



BANK FOR INTERNATIONAL SETTLEMENTS

Three BIS research themes in the Annual Report

Hyun Song Shin
Economic Adviser and Head of Research

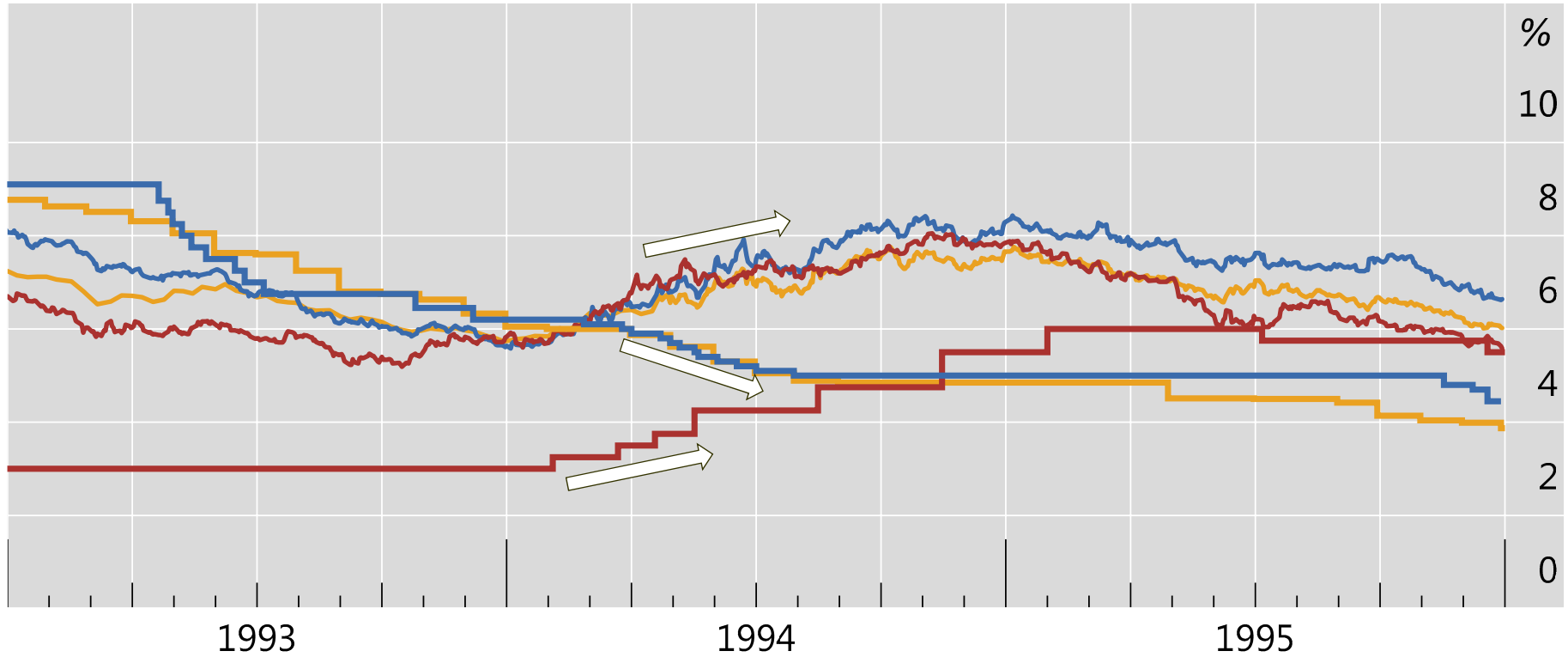
85th Annual General Meeting



The Annual Report reflects three BIS research themes

1. Characteristics of financial intermediation
 - Banks and non-banks
 - “Know your players”
2. Global liquidity and spillovers
 - First and second phases
3. Monetary and financial stability policy frameworks
 - “Risk-taking channel” of monetary policy

1994



Policy rates:

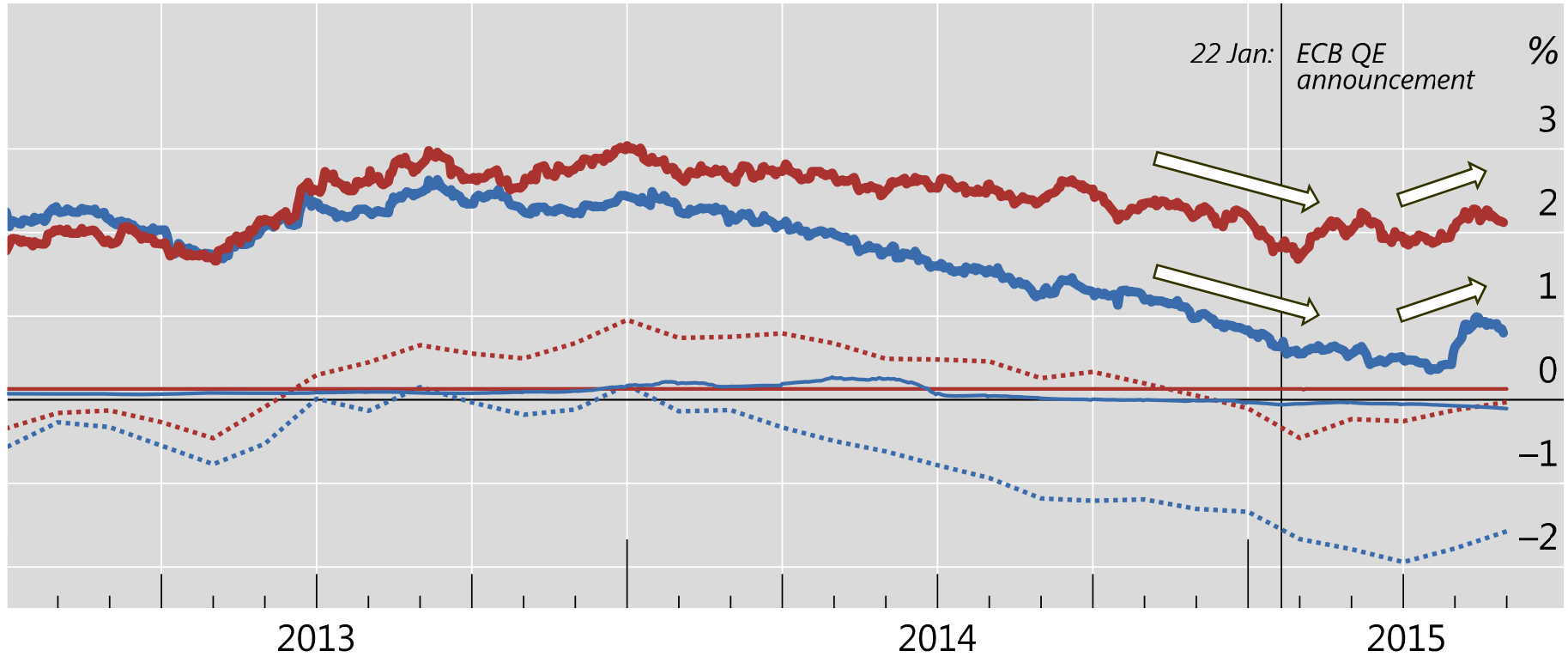
- Fed funds rate
- France (repo rate)
- Germany (repo rate)

10-year bond yield:

- United States
- France
- Germany

Sources: Bloomberg; national data.

2014-15



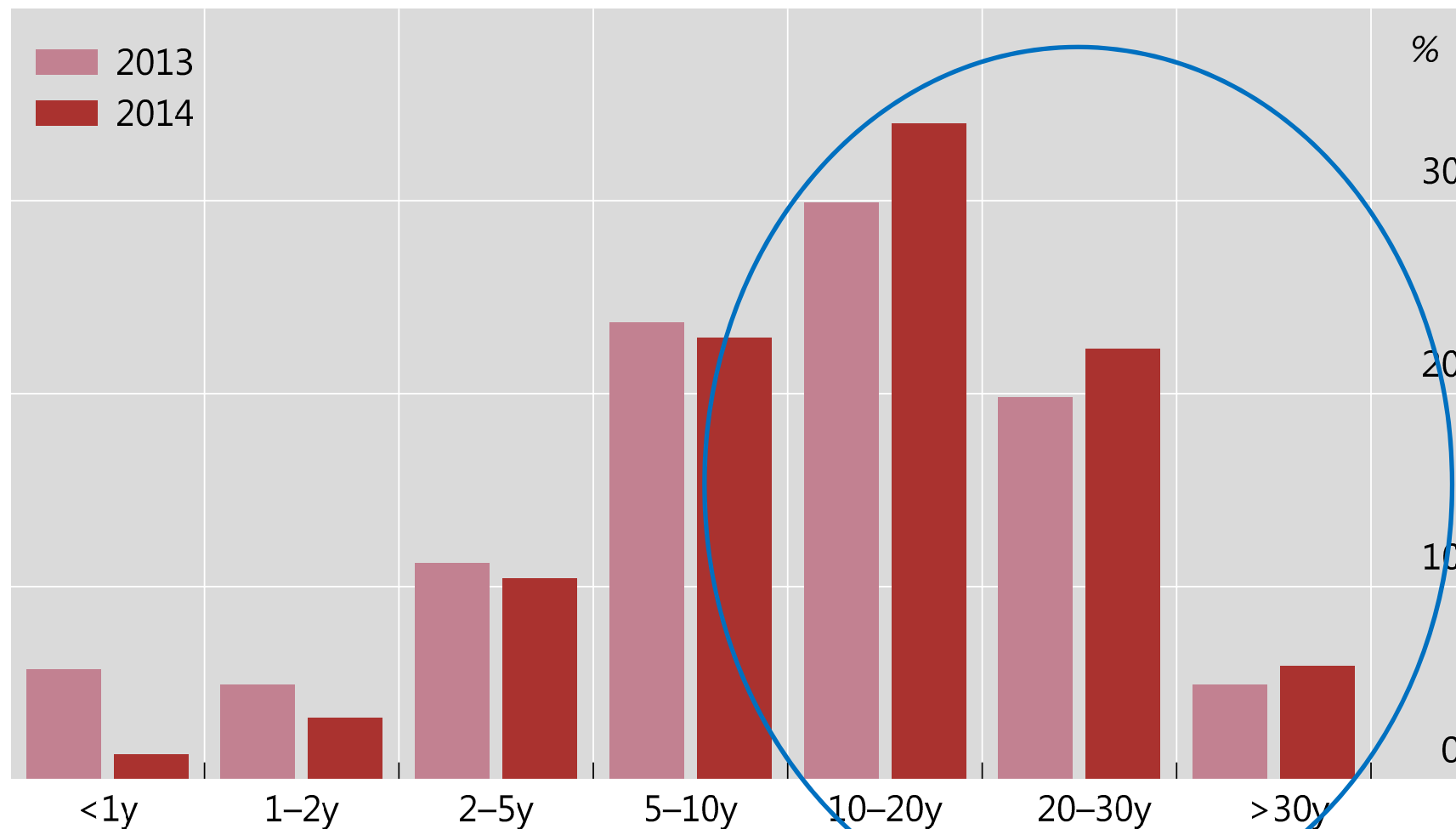
Policy rates:
 — Fed funds rate
 — EONIA

