

Statistical release: BIS international banking statistics and global liquidity indicators at end-September 2023

- Banks' cross-border claims rose by \$801 billion in Q3 2023 to reach \$38 trillion, +1% year-on-year (yoy), driven by derivatives valuations and increased cross-border bank credit (loans plus holdings of debt securities).
- Cross-border bank credit increased by \$448 billion in Q3 (+2% yoy) due to robust lending to advanced economies (AEs). By contrast, credit to emerging market and developing economies (EMDEs) contracted by 3% yoy.
- Cross-border bank credit to non-banks expanded, with a \$254 billion increase in lending to non-bank financial institutions (NBFIs) in Q3 (+7% yoy).
- Credit to non-financial borrowers in China has been declining since mid-2021, amid tightening financial conditions, Covid-19 lockdowns and strains in the domestic real estate sector.
- The BIS global liquidity indicators (GLIs) show an uptick in US dollar-denominated foreign currency credit in Q3 2023; US dollar credit to EMDEs, however, continued to decline.

Cross-border bank credit to advanced economies expanded

The BIS locational banking statistics (LBS) show that banks' global cross-border claims rose by \$801 billion (+1% yoy) during Q3 2023 on a FX- and break-adjusted basis (Graphs 1.A and 1.E). This pushed the outstanding stock of claims to \$38 trillion (Graph A.1 in the Annex).¹ The increase reflected a rise in the market value of derivatives and other instruments amid uncertainty about the future path of inflation and monetary policy in major economies (+\$329 billion), as well as a sizeable expansion in bank credit.

Cross-border bank credit expanded by \$448 billion in Q3, driven by robust lending in US dollars. Euro-denominated credit changed little, while credit in other currencies, mainly the Japanese yen, expanded by more than \$200 billion (Graph 1.B). Credit to borrowers in the United States, Japan and the United Kingdom increased the most (Graph 1.C), driving up the yoy growth in credit to AEs (Graph 1.F, solid black line). By contrast, cross-border bank credit to EMDEs expanded only modestly during Q3, leaving the yoy growth as low as -3% (dashed black line).

¹ In the BIS LBS, bank claims comprise (i) loans and deposits, (ii) holdings of debt securities, and (iii) derivatives with a positive market value and other residual instruments (combined). Credit is defined as the sum of (i) and (ii).

Changes in banks' global cross-border claims

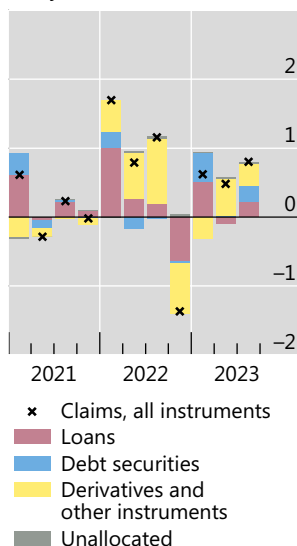
Graph 1

Quarterly changes¹

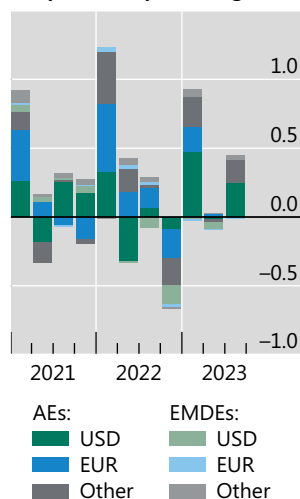
Claims

Of which: credit²

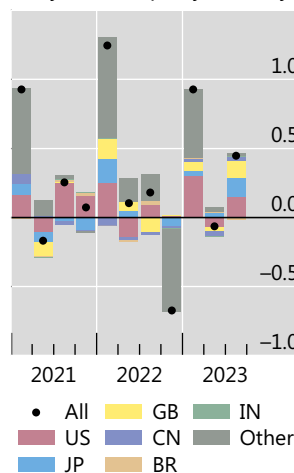
A. By instrument



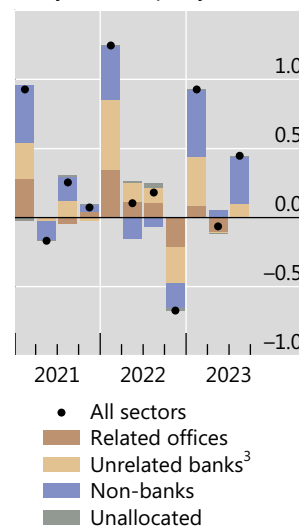
B. By currency and region



C. By counterparty country



D. By counterparty sector

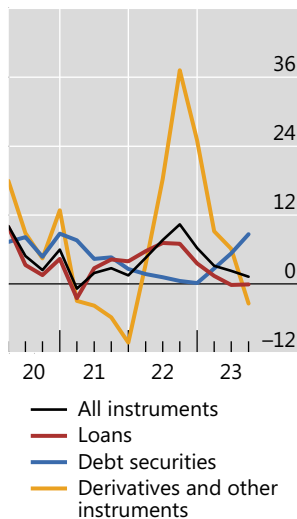


Year-on-year growth rates⁴

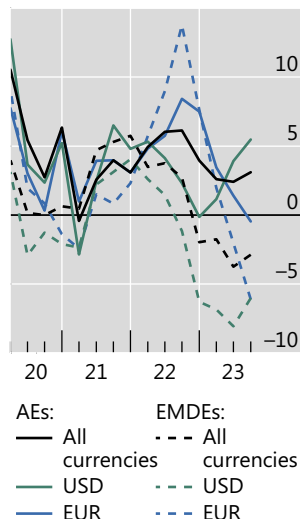
Claims

Of which: credit²

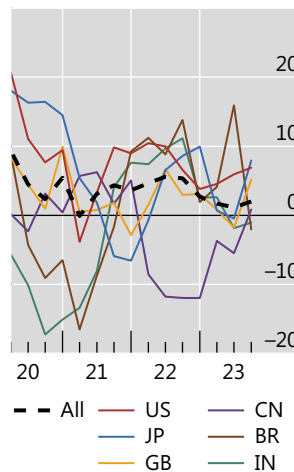
E. By instrument



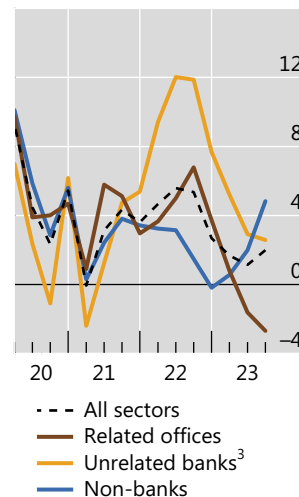
F. By currency and region



G. By counterparty country



H. By counterparty sector



¹ Quarterly changes adjusted for breaks in series and exchange rate fluctuations, in trillions of US dollars. ² Credit refers to loans and holdings of debt securities, ie excluding from "claims" all other instruments (derivatives with positive market value, equity and other residual instruments). ³ Includes credit to central banks and to banks unallocated by subsector. ⁴ Annual compounded adjusted change, in per cent (see BIS reporting guidelines).

Source: BIS locational banking statistics.

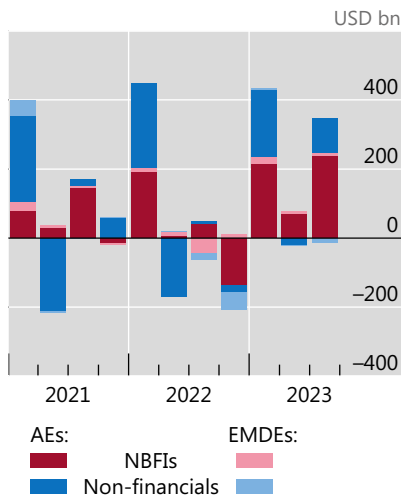
By sector of borrowers, cross-border credit to non-banks, especially those in AEs, drove the overall expansion. The \$341 billion increase during Q3 raised the global stock of cross-border credit to non-banks to \$15 trillion. Interbank credit added little, with credit to unrelated banks up by \$95 billion in Q3. Interoffice lending was weaker, reflected in a 3% contraction yoy (Graphs 1.D and 1.H).

Focusing on the non-bank sector, new cross-border credit (in all currencies) mainly went to NBFIs, with those in AEs attracting \$238 billion in new credit (Graph 2.A).² Global dollar-denominated credit to NBFIs increased for a third consecutive quarter, this time by \$173 billion (Graph 2.B). This pushed the yoy growth rate to 12% by end-September 2023; meanwhile, euro credit continued to fall (Graph 2.C).

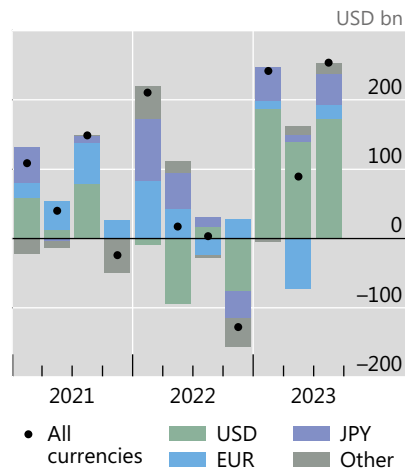
Cross-border credit to non-banks¹

Graph 2

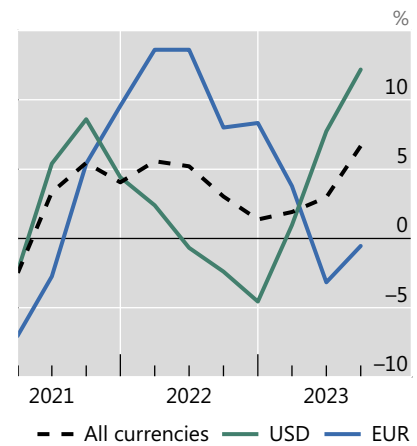
A. Credit to non-banks, by sector²



B. Credit to NBFIs, by currency²



C. Growth of credit to NBFIs³



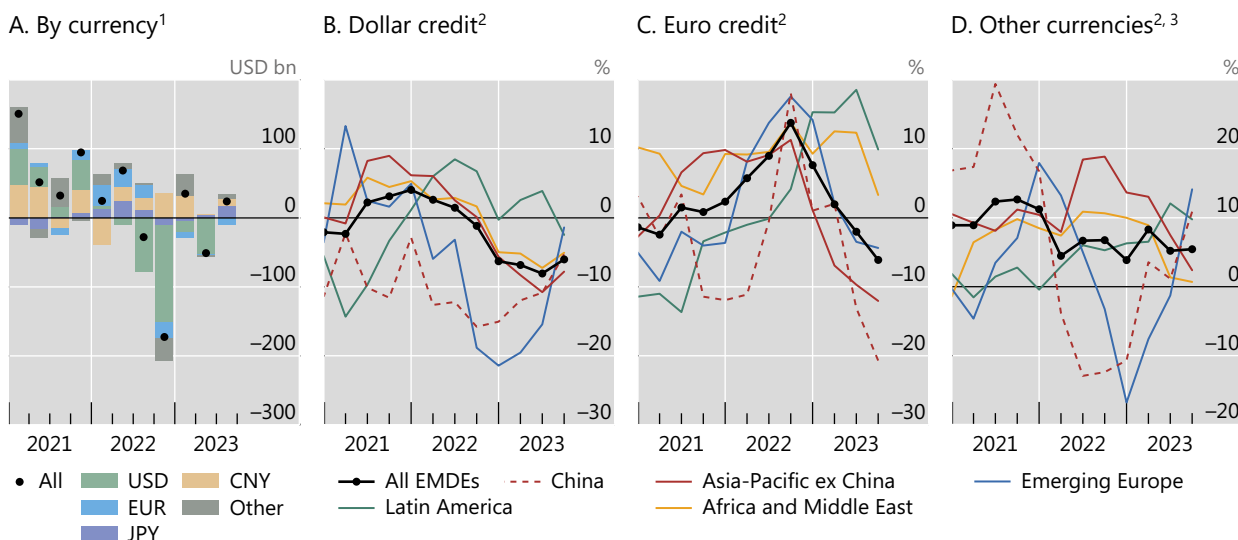
¹ Data for Japan relate to claims in all instruments. ² Quarterly changes adjusted for breaks in series and exchange rate fluctuations. ³ Annual compounded adjusted change, in per cent.

