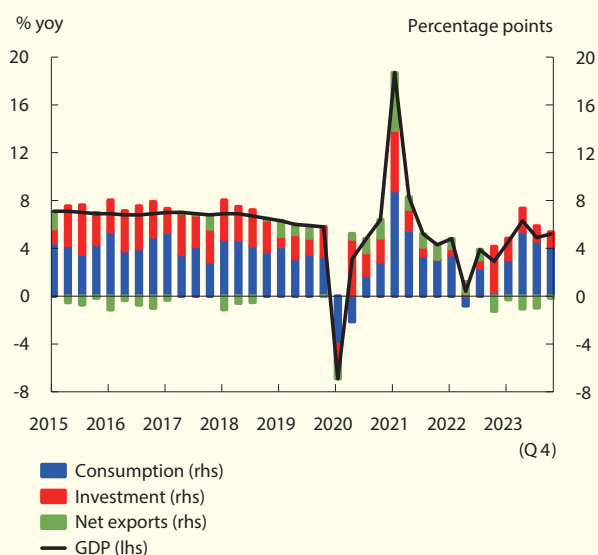
Looking ahead, the regional interest rate outlook remains uncertain as (1) inflation could be persistent due to a tight labour market and the El Niño climate phenomenon, and (2) concerns about FX depreciation and fund outflows will linger along with the uncertain US interest rate and global economic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

2.2 Mainland China

Economic performance and policy responses

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

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



Sources: CEIC, NBS and HKMA staff estimates.

In the near term, Mainland's economic recovery is expected to continue in 2024 on the back of supportive measures, especially strengthened fiscal support from the Central Government and better coordination of monetary and fiscal

policies.¹ Nevertheless, the pace of recovery may be uneven. Domestically, the lacklustre real estate sector, lingering concerns about distressed property developers and the risks associated with local government financing vehicle debts could continue to exert pressure on domestic demand. Externally, exports are still facing headwinds from uncertain global growth outlook and heightened geopolitical tensions, although "New Three" products² may still record fast export growth and provide some support to overall trade performance. The official growth target for 2024 is set at around 5% for the second consecutive year, and the latest consensus forecasts project the Mainland economy to expand by 4.7% in 2024.

The headline CPI inflation was slightly below zero for most of the second half of 2023, mainly reflecting the decline in food (especially pork) prices from a high base and, to a lesser extent, a moderation in energy prices. However, the core inflation, which excludes food and energy prices, remained steadily positive³. Meanwhile, the headline unemployment rate was largely stable at around 5%, with those for 16–24 and 25–29 age groups (excluding students) standing at 14.9% and 6.1% respectively in December 2023⁴.

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

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

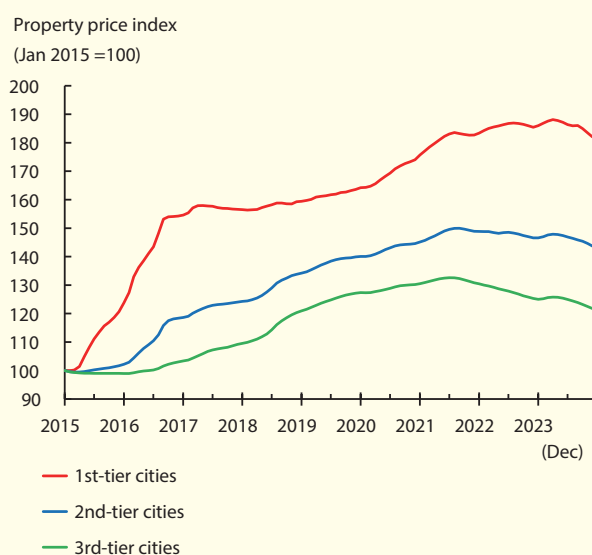
³ Pan Gongsheng, Governor of the PBoC, recently mentioned that since food prices will not fall persistently, the headline CPI inflation is expected to rise moderately going forward.

