XVIII European Congress

Brave New World for Finance?

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„The financial sector is, in many ways, the brain of a modern economy. When it functions well, it allocates resources and risk effectively and thereby boosts economic growth. (…) It works for all of us. Of course, when it works poorly, as has done recently, it can do enormous damage while benefitting a very few.“

R. G. Rajan (Fault Lines, 2010)

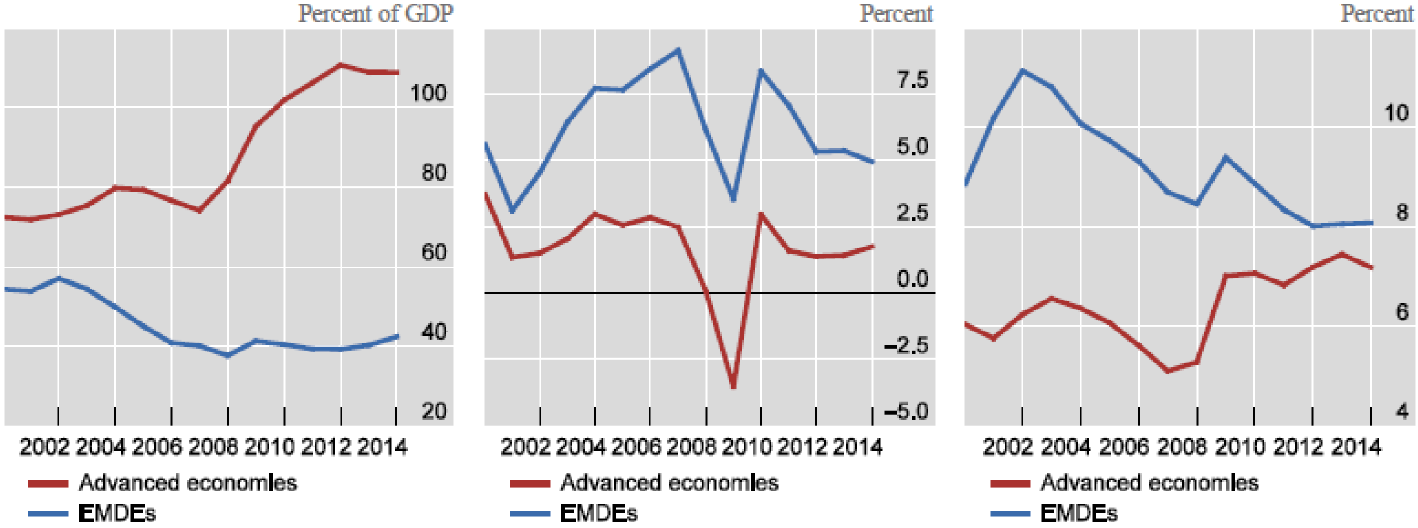
1. Legacies of the systemic financial crisis
2. Towards a more resilient financial system?
   (Regulation; Innovation)
3. The low-rate world
4. New macro-prudential policy tools

5. Conclusions

1. LEGACIES OF SYSTEMIC FINANCIAL CRISES

Costs of Financial Crisis (2008) in Western Economies

Public debt has increased in the countries hit by the crisis | The crisis caused a large output loss | Unemployment is well above pre-crisis levels in advanced economies



Left panel: Public debt to gross domestic product (GDP) ratio for FSB jurisdictions, weighted by nominal GDP. Middle panel: Real GDP growth rates for FSB jurisdictions, weighted by nominal GDP. Right panel: Simple average of unemployment rates for FSB jurisdictions. Source: IMF, World Economic Outlook Database, April 2015.

Source: BIS 2015

Financial Sector Support

Selected Advanced Economies

Percent of 2014 GDP

	Impact on Gross Public Debt and Other Support	Recovery to Date	Impact on Gross Public Debt and Other Support after Recovery
Austria[1]	. . .	. . .	6.2
Belgium	7.2	3.3	4.0
Cyprus	20.0	0.0	20.0
Germany[2]	12.3	4.4	7.9
Greece[3]	34.9	8.1	26.7
Ireland[4]	36.3	6.5	29.9
Netherlands	17.3	13.7	3.7
Slovenia[5]	12.0	1.7	12.0
Spain[6]	7.4	3.2	4.3
United Kingdom	11.6	4.7	6.9
United States	4.3	4.8	–0.5
Average	7.4	5.0	2.5
US$ billions	2,114	1,391	723

Sources: National authorities; and IMF staff estimates.

Note: Table shows fiscal outlays of the central government, except in the cases of Belgium and Germany, for which financial sector support by subnational governments is also included. Data are cumulative since the beginning of the global financial crisis in 2007—latest available data up to end-2014. Data do not include forthcoming support.