Source: BIS locational banking statistics.

Looking at EMDEs, growth in overall cross-border credit to most regions remained sluggish on account of weak euro and dollar lending (Graph 1.F). In Q3, credit to borrowers in Latin America, particularly Brazil, declined the most. By contrast, credit to the Asia-Pacific region expanded (+\$48 billion), especially vis-à-vis China, where the yoy growth rate turned positive for the first time since early 2022 (Graph 1.G).

Dollar credit to EMDEs remained below 2022 levels, despite showing signs of stabilisation in Q3 2023 (Graphs 3.A and 3.B). Euro credit weakened further, contracting by 6% yoy; the decline was larger still for China and other Asian countries (-21% and -12% yoy, respectively). By contrast, yen (+\$17 billion) and renminbi (+\$11 billion) credit strengthened. Credit denominated in currencies other than euro and dollar (combined) expanded at 5% yoy overall (Graph 3.D).

² Credit to the non-financial sector ("non-financials") also increased, albeit by less.



¹ Quarterly changes adjusted for breaks in series and exchange rate fluctuations. ² Annual compounded adjusted change, in per cent. ³ Credit denominated in currencies other than the US dollar and euro combined.

Source: BIS locational banking statistics.

Credit to non-financial sectors in China declined

Despite the uptick in cross-border bank credit to China in Q3, the amount outstanding, at \$793 billion, remained substantially lower than in mid-2021 (Graph 4.A).³ More than half of the decline over this period was vis-à-vis the non-financial sector (Graph 4.B), which includes real estate.⁴ Banks in the Asia-Pacific region have curbed their credit the most, by more than \$100 billion since mid-2021 (Graph 4.C). The bulk of the overall decline was attributable to Chinese banks operating outside China (Graph 4.D).

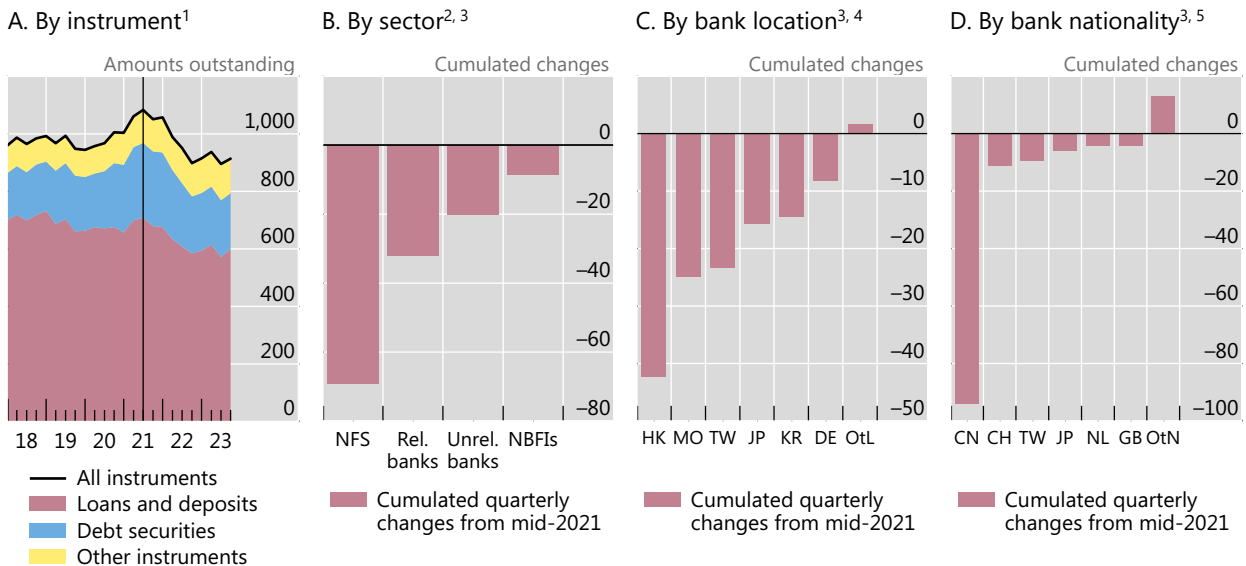
³ The increase in Q3 was largely due to credit to unrelated banks in China. The cumulative decline since mid-2021, most of which was vis-à-vis the non-financial sector in China, can be attributed to global and local influences. The COVID-19 pandemic, the conflict in Ukraine and international monetary policy tightening made for an adverse global backdrop. On a local level, weak economic growth due to the extended implementation of the zero-tolerance COVID-19 policy and the persistent strains in the real estate sector could also have contributed to the decline in lending.

⁴ Chinese real estate has faced persistent challenges since 2021. See “The real estate sector’s evolving contribution to China’s growth”, Box B, and the discussions around [Graph 15](#) in the *BIS Annual Economic Report*, Chapter 1, 2022.

Banks' cross-border credit to China

In billions of US dollars

Graph 4



NBFIs = non-bank financial institutions; NFS = non-financial sector; OtL = other locations; OtN = other nationalities; Rel. banks = related bank offices; Unrel. banks = Unrelated banks.

¹ The vertical line refers to end-June 2021. Credit is the sum of loans and deposits and debt securities. ² Unrelated banks include credit to central banks and to banks unallocated by subsector. Non-financials include credit to non-banks unallocated by subsector. ³ Quarterly changes adjusted for breaks in series and exchange rate fluctuations. ⁴ Due to data confidentiality, total claims are shown for Germany (DE) and Japan (JP). ⁵ Due to data availability, the data shown refer to claims. The country on the x-axis refers to the nationality of banks located outside their respective countries.

Source: BIS locational banking statistics.

Non-Chinese banks' credit to China, as recorded in the BIS consolidated banking statistics, paint a similar picture (Graph 5).⁵ As of end-September 2023, global banks' credit to China, which includes both their cross-border credit and local credit booked by their affiliates located in China, stood at \$826 billion, or 12% lower than in mid-2021 (Graph 5.A, beige bars).⁶ The drop can be almost equally attributed to lower credit to unaffiliated banks (red line) and to the non-financial private sector (blue line) in China. Other potential exposures did not decline as sharply (Graph 5.C).

Focusing more specifically on the non-financial private sector, its liabilities to foreign banks fell by almost \$70 billion during this period, mostly vis-à-vis Japanese and UK banks (Graph 5.B).

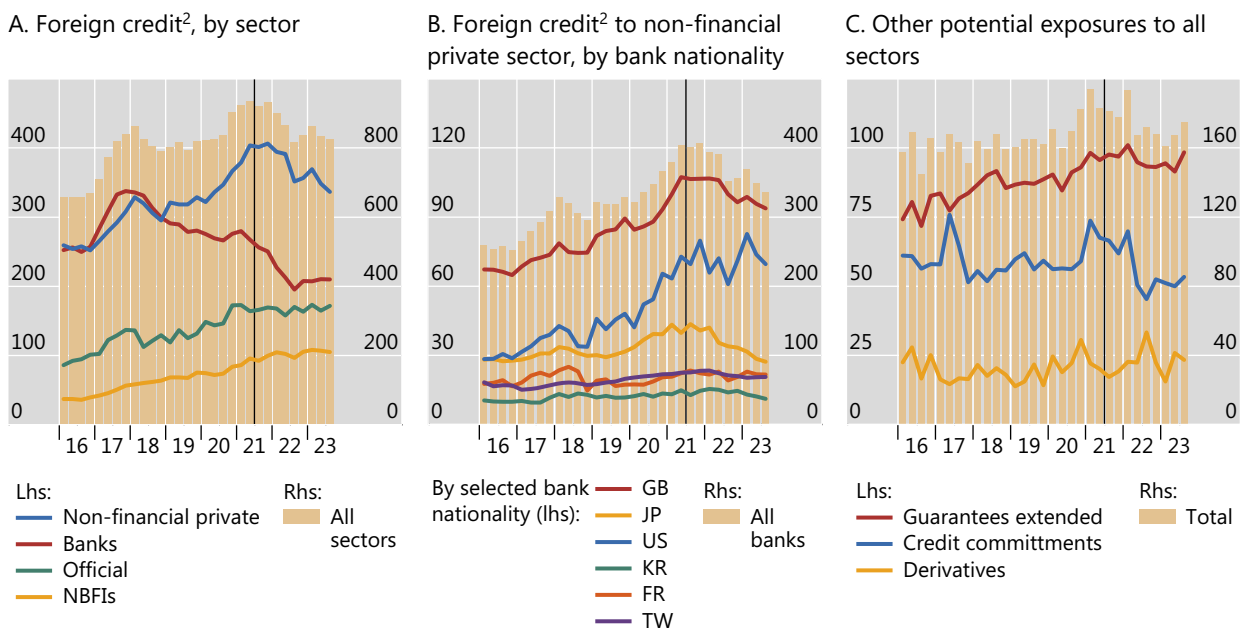
⁵ In the consolidated banking statistics, the published statistical tables use the term "claims", which comprise mainly deposits, loans and holdings of debt securities, but exclude derivatives with a positive market value.

⁶ Only part of this is due to exchange rate effects. The US dollar has appreciated since mid-2021 (by 9% in the broad dollar index). On an FX-adjusted basis, BIS internal estimates point to a decline in the international component of foreign credit, which comprises cross-border and local credit in foreign currency. This was partly offset by an increase in local credit in renminbi.

Banks' consolidated foreign exposures to China¹

Amounts outstanding, in billions of US dollars

Graph 5



¹ The vertical lines refer to end-June 2021. ² In the published statistical tables, referred to as "foreign claims" of foreign banks on China.

Source: BIS consolidated banking statistics on a guarantor basis.

Broader measures of credit to non-banks in China also point to reduced borrowing since mid-2021. Estimates of dollar credit to non-banks, as tracked in the BIS global liquidity indicators (see next section),⁷ has declined by \$140 billion (-25%) since mid-2021. This drop was partly offset by an increase in yen credit over the same period (+\$3 billion, at end-September 2023 exchange rates).

⁷ The estimates from the GLIs combine banks' cross-border and local loans as well as residents' bond issuance in international markets.

