

Transforming Shadow Banking into Resilient Market-based Finance

Update on the FSB's monitoring exercise

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1. Overview of the FSB's shadow banking monitoring approach
2. Trends from the FSB's 2015 Global Shadow Banking Monitoring Report
3. Non-bank financial intermediation: Pension funds trends

FSB Report “*Shadow Banking: Strengthening Oversight and Regulation*”* (27 Oct. 2011)

Definition

- Shadow banking system can be broadly defined as **the system of credit intermediation that involves entities and activities (fully or partly) outside the regular banking system.**

Monitoring approach

- Monitoring (and policy responses) guided by **a practical two-step approach:**
 1. Authorities should cast the net wide, looking at **all non-bank credit intermediation.**
 2. For policy purposes, authorities should **narrow the focus to the subset of non-bank credit intermediation** where there are: (i) developments that increase systemic risk (in particular maturity/liquidity transformation, imperfect credit risk transfer and/or leverage); and/or (ii) indications of regulatory arbitrage that is undermining the benefits of financial regulation.

* : Source: http://www.fsb.org/wp-content/uploads/r_111027a.pdf.

Overview – Participating jurisdictions

- **Participation by all FSB jurisdictions:**
 - 24 member jurisdictions and two non-member jurisdictions.
 - Represents about 90% of global financial assets and 80% of global GDP.
 - Approach is adopted by many non-FSB member jurisdictions (including international financial centres).

Advanced economies*		
Australia	Italy	Switzerland
Canada	Japan	United Kingdom
France	Korea	United States
Germany	Netherlands	
Hong Kong	Singapore	
Ireland**	Spain	

Emerging markets	
Argentina	Mexico
Brazil	Russia
Chile**	Turkey
China	Saudi Arabia
India	South Africa
Indonesia	

* : Also included: Euro Area as a whole.

** : Chile and Ireland participated in the FSB shadow banking monitoring as non-FSB members.

Key sectors of financial intermediation

- Central Banks
- Public Financial Institutions
- Banks
- Pensions Funds
- Insurance Companies
- Other Financial Intermediaries (OFIs)
 - Breakdown of OFIs by entity type
- Financial auxiliaries

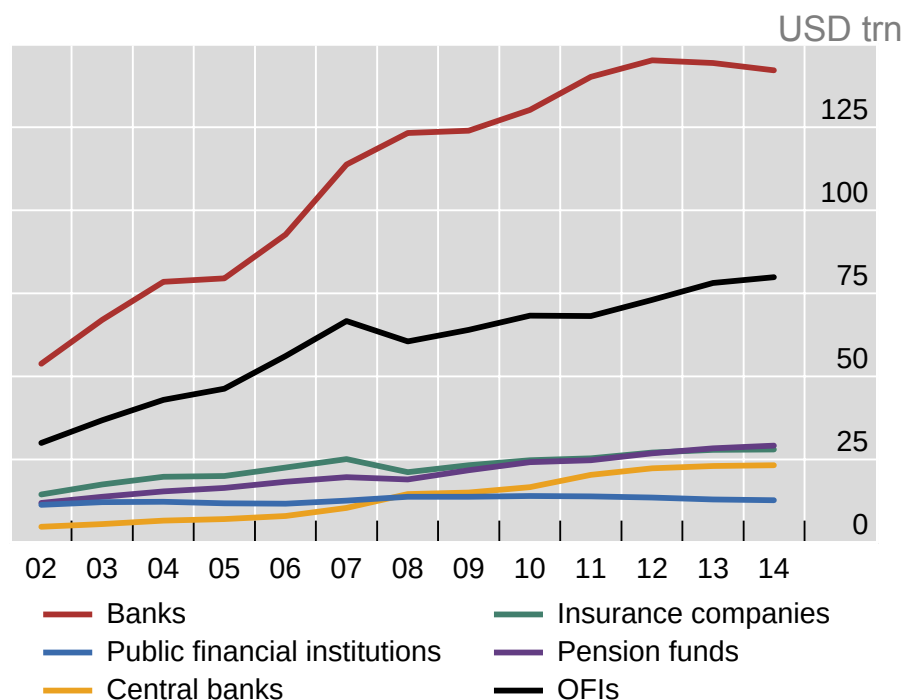
Data collection

- Data source generally **financial assets of sectoral balance sheet** (Flow of Funds) statistics, supplemented by supervisory data and surveys.
- **Prudential consolidation breakdowns** where entities are part of prudentially regulated banking groups.
- **Interconnectedness data** across banks and OFIs in each jurisdiction.
- **Risk metrics** via basic balance sheet data.

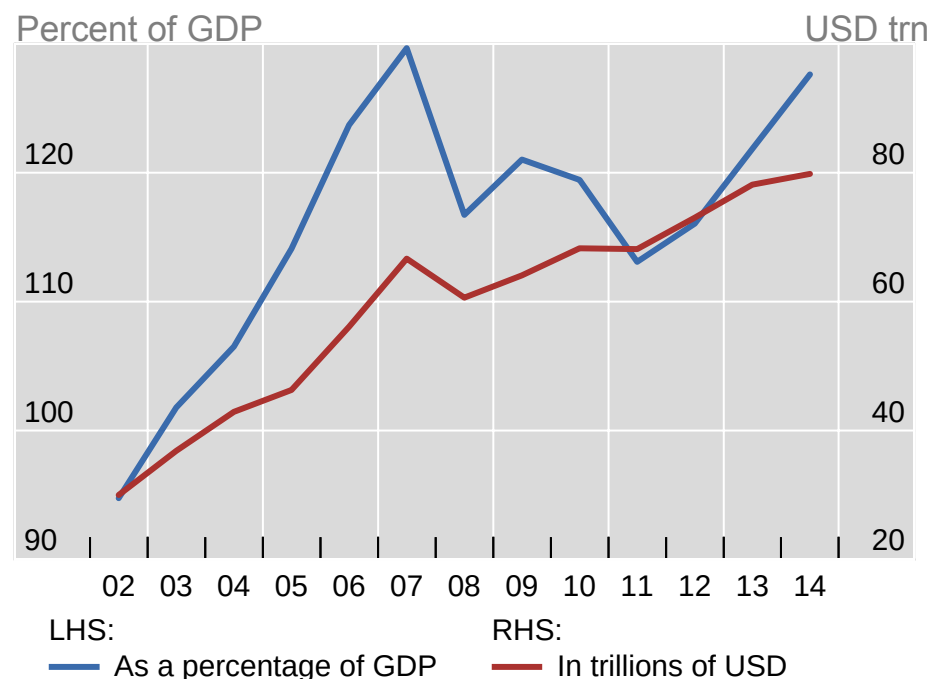
Assessing the global trends and structure of non-bank financial intermediation (1)

- Other Financial Intermediaries (OFIs), where various shadow banking activities tend to be found, grew briskly by \$1.6 trillion to \$80 trillion in 2014.
- Pension funds grew to nearly \$30 trillion in 2014.
- OFI assets are becoming larger as a share of GDP, reaching 128% of GDP in 2014.

Assets of financial intermediaries



Assets of OFIs



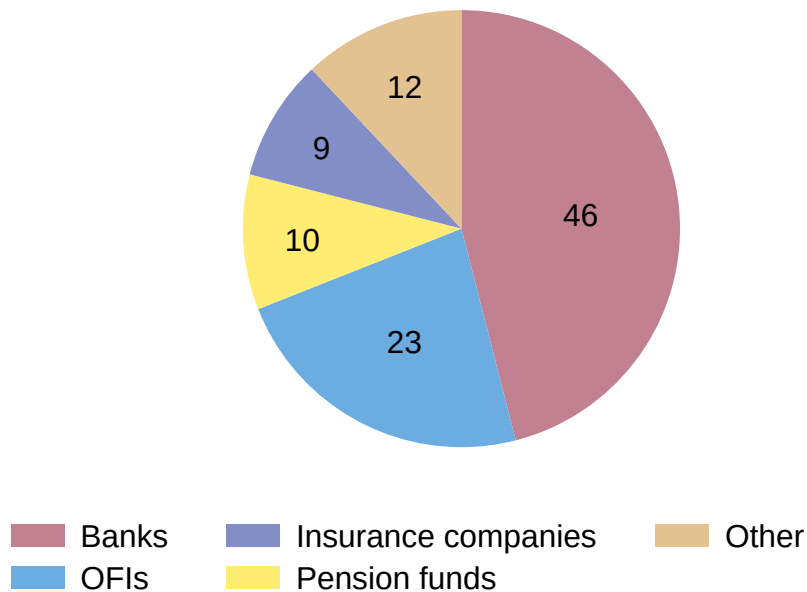
Notes: Sample = 20 jurisdictions and the euro area; Banks = deposit-taking institutions; OFIs = Other Financial Intermediaries.
Source: <http://www.fsb.org/wp-content/uploads/global-shadow-banking-monitoring-report-2015.pdf>.