1 As published by Statistik Austria on March 30, 2015 (end-2014 liabilities of HETA and KA Finanz).

2 Support includes here the estimated impact on public debt of liabilities transferred to newly created government sector entities (about 11 percent of GDP), taking into account operations from the central and subnational governments. As public debt is a gross concept, this neglects the simultaneous increase in government assets. With this effect taken into account, the net debt effect up to 2012 amounted to just 1.6 percent of GDP, which was recorded as a deficit.

3 Support includes the disbursements from the Hellenic Financial Stability Fund (HFSF), but excludes the undisbursed amount of the financial sector envelope.

4 The impact of the direct support measures is mainly on net debt, as significant recapitalization expenses were met from public assets. Direct support does not include asset purchases by the National Asset Management Agency, as these are not financed directly through the general government but with government-guaranteed bonds.

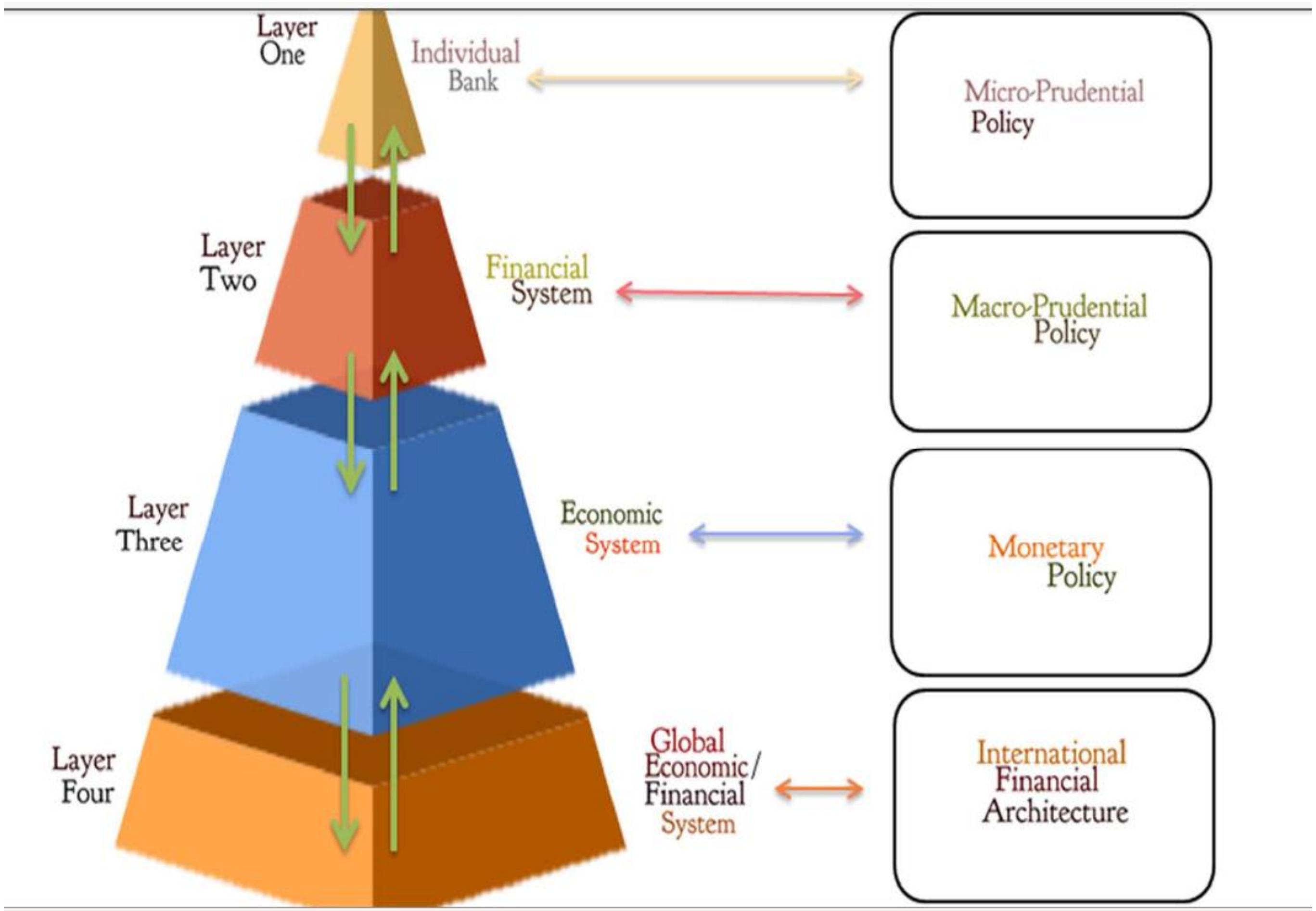
5 Support provided by the general government.

6 Direct support includes total capital injections by the Fondo de Reestructuración Ordenada Bancaria and liquidity support.

