Financial market development in emerging market economies – an overview

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The objective of financial market development (FMD) is to foster the growth of a financial system that pools domestic savings and foreign capital to fund long-term investment and consumption, and that enables risk sharing, all in an efficient manner. For capital markets in particular, important features of FMD are the promotion of deep and liquid markets that reveal clear price signals, and that allow a diverse investor base to channel funds efficiently and to help transfer risk to parties willing and able to bear them. Measuring FMD is therefore a multifaceted task involving a wide range of indicators.

To support the discussions on how FMD has affected monetary policy and financial stability in emerging market economies (EMEs) over the past two decades, this chartpack provides a broad-based overview of the major trends in EME financial systems. It draws on data submitted by participating central banks, complemented by BIS and other official data.

For ease, the summary below focuses on the major trends based on aggregate developments. But large cross-country differences exist as evident from the graphs.

Summary

Private and public sector balance sheets. Credit-to-GDP ratios for the private non-financial sector – the most basic measure of financial development – have increased, especially for households (Graph 1). While credit grew, the total financial assets of the household sector changed little (Graphs 2). The total financial liabilities of private non-financial corporates (PNFCs) also remained broadly unchanged (Graph 3), but leverage increased in many EMEs (Graph 4). The value of the private sector's external assets and liabilities rose steadily, with liabilities more so, widening the sector's net-negative external position (Graphs 12 to 17).

Relative to GDP, government debt has edged up somewhat in the last ten years, but far less than in advanced economies (AEs) (Graph 1). The international investment position of the government turned positive (Graph 12).

The financial system. The financial system has grown. The median of banking sector assets to GDP stands now at 120% (Graph 5). Other financial institutions such as pension funds and insurance companies have also become more important (Graphs 6 and 7).

The banking sector. Lending to households and non-financial corporates remains heavily bank-based (Graphs 8 and 9). Indicators suggest that banking sectors of many EMEs are healthy and that banking sector concentration has been reduced somewhat over time (Graph 10). Banking sectors in around half of the survey respondents have a net negative, on balance sheet, foreign currency position (Graph 11), even though these are typically fully hedged.

The government bond market. Government bond markets have grown rapidly in the last two decades (Graph 18). While they remain smaller, these markets increasingly resemble those of AEs in terms of instruments and maturities (Graphs 18 and 19). Moreover, even though liquidity conditions remain poor in a few EMEs, several others now enjoy liquidity conditions similar to those in smaller AEs (Graph 20).

The investor base of local currency government bonds has broadened considerably (Graph 21). Holdings of local currency government bonds of foreign investors rose sharply, as did those of domestic institutional investors.

Corporate bond markets. Driven by the non-financial corporate sector, corporate bond markets in EMEs have experienced a broad-based deepening and have grown to a similar size as AE markets (Graph 22). Many EME corporates predominantly borrow in foreign currency, a market segment that has seen a rapid expansion in the last 10 years (Graphs 22 and 23). Except in a few EMEs, mainly resident banks and institutional investors are active in the market for local currency corporate bonds; non-resident investors typically make up less than 5% of the investor base (Graph 24).

Other financial markets.

Equity markets (Graph 25). Equity markets have become much larger and the size gap between EMEs and AEs has narrowed. However, turnover generally remains below AEs and has even fallen in the last 10 years.

Repo markets (Graph 26). Repo markets have gained in significance. Yet beyond a few economies, they remain small, often below 5% of GDP.

Securitisation (Graphs 27 and 28). The market for securitised assets is still in a nascent stage but has been growing strongly in few EMEs in recent years.

Have EME financial markets emerged? In light of FMD over the last 20 years, local government bond and equity markets have started to look more like markets in AEs. This could suggest that EME financial markets have started to "emerge".

A cluster analysis, taking not only account of financial markets but also growth potential, external vulnerabilities and institutional development, suggests that large differences between EMEs and AEs remain (Graph 29). According to the results, EMEs are more similar to each other than they are to the average of advanced economies. Yet, the differences between EMEs tend to be much greater than the variations between developed markets.

General remarks

- Throughout the chartpack, the box and whisker plots show the median (horizontal line), interquartile range (box) and the min-max range (small vertical lines).

- Country aggregates for EMEs and AEs shown may not always cover all countries of these aggregates, as data may not be available for all years.

Index

Section 1: The household, non-financial corporate and government sectors

Total credit to the different sectors

As a percentage of GDP[1]

Total credit to households[2]	Total credit to PNFCs[2]	Total credit to the government[3]

Median — — — 25th–75th percentiles
◇ Average
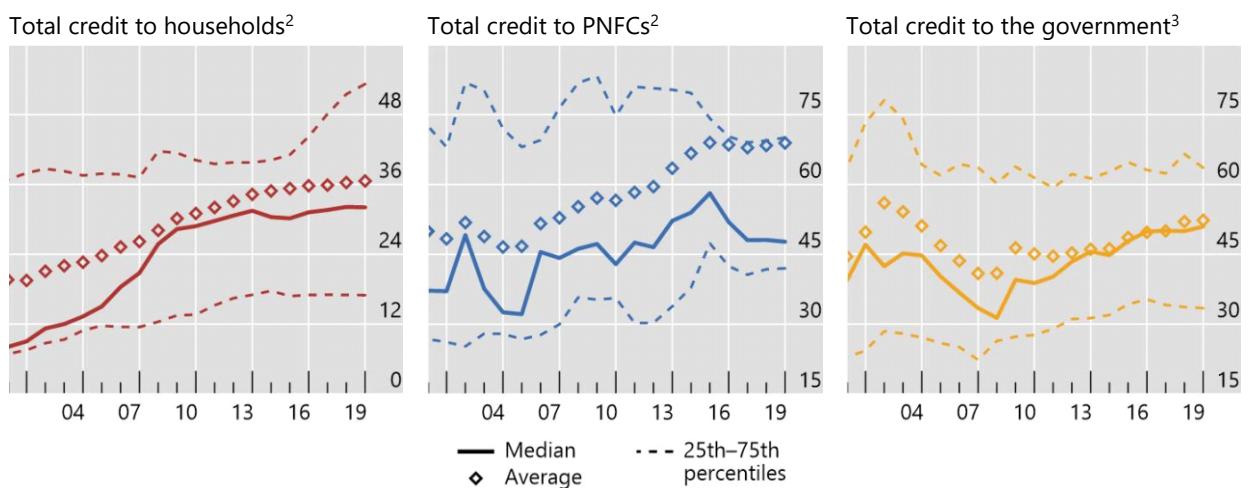
[1] Total credit as a percent of GDP. Country sample includes AR, BR, CL, CN, CO, CZ, HK, HU, ID, IN, IL, KR, MX, MY, PL, RU, SA, SG, TH, TR and ZA. Year-end figures; for 2019 end-June.   [2] Balanced sample starts in 2008. ID since 2001; CL since 2002; CN and MY since 2006; IN since 2007; ZA since 2008.   [3] Balanced panel starts in 2001. ID and TR since 2001.

Sources: BIS credit statistics; BIS calculations.

Total financial assets of households

As a percentage of GDP[1]

— Median   ▨ Interquartile range   ● 2010   ▲ 2018
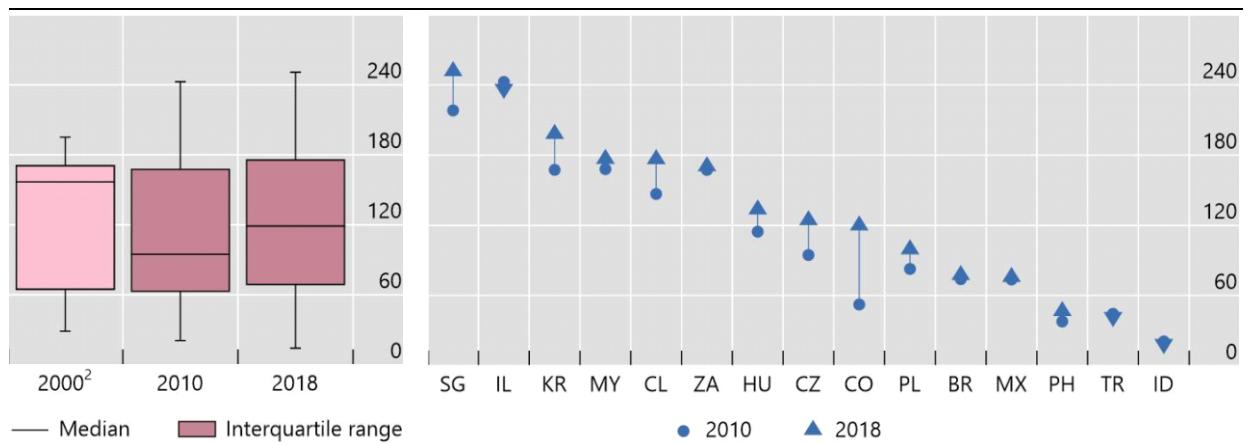
[1] Country sample in the left-hand panel includes AR, BR, CL, CN, CO, CZ, HK, HU, ID, IL, KR, MX, MY, PH, PL, RU, SG, TH, TR and ZA.   [2] For 2000, the sample only covers CL, CO, HU, KR, PL, SG and ZA.

Sources: BIS survey; IMF, *World Economic Outlook*; BIS calculations.