Assessing the global trends and structure of non-bank financial intermediation (2)

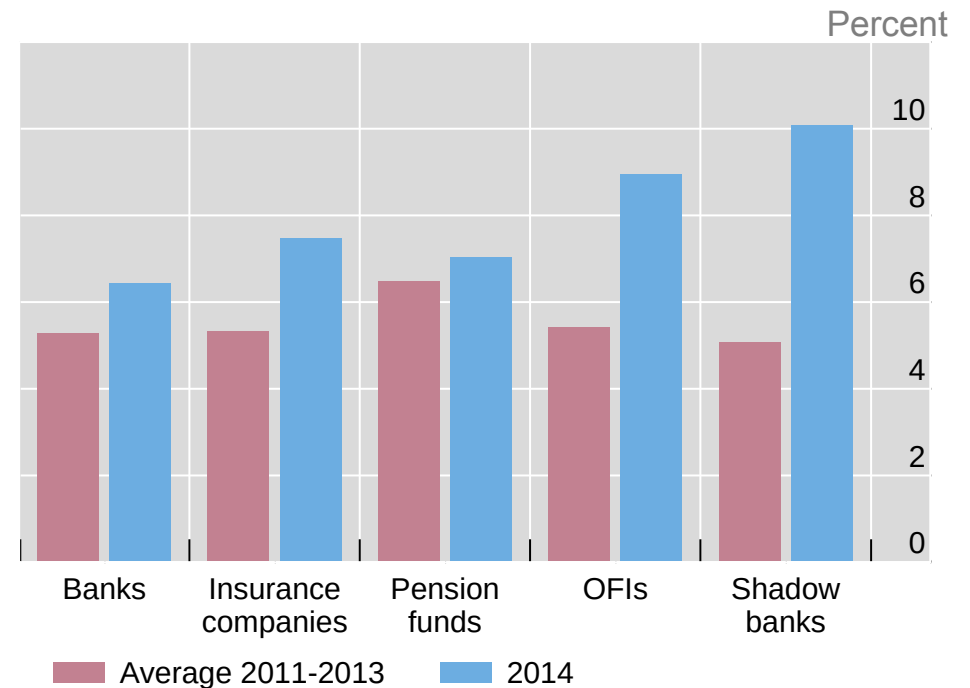
- Globally, banks make up the largest share of financial system assets (almost half), followed by OFIs (23%), while pensions are 10% of the financial sector.
- Shadow banking (largely a subset of OFI) experienced the highest growth rate in 2014.

Financial sector decomposition

At end-2014



Annual growth of financial sectors*



Notes: Sample = 26 jurisdictions; Banks = deposit-taking institutions; OFIs = Other Financial Intermediaries; Shadow Banking = economic functions-based measure of shadow banking Other = central bank + public financial institutions + financial auxiliaries.

*: Growth rate controlling for exchange rate effects.

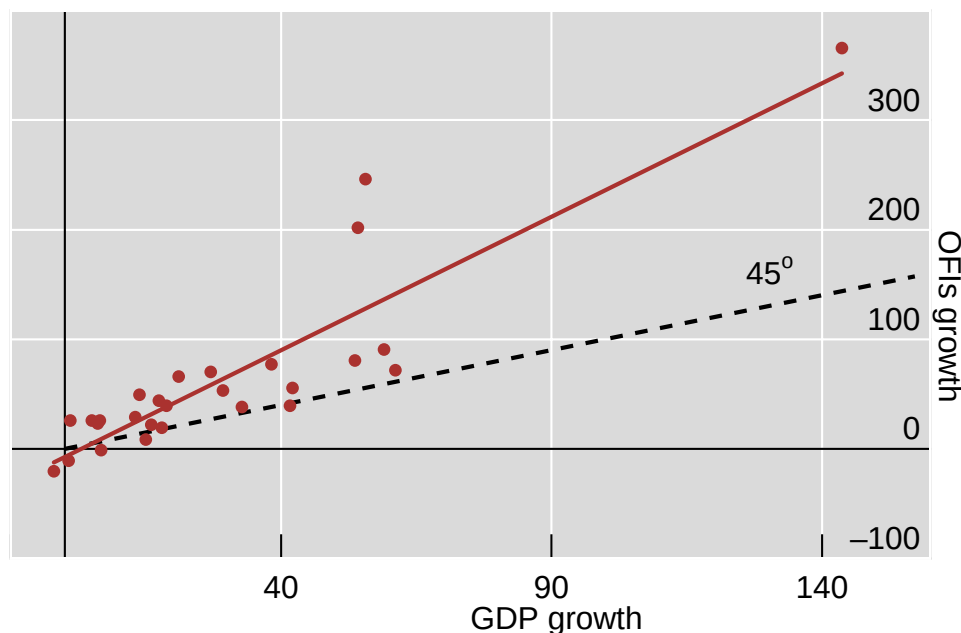
Source: <http://www.fsb.org/wp-content/uploads/global-shadow-banking-monitoring-report-2015.pdf>.

EMEs' strong OFI growth correlated with higher GDP growth

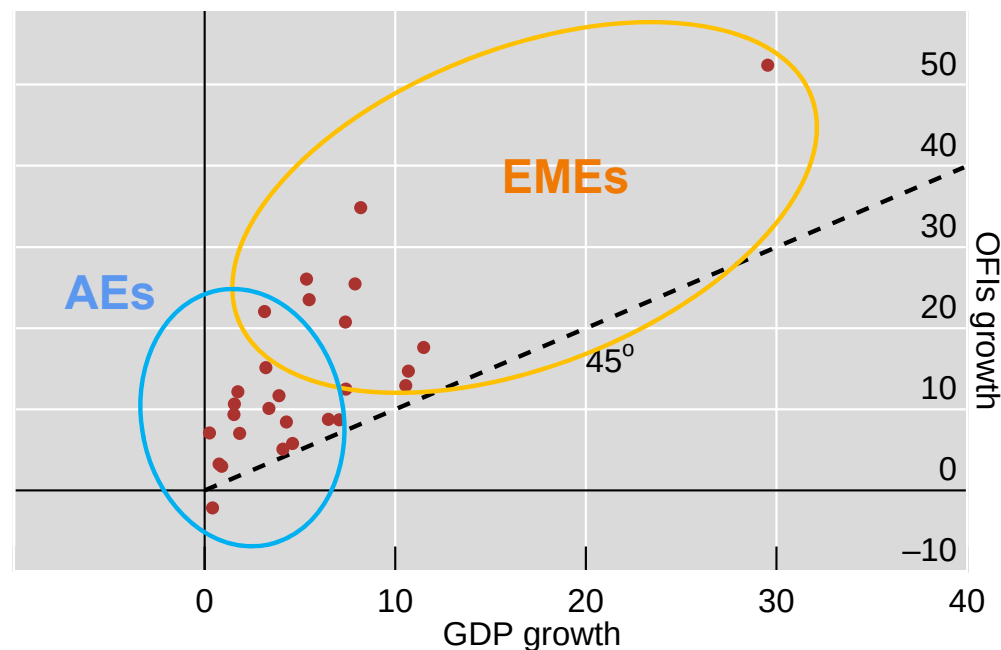
- OFI growth is generally outpacing GDP growth, though they appear fairly correlated over time.
- EMEs are experiencing higher GDP and OFI growth.

