Perceptions of risk and policy outlook drive markets

Financial markets extended previous gains during the review period.[1] As inflation readings gradually fell and the pace of policy tightening slowed early in the period, financial conditions eased and risky asset valuations generally rose on the back of perceptions of declining risks. Expectations of significant rate cuts in the near term appeared to firm up, despite cautious central bank communication about the policy outlook. The US dollar depreciated further, lending additional support to assets in emerging market economies (EMEs). Towards the end of the period, however, market developments proved sensitive to news that challenged investors' sanguine attitude.

Investors' expectations about future policy rate paths stood in contrast to central bank communications. While several major central banks slowed the pace of monetary tightening, they remained cautious about the interest rate path going forward, particularly in view of the persistent strength of labour markets. Nevertheless, interest rate futures continued to relay market participants' expectation that rate hikes will end this year, followed by steep rate cuts stretching well into 2024.

Conditions in government bond markets remained sensitive to perceptions of growth, inflation and the attendant policy response. In Japan, tensions remained in fixed income markets, as investors reassessed the yield curve control (YCC) policy. Broad-based and recurrent open market operations by the central bank smoothed market functioning and contained upward pressure on bond yields.

Risky assets registered gains and the US dollar depreciated through most of the review period, before news tempered markets' optimism about the policy outlook. Stock markets experienced bouts of selling pressure but registered positive returns, despite a still subdued earnings outlook. The concurrent fall in forward-looking gauges of market volatility suggested that valuations were boosted by benign risk perceptions. In a similar vein, credit spreads narrowed further, on the heels of declines in perceived default risks, and corporate bond issuance showed signs of recovery in January. US data releases in February steered investors towards anticipating stronger policy headwinds. This led to a slight dollar appreciation and some reversal of risky asset gains, halting their divergence from subdued bank lending in major advanced economies (AEs).

Financial conditions eased moderately in EMEs, largely mirroring those in AEs. Bond yields fell, amid an upbeat backdrop of resilient growth and falling inflation. Equity markets saw wider fluctuations, swayed by the gyrations of the US dollar. The abrupt end to the zero-Covid policy in China reinvigorated its equity market and contributed to the strong performance of risky assets in economies with close links to China. Yet it failed to turn around the lethargic portfolio flows to the country, while such flows did stabilise or even rebounded for most other EMEs.

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[1] The review period covers 25 November 2022 to 17 February 2023.

Financial conditions eased as policy tightening slowed

Fixed income markets in major AEs remained focused on monetary policy paths during the review period. Signs of abating inflationary pressures kept a lid on bond yields, while expectations of rate cuts in late 2023 firmed up in derivatives markets. By contrast, central banks remained cautious in their guidance about the policy outlook, against the backdrop of persistently tight labour markets. This sober stance appeared vindicated in early February, when US data releases led to some non-trivial increases in government bond yields.

Financial conditions eased further early in the review period and then broadly stabilised. As of early December, a widely used indicator of global financial conditions had retraced half of the tightening observed during 2022. It hovered thereafter around levels close to its long-term average (Graph 1.A). All this took place on the back of decelerating inflation in the United States and other AEs, in part driven by muted fluctuations in commodity prices. In addition, perceptions of upside inflationary risks among market participants appeared to moderate (Graph 1.B).
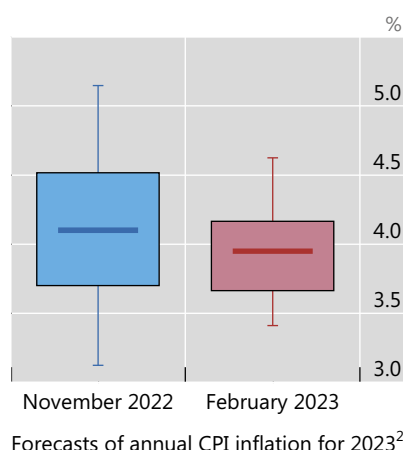
Financial conditions eased but remained sensitive to inflation risks   Graph 1
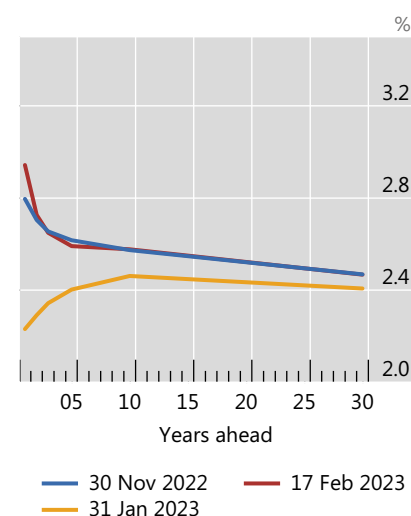
A. Global financial conditions eased...

B. ...while US inflation uncertainty decreased

C. US break-even inflation jumped with signs of economic resilience

The shaded area indicates 25 November 2022–17 February 2023 (period under review).

[1] See technical annex for details.   [2] Box plots show medians, interquartile ranges and fifth–95th percentiles.

Sources: Bloomberg; Consensus Economics; BIS.

In early February, US data releases brought renewed evidence of strong labour market conditions amid solid growth,[2] inducing market participants to reassess their inflation expectations. Near-term break-even inflation rates in the United States at mid-February were more than 60 basis points higher than at end-January (Graph 1.C). And the break-even term structure swiftly inverted, returning to the configuration prevalent early in the review period. In the euro area, inflation break-evens reacted less forcefully to the news, while a protracted disinflation process ploughed ahead. Against this backdrop, investors revised upwards their terminal policy rate projections for the United States, and to a lesser extent for the euro area, while pushing out the timing of expected rate cuts (Graph 2.A). Nevertheless, interest rate futures continued to signal a firm expectation that rate hikes would stop before the end of this year and that policy rates would decline materially in 2024.

In sharp contrast, central banks remained much more cautious in their communications throughout the review period. Admittedly, most central banks did slow the pace of tightening, including the Federal Reserve and the ECB. Moreover, some EME central banks, which had started tightening much earlier, paused. But in general, policymakers gave no indication that easing was on the horizon, reflecting concerns about still elevated inflation – with core inflation substantially above target – and upside risks that persisted on the back of generally tight labour markets.