Total financial liabilities of private non-financial corporates

As a percentage of GDP[1]   Graph 3
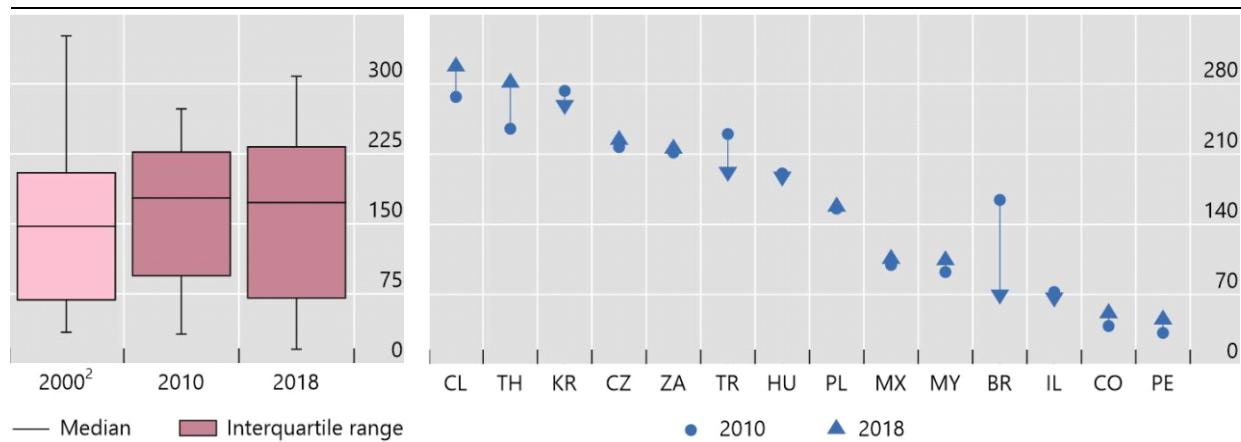
— Median   � Interquartile range   ● 2010   ▲ 2018

[1] Country sample in the left-hand panel includes AR, BR, CL, CO, CZ, HU, IL, KR, MX, MY, PE, PL, RU, TH, TR and ZA.   [2] For 2000, the sample covers only CL, CO, HU, KR, PE, PL and SA.

Sources: BIS survey; IMF, *World Economic Outlook*; BIS calculations.

The share of credit in total financial liabilities of private non-financial corporates

In per cent[1]   Graph 4
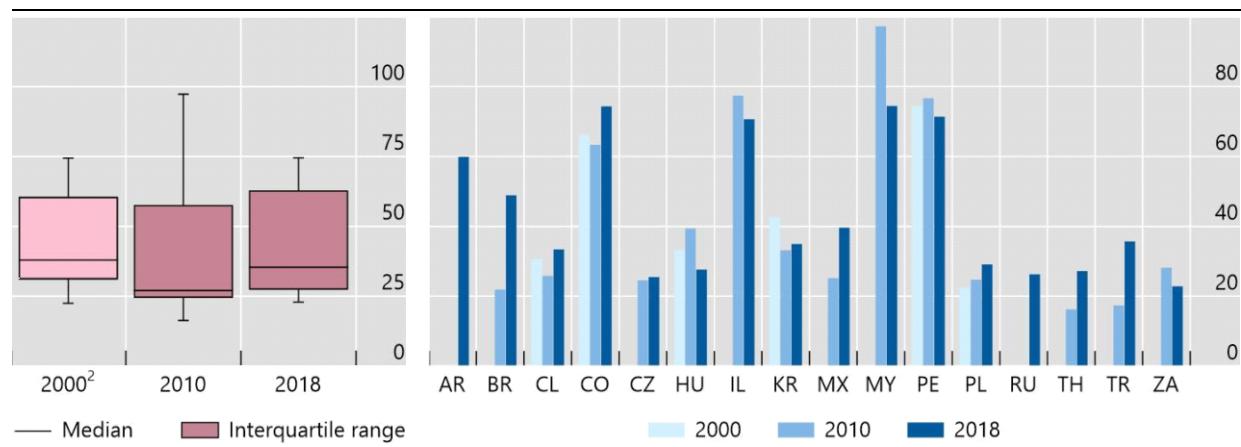
— Median   ▮ Interquartile range   ▮ 2000   ▮ 2010   ▮ 2018

[1] Country sample in the left-hand panel includes AR, BR, CL, CO, CZ, HU, IL, KR, MX, MY, PE, PL, RU, TH, TR and ZA.   [2] For 2000, the sample only includes only CL, CO, HU, KR, PE and PL.

Sources: BIS survey; BIS calculations.

Section 2: Financial institutions

Total financial assets of the banking sector

As a percentage of GDP[1]   Graph 5
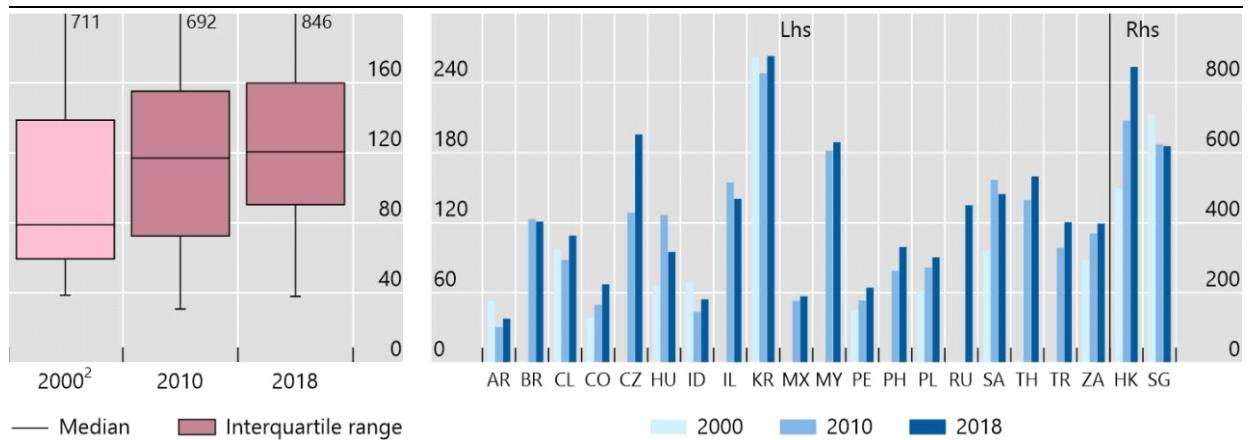
— Median   ▇ Interquartile range   ▢ 2000   ▢ 2010   ▇ 2018

[1] Country sample in the left-hand panel includes AR, BR, CL, CO, CZ, HK, HU, ID, IL, KR, MX, MY, PE, PH, PL, RU, SA, SG, TH, TR and ZA.   [2] For 2000, the sample covers only AR, CL, CO, HK, HU, ID, KR, PE, PL, SA, SG and ZA.

Sources: BIS survey; IMF, *World Economic Outlook*; BIS calculations.

Total financial assets of pension funds

As a percentage of GDP[1]   Graph 6

— Median   ▇ Interquartile range   ▢ 2000   ▢ 2010   ▇ 2018
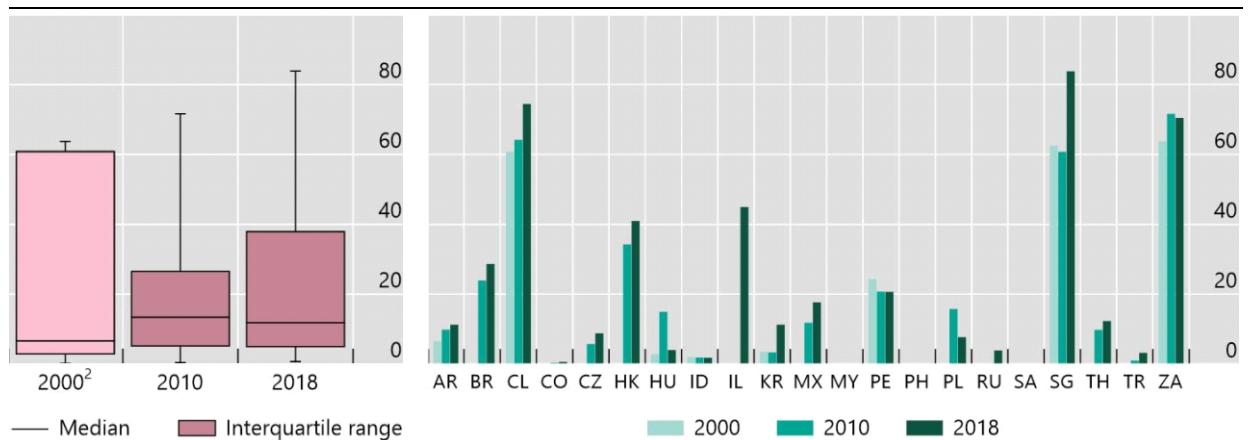
[1] Total financial assets of pension funds Country sample in the left-hand panel includes AR, BR, CL, CO, CZ, HK, HU, ID, IL, KR, MX, MY, PE, PH, PL, RU, SG, TH, TR and ZA.   [2] For 2000, the sample only includes AR, CL, CO, HU, ID, KR, PE, SG, and ZA.

Sources: BIS survey; IMF, *World Economic Outlook*; BIS calculations.

Total financial assets of insurance companies and other non-bank financials

As a percentage of GDP[1]   Graph 7

- Median   ■ Interquartile range   ■ 2000   ■ 2010   ■ 2018
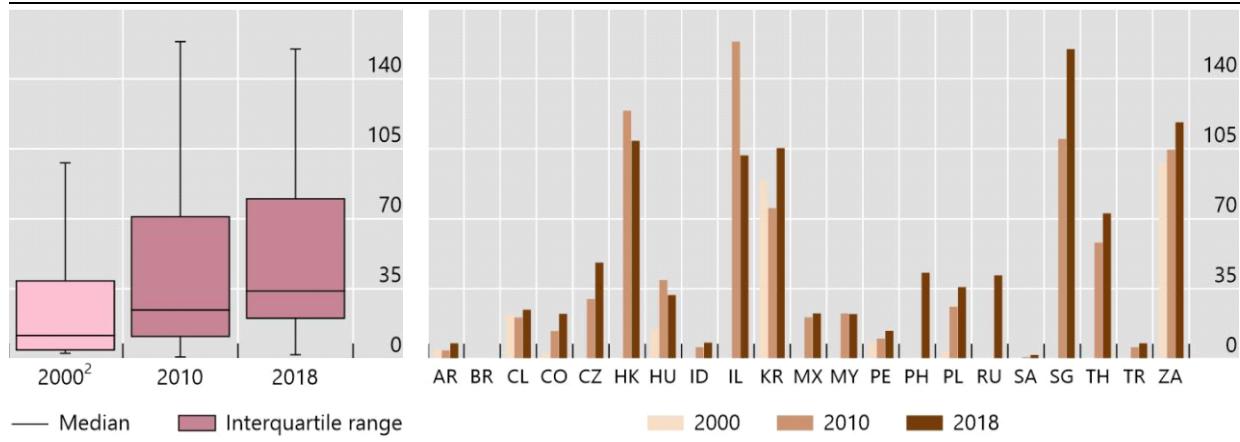
[1] Total financial assets of insurance companies and other non-bank financials. Country sample in the left-hand panel includes AR, BR, CL, CO, CZ, HK, HU, ID, IL, KR, MX, MY, PE, PH, PL, RU, SA, SG, TH, TR and ZA.   [2] For 2000, the sample only includes AR, CL, CO, HU, KR, PE, PL and ZA.