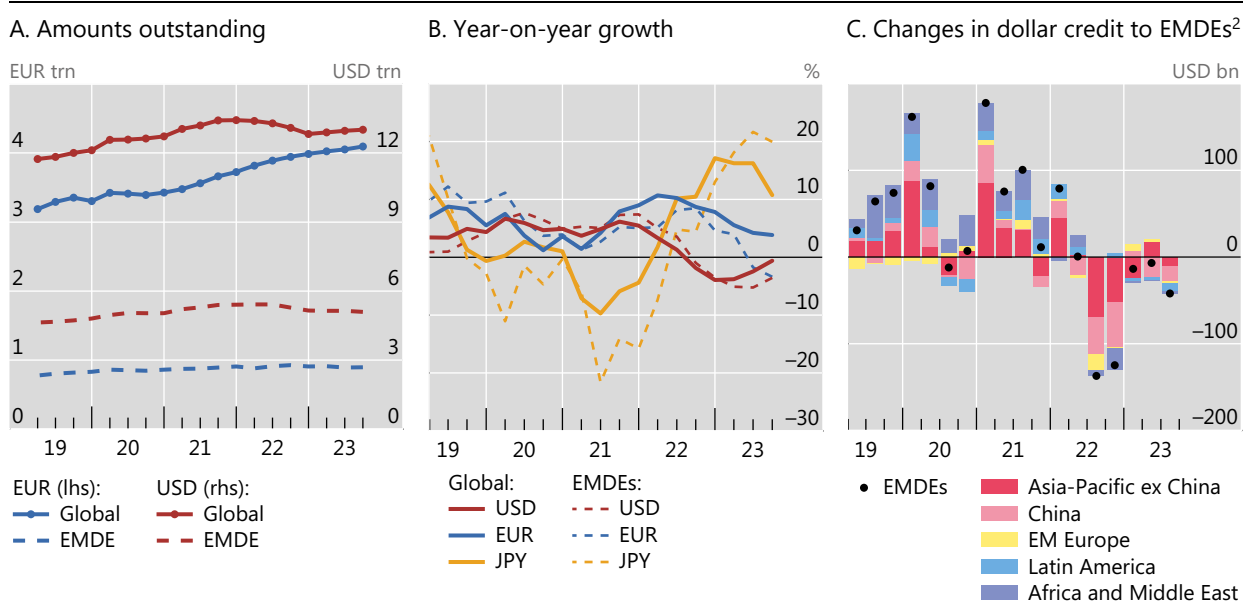
Global liquidity indicators at end-September 2023

The BIS global liquidity indicators (GLIs) track total credit to non-bank borrowers, covering both loans extended by banks and funding from global bond markets. The latter is captured through the net issuance (gross issuance less redemptions) of international debt securities (IDS). The main focus is on foreign currency credit denominated in the three major reserve currencies (US dollars, euros and Japanese yen) to non-residents, ie borrowers outside the respective currency areas.⁸

Foreign currency credit in US dollars and euros rose slightly in Q3 2023, while yen-denominated credit inched down. The quarterly increase of \$41 billion in US dollar credit to non-banks outside the United States left the outstanding stock at \$13 trillion (Graph 6.A, solid red line). Nonetheless, the yoy growth rate remained negative (Graph 6.B, solid red line). Euro-denominated credit to non-banks outside the euro area remained near €4 trillion (\$4.3 trillion) (Graph 6.A, solid blue line), 4% higher than a year earlier. After two years of rapid expansion, yen credit outside Japan lost momentum due to a decline in bank loans. The outstanding stock, at ¥56 trillion (\$390 billion), was still up 11% from a year earlier (Graph 6.B, solid yellow line).

Foreign currency credit to non-banks, by counterparty region¹

Graph 6



¹ Global refers to those economies outside the currency area. ² Data on local loans denominated in foreign currency extended by banks in Russia are not available after Q3 2021 and are assumed to be zero thereafter.

Source: BIS global liquidity indicators.

Dollar-denominated foreign currency credit to non-banks in EMDEs fell by \$42 billion in Q3 due to weaker bank lending, leaving the amount outstanding at \$5.1 trillion (Graph 6.A). As a result, the yoy growth remained firmly negative at -3.5% (Graph 6.B, dashed red line). Looking across regions, dollar credit to borrowers in the Asia-Pacific region fell the most in Q3 (-\$27 billion), followed by credit to those in Latin America (-\$9 billion) (Graph 6.C).

The differences in credit growth across the dollar, euro and yen reflect their respective funding costs and associated exchange rate movements. The negative co-

⁸ For more details, see the GLI methodology: www.bis.org/statistics/gli/gli_methodology.pdf.

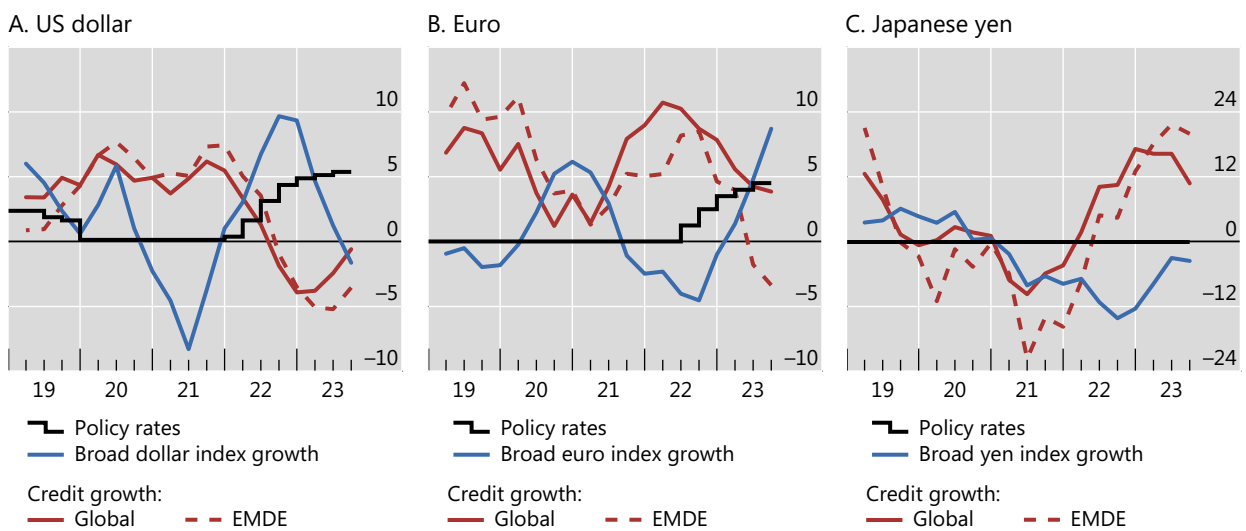
movement between exchange rate indices and credit growth has been salient over the past few years (Graph 7). Monetary policy tightening by the Federal Reserve in response to the surge in inflation led to a stronger dollar from early 2022 onward, weighing on dollar-denominated bank lending and bond issuance. The European Central Bank followed suit, triggering a similar pattern in euro credit growth. Moreover, brisk growth in yen credit between early 2022 and mid-2023 went hand in hand with sustained yen depreciation as the Bank of Japan kept interest rates below zero.

The negative co-movement between exchange rates and credit growth was particularly evident for EMDEs. The 3.5% yoy decline in dollar credit to EMDEs at end-Q3 2023 was notable compared with the 0.6% global decline. The discrepancy was even more striking for euro credit. In Q3, euro credit to all borrowers outside the euro area grew by 3.9% yoy, but euro credit to EMDEs shrank by 3.4% yoy. Finally, yen credit to EMDEs continued to grow at 20% yoy, compared with a global figure of 11% yoy.

Foreign currency credit growth, exchange rates and policy rates^{1, 2}

In per cent

Graph 7



¹ Credit to non-bank borrowers. Year-on-year growth rates, adjusted for breaks in series and exchange rate effects. ² Year-on-year growth rate of nominal effective exchange rate index (NEER). An increase indicates appreciation of the currency.

Sources: BIS global liquidity indicators.

Annex A Locational banking statistics graphs

Cross-border claims¹ by sector, currency and instrument

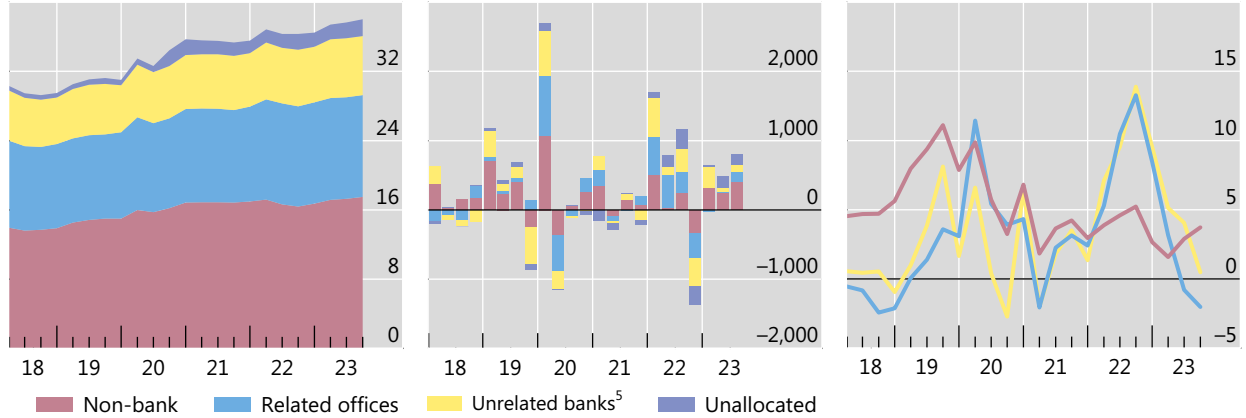
Graph A.1

Amounts outstanding, in USD trn²

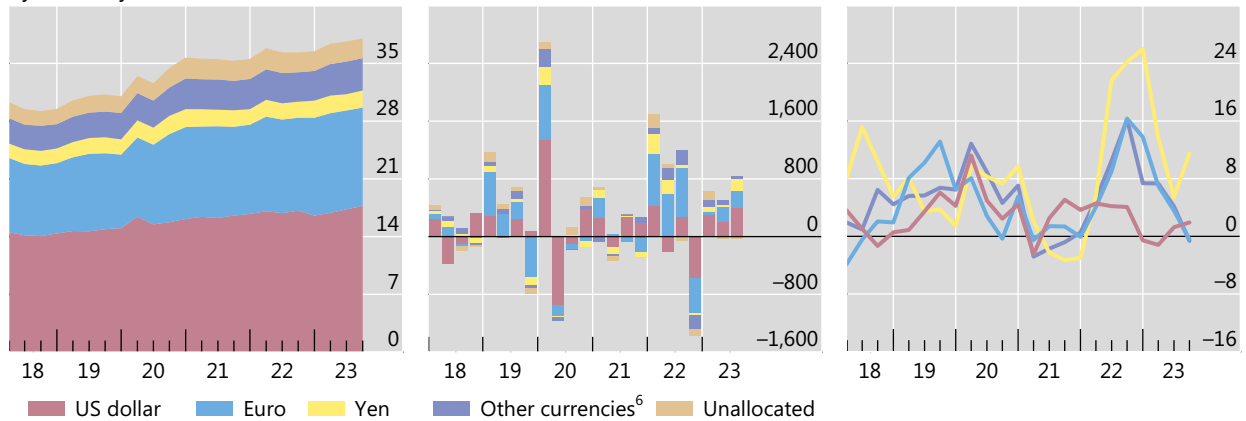
Adjusted changes, in USD bn³

Annual change, in per cent⁴

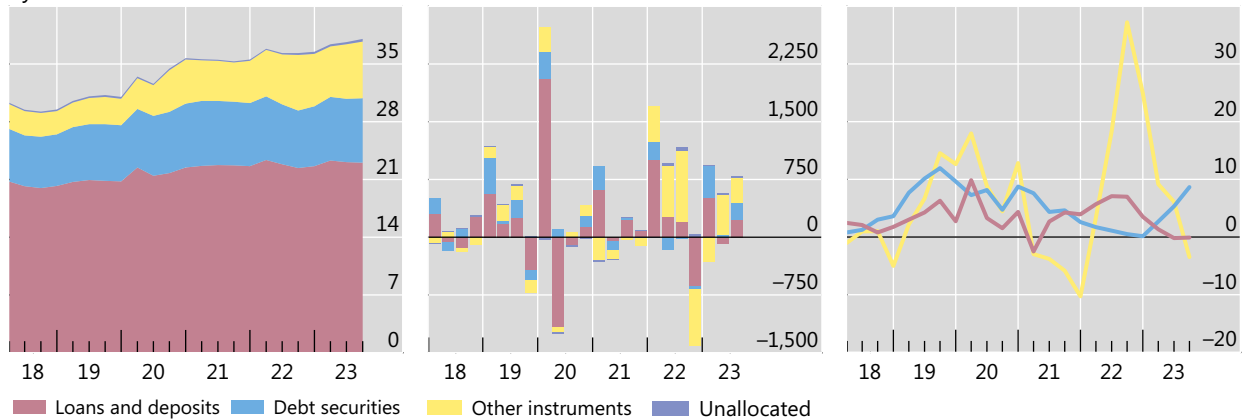
By sector of counterparty



By currency



By instrument



¹ Claims comprise loans and deposits, holdings of debt securities, and other instruments comprising derivatives with a positive market value and other residual instruments. ² At quarter-end. Amounts denominated in currencies other than the US dollar are converted to US dollars at the exchange rate prevailing on the reference date. ³ Quarterly changes in amounts outstanding, adjusted for the impact of exchange rate movements between quarter-ends and methodological breaks in the data. ⁴ Geometric mean of quarterly percentage adjusted changes. ⁵ Includes central banks and banks unallocated by subsector between interoffice and unrelated banks. ⁶ Other reported currencies, calculated as all currencies minus US dollar, euro, yen and unallocated currencies. The currency is known but reporting is incomplete.

