

Annexes

BIS Statistics: Charts

The statistics published by the BIS are a unique source of information about the structure of and activity in the global financial system. BIS statistics are presented in graphical form in this annex and in tabular form in the *BIS Statistical Bulletin*, which is published concurrently with the *BIS Quarterly Review*. For introductions to the BIS statistics and a glossary of terms used in this annex, see the *BIS Statistical Bulletin*.

The data shown in the charts in this annex can be downloaded from the *BIS Quarterly Review* page on the BIS website (www.bis.org/publ/quarterly.htm). Data may have been revised or updated subsequent to the publication of this annex. For the latest data and to download additional data, see the statistics pages on the BIS website (www.bis.org/statistics/index.htm). A release calendar provides advance notice of publication dates (www.bis.org/statistics/relcal.htm).

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A Locational banking statistics

Cross-border claims, by sector, currency and instrument

Graph A.1



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

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. ⁴ Includes central banks and banks unallocated by subsector between intragroup and unrelated banks. ⁵ 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.

Cross-border claims, by borrowing region

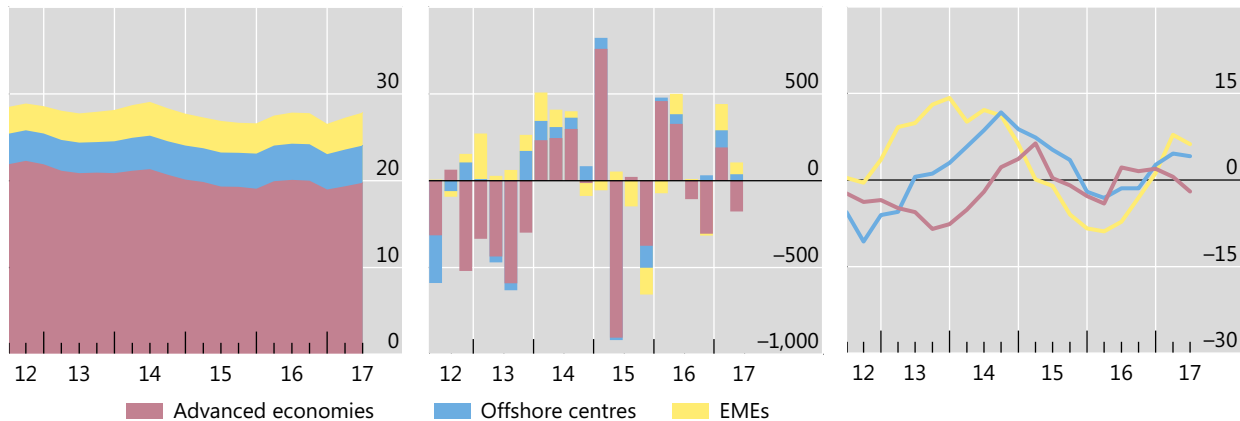
Graph A.2

Amounts outstanding, in USD trn¹

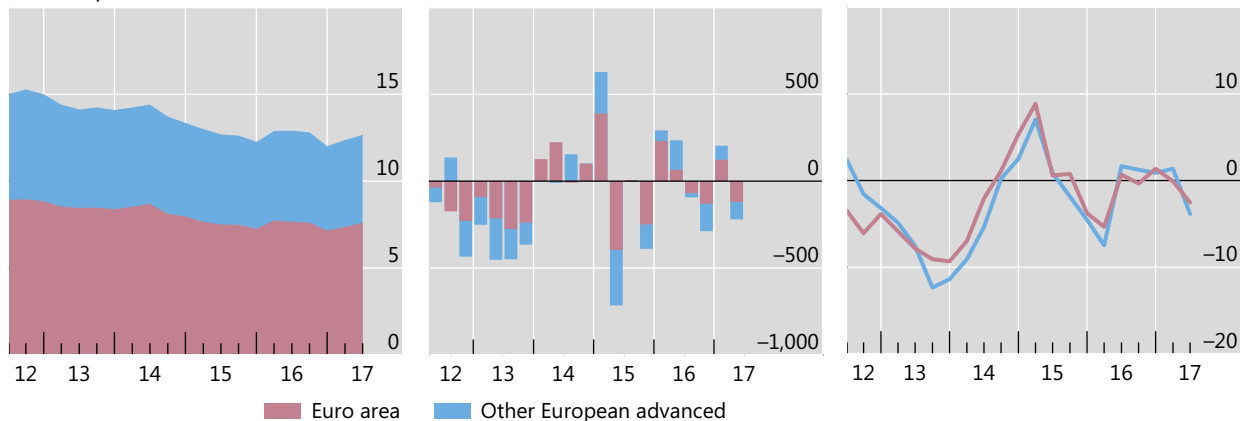
Adjusted changes, in USD bn²

Annual change, in per cent³

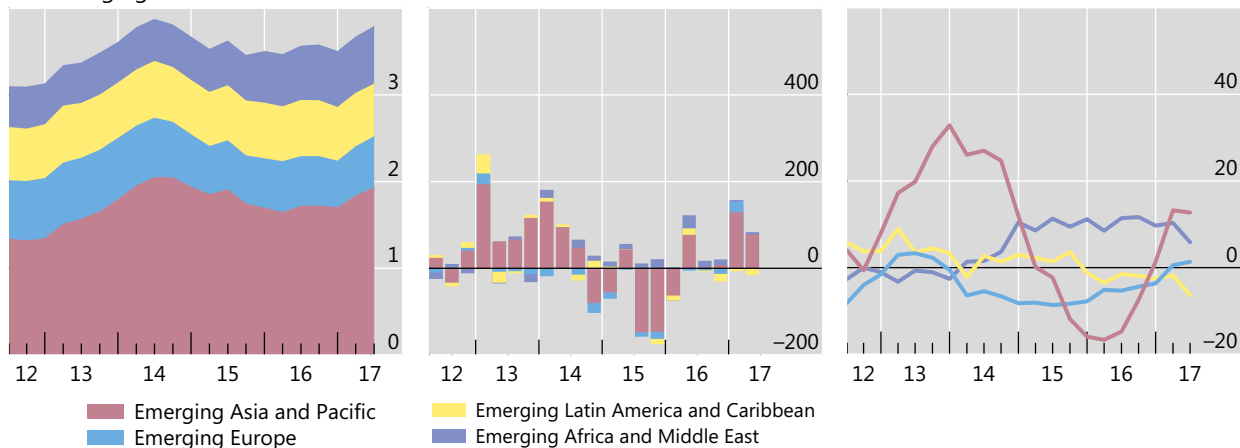
On all countries



On Europe



On emerging market economies



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

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.

Cross-border claims, by borrowing country

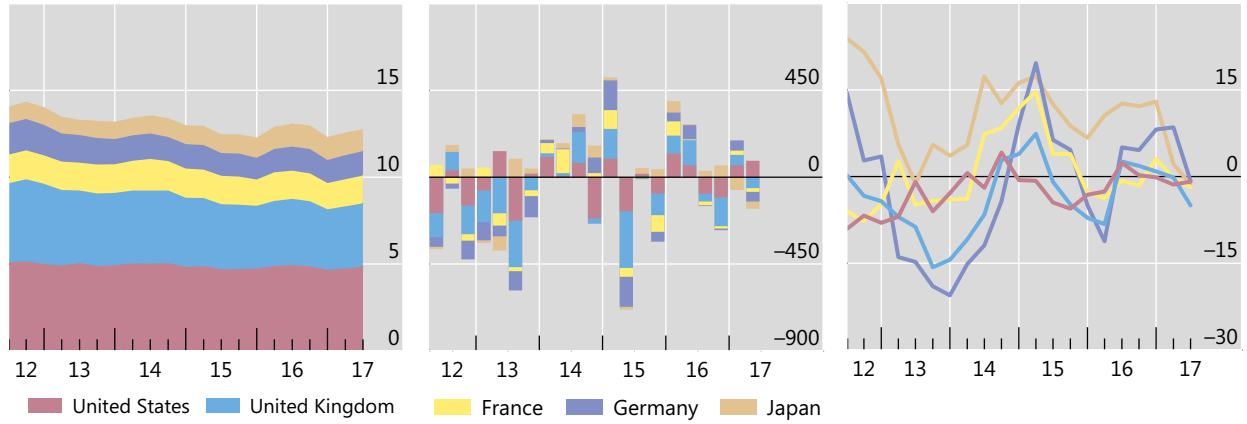
Graph A.3

Amounts outstanding, in USD trn¹

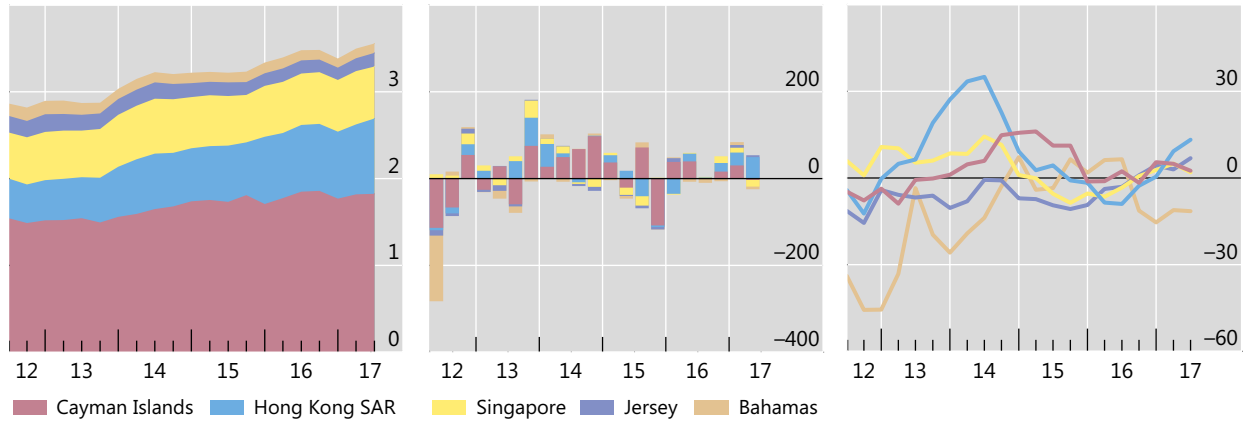
Adjusted changes, in USD bn²

Annual change, in per cent³

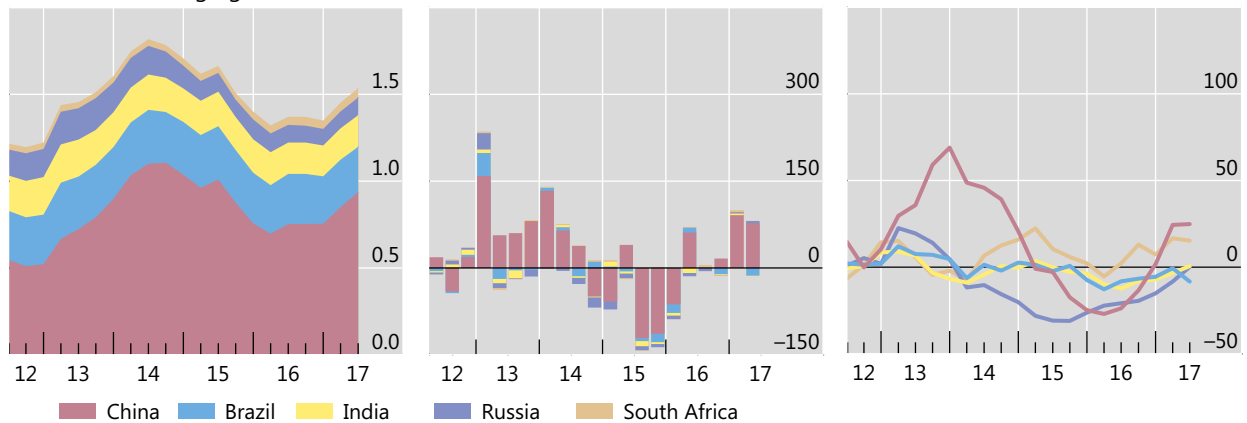
On selected advanced economies



On selected offshore centres



On selected emerging market economies

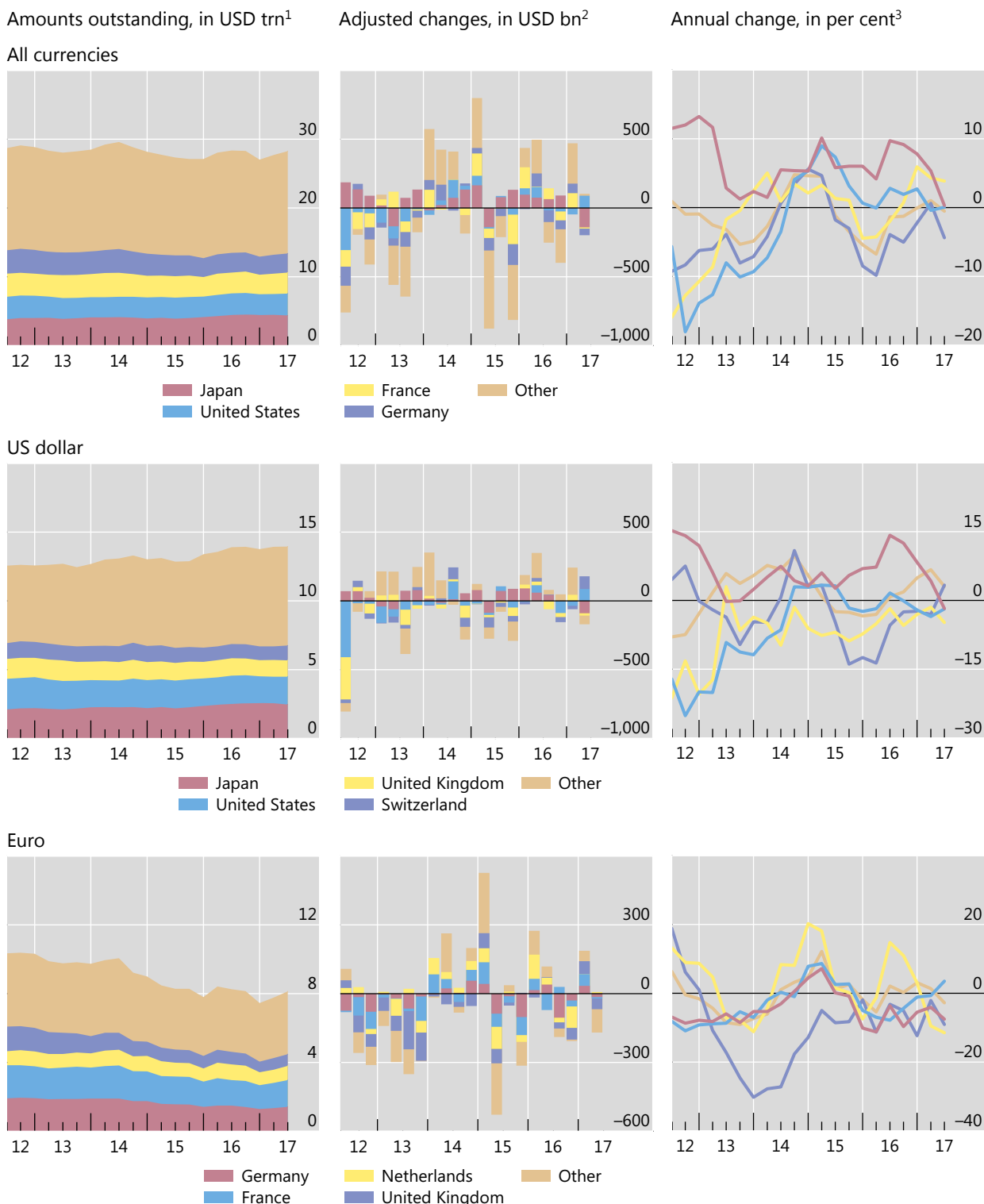


Further information on the BIS locational banking statistics is available at www.bis.org/statistics/bankstats.htm.

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.

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



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

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.

Cross-border liabilities of reporting banks

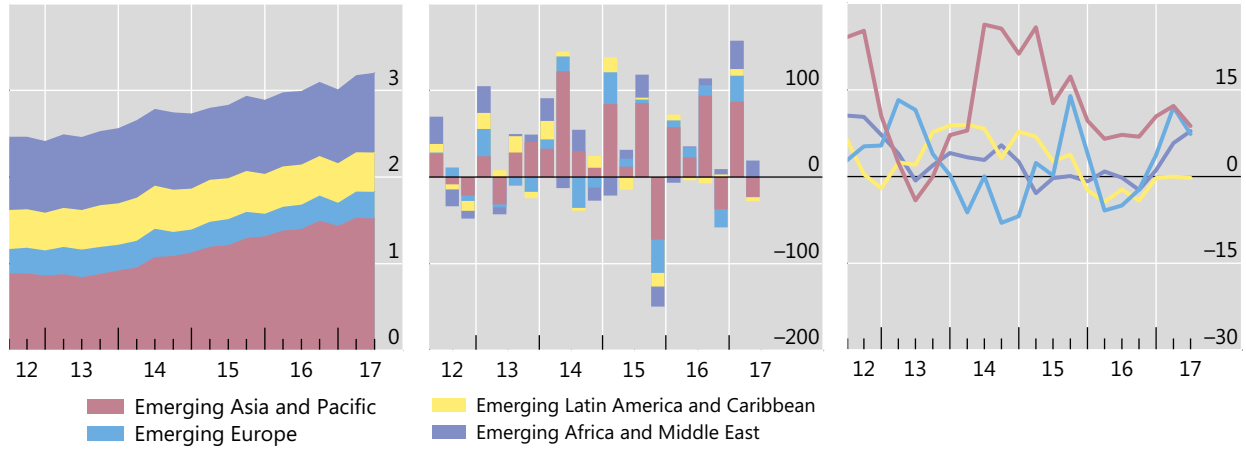
Graph A.5

Amounts outstanding, in USD trn¹

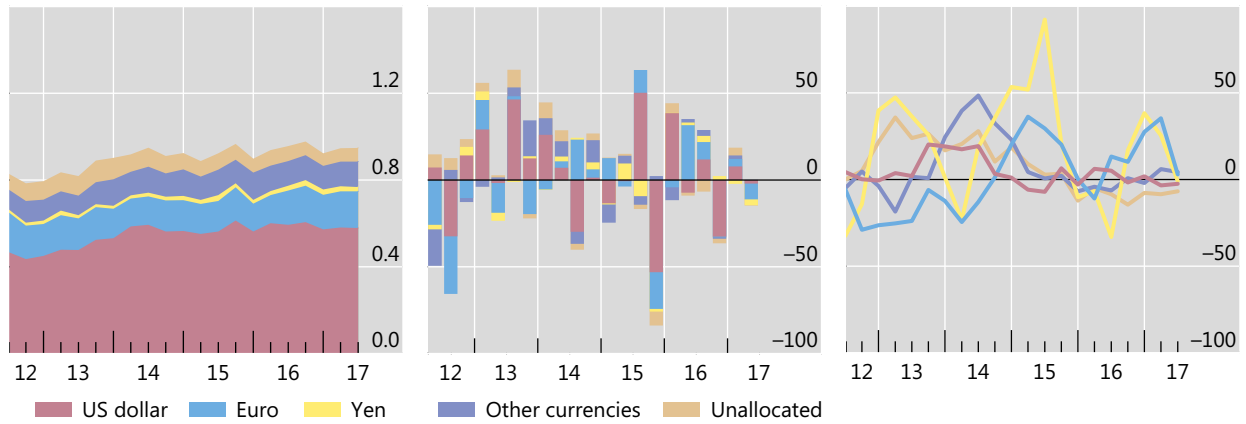
Adjusted changes, in USD bn²

Annual change, in per cent³

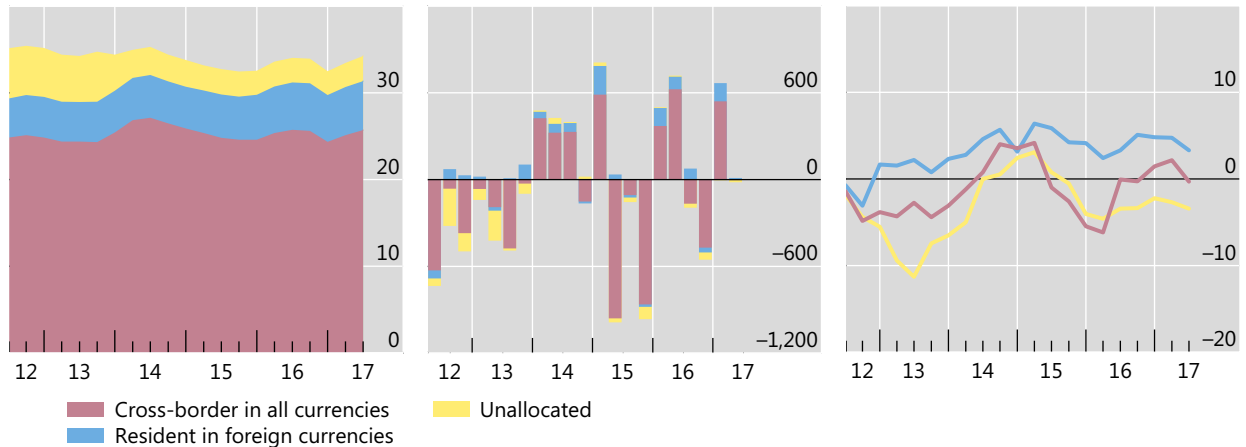
To emerging market economies



To central banks



By currency type and location



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

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.

B Consolidated banking statistics

Consolidated claims of reporting banks on advanced economies

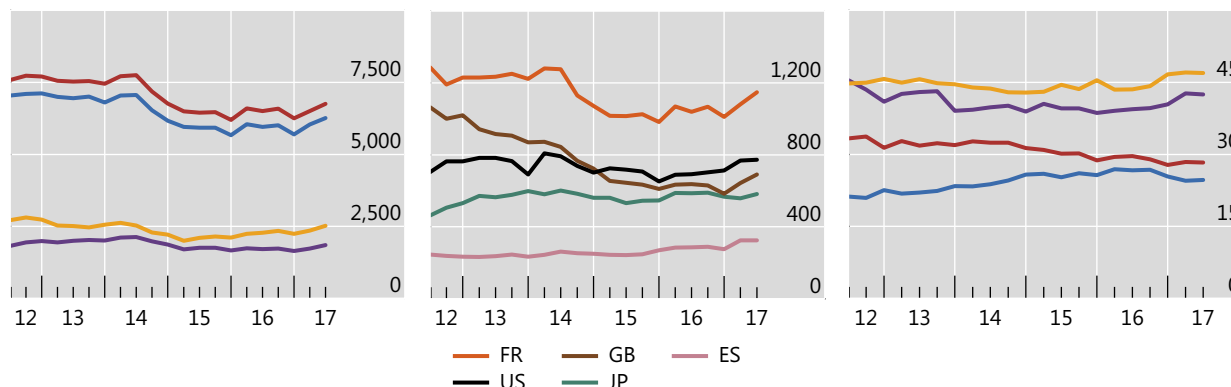
Graph B.1

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

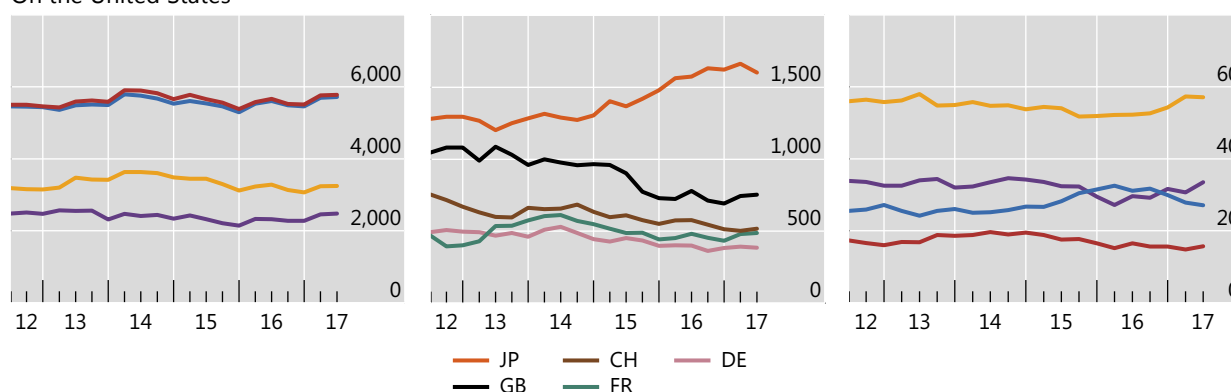
Foreign claims of selected creditors, in USD bn^{1,3}

International claims, by sector and maturity, in per cent⁴

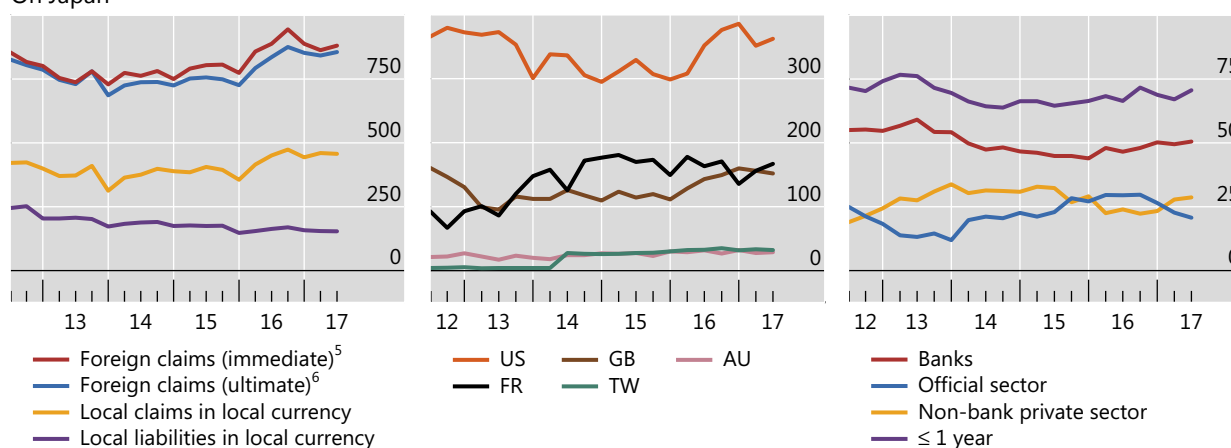
On the euro area



On the United States



On Japan



AU = Australia; CH = Switzerland; DE = Germany; FR = France; GB = United Kingdom; JP = Japan; NL = Netherlands; US = United States.

Further information on the BIS consolidated banking statistics is available at www.bis.org/statistics/bankstats.htm.

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 an ultimate risk 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 an ultimate risk basis.

Source: BIS consolidated banking statistics (CBS).