Sources: BIS survey; IMF, *World Economic Outlook*; BIS calculations.

Section 3: Banking sector indicators

The share of bank loans in total financial liabilities of households

In per cent[1]

Graph 8

- Median
- Interquartile range
- 2000
- 2010
- 2018

[1] Country sample in the left-hand panel includes AR, BR, CO, CZ, HU, IL, KR, MX, MY, PH, PL, RU, SG, TH, TR and ZA.   [2] For 2000, the sample only includes CO, HU, KR, SG and ZA.

Sources: BIS survey; BIS calculations.
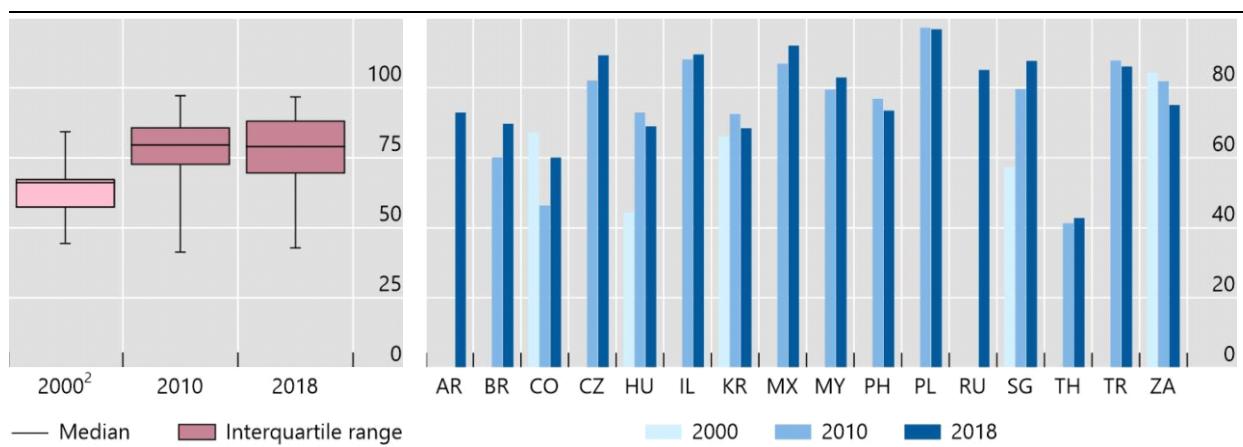
The share of bank credit in total credit to private non-financial corporates

In per cent

Graph 9

Latin America
- AR
- CL
- MX
- BR
- CO

Emerging Asia
- CN
- ID
- KR
- SG
- HK
- IN
- MY
- TH

Other EMEs
- CZ
- IL
- RU
- TR
- HU
- PL
- SA
- ZA

Sources: BIS credit statistics; BIS calculations.
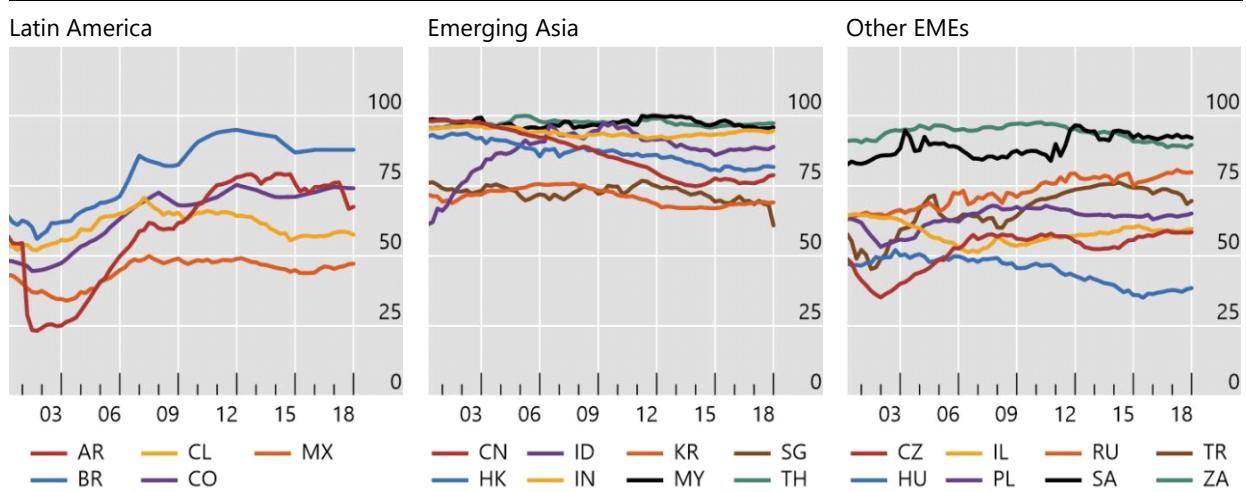
Aggregate indicators of banking sector health[1]

Graph 10

Banking sector concentration	Return-on-equity	Non-performing loans to total gross loans[2]	Bank total capital ratio

Median —— 25th–75th - - -
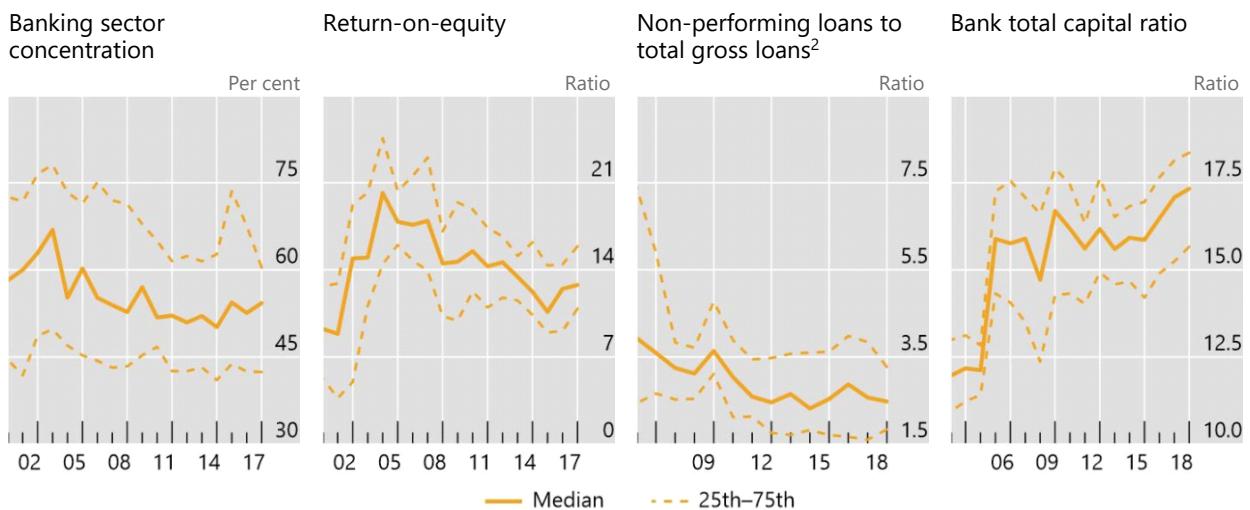
[1] Country sample includes AR, BR, CL, CN, CO, CZ, HK, HU, ID, IN, IL, KR, MX, MY, PE, PH, PL, RU, SA, SG, TH, TR and ZA.   [2] Balanced panel starts in 2011. CN and PE since 2010; PH and SA since 2009; HK, HU, IN, KR, PL, RU, SG, ZA since 2008, CZ since 2007; TH since 2006 and all the rest since 2005.

Sources: IMF, *Financial Soundness Indicators*; BIS calculations.

Banks' total financial assets and liabilities in foreign currency

Graph 11

Assets: 2000   2018   Liabilities:
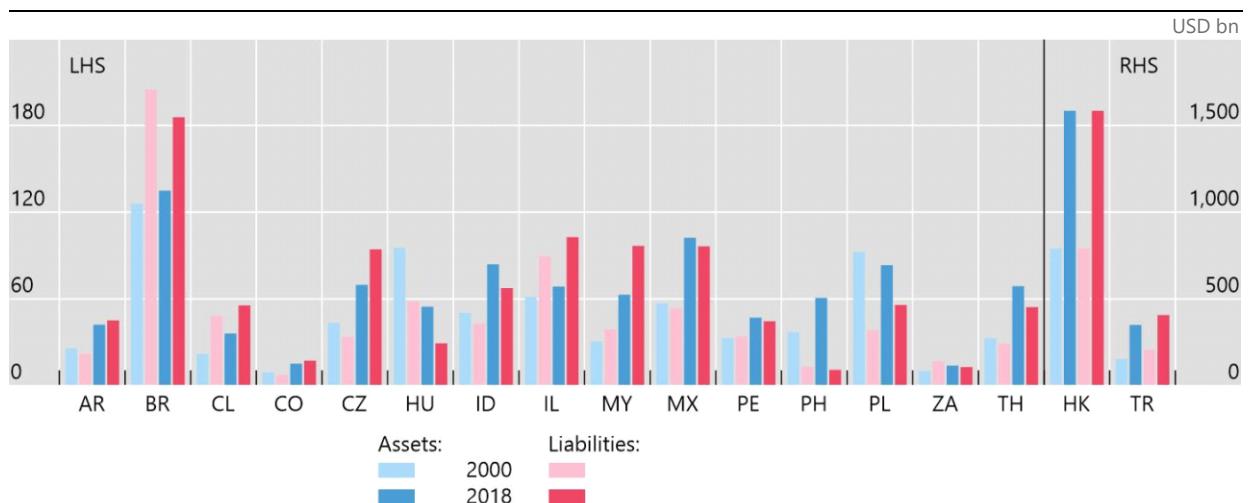
Sources: BIS survey; BIS calculations.