Market participants' muted inflation fears kept a lid on AE bond yields for most of the review period, in contrast to the previous quarter, when turmoil in a major sovereign bond market spilled over to other segments (see Box A). Long-term yields in Germany briefly surpassed previous 2022 highs in late December (Graph 2.B), as
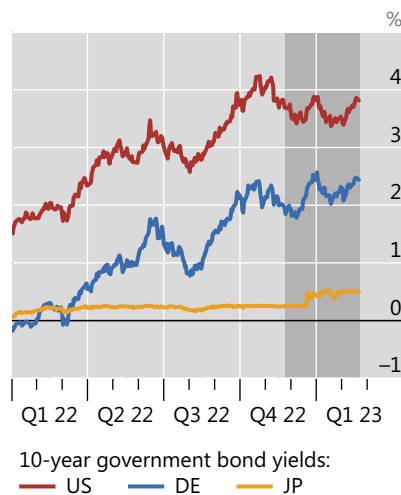
In addition to inflation, policy expectations drove sovereign bond markets
Graph 2

A. Investors anticipated steep rate cuts in 2024

US:
— 30 Nov 2022
— 31 Jan 2023
— 17 Feb 2023

EA:
— 30 Nov 2022
— 31 Jan 2023
— 17 Feb 2023
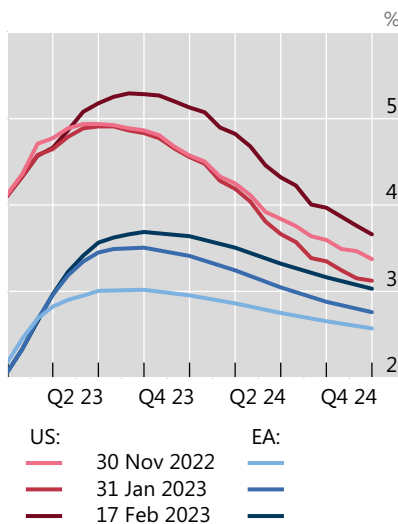
B. Govt bond yields reflected short-lived bouts of selling pressures

10-year government bond yields:
— US — DE — JP

C. Expected revisions to YCC swayed fixed income markets in Japan

— 10-year government bond yield
-- 10-year swap rate
▧ Implied interest rate volatility[1]
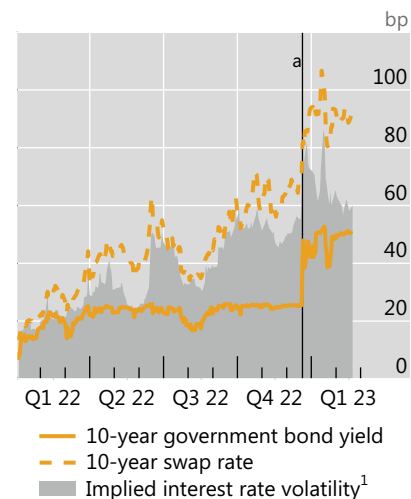
The shaded area indicates 25 November 2022–17 February 2023 (period under review).

[a] Bank of Japan changes yield curve control.

[1] Based on three-month into 10-year swaptions.

Sources: Bloomberg; Refinitiv Eikon; BIS.

[2] These included strong positive non-farm payroll and retail sales surprises, as well as mild upward revisions to past CPI data.

the ECB reaffirmed its guidance of policy tightening. Following the US data surprises in February, nominal long-term yields began to rise again on the back of widening break-evens and moderate increases in "real" (that is, inflation-adjusted) yields within positive territory, with the exception of Japan, where they stayed negative.

The market for Japanese government bonds (JGBs) experienced some tensions as investors continued to reassess the YCC policy. Long-term yields shifted upwards in December when the Bank of Japan unexpectedly widened the floating band of the 10-year yield (Graph 2.C). Further upward pressures on long-term yields were contained by recurring and broad-based open market operations of the central bank. At the same time, the spread of the 10-year swap rate over the cash yield persisted, as investors appeared to wager on further policy adjustments. And, even after receding from their peaks, forward-looking gauges of volatility stayed elevated, pointing at investors' uncertainty over the interest rate path.

Credit default swap (CDS) spreads indicated that market participants closely followed political negotiations around the debt limit in the United States. While remaining well below stress levels, CDS spreads for the US government briefly approached 35 basis points in January (Graph 3.A), as the US Treasury once again reached its borrowing limit and uncertainties over the debt ceiling negotiations increased. This contrasted with CDS spreads for Germany and Japan, which tightened during the review period.

Sovereign spreads in the euro area narrowed substantially in the new year, as the worst case macroeconomic scenarios feared in 2022 failed to materialise. A significant decline in projected fiscal deficits, in part resulting from less damaging prospects for energy prices, improved the metrics of euro area sovereigns' debt sustainability, thus lowering their funding costs. Most notably, spreads of Italian debt over bunds contracted by about 30 basis points over the last six weeks of the review period (Graph 3.B). Those of other sovereigns resumed the narrowing path briefly interrupted in December.

Sovereign spreads mostly narrowed and the US dollar depreciated   Graph 3

A. US CDS spreads diverged from DE and JP ones on debt limit concerns

B. Euro area sovereign spreads narrowed in the new year
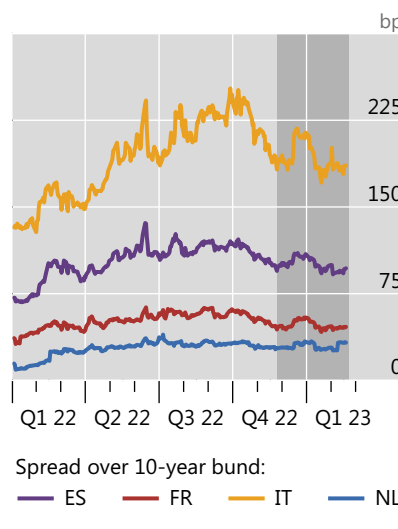
C. Dollar parities co-moved with currency volatility[1]
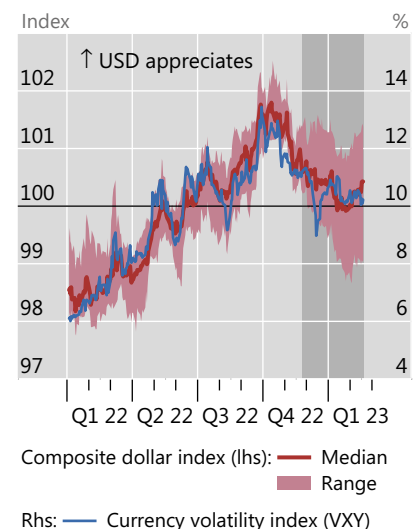
US   DE   JP

2012–current maximum

Spread over 10-year bund:
ES   FR   IT   NL

Composite dollar index (lhs):   Median
Range
Rhs: Currency volatility index (VXY)

The shaded areas indicate 25 November 2022–17 February 2023 (period under review).

[1] See technical annex for details.