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

Asset and credit markets

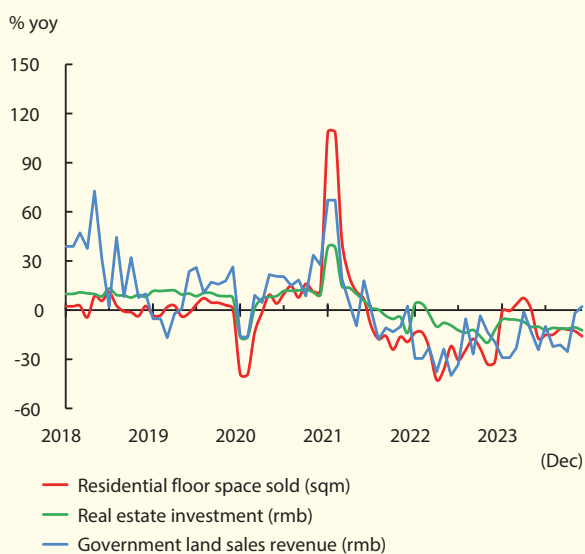
The Mainland property market remained sluggish in the second half of 2023, with housing prices seeing continued declines across all tiers of cities (Chart 2.6). Partly reflecting the fragile housing market sentiment, the contractions in residential floor space sold and real estate investment deepened,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

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



Sources: CEIC and HKMA staff estimates.

Chart 2.7
Mainland China: Property market activities



Sources: CEIC and HKMA staff estimates.

In light of the new demand and supply conditions in the property market, the authorities reiterated their supportive policy stance to stabilise the property market⁵. This included lowering the key mortgage rate⁶ and urging financial institutions to meet the reasonable financing needs of property developers, regardless of their ownership types. Some concrete measures were rolled out accordingly, such as the “Three No-lowers” requirements for banks’ real estate loans to developers and homebuyers,⁷ the permission to provide uncollateralised bank loans to developers, and the approval to issue operating property loans to qualified developers. In addition, to promote the establishment of a new development model for the property sector in the long run, the authorities proposed the “Three Major Projects”⁸. The central bank’s Pledged Supplementary Lending (PSL) facility, a tool established in 2014 for shantytown renovations, was relaunched to help finance the projects, with the outstanding amount of PSL reaching a three-year high of RMB3.4 trillion as of February 2024. At the city level, local governments continued to introduce city-specific policies to support basic and upgrading housing demand, such as reducing the districts where purchase restrictions apply and lowering the down payment ratio for first and second homes. In addition, some local governments have established a property financing coordination mechanism to meet the reasonable financing needs at the project level. This mechanism

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

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

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

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

includes the creation of a whitelist, which recommends eligible real estate projects for bank financing⁹.

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

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

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

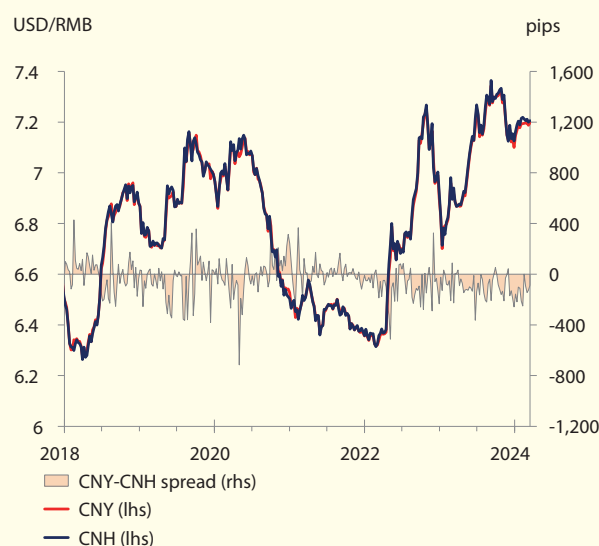
Source: CEIC.

Exchange rate and fund flow indicators

While the onshore renminbi (CNY) depreciated against the US dollar in general for the first ten months of 2023, it strengthened in mid-November 2023 and stabilised within the range of 7.0–7.2 thereafter. The stabilisation of the CNY was supported by the US dollar weakness amid the expectation of policy rate cuts by the Fed in 2024, and the Mainland’s gradual economic recovery and continued trade surplus. During the same period, the offshore renminbi (CNH) followed a similar pattern and traded slightly lower than its onshore counterpart (Chart 2.8). As for the indication of fund flows, the Northbound Stock Connect saw outflows in

August 2023 but has since stabilised. For 2023 as a whole, there was a modest inflow into Mainland China under the Northbound Stock Connect (Table 2.B). More recently, the Northbound Stock Connect recorded the first monthly net inflow in February 2024 following a six-month net outflow. The onshore Mainland bond market also recorded sizeable inflows in the second half of 2023 under different schemes, with increased holdings by foreign investors (Table 2.B).