Source: BIS locational banking statistics. Further information is available at www.bis.org/statistics/bankstats.htm.

Cross-border credit¹ by borrowing region

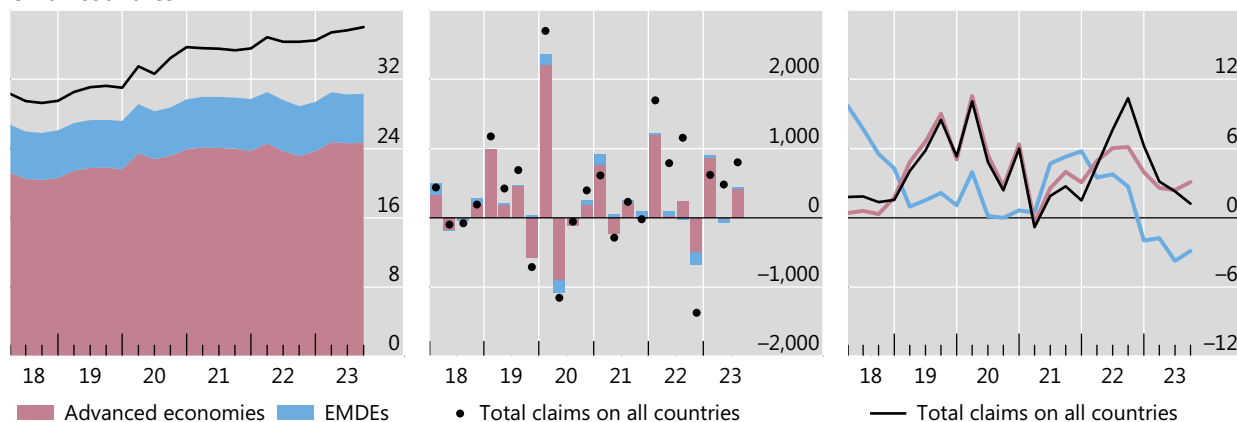
Graph A.2

Amounts outstanding, in USD trn²

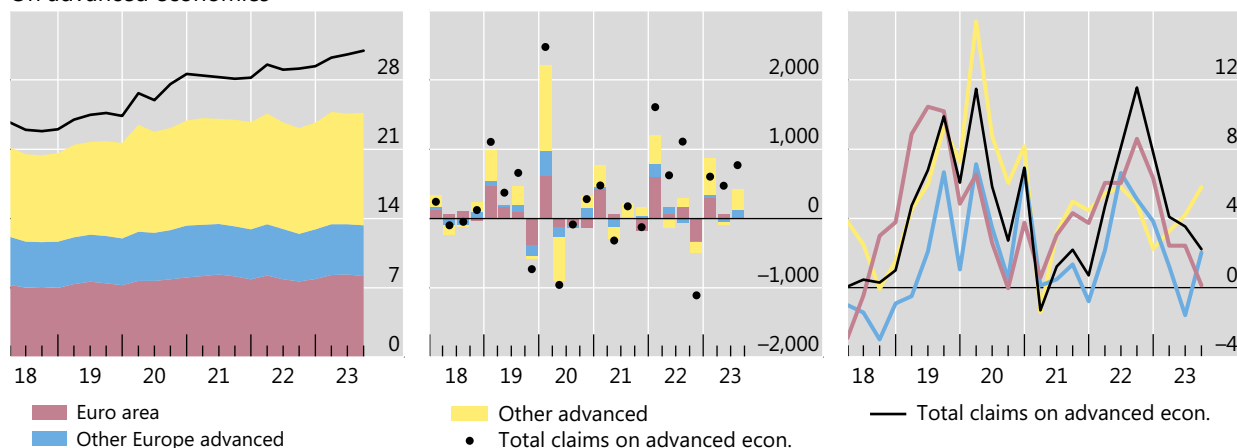
Adjusted changes, in USD bn³

Annual change, in per cent⁴

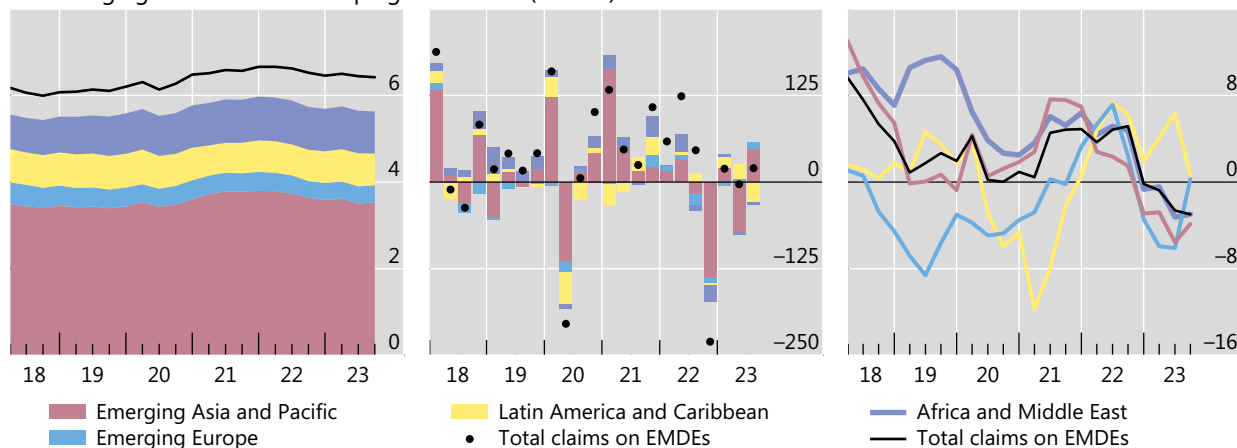
On all countries



On advanced economies



On emerging market and developing economies (EMDEs)



¹ Credit refers to loans and deposits, and holdings of debt securities, ie excluding from "claims" all other instruments (derivatives with positive market value and other residual instruments). ² At quarter-end. Amounts denominated in currencies other than the US dollar are converted to US dollars at the exchange rate prevailing on the reference date. ³ Quarterly changes in amounts outstanding, adjusted for the impact of exchange rate movements between quarter-ends and methodological breaks in the data. ⁴ Geometric mean of quarterly percentage adjusted changes.

Source: BIS locational banking statistics. Further information is available at www.bis.org/statistics/bankstats.htm.

Cross-border credit¹ by borrowing country

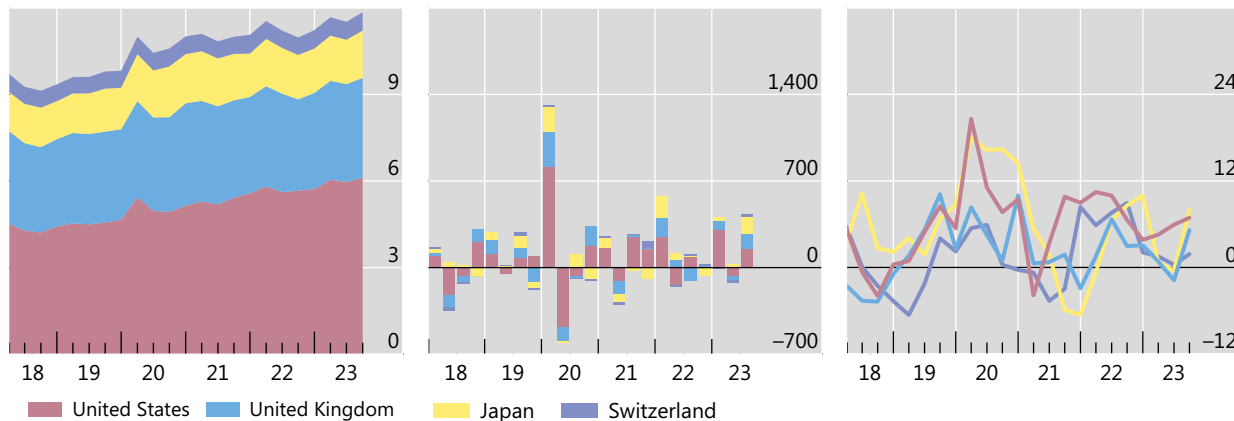
Graph A.3

Amounts outstanding, in USD trn²

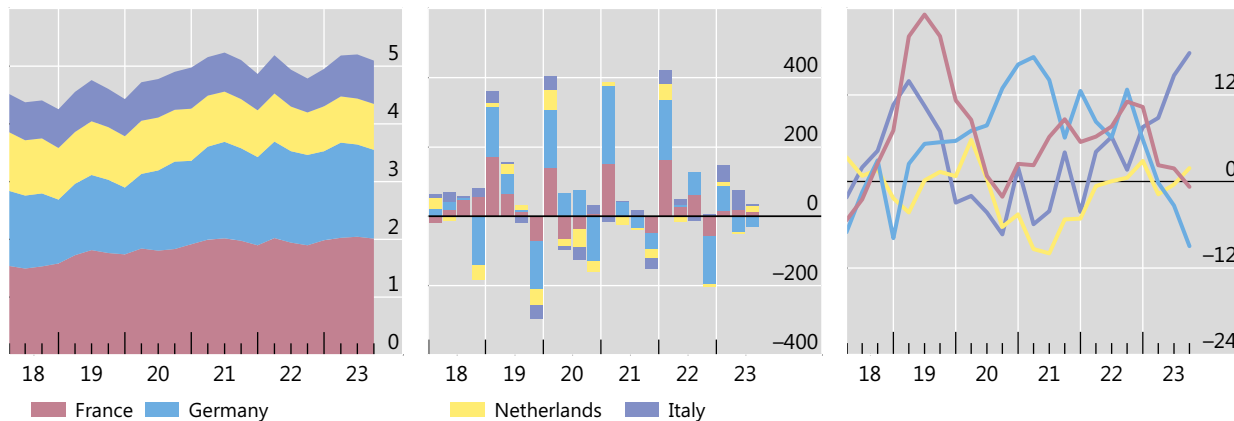
Adjusted changes, in USD bn³

Annual change, in per cent⁴

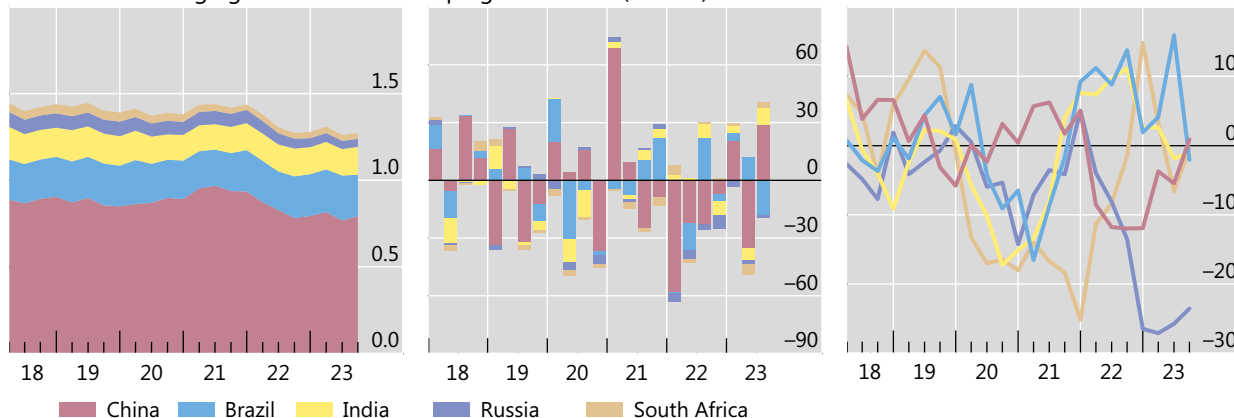
On selected advanced economies



On selected euro area countries



On selected emerging market and developing economies (EMDEs)