Sources: Bloomberg; Datastream; BIS.

Market turbulence and soaring margins: lessons from two recent episodes

Benjamin H Cohen and Kevin Tracol[1]

An increasing share of derivatives transactions is subject to margin requirements, with those for centrally cleared instruments set by central counterparties (CCPs) and those for uncleared ones set by regulatory standards.[2] These requirements have been effective in meeting their primary objective – reducing counterparty credit risk. However, in recent periods of large shocks and bouts of market turbulence, margin surges boosted counterparties' demand for liquidity exactly when the supply was short, in some cases exacerbating the turbulence.[3]

This box analyses how swings in liquidity demand reflect central clearing margin requirements, paying particular attention to aspects of the underlying model. We draw on a unique data set that estimates margin requirements on hypothetical trades of interest rate swaps (IRS) at LCH SwapClear, a prominent CCP for such derivatives. We focus on two episodes: the Covid-19 shock of March 2020 and the UK "mini" budget turmoil in September 2022. We show that a large component of the calibration of margin requirements – namely one reflecting market developments observed immediately before the time of calibration – is at the root of destabilising dynamics. A stronger precautionary component in the underlying model would dampen these dynamics but may reduce centrally cleared activity.

Margin arrangements normally include two components: variation margin (VM), which reflects current market conditions, and initial margin (IM), which seeks to anticipate future market conditions. When the value of a derivative changes and the losing side makes a payment to the winning side, there is an exchange of VM (usually daily). In addition, each CCP participant has to post an IM to cover potential future VM payments that it may fail to deliver, eg in case of default. Realised VMs in excess of the IM represent a potential "margin breach" that signals a risk for the CCP; if losing counterparties were to fail, IM would not be sufficient to cover the VM payments that these counterparties owe the CCP. The magnitudes of IM and VM depend on the size of the underlying positions and hence trading volumes. In addition, IM may change because of a recalibration of the underlying model that estimates extreme shocks down the road.

Required margin amounts underwent exceptional swings during the stress episodes we consider. In February/March 2020, when the Covid-19 epidemic spread worldwide, market volatility rose dramatically, resulting in sharp increases in both the overall amounts of the VMs exchanged between counterparties and the required IM.[4] The largest daily VM paid to SwapClear reached $26 billion in Q1 2020, and IM increased by $28 billion over the same period.[5] Both of these values were 40% higher than the previous records. SwapClear witnessed a potential margin breach as high as £558 million in Q1 2020, which was roughly equal to three times the largest value that had yet been recorded (in Q3 2015). IM again rose sharply during the bout of turbulence that followed the UK "mini" budget announcement in September 2022, and potential margin breaches peaked at £698 million, even higher than in March 2020.[6]

To understand the role of the underlying model in such IM developments, we consider two hypothetical positions, for which we can derive margin requirements while fixing the trading volume. The positions are: the pay-fixed side of a US dollar one-year swap in February/March 2020 (Graph A1.A); and the receive-fixed side of a GBP one-year swap for September 2022 (Graph A1.C). In their respective periods of stress, both positions incurred market losses that necessitated substantial VM payments. In each case, our simulations indicate that the VM level was higher than the concurrent IM, ie there was a potential margin breach. Subsequently, the required amount of IM surged, suggesting that the shocks underpinning the VM payments materially affected the implications of the IM model, even if with a lag of a few days. This surge reinforced the liquidity needs of entities holding the positions we consider, as it came on the heels of VM payments. Such needs generate destabilising dynamics when they arise during market stress, ie when they are procyclical. We thus investigate what aspects of the IM model generate procyclicality.

In setting IM for IRS, SwapClear computes two tail risk measures from two historical loss distributions and uses the maximum of the two. One of the measures (expected shortfall (ES)) is based on a history of shocks from the previous 10 years. This risk measure is recalibrated every day to include the latest observation in the set of historical shocks (the "new shocks" effect) and to scale these historical shocks so that their standard deviation reflects the most recent volatility (the "volatility scaling" effect). Both the new shocks and the volatility scaling effects raise ES in times of market stress. The second tail risk measure (stressed value-at-risk (SVaR)) is calibrated on specific historical stress episodes (eg the Great Financial Crisis or the European sovereign debt crisis). Since adjustments to this set of events

are rare, SVaR is stable over time and acts as a floor for IM, surfacing when ES is low during periods of calm. Conversely, a transition from calm to heightened volatility brings ES to the fore by raising it above the SVaR floor. Importantly, the higher the SVaR, the smaller the portion of the ES rise that translates into an IM increase. Overall, while the new shocks and volatility scaling effects introduce procyclicality in IM, an SVaR effect dampens this procyclicality.
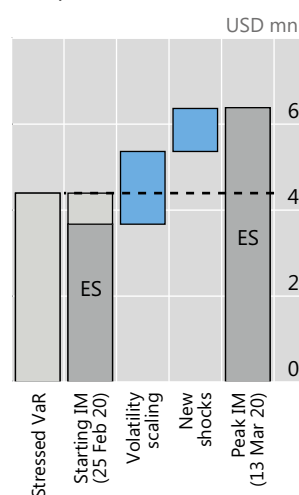

Initial and variation margins for hypothetical interest rate swap positions[1]   Graph A1
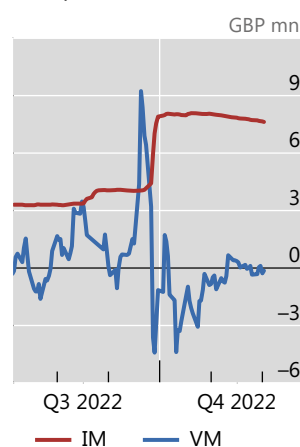
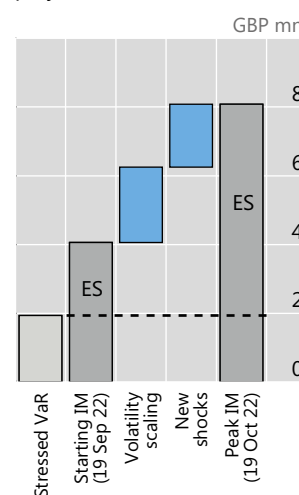

A. VM and then IM surged in February 2020[2]
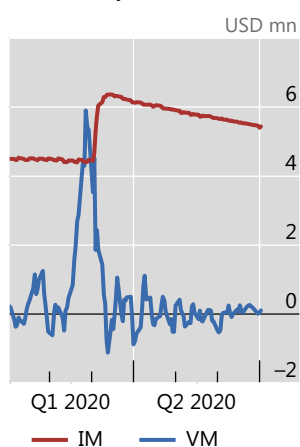
B. Precautionary element dampened the IM rise

C. VM and then IM surged in September 2022

D. Precautionary element played no role[3]

IM = initial margin; VM = variation margin; VaR = value-at-risk; ES = expected shortfall.