10-year bond yield:
 — United States
 — France

Term premium:¹
 United States
 Euro area

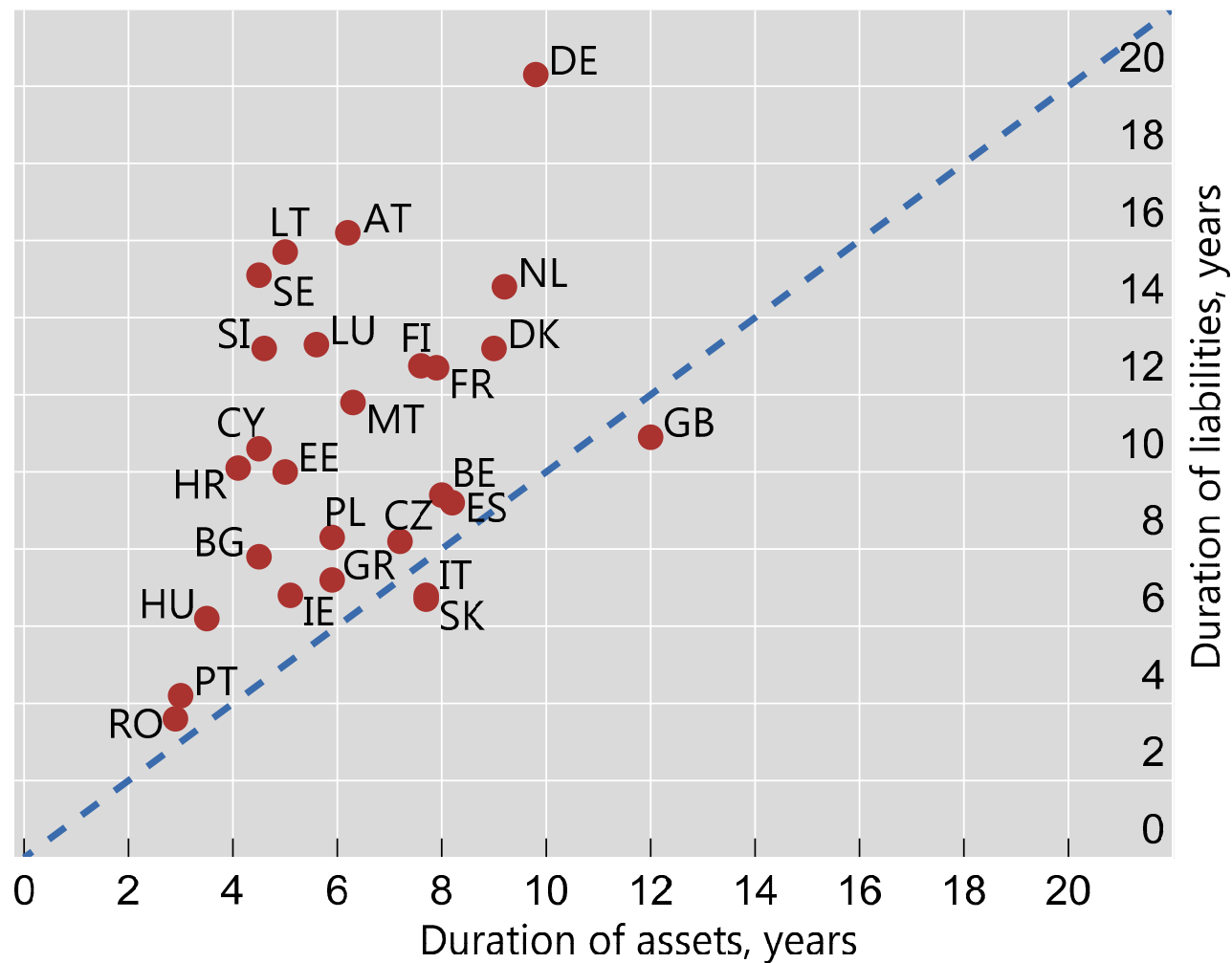
¹ Decomposition of the 10-year nominal yield according to an estimated joint macroeconomic and term structure model. Yields are expressed in zero coupon terms; for the euro area, French government bond data are used. Sources: Bloomberg; national data.

German insurance companies: holdings of OECD government bonds, shares in total



Source: Deutsche Bundesbank.

Duration of assets and liabilities of European insurance companies



Source: European Insurance and Occupational Pensions Authority (EIOPA).

“Knowing your players” – example of the insurance sector

- Increasing weight of German insurance sector bond portfolio
 - Insurance sector, 12.5% of total resident bond holdings
 - In 2014, accounted for 40% of net purchase of bonds
- Duration-matching as potential amplification channel
 - In bond market rally, accumulate long-dated bonds; chase disappearing yields
 - In reversals, reduce positions in long-dated bonds
- Long-maturity bonds in foreign currency
 - Amplification channel influences long rates elsewhere



BANK FOR INTERNATIONAL SETTLEMENTS

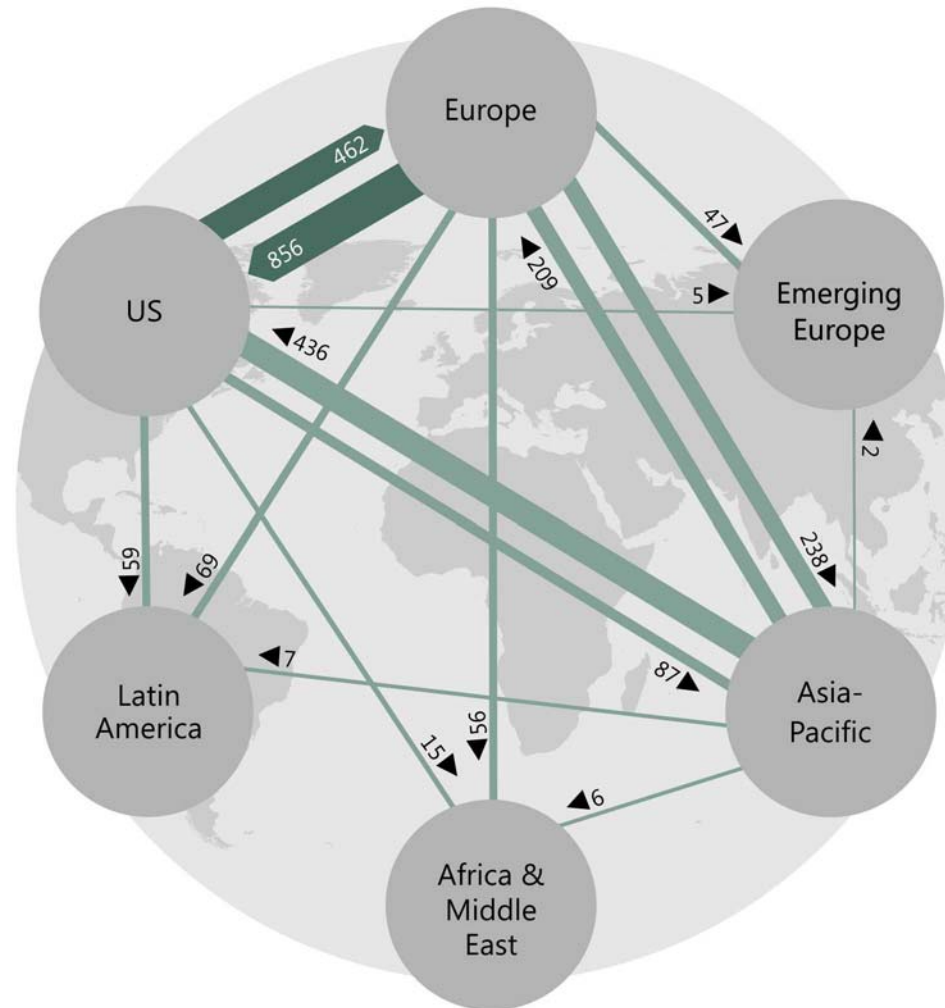
Currencies are global
even when monetary policy is territorial



US dollar-denominated cross-border bank claims

In USD billions

2002

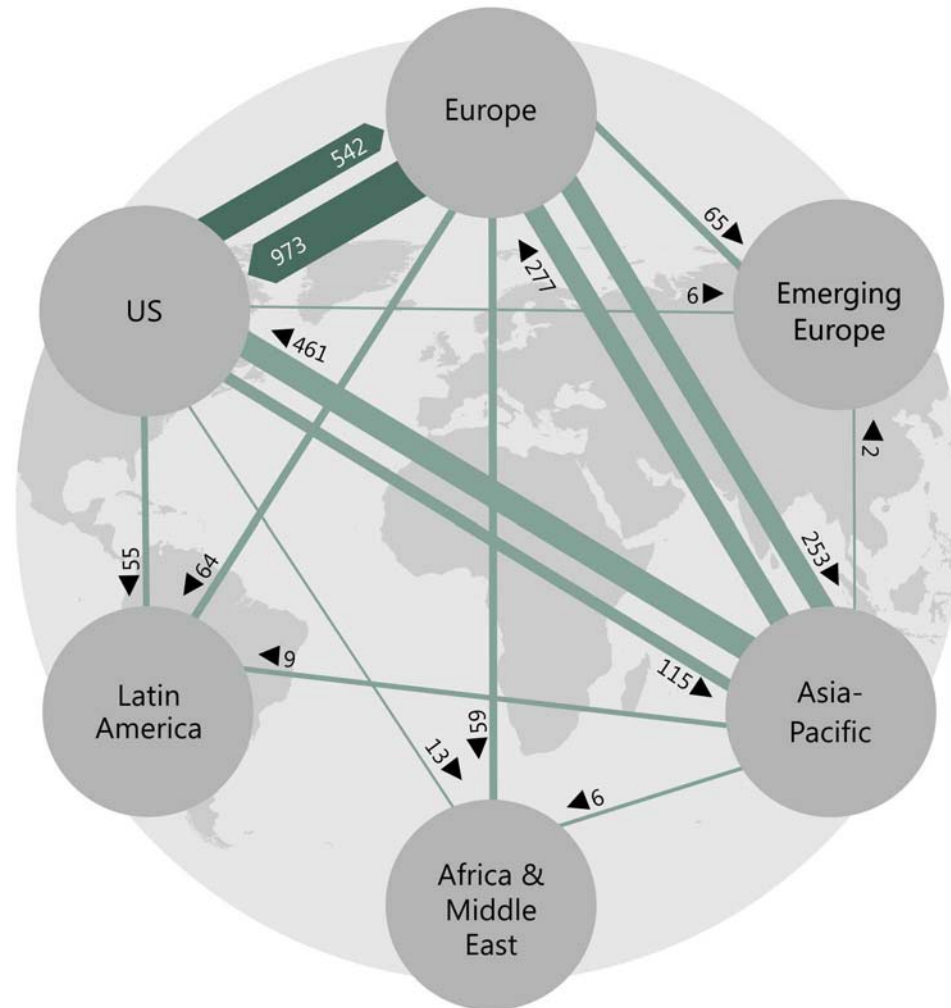


Source: BIS locational banking statistics by residence.

US dollar-denominated cross-border bank claims

In USD billions

2003

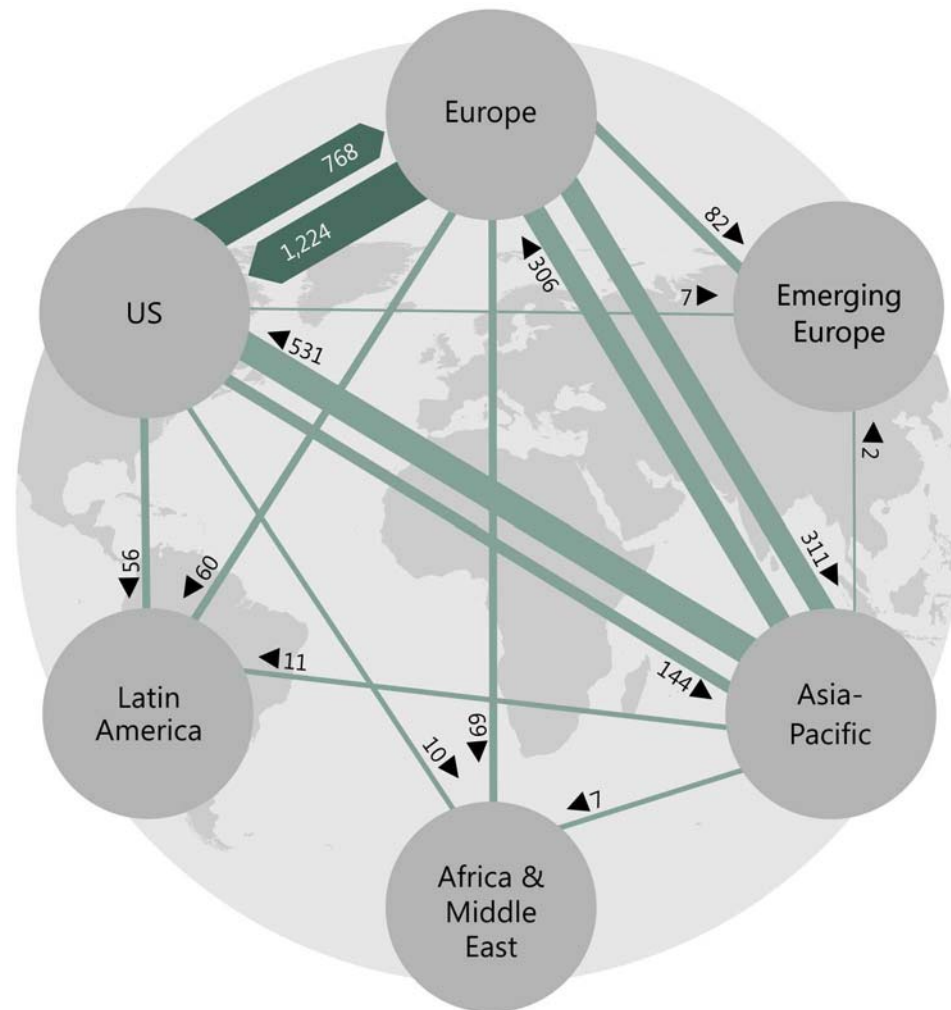


Source: BIS locational banking statistics by residence.