The relationship of GDP growth and OFI growth

Compound annual growth rate 2011-2014



2014 annual growth rate



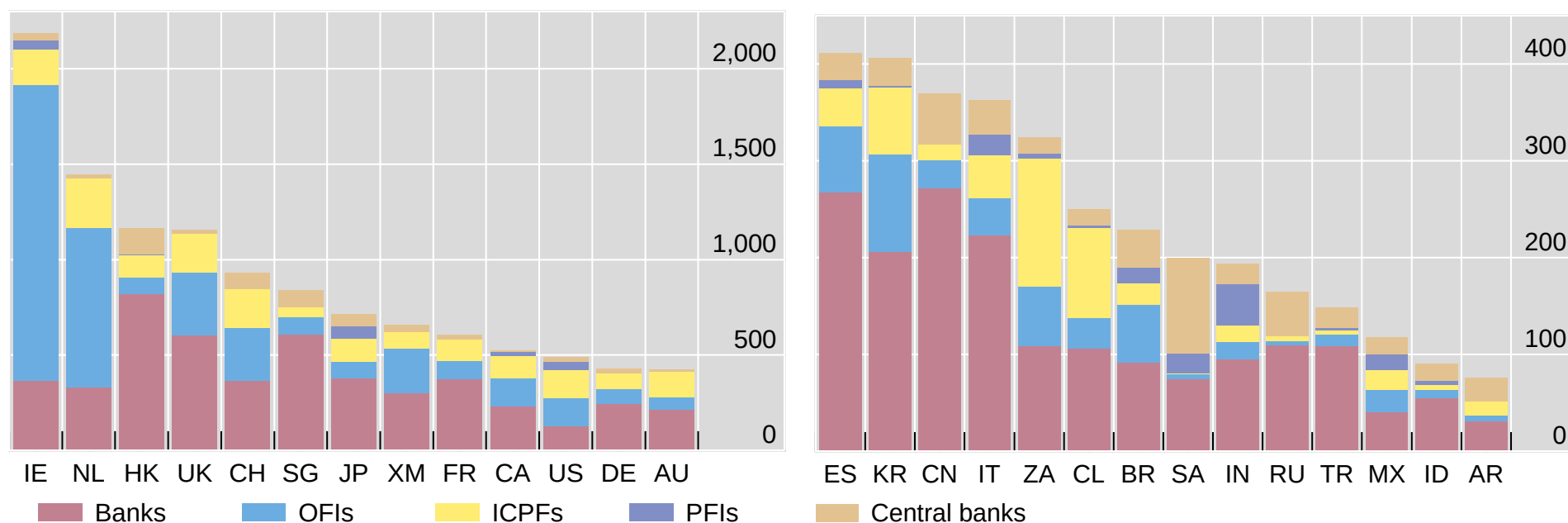
Notes: Sample = 26 jurisdictions and the euro area; growth rates are exchange rate adjusted. OFIs = Other Financial Intermediaries.

Source: <http://www.fsb.org/wp-content/uploads/global-shadow-banking-monitoring-report-2015.pdf>.

Composition of financial systems by jurisdiction

- Advanced economies tend to have larger OFI sectors.
- By contrast, the OFI sector in EMEs is generally smaller relative to GDP.

Composition of financial systems (% of GDP at end-2014)



Notes: Banks = deposit-taking institutions; ICPFs = insurance companies and pension funds; PFIs = public financial institutions; OFIs = Other Financial Intermediaries.

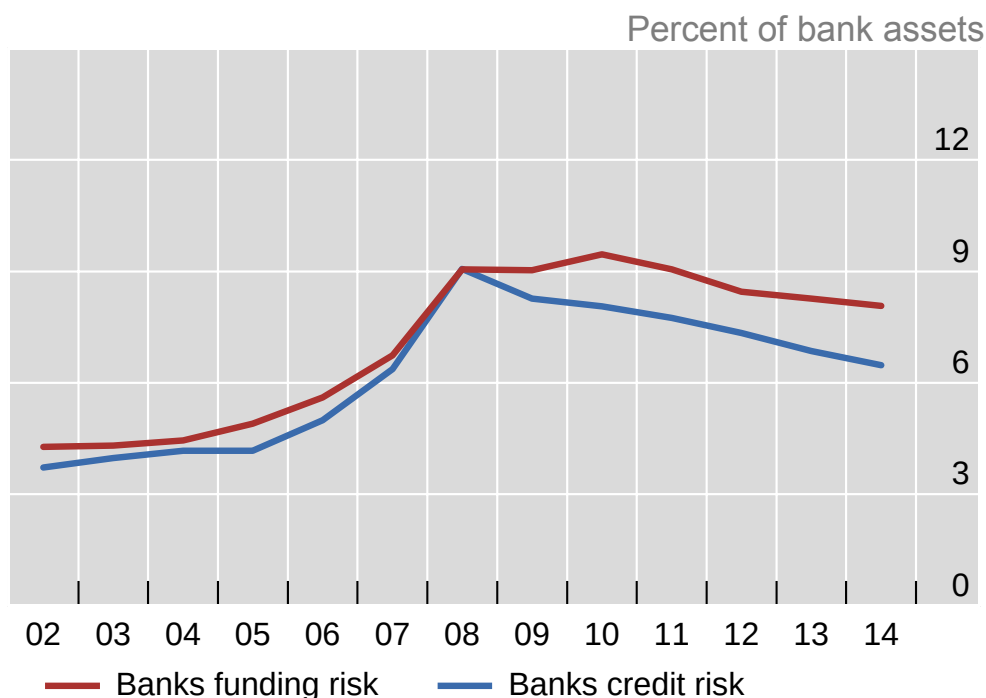
Source: <http://www.fsb.org/wp-content/uploads/global-shadow-banking-monitoring-report-2015.pdf>.

Interconnectedness has generally declined

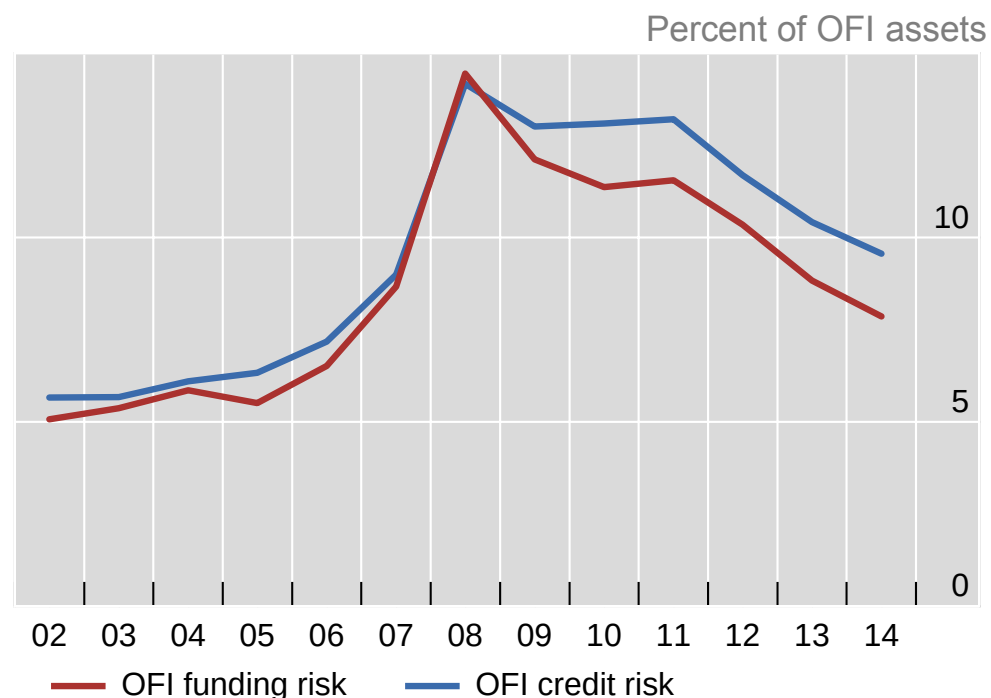
- Interconnectedness between banks and OFIs (funding/credit) continues to decline from pre-crisis peaks and does not appear concerning *on average*.
- However, exposures range widely across jurisdictions.

Banks' assets and liabilities to OFIs

Interconnectedness risks for banks



Interconnectedness risks for OFIs



Notes: Average for 20 jurisdictions and the euro area.

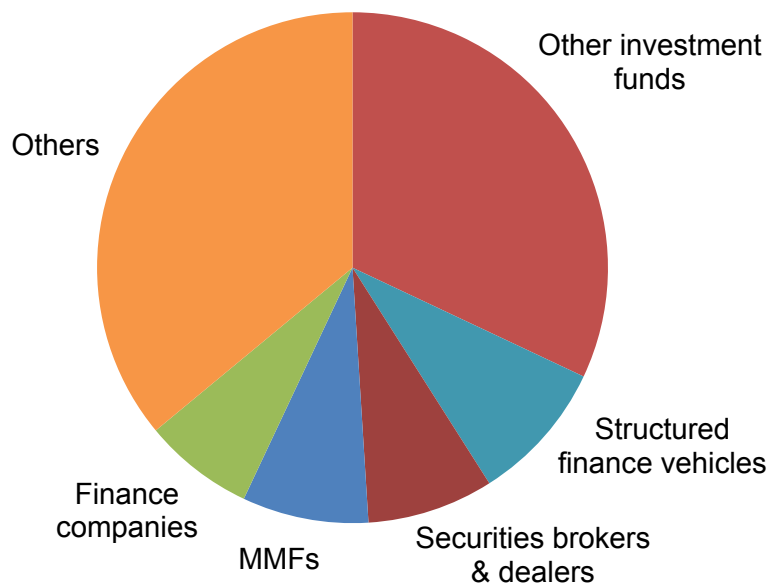
Source: <http://www.fsb.org/wp-content/uploads/global-shadow-banking-monitoring-report-2015.pdf>.