[1] VM is cumulated over five-day periods and IM is based on a five-day closeout period.   [2] Pay-fixed side of a one-year USD interest rate swap with a notional of $1 billion.   [3] Receive-fixed side of a one-year GBP swap with a notional of £750 million.

Sources: Clarus Financial Technology; authors' calculations.

The stress episodes we focus on highlight the three model-based effects behind IM rises, and in particular the scope for SVaR to dampen IM swings. In both episodes, the volatility scaling effect and, to a lesser extent, the new shocks effect drove the spike in IM for the hypothetical positions (Graphs A1.B and A1.D). The SVaR floor dampened the procyclicality of these two effects during the 2020 episode: only 74% of their combined impact on ES translated into an IM increase for the US dollar interest rate swap. By contrast, a low SVaR did not bind and thus did not play a dampening role in the 2022 episode, during which the IM for the GBP interest rate swap doubled.

The message of our stylised exercise is clear: if policymakers wish to mitigate the perverse effects of sharp adjustments to IM in times of market stress, they need to beef up its precautionary component, ie the SVaR floor, in tranquil times. Of course, raising this component means that the evolution of IM would reflect the current market environment less accurately. And the generally higher IM would increase the cost of entering derivatives positions. This may push activity to the less transparent bilateral markets or have participants shun derivatives, leaving some risks unhedged. From a financial stability perspective, the trade-offs between reducing margin procyclicality and reducing activity in centrally cleared derivatives call for a careful assessment and require a system-wide regulatory approach.

① The views expressed are those of the authors and do not necessarily reflect the views of the BIS.   ② Basel Committee on Banking Supervision (BCBS) and International Organization of Securities Commissions (IOSCO), *Margin requirements for non-centrally cleared derivatives*, July 2019.   ③ A Schrimpf, H S Shin and V Sushko, "Leverage and margin spirals in fixed income markets during the Covid-19 crisis", *BIS Bulletin*, no 2, April 2020; M Brunnermeier and L Pedersen, "Market liquidity and funding liquidity", *Review of Financial Studies* vol 22, February 2009, pp 2201–38.   ④ BCBS, Committee on Payments and Market Infrastructures (CPMI) and IOSCO, *Review of margining practices*, September 2022, and W Huang and E Takats, "The CCP-bank nexus in the time of Covid-19", *BIS Bulletin*, no 13, May 2020.   ⑤ According to SwapClear's CPMI-IOSCO quantitative disclosures and Clarus Financial Technology.   ⑥ S Aramonte and P Rungcharoenkitkul, "Leverage and liquidity backstops: cues from pension funds and gilt market disruptions", *BIS Quarterly Review*, December 2022, Box B.

The dollar continued to depreciate through most of the review period as US interest rates lacked upward momentum. The dollar's depreciation over the turn of the year was broad-based (Graph 3.C, red line and area), before reversing somewhat in February. Overall, the dollar retraced almost half of its 2022 gains. Given that the broad dollar index co-moves with gauges of currency volatility (blue line), the depreciation supported risk-taking in currency and risky asset markets.
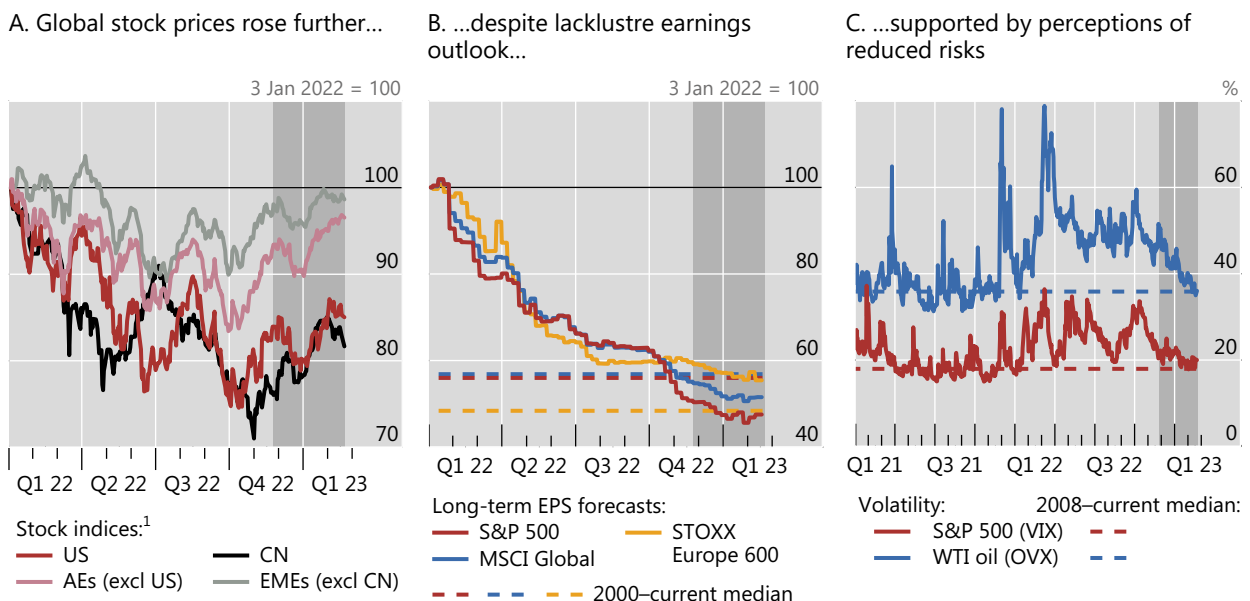
Risky assets buoyed by falling risk premia

Risky assets extended the rally that had begun in late 2022. Stock and credit market valuations were bolstered by a decline in perceived risks. In this context, corporate bond issuance rebounded strongly in January, after months of limited dynamism, whereas bank lending stayed restrained.

Equity markets continued recovering from their losses earlier in 2022, despite a downward correction in late February. Chinese stocks were boosted by the sudden end of the zero-Covid policy: the CSI 300 index increased by almost 10% between late November and mid-February (Graph 4.A). Other EME stock markets, which had experienced relatively smaller price declines last year, rose back to their pre-2022 levels. Among AEs, the S&P 500 continued to lag other major indices, and the continuously robust performance of European equities stood out. At the sectoral level, the returns of value stocks edged ahead of those of growth and technology stocks.