US dollar-denominated cross-border bank claims

In USD billions

2004

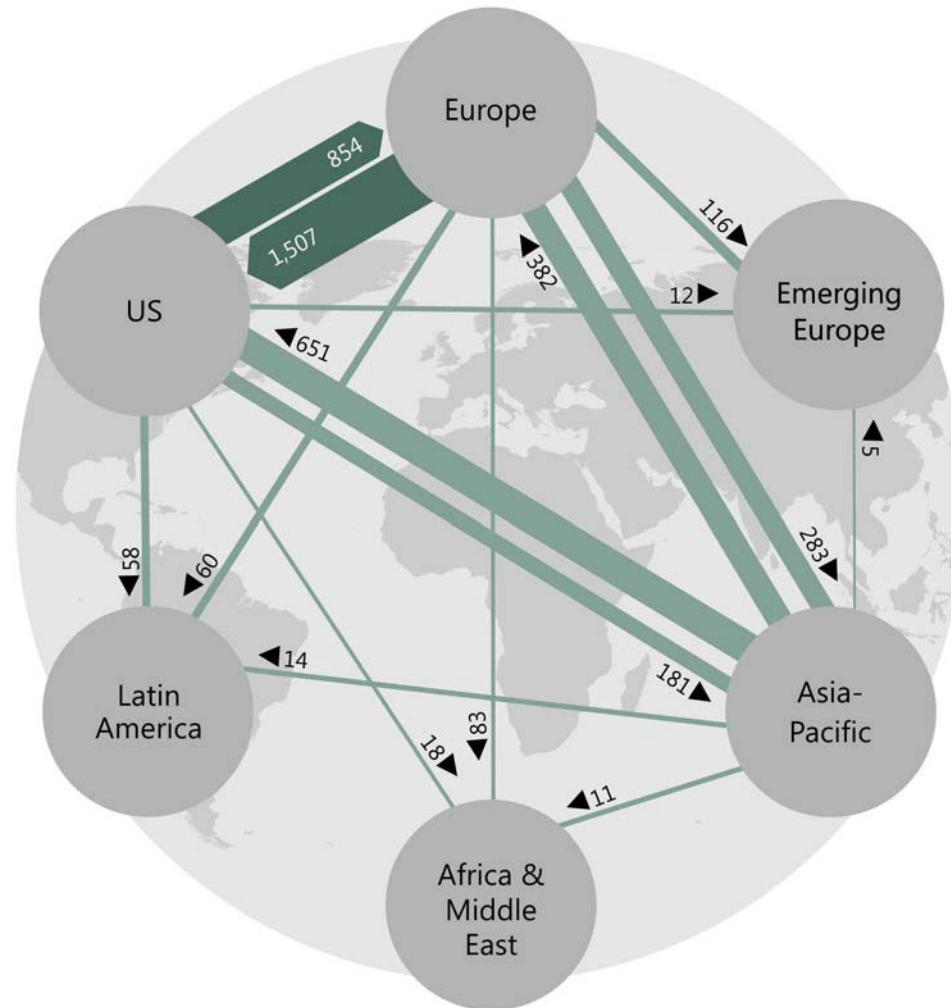


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US dollar-denominated cross-border bank claims

In USD billions

2005

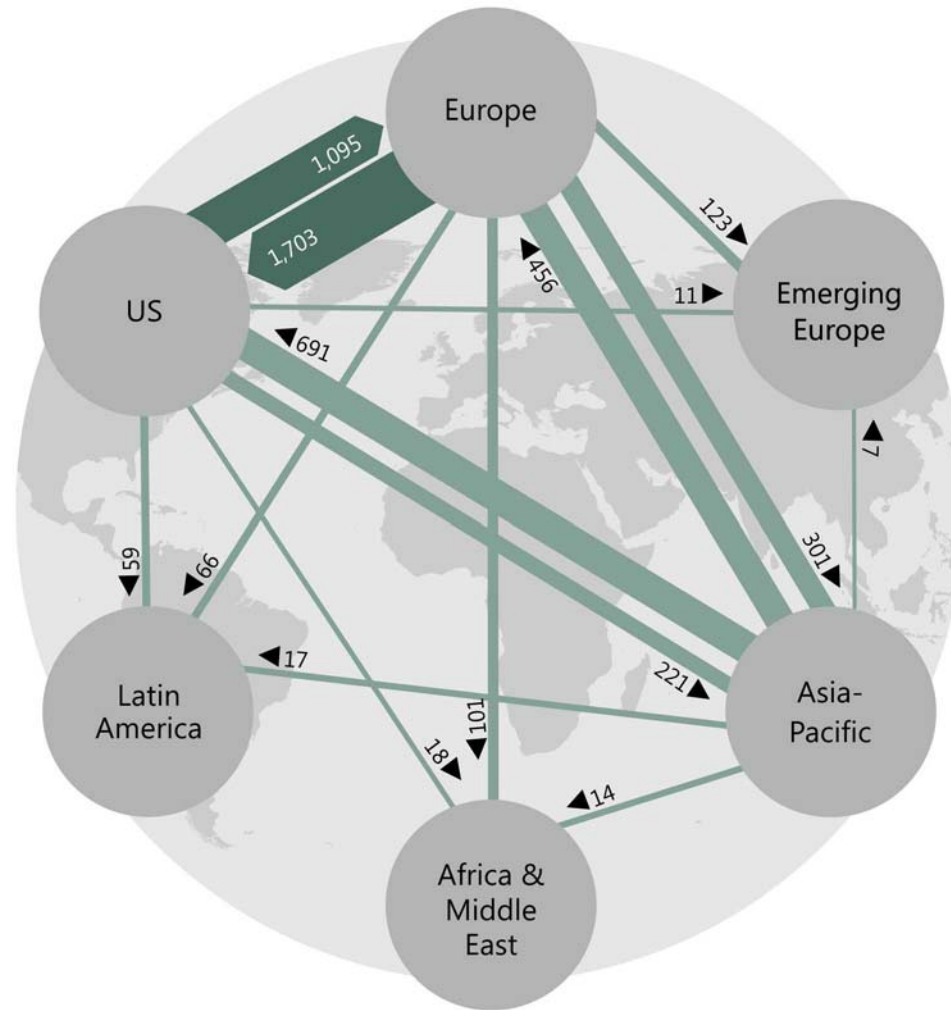


Source: BIS locational banking statistics by residence.

US dollar-denominated cross-border bank claims

In USD billions

2006

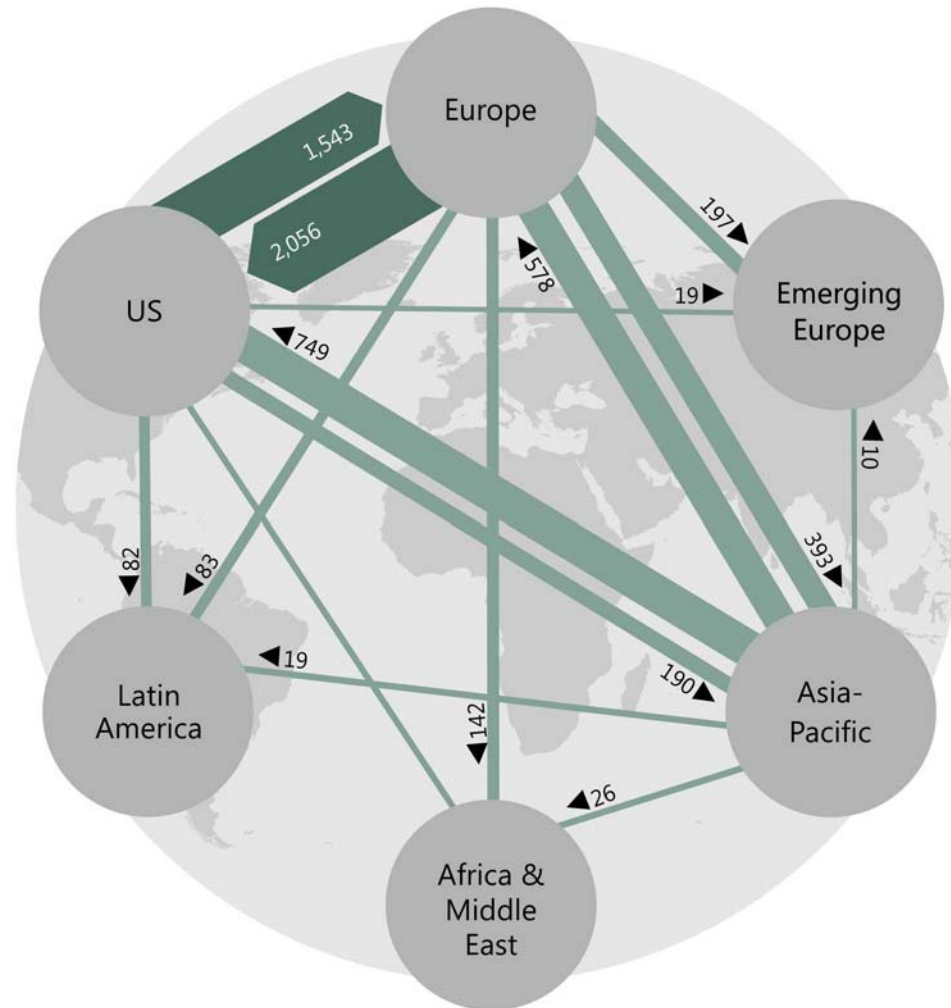


Source: BIS locational banking statistics by residence.

US dollar-denominated cross-border bank claims

In USD billions

2007

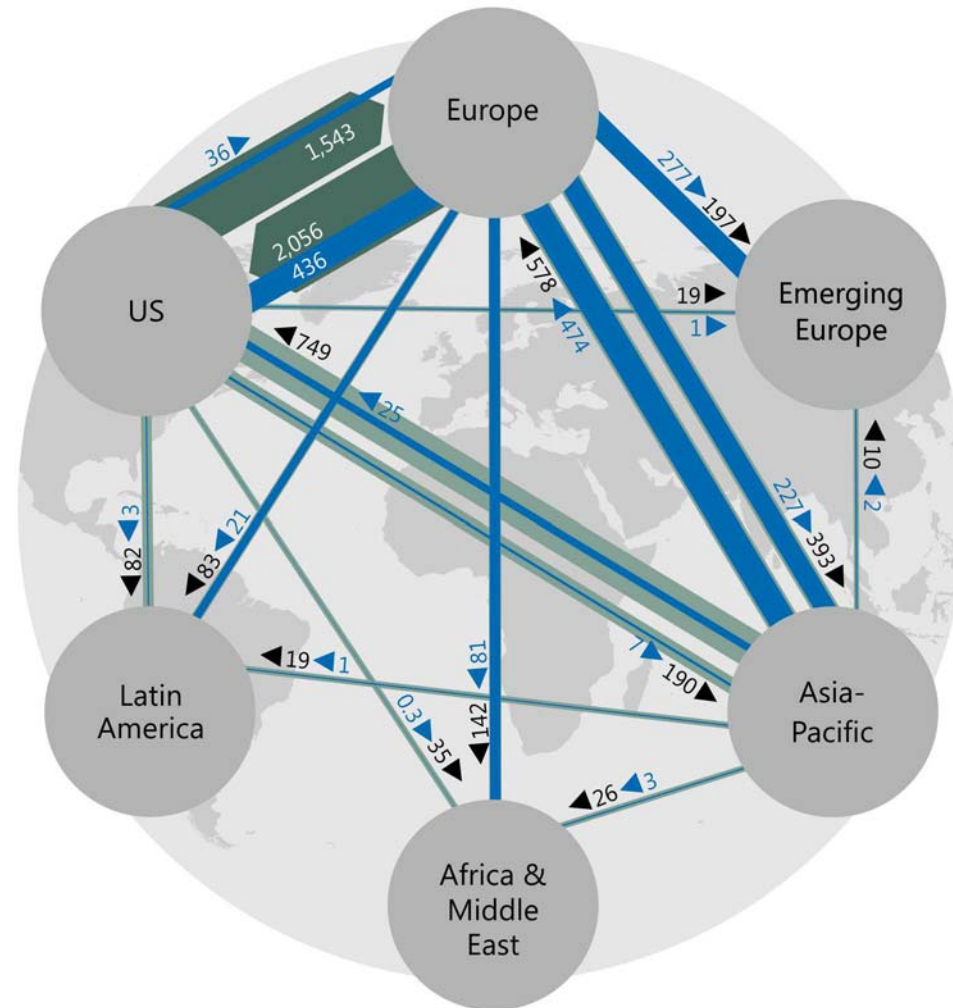


Source: BIS locational banking statistics by residence.

US dollar- and euro-denominated cross-border bank claims

In USD billions

2007



Source: BIS locational banking statistics by residence.