A more granular view of the structure of non-bank financial intermediation

- The granularity of the OFI sector has improved since the first monitoring exercise in 2011.

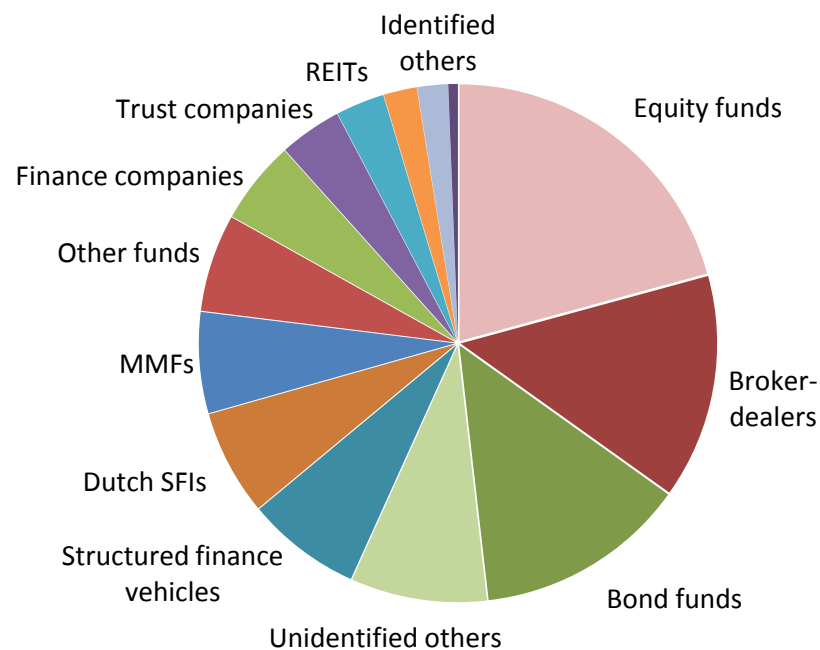
2011 Monitoring Exercise

(data as of end-2010)



2015 Monitoring Exercise

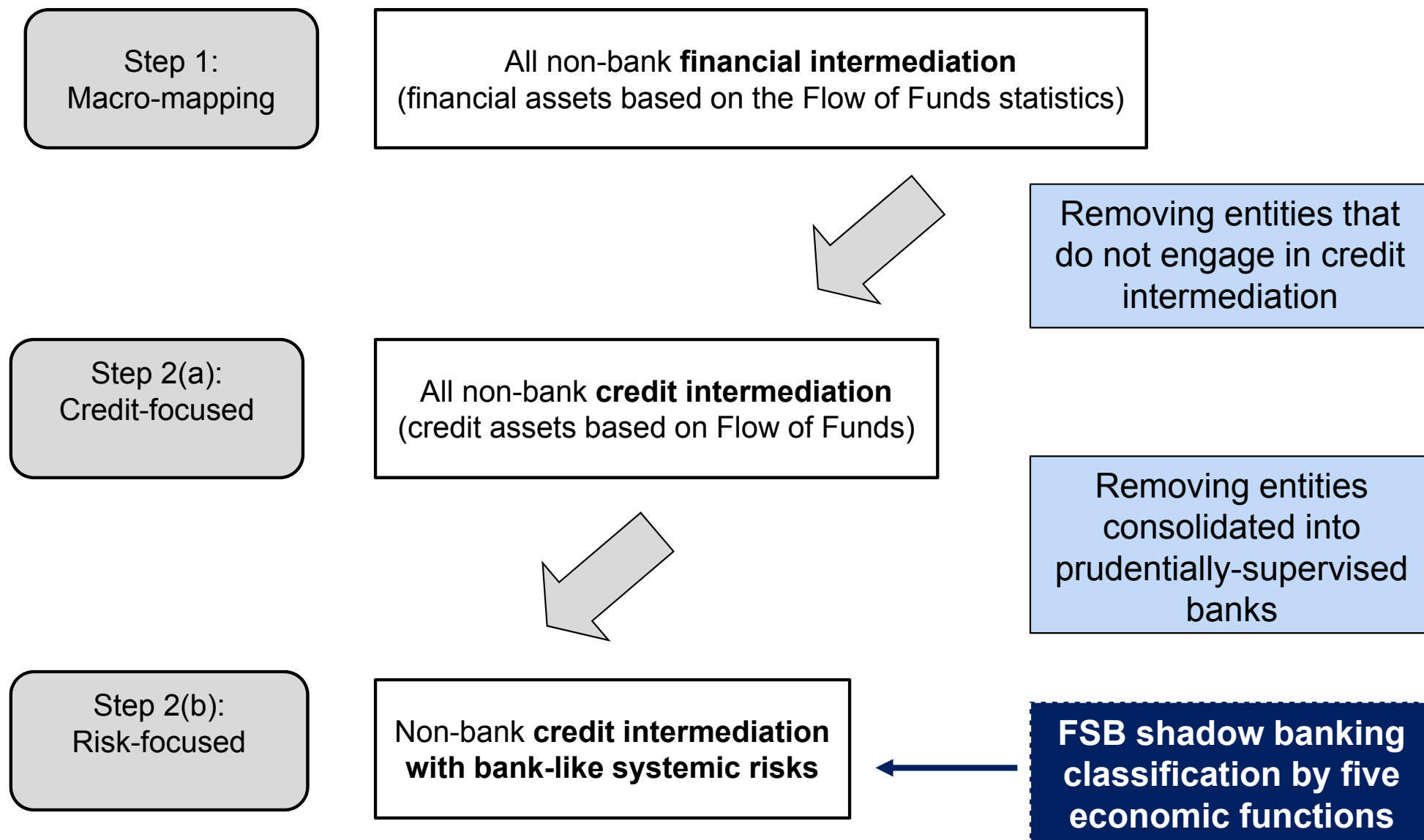
(data as of end-2014)



Notes: SFIs = Special Financial Institutions; REITs = Real Estate Trusts and Funds.

Sources: http://www.fsb.org/wpcontent/uploads/r_111027a.pdf and <http://www.fsb.org/wp-content/uploads/global-shadow-banking-monitoring-report-2015.pdf>.