Consolidated claims of reporting banks on emerging market economies

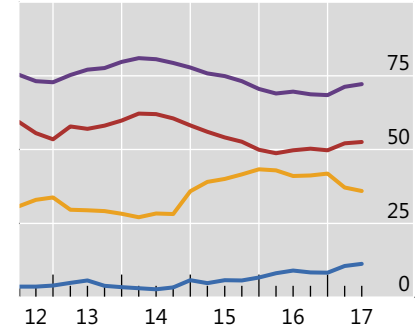
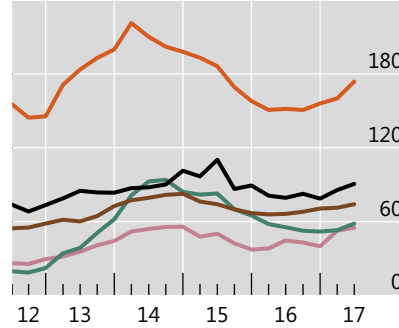
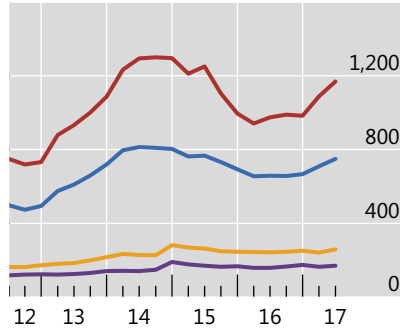
Graph B.2

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

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

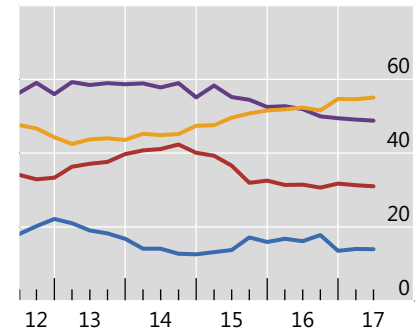
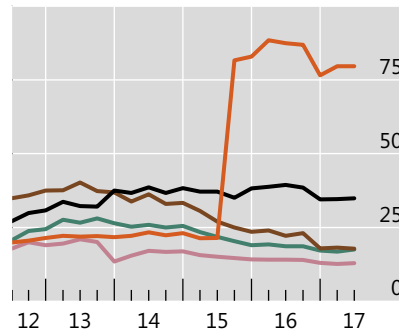
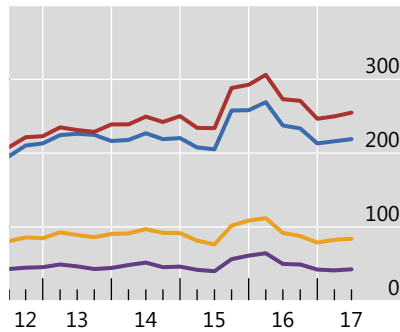
International claims, by sector and maturity, in per cent⁴

On China



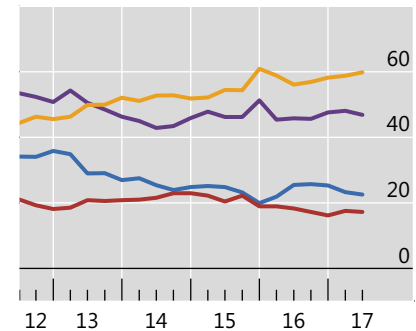
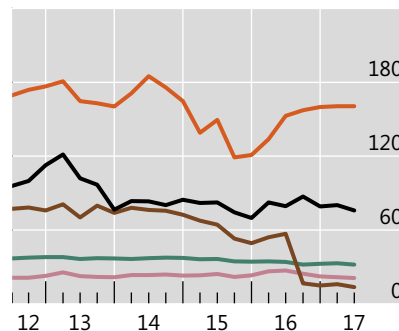
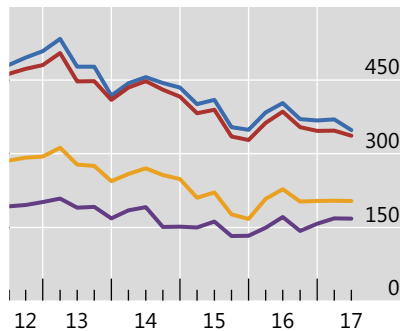
— United Kingdom — Chinese Taipei
— United States — France
— Japan

On Turkey



— ES — GB — DE
— FR — US

On Brazil



— Foreign claims (immediate)⁵
— Foreign claims (ultimate)⁶
— Local claims in local currency
— Local liabilities in local currency

— ES — GB — FR
— US — JP

— Banks
— Official sector
— Non-bank private sector
— ≤ 1 year

AU = Australia; DE = Germany; ES = Spain; GB = United Kingdom; GR = Greece; JP = Japan; NL = Netherlands; TW = Chinese Taipei; US = United States.

Further information on the BIS consolidated banking statistics is available at www.bis.org/statistics/bankstats.htm.

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 an ultimate risk 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 an ultimate risk basis.

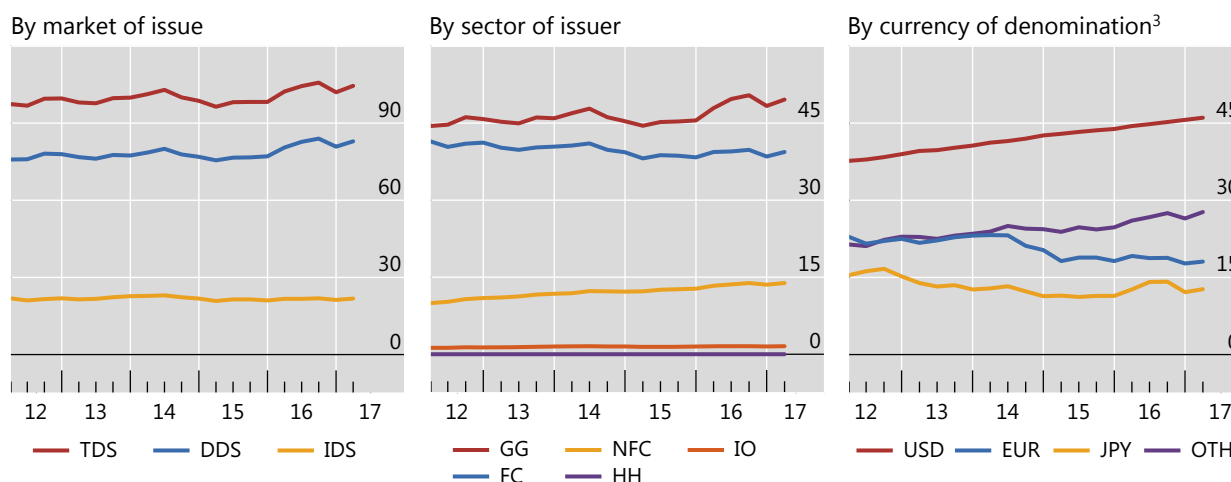
Source: BIS consolidated banking statistics (CBS).

C Debt securities statistics

Global debt securities markets¹

Amounts outstanding, in trillions of US dollars²

Graph C.1



DDS = domestic debt securities; IDS = international debt securities; TDS = total debt securities.

FC = financial corporations; GG = general government; HH = households and non-profit institutions serving households; IO = international organisations; NFC = non-financial corporations.

EUR = euro; JPY = yen; OTH = other currencies; USD = US dollar.

Further information on the BIS debt securities statistics is available at www.bis.org/statistics/secstats.htm.

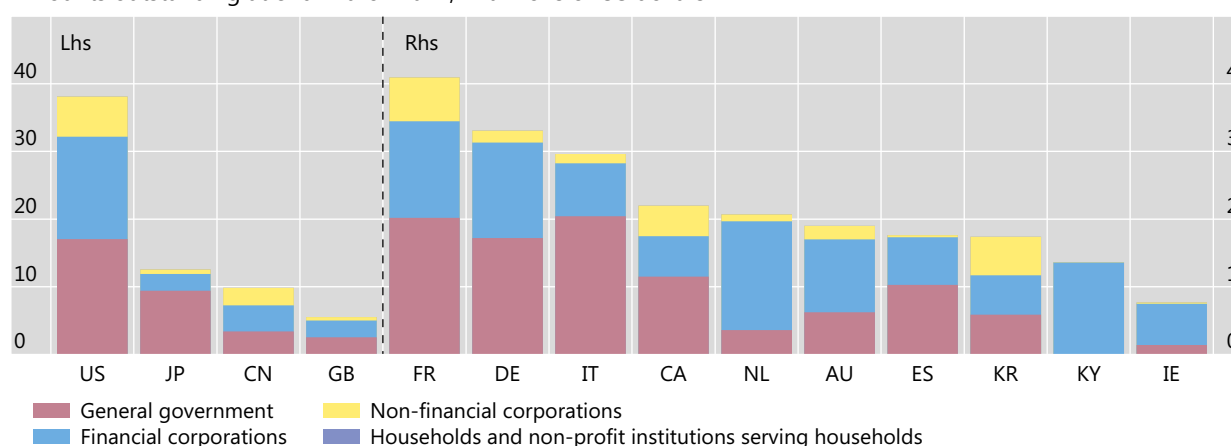
¹ Sample of countries varies across breakdowns shown. For countries that do not report TDS, data are estimated by the BIS as DDS plus IDS. For countries that do not report either TDS or DDS, data are estimated by the BIS as IDS. ² At quarter-end. Amounts denominated in currencies other than the US dollar are converted to US dollars at the exchange rate prevailing on the reference date. ³ Where a currency breakdown is not available, DDS are assumed to be denominated in the local currency.

Sources: IMF; Dealogic; Euroclear; Thomson Reuters; Xtrakter Ltd; national data; BIS debt securities statistics; BIS calculations.

Total debt securities, by residence and sector of issuer¹

Amounts outstanding at end-March 2017, in trillions of US dollars²

Graph C.2



AU = Australia; CA = Canada; CN = China; DE = Germany; ES = Spain; FR = France; GB = United Kingdom; IE = Ireland; IT = Italy; JP = Japan; KR = Korea; KY = Cayman Islands; NL = Netherlands; US = United States.

Further information on the BIS debt securities statistics is available at www.bis.org/statistics/secstats.htm.

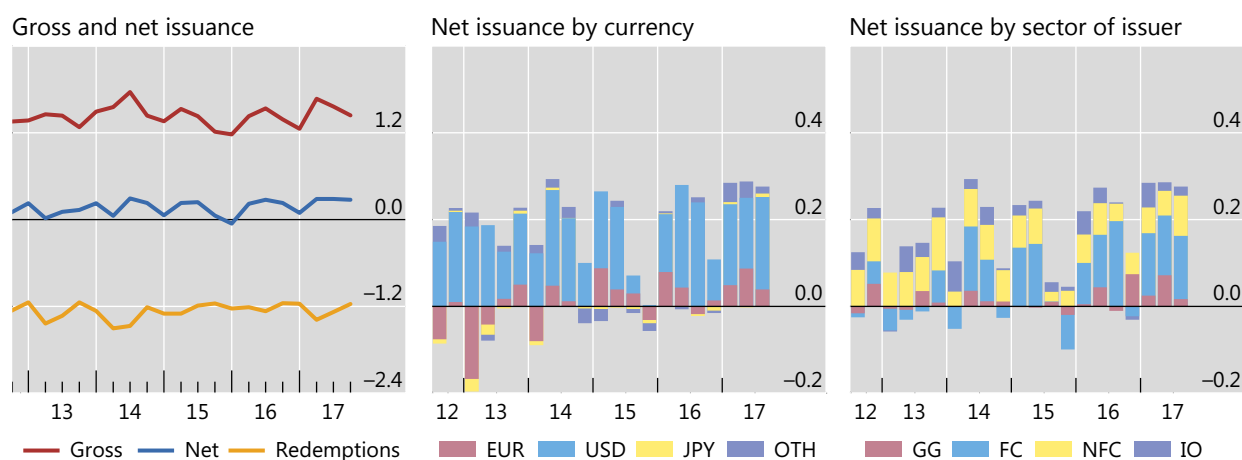
¹ For countries that do not report TDS, data are estimated by the BIS as DDS plus IDS. ² Amounts denominated in currencies other than the US dollar are converted to US dollars at the exchange rate prevailing on the reference date.

Sources: National data; BIS debt securities statistics.

International debt securities, by currency and sector

In trillions of US dollars

Graph C.3



EUR = euro; JPY = yen; OTH = other currencies; USD = US dollar.

FC= financial corporations; GG = general government; IO = international organisations; NFC = non-financial corporations.

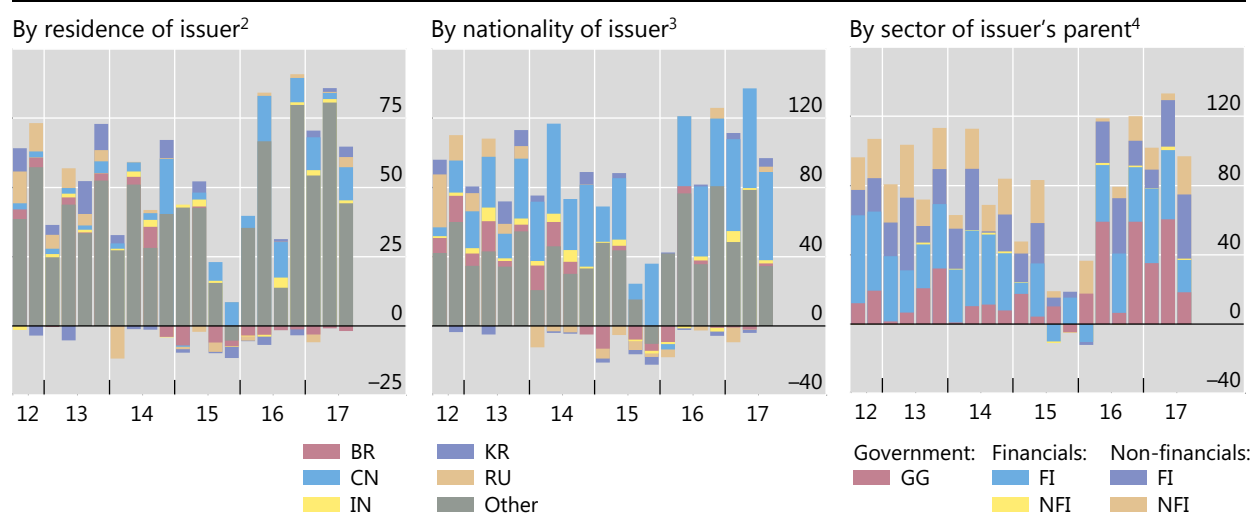
Further information on the BIS debt securities statistics is available at www.bis.org/statistics/secstats.htm.

Sources: IMF; Dealogic; Euroclear; Thomson Reuters; Xtrakter Ltd; BIS debt securities statistics.

International debt securities issued by borrowers from emerging market economies¹

Net issuance, in billions of US dollars

Graph C.4



BR = Brazil; CN = China; IN = India; KR = Korea; RU = Russia.

FI = financial corporations; GG = general government; NFI = non-financial corporations.

Further information on the BIS debt securities statistics is available at www.bis.org/statistics/secstats.htm.

¹ For the sample of countries comprising emerging market economies, see the glossary to the *BIS Statistical Bulletin*. ² Country where issuer resides. ³ Country where issuer's controlling parent is located. Includes issuance by financing vehicles incorporated in offshore financial centres with parents based in an emerging market economy. ⁴ By nationality, ie issuers with parents based in an emerging market economy. Issuers are grouped by sector of their parent.

Sources: IMF; Dealogic; Euroclear; Thomson Reuters; Xtrakter Ltd; BIS debt securities statistics.

D Derivatives statistics

Exchange-traded derivatives

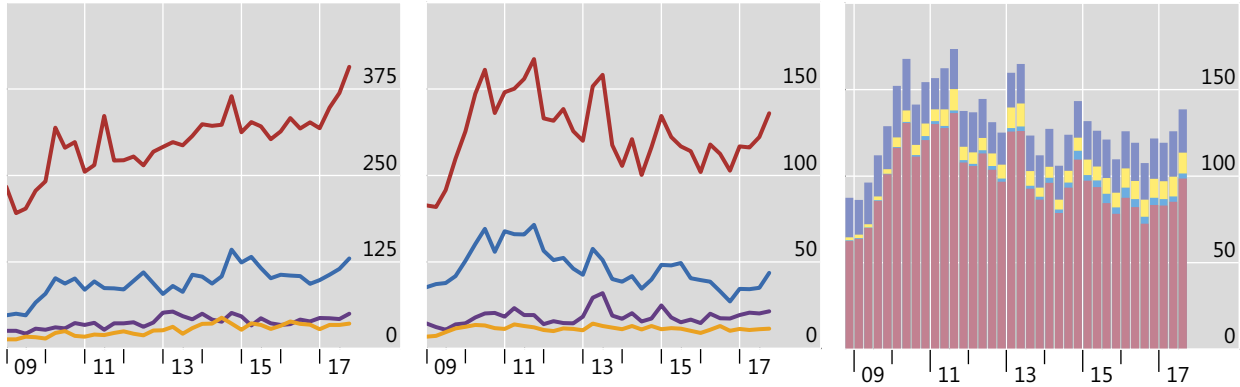
Graph D.1

Open interest, by currency¹

Daily average turnover, by currency²

Daily average turnover, by location of exchange²

Foreign exchange derivatives, USD bn³



Interest rate derivatives, USD trn³



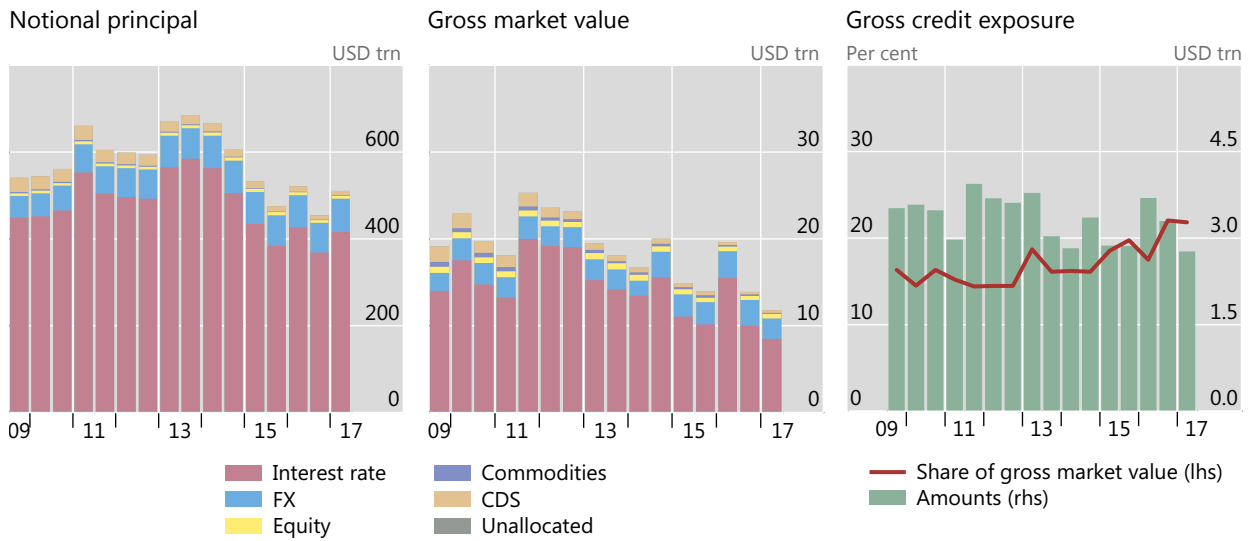
Further information on the BIS derivatives statistics is available at www.bis.org/statistics/extderiv.htm.

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 averages of daily turnover. ³ Futures and options.

Sources: Euromoney TRADEDATA; Futures Industry Association; The Options Clearing Corporation; BIS derivatives statistics.

Global OTC derivatives markets¹

Graph D.2



Further information on the BIS derivatives statistics is available at www.bis.org/statistics/derstats.htm.

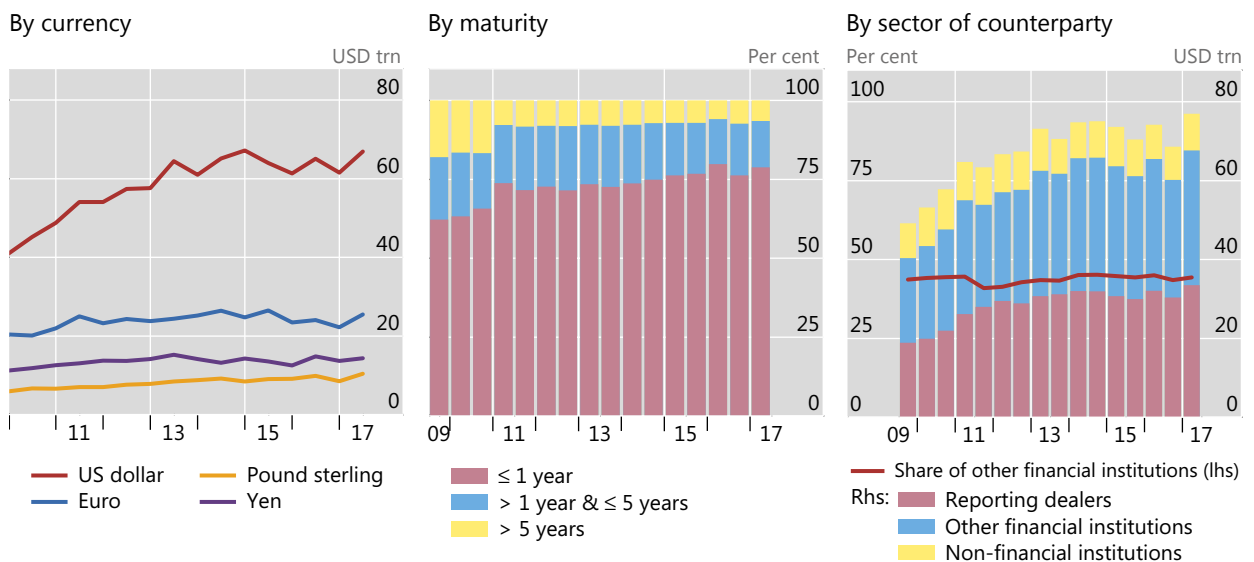
¹ At half-year end (end-June and end-December). Amounts denominated in currencies other than the US dollar are converted to US dollars at the exchange rate prevailing on the reference date.

Source: BIS derivatives statistics.

OTC foreign exchange derivatives

Notional principal¹

Graph D.3



Further information on the BIS derivatives statistics is available at www.bis.org/statistics/derstats.htm.

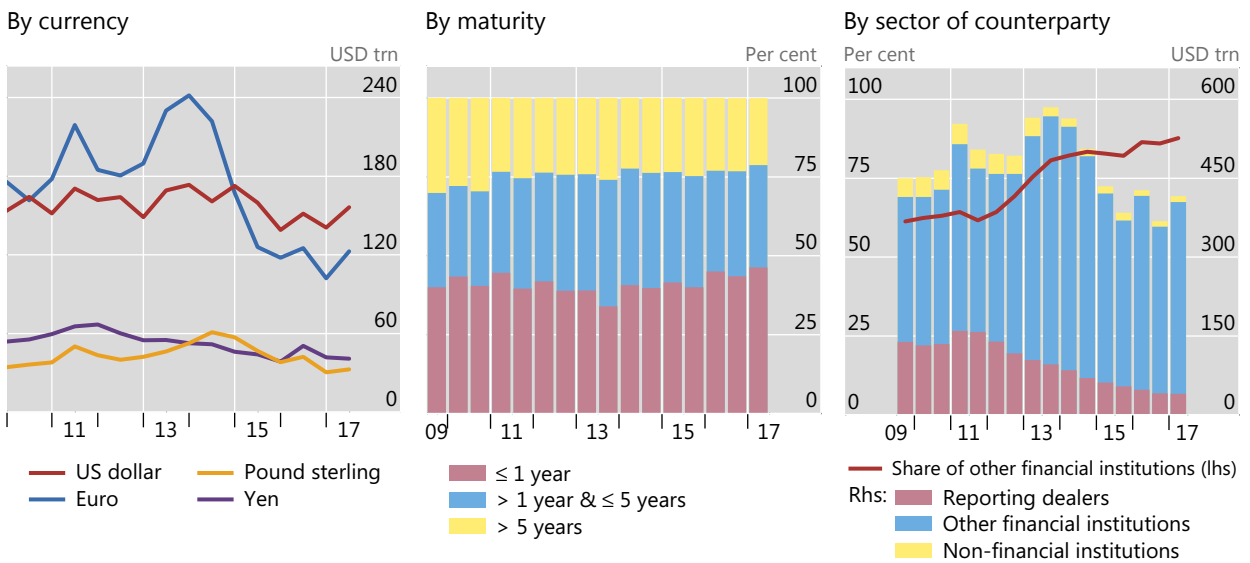
¹ At half-year end (end-June and end-December). Amounts denominated in currencies other than the US dollar are converted to US dollars at the exchange rate prevailing on the reference date.

Source: BIS derivatives statistics.

OTC interest rate derivatives

Notional principal¹

Graph D.4



Further information on the BIS derivatives statistics is available at www.bis.org/statistics/derstats.htm.

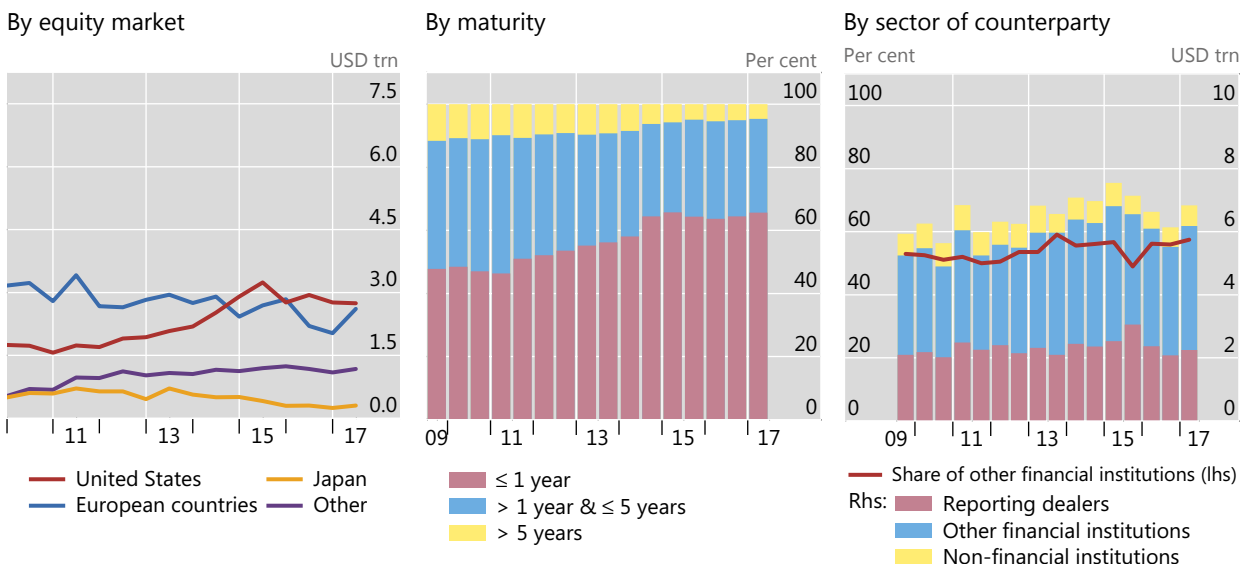
¹ At half-year end (end-June and end-December). Amounts denominated in currencies other than the US dollar are converted to US dollars at the exchange rate prevailing on the reference date.