Section 4: External balance sheet positions

Net international investment positions and debt currency mismatches[1]

Graph 12

IIP of China
USD trn

IIP of other EMEs[2]
USD trn

IIP on debt by currency
USD mn

— Total   ■ Public sector   ■ Private sector

Assets: Liabilities:
- ■ USD
- ■ Other foreign currencies
- ■ Local currency
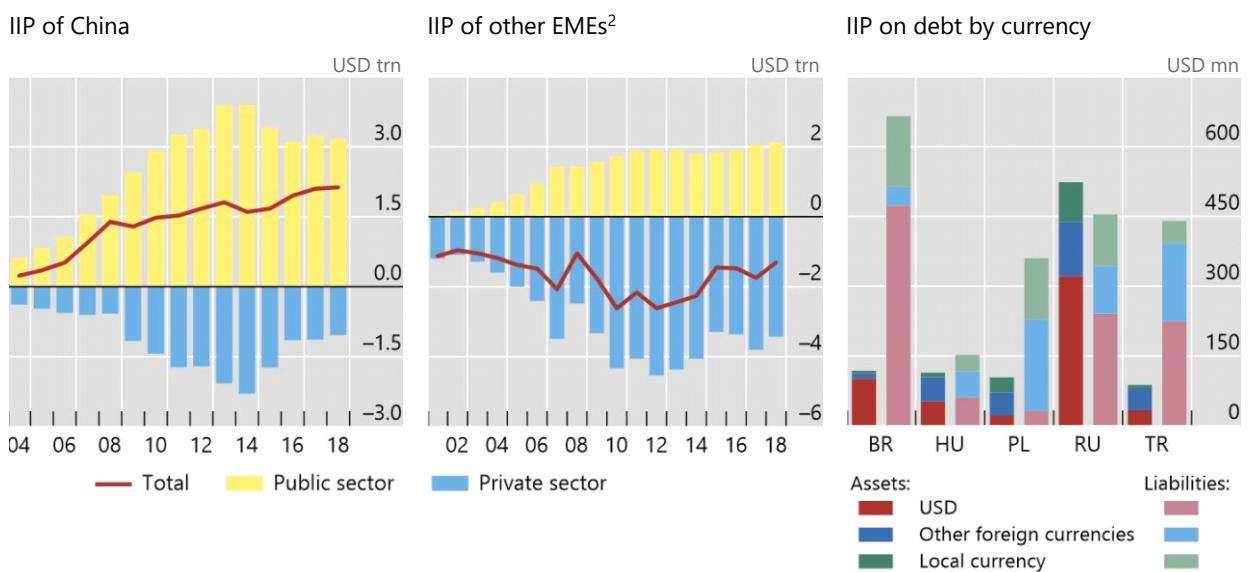
[1] Net public international investment position is calculated as the difference between reserve assets and SDR allocations at the IMF for countries where data for subcomponents are not available.   [2] Country sample includes AR, BR, CL, CO, CZ, HU, ID, IL IN, KR, MX, MY, PE, PH, PL, RU, SG, TH, TR and ZA.

Source: IMF, *Balance of Payments Statistics*.

International investment positions and currency mismatches

Graph 13

International investment positions
Percentage of GDP

International investment positions by currency
Per cent

■ Assets   ■ Liabilities   ● Net

- ■ % of IIP assets in foreign currency
- ■ % of IIP liabilities in foreign currency
- ● Net
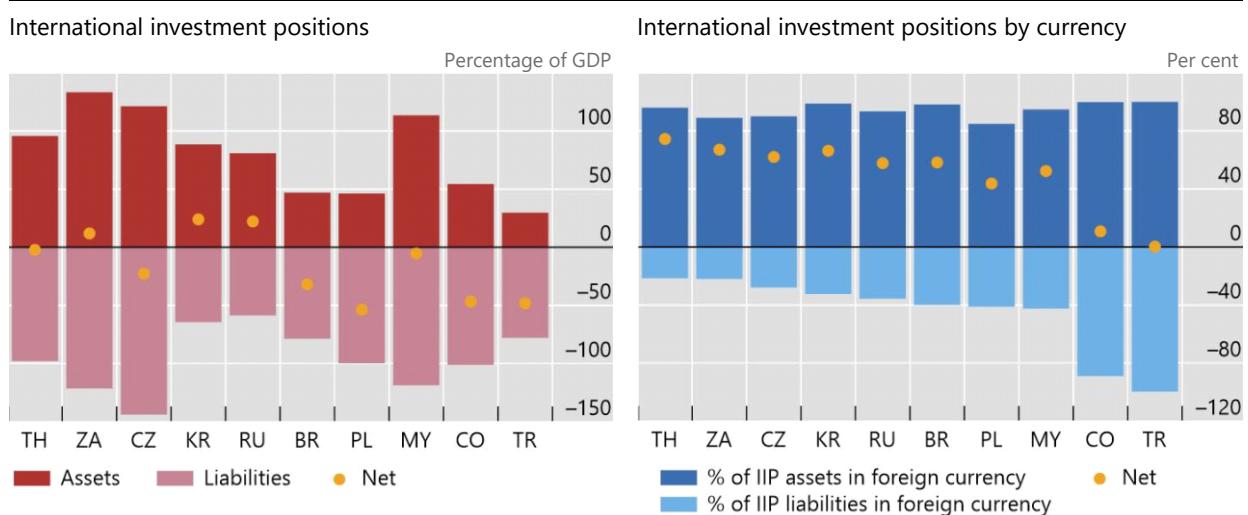
Sources: BIS survey; IMF, *Balance of Payments Statistics*.

Total net external investment positions

As a percentage of GDP   Graph 14
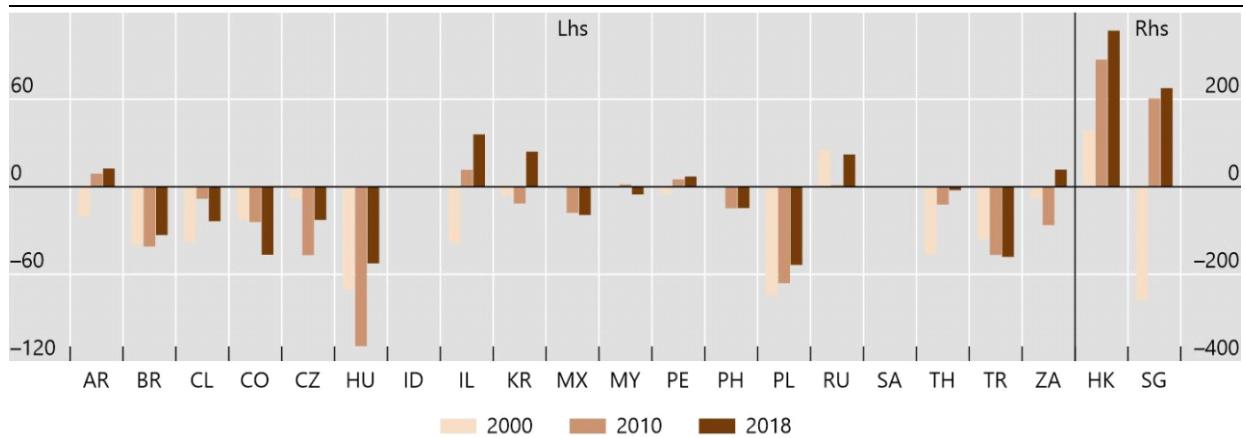
Sources: BIS survey; IMF, *World Economic Outlook*; BIS calculations.

Net external investment positions of banks

In billions of US dollars   Graph 15
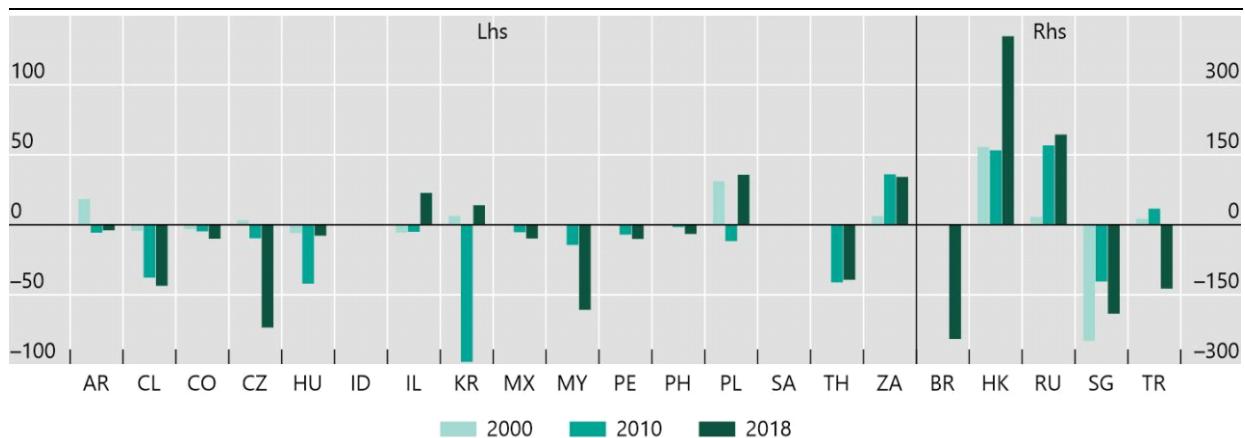
Sources: BIS survey; BIS calculations.

Net external investment positions of non-bank financial institutions

In billions of US dollars   Graph 16
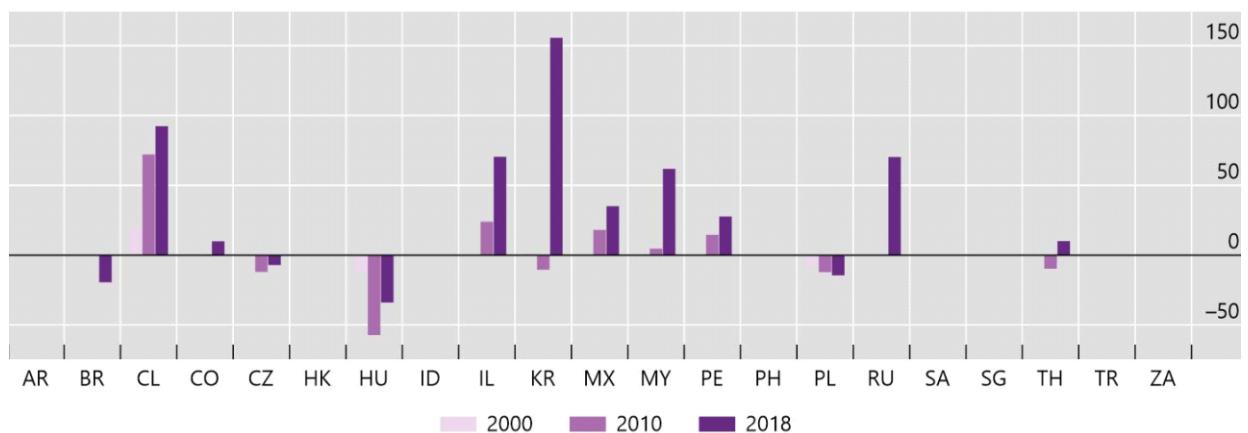
Sources: BIS survey; BIS calculations.