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



Sources: Bloomberg and HKMA staff estimates.

Table 2.B
Mainland China: Foreign fund flow indicators

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

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

Sources: Wind, CFETS and HKMA staff estimates.

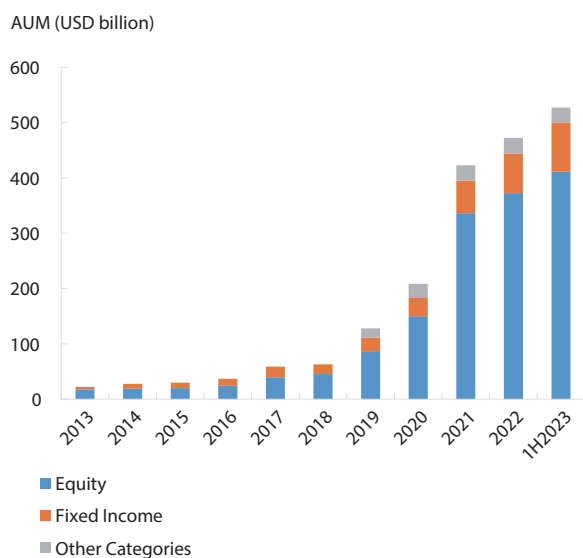
⁹ A total of 276 cities in 31 provinces had reportedly set up such mechanism as of late February, under which 162 projects in 57 cities have received bank financing totalling RMB29.4 billion by 20 February.

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

Introduction¹⁰

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

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



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

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

Data and methodology

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

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

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

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

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

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

where $FundFlow(\%)_{i,t}$ is net fund flows of fund i at time t , in terms of share of the fund's total net assets (TNA) in the last period; ESG_i is a binary variable equals to one if fund i is classified as an ESG ETF, and equals zero otherwise; $Shocks_*$ represents three different types of shocks, namely market stress shock ($MktVol_{i,j,t}$), economic policy uncertainty shock ($stdEPU_{i,k,t}$), and global monetary condition shock (MPS_t)¹³; and $X_{i,t}$ represents a series of time-varying fund-specific controls, including $\ln(TNA)$, NAV , $Return$, and $\ln(OutShare)$. The model controls for fund fixed effects (γ_i) with the category dummies allowing for unobserved fixed fund attributes, and γ_* that represents three different types of fixed effects¹⁴. The standard errors $\epsilon_{i,t}$ are clustered at the fund level. Our regression has the following three specifications:

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

- Specification with *economic policy uncertainty* ($stdEPU_{i,k,t}$) compares the response of ESG and non-ESG fund flows in response to *economic shocks* to the fund-investing economy.
- Specification with *global monetary condition* (MPS_t) estimates the potential differences in the response of ESG and non-ESG fund flows to *monetary shocks* to all markets and economies.

Empirical results

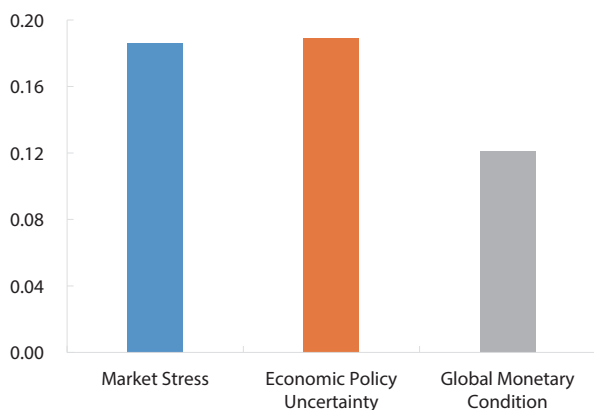
The coefficients (β_2) on $MktVol$ (-0.021), $stdEPU$ (-0.067), and MPS_{SPF} (-0.134) are all negative and statistically significant, suggesting that an increase in any type of macro-financial shocks could induce fund outflows. However, in the face of macro-financial shocks, the ESG attribute could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

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

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

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

Fund flows response to one standard deviation shock (% total net assets)



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

Source: HKMA staff estimates.