Source: BIS derivatives statistics.

OTC equity-linked derivatives

Notional principal¹

Graph D.5



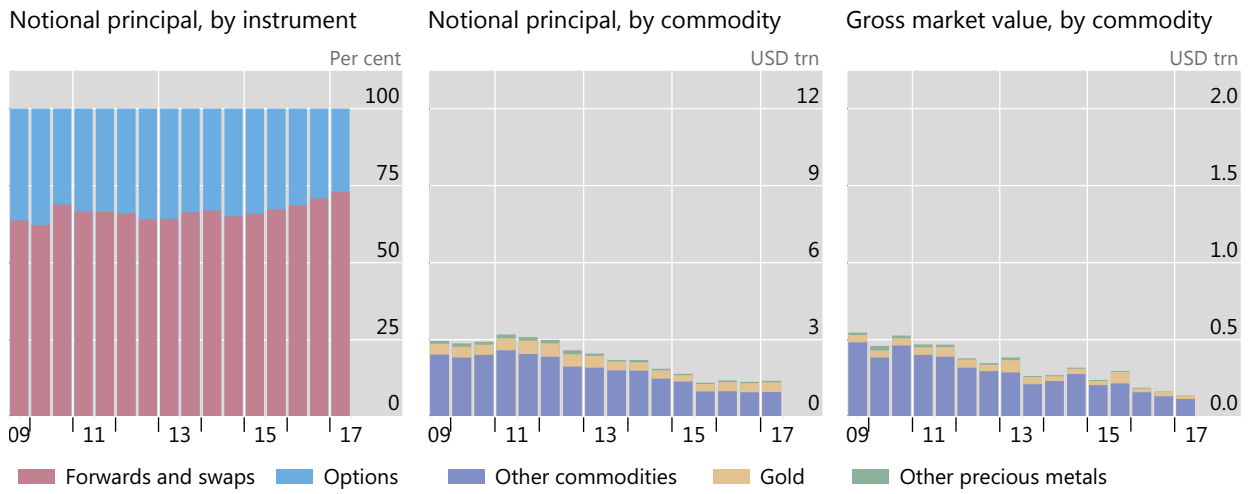
Further information on the BIS derivatives statistics is available at www.bis.org/statistics/derstats.htm.

¹ At half-year end (end-June and end-December). Amounts denominated in currencies other than the US dollar are converted to US dollars at the exchange rate prevailing on the reference date.

Source: BIS derivatives statistics.

OTC commodity derivatives¹

Graph D.6



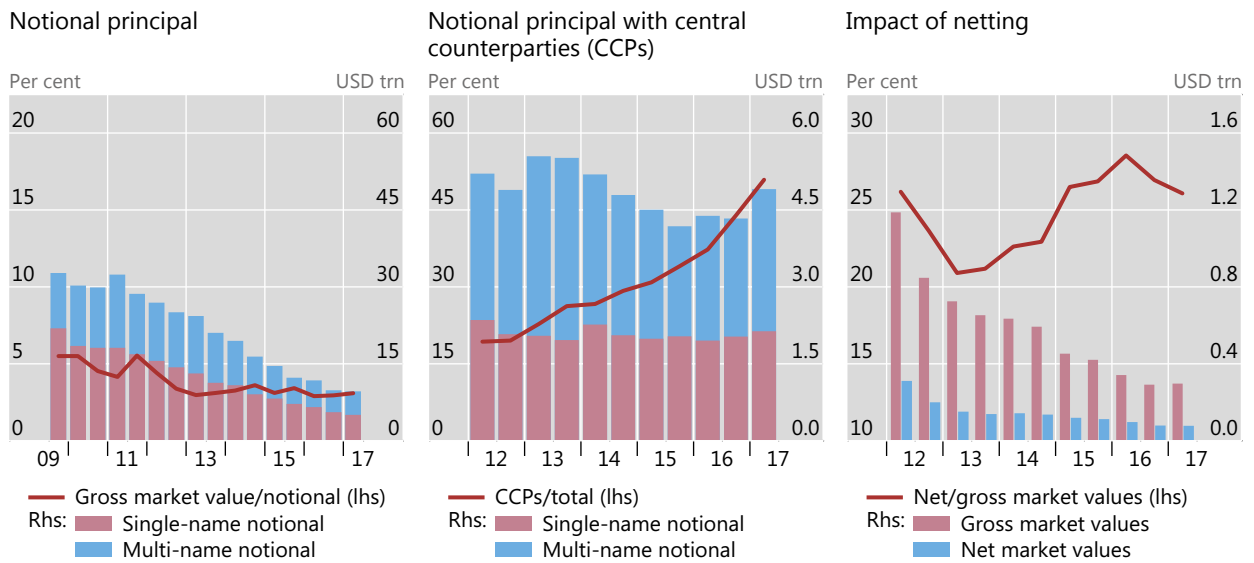
Further information on the BIS derivatives statistics is available at www.bis.org/statistics/derstats.htm.

¹ At half-year end (end-June and end-December). Amounts denominated in currencies other than the US dollar are converted to US dollars at the exchange rate prevailing on the reference date.

Source: BIS derivatives statistics.

Credit default swaps¹

Graph D.7



Further information on the BIS derivatives statistics is available at www.bis.org/statistics/derstats.htm.

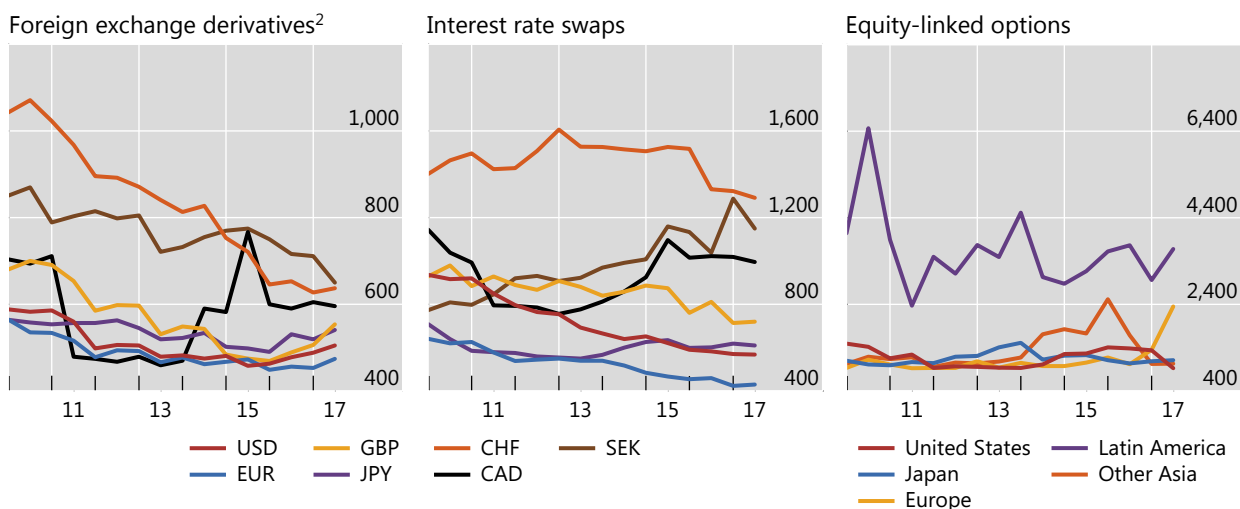
¹ At half-year end (end-June and end-December). Amounts denominated in currencies other than the US dollar are converted to US dollars at the exchange rate prevailing on the reference date.

Source: BIS derivatives statistics.

Concentration in global OTC derivatives markets

Herfindahl index¹

Graph D.8



CAD = Canadian dollar; CHF = Swiss franc; EUR = euro; GBP = pound sterling; JPY = yen; SEK = Swedish krona; USD = US dollar.

Further information on the BIS derivatives statistics is available at www.bis.org/statistics/derstats.htm.

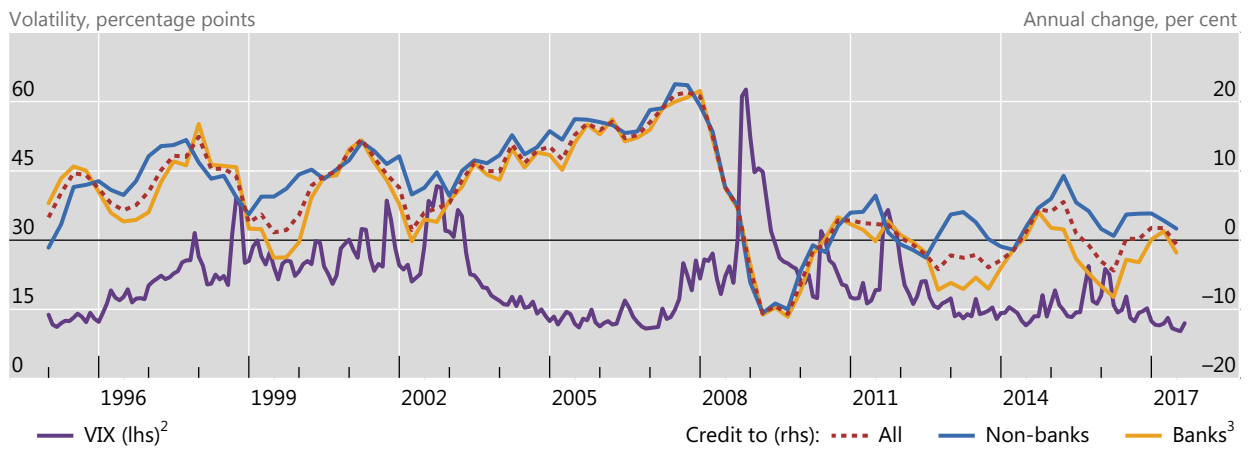
¹ The index ranges from 0 to 10,000, where a lower number indicates that there are many dealers with similar market shares (as measured by notional principal) and a higher number indicates that the market is dominated by a few reporting dealers. ² Foreign exchange forwards, foreign exchange swaps and currency swaps.

Source: BIS derivatives statistics.

E Global liquidity indicators

Growth of international bank credit¹

Graph E.1



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

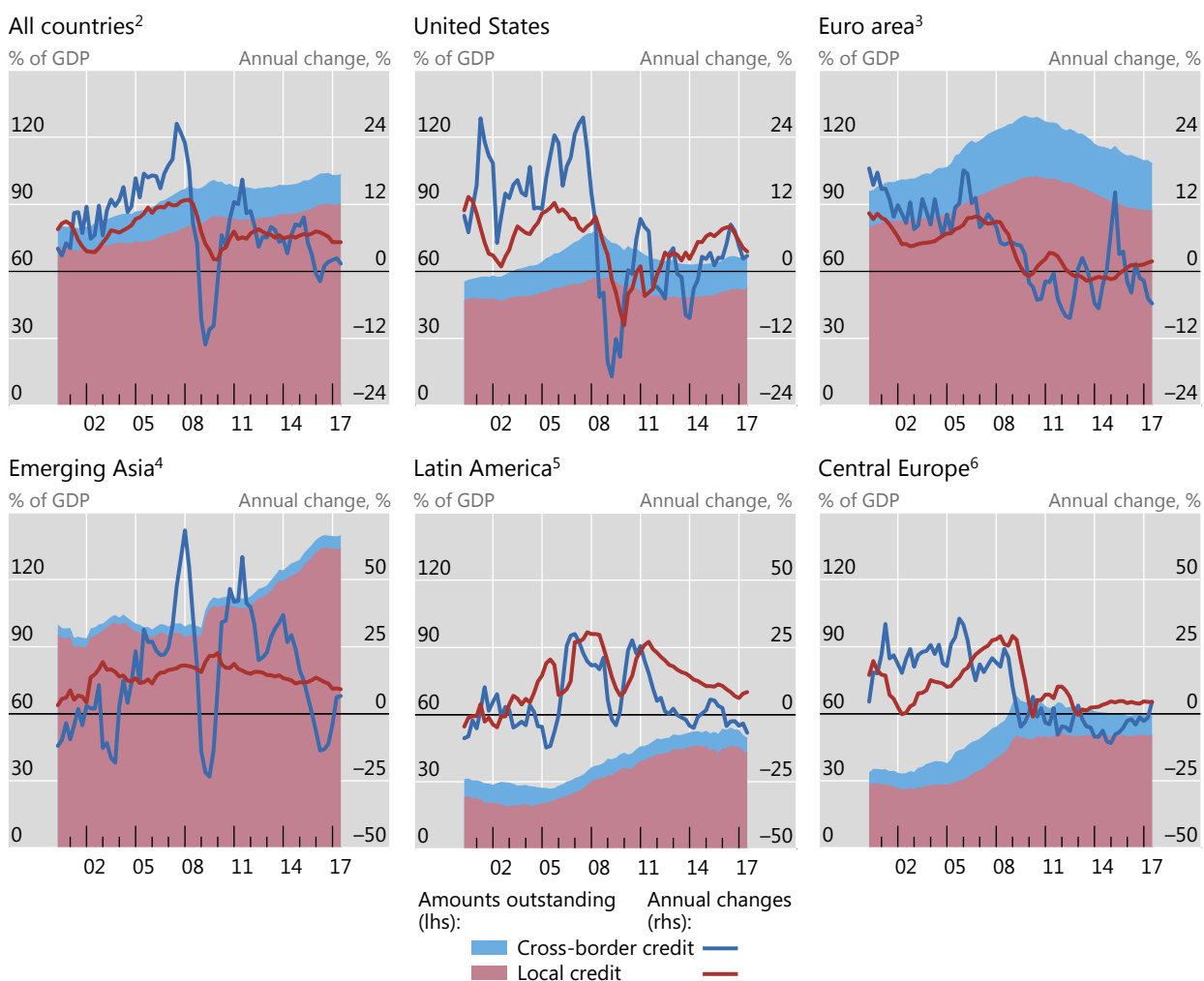
¹ LBS-reporting banks' cross-border claims plus local claims in foreign currencies. ² Chicago Board Options Exchange S&P 500 implied volatility index; standard deviation, in percentage points per annum. ³ Including intragroup transactions.

Sources: Bloomberg; BIS locational banking statistics.

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

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

Graph E.2



Further information on the BIS global liquidity indicators is available at www.bis.org/statistics/gli.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, 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, the Netherlands, Portugal and Spain. ⁴ China, Hong Kong SAR, India, Indonesia, Korea, Malaysia, Singapore and Thailand. ⁵ Argentina, Brazil, Chile and Mexico. ⁶ The Czech Republic, Hungary and Poland.

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

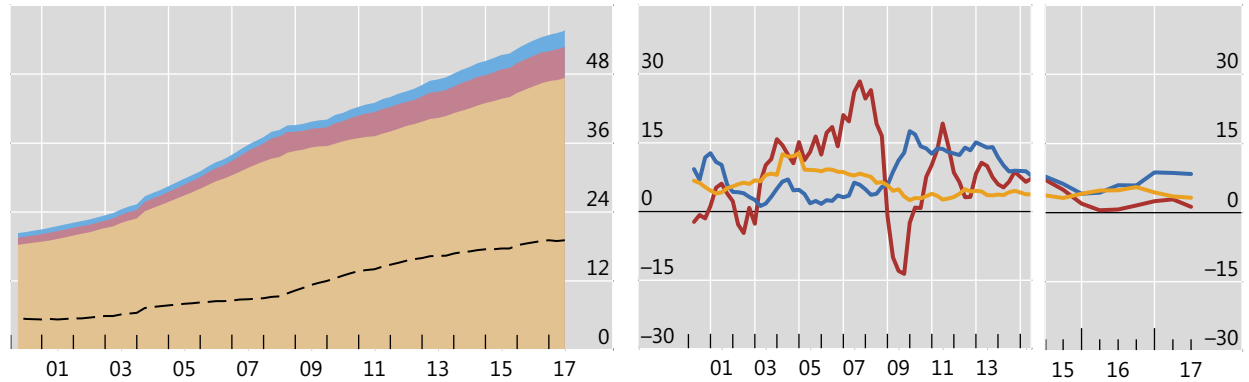
Global credit to the non-financial sector, by currency

Graph E.3

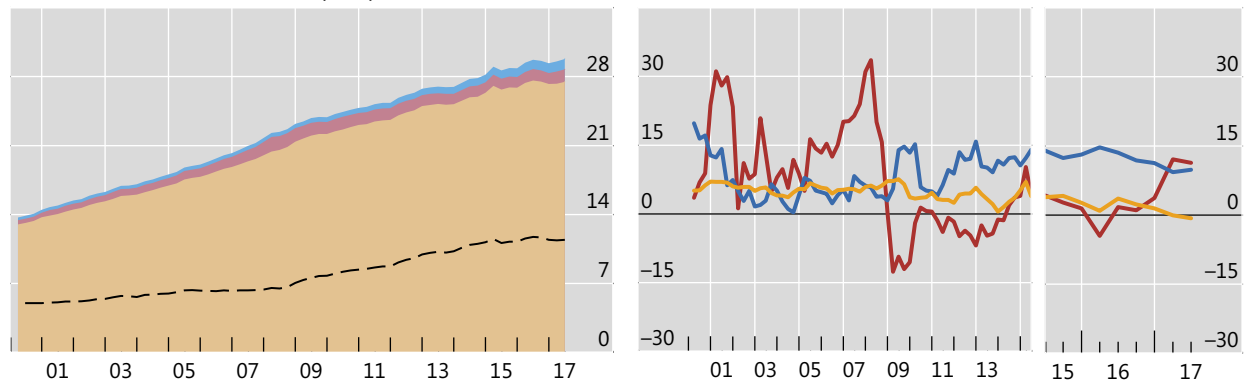
Amounts outstanding, in trillions of currency units¹

Annual change, in per cent²

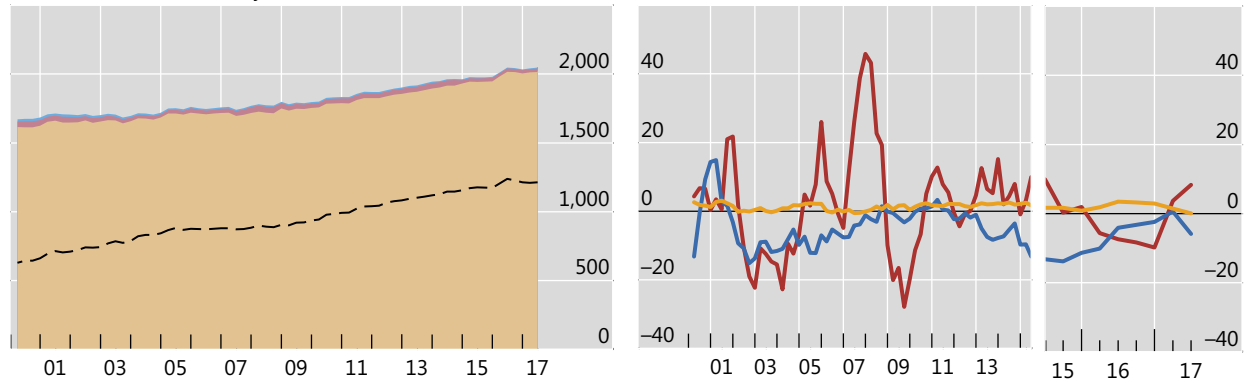
Credit denominated in US dollars (USD)



Credit denominated in euros (EUR)



Credit denominated in yen (JPY)



Credit to residents³
 Credit to non-residents:

 Of which:

 Credit to government

 Loans⁵

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

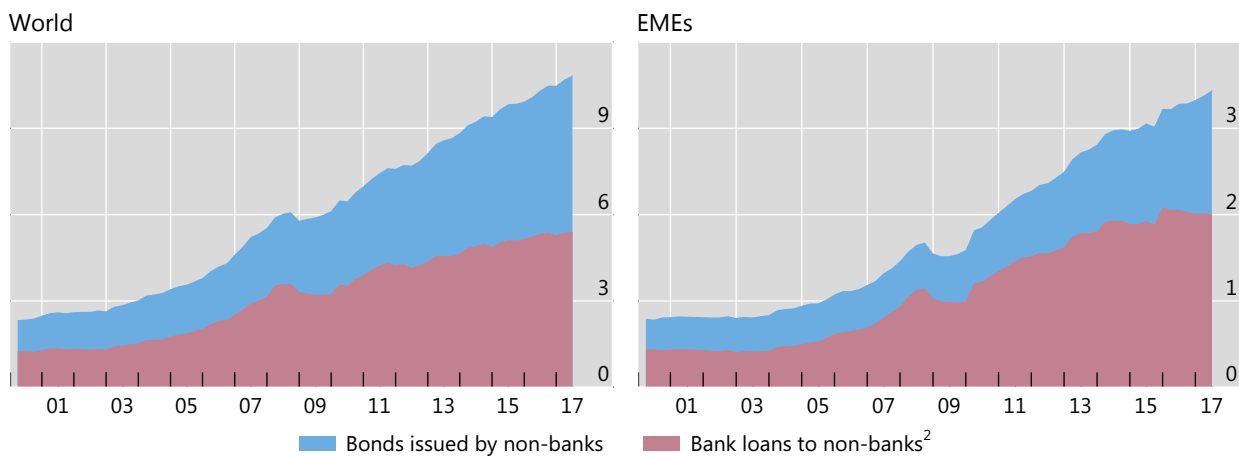
¹ Amounts outstanding at quarter-end. ² Based on quarterly break- and exchange rate-adjusted changes. ³ Credit to non-financial borrowers residing in the United States/euro area/Japan. National financial accounts are adjusted using BIS banking and securities statistics to exclude credit denominated in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

Sources: Bloomberg; 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

Amounts outstanding, in trillions of US dollars

Graph E.4



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

¹ Non-banks comprise non-bank financial entities, non-financial corporations, governments, households and international organisations. ² Loans by LBS-reporting banks to non-bank borrowers, including non-bank financial entities, comprise cross-border plus local loans.

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

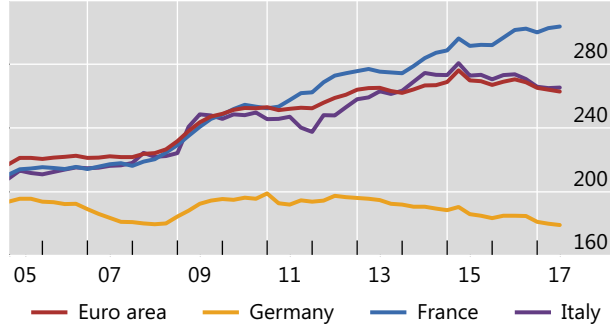
F Statistics on total credit to the non-financial sector

Total credit to the non-financial sector (core debt)

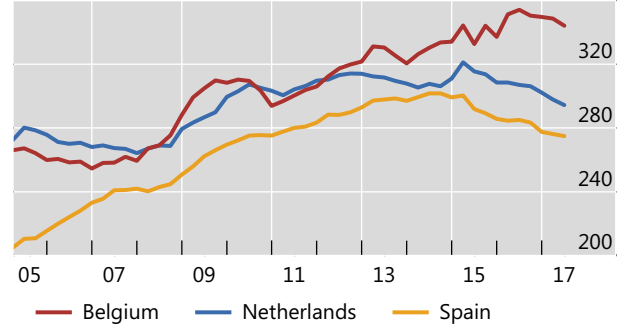
As a percentage of GDP

Graph F.1

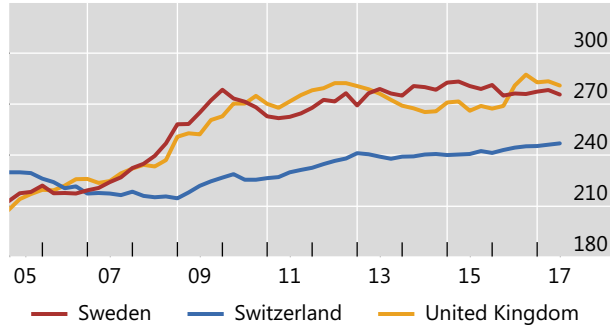
Euro area: aggregate and major countries



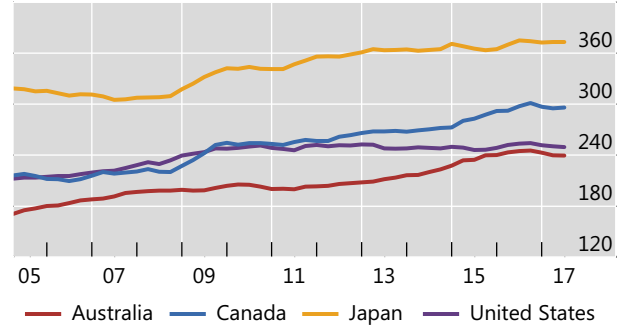
Euro area: other countries



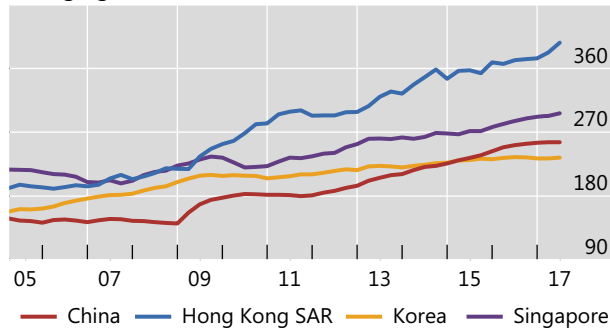
Other European countries



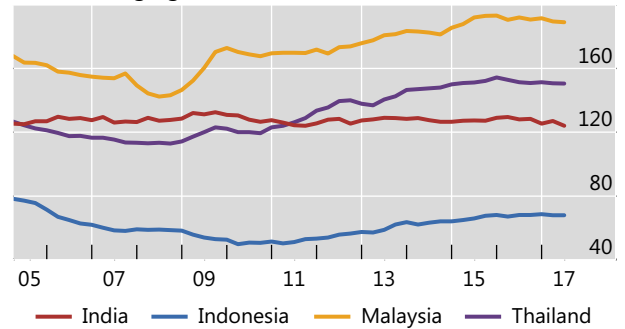
Major advanced economies



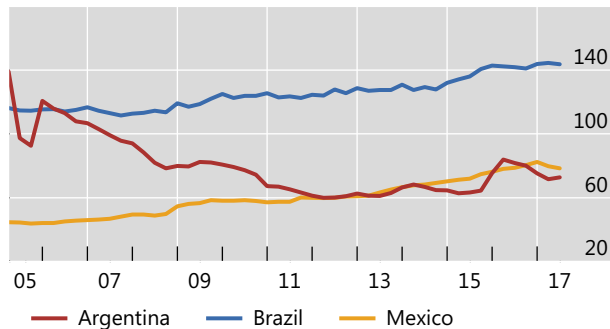
Emerging Asia



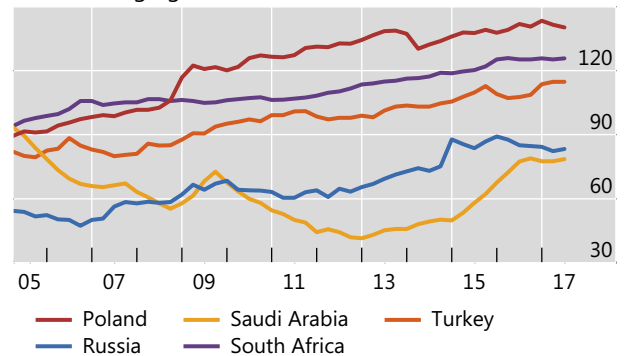
Other emerging Asia



Latin America



Other emerging market economies



Further information on the BIS credit statistics is available at www.bis.org/statistics/totcredit.htm.