Net external investment positions of private non-financial corporations

In billions of US dollars   Graph 17
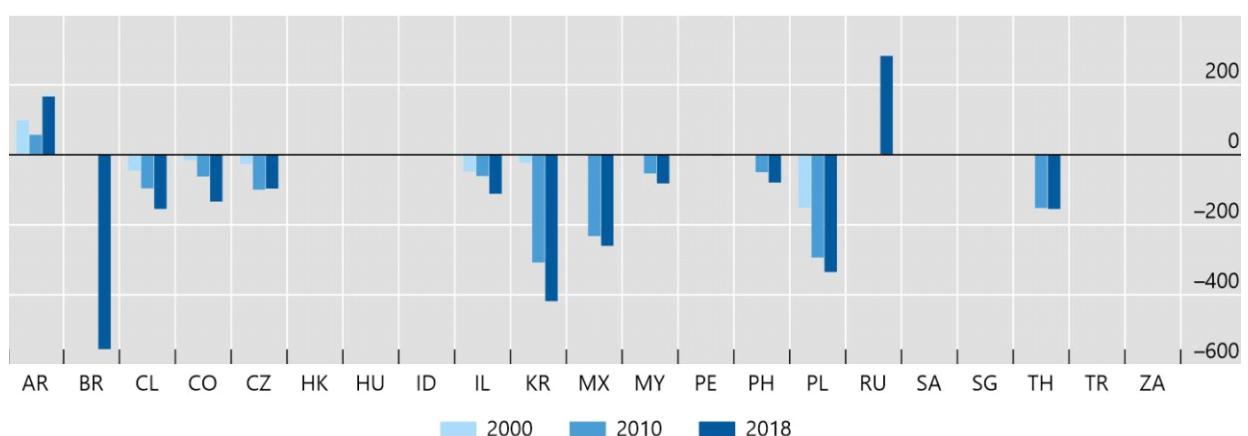
Sources: BIS survey; BIS calculations.

Section 5: Government bond markets

Government bond markets: volumes and composition

Graph 18
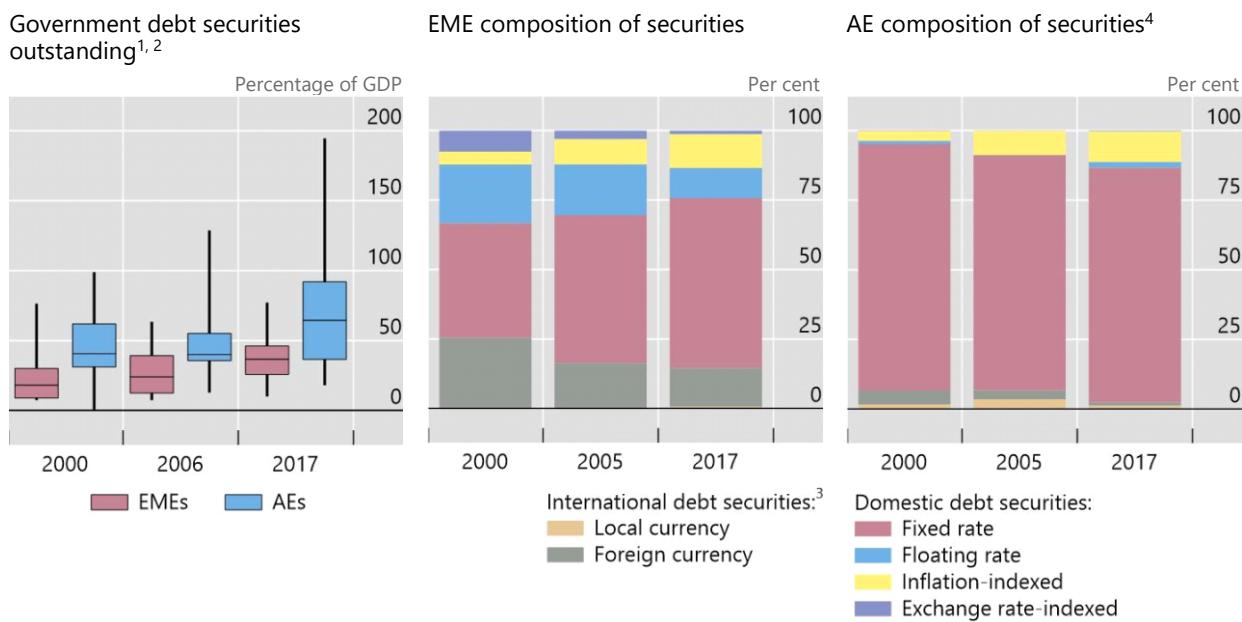
Government debt securities outstanding[1,2]

EME composition of securities

AE composition of securities[4]

Percentage of GDP | Per cent | Per cent

EMEs | **AEs**

International debt securities:[3]
- Local currency
- Foreign currency

Domestic debt securities:
- Fixed rate
- Floating rate
- Inflation-indexed
- Exchange rate-indexed

[1] Country sample includes AR, AU, BE, BR, CA, CH, CL, CN, CO, CZ, DE, DK, ES, FR, GB, HK, HU, ID, IL, IN, IT, JP, KR, MX, MY, NL, NO, NZ, PE, PH, PL, RO, RU, SA, SE, SG, TH, TR, US and ZA.   [2] Total debt securities, by residence. If total debt securities are not available, then the sum of domestic and international debt securities.   [3] By residency. Country sample includes AR, BR, CL, CO, CZ, HU, HK, ID, IL, IN, KR, MX, MY, PE, PH, PL, RU, SA, SG, TR and ZA.   [4] AU, BE, CA, DE, ES, GB and US.

Source: CGFS (2019).

Maturities of government bonds and central bank securities

Graph 19

Remaining maturity of government debt

Years

EMEs:[1]
— Mean
-- Median

AEs:[2]
—
--
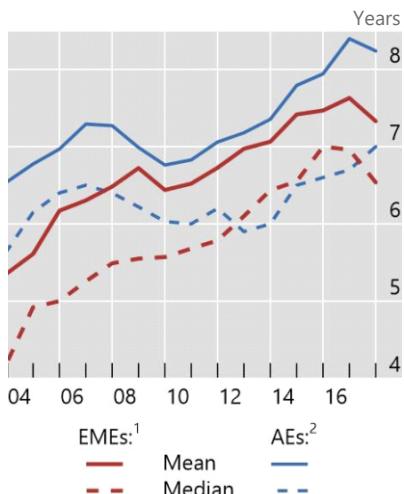
Maturity distribution of government bond markets[3]

Per cent

2000 2010 2018

Years:
■ <1
■ 1–5
■ 5–7
■ 7–10
■ >10
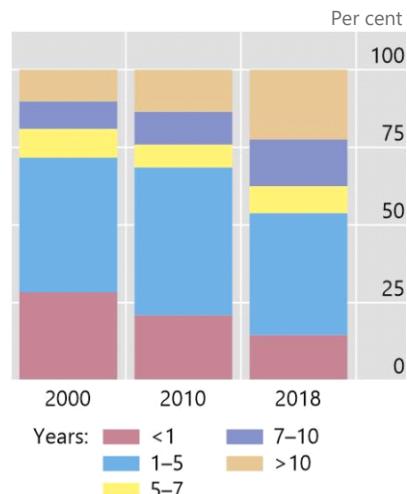
Maturity distribution of central bank securities[4]

Per cent

2000 2010 2018

Years:
■ <1
■ 1–3
■ >3
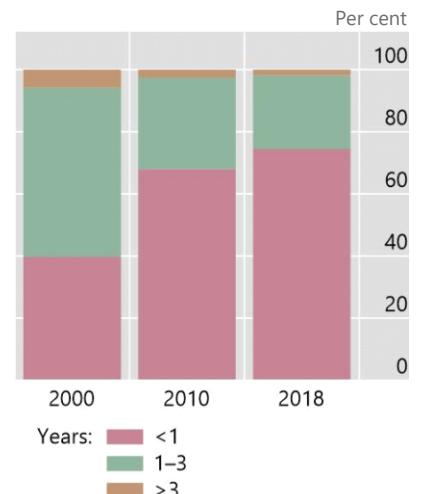
[1] AR, BR, CL, CO, CZ, HU, HK, ID, IL, IN, KR, MX, MY, PE, PH, PL, RU, SA, SG, TR and ZA.   [2] AU, BE, CA, DE, ES, GB and US.   [3] Country sample includes AR, BR, CL, CO, CZ, HK, HU, ID, IL, KR, MX, MY, PE, PH, PL, RU, SA, SG, TH, TR and ZA.   [4] Country sample includes AR, BR, CL, CZ, HU, ID, IL, KR, MX, MY, PE, PL, RU, SG and TH.

Sources: BIS survey; CGFS (2019); BIS calculations.