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

Conclusion and implications

This study shows that ESG funds mitigate fund outflows compared to non-ESG funds under all three types of macro-financial shocks. By visualising the interconnectivity of fund flows via ETFs and ESG ETFs, we find that ESG ETFs across APAC economies¹⁵ have a density that is significantly lower than the network of developed markets (Chart B1.3A and Chart B1.3B). Based on our findings, a higher density of ESG ETFs represents a more resilient network against macro-financial shocks, which means that the APAC region has a lower ESG-derived resilience against macro-financial shocks. This calls for more policy efforts in promoting ESG development in the region.

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

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

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

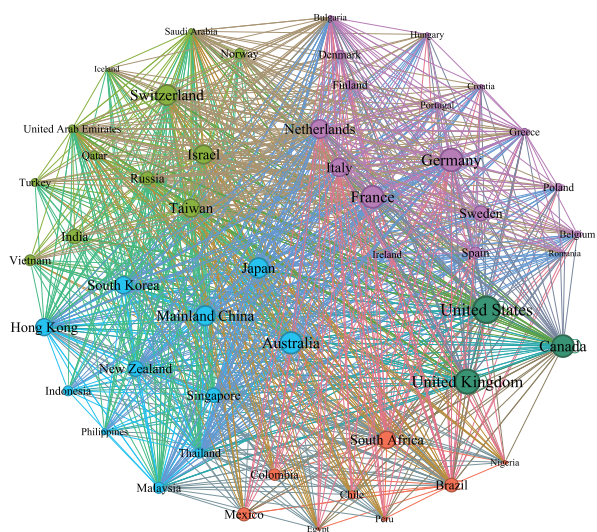
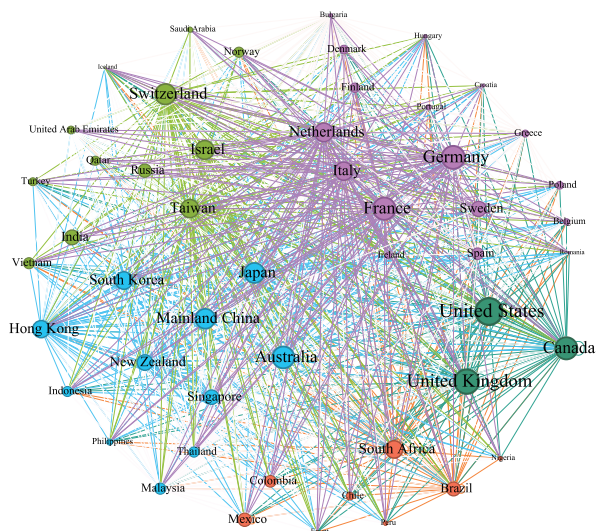


Chart B1.3B
Fund Flow Network for ESG equity ETFs
in the first half of 2023



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

Sources: Bloomberg and HKMA staff estimates.

References

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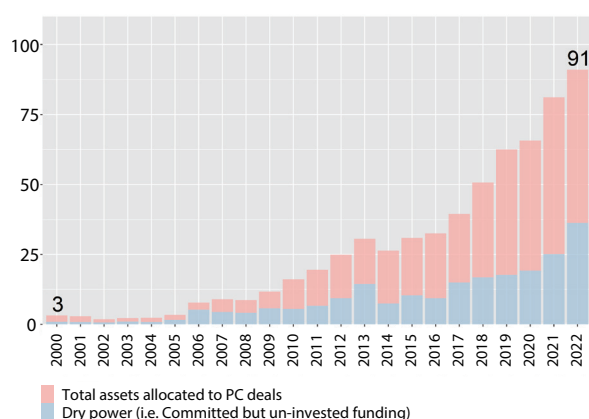
Pastor, L. and Vorsatz, M. B., (2020): “Mutual fund performance and flows during the COVID-19 crisis”, *The Review of Asset Pricing Studies*, 10 (4), 791–833.