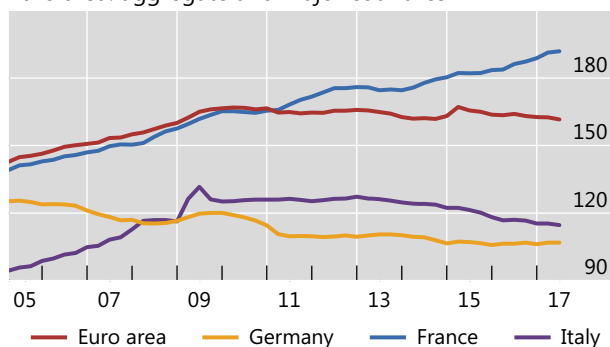
Source: BIS total credit statistics.

Total credit to the private non-financial sector (core debt)

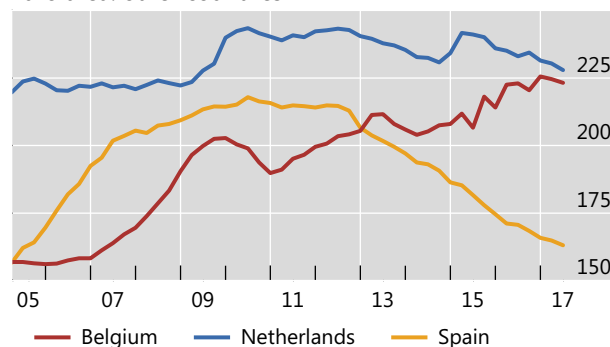
As a percentage of GDP

Graph F.2

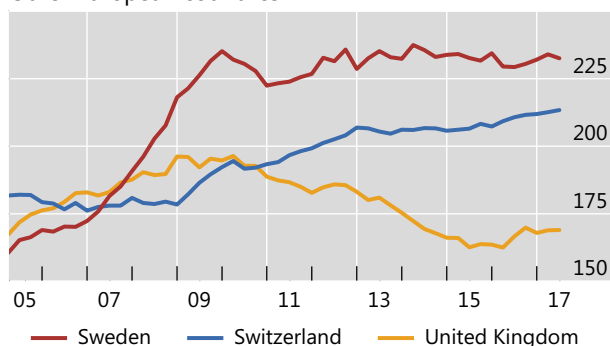
Euro area: aggregate and major countries



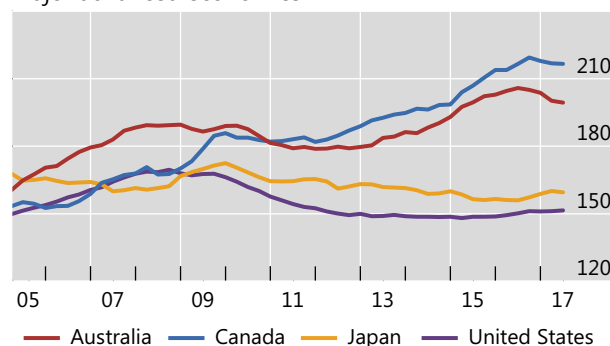
Euro area: other countries



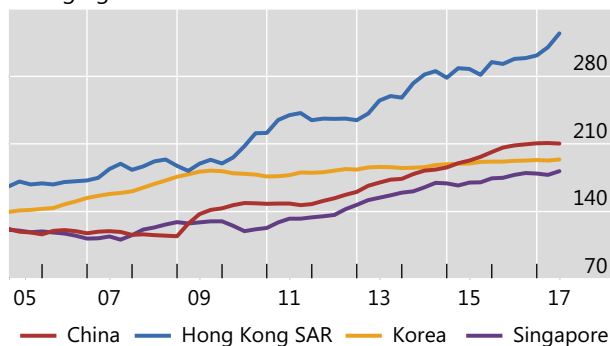
Other European countries



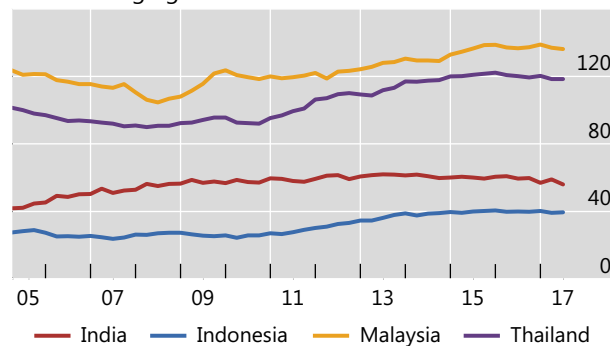
Major advanced economies



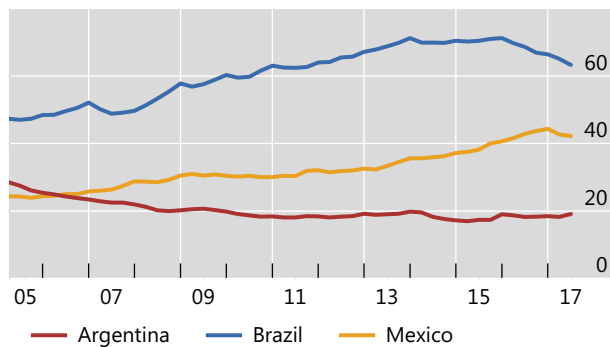
Emerging Asia



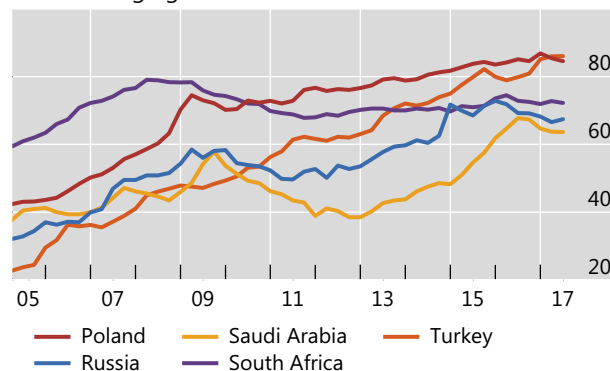
Other emerging Asia



Latin America



Other emerging market economies



Further information on the BIS credit statistics is available at www.bis.org/statistics/totcredit.htm.

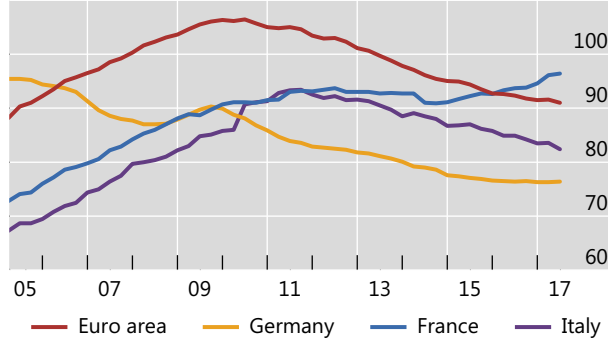
Source: BIS total credit statistics.

Bank credit to the private non-financial sector (core debt)

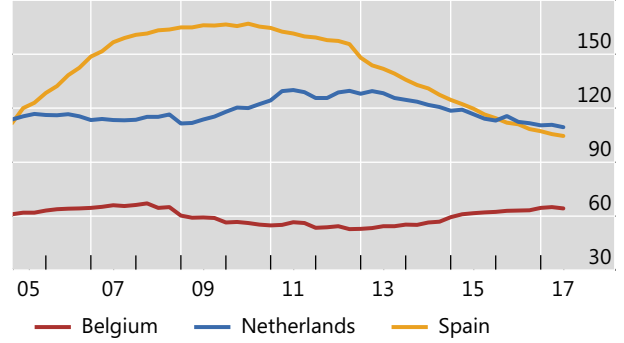
As a percentage of GDP

Graph F.3

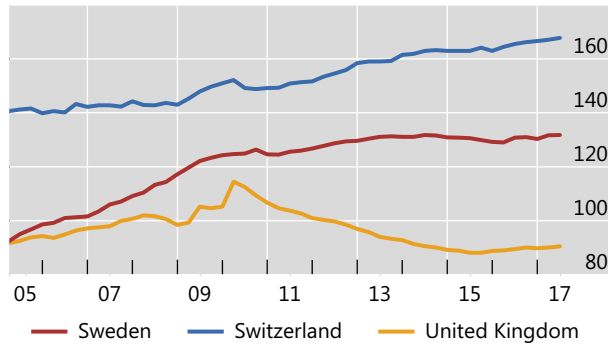
Euro area: aggregate and major countries



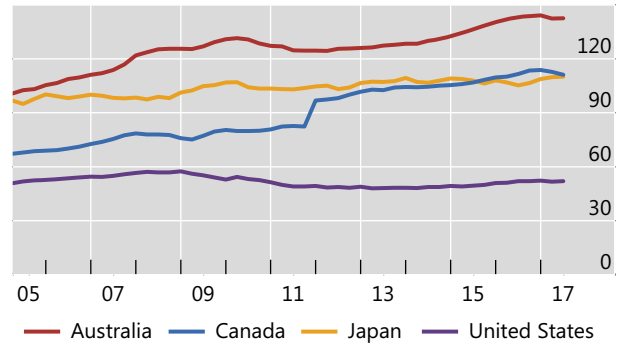
Euro area: other countries



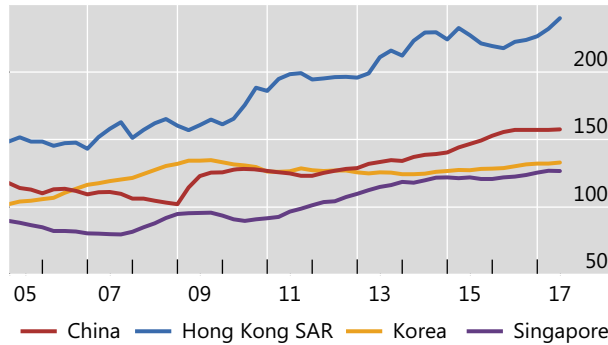
Other European countries



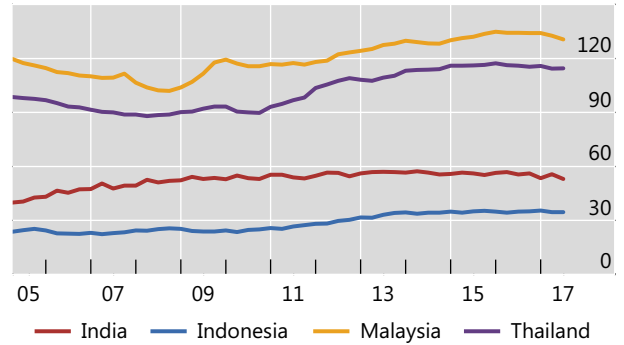
Major advanced economies



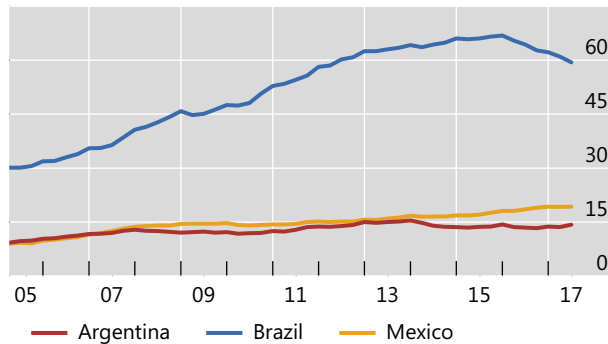
Emerging Asia



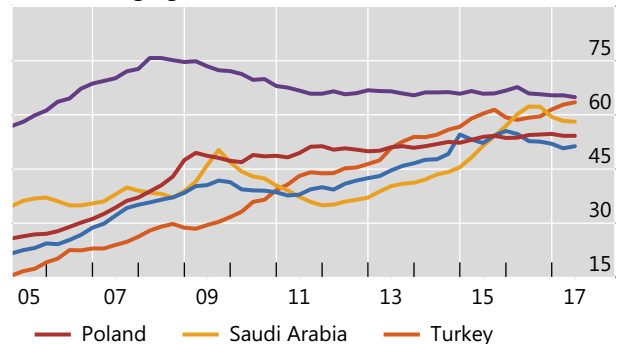
Other emerging Asia



Latin America



Other emerging market economies



Further information on the BIS credit statistics is available at www.bis.org/statistics/totcredit.htm.

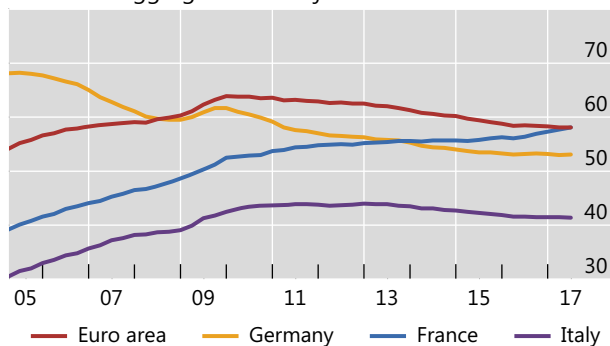
Source: BIS total credit statistics.

Total credit to households (core debt)

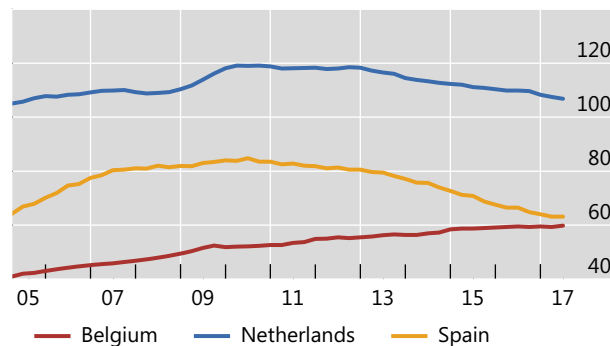
As a percentage of GDP

Graph F.4

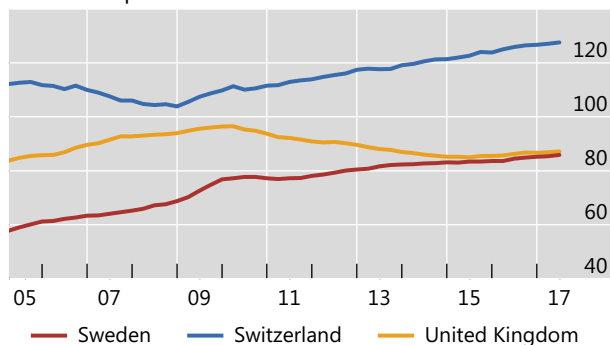
Euro area: aggregate and major countries



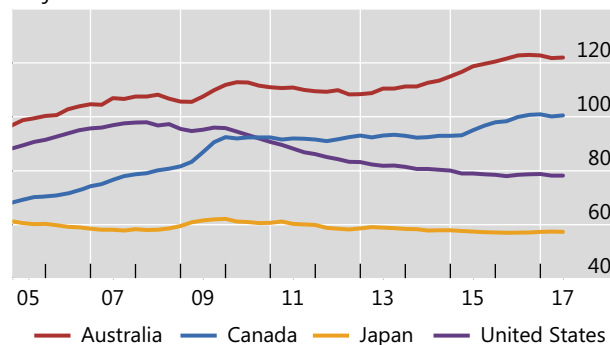
Euro area: other countries



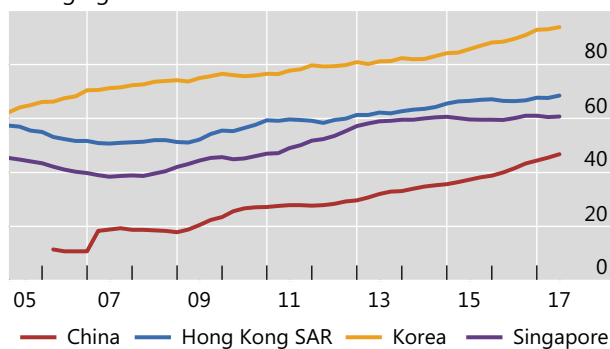
Other European countries



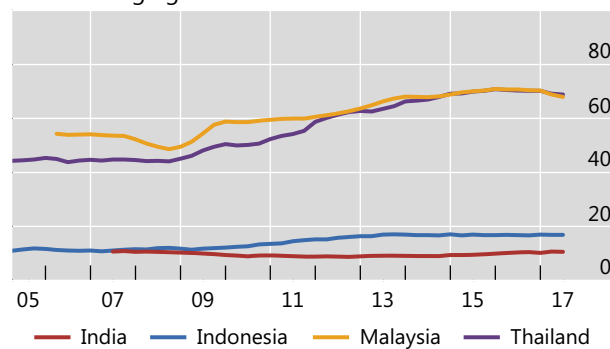
Major advanced economies



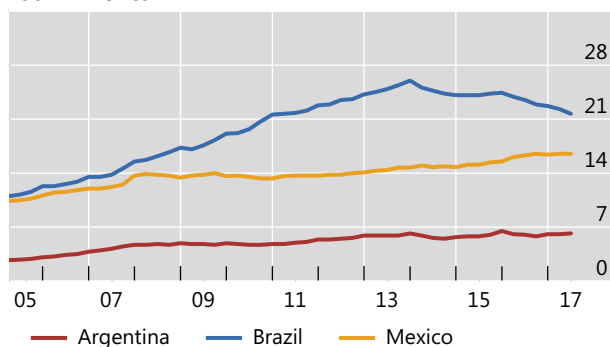
Emerging Asia



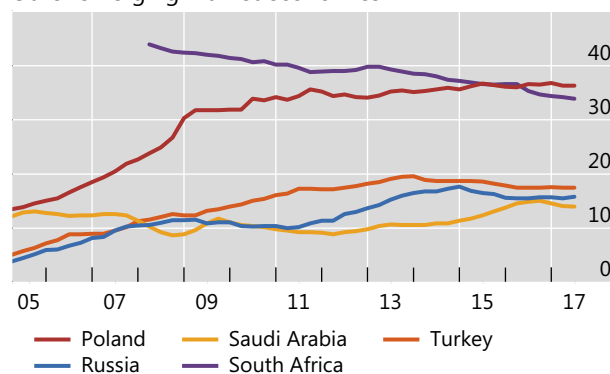
Other emerging Asia



Latin America



Other emerging market economies



Further information on the BIS credit statistics is available at www.bis.org/statistics/totcredit.htm.

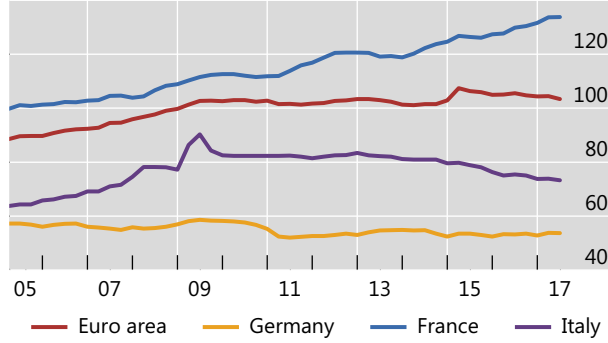
Source: BIS total credit statistics.

Total credit to non-financial corporations (core debt)

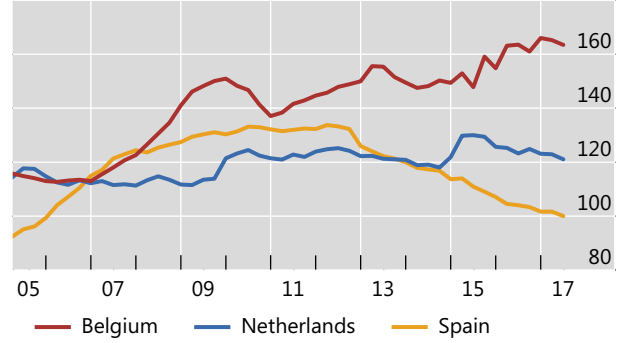
As a percentage of GDP

Graph F.5

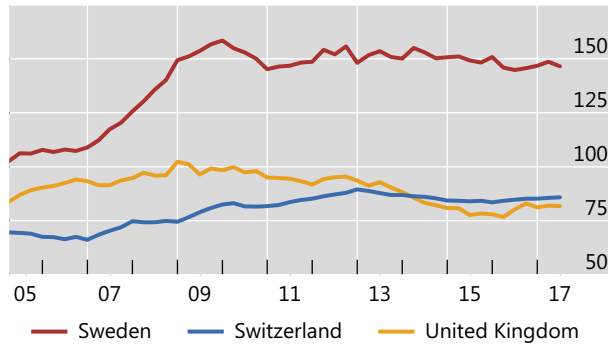
Euro area: aggregate and major countries



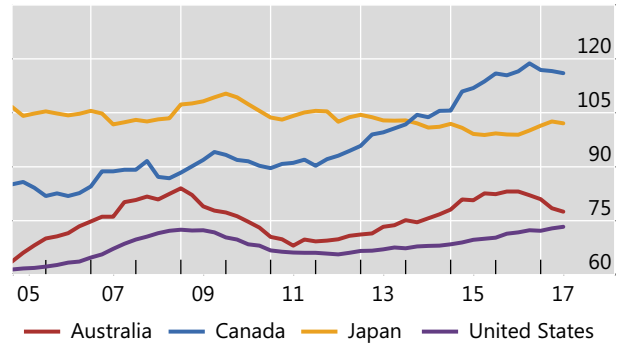
Euro area: other countries



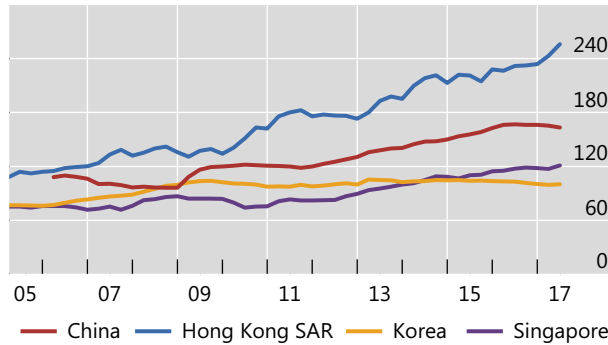
Other European countries



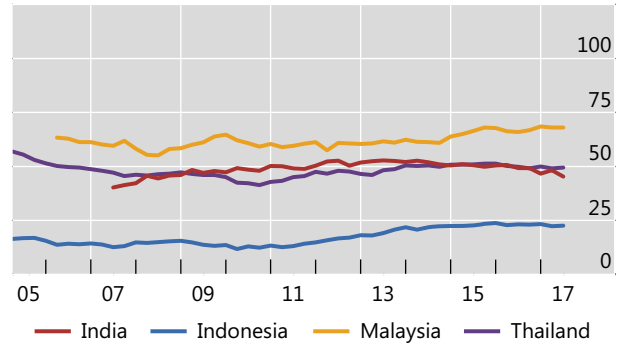
Major advanced economies



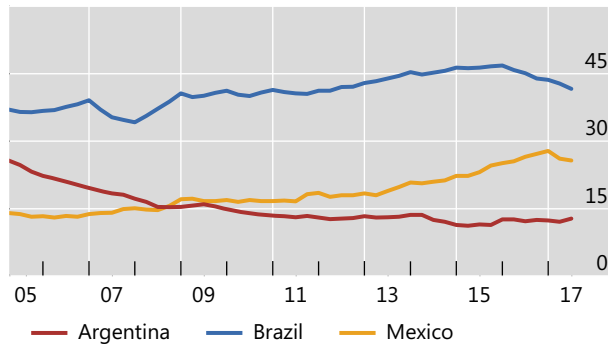
Emerging Asia



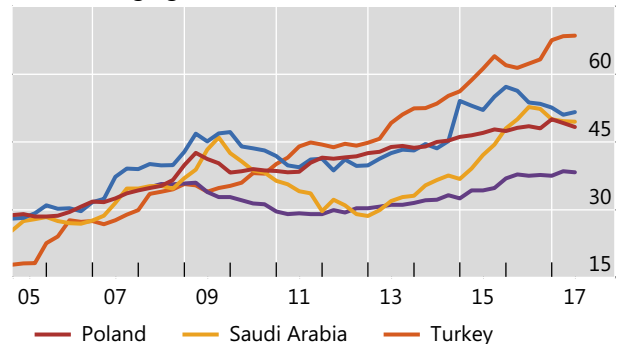
Other emerging Asia



Latin America



Other emerging market economies



Further information on the BIS credit statistics is available at www.bis.org/statistics/totcredit.htm.

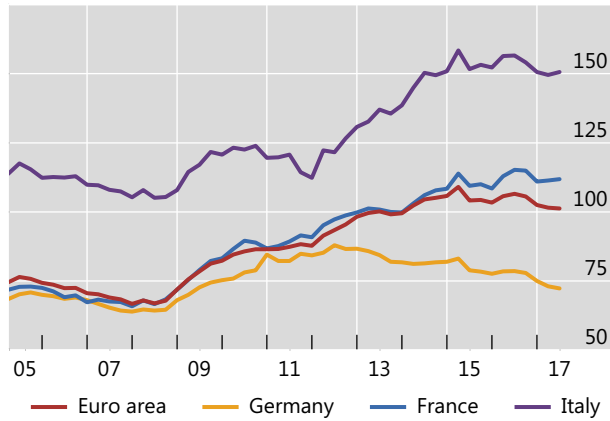
Source: BIS total credit statistics.