Source: IMF

2. FINANCIAL REGULATION
REGULATION ARBITRAGE
FINANCIAL INNOVATION

The „Macro-financial System of Systems“



Quelle: Haldane, A.: On microscopes and telescopes; Bank of England 2015

G20 Action Plan on Financial Markets

(Washington, November 15, 2008)

- Strengthening **Transparency** and **Accountability**
- Enhancing Sound **Regulation**

„…ensure that all financial markets, products and participants are regulated or subject to oversight, as appropriate to their circumstances.“

- Prudential **Oversight**
- **Risk Management**
- Promoting **Integrity** in Financial Markets
- Reinforcing **International Cooperation**
- Reforming **Internatioanl Financial Institutions**

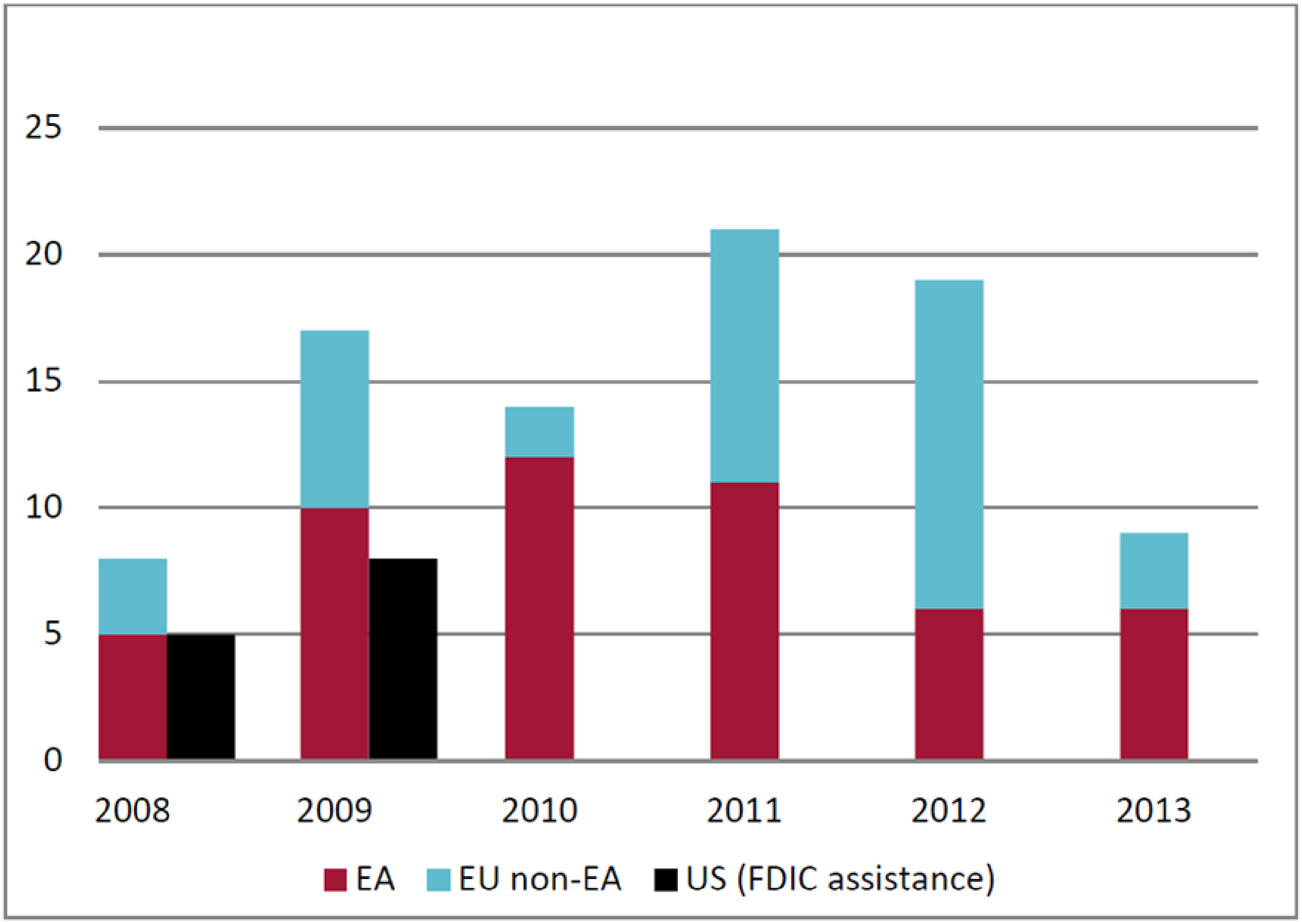
G20-Declaration Pittsburgh 2009

- 16. .... Where **reckless behavior** and a **lack of responsibility** led to crisis, we will **not allow a return to banking as usual**.