¹ Credit refers to loans and deposits, and holdings of debt securities, ie excluding from "claims" all other instruments (derivatives with positive market value and other residual instruments). ² At quarter-end. Amounts denominated in currencies other than the US dollar are converted to US dollars at the exchange rate prevailing on the reference date. ³ Quarterly changes in amounts outstanding, adjusted for the impact of exchange rate movements between quarter-ends and methodological breaks in the data. ⁴ Geometric mean of quarterly percentage adjusted changes.

Source: BIS locational banking statistics. Further information is available at www.bis.org/statistics/bankstats.htm.

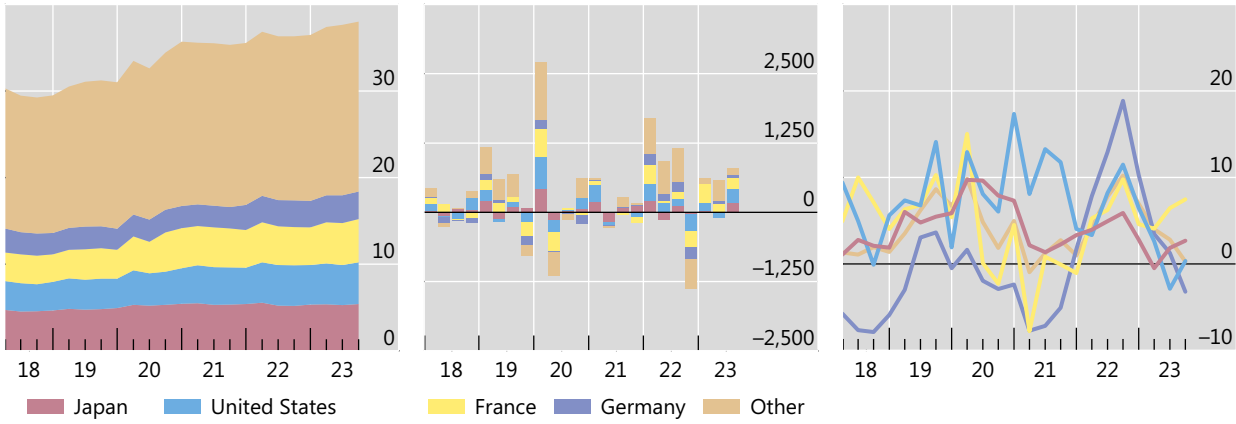
Cross-border claims by nationality of reporting bank and currency of denomination Graph A.4

Amounts outstanding, in USD trn¹

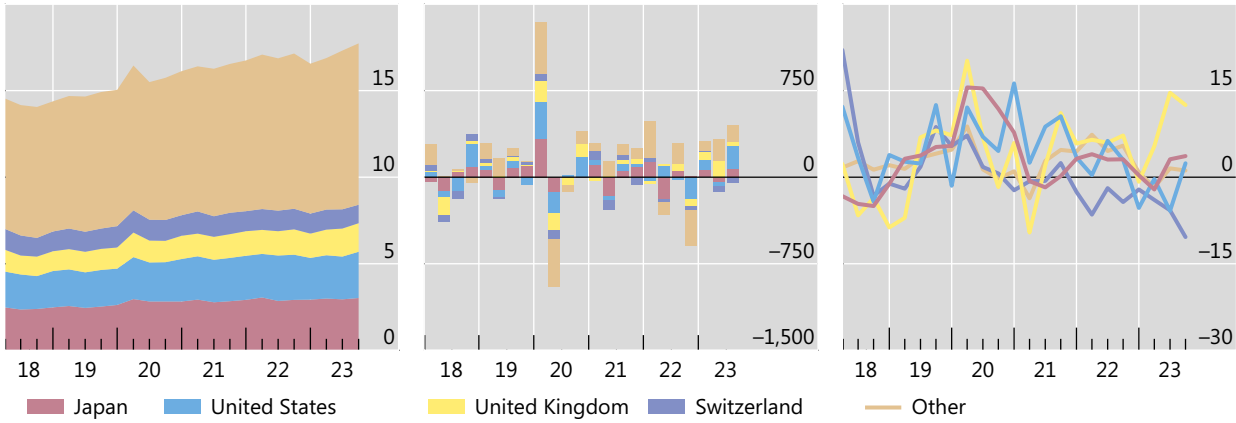
Adjusted changes, in USD bn²

Annual change, in per cent³

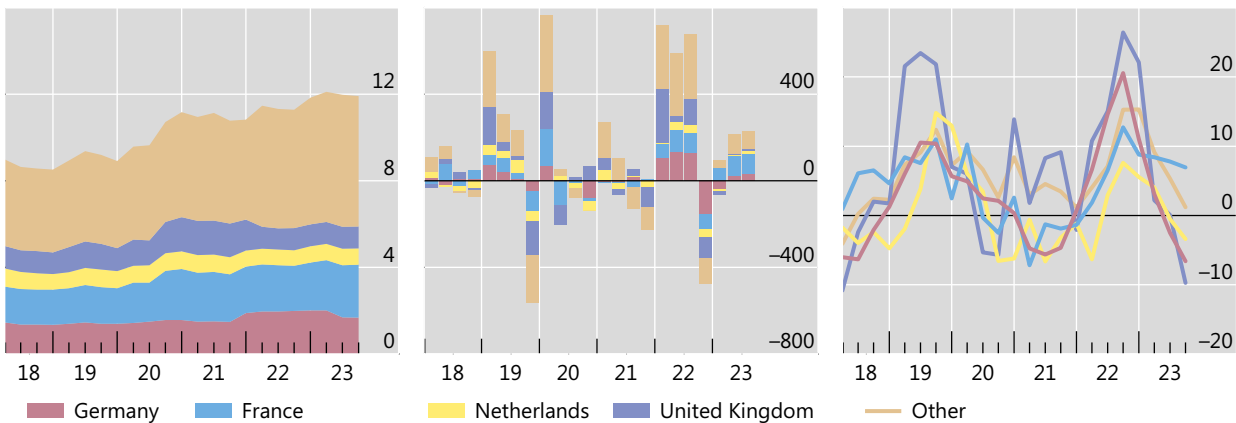
All currencies



US dollar



Euro



¹ At quarter-end. Amounts denominated in currencies other than the US dollar are converted to US dollars at the exchange rate prevailing on the reference date. ² Quarterly changes in amounts outstanding, adjusted for the impact of exchange rate movements between quarter-ends and methodological breaks in the data. ³ Geometric mean of quarterly percentage adjusted changes.

Source: BIS locational banking statistics. Further information is available at www.bis.org/statistics/bankstats.htm.