Total credit to the government sector at market value (core debt)¹

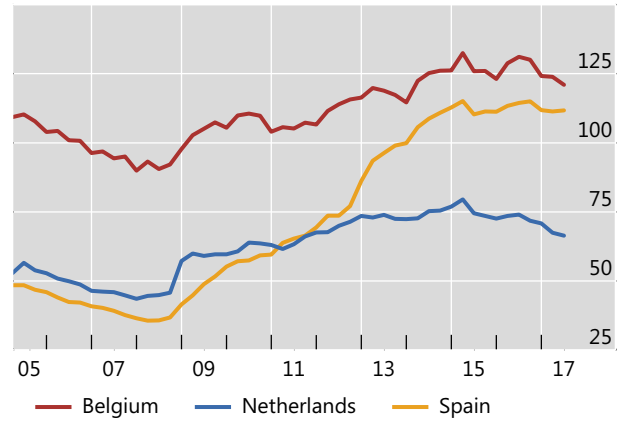
As a percentage of GDP

Graph F.6

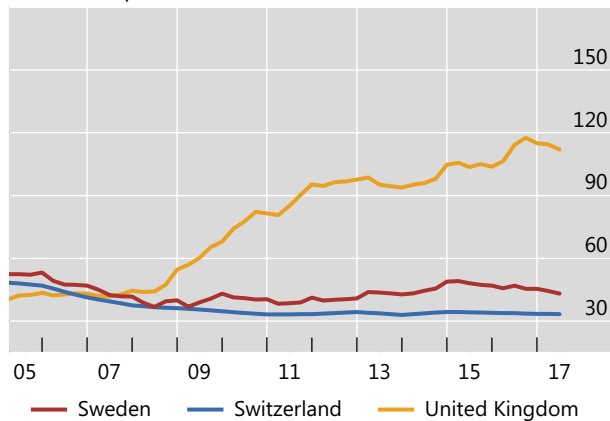
Euro area: aggregate and major countries



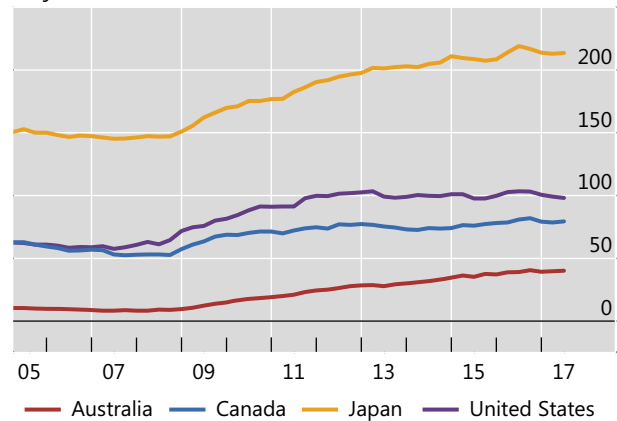
Euro area: other countries



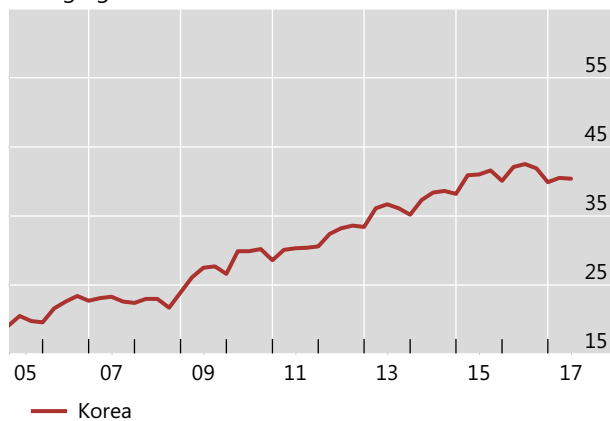
Other European countries



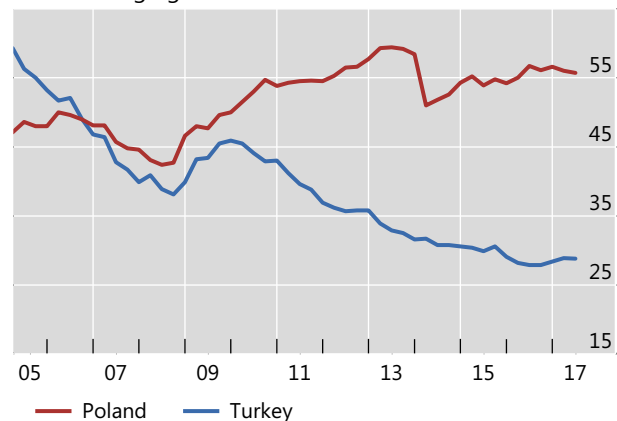
Major advanced economies



Emerging Asia



Other emerging market economies



Further information on the BIS credit statistics is available at www.bis.org/statistics/totcredit.htm.

¹ Consolidated data for the general government sector.

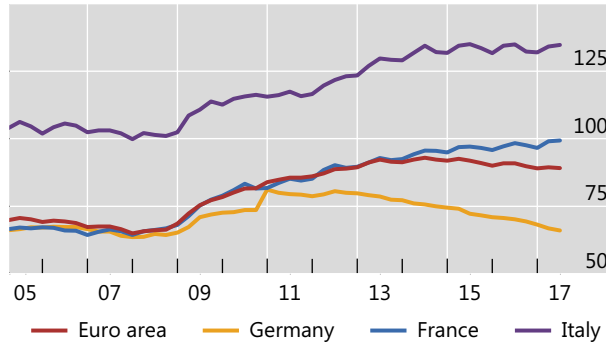
Source: BIS total credit statistics.

Total credit to the government sector at nominal value (core debt)¹

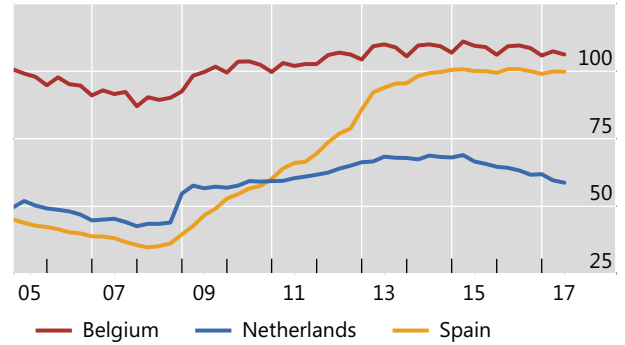
As a percentage of GDP

Graph F.7

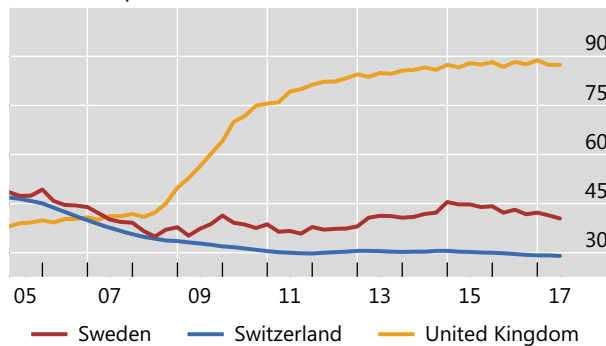
Euro area: aggregate and major countries



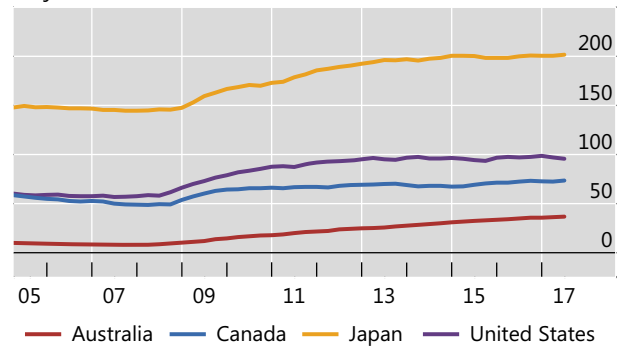
Euro area: other countries



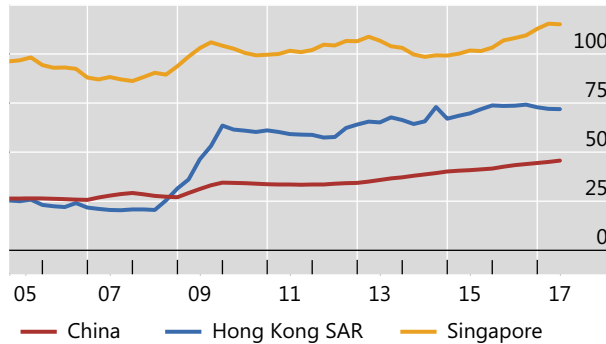
Other European countries



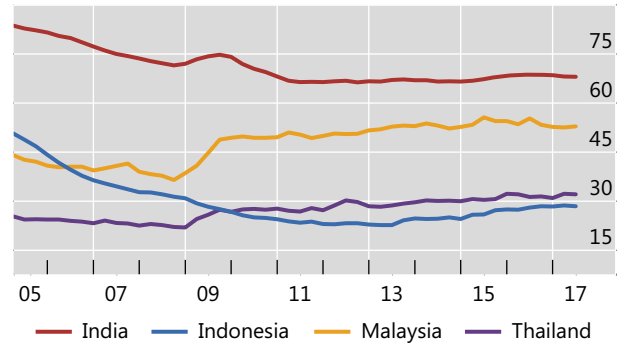
Major advanced economies



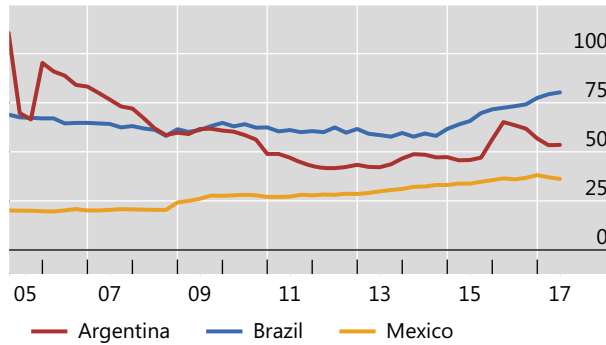
Emerging Asia



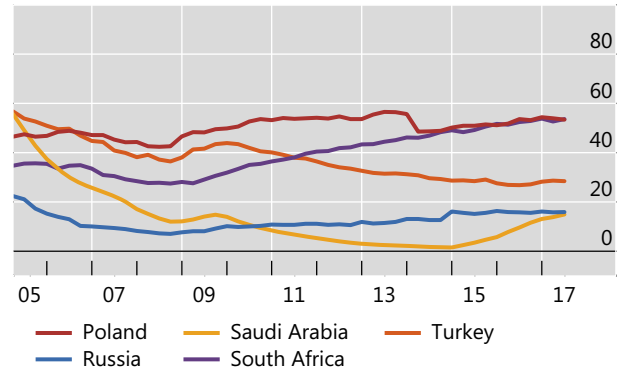
Other emerging Asia



Latin America



Other emerging market economies



Further information on the BIS credit statistics is available at www.bis.org/statistics/totcredit.htm.

¹ Consolidated data for the general government sector; central government for Argentina, Indonesia, Malaysia, Mexico, Saudi Arabia and Thailand.

Source: BIS total credit statistics.

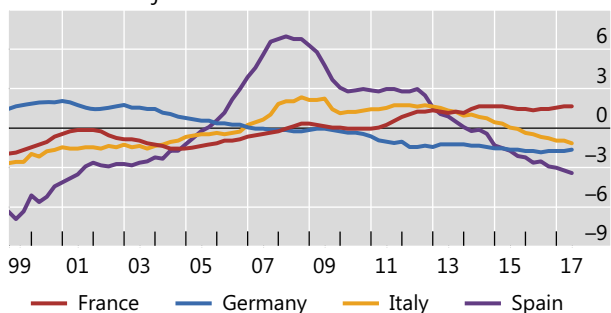
G Debt service ratios for the private non-financial sector

Debt service ratios of the private non-financial sector

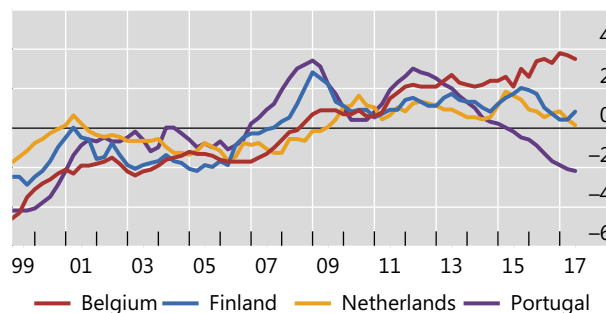
Deviation from country-specific mean, in percentage points¹

Graph G.1

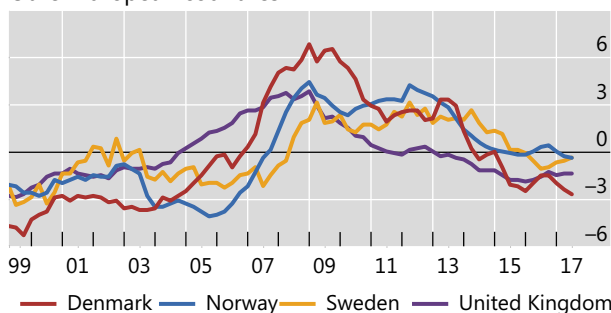
Euro area: major countries



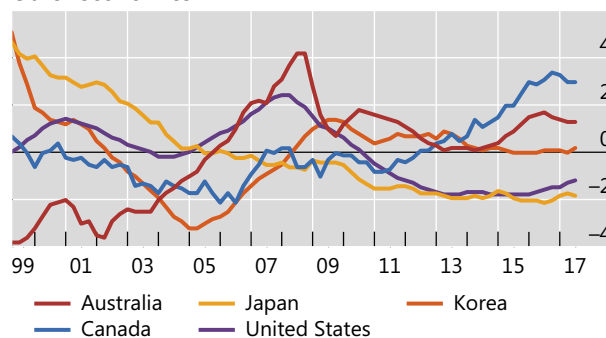
Euro area: other countries



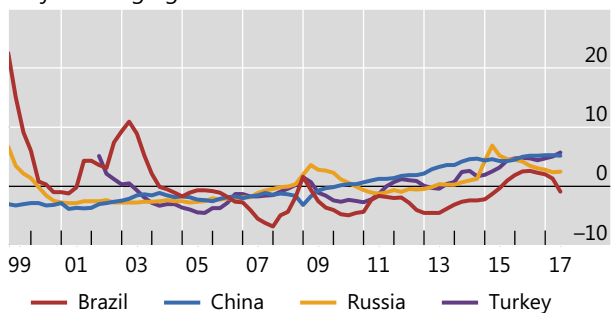
Other European countries



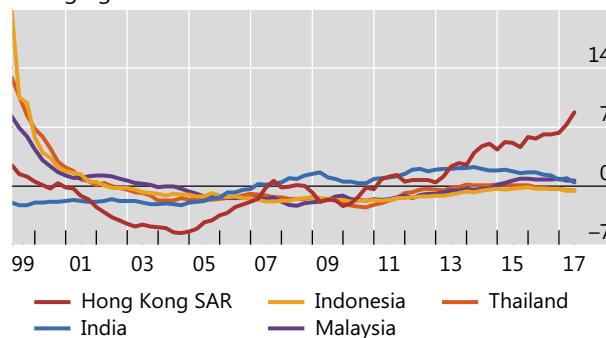
Other economies



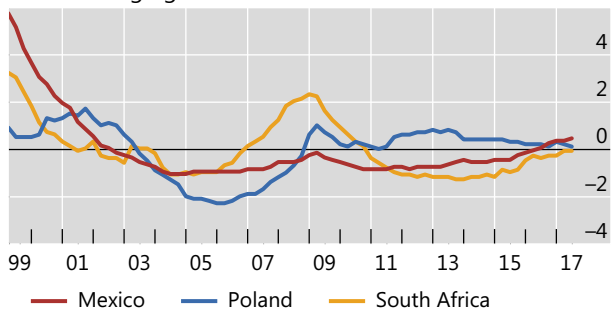
Major emerging markets²



Emerging Asia²



Other emerging markets²



Further information on the BIS debt service ratio statistics is available at www.bis.org/statistics/dsr.htm.

¹ Country-specific means are based on all available data from 1999 onwards. ² Countries which are using alternative measures of income and interest rates. Further information is available under "Methodology and data for DSR calculation" at www.bis.org/statistics/dsr.htm.

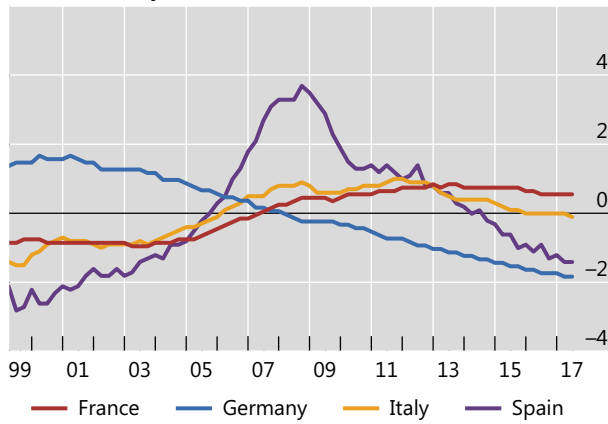
Source: BIS debt service ratios statistics.

Debt service ratios of households

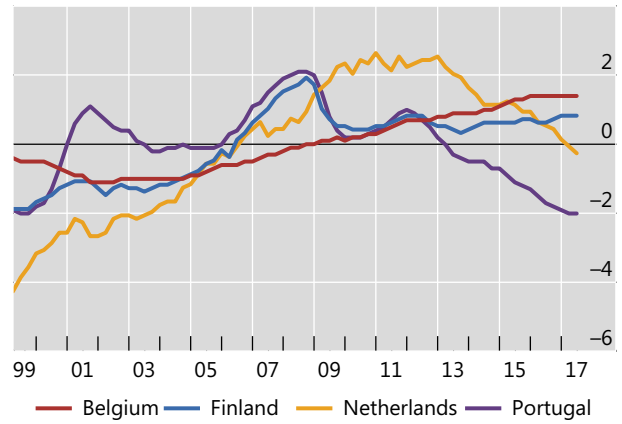
Deviation from country-specific mean, in percentage points¹

Graph G.2

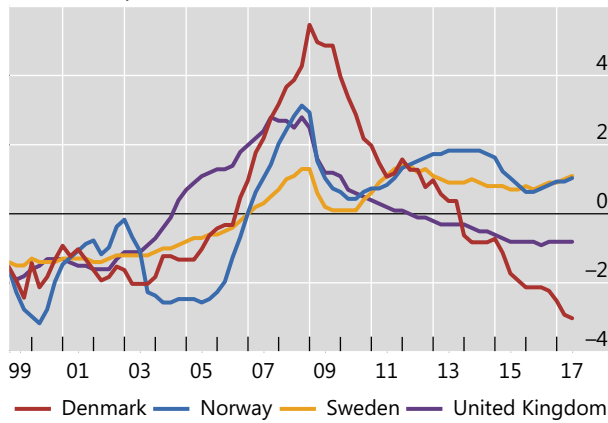
Euro area: major countries



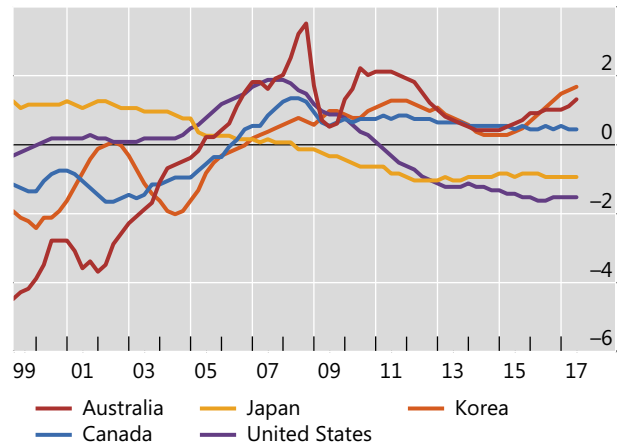
Euro area: other countries



Other European countries



Other economies



Further information on the BIS debt service ratio statistics is available at www.bis.org/statistics/dsr.htm.

¹ Country-specific means are based on all available data from 1999 onwards.

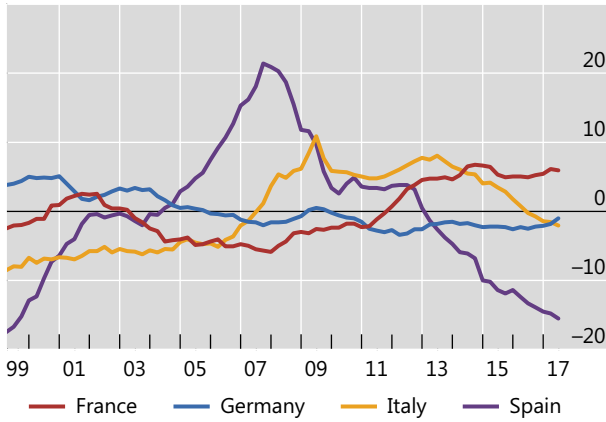
Source: BIS debt service ratios statistics.

Debt service ratios of non-financial corporations

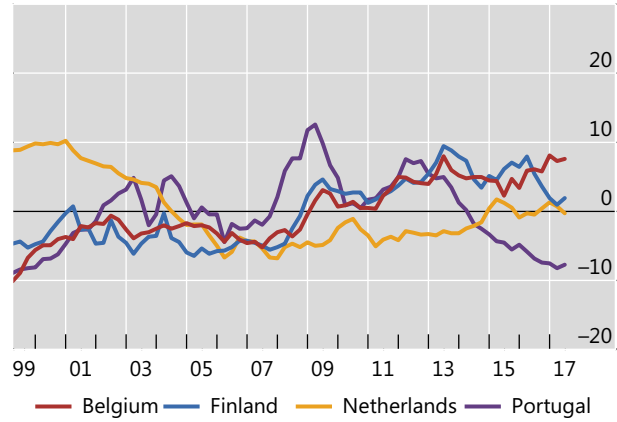
Deviation from country-specific mean, in percentage points¹

Graph G.3

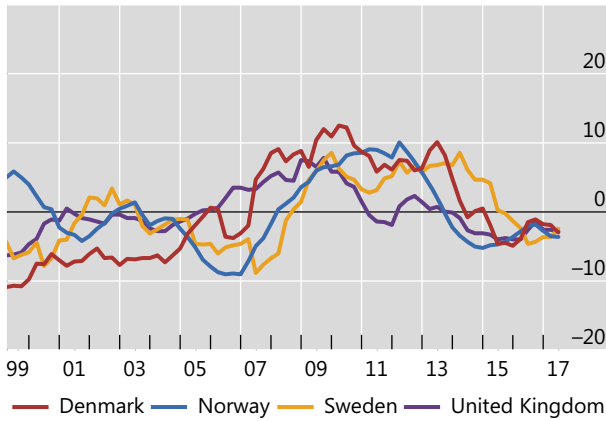
Euro area: major countries



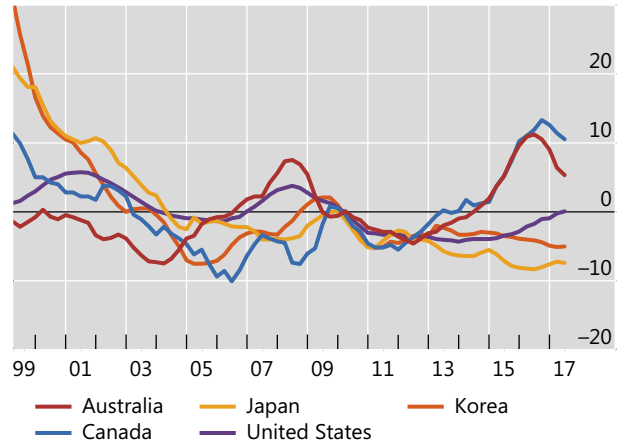
Euro area: other countries



Other European countries



Other economies



Further information on the BIS debt service ratio statistics is available at www.bis.org/statistics/dsr.htm.

¹ Country-specific means are based on all available data from 1999 onwards.

Source: BIS debt service ratios statistics.

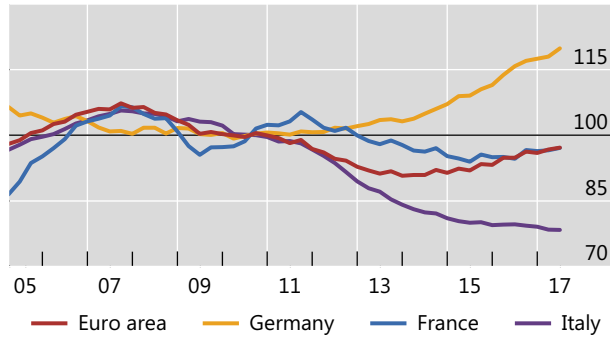
H Property price statistics

Real residential property prices

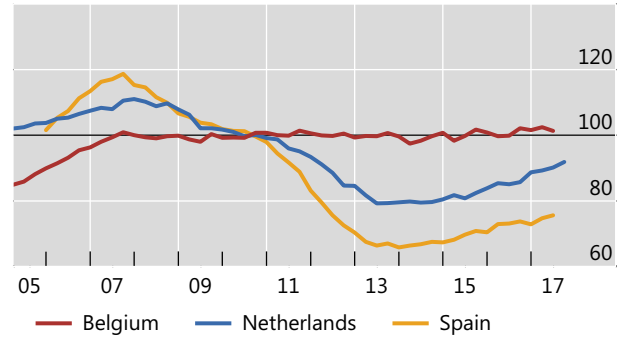
CPI-deflated, 2010 = 100

Graph H.1

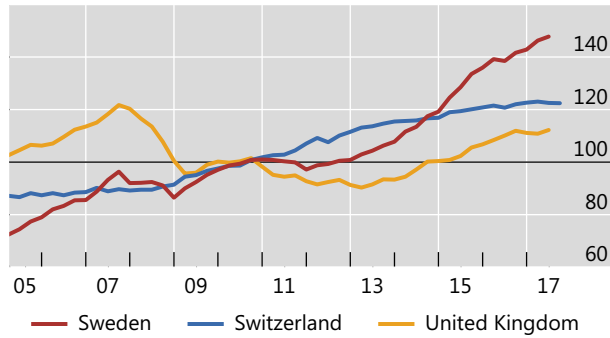
Euro area: aggregate and major countries



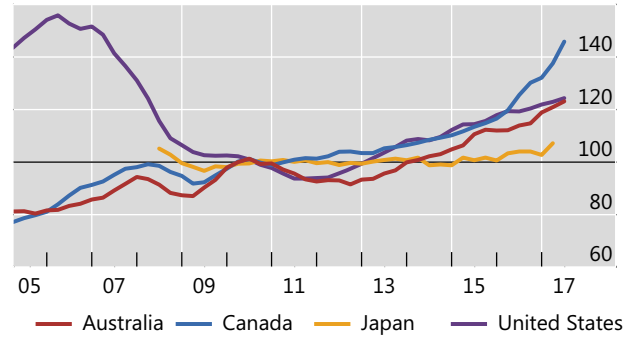
Euro area: other countries



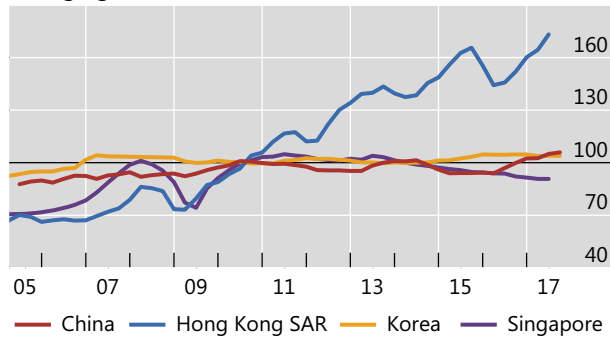
Other European countries



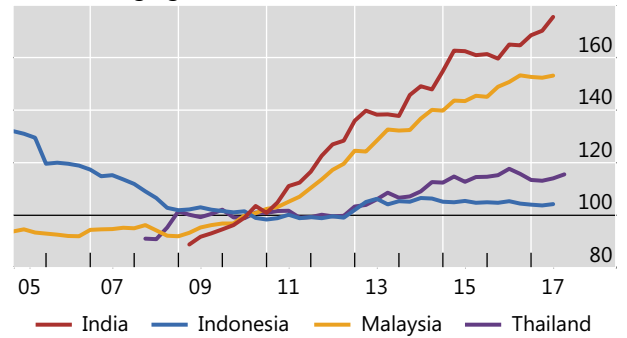
Major advanced economies



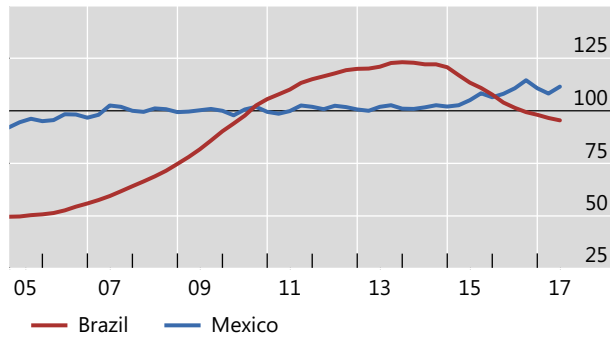
Emerging Asia



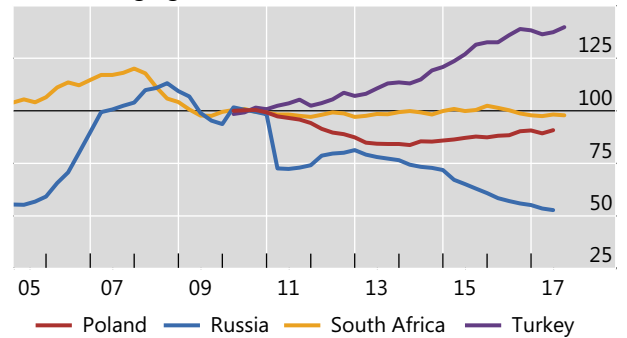
Other emerging Asia



Latin America



Other emerging market economies



Further information on the BIS property price statistics is available at www.bis.org/statistics/pp.htm.