Narrowing down to shadow banking



Results of the 2015 narrowing down process

MUNFI: \$124.1 trn

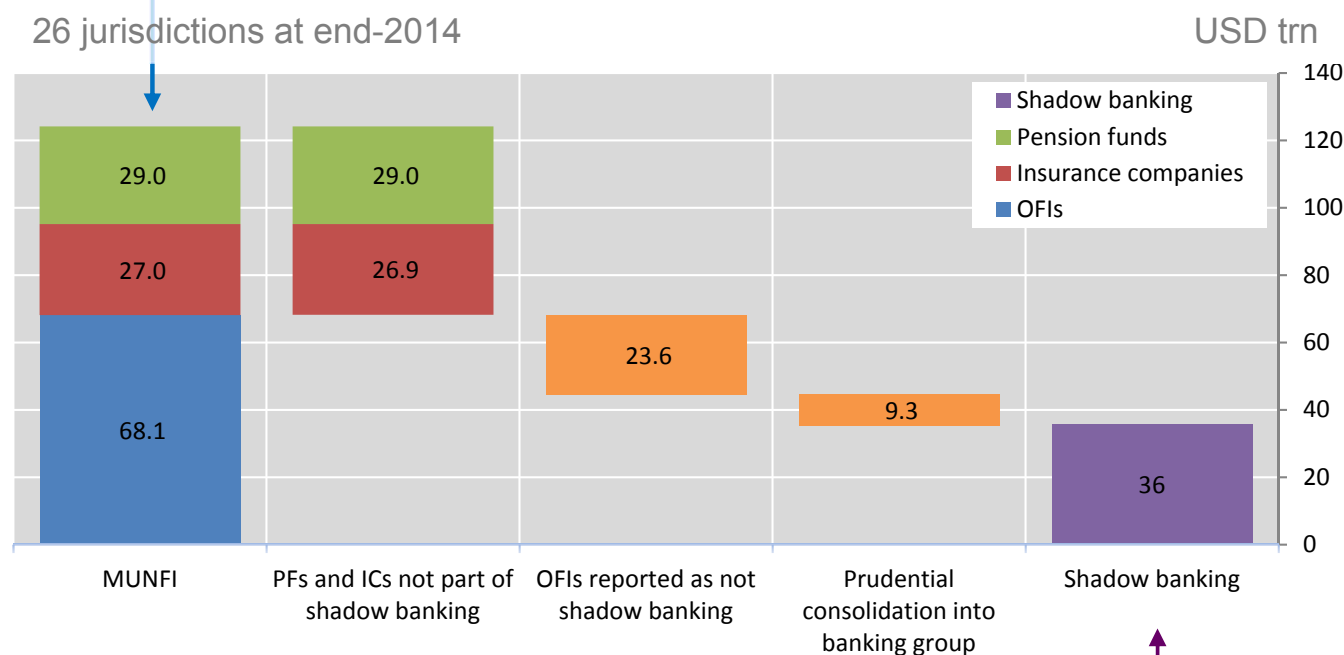
other financial intermediaries (OFIs), insurance companies and pension funds.

- ✓ **Removed \$55.9 trn** insurance companies and pension funds not considered shadow banking.
- ✓ **Removed \$23.6 trn** OFIs not considered shadow banking.
- ✓ **Removed \$9.3 trn** entities prudentially consolidated into banking groups.

➤ **Identified \$36 trn of shadow banking.**

Narrowing down shadow banking

26 jurisdictions at end-2014



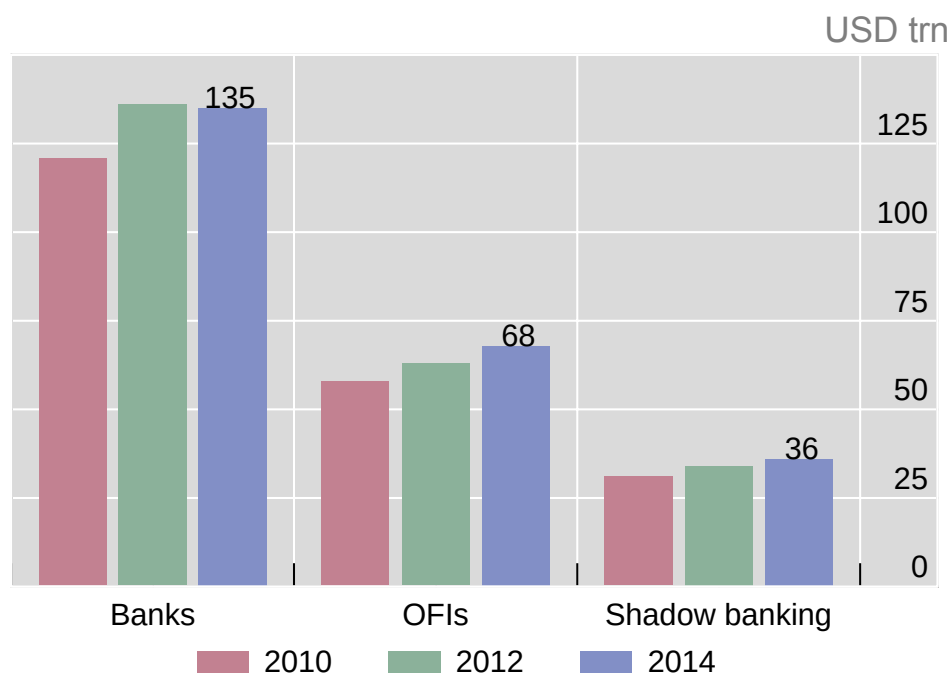
Notes: MUNFI = Monitoring Universe of Non-bank Financial Intermediation (insurance companies (ICs) + pension funds (PFs) + other financial intermediaries (OFIs)).

Source: <http://www.fsb.org/wp-content/uploads/global-shadow-banking-monitoring-report-2015.pdf>.

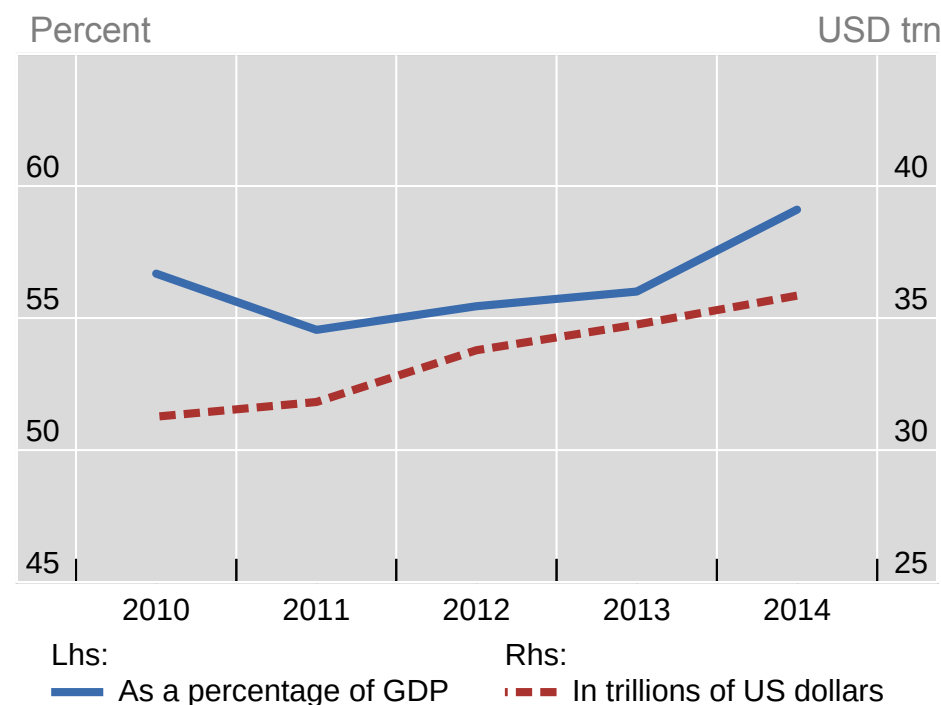
Size of global shadow banking

- Globally, identified shadow banking has risen to \$36 trillion at end-2014, or about 60% of GDP.

Assets of financial intermediaries



Shadow banking and GDP



Notes: Sample = 26 jurisdictions; Banks = deposit-taking institutions; OFIs = Other Financial Intermediaries; Shadow Banking = measure of shadow banking based on economic functions.

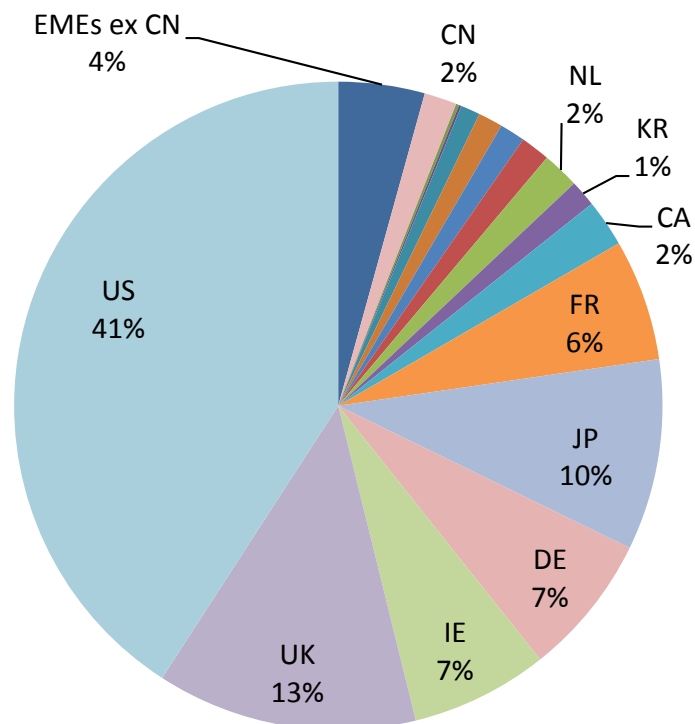
Source: <http://www.fsb.org/wp-content/uploads/global-shadow-banking-monitoring-report-2015.pdf>.