Cross-border debt liabilities¹ of reporting banks

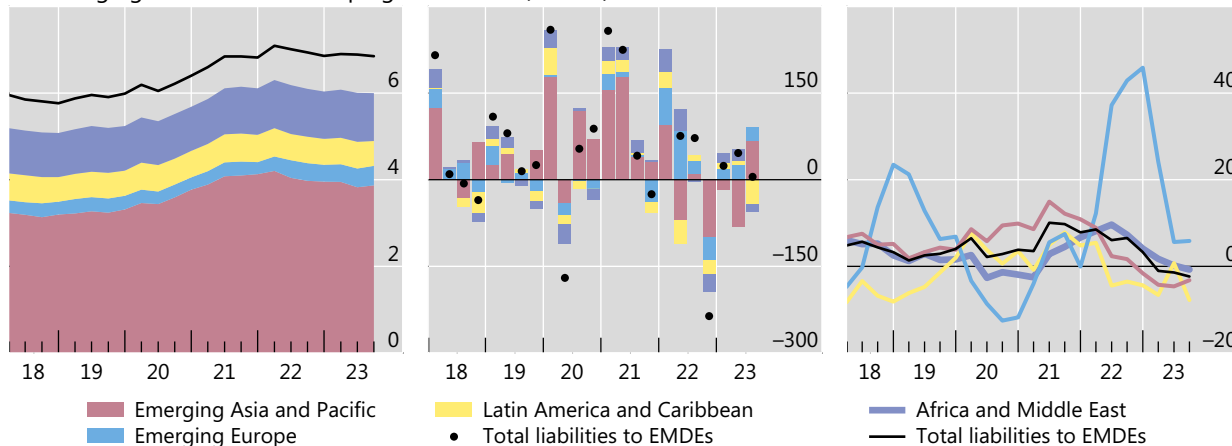
Graph A.5

Amounts outstanding, in USD trn²

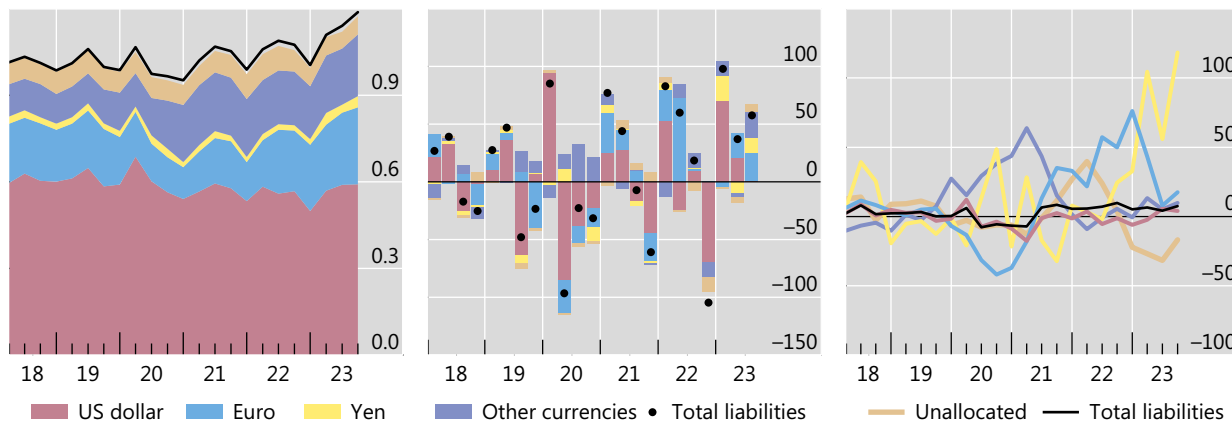
Adjusted changes, in USD bn³

Annual change, in per cent⁴

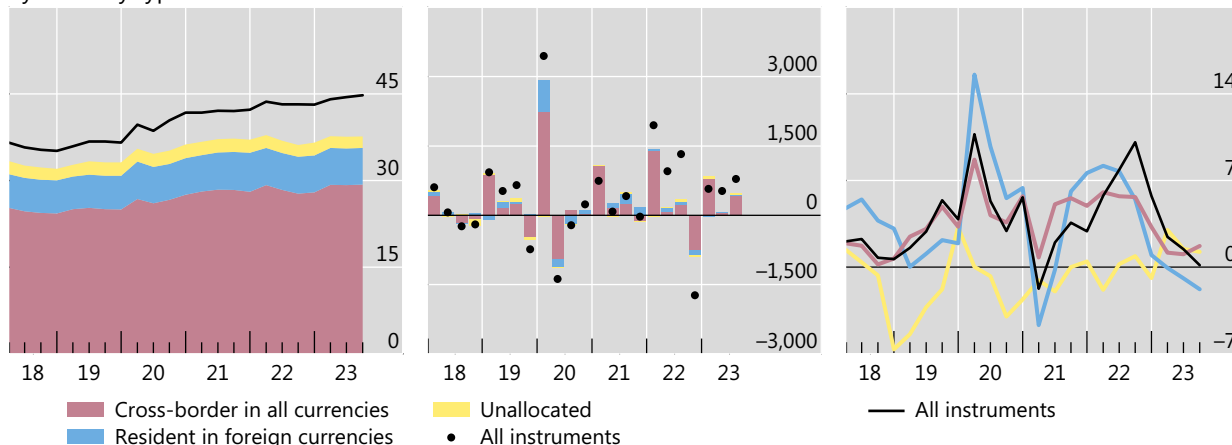
To emerging market and developing economies (EMDEs)



To central banks



By currency type and location



¹ Debt liabilities refer to loans and deposits and debt securities, ie excluding from “liabilities” all other instruments (derivatives with negative market value and other residual instruments). ² At quarter-end. Amounts denominated in currencies other than the US dollar are converted to US dollars at the exchange rate prevailing on the reference date. ³ Quarterly changes in amounts outstanding, adjusted for the impact of exchange rate movements between quarter-ends and methodological breaks in the data. ⁴ Geometric mean of quarterly percentage adjusted changes.

Source: BIS locational banking statistics. Further information is available at www.bis.org/statistics/bankstats.htm.

Annex B Consolidated banking statistics graphs

Consolidated claims of reporting banks on advanced economies

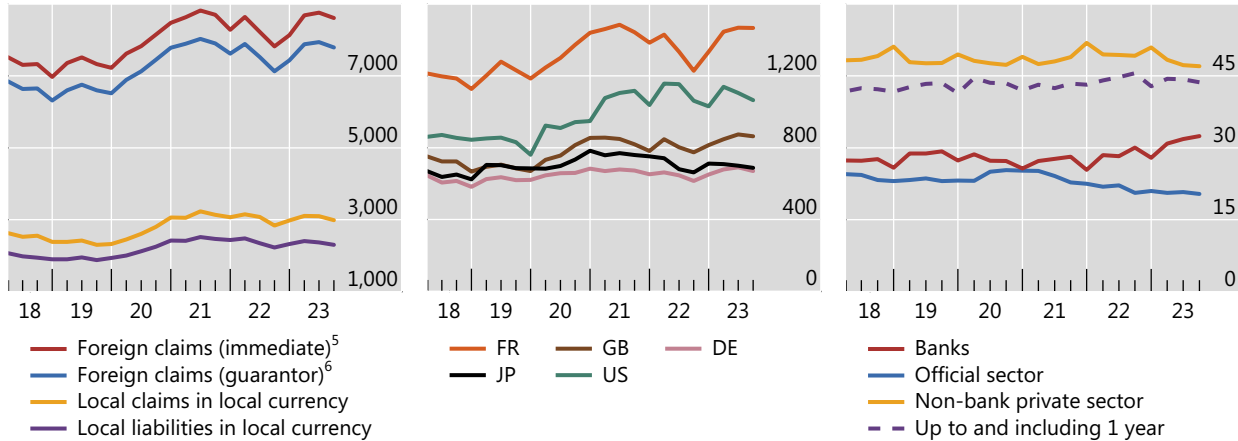
Graph B.1

Foreign claims and local positions, in USD bn^{1,2}

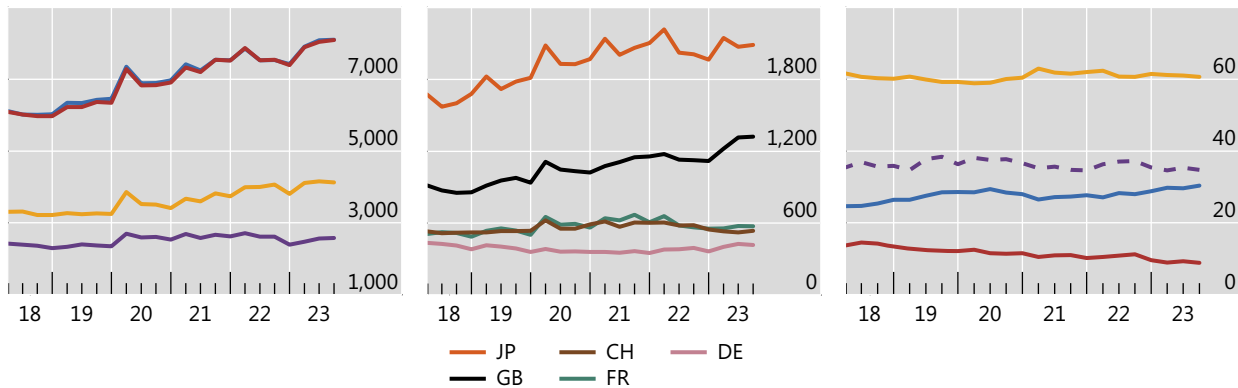
Foreign claims of selected creditors, in USD bn^{1,3}

International claims, by sector and maturity, in per cent⁴

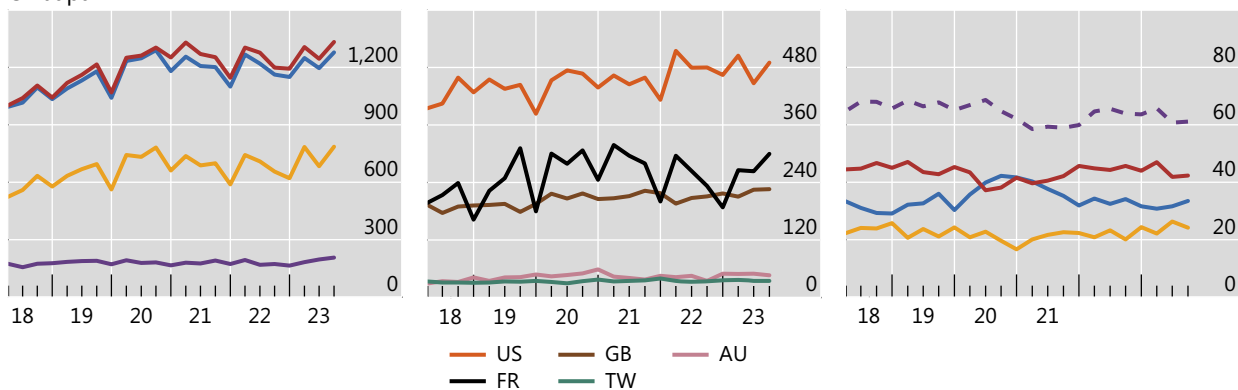
On the euro area



On the United States



On Japan



¹ Amounts outstanding at quarter-end. Amounts denominated in currencies other than the US dollar are converted to US dollars at the exchange rate prevailing on the reference date. ² Excludes domestic claims, ie claims on residents of a bank's home country. ³ Foreign claims on a guarantor basis, by nationality of reporting bank. The banking systems shown are not necessarily the largest foreign bank creditors on each reference date. ⁴ As a percentage of international claims outstanding. ⁵ On an immediate counterparty basis. Includes the unconsolidated claims of banks headquartered outside but located inside CBS-reporting countries. ⁶ On a guarantor basis.

Source: BIS consolidated banking statistics (CBS). Further information is available at www.bis.org/statistics/consstats.htm.

Consolidated claims of reporting banks on emerging market and developing economies (EMDEs)

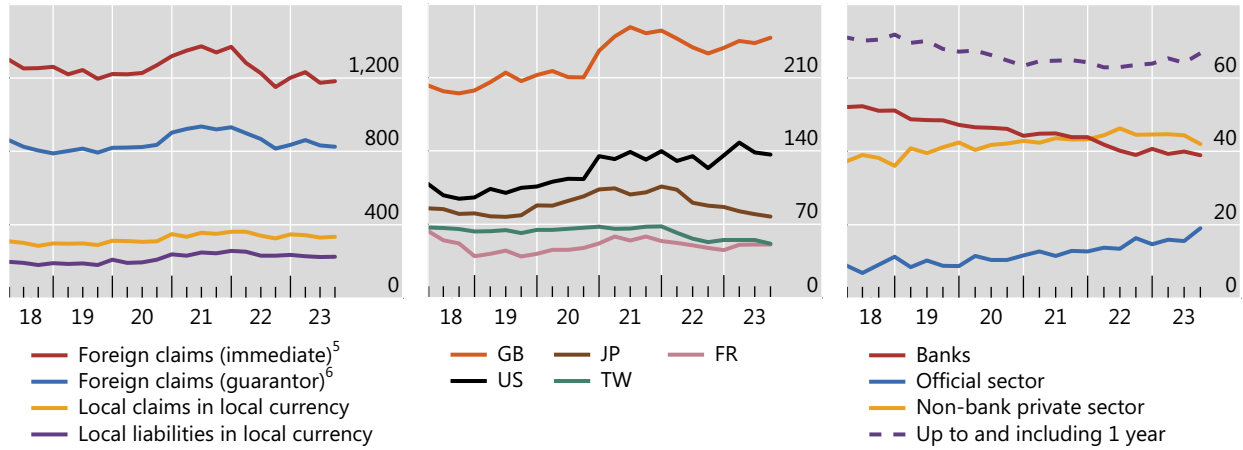
Graph B.2

Foreign claims and local positions, in USD bn^{1,2}

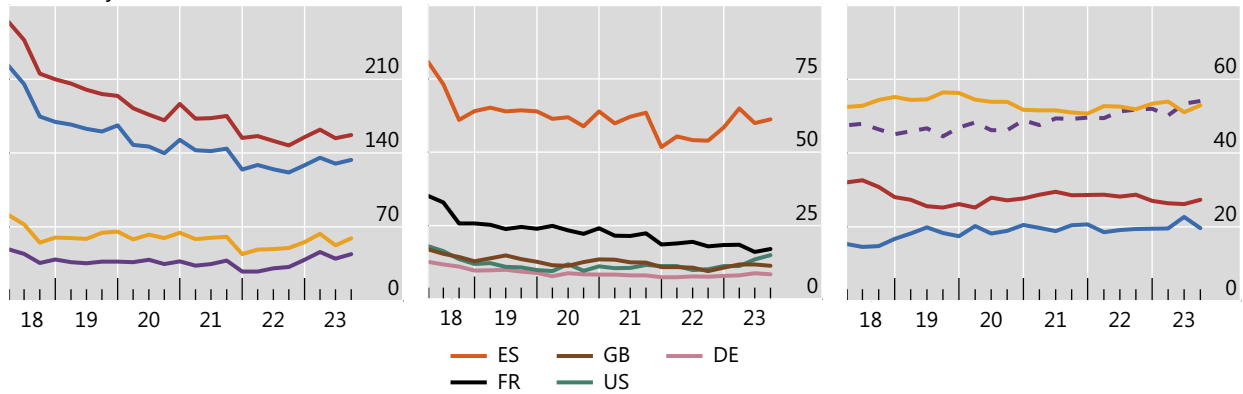
Foreign claims of selected creditors, in USD bn^{1,3}