- 17. **....**to raise **capital standards**,
    - to implement strong international **compensation standards** aimed at ending practices that lead to **excessive risk-taking**,
    - to improve the **over-the-counter derivatives** market and
    - to create more powerful tools to **hold large global firms to account for the risks** they take.
    - Standards for **large global financial firms** should be commensurate with the cost of their failure.
    - For all these reforms, we have set for ourselves **strict and precise timetables.**

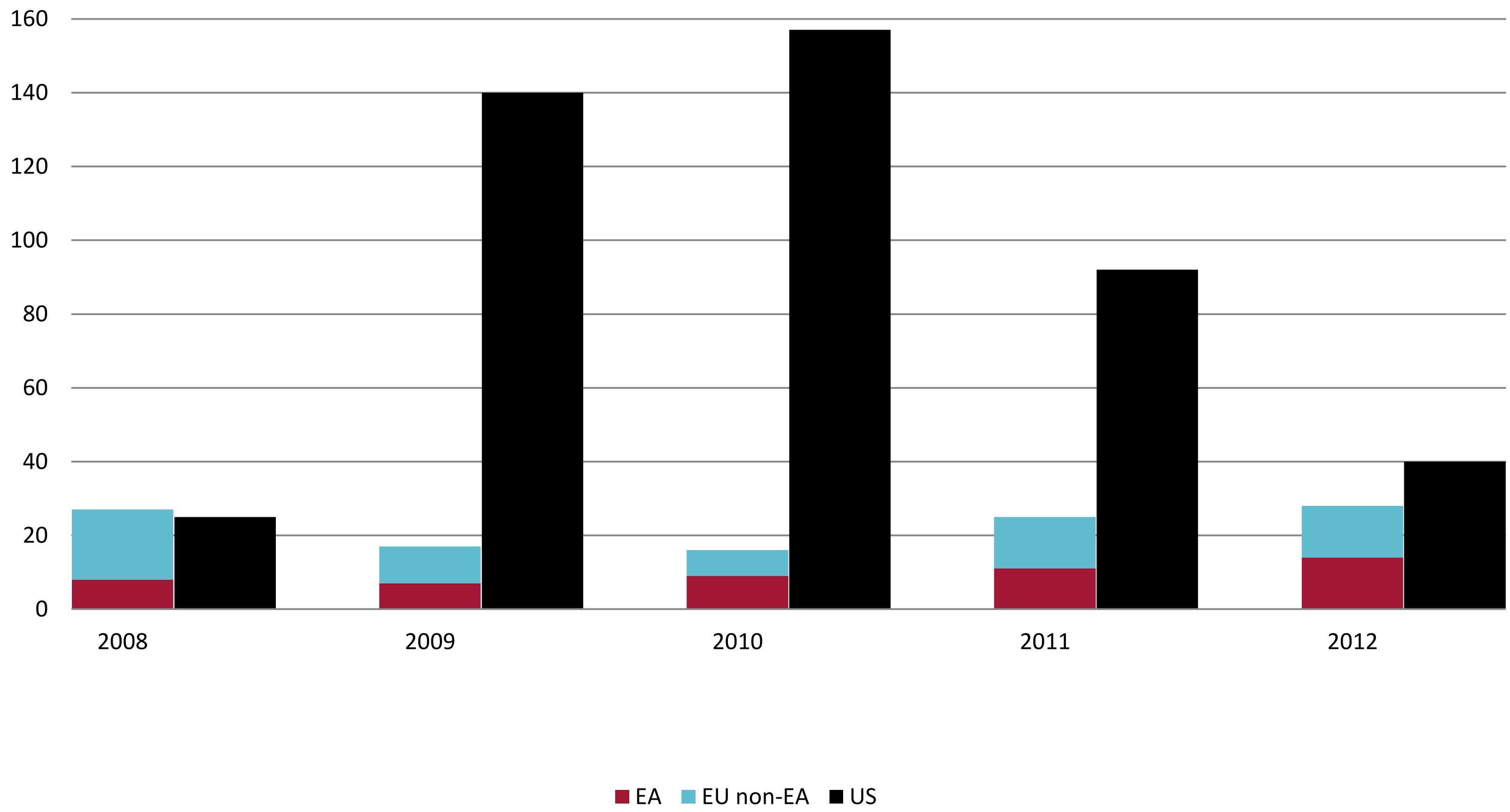
State Aid Bank Support Cases

(other than guarantees)