This strong performance through most of the period under review stood in contrast to firms' recent and expected profitability. Earnings announcements were generally underwhelming, and analysts' near-term forecasts remained downbeat.

Stock markets extended their rally despite weak earnings outlook   Graph 4

A. Global stock prices rose further...

B. ...despite lacklustre earnings outlook...

C. ...supported by perceptions of reduced risks

The shaded areas indicate 25 November 2022–17 February 2023 (period under review).

[1] See technical annex for details.

Sources: Bloomberg; Datastream; BIS.

Moreover, after aggressively ramping up in 2021, longer-term expectations of earnings per share (EPS) declined to around half of their early 2022 levels (Graph 4.B). In particular, those underpinning US stocks stood well below their historical watermarks. Thus, the stock market rally appeared to be driven mostly by declining equity risk premia, ie the compensation that investors require for exposure to risk (see Box B). In line with this decline, equity and commodity option-implied volatilities retracted to their historical averages (Graph 4.C).

Valuations in corporate credit markets improved along with those of equity markets. Credit spreads narrowed materially during the review period. While the spreads still stayed somewhat above their long-term averages in the euro area, they fell back below such levels in the United States (Graph 5.A). The broad-based drop affected different rating categories. For example, the spreads on BBB credits, a growing segment within investment grade, fell by about 50 basis points, while the spreads on CCC credits, the lowest-quality rung in high-yield, fell by about 250 basis points.

Lower corporate credit spreads seemed to reflect mostly an improvement in investors' default risk perceptions. A decomposition of corporate spreads suggests that their narrowing during the review period owed almost entirely to this improvement (Graph 5.B, red line and blue bars). Similarly, spreads on high-yield corporate bonds declined in line with a fall in expected default frequencies (Graph 5.C). Given that high-yield bonds comprise a sizeable share of floating coupon corporate securities, these bonds might have further benefited from greater investor demand for such securities. Investors generally shift towards floating rate products when rates are rising.

Risk appetite bolstered corporate credit markets

Graph 5

A. Corporate spreads narrowed...
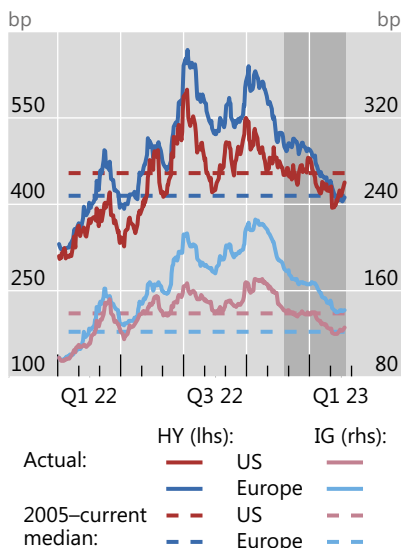
B. ...amid a decline in expected defaults
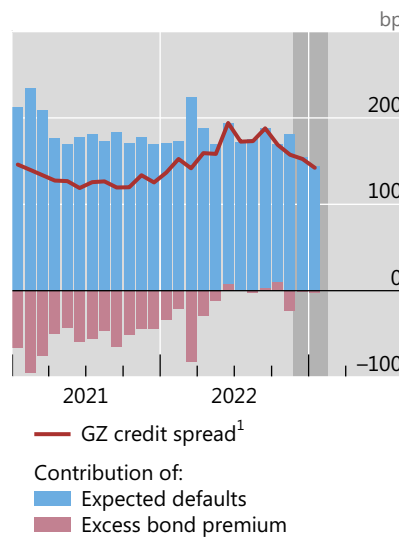
C. High-yield spreads also moved with measures of default risk

HY (lhs):   IG (rhs):
Actual: — US   — US
         — Europe   — Europe
2005–current — US   — US
median: — Europe   — Europe

— GZ credit spread[1]
Contribution of:
◼ Expected defaults
◼ Excess bond premium

US high-yield:
— Expected default frequencies (lhs)
— Corporate spreads (rhs)

The shaded areas indicate 25 November 2022–17 February 2023 (period under review).

[1] See technical annex for details.

Sources: Board of Governors of the Federal Reserve System; ICE BofAML indices; Moody's; BIS.

Understanding the rally in equity markets

*Fernando Avalos and Vladyslav Sushko*①

From late September to end-January, major equity markets delivered double-digit returns in Europe, the United States and EMEs. At the upper end, the EURO STOXX 50, a portfolio mostly of large French and German stocks, returned over 25% (Graph B1.A). The S&P 500 delivered a gross return of slightly over 10%, while EME (excluding Chinese) and UK stocks returned almost 15%. Chinese stocks returned slightly less than 10%, with the ec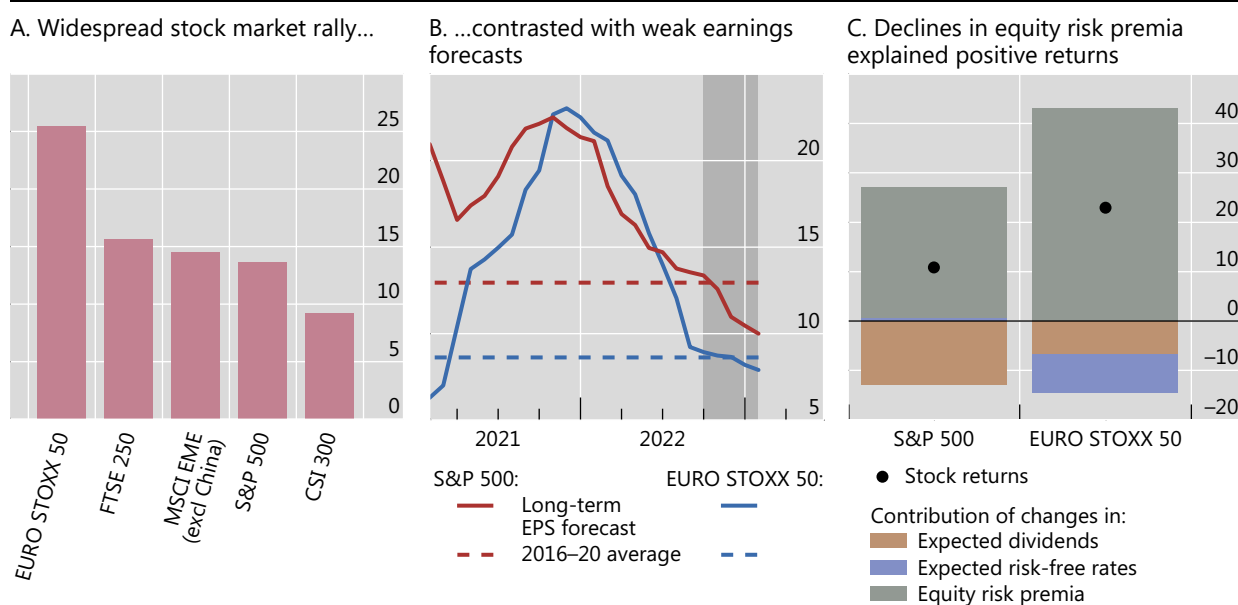onomy just reopening as the country's zero-Covid policy was ended. Focusing on US and euro area equity markets, this box finds that the gains reflected declines in equity risk premia, ie the compensation for risk demanded by investors, rather than firms' expected performance.