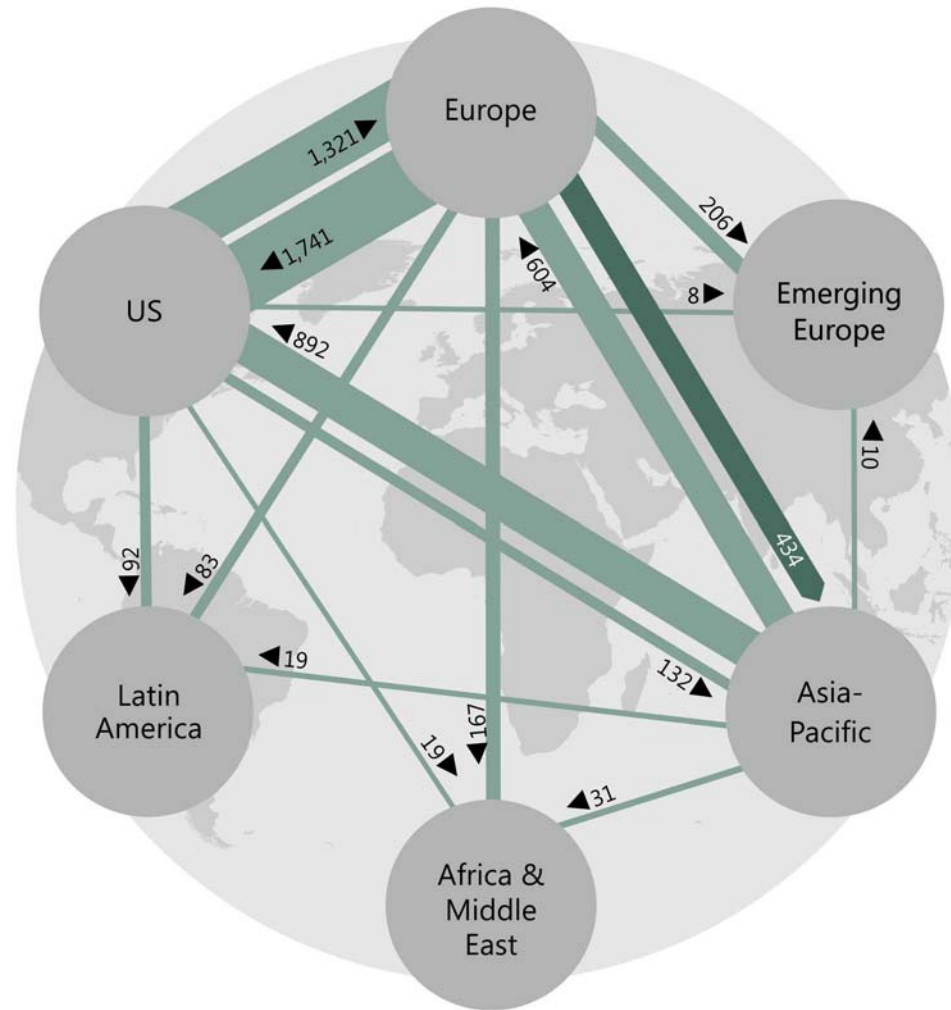
US dollar cross-border bank lending: 2002–07

- Increase of \$3.6 trillion between 2002 and 2007
 - Two thirds of increase (\$2.3 trillion) due to US-Europe nexus
 - US-based banks account for only 35% of total increase in US dollar cross-border bank lending
- European banks intermediating US dollar funding
 - At end-2007, European banks had twice the dollar claims on Asian borrowers as US-based banks (\$393 bn vs \$190 bn)

US dollar-denominated cross-border bank claims

In USD billions

2008

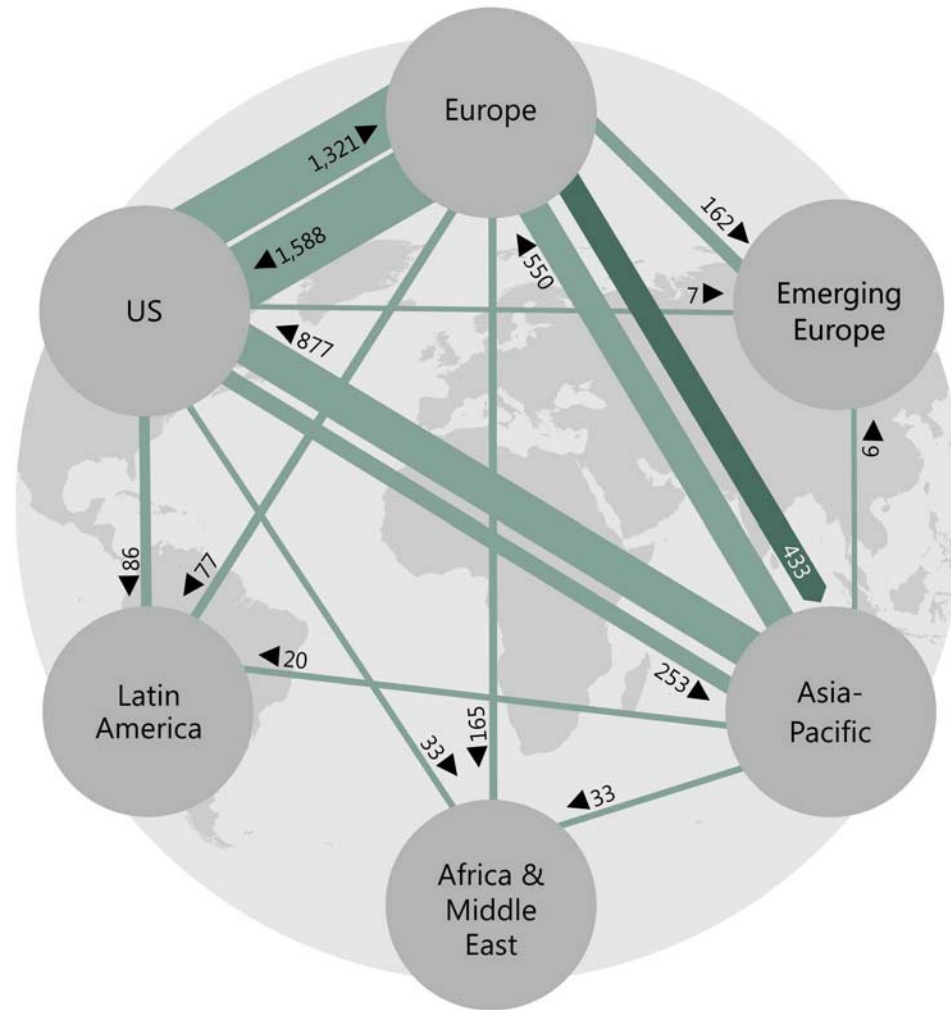


Source: BIS locational banking statistics by residence.

US dollar-denominated cross-border bank claims

In USD billions

2009

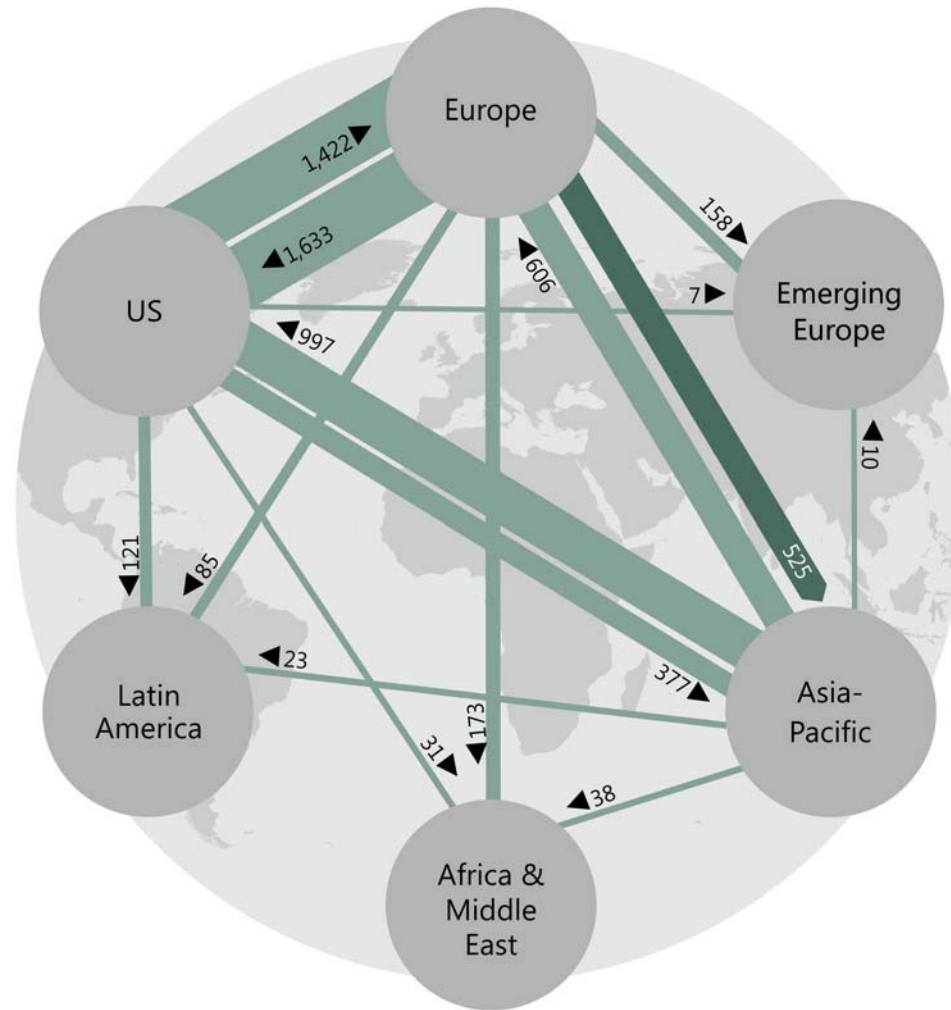


Source: BIS locational banking statistics by residence.

US dollar-denominated cross-border bank claims

In USD billions

2010

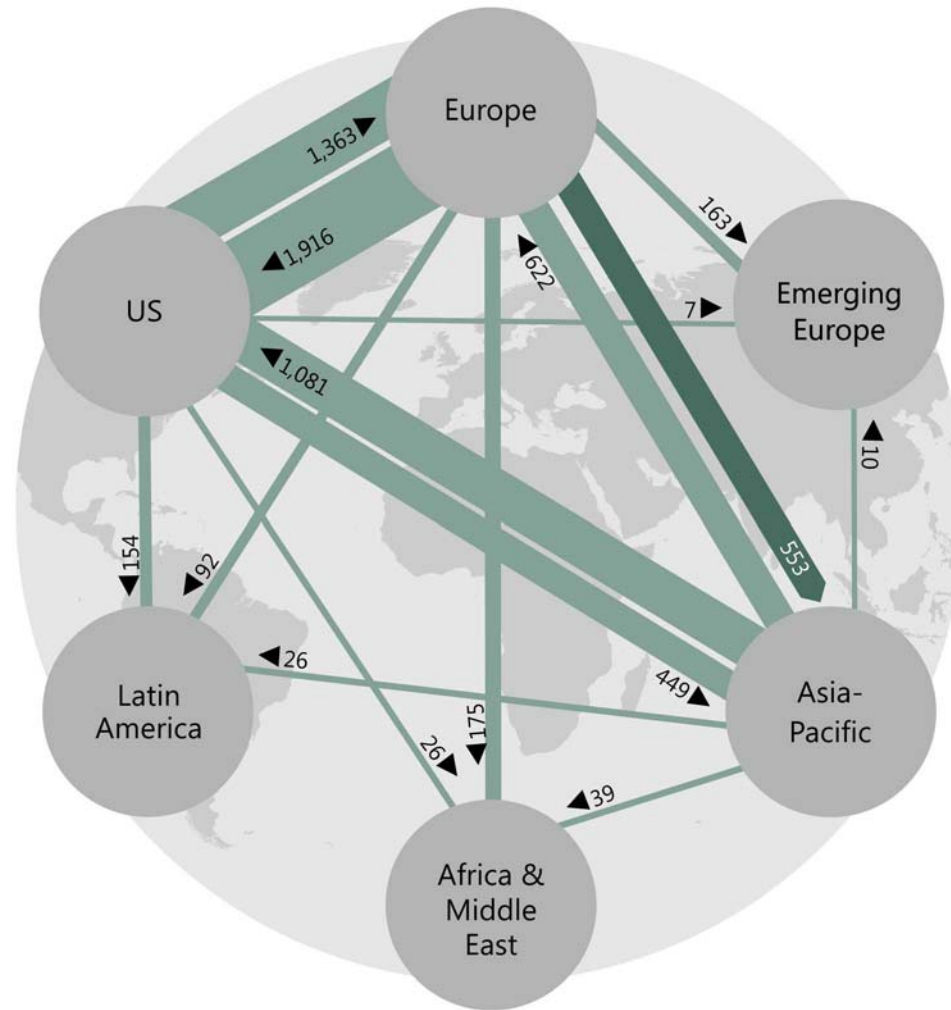


Source: BIS locational banking statistics by residence.