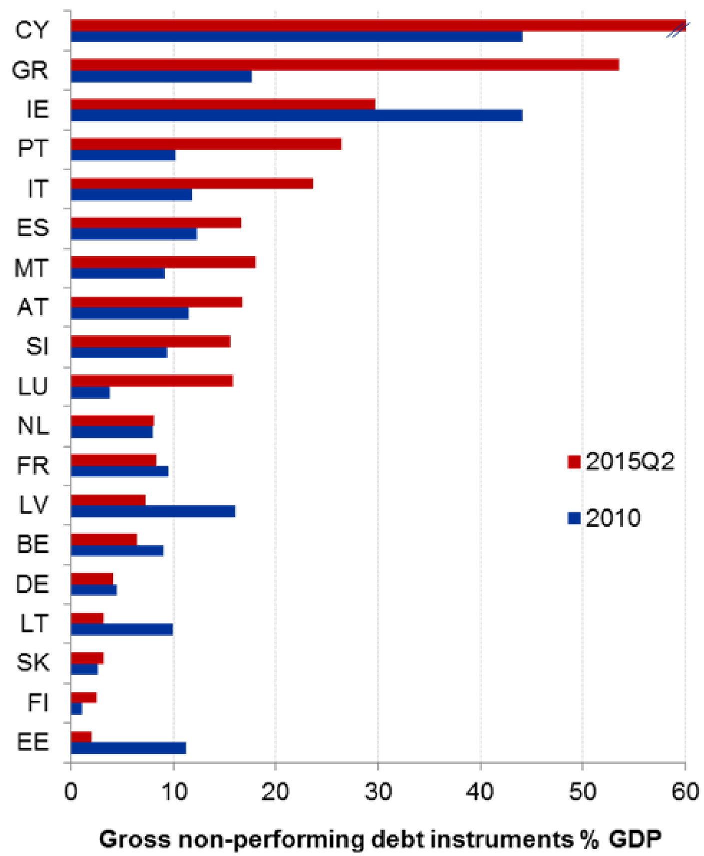
Source: Bruegel Brussels

Bank Failures

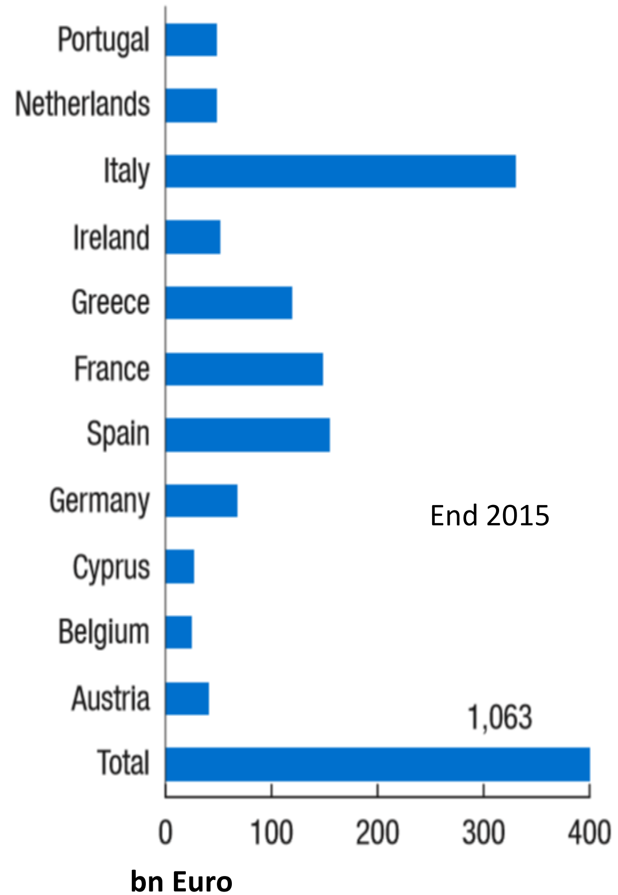


Source: Bruegel Brussels

Non-Performing Loans

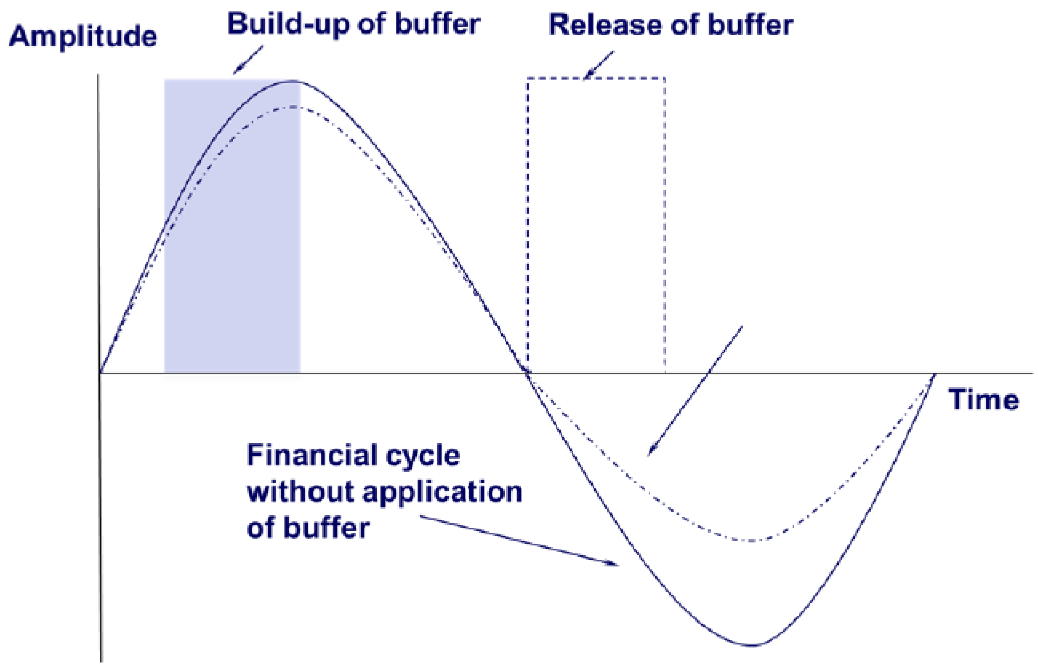


Sources: Eurostat and ECB (CBD database).



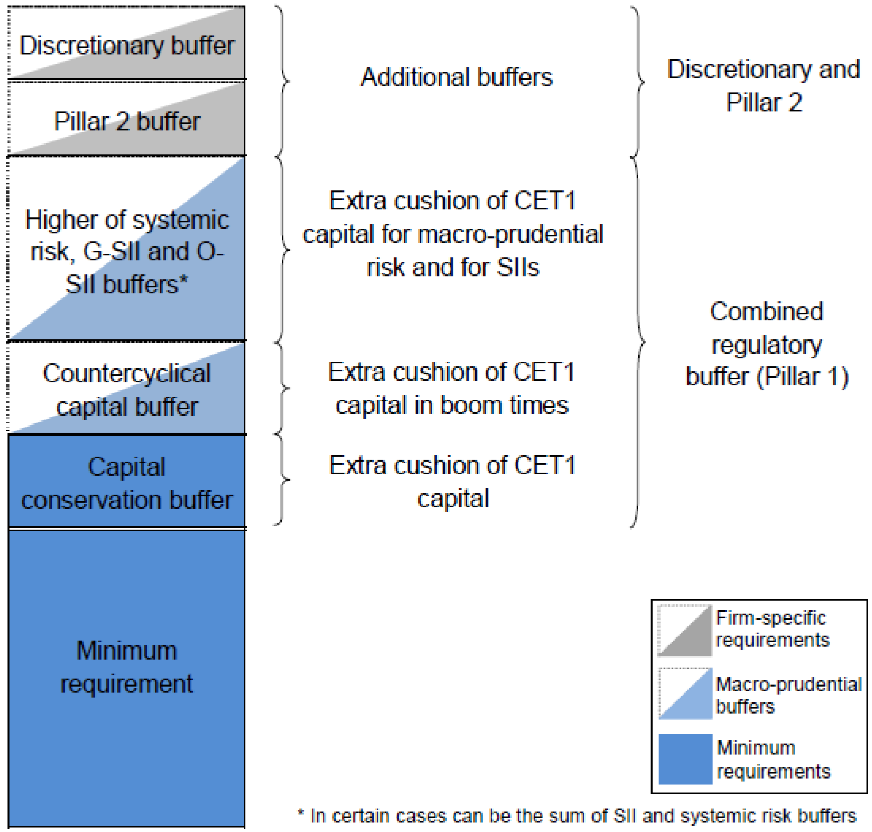
Sources: Bankscope, EBA, ECB, IMF Staff

Stilized changes of the capital buffer over the credit cycle



Quelle: ESRB Handbook 2015

Capital Requirements Basel III/CRD/CRR



Source: ESRB staff based on European Commission (2013)

G-SIBs – G-SIIs:
Size and Interconnectedness

Too big to…

… fail

… save

(… jail)

„The problem is not that banks are too big to fail. The problem is that they fail!“

(Larry Summers)