The strong run of global equity markets is hard to reconcile with the macroeconomic backdrop that weighed on expected earnings for most of the period. The long-term outlook for earnings deteriorated in the United States and the euro area. Earnings forecasts had been significantly ramped up in the quarters following the Covid-19 outbreak. But they switched towards a steady and accelerated retreat during all of 2022 (Graph B1.B). The headwinds included expectations of high and volatile energy prices, weak growth forecasts and substantial monetary policy tightening.

Falling risk premia boosted equity market returns[1]

In per cent

Graph B1

A. Widespread stock market rally…

B. …contrasted with weak earnings forecasts

C. Declines in equity risk premia explained positive returns

S&P 500:
— Long-term EPS forecast
- - - 2016–20 average

EURO STOXX 50:
—
- - -

● Stock returns

Contribution of changes in:
Expected dividends
Expected risk-free rates
Equity risk premia

The shaded area indicates 30 September 2022–31 January 2023.

[1] Stock returns calculated over 30 September 2022–31 January 2023.

Sources: ECB; Board of Governors of the Federal Reserve System; Bloomberg; Datastream; BIS.

In simple terms, a stock's price should be equal to the present discounted value of expected future dividend payments. Thus, valuation changes have two general sources. The first one is changes in investors' perceptions of the firm's future profitability, which determine their expectations of future dividends. The second is changes in the discount rates that investors apply to the expected stream of dividends. Discount rates are composed of "risk-free" rates, capturing the time value of money, and an equity risk premium, capturing the extra compensation required by investors to hold the risky asset. The risk premium fluctuates with investors' perceptions of and appetite for risk – all else equal, a higher risk premium results in a lower price.

We rely on a standard present value model to disentangle the contributions of these sources to the returns of the S&P 500 and the EURO STOXX 50 between September 2022 and January 2023.② The model is implemented with monthly averages of daily market data for each index. *Expected dividends* are estimated using dividend futures for the initial five years and long-term analyst expectations of earnings per share growth at longer horizons. *Expected risk-free rates* are estimated using zero coupon yields.③ The *equity risk premium* is then obtained as a residual.

The analysis suggests that the recent market rally owed entirely to the drop in equity risk premia. For both the S&P 500 and the EURO STOXX 50, expected dividends fell during the period, weighing on returns (Graph B1.C, brown bars). Expected risk-free interest rates played an indiscernible role for US equity returns during the period, but exerted a drag on European ones (purple bars), as the pace of ECB tightening picked up. However, substantial falls in equity risk premia more than offset these effects (grey bars), thus leading to the large and positive returns (dots).④

The plummeting equity risk compensations required by investors could be explained, in part, by a decrease in the perceived risks. In the United States, perceived equity risks dropped in tandem with a perceived fall in US inflation risk, which moderated the expected pace of monetary tightening. In the case of the euro area, the drop in key energy prices from their extreme highs seen earlier in 2022 and the fading likelihood of a deep recession probably played a major role.

① The views expressed are those of the authors, and do not necessarily reflect the views of the BIS.　② The computations are performed in terms of dividend yields, and then re-expressed in terms of stock returns. Initial uses of the underlying present value decomposition date back to J Campbell and R Shiller, "The dividend-price ratio and expectations of future dividends and discount factors", *Review of Financial Studies*, vol 1, 1988, pp 195–227. For a more didactic presentation, see the discussion preceding equation (7.1.24) in J Campbell, A Lo and A McKinlay, *The econometrics of financial markets*, 1997.　③ Dividend data are obtained from the Chicago Mercantile Exchange and Eurex, zero coupon rates are published by the ECB and the Board of Governors of the Federal Reserve, and analysts' expectations are provided by I/B/E/S.　④ The interpretation of these results requires the usual caution. A decomposition implicitly assumes that the model is "correct". The residual, which in other contexts has been likened to "sentiment", subsumes any modelling error.

After a challenging 2022, conditions in primary markets for corporate credit came to be more in line with the easing conditions in secondary markets. Corporate bond issuance began to recover in January (Graph 6.A), led by the investment grade segment and issuance by financial firms. Reportedly, corporate bond financing also benefited from the deployment of investor cash that had remained on the sidelines for most of the second half of 2022.
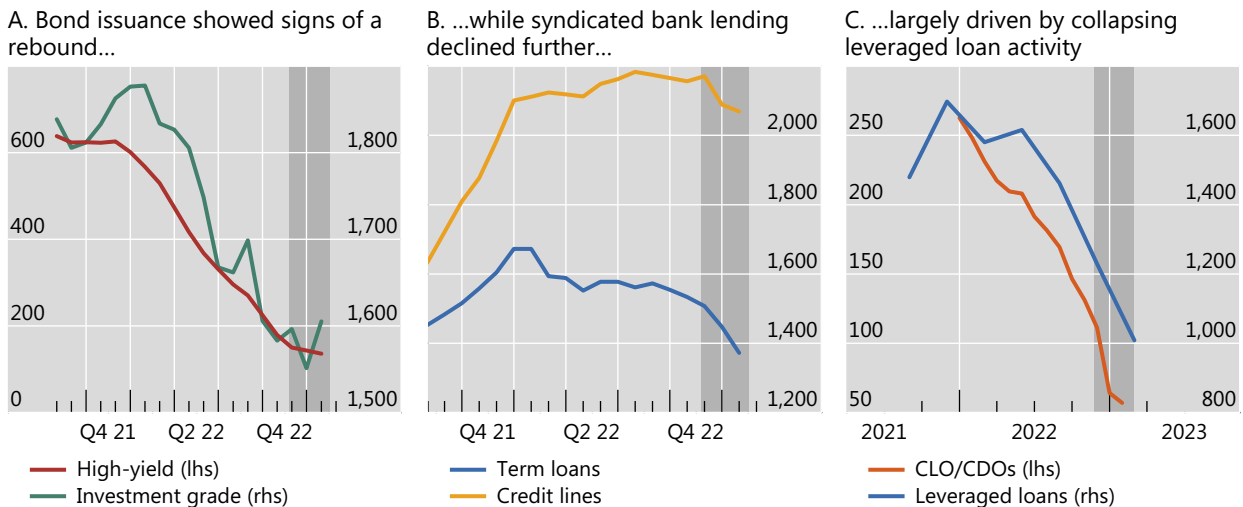
In contrast to the budding recovery of corporate bond issuance, bank lending continued to be restrained. This is in line with the close attention that banks reportedly pay to downside risks in the economic outlook. Syndicated lending remained downbeat (Graph 6.B), particularly in the leveraged loan segment. The persistent pressure in this market segment was in part due to the collapse in the issuance of collateralised loan obligations (CLOs), which had provided an avenue for banks to offload a fraction of high-risk loans from their balance sheets (Graph 6.C). Leveraged real estate lending also faced headwinds, particularly in the euro area, as property values fell amid higher borrowing costs. Moreover, surveys suggested that bank retrenchment was more widespread,[3] extending to consumer lending and mortgages. According to these surveys, the underlying drivers included a tightening of lending standards and a drop in loan demand.