US dollar-denominated cross-border bank claims

In USD billions

2011

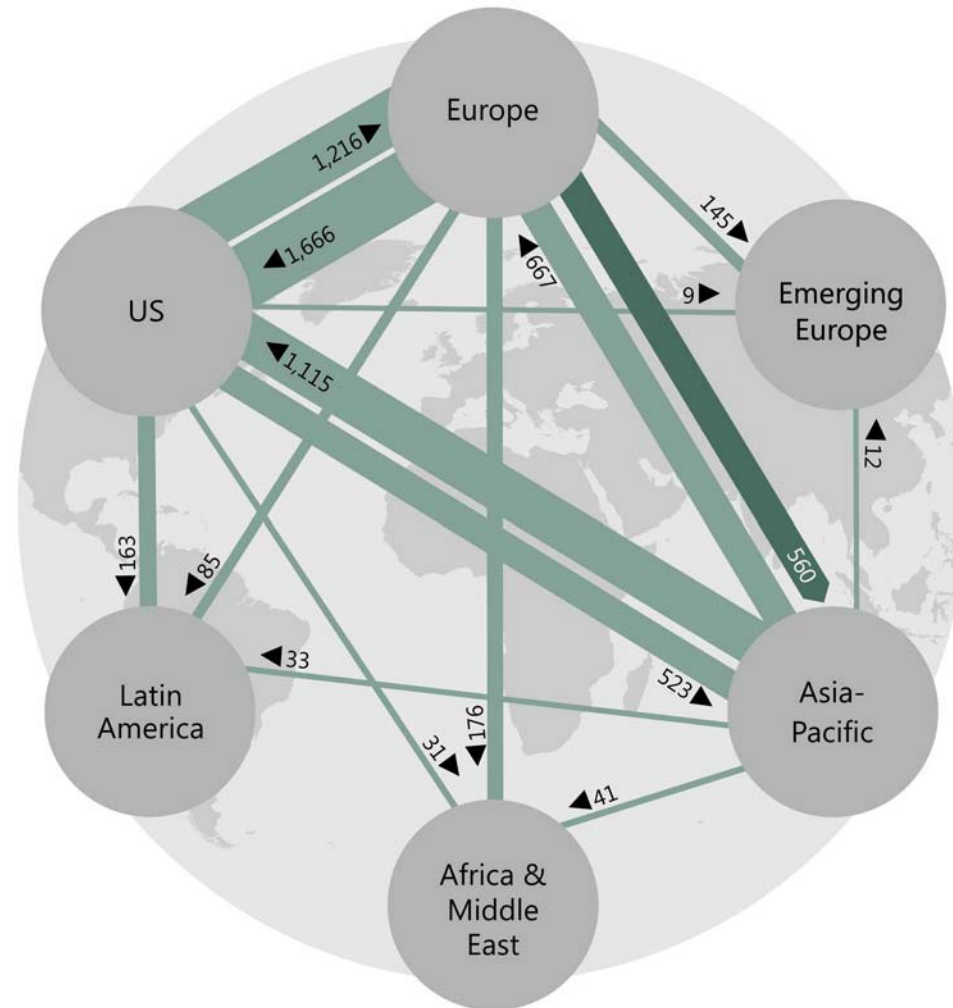


Source: BIS locational banking statistics by residence.

US dollar-denominated cross-border bank claims

In USD billions

2012

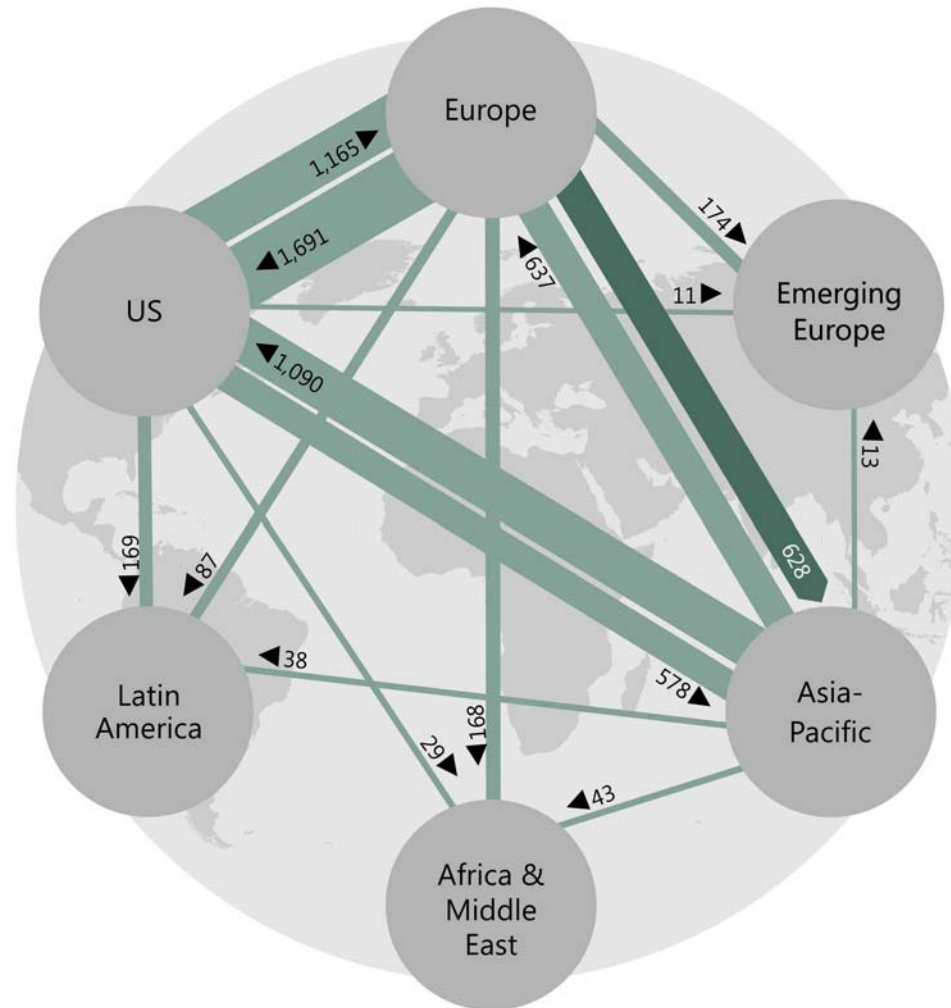


Source: BIS locational banking statistics by residence.

US dollar-denominated cross-border bank claims

In USD billions

2013

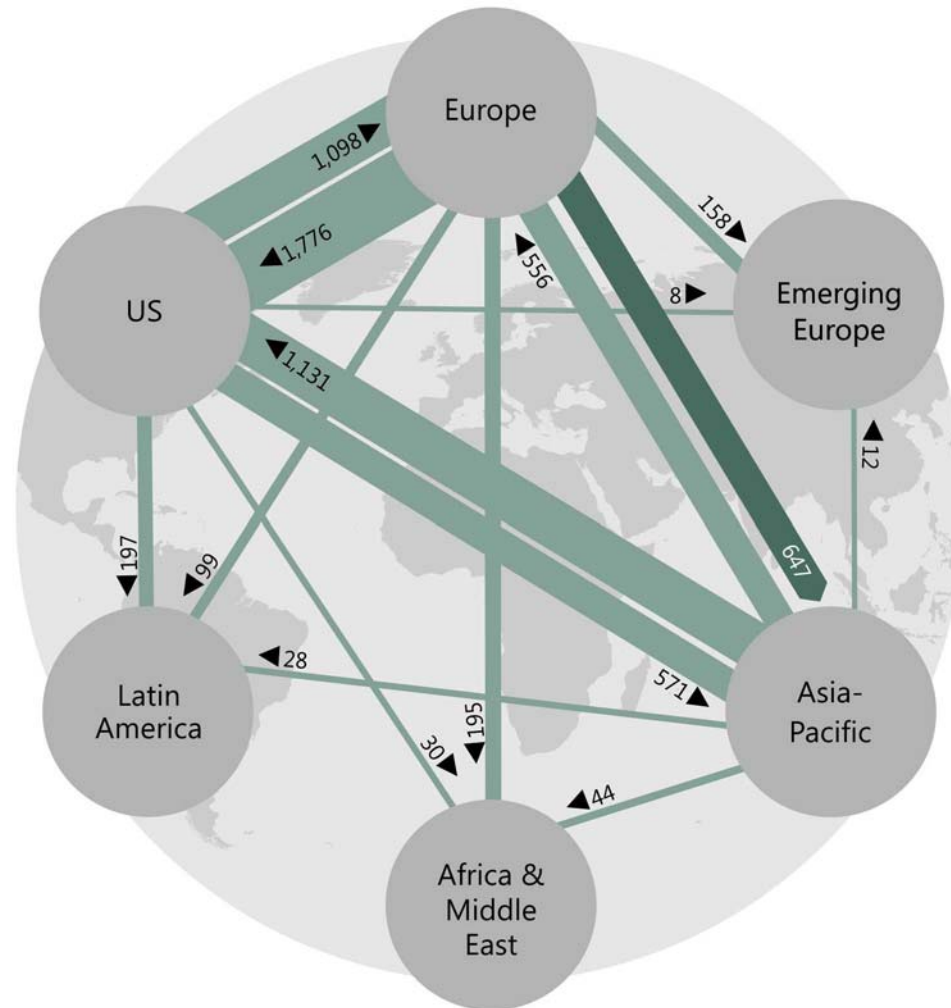


Source: BIS locational banking statistics by residence.

US dollar-denominated cross-border bank claims

In USD billions

2014



Source: BIS locational banking statistics by residence.

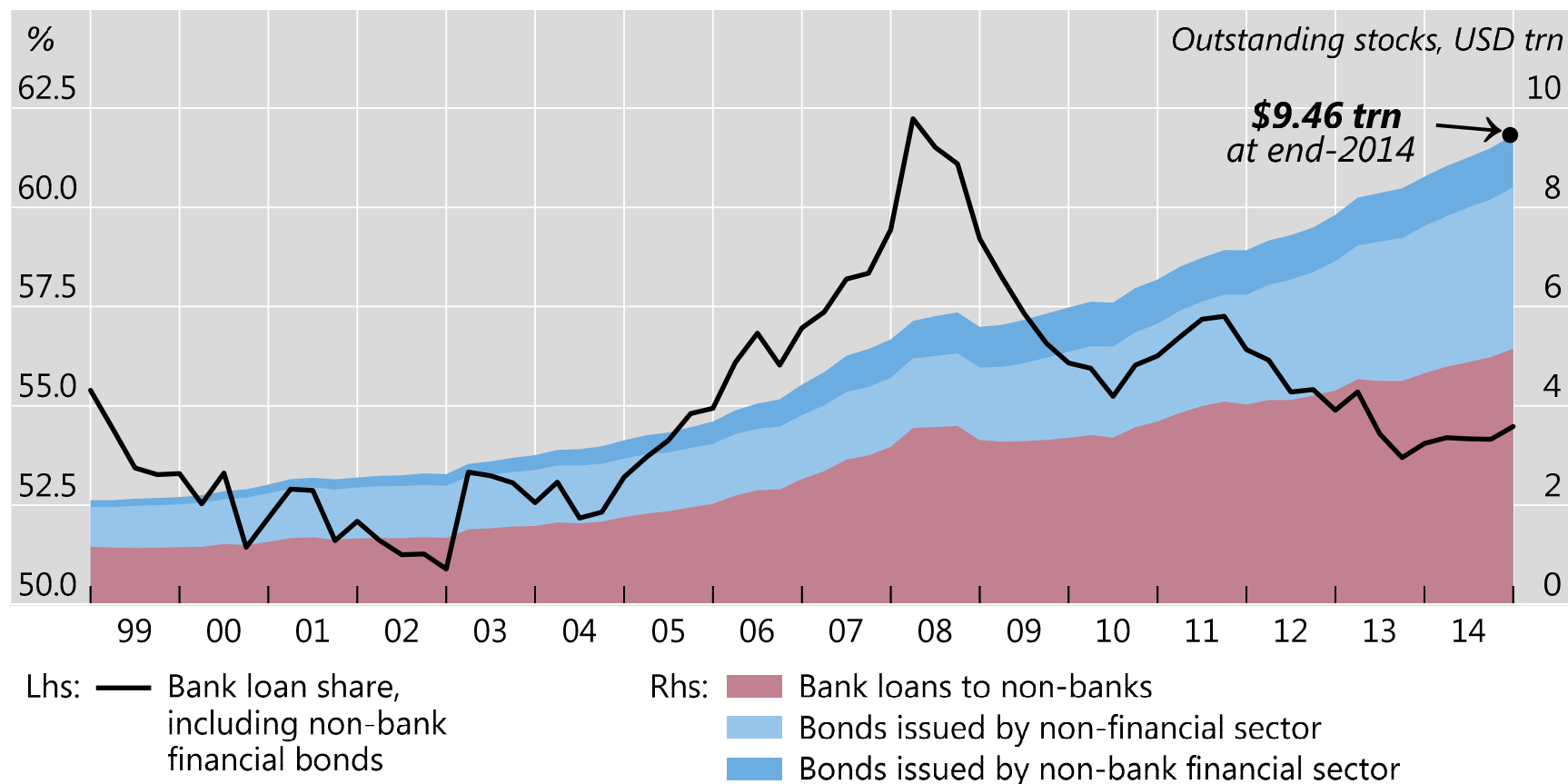


BANK FOR INTERNATIONAL SETTLEMENTS

Currency denomination does not follow
the national income boundary:
the case of non-banks