Liquidity in government bond markets

Graph 20

Ten-year benchmark government bond market liquidity[1]

Basis points   Basis points

PH ID CL HU MY CN PL SE ES TH IT IL BR ZA FR DE US IN
CZ RO CH TR NO NZ CO MX DK RU JP KR NL BE AU CA GB

✕ Bid-ask spread (lhs)[2]

Price impact of trade (rhs):[3]
■ EMEs
■ AEs
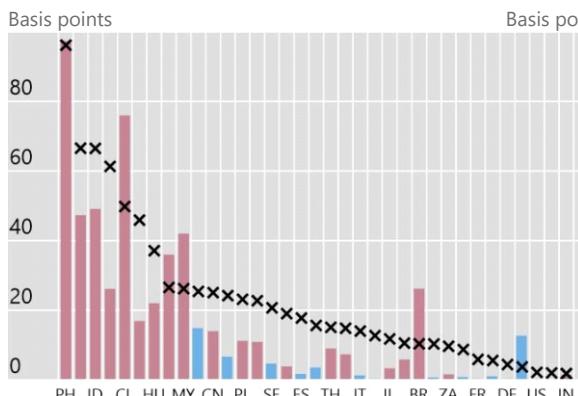
Average daily government bond market turnover[4]

Per cent

IN MY PL KR MX TH DK NL FR DE ES JP
BR CN SG ID HU IT FI BE SE GB US

2017:   2005:
■ EMEs   ● EMEs
■ AEs   ● AEs
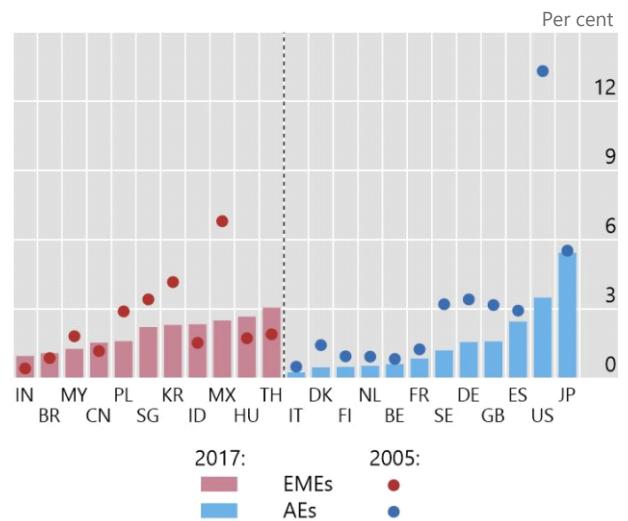
[1] Excluding HK (bid-ask spread = 88.25 basis points; price impact of trade = 266.53 basis points).   [2] Average of daily bid-ask spread in May 2018, defined as: (ask price – bid price) / bid price * 100, ie the return cost of executing a round-trip transaction in the bond.   [3] Based on USD 10 million transaction amount using estimates from the Bloomberg Liquidity Assessment (LQA) function. Data based on 6 June 2018 5 pm Tokyo closing time, except for Korea, which is 5 June 2018 5 pm Tokyo time, and Sweden, which is 4 pm New York time.   [4] Calculated as average daily trading volume divided by total amount outstanding. Definitions may vary depending on data availability. For 2005 observations: BE, 2014; BR, 2008; FR, 2006; NL, 2011. For NL, data up to 2016.

Source: CGFS (2019).

The investor base of local currency government bonds

Graph 21

Outstanding values[1]

Percentage of GDP

Residents:
— Median
▮ Interquartile range

Non-residents:
—
▮

Resident investors[3]

Per cent

Of which, banks:
— Median
▮ Interquartile range

Of which, pension funds and insurers:
—
▮

Investor base in 2018

Percentage of GDP

MY CZ HU MX PL CO ID BR KR CL TR IL

Residents:
▮ Banks
▮ Pension funds and insurers
▮ Others

Non-residents:
▮ All sectors
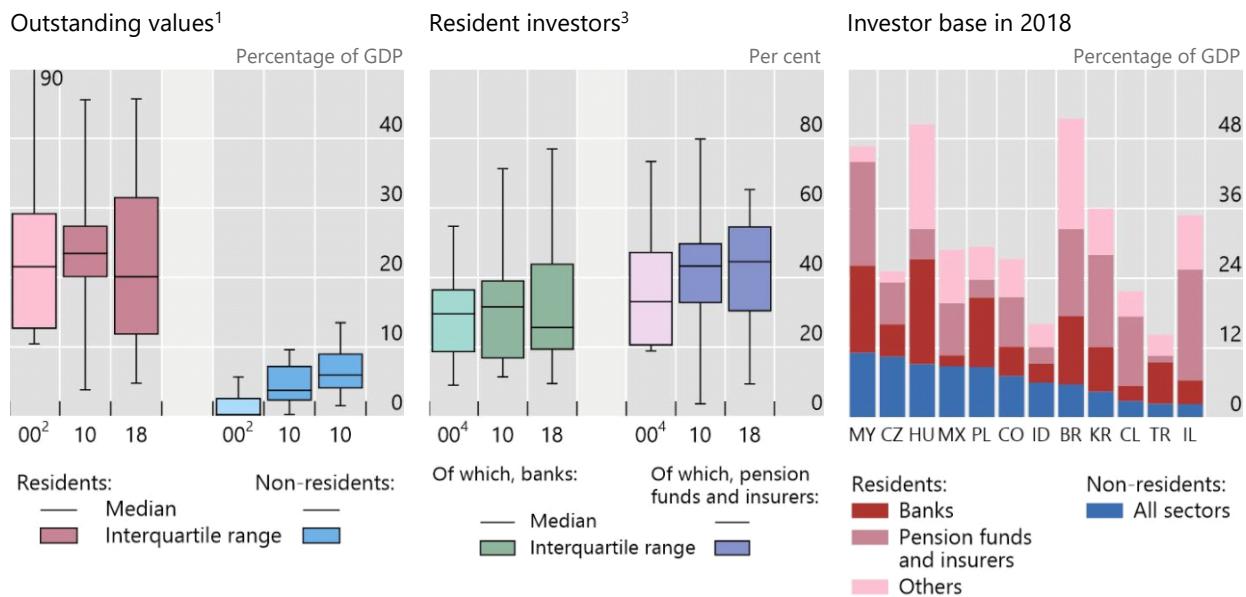
[1] Country sample includes BR, CL, CO, CZ, HU, ID, IL, KR, MX, MY, PE, PL, RU, SA, SG, TH, TR and ZA.   [2] For 2000, including only BR, CO, CZ, HU, IL, KR, MY, MX, PL, SA for residents and BR, CZ, HU, KR, MY, MX, PL for non-residents.   [3] Bank or pension fund holdings relative to local currency government bonds held by residents. Country sample includes BR, CL, CO, CZ, HU, ID, IL, KR, MX, MY, PE, PL, RU, SA, TH, TR and ZA.   [4] For 2000, including only BR, CO, CZ, HU, IL, KR, MY, MX, PL, SA for banks and CO, CZ, HU, IL, KR, MY, MX and SA for pension funds and insurers.

Sources: BIS survey; BIS calculations.

Section 6: Corporate bond markets

Volumes in corporate debt securities markets

As a percentage of GDP[1]

Graph 22

Total debt securities, financial corporate sector[2]

Total debt securities, non-financial corporate sector[2]

International debt securities, non-financial corporate sector[3]
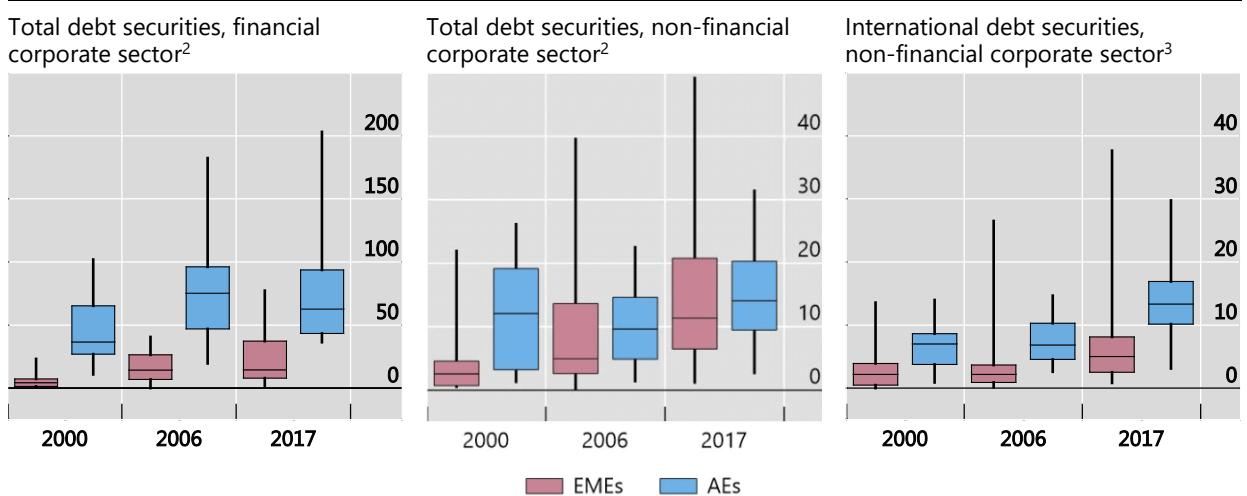
[1] If total debt securities are not available, then the sum of international and domestic debt securities.   [2] By residence.   [3] By nationality.

Source: CGFS (2019).

Characteristics of corporate debt securities markets

Graph 23

Maturity of bond issuance[1]
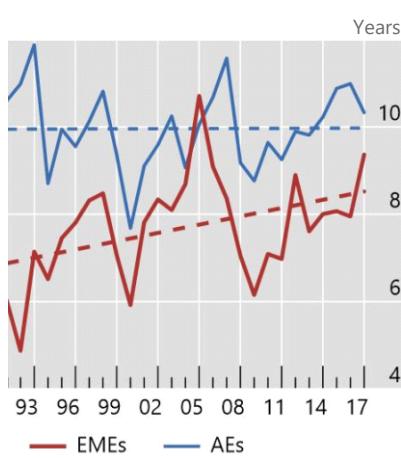
Share of local currency bond issuance[2]
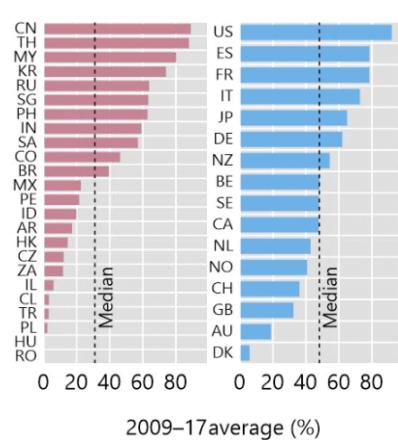
Corporate bond market turnover ratio
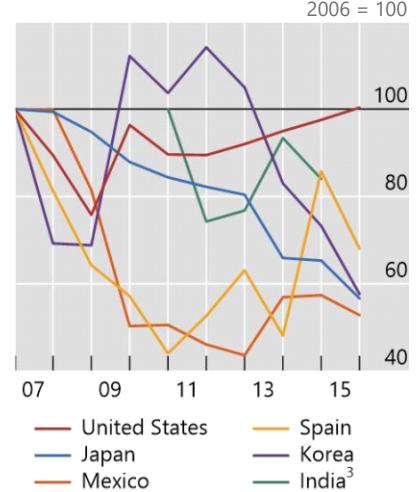
[1] Maturities weighted by value; dashed lines indicate linear trend.   [2] By nationality.   [3] 2010 = 100

Source: CGFS (2019).