International claims, by sector and maturity, in per cent⁴

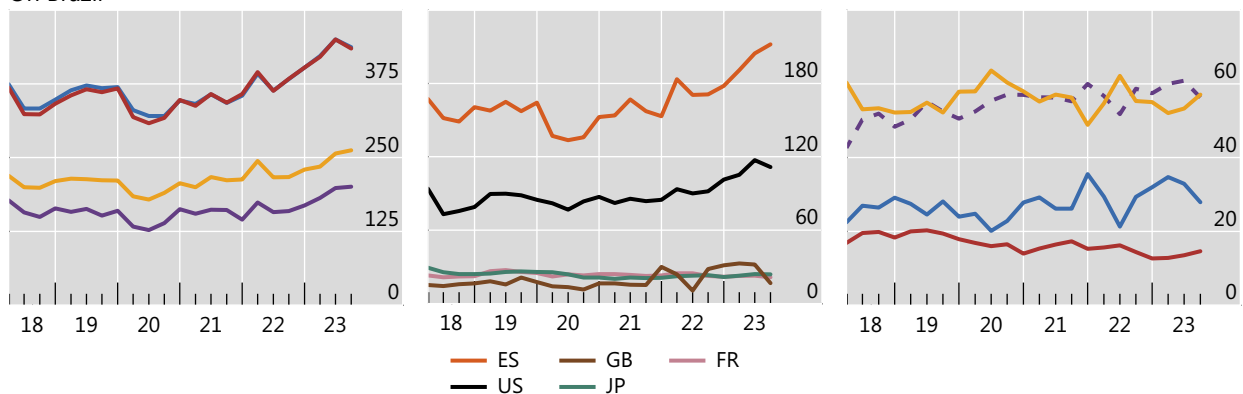
On China



On Turkey



On Brazil



¹ Amounts outstanding at quarter-end. Amounts denominated in currencies other than the US dollar are converted to US dollars at the exchange rate prevailing on the reference date. ² Excludes domestic claims, ie claims on residents of a bank's home country. ³ Foreign claims on a guarantor basis, by nationality of reporting bank. The banking systems shown are not necessarily the largest foreign bank creditors on each reference date. ⁴ As a percentage of international claims. ⁵ On an immediate counterparty basis. Includes the unconsolidated claims of banks headquartered outside but located inside CBS-reporting countries. ⁶ On a guarantor basis.

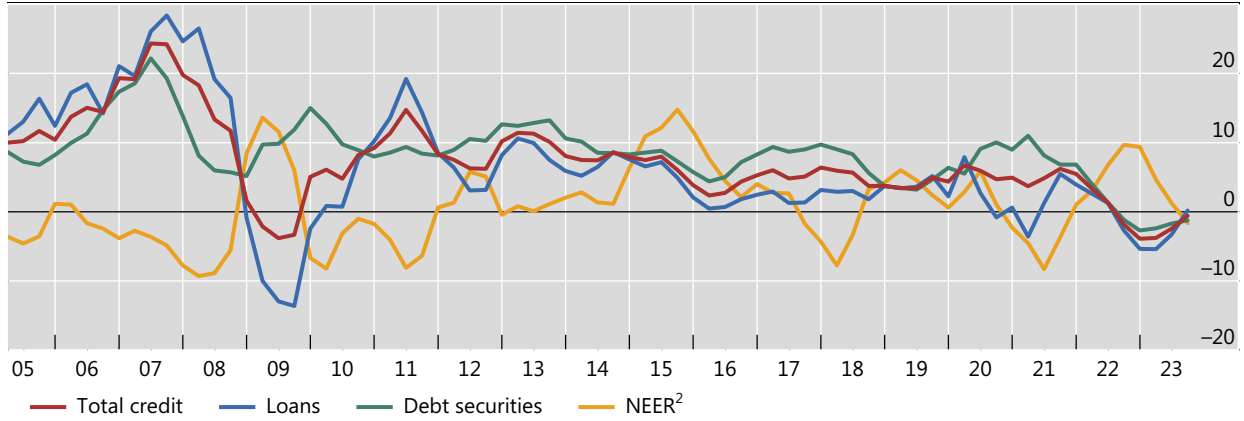
Source: BIS consolidated banking statistics (CBS). Further information is available at www.bis.org/statistics/consstats.htm.

Annex C Global liquidity indicators graphs

US dollar credit outside the United States¹

Annual change, in per cent

Graph C.1



Further information on the BIS global liquidity indicators is available at www.bis.org/statistics/about_gli_stats.htm.

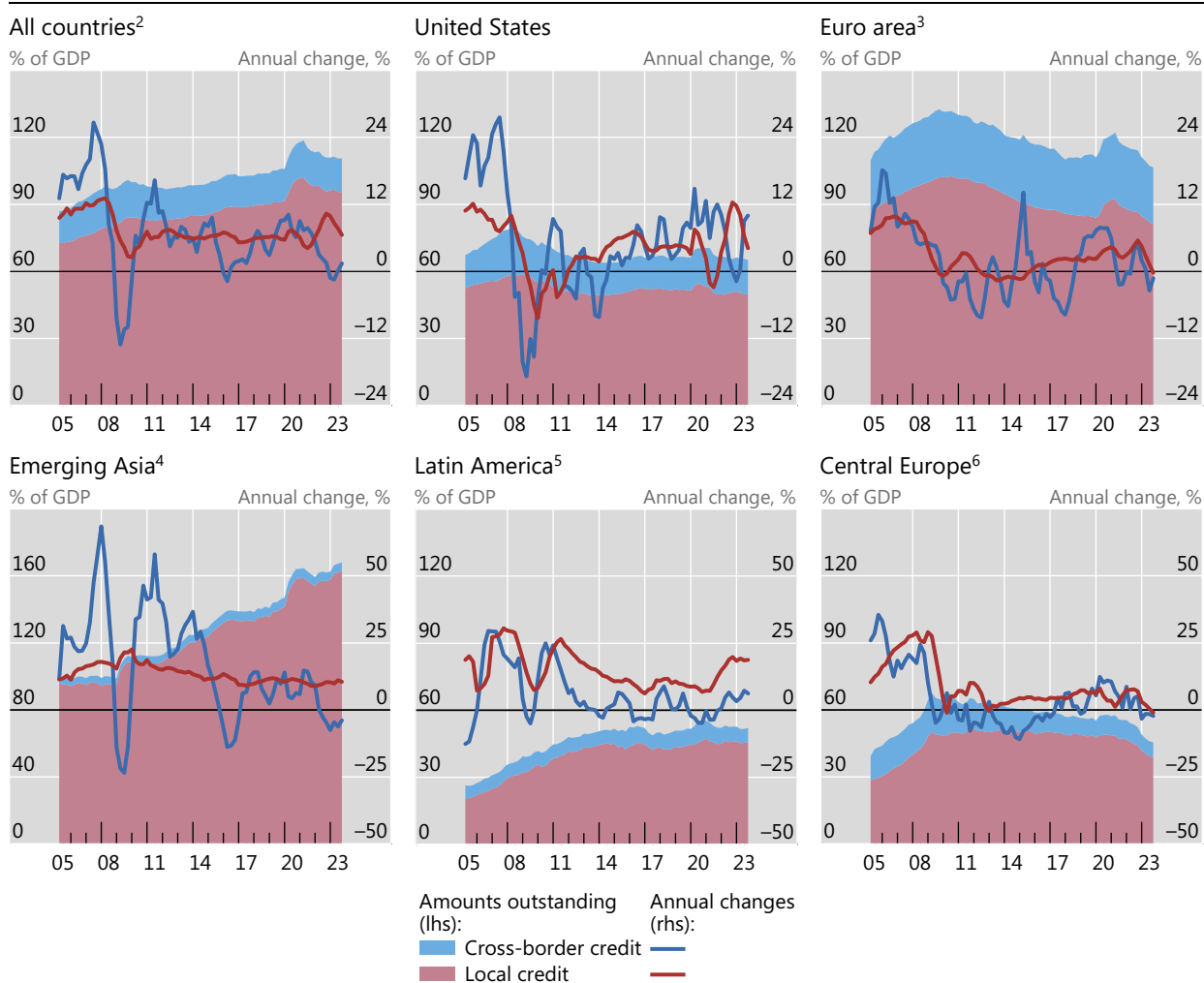
¹ Annual growth of US dollar-denominated credit to non-banks outside the United States. ² Annual growth of the US dollar nominal effective exchange rate (NEER). An increase indicates an appreciation of the US dollar NEER.

Sources: Datastream; Dealogic; Euroclear; Thomson Reuters; Xtrakter Ltd; national data; BIS locational banking statistics; BIS effective exchange rate statistics; BIS calculations.

Global bank credit to the private non-financial sector, by residence of borrower

Banks' cross-border credit plus local credit in all currencies¹

Graph C.2



Further information on the BIS global liquidity indicators is available at www.bis.org/statistics/about_gli_stats.htm.

¹ Cross-border claims of LBS-reporting banks to the non-bank sector plus local claims of all banks to the private non-financial sector. Weighted averages of the economies listed, based on four-quarter moving sums of GDP. ² Australia, Canada, Denmark, Israel, Japan, New Zealand, Norway, Russia, Saudi Arabia, South Africa, Sweden, Switzerland, Turkey and the United Kingdom, plus the countries in the other panels. ³ Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal and Spain. ⁴ China, Hong Kong SAR, India, Indonesia, Korea, Malaysia, Singapore and Thailand. ⁵ Argentina, Brazil, Chile, Colombia and Mexico. ⁶ The Czech Republic, Hungary and Poland.

Sources: BIS statistics on credit to the non-financial sector; BIS locational banking statistics (LBS); BIS calculations.