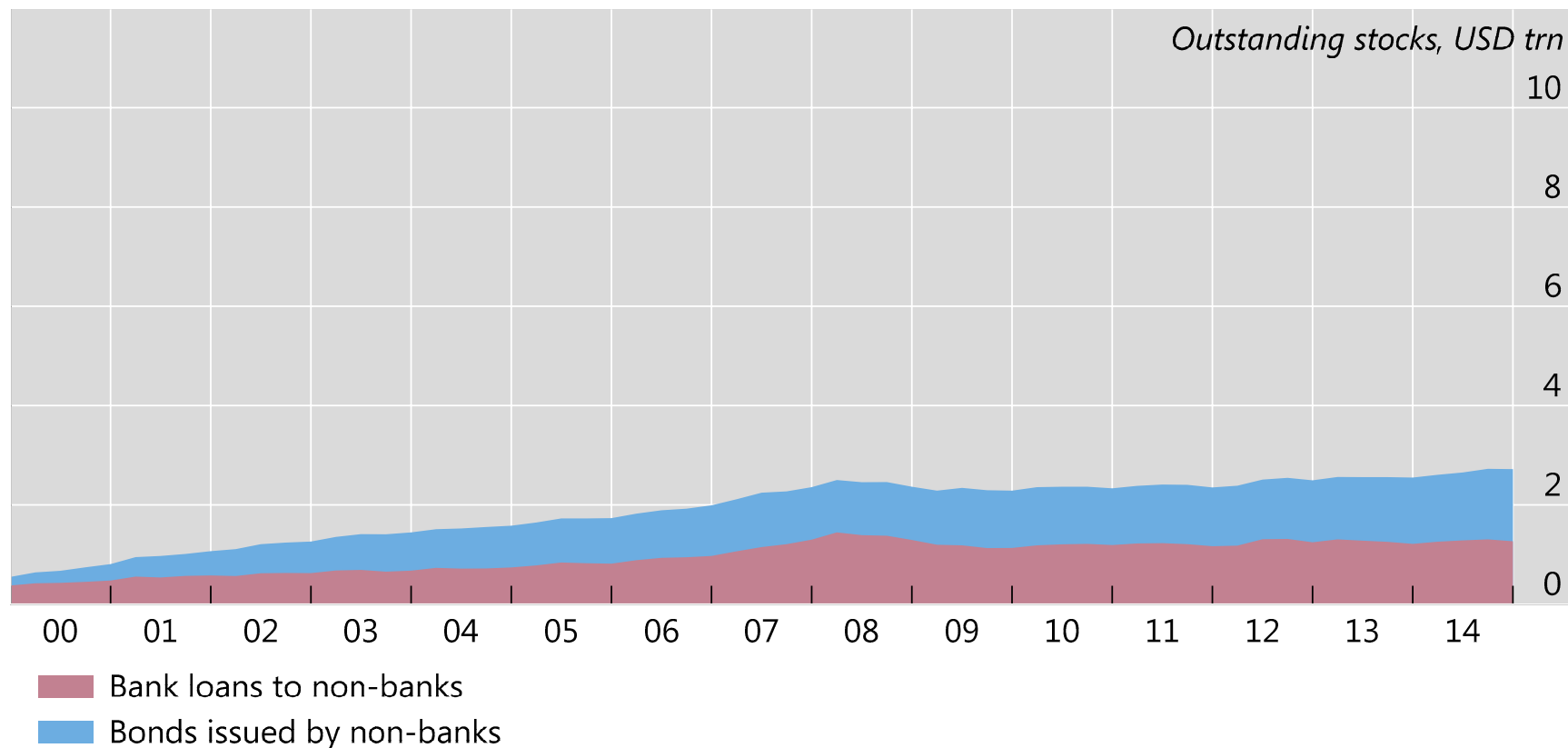
US dollar credit to non-banks outside the United States



Bank loans include cross-border and locally extended loans to non-banks outside the United States. For China and Hong Kong SAR, locally extended loans are derived from national data on total local lending in foreign currencies on the assumption that 80% are denominated in US dollars. For other non-BIS reporting countries, local US dollar loans to non-banks are proxied by all BIS reporting banks' gross cross-border US dollar loans to banks in the country. Bonds issued by US national non-bank financial sector entities resident in the Cayman Islands have been excluded.

Sources: IMF, *International Financial Statistics*; Datastream; BIS international debt statistics and locational banking statistics by residence; BIS calculations.

Equivalent euro-denominated debt is a quarter of the size



Bank loans include cross-border and locally extended loans to non-banks outside the euro area. For China and Hong Kong SAR, locally extended loans are derived from national data on total local lending in foreign currencies on the assumption that 20% are denominated in euros. For other non-BIS reporting countries, local euro loans to non-banks are proxied by all BIS reporting banks' gross cross-border euro loans to banks in the country.

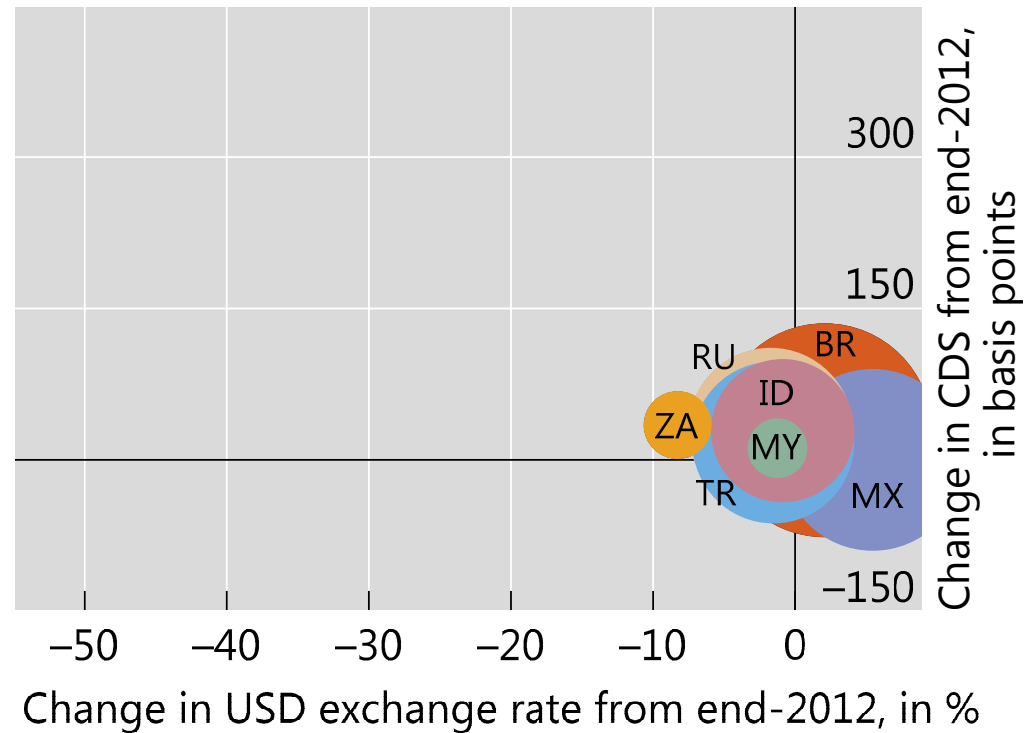
Sources: IMF, *International Financial Statistics*; Datastream; BIS international debt statistics and locational banking statistics by residence; BIS calculations.

What assets back the 9.5 trillion US dollar debt of non-bank borrowers outside the United States?

- Many have dollar cash flows:
 - Exporters
 - Commodity producers
- Some do not:
 - Property developers
 - Utilities
- Even with dollar cash flows, a strong dollar may lead to strains:
 - Commodity prices negatively correlated with the dollar
 - Credit tightening through the “risk-taking channel”

Illustrating the risk-taking channel Bilateral USD exchange rate and five-year sovereign CDS

**End-
March
2013**



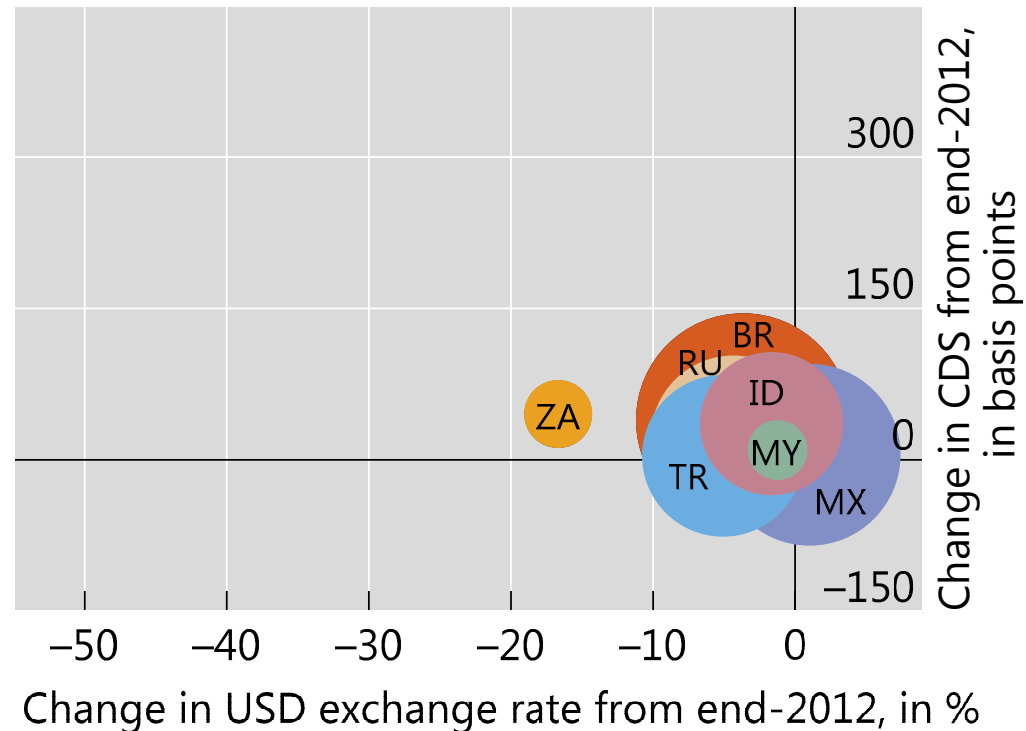
BR = Brazil; ID = Indonesia; MX = Mexico; MY = Malaysia; RU = Russia; TR = Turkey; ZA = South Africa.
The size of the bubbles indicates the size of dollar debt in Q4 2014.

Sources: Markit; national data; BIS.

Illustrating the risk-taking channel

Bilateral USD exchange rate and five-year sovereign CDS

**End-
May
2013**

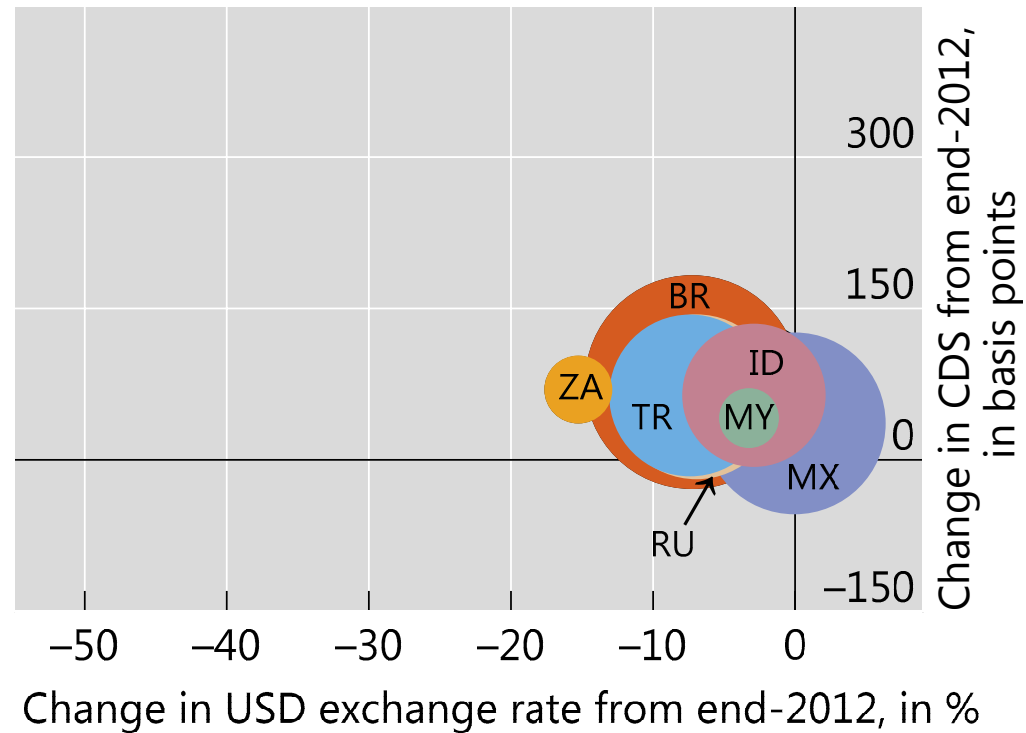


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Illustrating the risk-taking channel Bilateral USD exchange rate and five-year sovereign CDS