The investor base of local currency corporate bonds

Graph 24

Outstanding values[1]

% of GDP

Resident investors[3]

Per cent

Non-resident investors[5]

Per cent

Investor base in 2018

Per cent

Residents:
— Median
Interquartile range

Non-residents:

O/w, banks:
— Median
Interquartile range

O/w, pension funds and insurers:

Banks:

2000
2010
2018

Pension funds, insurers, foreign gov. or central bank

Residents:
Banks
Pension funds and insurers
Others

Non-residents:
All sectors
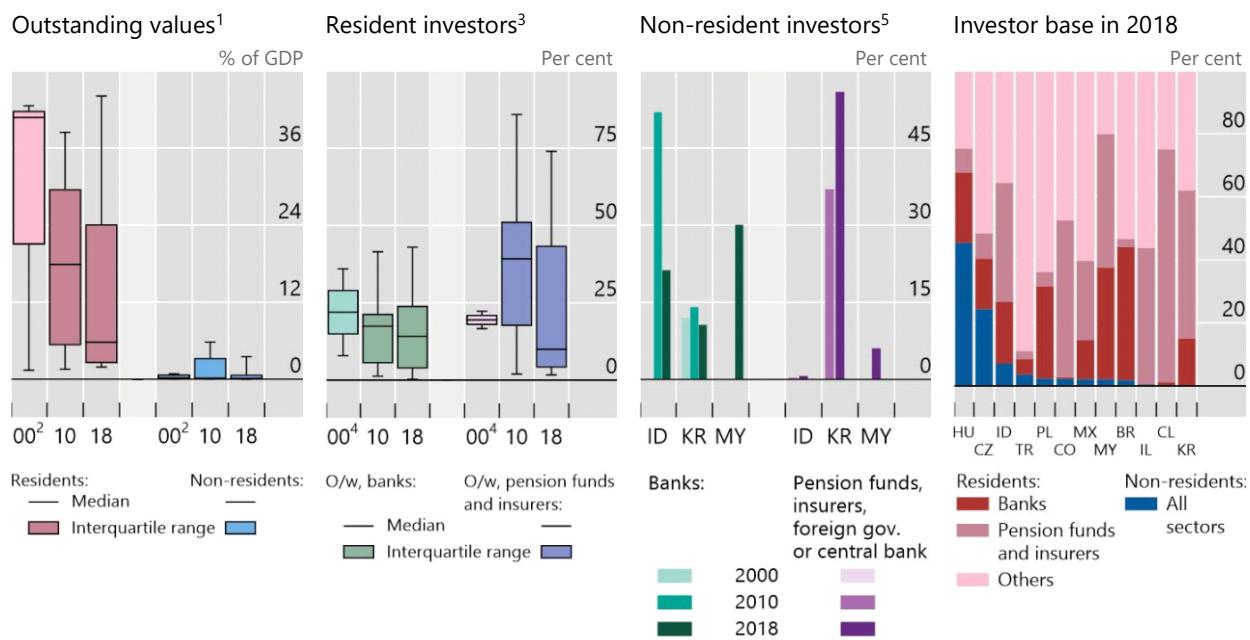
[1] Country sample includes BR, CL, CO, CZ, HU, ID, IL, KR, MX, MY, PL, SG, and TR. [2] For 2000, including only HU, KR and MY. [3] Local currency domestic corporate bonds held by resident banks and pension funds as a share of total resident holdings. Country sample includes BR, CL, CO, CZ, HU, ID, IL, KR, MX, MY, PL and TR. [4] For 2000, including only HU and KR. [5] Local currency domestic corporate bonds held by non-resident banks and pension funds as a share of total non-resident holdings.

Source: BIS survey; IMF, *World Economic Outlook*.

Section 7: Other markets

Equity markets
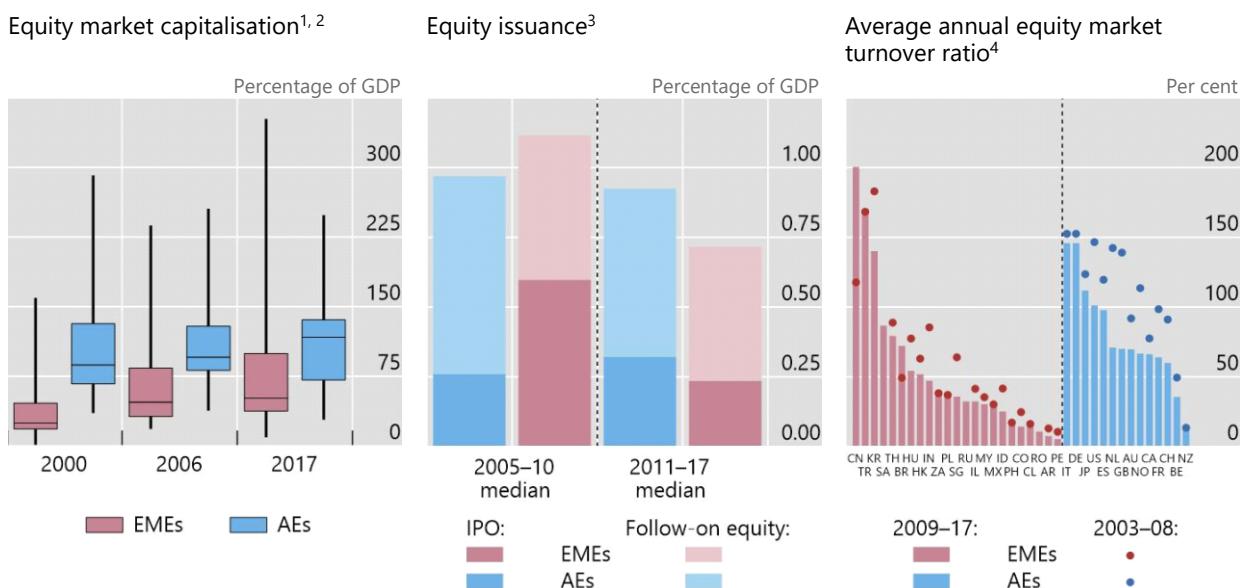
Graph 25

Equity market capitalisation[1,2]

Percentage of GDP

EMEs   AEs

Equity issuance[3]

Percentage of GDP

IPO:
- EMEs
- AEs

Follow-on equity:
- EMEs
- AEs

Average annual equity market turnover ratio[4]

Per cent

CN KR TH HU IN PL RU MY ID CO RO PE DE US NL AU CA CH NZ
TR SA BR HK ZA SG IL MX PH CL AR IT JP ES GB NO FR BE

2009–17:
- EMEs
- AEs

2003–08:
- EMEs
- AEs

[1] Country sample includes AR, AU, BE, BR, CA, CH, CL, CN, CO, CZ, DE, DK, ES, FR, GB, HK, HU, ID, IL, IN, IT, JP, KR, MX, MY, NL, NO, NZ, PE, PH, PL, RO, RU, SA, SE, SG, TH, TR, US and ZA.   [2] Excluding HK, where in 2017 equity market capitalisation was 1,274% of GDP.   [3] Median across economies. For each IPO, the corresponding amount in national currency is converted into USD, using the historical conversion rate (actual exchange rate values as of the fiscal year end). IPO data selected according to the geographical location (headquarter) of the issuer.   [4] Turnover computed as the sum of the values of shares traded each year, divided by the average domestic market capitalisation. For BE, FR and NL, 2009–14 data. For NZ, excluding 2011 data.

Source: CGFS (2019).

Repo markets

As a share of GDP

Graph 26

2000   2010   2018

AR   BR   CO   ID   KR   MX   MY   PH   TH

Total   Of which: repos with central bank
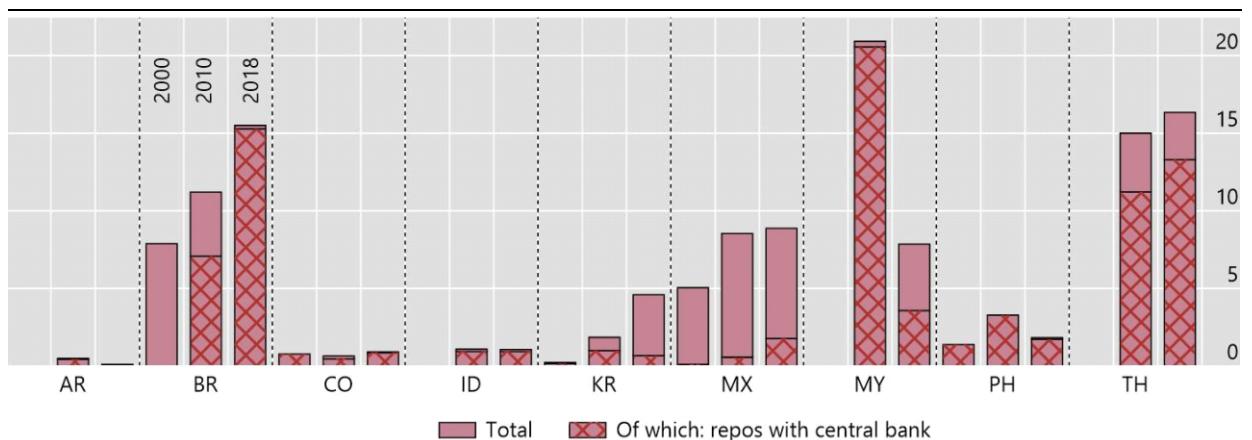
Sources: BIS survey; BIS calculations