[3]　The ECB released euro area bank lending survey results for the fourth quarter of 2022 on 31 January, while the Federal Reserve released the latest Senior Loan Officer Opinion Survey results, which also generally correspond to the fourth quarter of 2022, the following week.

Corporate bond issuance revived in January, but not bank lending

Twelve-month cumulative issuance; in billions of US dollars   Graph 6

A. Bond issuance showed signs of a rebound...

B. ...while syndicated bank lending declined further...

C. ...largely driven by collapsing leveraged loan activity

- High-yield (lhs)
- Investment grade (rhs)
- Term loans
- Credit lines
- CLO/CDOs (lhs)
- Leveraged loans (rhs)

The shaded areas indicate 25 November 2022–17 February 2023 (period under review).

Sources: Dealogic; SIFMA; BIS.

EME financial conditions eased moderately

Financial conditions in EMEs moved in tandem with those in AEs, easing early in the review period and remaining broadly stable afterwards. That said, in February EME exchange rates and portfolio flows proved sensitive to some signs of shifting financial conditions in the United States.
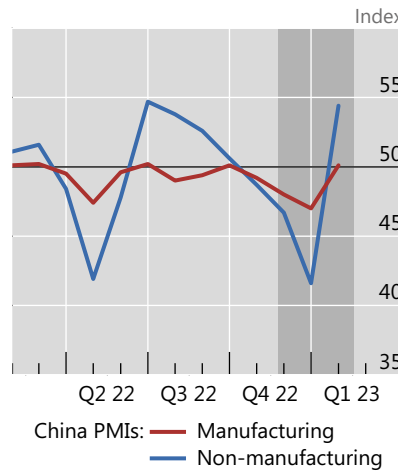
EME financial conditions benefited from both global and regional factors, as well as from domestic growth momentum. For one, they were in line with the strong general performance of risky asset markets. In addition, they reflected resilient growth and falling inflation in most EME regions, which faced only occasional setbacks. EME financial conditions remained fairly accommodative also through a patch of negative macroeconomic news in late 2022 (Graph 7.A).

Developments in China stood out owing to a string of positive economic news and despite some persistent headwinds. A significantly better than expected release of Q4 real GDP in China constituted a sizeable positive surprise for EMEs as a group (Graph 7.A). And, as the country reopened after the Covid-19 lockdown, bank lending in January exceeded forecasts, growing at the fastest pace in 10 months. Leading indicators pointed to an upcoming economic expansion driven by services. The non-manufacturing PMI increased sharply, from contractionary to expansionary readings, in January (Graph 7.B). By contrast, manufacturing PMIs did not foretell an expansion, suggesting a limited contribution to commodity demand and limited upward pressure on commodity prices, at least in the near term.

EME financial conditions eased ahead of a rebound in macro indicators[1]   Graph 7
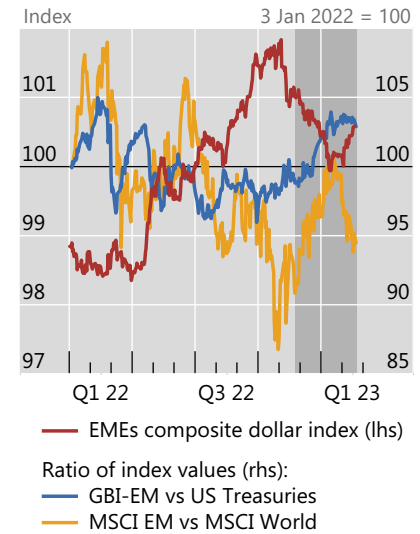
A. Financial conditions were robust to negative macro surprises

B. Chinese PMIs suggested a services-led recovery

C. EME asset performance correlated with US dollar strength

EME financial conditions index (lhs)
EME macro surprise index (rhs)

China PMIs: Manufacturing
Non-manufacturing

EMEs composite dollar index (lhs)
Ratio of index values (rhs):
GBI-EM vs US Treasuries
MSCI EM vs MSCI World

The shaded areas indicate 25 November 2022–17 February 2023 (period under review).

ª China real GDP release for Q4 2022.

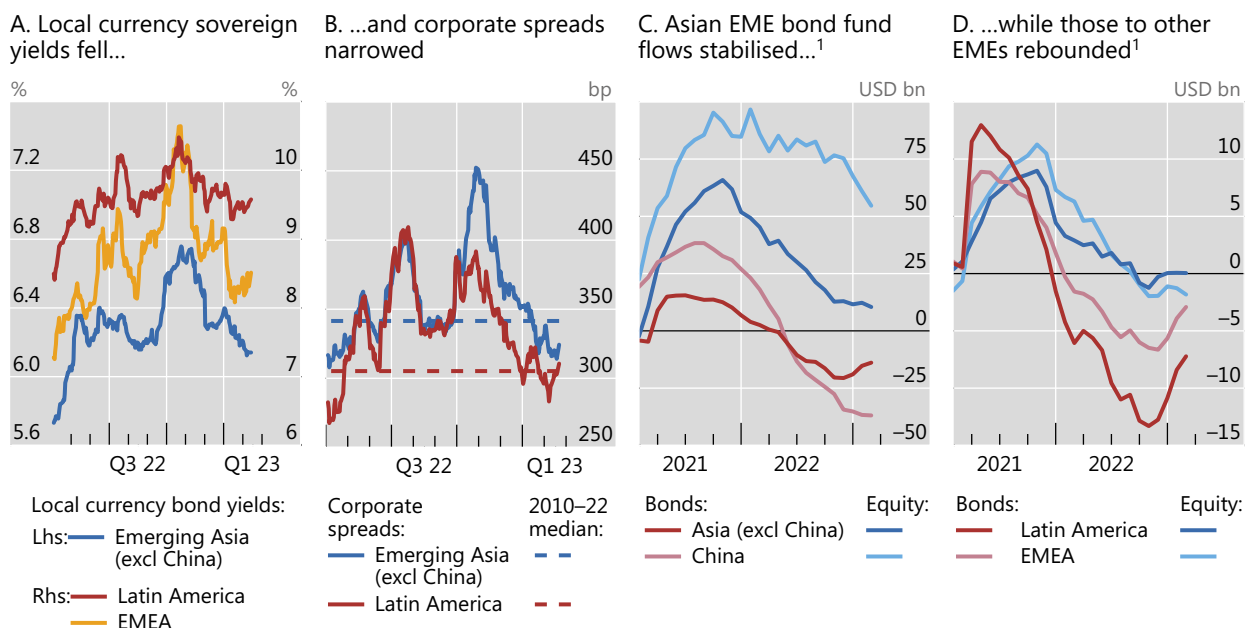[1] See technical annex for details.