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

Introduction¹⁶

The PC¹⁷ sector in Asia-Pacific¹⁸ (APAC) has grown rapidly. Its total assets under management are estimated to have grown rapidly by 30 times in the past two decades to US\$91 billion in 2022 (Chart B2.1). The advent of PC provides an alternative financing channel for some businesses that may find it difficult to obtain sufficient funding from traditional financial sectors such as banks.

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



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

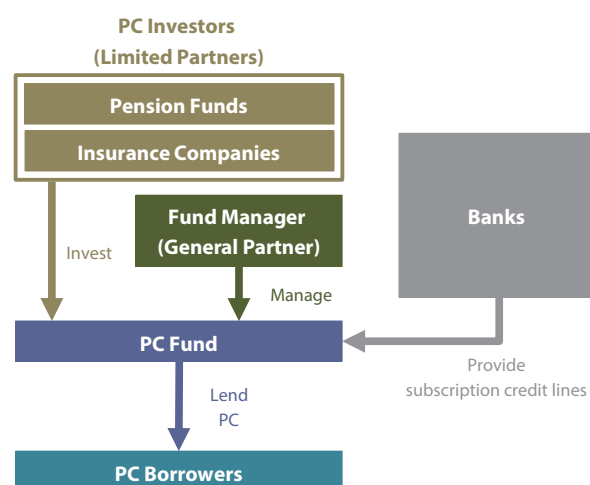
Sources: Prequin Ltd and HKMA staff estimates.

However, these borrowers usually have higher credit risks, e.g. start-ups. Also, as most of the PC are floating-rate loans, the current high interest rate environment might put pressure on the repayment ability of these borrowers. The default risks of PC and the potential spillover risks to the broader financial system may cause financial stability concerns. Against this background, this box examines the systemic risks of the PC sector in APAC.

Assessing systemic risks for the PC sector in APAC

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

Chart B2.2
PC market structure



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

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

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

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

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

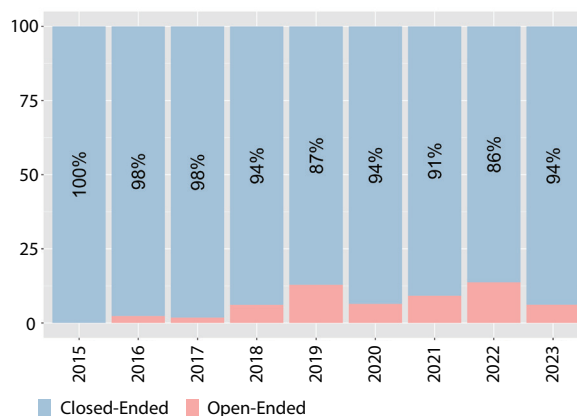
1) Fund size

Despite the rapid growth of the APAC PC funds, they remained relatively small. Their total size is compared to only 0.2% of the NBFIs or 0.1% of bank assets in the region at the end of 2022.²⁰ In terms of asset size, the APAC PC funds may not cause imminent systemic risks, although its rapid growth may be a concern.

2) Liquidity mismatch risks

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

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



Notes:

(i) The stacked bar chart depicts the proportion of closed-ended (blue) and open-ended (pink) funds among APAC PC funds over vintages; and

(ii) The proportion is calculated by the number of funds launched.

Sources: Preqin Ltd and HKMA staff estimates.

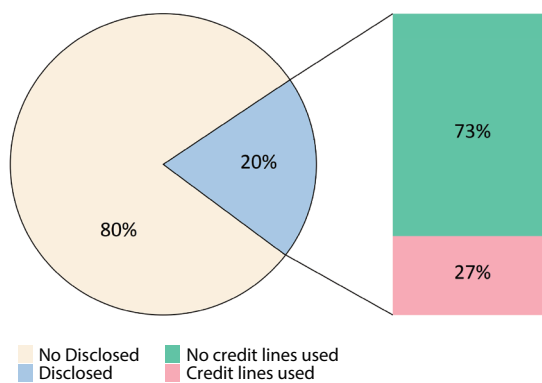
3) Leverage risks

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

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

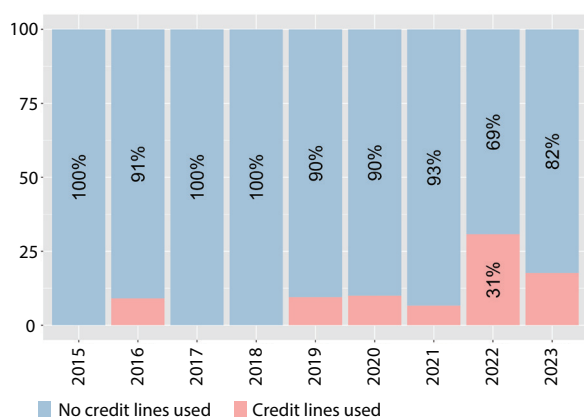
²¹ The proportion is measured by the number of PC funds.