Advanced economies dominate global shadow banking in terms of size

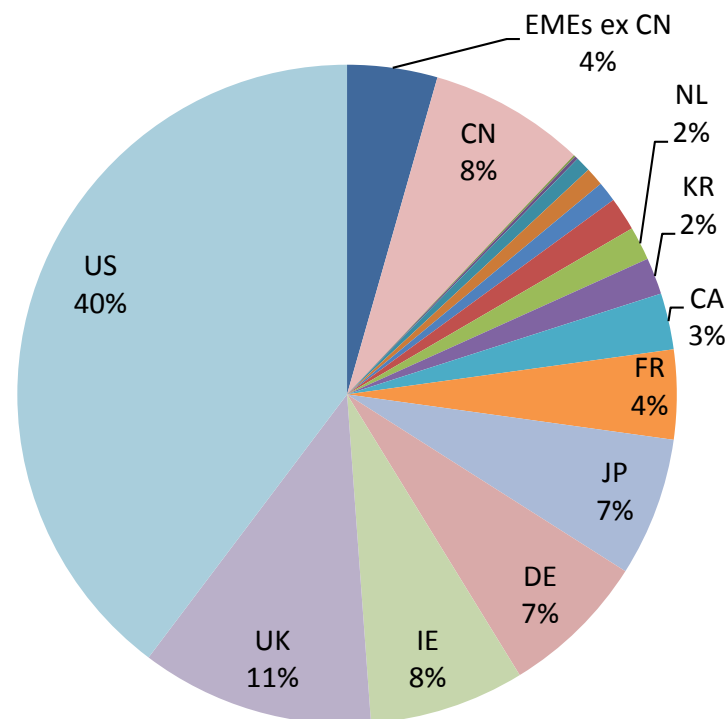
- Seven advanced economy jurisdictions and one Asian EME jurisdiction contribute to nearly 90% of global shadow banking.

Share of shadow banking assets

At end-2010



At end-2014



Note: Sample = 26 jurisdictions.

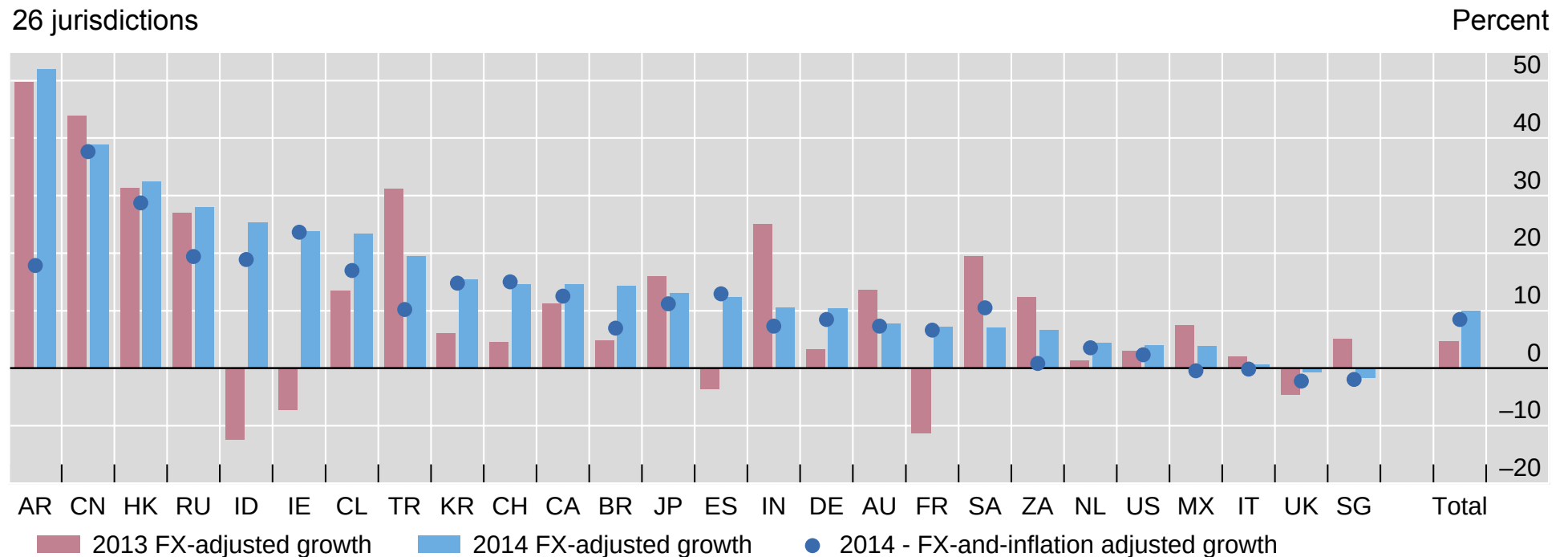
Source: <http://www.fsb.org/wp-content/uploads/global-shadow-banking-monitoring-report-2015.pdf>.

However, EMEs generally experience higher growth in shadow banking

- Nearly all of the ten jurisdictions with the fastest shadow banking growth rates are EMEs.
- Many are experiencing higher economic growth and financial deepening.

Annual growth of shadow banking

26 jurisdictions



Notes: Bars show year-over-year growth rates, controlling for exchange rate effects. Dots show year-over-year growth rates, controlling for exchange rate and inflation effects.

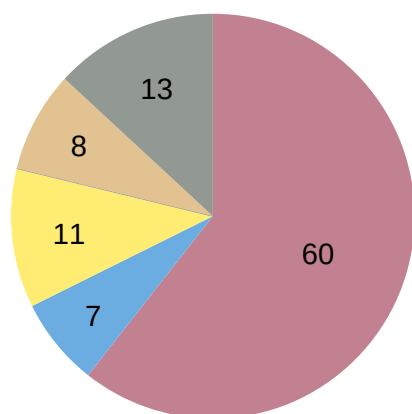
Source: <http://www.fsb.org/wp-content/uploads/global-shadow-banking-monitoring-report-2015.pdf>.

Classification by economic functions shows composition of growth

- Globally, collective investment vehicles with features that make them susceptible to runs (**EF1**) **made up by far the largest component of shadow banking.**
- EF1 also experienced the highest growth rate**, both in 2014 and on average from 2011-2013.

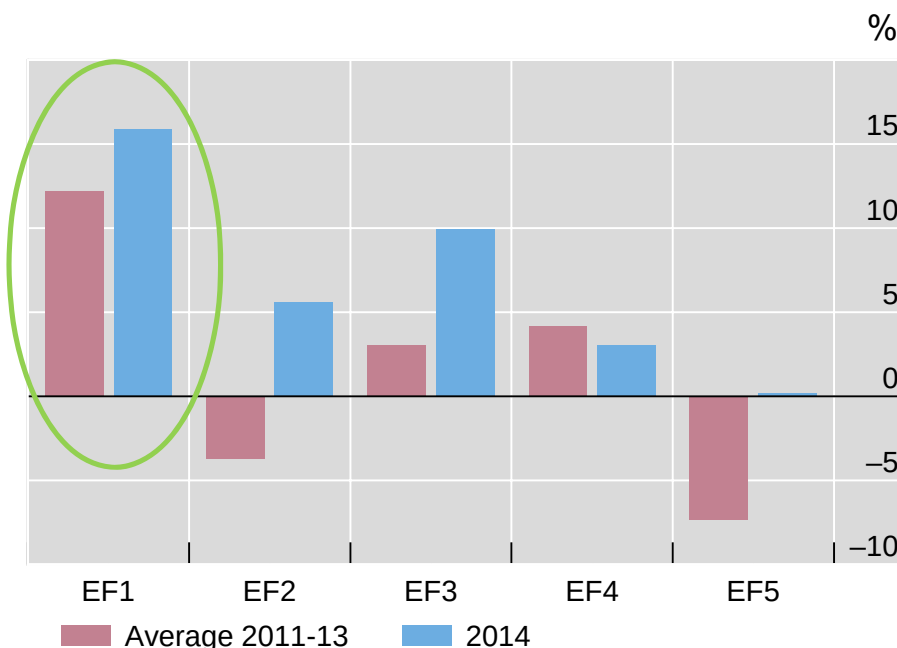
Relative size of economic functions

26 jurisdictions at end-2014



EF1 EF2 EF3
 EF4 EF5 SB not classified into EFs

Annual growth of economic functions*



Notes: EF1 = Management of collective investment vehicles with features that make them susceptible to runs; EF2 = Loan provision that is dependent on short-term funding; EF3 = Intermediation of market activities that is dependent on short-term funding or on secured funding of client assets; EF4 Facilitation of credit creation; EF5 = Securitisation-based credit intermediation and funding of financial entities; SB not classified into EFs = Residual OFI with some shadow banking risks but not classified into any of the five economic functions.