„A bank that is too big to fail is too big.“

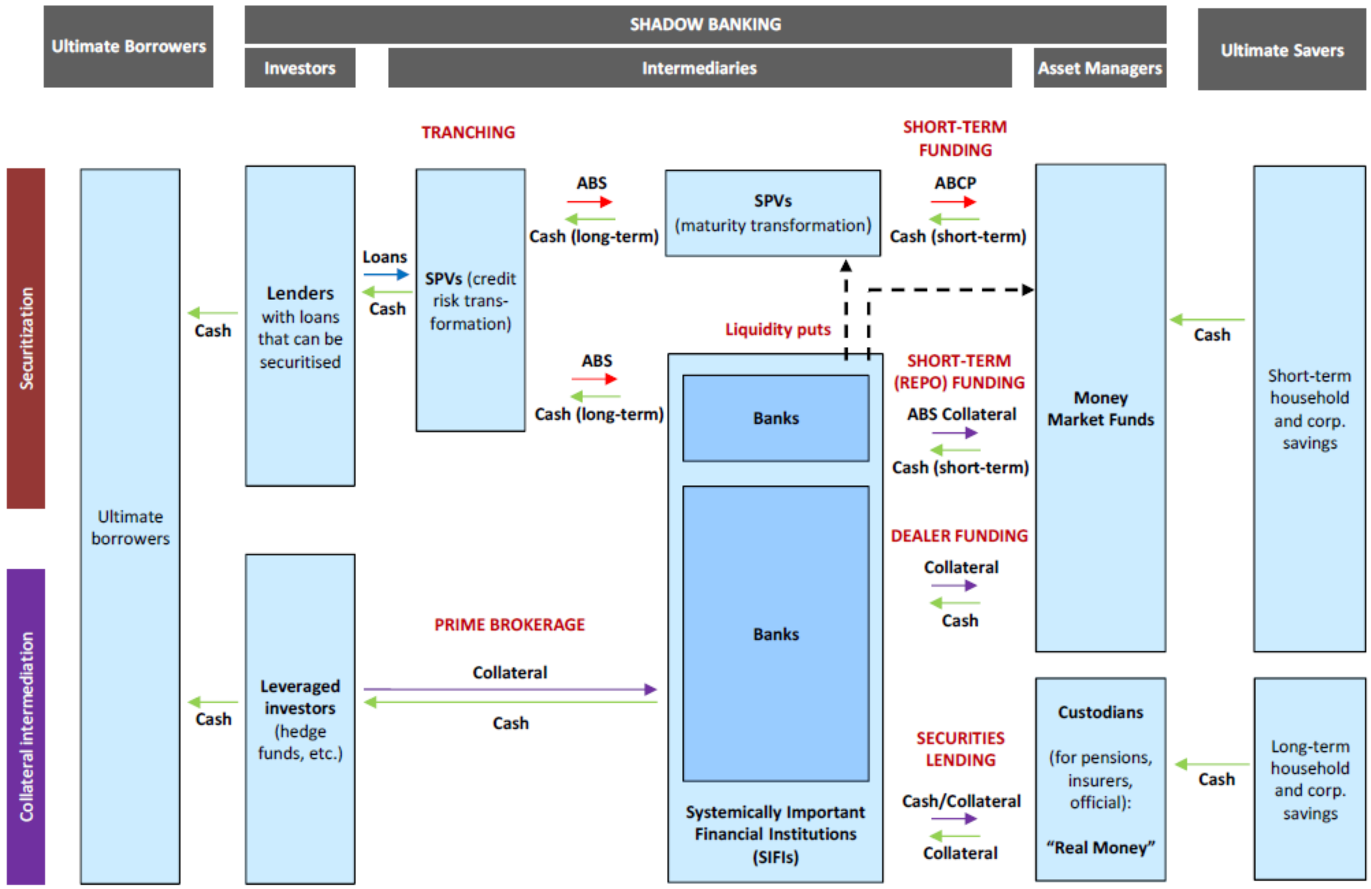
(Alan Meltzer)

“The **“shadow banking system”** can broadly be described as “credit intermediation involving entities and activities (fully or partially) outside the regular banking system” or non-bank credit intermediation in short.“