Source: BIS property prices statistics.

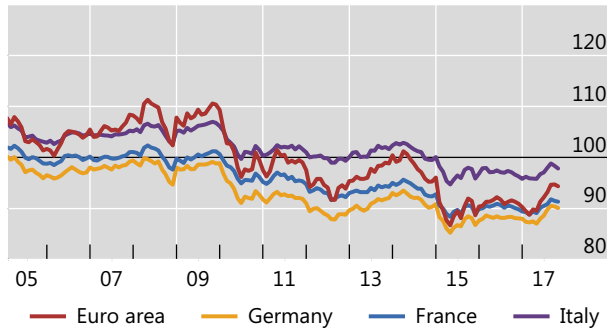
I Effective and US dollar exchange rate statistics

Real effective exchange rates

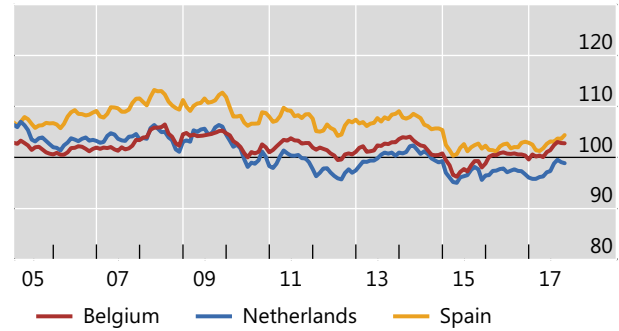
CPI-based, 1995–2005 = 100¹

Graph I.1

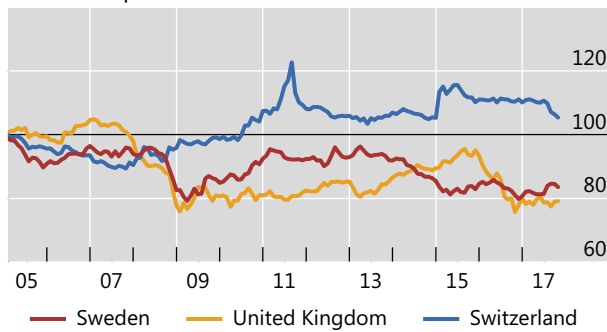
Euro area: aggregate and major countries



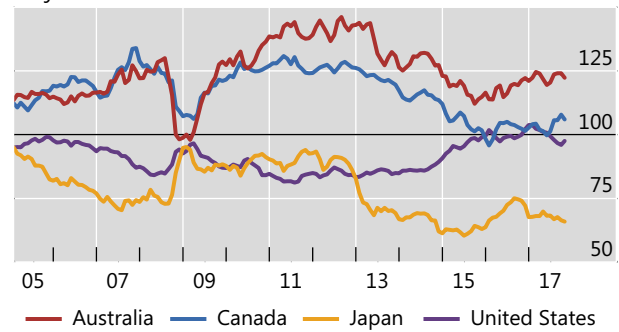
Euro area: other countries



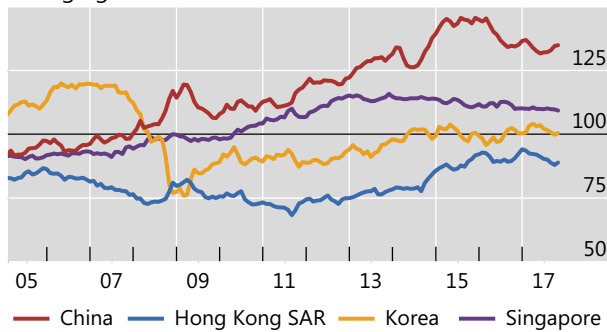
Other European countries



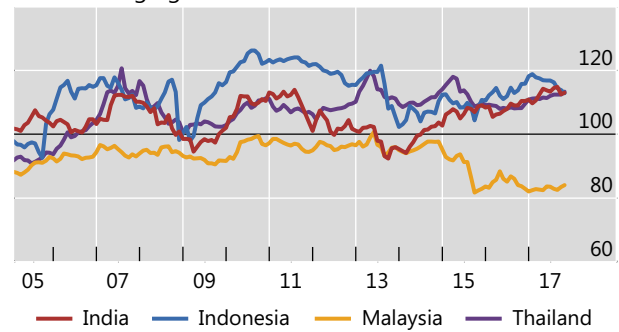
Major advanced economies



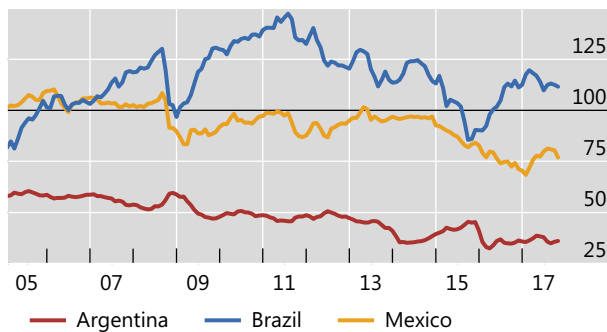
Emerging Asia



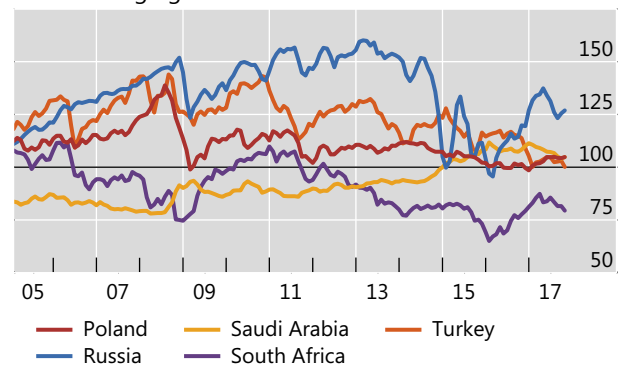
Other emerging Asia



Latin America



Other emerging market economies



Further information on the BIS effective exchange rate statistics is available at www.bis.org/statistics/eer.htm.

¹ An increase indicates a real-term appreciation of the local currency against a broad basket of currencies.

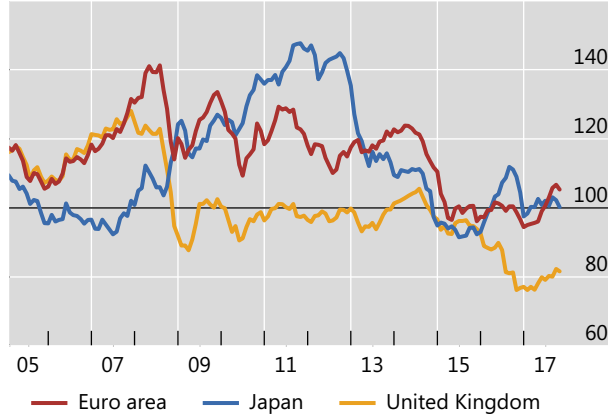
Source: BIS effective exchange rates statistics.

US dollar exchange rates

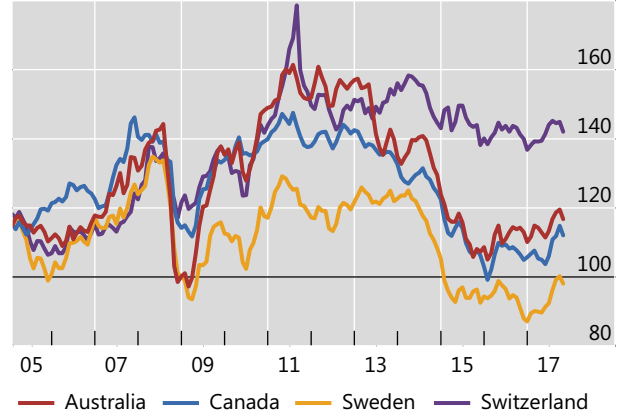
Indices, 1995–2005 = 100¹

Graph I.2

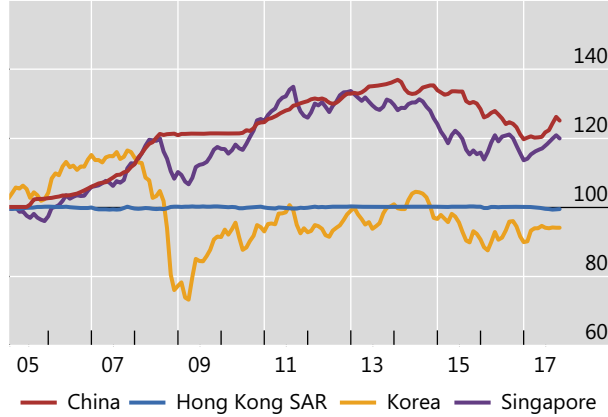
Major advanced economies



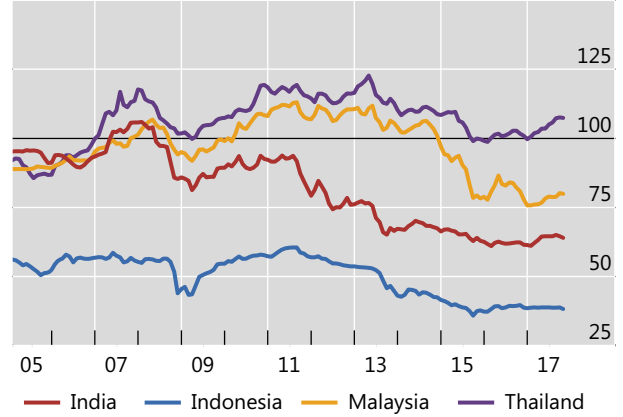
Other advanced economies



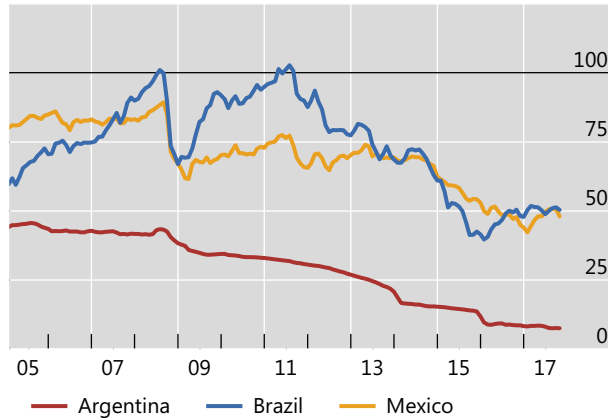
Emerging Asia



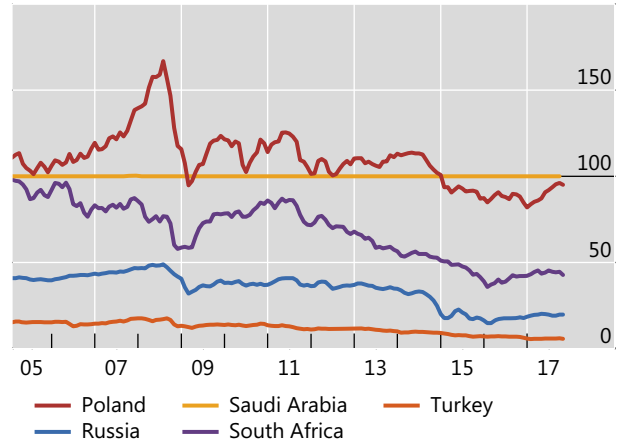
Other emerging Asia



Latin America



Other emerging market economies



Further information on the exchange rate statistics is available at www.bis.org/statistics/xrusd.htm.

¹ An increase indicates an appreciation of the local currency against the US dollar.

Source: BIS US dollar exchange rates statistics.

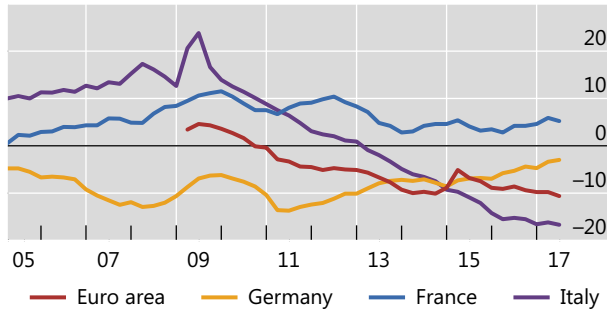
J Credit-to-GDP gaps

Credit-to-GDP gaps

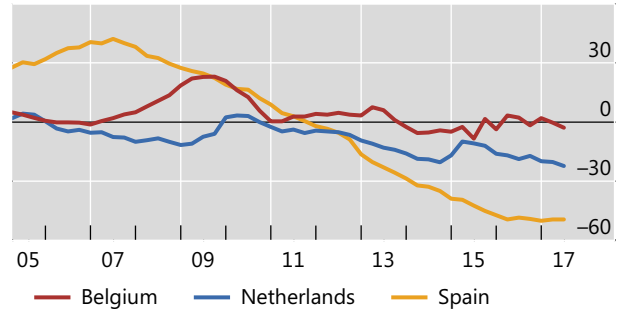
In percentage points of GDP

Graph J.1

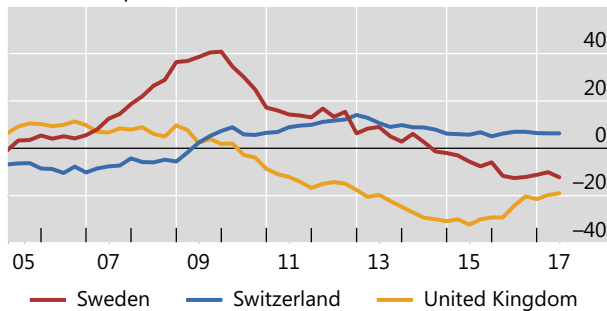
Euro area: aggregate and major countries



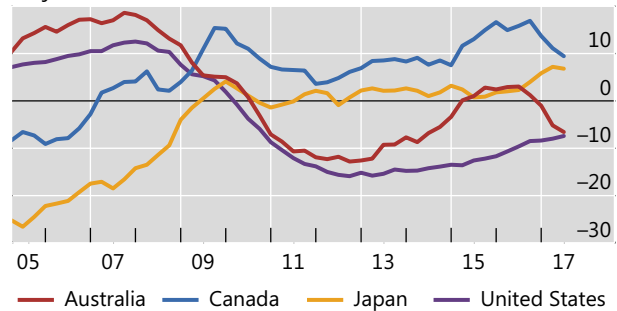
Euro area: other countries



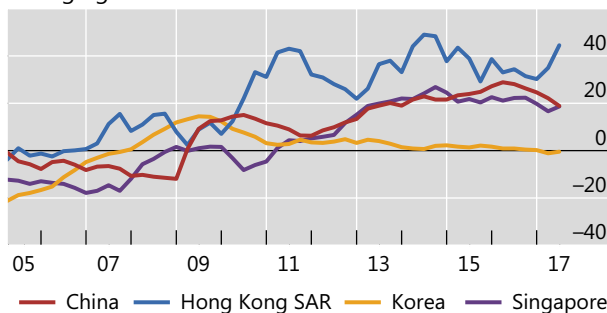
Other European countries



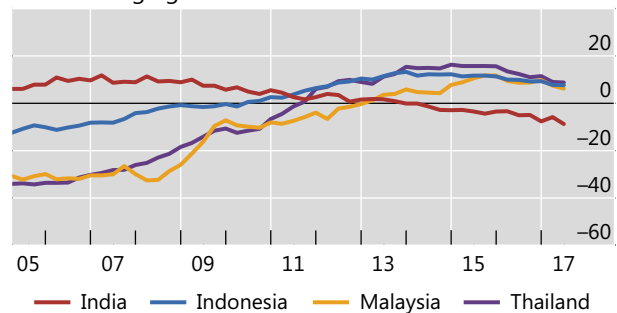
Major advanced economies



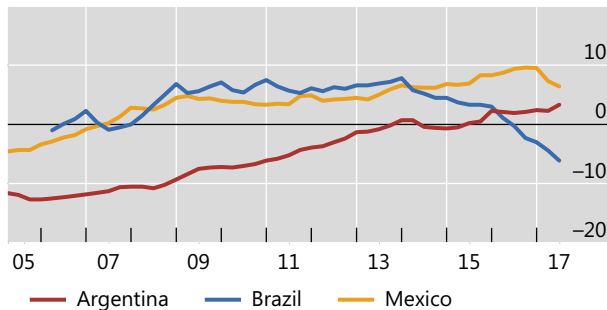
Emerging Asia



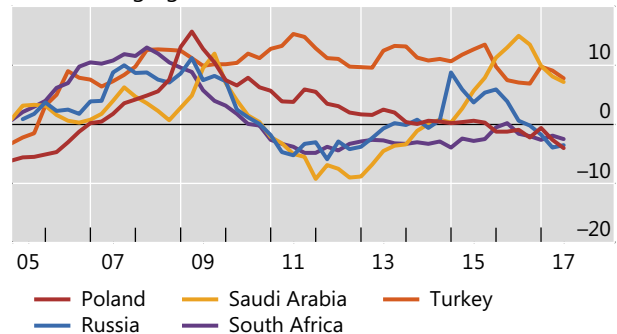
Other emerging Asia



Latin America



Other emerging market economies



¹ Estimates based on series on total credit to the private non-financial sector. The credit-to-GDP gap is defined as the difference between the credit-to-GDP ratio and its long-term trend; the long-term trend is calculated using a one-sided Hodrick-Prescott filter with a smoothing parameter of 400,000. Further information on the BIS credit-to-GDP gaps is available at www.bis.org/statistics/c_gaps.htm.

Source: BIS credit-to-GDP gaps statistics.

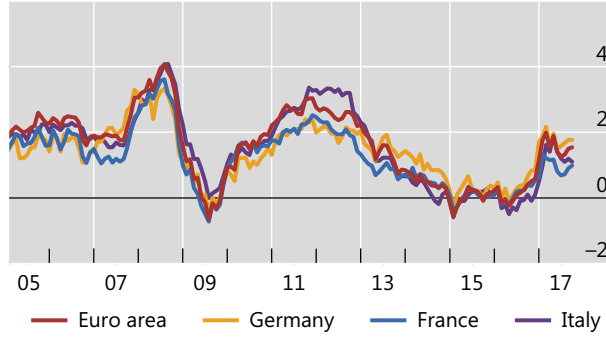
K Consumer prices

Consumer prices

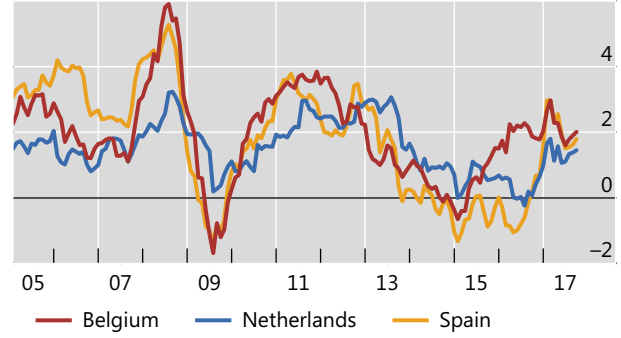
Year-on-year percentage changes

Graph K.1

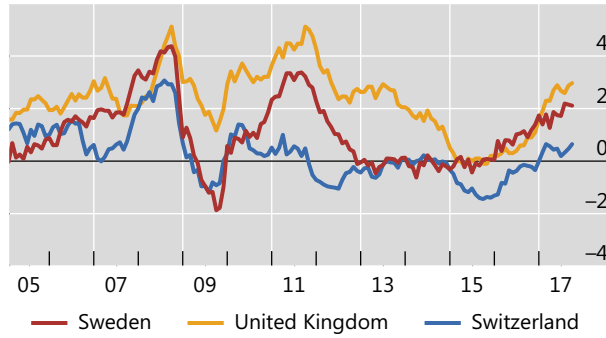
Euro area: aggregate and major countries



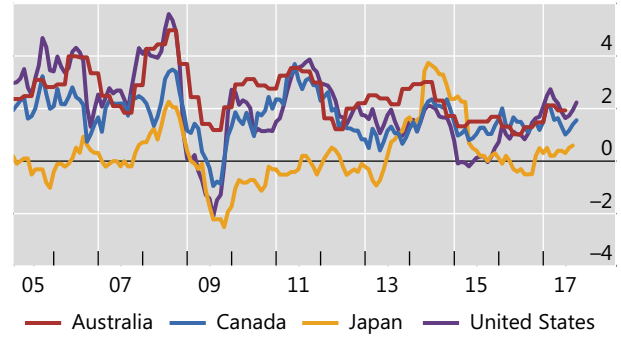
Euro area: other countries



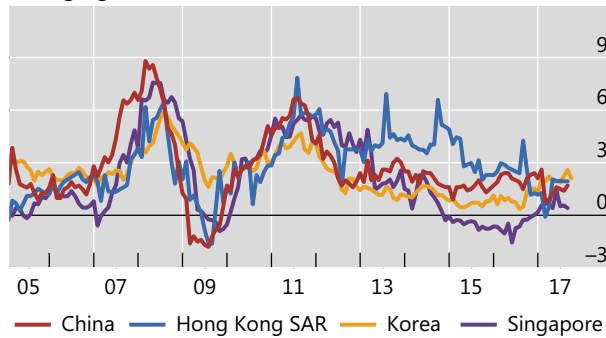
Other European countries



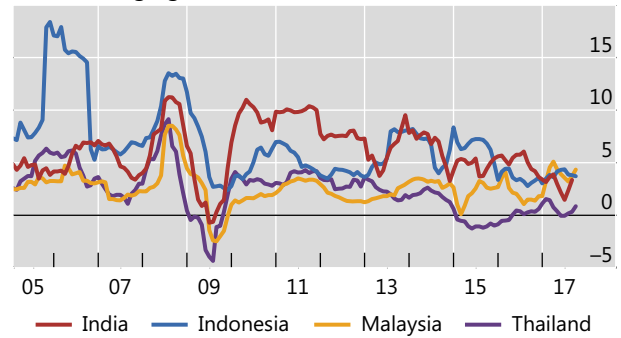
Major advanced economies



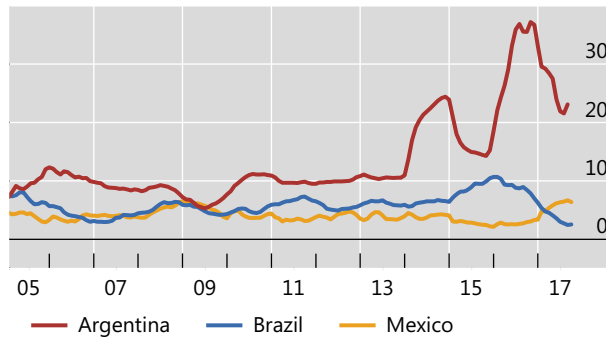
Emerging Asia



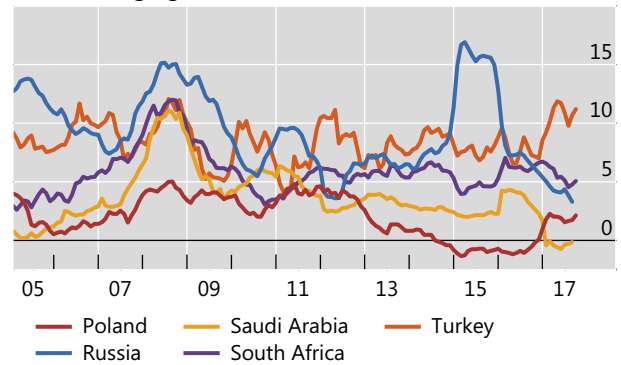
Other emerging Asia



Latin America



Other emerging market economies



Further information on the BIS consumer prices is available at www.bis.org/statistics/cp.htm.

Source: BIS consumer price statistics.