*: Controlling for exchange rate effects.

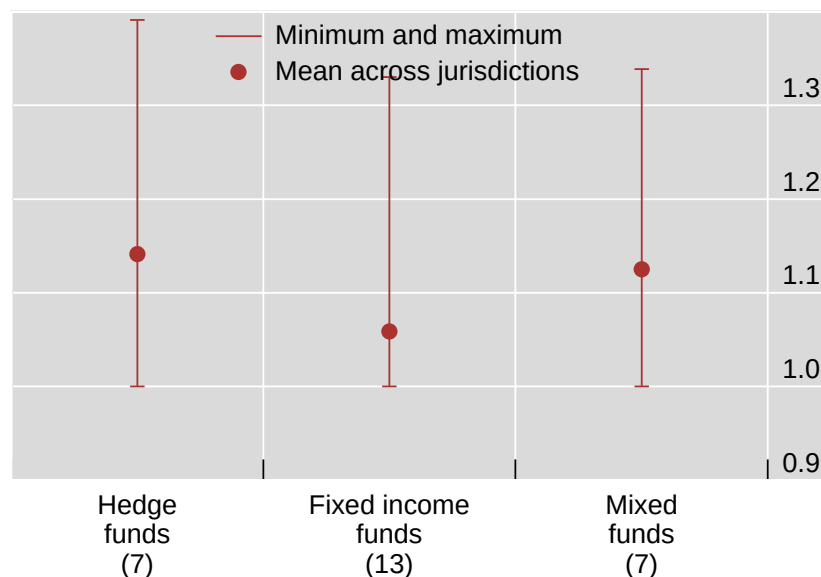
Source: <http://www.fsb.org/wp-content/uploads/global-shadow-banking-monitoring-report-2015.pdf>.

Shadow banking risk metrics

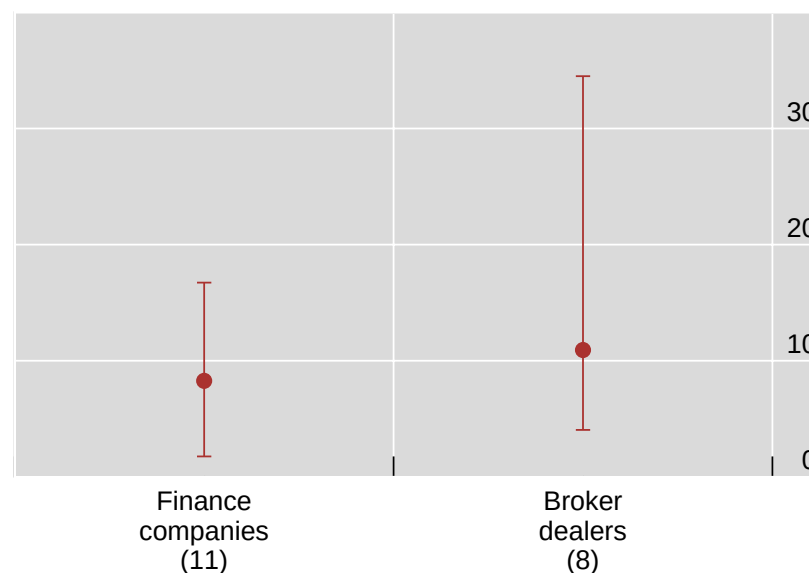
- Balance sheet data were collected to calculate shadow banking risk metrics for entity types classified into the 5 economic functions (EFs).
- Where available, risk metrics show **wide ranges of risk levels across entities and jurisdictions**.
- Lack of data continues to hamper a more thorough risk assessment.

Leverage

Total financial assets / NAV



Total financial assets / equity



Notes: Sample size in parenthesis, indicating the number of jurisdictions submitting the relevant data. The underlying sample in terms of non-bank financial entities represents data collected by authorities on individual entities within each jurisdiction, which is a much larger sample set.

Source: <http://www.fsb.org/wp-content/uploads/global-shadow-banking-monitoring-report-2015.pdf>.

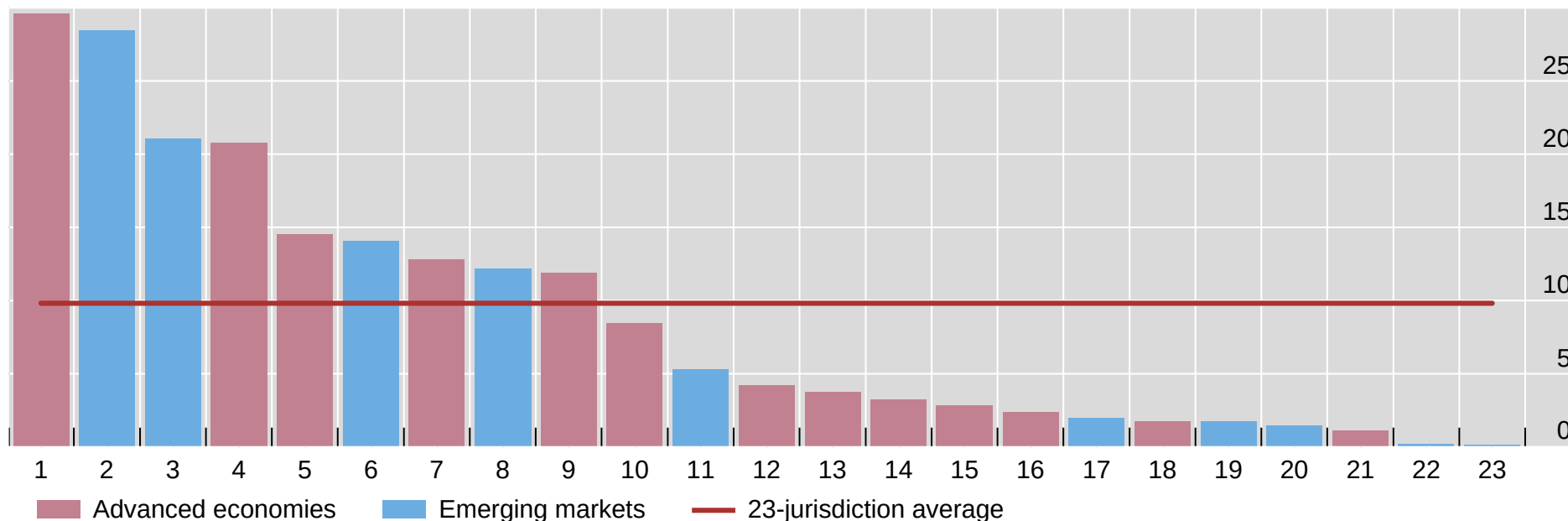
Pension funds (1)

- The size of jurisdictions' pension funds sector ranges from zero to nearly 30% of total financial assets.
- There appears to be little distinction between the pension funds sector in advanced and emerging markets economies.