**End-
June
2013**

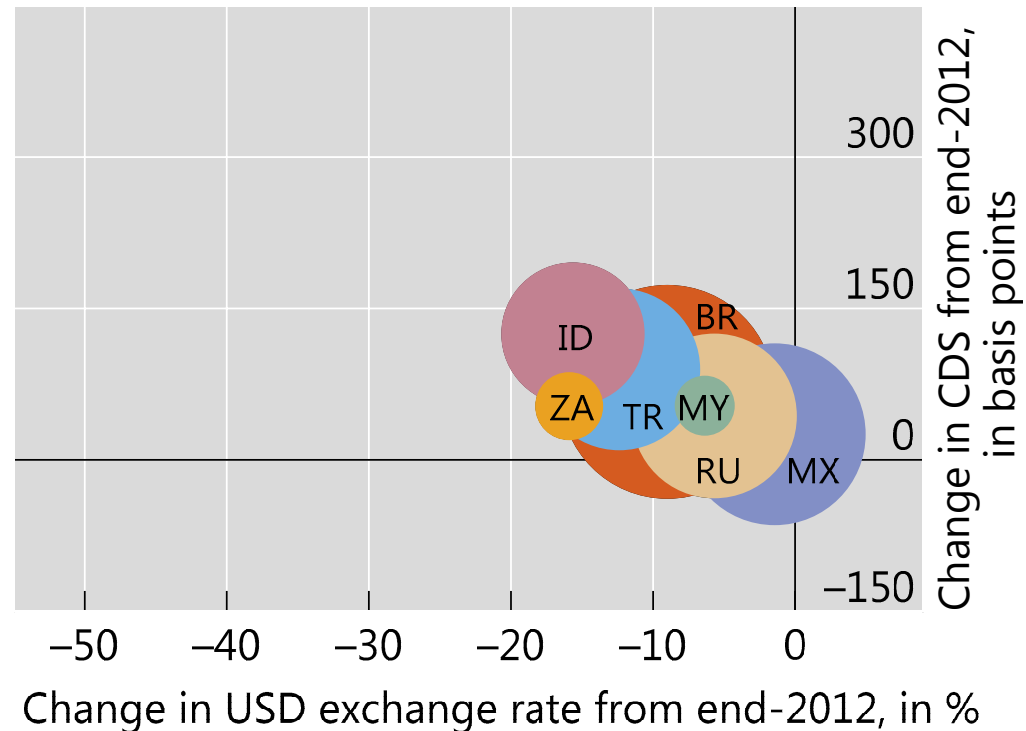


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Illustrating the risk-taking channel Bilateral USD exchange rate and five-year sovereign CDS

**End-
September
2013**



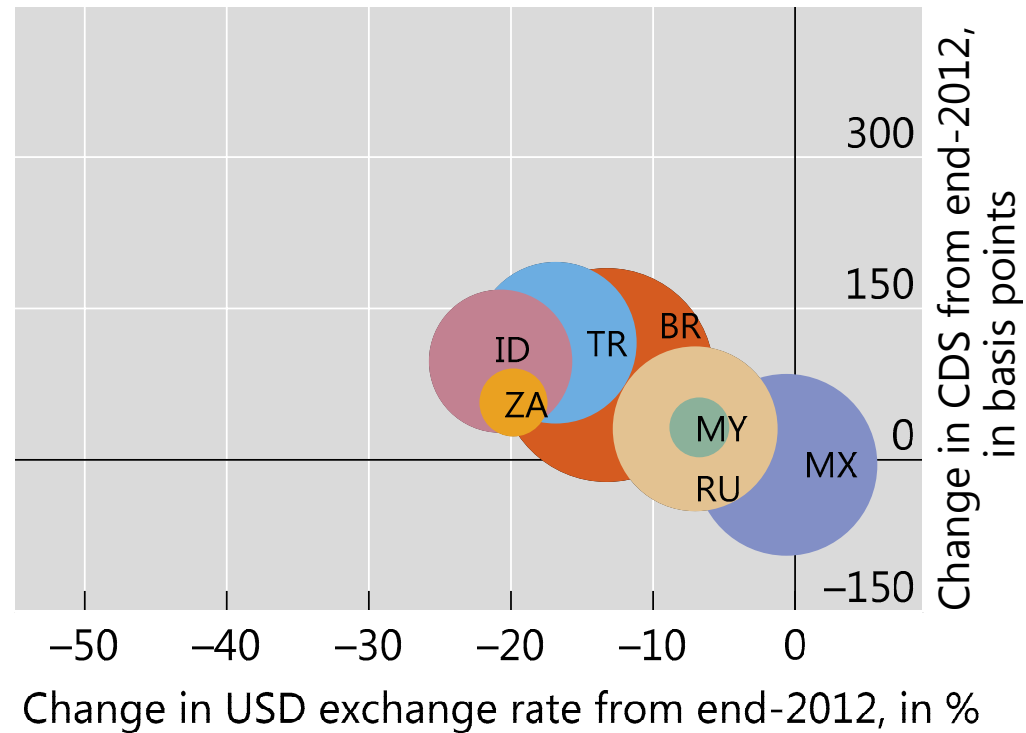
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Illustrating the risk-taking channel

Bilateral USD exchange rate and five-year sovereign CDS

**End-
December
2013**



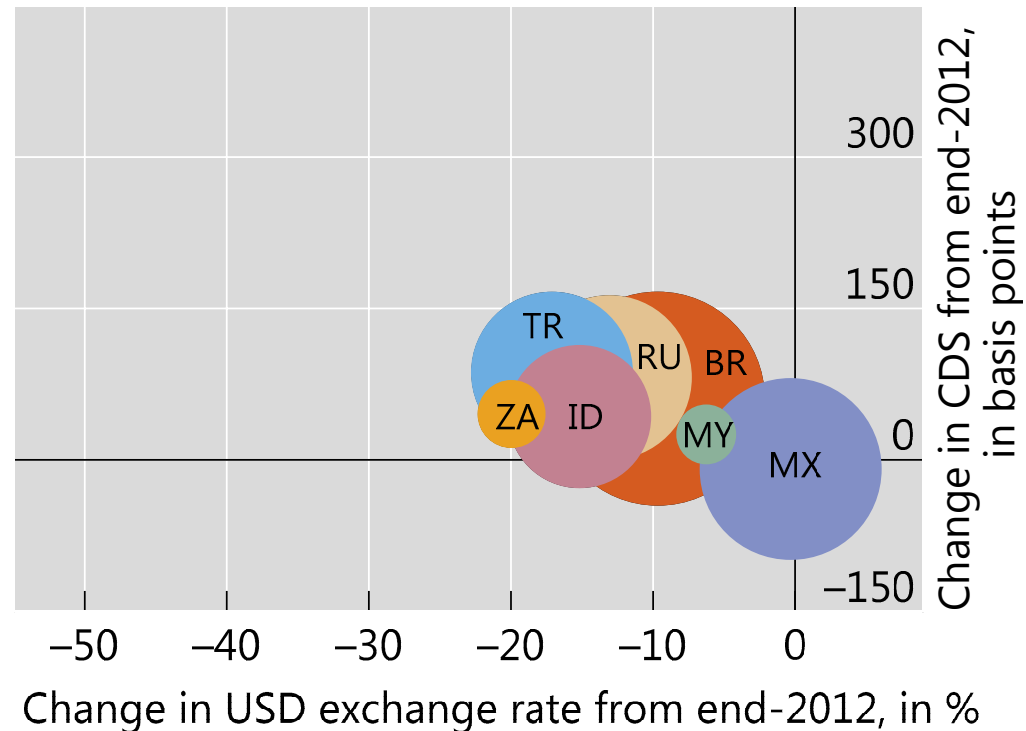
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Illustrating the risk-taking channel

Bilateral USD exchange rate and five-year sovereign CDS

**End-
March
2014**



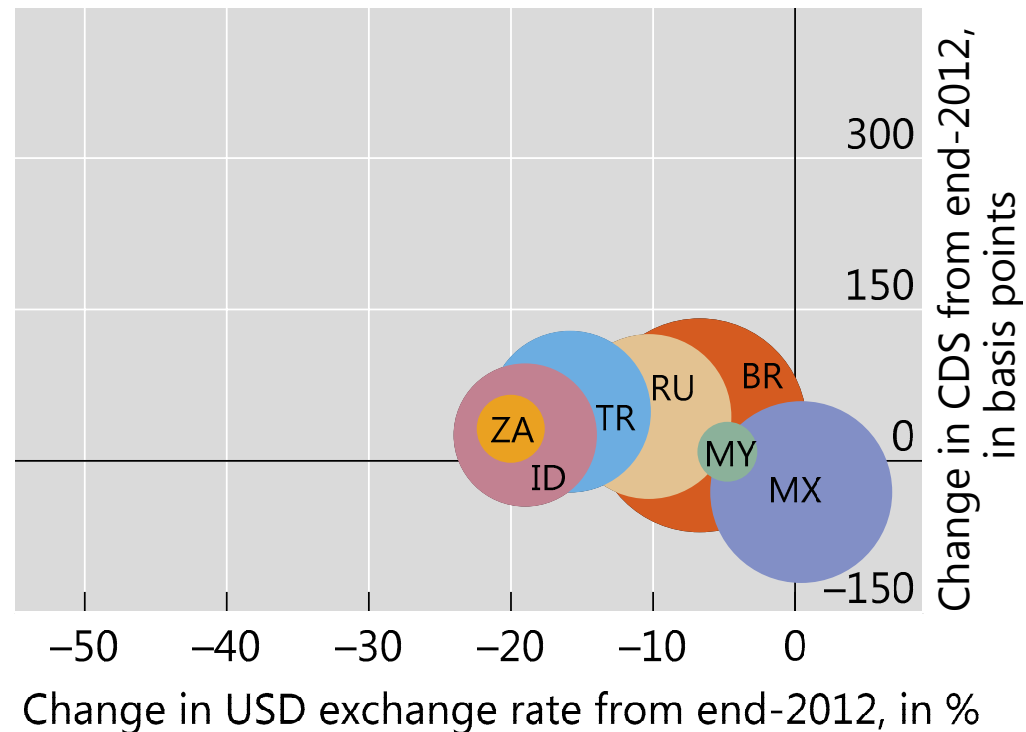
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2014**

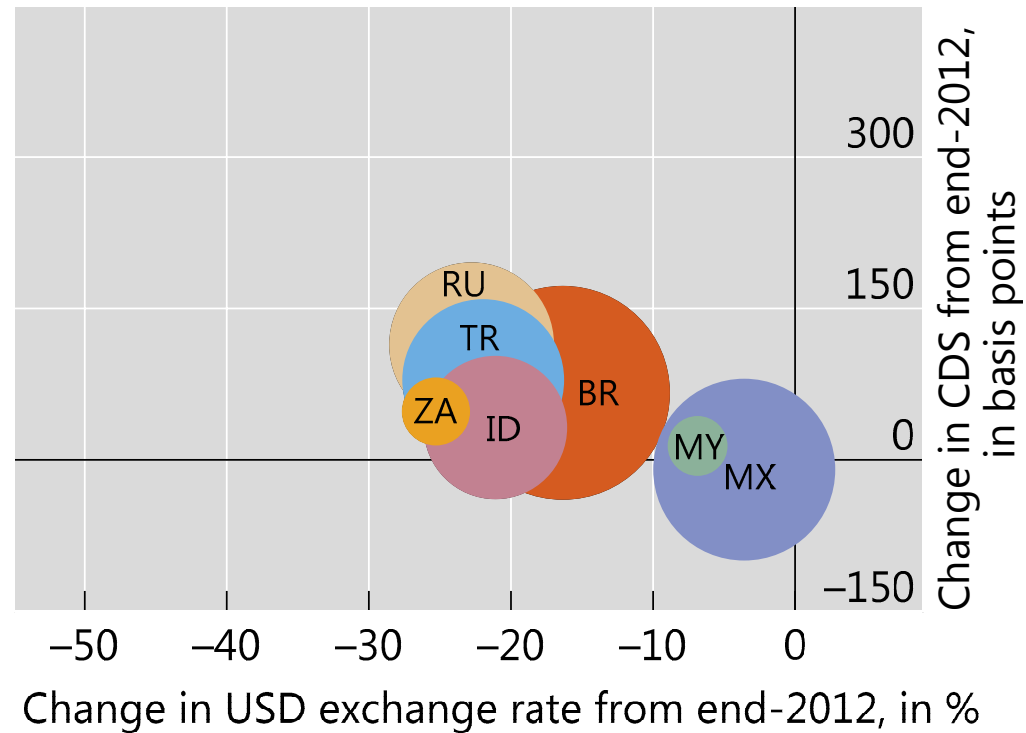


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**End-
September
2014**

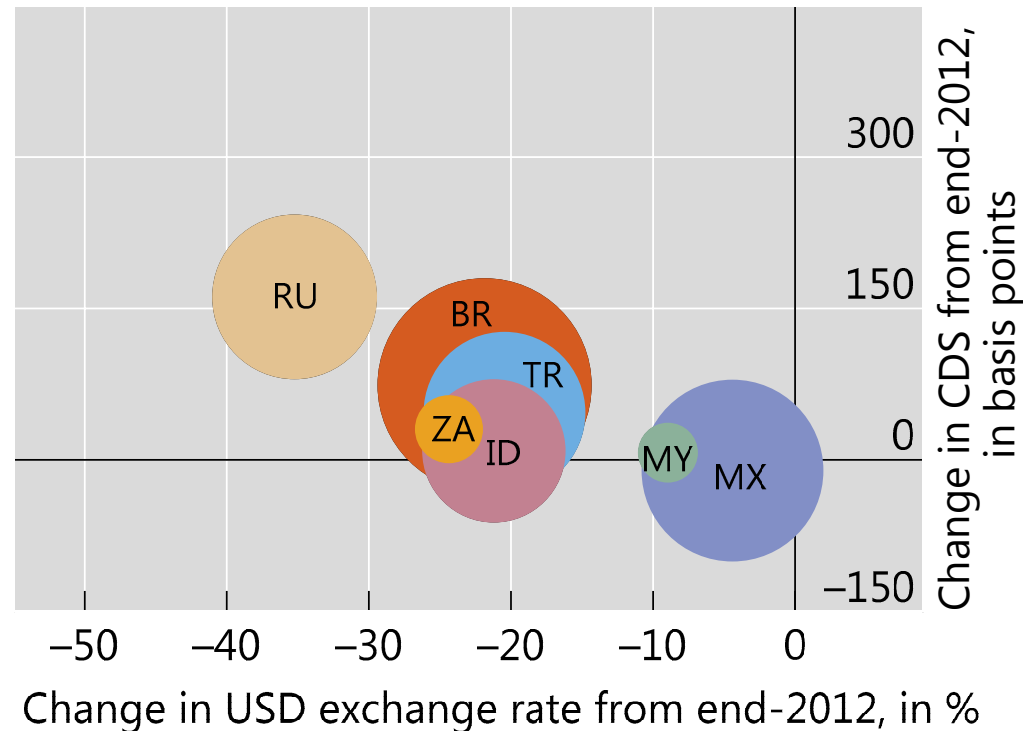


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Illustrating the risk-taking channel Bilateral USD exchange rate and five-year sovereign CDS