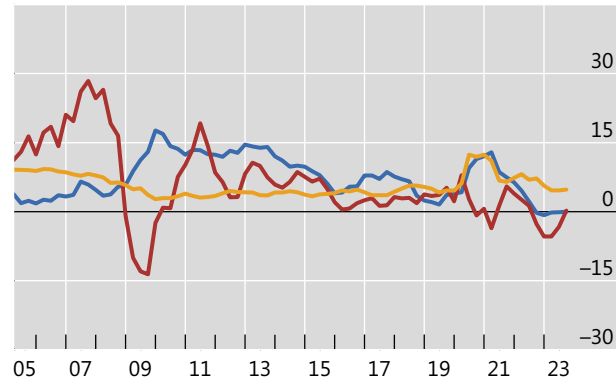
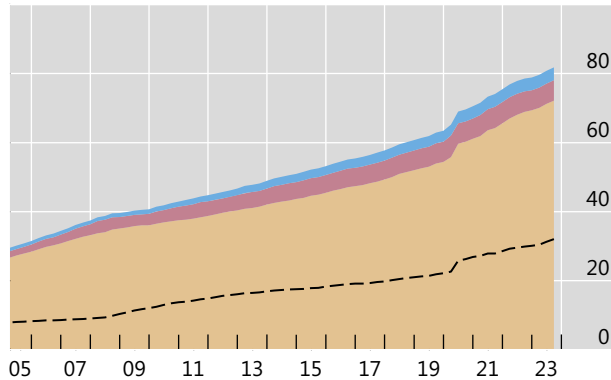
Global credit to the non-financial sector, by currency

Graph C.3

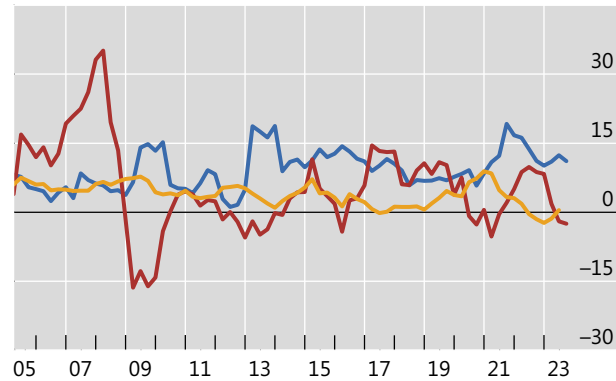
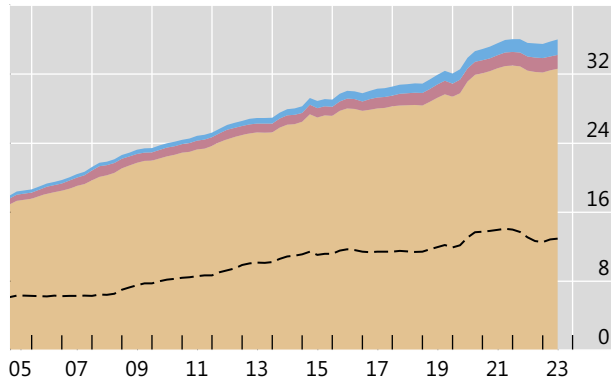
Amounts outstanding, in trillions of currency units¹

Annual change, in per cent²

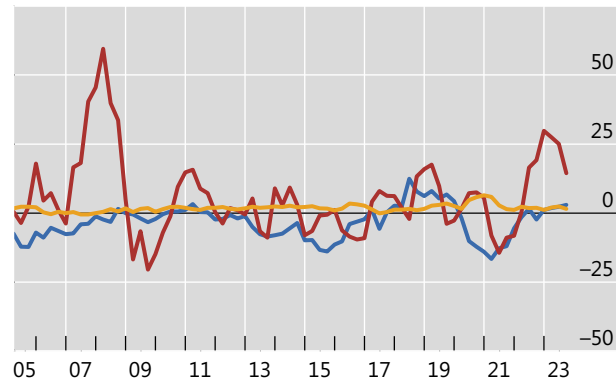
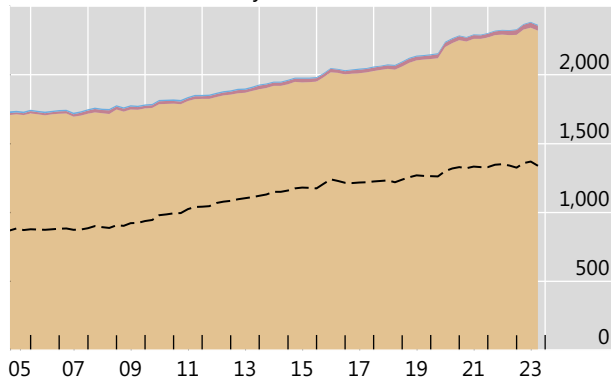
Credit denominated in US dollars



Credit denominated in euros



Credit denominated in yen



Credit to non-residents: Credit to residents:⁵
 Bank loans³ Total
 Debt securities⁴ — Of which: government

Credit to non-residents: Credit to residents:⁵
 Bank loans³
 Debt securities⁴

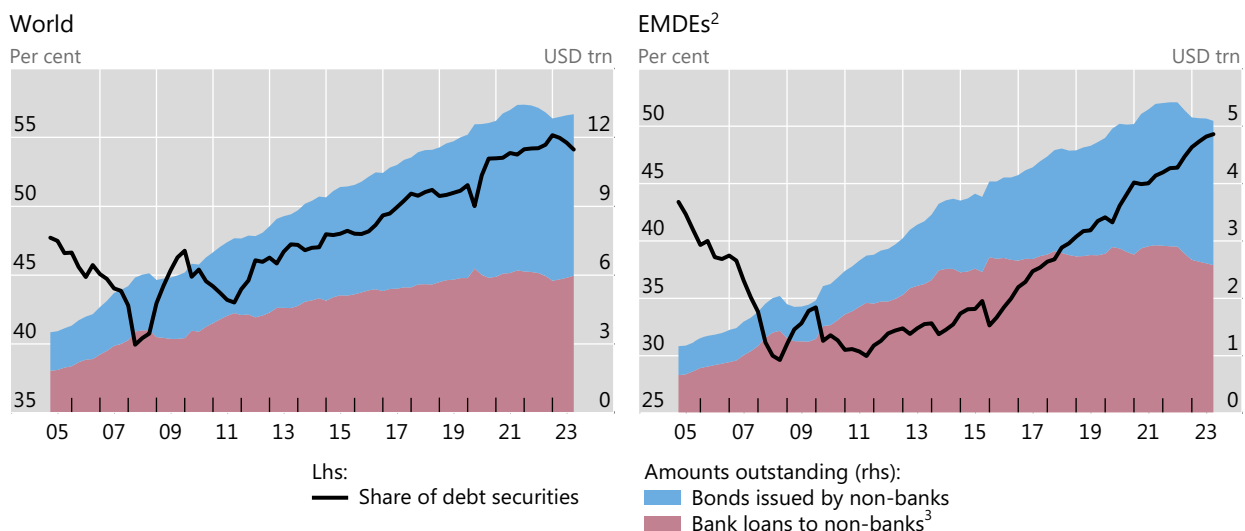
Further information on the BIS global liquidity indicators is available at www.bis.org/statistics/about_gli_stats.htm.

¹ Amounts outstanding at quarter-end. ² Based on quarterly break- and exchange rate-adjusted changes. ³ Loans by LBS-reporting banks to non-bank borrowers, including non-bank financial entities, comprise cross-border plus local loans. ⁴ Excluding debt securities issued by special purpose vehicles and other financial entities controlled by non-financial parents. Euro-denominated debt securities exclude those issued by institutions of the European Union. ⁵ Credit to non-financial borrowers residing in the United States / euro area / Japan. National financial accounts are adjusted using BIS banking and securities statistics to exclude credit denominated in non-local currencies.

Sources: Datastream; Dealogic; Euroclear; Thomson Reuters; Xtrakter Ltd; national data; BIS locational banking statistics (LBS); BIS calculations.

US dollar-denominated credit to non-banks outside the United States¹

Graph C.4



Further information on the BIS global liquidity indicators is available at www.bis.org/statistics/about_gli_stats.htm.

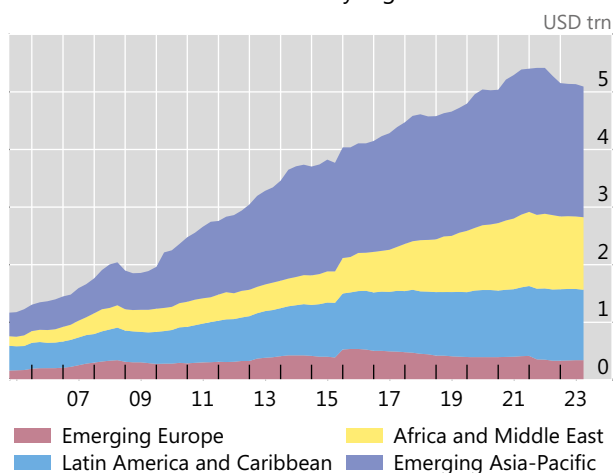
¹ Non-banks comprise non-bank financial entities, non-financial corporations, governments, households and international organisations. ² From December 2022, this grouping has been aligned with the country classification in the BIS Annual Economic report, as detailed [here](#). ³ Loans by LBS-reporting banks to non-bank borrowers, including non-bank financial entities, comprise cross-border plus local loans.

Sources: Datastream; Dealogic; Euroclear; Thomson Reuters; Xtrakter Ltd; national data; BIS locational banking statistics (LBS); BIS calculations.

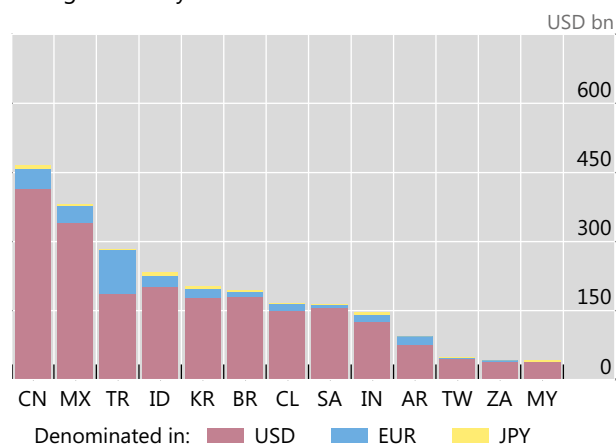
Foreign currency credit to non-banks in EMDEs¹

Graph C.5

US dollar-denominated credit by region



Foreign currency credit to selected EMDEs²



Further information on the BIS global liquidity indicators is available at www.bis.org/statistics/about_gli_stats.htm.

¹ From December 2022, this grouping has been aligned with the country classification in the BIS Annual Economic report, as detailed [here](#). ² Amounts outstanding for the latest available data.

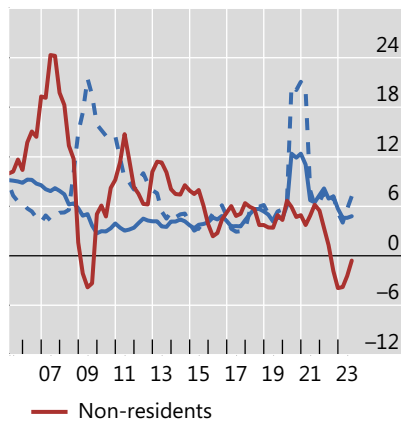
Sources: Datastream; Dealogic; Euroclear; Thomson Reuters; Xtrakter Ltd; national data; BIS locational banking statistics; BIS calculations.

Credit to non-residents and residents

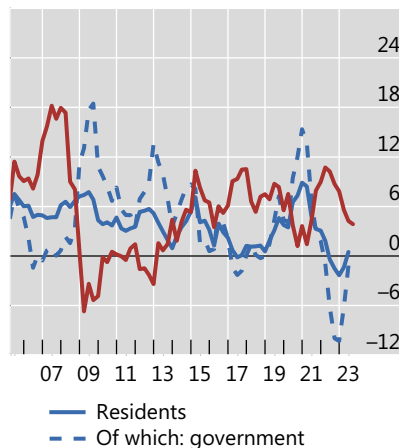
Year-on-year change, in per cent

Graph C.6

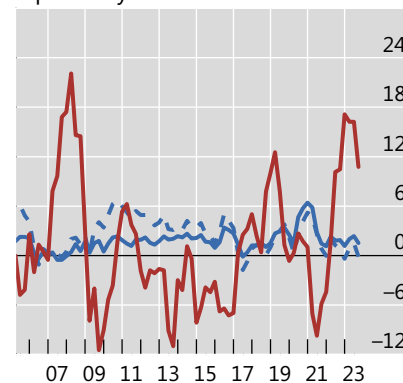
US dollar



Euro



Japanese yen



Credit to non-resident non-bank sector and resident non-financial sector.

Sources: Datastream; Dealogic; Euroclear; Thomson Reuters; Xtrakter Ltd; national data; BIS locational banking statistics (LBS); BIS calculations.