Sources: Bloomberg; Datastream; JPMorgan Chase; BIS.

EME equities fluctuated with the ebb and flow of US dollar strength. As EME currencies recouped more than half of their 2022 losses against the dollar, their stock markets followed suit, and turned from under- to over-performance against global benchmarks (Graph 7.C). By contrast, the subsequent bout of US dollar appreciation in February went hand in hand with a soft patch for EME stocks, which again started trailing the global index.

EME fixed income assets saw a more solid performance. As financial conditions improved and central banks halted or slowed the pace of rate hikes, local currency sovereign yields declined further (Graph 8.A). Improved funding costs allowed some EMEs, particularly those in Asia, to restart issuance in sovereign debt markets. Sovereign yields continued to be higher in Latin America than in other EME regions, partly reflecting a more restrictive policy stance amid higher inflation rates. The stretched fiscal positions of some Latin American sovereigns also contributed to the upward pressure on yields.

The cost of credit declined materially for EME corporates as well. Corporate spreads compressed further, to levels within the recent decade's averages (Graph 8.B). Spreads narrowed most rapidly in emerging Asia, amid a streak of positive growth news. Corporate funding conditions in the region also benefited from the stabilisation of credit markets in Korea, where authorities took effective measures to address the strains that emerged late in 2022.

The period under review witnessed a general stabilisation and some reversals of portfolio outflows from EMEs. This pattern was evidenced in equity fund flows, with continued outflows from China being the main exception (Graph 8.C). In terms of bond fund flows, EMEs generally experienced a rebound (Graph 8.D).

EME funding costs declined as net portfolio outflows began to revert

Graph 8

A. Local currency sovereign yields fell...

B. ...and corporate spreads narrowed

C. Asian EME bond fund flows stabilised...[1]

D. ...while those to other EMEs rebounded[1]

Local currency bond yields:

Lhs: ■—— Emerging Asia (excl China)

Rhs: ■—— Latin America
■—— EMEA

Corporate spreads:
■—— Emerging Asia (excl China)
■—— Latin America

2010–22 median:
■ - - -
■ - - -

Bonds:
■—— Asia (excl China)
■—— China

Equity:
■——

Bonds:
■—— Latin America
■—— EMEA

Equity:
■——

[1] See technical annex for details.

Sources: EPFR; JPMorgan Chase; BIS.

In a slight departure from these general developments, bond fund outflows resurfaced in February in country-level data. In addition to expectations that US financial conditions might tighten somewhat, local factors included uncertainties around a possible inflation target adjustment in Brazil and selling pressures in Korean fixed income assets after a recent decline in long-term yields. Other EMEs that experienced outflows in the first half of February included the Philippines, Thailand and Mexico. Foreign investor outflows from bond mutual funds in China also continued (Graph 8.C), as benchmark yields remained below those on US Treasuries and domestic monetary policy remained accommodative.

Technical annex

HY = high-yield; IG = investment grade.

Graph 1.A: Goldman Sachs Financial Conditions Index (FCI): a weighted average of country-specific risk-free interest rates, exchange rates, equity valuations and credit spreads, with weights that correspond to the estimated impact of each variable on GDP. A value of 100 indicates average conditions. A higher (lower) value indicates tighter (looser) conditions.

Graph 3.C: The composite dollar index corresponds to standardised USD exchange rates against AUD, CAD, CNY, CZK, EUR, GBP, HUF, INR, JPY, KRW, NOK, SEK and ZAR. The currency volatility index (VXY) corresponds to G10 currency option-implied volatility.

Graph 4.A: S&P 500 index for the United States; Shanghai Shenzhen CSI 300 Equity Index for China. AEs (excl US): weighted average of S&P/ASX 200, S&P/TSX Composite Index, Swiss Market Index, OMX Copenhagen Index, EURO STOXX 600 Index, FTSE 100 Index, Nikkei 225, OBX Stock Index, S&P/NZX 50 Index and OMX Stockholm Benchmark for AEs. EMEs (excl CN): weighted average of Brazil Ibovespa Index, S&P/CLZ IPSA, MSCI Colcap Index, Prague Stock Exchange Index, Hang Seng Index, Budapest Stock Exchange Index, S&P BSE Sensez Index, Jakarta Composite Index, Kospi Index, S&P/BMV IPC Index, FTSE Bursa Malaysia KLCI, S&P/BVL PeruGeneral TRPEN, PSEi Philippine SE Index, WSE WIG Index, Straits Times Index, Stock Exchange of Thailand Index and FTSE/JSE Africa ALL SHR Index for EMEs.

Graph 5.B: The GZ spread has two components: one capturing movements in default expectations, and another representing the procyclical changes in the relationship between measured default risk and credit spreads — the so-called excess bond premium. Published monthly by the Board of Governors of the Federal Reserve, the two components are taken from S Gilchrist and E Zakrajsek, "Credit spreads and business cycle fluctuations", *American Economic Review*, vol 102, no 4, 2012, pp1692–720.

Graph 7.A: See entry for Graph 1.A.

Graph 7.C: The EME composite dollar index corresponds to standardised USD exchange rates against CNY, CZK, HUF, INR, KRW and ZAR.

Graph 8.C–D: Aggregation of weekly data across major economies in each region. Cumulative flows for the past 12 months. Data cover net portfolio flows (adjusted for exchange rate changes) to dedicated funds for individual EMEs and to EME funds with country/regional decomposition.