**Mid-
November
2014**

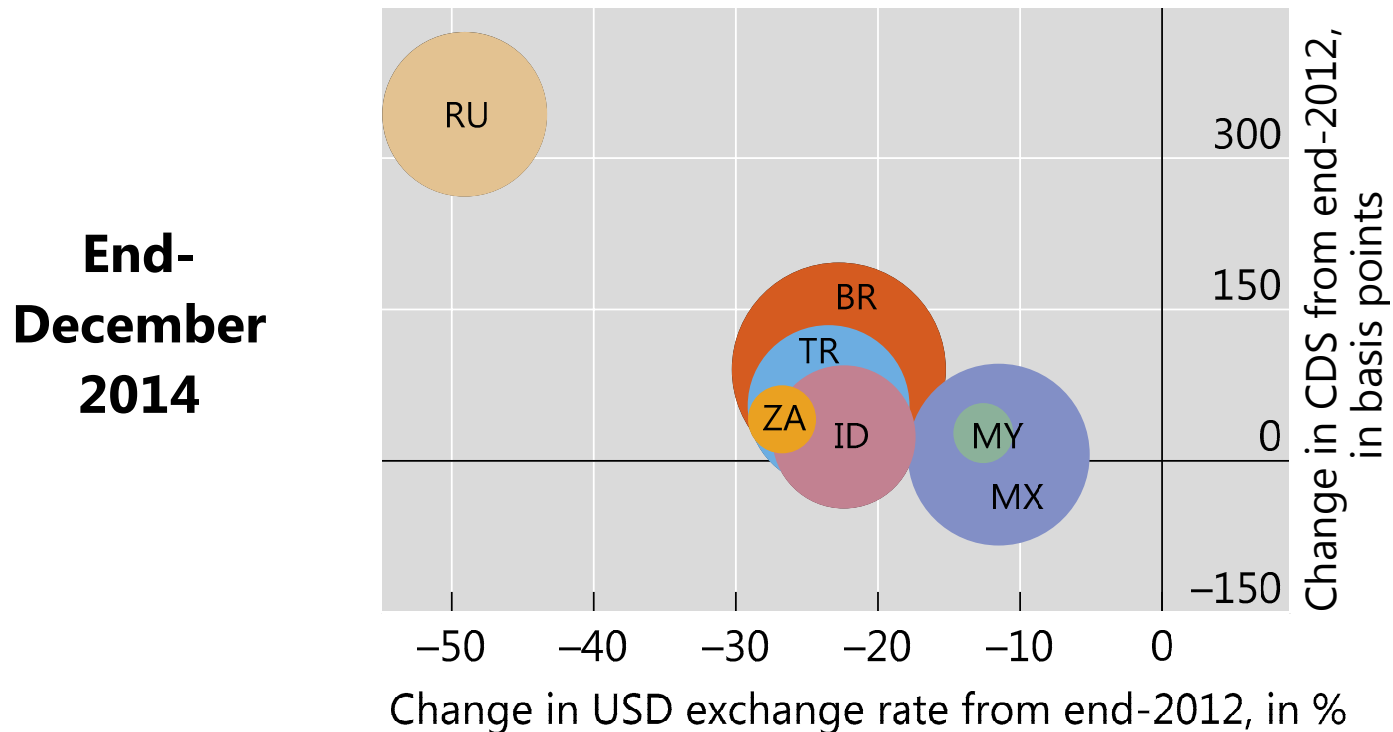


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Illustrating the risk-taking channel

Bilateral USD exchange rate and five-year sovereign CDS

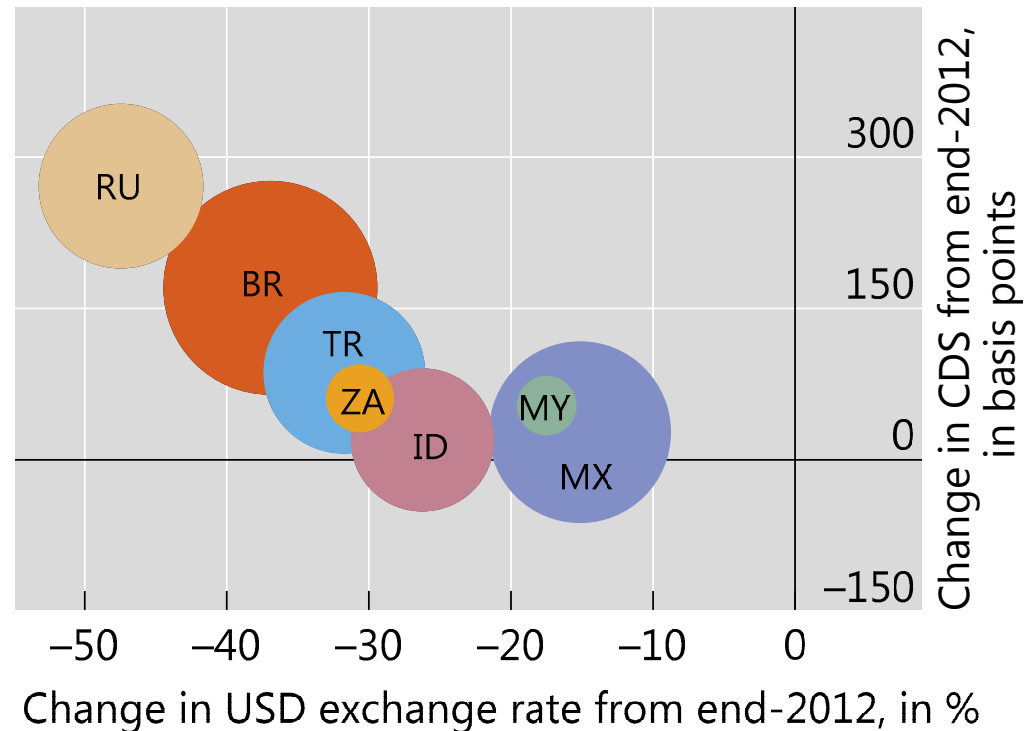


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Illustrating the risk-taking channel Bilateral USD exchange rate and five-year sovereign CDS

**End-
March
2015**



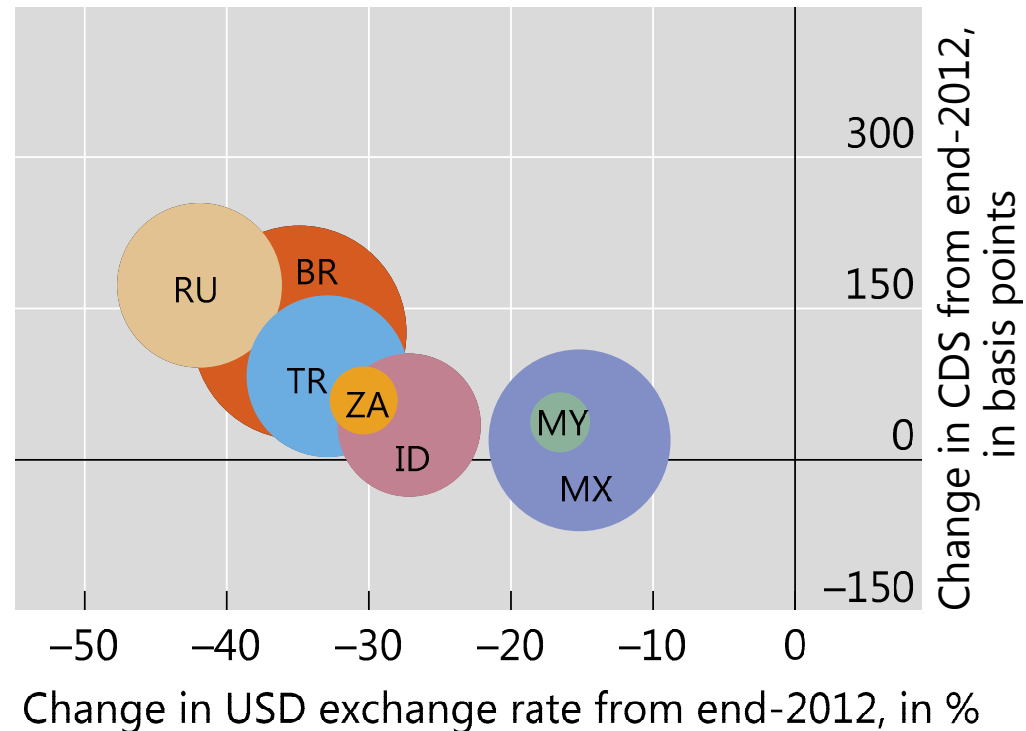
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Illustrating the risk-taking channel

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**End-
May
2015**



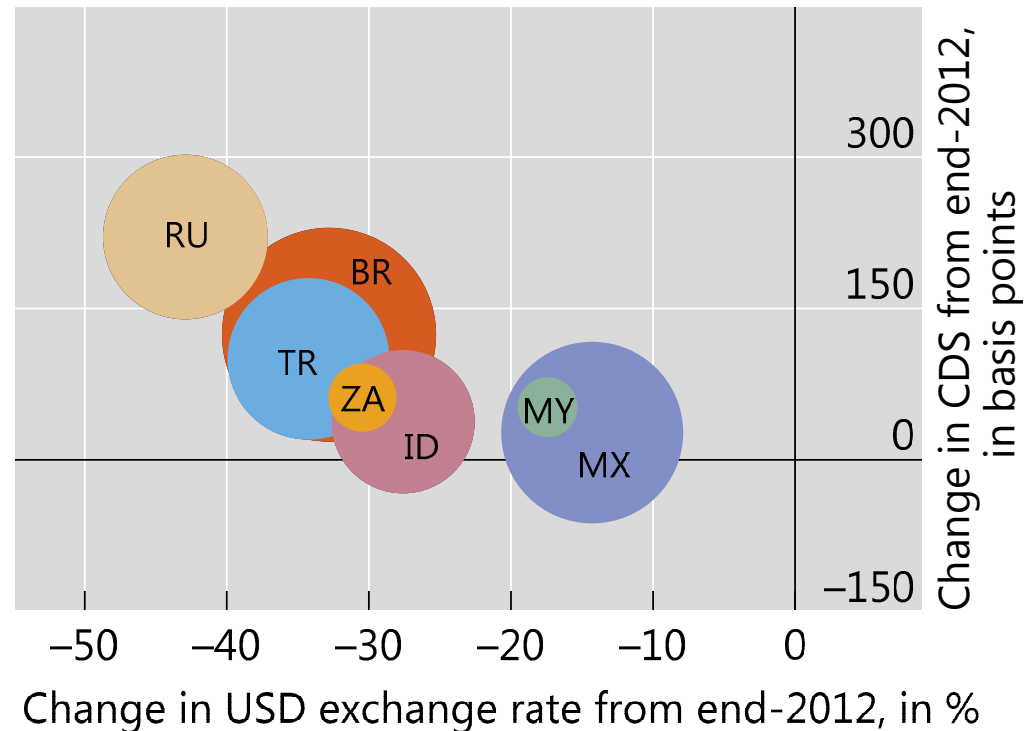
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**Mid-
June
2015**



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Lessons for the international monetary and financial system

- Channels of monetary policy spillovers
 - Portfolio choice of investors with global reach
 - Currencies are global, even if monetary policy is territorial
- “Spillbacks” arise if accumulated vulnerabilities materialise
 - Bidding-up of the international currency by borrowers
 - Overhang of “net short” position in the international currency
- How far can enlightened self-interest internalise the spillover effects?
- What additional steps to go from keeping one’s own house in order to keeping the neighbourhood in order?