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



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

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

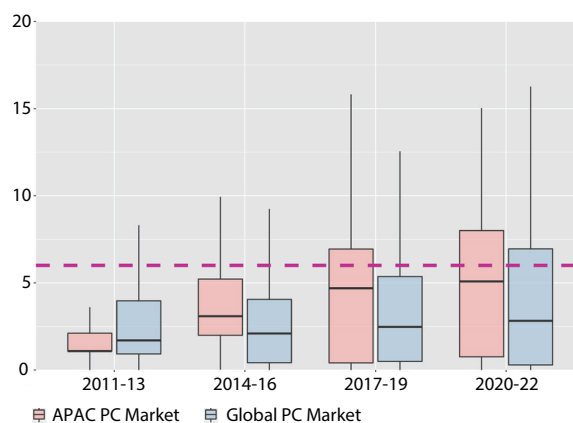


Notes:
 (i) The stacked bar chart depicts the proportion of credit line non-users (blue) and users (pink) among APAC PC funds over vintages; and
 (ii) The proportion is calculated by the number of funds launched.
 Sources: Preqin Ltd and HKMA staff estimates.

Another layer of leverage in a PC deal could be at the PC borrower level. There is a rising share of borrowers with a debt-to-EBITDA²² ratio higher than six (the dotted line, Chart B2.6), which is a loose cap set on bank lending in some economies for loan underwriting. This indicates that PC funds have become more likely to lend to

companies which may not be able to borrow from banks due to their high leverage. Such loosening underwriting standards could add to credit risk for PC funds, especially those in APAC.

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



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

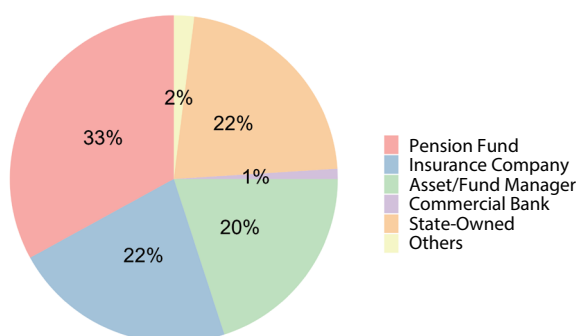
4) Interconnectedness

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

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

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

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



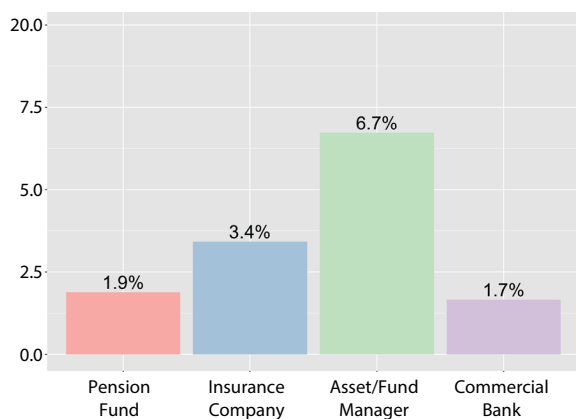
Notes:

- (i) The pie chart depicts the proportion of APAC PC investors by investor type in 2023; and
- (ii) The proportion is calculated by the amount of PC investments.

Sources: Preqin Ltd and HKMA staff estimates.

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

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



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

Sources: Preqin Ltd and HKMA staff estimates.

Conclusion and implications

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

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

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

References

FSB. (2023). *Global Monitoring Report on Non-Bank Financial Intermediation 2023*.

IOSCO. (2023). *Thematic Analysis: Emerging Risks in Private Finance — Final Report*.