Total value of securitised assets

Outstanding values

Graph 27

USD mn | USD bn
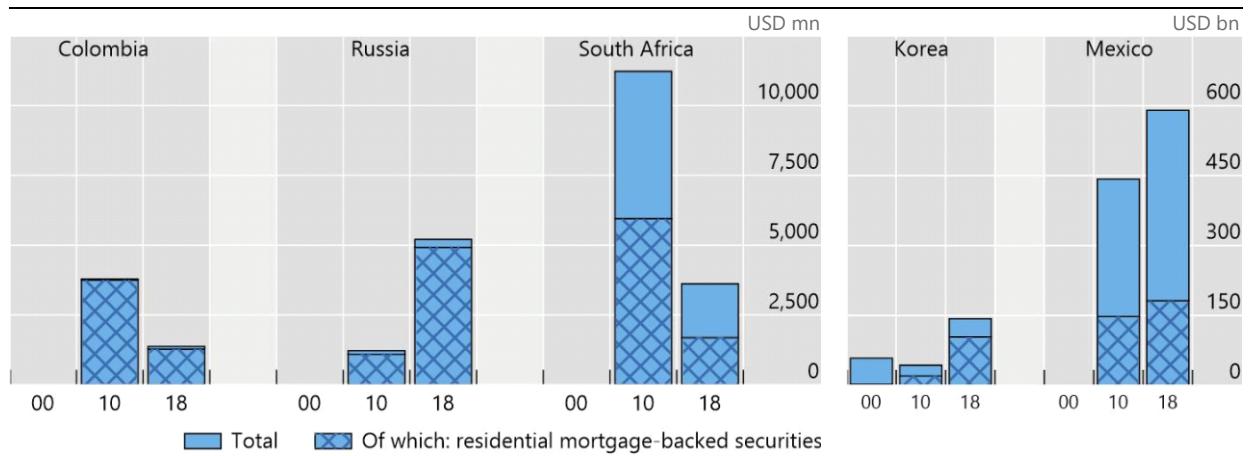
Sources: BIS survey; BIS calculations.

Mortgages, covered bonds and securitisation

Graph 28

Outstanding mortgages | Outstanding amounts of mortgage backed covered bonds of selected EMEs[1] | Gross securitisation issuance in China
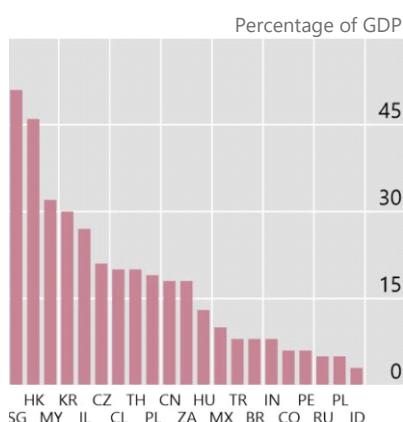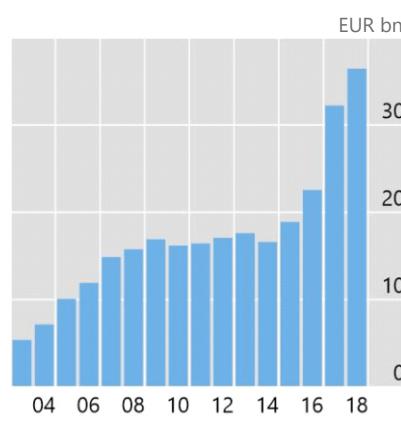
Percentage of GDP | EUR bn | CNY bn

Credit asset securitisation
Asset-backed specific plan
Asset-backed notes
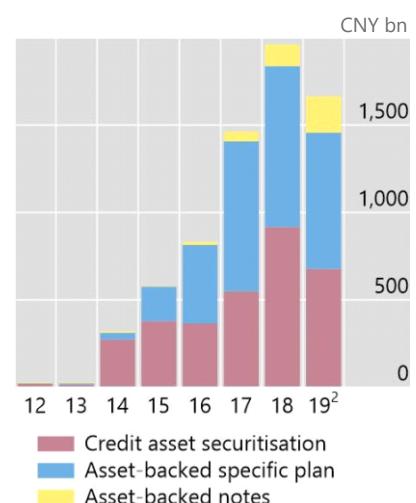
[1] Country sample includes BR, CZ, HU, KR, PL, SG, TR.   [2] Data up to September 2019.

Sources: World Bank; European Covered Bond Council; Wind.

Section 8: How do EMEs and AEs compare?

Cluster analysis comparing EMEs and AEs

Euclidian distance between different countries   Graph 29
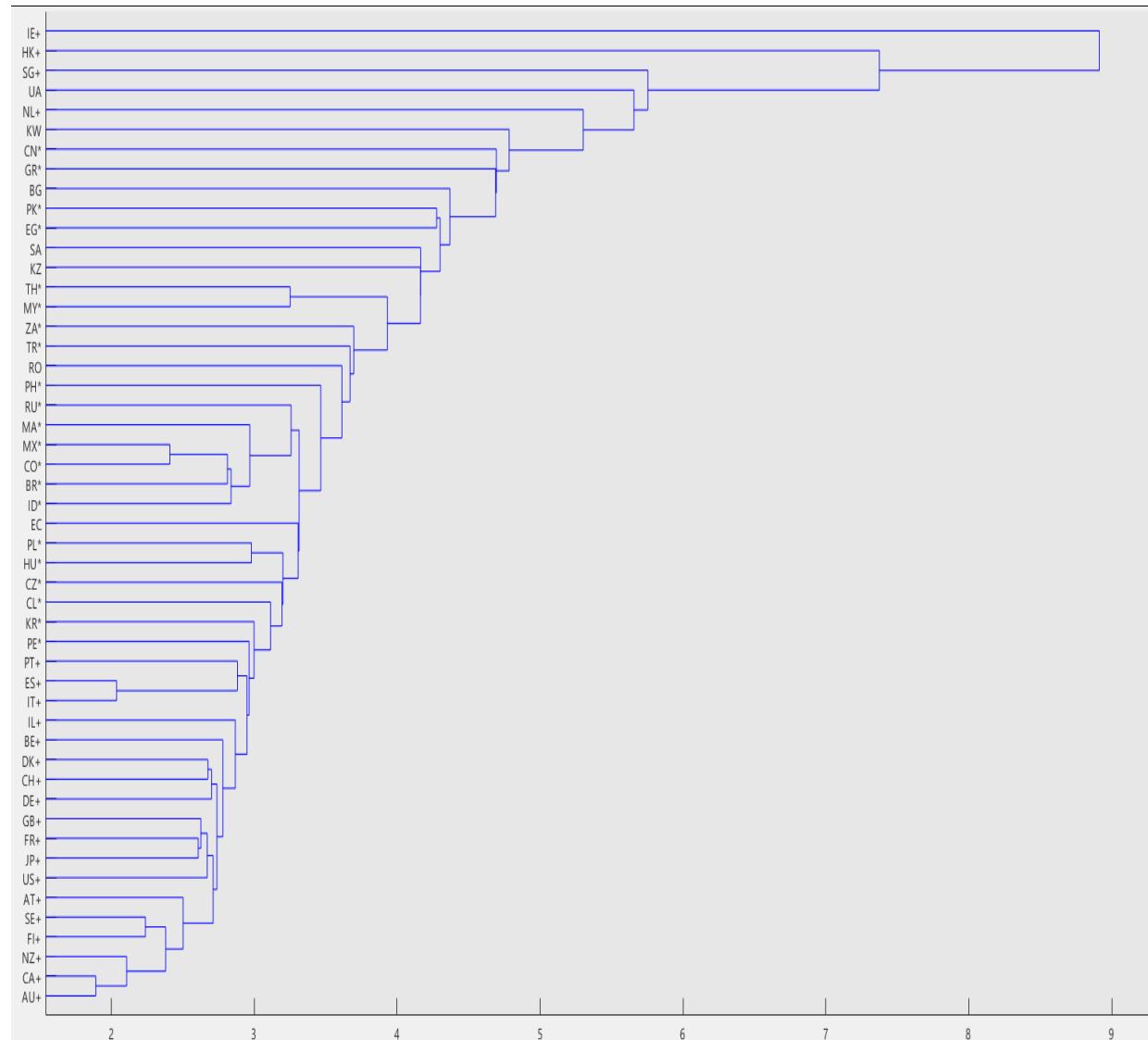
Clustering of countries according to variables from 2018 related to (i) asset returns and financial market characteristics, (ii) growth potential, (iii) external vulnerability and (iv) institutional development, all normalised.

X-axis shows the Euclidian distance between different countries. Countries link up when the Euclidian distance between them is smaller than the value on the x-axis. For example, the Euclidian distance between Canada and Australia is 1.9 and that between Mexico and Colombia is 2.4. The average distance between Brazil and the average of Mexico and Colombia is just below 3.

Countries marked with + are AEs and with * are EMEs.

Source: Baudot-Trajtenberg and Upper (2020).

References

Baudot-Trajtenberg, N and C Upper (2020): "What is an emerging market?", mimeo

Committee on the Global Financial System (2019): "Establishing viable capital markets", *CGFS Papers*, no 62.

Country codes

AR	Argentina	GB	United Kingdom	NZ	New Zealand
AU	Australia	HK	Hong Kong SAR	PE	Peru
BE	Belgium	HU	Hungary	PH	Philippines
BR	Brazil	ID	Indonesia	PL	Poland
CA	Canada	IL	Israel	RO	Romania
CH	Switzerland	IN	India	RU	Russia
CL	Chile	IT	Italy	SA	Saudi Arabia
CN	China	JP	Japan	SE	Sweden
CO	Colombia	KR	Korea	SG	Singapore
CZ	Czech Republic	MX	Mexico	TH	Thailand
DE	Germany	MY	Malaysia	TR	Turkey
ES	Spain	NL	Netherlands	US	United States
FR	France	NO	Norway	ZA	South Africa

Advanced economies (AEs): Australia, Belgium, Canada, Denmark, the euro area, France, Germany, Japan, New Zealand, Norway, Spain, Sweden, Switzerland, the United Kingdom and the United States.

Emerging market economies (EMEs): Argentina, Brazil, Chile, China, Chinese Taipei, Colombia, the Czech Republic, Hong Kong SAR, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Peru, the Philippines, Poland, Russia, Saudi Arabia, Singapore, South Africa, Thailand and Turkey.