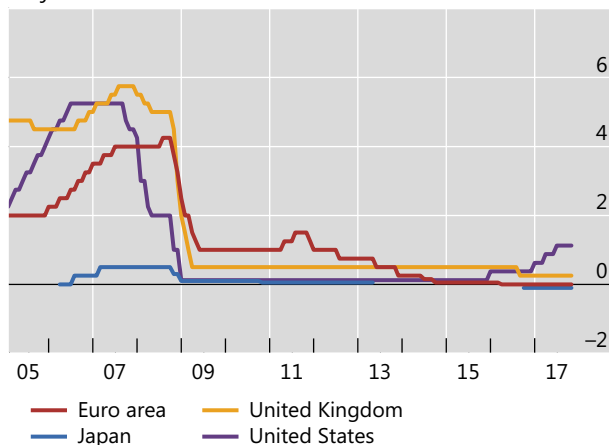
L Central bank policy rates

Central bank policy or representative rates

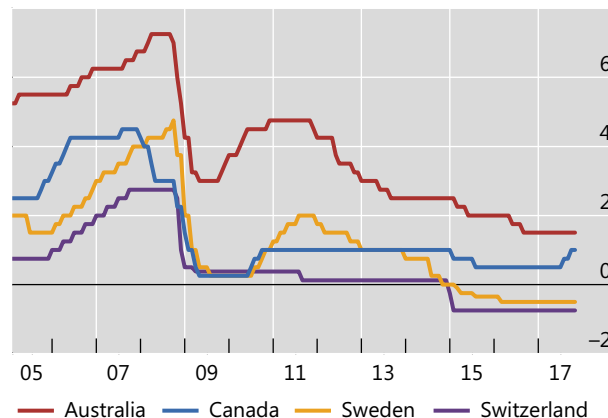
Month-end; in per cent

Graph L.1

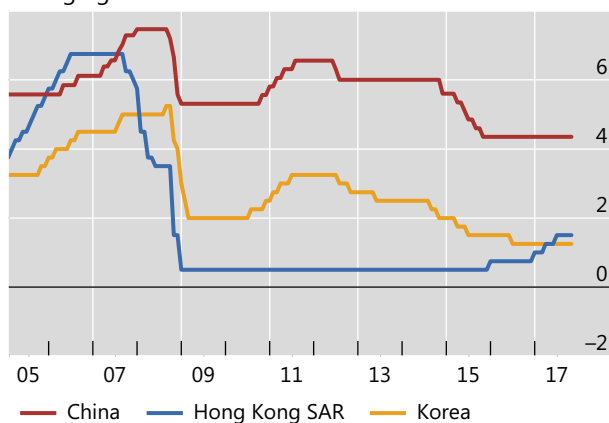
Major advanced economies



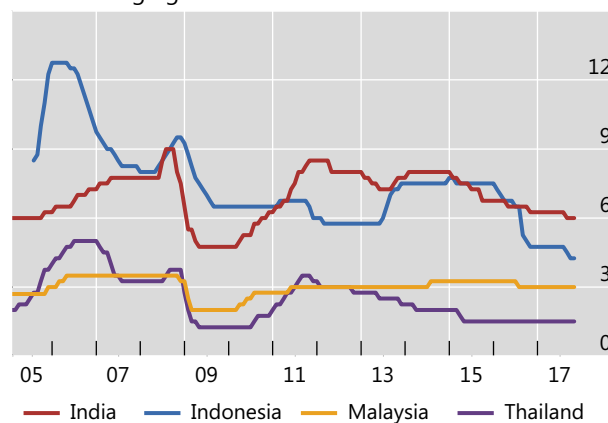
Other advanced economies



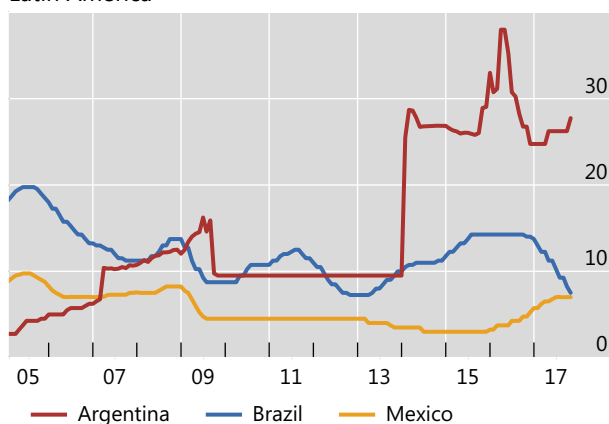
Emerging Asia



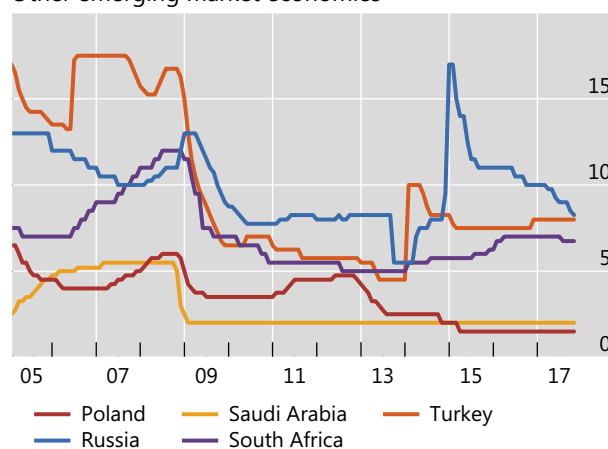
Other emerging Asia



Latin America



Other emerging market economies



Further information on the policy rates is available at www.bis.org/statistics/cbpol.htm.

Source: BIS policy rates statistics.

Special features in the BIS Quarterly Review

September 2017	FX swaps and forwards: missing global debt?	Claudio Borio, Robert McCauley & Patrick McGuire
September 2017	Central bank cryptocurrencies	Morten Bech & Rodney Garratt
September 2017	What are the effects of macroprudential policies on macroeconomic performance?	Codruta Boar, Leonardo Gambacorta, Giovanni Lombardo & Luiz Pereira da Silva
September 2017	Green bond finance and certification	Torsten Ehlers & Frank Packer
March 2017	Consumption-led expansions	Enisse Kharroubi & Emanuel Kohlscheen
March 2017	The new era of expected credit loss provisioning	Benjamin Cohen & Gerald Edwards Jr
March 2017	The quest for speed in payments	Morten Bech, Yuuki Shimizu and Paul Wong
March 2017	The bond benchmark continues to tip to swaps	Lawrence Kreicher, Robert McCauley & Philip Wooldridge
December 2016	Downsized FX markets: causes and implications	Michael Moore, Andreas Schrimpf and Vladyslav Sushko
December 2016	The changing shape of interest rate derivatives markets	Torsten Ehlers & Egemen Eren
December 2016	Emerging derivatives markets?	Christian Upper & Marcos Valli
December 2016	Non-deliverable forwards: impact of currency internationalisation and derivatives reform	Robert McCauley & Chang Shu
December 2016	Does the financial channel of exchange rates offset the trade channel?	Jonathan Kerns & Nikhil Patel

Recent BIS publications¹

BIS Working Papers

CoCo issuance and bank fragility

Stefan Avdjiev, Bilyana Bogdanova, Patrick Bolton, Wei Jiang and Anastasia Kartasheva
November 2017, No 678

The promise of contingent convertible capital securities (CoCos) as a 'bail-in' solution has been the subject of considerable theoretical analysis and debate, but little is known about their effects in practice. In this paper, we undertake the first comprehensive empirical analysis of bank CoCo issues, a market segment that comprises over 730 instruments totaling \$521 billion. Four main findings emerge: 1) The propensity to issue a CoCo is higher for larger and better-capitalized banks; 2) CoCo issues result in statistically significant declines in issuers' CDS spreads, indicating that they generate risk-reduction benefits and lower costs of debt. This is especially true for CoCos that: i) convert into equity, ii) have mechanical triggers, iii) are classified as Additional Tier 1 instruments; 3) CoCos with only discretionary triggers do not have a significant impact on CDS spreads; 4) CoCo issues have no statistically significant impact on stock prices, except for principal write-down CoCos with a high trigger level, which have a positive effect.

Macroeconomic implications of financial imperfections: a survey

Stijn Claessens and M Ayhan Kose
November 2017, No 677

This paper surveys the theoretical and empirical literature on the macroeconomic implications of financial imperfections. It focuses on two major channels through which financial imperfections can affect macroeconomic outcomes. The first channel, which operates through the demand side of finance and is captured by financial accelerator-type mechanisms, describes how changes in borrowers' balance sheets can affect their access to finance and thereby amplify and propagate economic and financial shocks. The second channel, which is associated with the supply side of finance, emphasises the implications of changes in financial intermediaries' balance sheets for the supply of credit, liquidity and asset prices, and, consequently, for macroeconomic outcomes. These channels have been shown to be important in explaining the linkages between the real economy and the financial sector. That said, many questions remain.

Asset prices and macroeconomic outcomes: a survey

Stijn Claessens and M Ayhan Kose
November 2017, No 676

This paper surveys the literature on the linkages between asset prices and macroeconomic outcomes. It focuses on three major questions. First, what are the basic theoretical linkages between asset prices and macroeconomic outcomes? Second, what is the empirical evidence supporting these linkages? And third, what are the main challenges to the theoretical and empirical findings? The survey addresses these questions in the context of four major asset price categories: equity prices, house prices, exchange rates and interest rates, with a particular focus on their international dimensions. It also puts into perspective the evolution of the literature on the determinants of asset prices and their linkages with macroeconomic outcomes, and discusses possible future research directions.

¹ Requests for publications should be addressed to Bank for International Settlements, Press & Communications, Centralbahnplatz 2, CH-4002 Basel. These publications are also available on the BIS website (<http://www.bis.org/>).

Macroprudential Policies in Peru: The effects of Dynamic Provisioning and Conditional Reserve Requirements

Elias Minaya, José Lupú and Miguel Cabello

November 2017, No 675

Over the past decade, credit has grown significantly in Peru, a small and partially dollarised economy, and the mounting credit risk attached to foreign currency credit created severe challenges for financial regulators. This paper assesses the effectiveness of two macroprudential measures implemented by regulators: dynamic provisioning, to reduce the procyclicality of credit and conditional reserve requirements, to diminish the degree of dollarisation of the economy. Using credit register data that covers the period of 2004-2014, we find evidence that dynamic provisioning has decelerated the rapid growth of commercial bank lending. Moreover, mortgage dollarisation declined significantly after the implementation of the conditional reserve requirement scheme.

Credit supply responses to reserve requirement: loan-level evidence from macroprudential policy

João Barata R B Barroso, Rodrigo Barbone Gonzalez and Bernardus F Nazar Van Doornik

November 2017, No 674

This paper estimates the impact of reserve requirements (RR) on credit supply in Brazil, exploring a large loan-level dataset. We use a difference-in-difference strategy, first in a long panel, then in a cross-section. In the first case, we estimate the average effect on credit supply of several changes in RR from 2008 to 2015 using a macroprudential policy index. In the second, we use the bank-specific regulatory change to estimate credit supply responses from (1) a countercyclical easing policy implemented to alleviate a credit crunch in the aftermath of the 2008 global crisis; and (2) from its related tightening. We find evidence of a lending channel where more liquid banks mitigate RR policy. Exploring the two phases of countercyclical policy, we find that the easing impacted the lending channel on average two times more than the tightening. Foreign and small banks mitigate these effects. Finally, banks are prone to lend less to riskier firms.

Loan-to-value policy and housing finance: effects on constrained borrowers

Douglas Kiarely Godoy de Araujo, João Barata R B Barroso and Rodrigo Barbone Gonzalez

November 2017, No 673

This paper explores the effects on constrained borrowers of an LTV limit implemented on September 2013 on two major segments of housing finance in Brazil. LTV (hard) limits and related policies entail identification challenges, since constrained individuals are no longer directly observed after policy implementation. In this paper, partially observed treatment status is overcome by the use of an adjusted difference-in-difference method, focusing on the average treatment effect on the treated borrowers (i.e. those that would violate the LTV limit if allowed to do so). We use comprehensive loan-level data on mortgages augmented with a detailed and granular employment register. In the most affected segment, constrained individuals must meet the new LTV limit. These treated borrowers purchase more affordable homes and are less likely to be in arrears 12 months in the future. In the least affected segment, constrained borrowers also end-up meeting the new LTV limit, but the impacts are smaller and we find no significant effects on borrower's housing choice or morose debt.

Capital and currency-based macroprudential policies: an evaluation using credit registry data

Horacio A Aguirre and Gastón Repetto

November 2017, No 672

We aim to assess the impact of capital- and currency-based macroprudential policy measures on credit growth at the bank-firm level, using credit registry data from Argentina. We examine the impact of the introduction and tightening of a capital buffer and a limit on the foreign currency position of financial institutions on credit growth of firms, estimating fixed effects and difference-in-difference models for the period 2009-2014; we control for macroeconomic, financial institutions and firms' variables, both observable and unobservable. We find that: the capital buffer and the limits on foreign currency positions generally contribute to moderating the credit cycle, both when introduced and when tightened; the

currency-based measure appears to have a quantitatively more important impact; both measures operate on the extensive and the intensive margins, and have an impact on credit supply. Macroprudential policies also have an effect on ex post credit quality: growth of non-performing loans is reduced after their implementation. In general, credit granted by banks with more capital and assets evidences a higher impact of the introduction of the capital buffer, while this measure also acts more strongly during economic activity expansions.

Capital misallocation and financial development: A sector-level analysis

Daniela Marconi and Christian Upper

November 2017, No 671

This study investigates how financial development affects capital allocation across industries in a panel of countries at different stages of development (China, India, Mexico, Korea, Japan and the US) over the period 1980-2014. Following the approach proposed by Chari et al (2007) and Aoki (2012), we compute wedges for capital and labour inputs for 26 industrial sectors in the six countries and add them up to economy-wide measures of capital and labour misallocation. We find that more developed financial systems allocate capital investment more efficiently than less developed ones. If financial development is low, faster capital accumulation is associated with a worsening of allocative efficiency. This effect reverses for higher levels of financial development. Sectors with high R&D expenditures or high capital investment benefit most from financial development. These effects are not only statistically significant, they are also large in economic terms.

Policy Rules for Capital Controls

Gurnain Kaur Pasricha

November 2017, No 670

This paper attempts to borrow the tradition of estimating policy reaction functions in monetary policy literature and apply it to capital controls policy literature. Using a novel weekly dataset on capital controls policy actions in 21 emerging economies over the period 1 January 2001 to 31 December 2015, I examine the competitiveness and macroprudential motivations for capital control policies. I introduce a new proxy for competitiveness motivations: the weighted appreciation of an emerging-market currency against its top five trade competitors. The analysis shows that past emerging-market policy systematically responds to both competitiveness and macroprudential motivations. The choice of instruments is also systematic: policy-makers respond to competitiveness concerns by using both instruments - inflow tightening and outflow easing. They use only inflow tightening in response to macroprudential concerns. I also find evidence that that policy is acyclical to foreign debt but is countercyclical to domestic bank credit to the private non-financial sector. The adoption of explicit financial stability mandates by central banks or the creation of inter-agency financial stability councils increased the weight of macroprudential factors in the use of capital controls policies. Countries with higher exchange rate pass-through to export prices are more responsive to competitiveness concerns.

Credit misallocation during the European financial crisis

Fabiano Schivardi, Enrico Sette and Guido Tabellini

November 2017, No 669

Do banks with low capital extend excessive credit to weak firms, and does this matter for aggregate efficiency? Using a unique dataset that covers almost all bank-firm relationships in Italy in the period 2004-2013, we find that during the Eurozone financial crisis (i) undercapitalized banks were less likely to cut credit to non-viable firms; (ii) credit misallocation increased the failure rate of healthy firms and reduced the failure rate of non-viable firms and (iii) nevertheless, the adverse effects of credit misallocation on the growth rate of healthier firms were negligible, as were the effects on TFP dispersion. This goes against previous influential findings, which, we argue, face serious identification problems. Thus, while banks with low capital can be an important source of aggregate inefficiency in the long run, their contribution to the severity of the great recession via capital misallocation was modest.

Financial and real shocks and the effectiveness of monetary and macroprudential policies in Latin American countries

Javier Garcia-Cicco, Markus Kirchner, Julio Carrillo, Diego Rodríguez, Fernando Perez, Rocío Gondo, Carlos Montoro and Roberto Chang

October 2017, No 668

This work compares the impact of monetary and macroprudential policies on financial and real sectors in four Latin American countries: Chile, Colombia, Mexico and Peru, and explores the commonalities and differences in the reaction to shocks to both the financial and real sector. In order to do that, we estimate a New Keynesian small open economy model with frictions in the domestic financial intermediation sector and a commodity sector for each country. Results suggest that financial shocks are important drivers of output and investment fluctuations in the short run for most countries, but in the long run their contribution is small. Furthermore, we evaluate the ability of macroprudential policies to limit the impact on credit growth and its effect on real variables. In a scenario of tighter financial conditions, monetary policy becomes expansionary due to both lower inflation (given the exchange rate appreciation) and weaker output growth, and macroprudential policies further contribute to restoring credit and output growth. However, in the case of a negative commodity price shock, macroprudential policies are less effective but useful as a complement for the tightening of monetary policy. Higher inflation (due to the exchange rate depreciation) and higher policy rates lead to a contraction in output growth, but macroprudential policies could alleviate this by improving credit conditions.

Modeling Time-Varying Uncertainty of Multiple-Horizon Forecast Errors

Todd E Clark, Michael W McCracken and Elmar Mertens

October 2017, No 667

We develop uncertainty measures for point forecasts from surveys such as the Survey of Professional Forecasters, Blue Chip, or the Federal Open Market Committee's Summary of Economic Projections. At a given point of time, these surveys provide forecasts for macroeconomic variables at multiple horizons. To track time-varying uncertainty in the associated forecast errors, we derive a multiple-horizon specification of stochastic volatility. Compared to constant-variance approaches, our stochastic-volatility model improves the accuracy of uncertainty measures for survey forecasts.

Bank capital allocation under multiple constraints

Tirupam Goel, Ulf Lewrick and Nikola Tarashev

October 2017, No 666

Banks allocate capital across business units while facing multiple constraints that may bind contemporaneously or only in future states. When risks rise or risk management strengthens, a bank reallocates capital to the more efficient unit. This unit would have generated higher constraint- and risk-adjusted returns while satisfying a tightened constraint at the old capital allocation. Calibrated to US data, our model reveals that, when credit or market risk increases, market-making attracts capital and lending shrinks. Leverage constraints affect banks only when measured risks are low. At low credit risk, tighter leverage constraints may reduce market-making but support lending.

Interest rates and house prices in the United States and around the world

Gregory Sutton, Dubravko Mihaljek and Agn  Subelyt 

October 2017, No 665

This paper estimates the response of house prices to changes in short- and long-term interest rates in 47 advanced and emerging market economies. We use data that statistical authorities selected as their best house price series, covering almost half a century of quarterly observations for the United States and over 1,000 annual observations for the rest of the sample. We find a surprisingly important role for short-term interest rates as a driver of house prices, especially outside the United States. Our interpretation is that this reflects the importance of the bank lending channel of monetary policy in house price fluctuations, especially in countries where securitisation of home mortgages is less prevalent. In addition, we document substantial inertia in house prices and find that changes in interest rates and other determinants affect house

prices gradually rather than on impact. This suggests that modest cuts in policy rates are not likely to rapidly fuel house price increases. Finally, we find that US interest rates seem to affect house prices outside the United States.

Is the price right? Swing pricing and investor redemptions

Ulf Lewrick and Jochen Schanz

October 2017, No 664

How effective are available policy tools in managing liquidity risks in the mutual fund industry? We assess one such tool - swing pricing - which allows funds to adjust their settlement price in response to large net flows. Our empirical analysis exploits the fact that swing pricing is available to Luxembourg funds, but not yet to U.S. funds. We show that swing pricing dampens outflows in reaction to weak fund performance, but has a limited effect during stress episodes. Furthermore, swing pricing supports fund returns, while raising accounting volatility, and may lead to lower cash buffers.

Liquidity risk in markets with trading frictions: What can swing pricing achieve?

Ulf Lewrick and Jochen Schanz

October 2017, No 663

Open-end mutual funds expose themselves to liquidity risk by granting their investors the right to daily redemptions at the fund's net asset value. We assess how swing pricing can dampen such risks by allowing the fund to settle investor orders at a price below the fund's net asset value. This reduces investors' incentive to redeem shares and mitigates the risk of large destabilising outflows. Optimal swing pricing balances this risk with the benefit of providing liquidity to cash-constrained investors. We derive bounds, depending on trading costs and the share of liquidity-constrained investors, within which a fund chooses to swing the settlement price. We also show how the optimal settlement price responds to unanticipated shocks. Finally, we discuss whether swing pricing can help mitigate the risk of self-fulfilling runs on funds.

The real effects of relationship lending

Ryan Niladri Banerjee, Leonardo Gambacorta and Enrico Sette

September 2017, No 662

This paper studies the real consequences of relationship lending on firm activity in Italy following Lehman Brothers' default shock and Europe's sovereign debt crisis. We use a large data set that merges the comprehensive Italian Credit and Firm Registers. We find that following Lehman's default, banks offered more favourable continuation lending terms to firms with which they had stronger relationships. Such favourable conditions enabled firms to maintain higher levels of investment and employment. The insulation effects of tighter bank-firm relationships was still present during the European sovereign debt crisis, especially for firms tied to well capitalised banks.

Basel Committee on Banking Supervision

Identification and management of step-in risk

October 2017

As part of the G20's initiative to strengthen the oversight and regulation of the shadow banking system, the Basel Committee on Banking Supervision's Guidelines on identification and management of step-in risk aim to mitigate the systemic risks stemming from potential financial distress in shadow banking entities spilling over to banks.

The guidelines build upon two public consultations carried out by the Committee in December 2015 and March 2017. They introduce a flexible and tailored approach, where measures to mitigate significant step-in risk rely on a supervisory process that is supported by proportionate reporting. In particular:

Banks define the scope of entities to be evaluated for potential step-in risk, based on the relationship of these entities with the bank

Banks identify entities that are immaterial or subject to collective rebuttals and exclude them from the initial set of entities to be evaluated

Banks assess all remaining entities against the step-in risk indicators provided in the guidelines, including potential mitigants

For entities where step-in risk is identified, banks estimate the potential impact on liquidity and capital positions and determine the appropriate internal risk management action

Banks report their self-assessment of step-in risk to their supervisor

After reviewing the bank's self-assessment analysis, where necessary supported by an analysis of the bank's policies and procedures, the supervisor should decide whether there is a need for an additional supervisory response. To that extent, the guidelines do not prescribe any automatic Pillar 1 liquidity or capital charge, but rather rely on the application of existing prudential measures available to mitigate significant step-in risk.

The guidelines are expected to be implemented in member jurisdictions by 2020.

Thirteenth progress report on adoption of the Basel regulatory framework October 2017

This updated Progress report on adoption of the Basel regulatory framework provides a high-level view of Basel Committee members' progress in adopting Basel III standards as of end-September 2017.

The report focuses on the status of adoption of all the Basel III standards (which will become effective by 2019) to ensure that the Basel standards are transformed into national law or regulation according to the internationally agreed timeframes. The report is based on information provided by individual members as part of the Committee's Regulatory Consistency Assessment Programme (RCAP). The report includes the status of adoption of the Basel III risk-based capital standards, the liquidity coverage ratio (LCR), the net stable funding ratio (NSFR), the standards for global and domestic systemically important banks (SIBs), the leverage ratio, the large exposure framework, the interest rate risk in the banking book (IRRBB), and the disclosure requirements.

In addition to periodically reporting on the status of adoption, all Committee members undergo an assessment of the consistency of their domestic rules with the Basel standards.

Regulatory Consistency Assessment Programme (RCAP) - Assessment of Basel III LCR regulations - Switzerland October 2017

This report presents the findings of an RCAP Assessment Team on the adoption of the Basel Liquidity Coverage Ratio (LCR) in Switzerland and its consistency with the minimum requirements of the Basel III framework. The assessment is based on the Swiss LCR rules of the Liquidity Ordinance, supplemented by circulars issued by Swiss Financial Market Supervisory Authority (FINMA).

The assessment focuses on the consistency and completeness of the Swiss LCR rules with the Basel minimum requirements. Issues relating to prudential outcomes, the liquidity position of individual banks or the effectiveness of the FINMA's supervisory effectiveness were not in the scope of this RCAP. The assessment relied upon the Swiss regulations and other information and explanations provided by the Swiss authorities and ultimately reflects the expert view of the Assessment Team on the documents and data reviewed. Where deviations from the Basel framework were identified, they were evaluated for their current and potential impact on the reported LCR for a sample of internationally active banks in Switzerland. The materiality assessment relied upon the data, information and computations provided by FINMA. Some findings were evaluated on a qualitative basis in instances where appropriate quantitative data were not available. The overall assessment outcome was then based on the materiality of findings (in both quantitative and qualitative terms) and expert judgment. The Assessment Team followed the methodology and guidance provided in the RCAP Handbook for Jurisdictional Assessments.

Regulatory Consistency Assessment Programme (RCAP) - Assessment of Basel III LCR regulations - Canada
October 2017

This report presents the findings of an RCAP assessment on the domestic adoption of the Basel Liquidity Coverage Ratio (LCR) standard in Canada and its consistency with the minimum requirements of the Basel III framework. The assessment focuses on the rules applied to Canadian banks that are internationally active and of significance to domestic financial stability, in particular the consistency and completeness of the Canadian regulations with the Basel minimum requirements. It is based on the Canadian regulations in force on 30 June 2017. Issues relating to prudential outcomes, the liquidity position of individual banks or the supervisory effectiveness of the Canadian authorities were not in the scope of this RCAP assessment.

Where domestic regulations and provisions were found to be non-compliant with the Basel framework, those deviations were evaluated for their current and potential impact (or non-impact) on the reported LCRs of a sample of Canadian banks. The assessment outcome was based on the materiality of findings and expert judgment.

The report has three sections and a set of annexes: (i) an executive summary with a statement from the Canadian authorities on the assessment outcome; (ii) the context, scope and methodology, together with the main assessment findings; and (iii) details of the deviations and their materiality along with other assessment-related observations.

Regulatory Consistency Assessment Programme (RCAP) - Assessment of Basel III LCR regulations - Brazil
October 2017

This report presents the findings of an RCAP Assessment Team on the domestic adoption of the Basel Liquidity Coverage Ratio (LCR) standard in Brazil and its consistency with the minimum requirements of the Basel III framework. The assessment focuses on the Brazilian banks that are internationally active and of significance to domestic financial stability.

The focus of the assessment was on the consistency and completeness of the Brazilian regulations with the Basel minimum requirements, based on the regulations in force on 31 July 2017. Issues relating to prudential outcomes, the liquidity position of individual banks, or the Brazilian authorities' supervisory effectiveness were not in the scope of this RCAP assessment. The assessment reflects the expert view of the Assessment Team on the documents, data and explanations provided by the Brazilian authorities.

Regulatory Consistency Assessment Programme (RCAP) - Assessment of Basel III LCR regulations - Australia
October 2017

This report presents the findings of an RCAP Assessment Team on the domestic adoption of the Basel Liquidity Coverage Ratio (LCR) in Australia and its consistency with the minimum requirements of the Basel III framework. The assessment is based on the Australian LCR rules of the Authorised Deposit-taking Institutions (ADI) Prudential Standards (APS), supplemented by the ADI Reporting Standards (ARS) and ADI Prudential Practice Guide (APG).