Size of pension fund assets

23 jurisdictions at end-2014

Percent of total national financial system assets

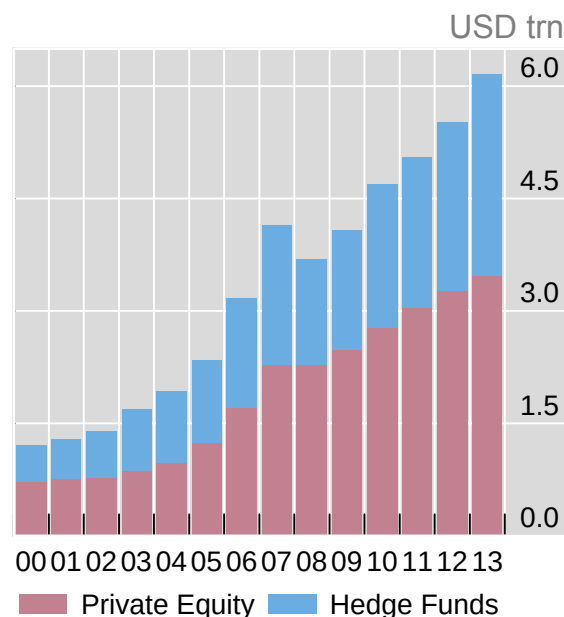


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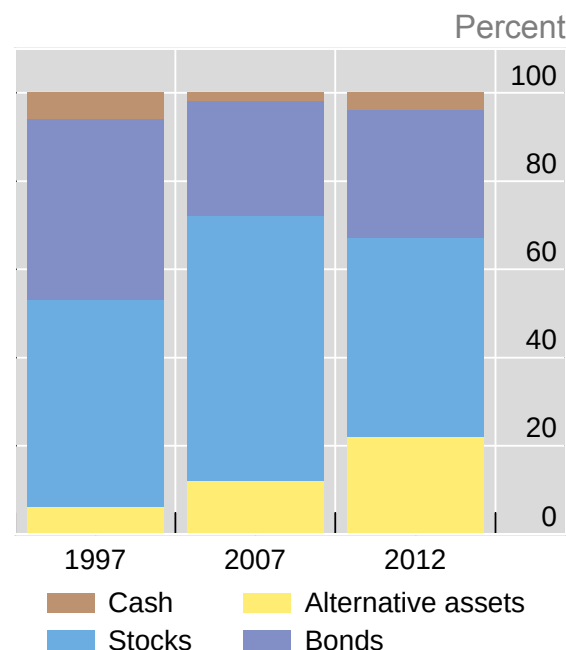
Pension funds (2)

- The growth of alternative investments including private equity and hedge funds is occurring amid a growth in pension fund holdings of alternative assets.
- The extent to which diversification into alternatives will persist in an environment in which underlying credit positions deteriorate and become highly correlated may be an issue.

Private equity and hedge funds' assets under management



Alternative assets as share of international pensions



Sources: Preqin, Hedge Fund Research, Company reports, Towers Watson Global Pension Assets Study 2014, Pension & Investments.

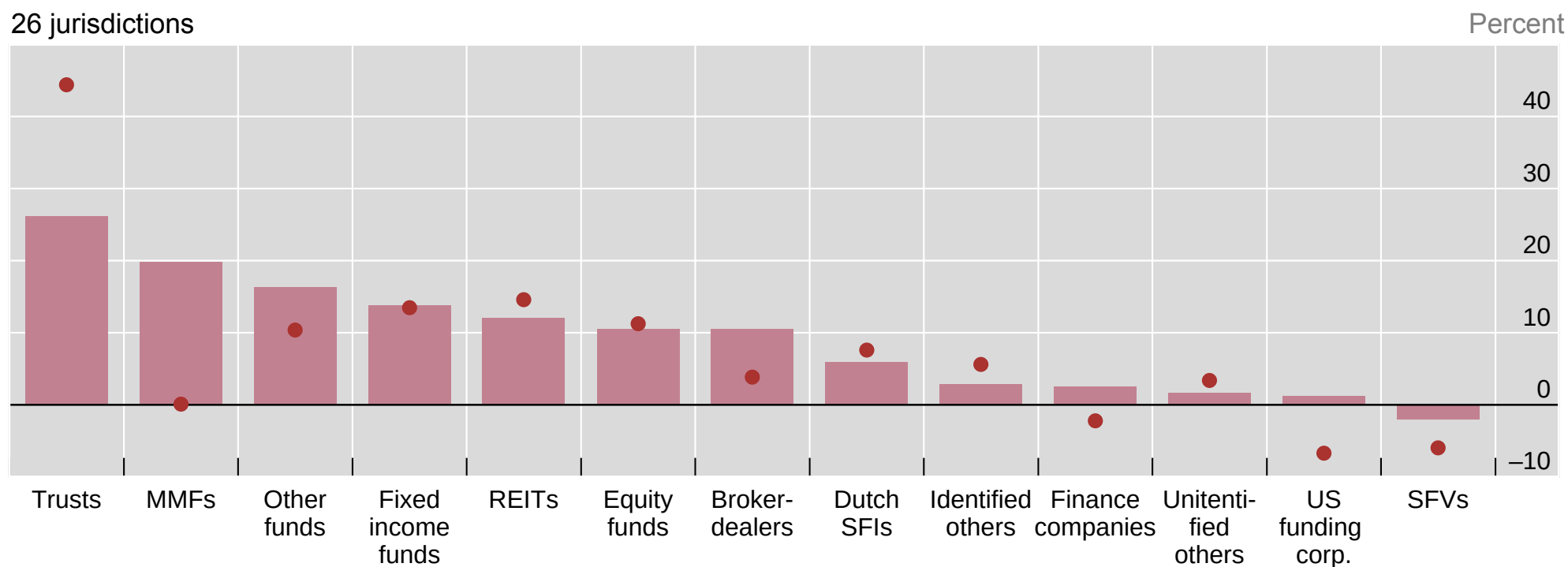
Annex

Annual growth of OFI subsectors

- Trust companies showed the fastest annual growth of 26% in 2014, followed by money market funds, whose growth rate rebounded to 20%.

Annual growth of OFIs' subsectors

26 jurisdictions



● Average annual growth, 2011-13 ■ 2014

Notes: Trusts – trust companies; MMFs = money market funds; REITs = real estate investment trusts and funds; Dutch SFIs = Dutch special financing institutions; SFVs = structured finance vehicles.

Source: <http://www.fsb.org/wp-content/uploads/global-shadow-banking-monitoring-report-2015.pdf>.

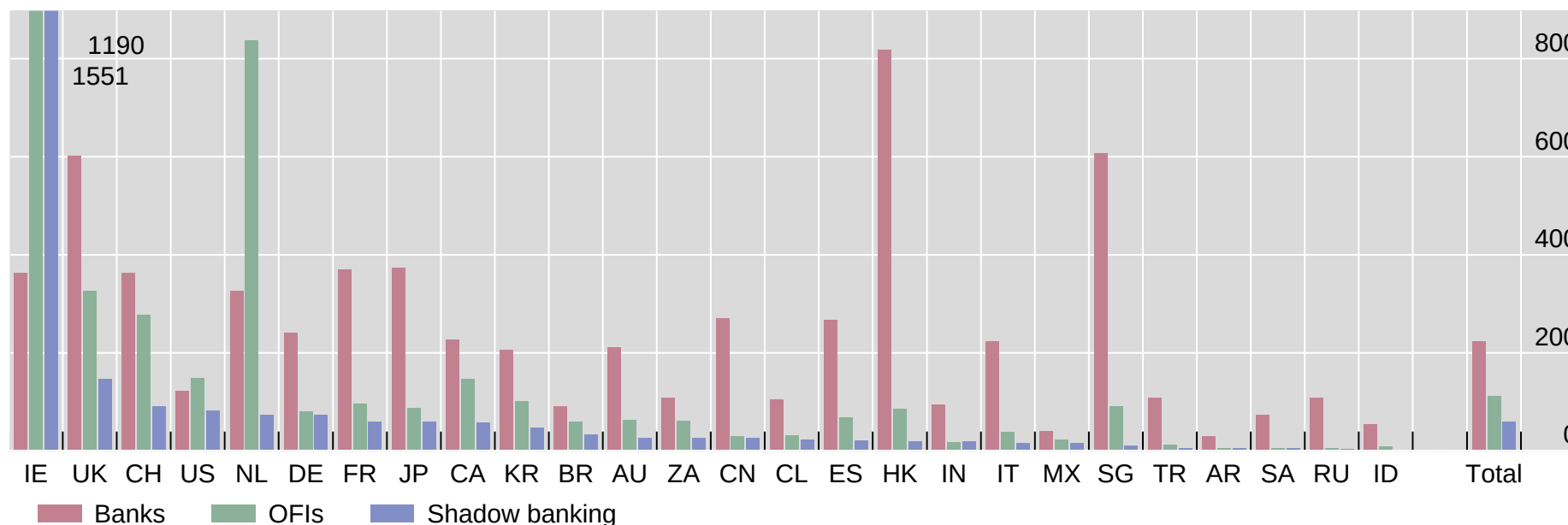
Advanced economies dominate global shadow banking as a percentage of GDP

- Advanced economy member jurisdictions account for all but one of the largest ten shadow banking systems relative to GDP.

Shadow banking, OFIs and banks as a percent of GDP

26 jurisdictions at end-2014

Percent



Notes: Banks = broader category of 'deposit-taking institutions'; OFIs = Other Financial Intermediaries; Shadow Banking = economic function-based measure of shadow banking.

Source: <http://www.fsb.org/wp-content/uploads/global-shadow-banking-monitoring-report-2015.pdf>.