The focus of the assessment was on the consistency and completeness of the Australian LCR rules with the Basel minimum requirements. Issues relating to prudential outcomes, the liquidity position of individual banks or the effectiveness of APRA's supervisory effectiveness were not in the scope of this RCAP assessment. The assessment relied upon data, information and materiality computations provided by APRA and was based on Australian regulations in force as of 30 June 2017. Where deviations from the Basel III framework were identified, they were evaluated for their current and potential impact on the reported LCR for a sample of internationally active banks in Australia. Some findings were evaluated on a qualitative basis in instances where appropriate quantitative data were not available. The overall assessment outcome was then based on the materiality of findings (in both quantitative and qualitative terms) and ultimately reflects the expert view of the Assessment Team. The Assessment Team

followed the methodology and guidance provided in the RCAP Handbook for Jurisdictional Assessments.²

Risk weight for Asian Infrastructure Investment Bank October 2017

The Basel Committee on Banking Supervision has agreed that supervisors may allow banks to apply a 0% risk weight to claims on the Asian Infrastructure Investment Bank (AIIB) in accordance with paragraph 59 of the document International Convergence of Capital Measurement and Capital Standards: A revised Framework - Comprehensive Version, June 2006. AIIB will be included in the list of multilateral development banks as set out in footnote 24 of the document.

Basel III definition of capital - Frequently asked questions October 2017

The Basel Committee periodically reviews frequently asked questions (FAQs) on its standards and publishes answers to these together with technical elaboration of the rules text and interpretative guidance where necessary. These aim to promote consistent global implementation of Basel III.

The FAQs published in this document correspond to the definition of capital sections of the Basel III standards and the 13 January 2011 press release on the loss absorbency of capital at the point of non-viability. These FAQs are in addition to those previously published in July 2011, October 2011 and December 2011. They are grouped according to the relevant paragraphs of the rules text. FAQs that have been added since the publication of the third version of this document are listed at the start of the document and marked in italics.

Basel III Monitoring Report September 2017

This report presents the results of the Basel Committee's latest Basel III monitoring exercise based on data as of 31 December 2016. The Committee established a rigorous reporting process to regularly review the implications of the Basel III standards for banks, and it has published the results of previous exercises since 2012. For the first time, the report provides not only global averages but also a regional breakdown for many key metrics.

Data have been provided for a total of 200 banks, comprising 105 large internationally active banks. These "Group 1 banks" are defined as internationally active banks that have Tier 1 capital of more than €3 billion, and include all 30 banks that have been designated as global systemically important banks (G-SIBs). The Basel Committee's sample also includes 95 "Group 2 banks" (ie banks that have Tier 1 capital of less than €3 billion or are not internationally active).

The Basel III minimum capital requirements are expected to be fully phased-in by 1 January 2019 (while certain capital instruments could still be recognised for regulatory capital purposes until end-2021). On a fully phased-in basis, data as of 31 December 2016 show that all banks in the sample meet both the Basel III risk-based capital minimum Common Equity Tier 1 (CET1) requirement of 4.5% and the target level CET1 requirement of 7.0% (plus any surcharges for G-SIBs, as applicable). Between 30 June and 31 December 2016, Group 1 banks continued to reduce their capital shortfalls relative to the higher Tier 1 and total capital target levels; in particular, the Tier 2 capital shortfall has decreased from €3.4 billion to €0.3 billion. As a point of reference, the sum of after-tax profits prior to distributions across the same sample of Group 1 banks for the six-month period ending 31 December 2016 was €239.5 billion. In addition, applying the 2022 minimum requirements for Total Loss-Absorbing Capacity (TLAC), 12 of the G-SIBs in the sample have a combined incremental TLAC shortfall of €116.4 billion as at the end of December 2016, compared with €318.2 billion at the end of June 2016.

² See www.bis.org/bcbs/publ/d361.pdf.

The monitoring reports also collect bank data on Basel III's liquidity requirements. Basel III's Liquidity Coverage Ratio (LCR) was set at 60% in 2015, increased to 70% in 2016 and will continue to rise in equal annual steps to reach 100% in 2019. The weighted average LCR for the Group 1 bank sample was 131% on 31 December 2016, up from 126% six months earlier. For Group 2 banks, the weighted average LCR was 159%, slightly up from 158% six months earlier. Of the banks in the LCR sample, 91% of the Group 1 banks (including all G-SIBs) and 96% of the Group 2 banks reported an LCR that met or exceeded 100%, while all Group 1 and Group 2 banks reported an LCR at or above the 70% minimum requirement that was in place for 2016.

Basel III also includes a longer-term structural liquidity standard - the Net Stable Funding Ratio (NSFR). The weighted average NSFR for the Group 1 bank sample was 116%, while for Group 2 banks the average NSFR was 114%. As of December 2016, 94% of the Group 1 banks (including all G-SIBs) and 88% of the Group 2 banks in the NSFR sample reported a ratio that met or exceeded 100%, while 100% of the Group 1 banks and 96% of the Group 2 banks reported an NSFR at or above 90%.

Committee on Payments and Market Infrastructures

Statistics on payment, clearing and settlement systems in the CPMI countries - Figures for 2016 (preliminary version)

October 2017 No 171

This is an annual publication that provides data on payments and payment, clearing and settlement systems in the CPMI countries.

This version of the statistical update contains data for 2016 and earlier years. There are detailed tables for each individual country as well as a number of comparative tables.

A final version will be published in December 2017.

Discussion note - Reducing the risk of wholesale payments fraud related to endpoint security - consultative document

September 2017 No 170

The Committee on Payments and Market Infrastructures (CPMI) has published a consultative document, Discussion note - Reducing the risk of wholesale payments fraud related to endpoint security.

This strategy aims to help focus industry efforts to tackle the increasing threat of wholesale payments fraud related to endpoint security. The strategy sets out seven elements designed to address all areas relevant to preventing, detecting, responding to and communicating about wholesale payments fraud. It stresses the importance of understanding the full range of risks and calls upon all relevant public and private sector stakeholders to take a holistic and coordinated approach.

The CPMI is now seeking input from relevant stakeholders. After the consultation, it plans to develop guidance on each of the seven elements to help operators and participants of payment systems and messaging networks as well as their respective supervisors, regulators and overseers improve endpoint security. Proposed guidance will be developed by early 2018.

Harmonisation of the Unique Product Identifier - Technical Guidance

September 2017 No 169

G20 Leaders agreed in 2009 that all over-the-counter (OTC) derivatives contracts should be reported to trade repositories (TRs) as part of their commitment to reform OTC derivatives markets in order to improve transparency, mitigate systemic risk and protect against market abuse. Aggregation of the data reported across TRs is necessary to help ensure that authorities are able to obtain a comprehensive view of the OTC derivatives market and activity.

Following the 2014 FSB Feasibility study on approaches to aggregate OTC derivatives data , the FSB asked the CPMI and IOSCO to develop global guidance on the harmonisation of data elements reported to TRs and important for the aggregation of data by authorities, including Unique Transaction Identifiers (UTIs) and Unique Product Identifiers (UPIs).

This report is one part of the CPMI-IOSCO Harmonisation Group's response to its mandate. It focuses on the harmonised global UPI, whose purpose is to uniquely identify each OTC derivative product involved in a transaction that an authority requires, or may require in the future, to be reported to a TR. The guidance is global in scale, takes account of relevant international technical standards where available and is jurisdiction-agnostic, thus enabling the consistent global aggregation of OTC derivatives transaction data.

The CPMI and IOSCO issued a Technical Guidance on Harmonisation of the Unique Transaction Identifier in February 2017.

Speeches

Can central banks talk too much?

Speech by Mr Hyun Song Shin, Economic Adviser and Head of Research of the BIS, at the ECB conference on "Communications challenges for policy effectiveness, accountability and reputation", Frankfurt, 14 November 2017.

Is it possible for central banks to talk too much? Central banks learn from market prices, and influence market prices to steer the economy. However, the signal value of market prices can become impaired when market participants place too much weight on central bank pronouncements and actions. One concrete example of the confounding of market signals is the behaviour of market-implied inflation expectations based on the inflation swaps market, where swap rates have begun to move in lockstep with nominal yields. Such instances remind us that communication is a two-way street that involves listening as well as talking. Listening with greater self-awareness of the central bank's outsized role in financial markets would give central banks space to take a more detached position and make better decisions.

Recent regulatory developments and remaining challenges

Presentation by Mr Fernando Restoy, Chairman, Financial Stability Institute, Bank for International Settlements, at the CIV Meeting of Central Bank Governors of the Center for Latin American Monetary Studies (CEMLA), Washington DC, 12 October 2017.

The presentation provides an overview of the achievements to date of the post-crisis regulatory reforms and the ongoing work of the different standard-setting bodies. It highlights some specific challenges for financial sector authorities, including the ex post impact assessment of regulatory reforms; the problem of non-performing loans in several jurisdictions; the application of proportionality in regulation; the emergence of fintech; the implementation of resolution reforms; and other priority areas such as cyber-risk, shadow banking and correspondent banking.

Leverage in the small and in the large

Panel remarks by Mr Hyun Song Shin, Economic Adviser and Head of Research of the BIS, at the IMF conference on "Systemic Risk and Macroprudential Stress Testing", Washington DC, 10 October 2017.

Leverage in the small refers to the leverage of individual institutions, while leverage in the large refers to the leverage of the financial system as a whole. These two notions correspond to two directions in gauging systemic risk. One is to drill down to detailed micro evidence of how financial institutions are intertwined and delve into the complex web of interconnections. The other direction is to "drill up", to the macro, and indeed global, aggregates. Of the two, drilling up is often more informative, as it delivers the all-important time dimension of systemic risk - how it builds up over time and how it unwinds. I argue for

two propositions. First, mitigating complexity is mostly about taming leverage in the small. The motto is: if you take care of leverage in the small, complexity will take care of itself. Second, lest we fall into complacency, taming complexity is not enough to ward off systemic risk. Systemic risk is mostly about leverage in the large. Addressing systemic risk entails taking a macro and global perspective. Here, the motto is: take a global approach to macroprudential frameworks

Avoiding "regulatory wars" using international coordination of macroprudential policies

Article by Mr Luiz Awazu Pereira da Silva, Deputy General Manager of the BIS, and Mr Michael Chui, Senior Economist, based on panel remarks at the Seminar on Financial Volatility and Foreign Exchange Intervention: Challenges for Central Banks, jointly organised by the Inter-American Development Bank and the Central Reserve Bank of Peru, Cusco, 25-26 July 2017.

Financial spillovers and spillbacks have increased significantly in magnitude since the Global Financial Crisis posing a threat to financial stability. Using macroprudential policies following systematic countercyclical rules reduces volatility and contributes to financial stability, growth and investment. However, a multiplication of non-systematic, local macroprudential policies, and capital flow management measures including more aggressive capital controls, might result in a "regulatory war" and reduce global welfare. Instead, other avenues could be explored, as demonstrated by the adaptability of the policy frameworks used by emerging market economies. They have constantly evolved as a result of lessons learned from crises and that should include the Global Financial Crisis. This evolution is part of a learning curve that uses past crisis experiences, policymaking and research to prevent vulnerabilities from developing into full-blown future crises. These remarks are meant to show how this process occurs, its importance for global stability and a last but much needed "new lesson". Global financial stability needs international coordination on macroprudential policies between major emerging market economies (those that represent a large combined share of the global economy) and the major advanced economies.

Is there a risk of snapback in long-dated yields?

Panel remarks by Mr Hyun Song Shin, Economic Adviser and Head of Research of the BIS, at the Second ECB Annual Research Conference, Frankfurt, 25 September 2017.

Long-term interest rates have stayed low in the face of monetary policy normalisation, but experience has taught us that the bond market can change course quite abruptly. Long rates overreact relative to the benchmark where long rates are the average of expected future short rates. As prices are the outcomes of the interaction of many actors, the exact mechanism behind the overreaction varies over time and across markets, but we can sometimes shed light on what is going on without being able to predict when big market moves will happen. I provide a glimpse of the ultra-long segment of the euro area sovereign bond market through the lens of the insurance sector. The holding of ultra-long bonds by German insurance firms has quadrupled since 2008. In turn, yield-chasing may affect market dynamics to lower long-term rates, sparking even greater demand for long-dated bonds. To an outside observer, it would appear as if market participants' preferences were changing with market prices themselves. Low rates beget low rates through higher value placed on long-dated bonds, and high rates beget high rates due to lower value placed on long-dated bonds.

Through the looking glass

Lecture by Mr Claudio Borio, Head of the Monetary and Economic Department of the BIS, at the OMFIF City Lecture, London, 22 September 2017.

Why has inflation been so stubbornly subdued despite so little excess capacity? And why have real (inflation-adjusted) interest rates declined so much for so long? The lecture argues that these two seemingly independent developments are, in fact, intimately linked. Prevailing paradigms may underestimate how long-lasting the impact of real factors, such as globalisation and, increasingly, technology, may be on inflation; and, conversely, they may underestimate how long-lasting the impact of monetary policy may be on real interest rates.

If these hypotheses are correct, they could have first-order implications for the future of monetary policy.

Challenges for regulators and supervisors after the post-crisis reforms

Opening address by Mr Jaime Caruana, General Manager of the BIS, at the FSI Conference on "Supervisory policy implementation in the current macro-financial environment - 'a cross-sectoral journey'", Basel, 18 September 2017.

The emphasis on enhancing resilience for the whole system - not just individual institutions - is critical. It also implies a very broad-based endeavour. During the past nine years, major financial reforms have taken place in multiple areas.

In the crisis prevention domain, a number of new standards were developed to increase the resilience of financial institutions and market infrastructures, to make financial transactions safer and to reduce the scope for key entities to generate systemic risks. In the crisis management domain, authorities have developed ways to make the resolution of unviable institutions more orderly in future, ideally without involving government finances - in contrast to what happened in many countries during the crisis.

On this occasion, I will refrain from listing the whole catalogue of reforms and their implementation status. Should there be any need to assess the breadth and depth of these reforms, I believe you are familiar with the multiple and detailed progress reports produced by the individual standard setters and the Financial Stability Board (FSB).¹ For an overview, I recommend the latest FSB annual report on implementation and effects of the G20 financial regulatory reforms.²

Although there are still a few important pending issues, it is fair to recognise that a huge amount of work has taken place over the past nine years. These efforts have contributed to making the financial system more resilient and better equipped to facilitate sustainable economic growth. Also worth highlighting is that this progress is largely the consequence of an impressive, possibly unprecedented, international cooperation effort, involving authorities from jurisdictions around the world.

Designing the reforms is only the first step. After developing a comprehensive reform package that affects almost all aspects of the financial system, there is still the need to complete what is pending and concentrate efforts on proper implementation and monitoring effects.

Completing the elements that are pending is, of course, essential. Basel III comes to mind - and I expect that it will soon be finalised. Stabilising the regulatory framework will help the financial sector adjust and adapt to these changes.

At this point in the regulatory cycle, one of the best contributions that the international regulatory community could make in support of financial stability is to promote the comprehensive, consistent and timely implementation of the reforms.

Before turning to implementation, my main topic today, let me add a couple of thoughts that we at the BIS believe to be important to bear in mind.

First, it would be a mistake to declare victory too soon. The world economy is still subject to risks and vulnerabilities, most notably those relating to the generalised increase in indebtedness and the rich valuations of assets. As we know from experience, debt is an extremely powerful mechanism that can amplify the destabilising impact of adverse shocks.

Second, financial stability is a very elusive, multifaceted objective. Its pursuit requires the contribution of other policies. Monetary, fiscal and structural reform policies also need to contribute to limiting financial stability risks both at the national level and globally. I don't think that prudential policies, not even together with macroprudential ones, can do the job alone.

Against this background, let me turn to my main topic.

We all agree that proper implementation is essential to reaping the full benefits of the global regulatory reforms. It is crucial to ensure consistency among the different segments of

the regulated financial sector. It is also vital to promote a level playing field both within and across jurisdictions.

Policy implementation: three dimensions

In talking about implementation, I would like to adopt a relatively wide definition, under which good policy implementation covers three different but related dimensions.

The first relates to adopting the new standards into national regulation in a proper, consistent and timely way. The second is about assessing whether these standards, once implemented, are achieving their objectives. The third is about putting in place supervisory frameworks that help maximise the benefits of the new standards.

Adopting new standards in a proper, consistent and timely way

First and foremost, implementation requires the proper adoption of the new regulatory standards. As documented in the progress reports of the various standard setters and the FSB, significant progress has been made in implementing the new standards in all domains. This general progress, however, is uneven.

The various standard setters have identified some areas where more expeditious implementation is desirable in some jurisdictions. This is the case, for example, for the standards relating to counterparty credit risk in the banking sphere. This is also the case for the standards relating to margin requirements for non-centrally cleared derivatives, even though implementation has taken place in the major financial centres.

The FSB, for its part, has identified in its latest review of post-crisis reforms that substantial work remains to be done before an adequate implementation of resolution regimes can take place in a number of jurisdictions. This is particularly the case regarding resolution powers. The key missing powers are those that enable bail-in and those that allow for a temporary stay on the exercise of early termination rights.³

In other words, the adoption of new rules is still very much a work in progress.

In talking about implementation, we often emphasise the need for consistency. However, consistency does not necessarily require uniform application of standards to all entities and in all jurisdictions. For instance, as you know, the Basel Committee standards are minimum standards. There is scope for supervisors to ask for more than the minimum if necessary. And these standards are in principle meant to apply to large international banks. We need to be sensitive to the compliance costs.

Following the principle of proportionality, it may be appropriate to apply simpler standards to banks with simpler business models - as long as this does not result in less stringent requirements for these institutions. Indeed, ever since its Market Risk Amendment in 1996, the Basel Committee has envisaged the use of both standardised and advanced methods for determining capital charges, with the former applying to less complex businesses. In fact, this simpler, standardised approach is associated with higher capital requirements. And a number of jurisdictions currently apply specific rules to purely domestic banks.

Yet, when applying the principle of proportionality, we should give due consideration to the potential consequences that may result from heterogeneous regulatory requirements. For example, we should consider what impact such heterogeneity might have on the resilience of individual institutions, or on the domestic competitive environment.

Assessing whether standards, once implemented, achieve their objectives

The second dimension of implementation relates to assessing the reforms' impact once we gain some experience with operating under the new rules. Given the wide scope of the reforms, spanning virtually all segments of financial activity, it is necessary to assess their combined impact on the financial system and on the real economy.

Since the early stages of designing the current reforms, there have been significant efforts to assess their potential impacts. As these reforms are being implemented, more valuable information is becoming available to assess whether the new rules are working as

intended and whether they generate adverse unintended effects. These can include the excessive shift of risks towards less regulated areas,⁴ the reduced liquidity in some securities markets or the retrenched provision of correspondent banking services to some countries. Such assessments no doubt require a comprehensive and inter-sectoral approach to grasp the whole range of effects that the new standards could generate.

This comprehensive analysis should build on the extensive impact assessments conducted by each standard setter. For instance, the Basel Committee began conducting impact assessments more than a decade ago, when finalising Basel II. Ever since, it has developed and refined its methodologies, conducting increasingly elaborate assessments of its standards.⁵

The next logical step is to systematically conduct and generalise these types of assessments. Indeed, the FSB, in cooperation with the relevant standard setters, has recently launched a methodological framework⁶ for the evaluation of the post-crisis reforms so as to analyse their overall effects and to compare these with their objectives.

In this context, two elements seem to be critical to me:

The first is about the need for fact-driven analysis as well as data availability and quality. To assess the impact of reforms, we will need sufficient practical experience with the reforms and long enough series of robust data. The usefulness of these assessments for policy recommendations will depend on the extent to which they can identify and measure the effects of regulation. Gaining experience and gathering good data will take time. Good collaboration with the private sector will thus be crucial. It may also require an additional effort by private sector stakeholders to ensure the quality of their IT systems and the information they can provide.

The second critical point about assessment methodology - and perhaps the biggest challenge in this regard - is the need to establish some kind of reference point, some kind of measurable benchmark that helps to capture the social benefits and costs of the reforms. This will help determine whether the actual outcomes are satisfactory and sufficient to meet the reforms' intended objectives.

In any case, this collaborative effort at the FSB, when combined with all of the ongoing impact assessments conducted by the individual standard setters, will no doubt help address concerns about potential imperfections in the different standards.

At the same time, we should be careful to avoid the impression that there will be frequent adjustments to the regulatory standards. Otherwise, we would be contradicting our objective to achieve soon a sufficiently stable and predictable regulatory environment. This stability is also critical for an evidence-based assessment of the impact of the reforms over time.

Putting in place supervisory frameworks that maximise the benefits of new standards

The third dimension of policy implementation is to have supervisory frameworks that help support and maximise the positive effects of the regulatory reforms on the proper functioning of the financial system. This is a broad topic that includes resources, powers, methodologies, cooperation, etc. Let me focus on a few specific observations.

First, the crisis has confirmed the need for supervisors to take a more comprehensive approach to address the build-up of vulnerabilities at financial institutions. Accordingly, they are now increasing their efforts to directly assess asset quality, proper classifications, valuations and provisions. At the same time, supervisors are combining this traditional focus with greater attention to corporate culture and governance, including the framework for risk appetite and the compensation system. All these elements must be part of their comprehensive efforts to identify vulnerabilities. Importantly, authorities are now complementing the traditional microprudential focus of their supervisory programmes with a macro perspective. This allows them to better assess system-wide risk concentrations, the build-up of financial imbalances and procyclical effects.

Supervisory priorities and practices are also becoming more forward-looking. Over the last few years, national supervisors have increasingly combined the analysis of financial statements, supervisory reporting and on-site inspections with stress testing exercises to assess banks' resilience under different risk scenarios. Supervisors are also assessing and challenging the sustainability of banks' business models in order to anticipate difficulties.

More cooperation across authorities when conducting stress tests could enhance the analysis. This would help, for instance, to improve the assessment of cross-border spillover effects. It would also help to take these effects into consideration in a more consistent manner across jurisdictions.

Another key lesson reconfirmed by the crisis is the need for supervisory intervention to be more proactive. This generally means earlier and perhaps more forceful interventions that address problems well before the situation deteriorates to the point of non-viability. Proactive supervisory interventions have long been a known challenge because they involve delicate trade-offs. In particular, they rely not only on early identification of problems, but also on the exercise of just enough supervisory discretion and supervisory powers to solve the problems at stake. Doing too much would risk arbitrary intervention. Doing too little would risk complacency.

Last but not least, technological innovations are facilitating the emergence of new players in the market for financial services. That in turn is forcing supervised institutions to change and to adapt their business models. These changes can increase the efficiency of the industry. In some jurisdictions, they may also encourage financial inclusion. But at the same time, innovations and new players also mean that the nature of the risks affecting the financial system is evolving. All these developments require specific policy attention by both conduct of business supervisors and prudential supervisors. The Basel Committee's current public consultation on the implications of fintech for the financial sector is one recent case in point.⁷

Concluding remarks

Let me conclude. I started my intervention by highlighting the magnitude of the post-crisis regulatory reforms and their progress. These reforms will help the orderly functioning of the financial sector. They will promote systemic stability and, therefore, sustainable growth. That being said, there is no room for complacency. We certainly need to work more, especially - but not exclusively - on policy implementation. Avoiding watering down what we have achieved so far, completing Basel III and implementing the reforms in a consistent and timely manner are top priorities.

I want to reiterate, however, that the task of maintaining financial stability goes beyond ensuring effective regulation and supervision. The vulnerabilities in the financial system often have multiple causes. It is therefore important to recognise the interactions across policy domains in order to deliver an adequate combination of policy actions - a combination that helps to meet all objectives effectively.

This can only be achieved through the work of the international regulatory community. Without the dedicated spirit of cooperation across national authorities, the substantial strengthening of regulations governing the functioning of the financial system would not have been possible. We should certainly maintain this attitude and level of commitment in order to deal effectively with the challenges that lie ahead of us.

One key aspect of this cooperation is the exchanges of practices and experiences among regulators and supervisors to help ensure that sound policy approaches are adopted worldwide. I believe that the Financial Stability Institute can support the standard setters in this regard and should continue to play a key role in promoting the adoption of good policy practices across jurisdictions. This work goes well beyond the dissemination of standards. It also includes, as the FSI is now doing, facilitating information-sharing and providing analysis that helps financial sector authorities identify the appropriate policy approaches. I believe that this conference organised by the FSI fits very well with the objective to promote reflection and cooperation, across countries and sectors, in the field of policy implementation.

International arrangements for a resilient global economy

Keynote speech by Mr Jaime Caruana, General Manager of the BIS, at the conference on "The uncertain future of global economic integration", jointly organised by the Central Bank of Iceland and the Reinventing Bretton Woods Committee, Reykjavik, 14 September 2017.

The existing international monetary and financial system leaves much room for improvement. In financial regulation, extensive international cooperation coexists with domestic mandates. Yet, when it comes to monetary policy, domestic mandates are broadly considered to rule out cooperation. This is so even though these policies' international spillovers through global financial markets are widely recognised to be powerful.

It is true that, if policymakers could better manage their own domestic financial cycles, they would already constrain excesses and reduce spillovers. But keeping one's own house in order is not enough. Policymakers should also give more weight to how domestic policies interact at a global level. A necessary step is to reach a common understanding of how various spillovers and spillbacks work. Developing analytical frameworks that better capture these effects is a start. Going one step further, more international cooperation on monetary policy could also provide backing for financial stability. Monetary policymakers should take further practical steps to complement their domestic analysis with a more global perspective. Emphasis on enhancing resilience for the whole system - not just individual institutions - is critical. It also implies a very broad-based endeavour.

Early intervention regimes: the balance between rules vs discretion

Speech by Mr Fernando Restoy, Chairman, Financial Stability Institute, Bank for International Settlements, at the FSI-IADI Meeting on early supervisory intervention, resolution and deposit insurance, Basel, Switzerland, 12 September 2017.

This meeting takes place at an interesting juncture - almost exactly 10 years after the financial crisis, which is widely acknowledged to have started when BNP Paribas stopped redemptions on three of its money market funds due to its inability to value their subprime mortgage exposures. This was followed shortly thereafter by an old-fashioned bank run at the UK mortgage lender Northern Rock. The failure of Northern Rock turned out to be the first of many high-profile bank failures in a number of countries, with additional collapses averted only by extraordinary government bailouts.

Fortunately, the post-crisis regulatory reforms have led to a more resilient financial system where financial crises are, we hope, less frequent and less costly. Yet, the world economy still faces a number of risks - including the protracted low interest rate environment, excessive indebtedness, potential for regulatory arbitrage and the overcapacity of the banking sector in some jurisdictions - which, collectively, may contribute to new episodes of financial instability. In this context, I cannot emphasise enough the critical role that all the safety net authorities that are gathered around this table can play in fostering a stable financial system.

I will touch upon the evolution, nature and use of early intervention frameworks including their role during the financial crisis. I will also provide a few thoughts about the age-old debate on the appropriate balance between rules and discretion as it relates to early intervention frameworks.