FSB, November 2015

Shaddow Banking System

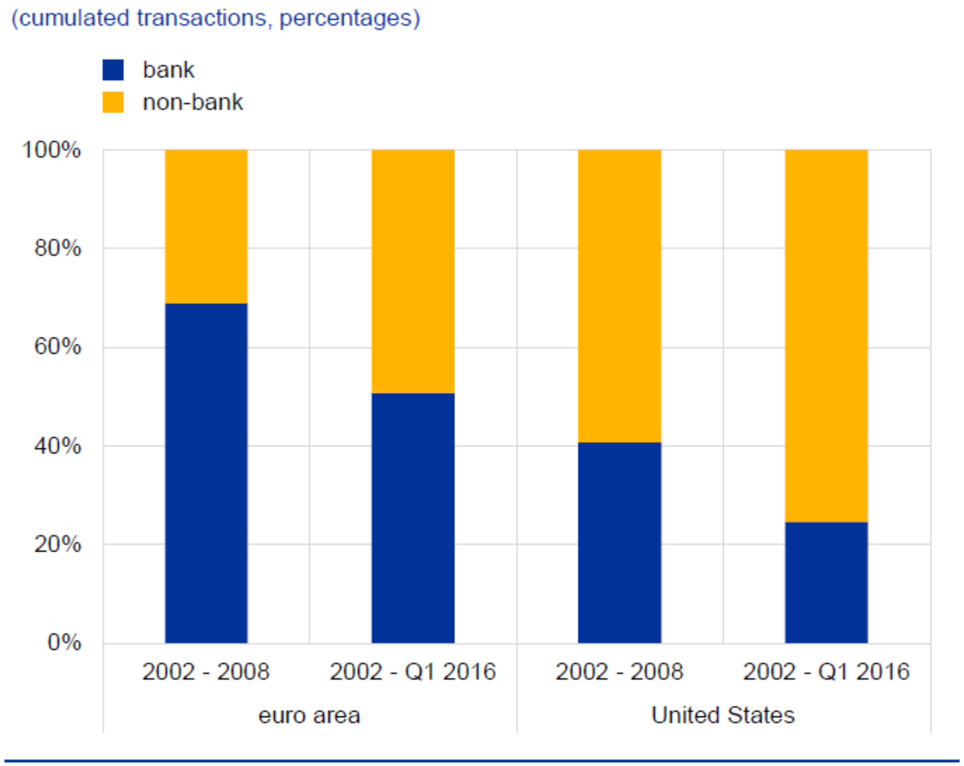
Stilized Overview



Source: Claessens *et al* (2012), available here: https://www.imf.org/external/pubs/ft/sdn/2012/sdn1212.pdf. Notes: This stylised map illustrates the interactions within the shadow banking sector as well as the interactions of the shadow banking sector with the banking sector.

Share of Bank and Non-bank Financing

(in total non-financial corporation financing in US and EA)



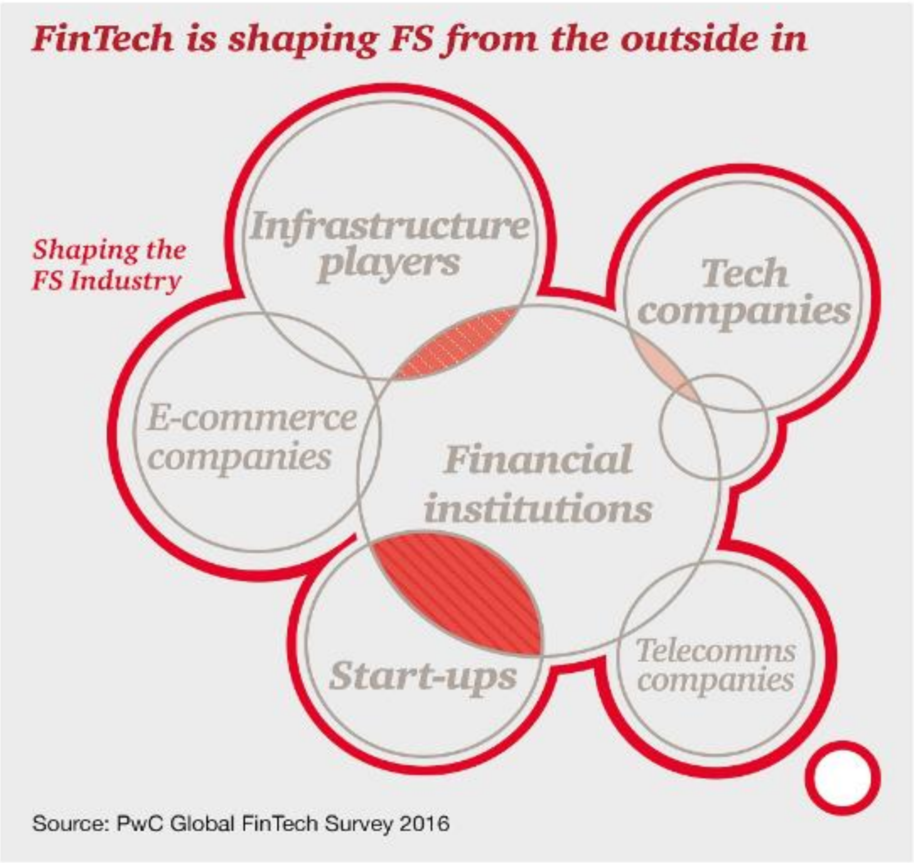
Sources: ECB, Federal Reserve System.
Note: The latest observation is for the first quarter of 2016.

IMF Financial Stability Report, October 2016

FinTech …. and its …

Source: World Economic Forum 2015

… Implications (I)



…. Implications (II)

1 Streamlined Infrastructure

- Emerging platforms and decentralised technologies provide new ways to aggregate and analyse information, improving connectivity and reducing the marginal costs of accessing information and participating in financial activities

2 Automation of High-Value Activities

- Many emerging innovations leverage advanced algorithms and computing power to automate activities that were once highly manual, allowing them to offer cheaper, faster, and more scalable alternative products and services

3 Reduced Intermediation

- Emerging innovations are streamlining or eliminating traditional institutions' role as intermediaries, and offering lower prices and / or higher returns to customers

4 The Strategic Role of Data

- Emerging innovations allow financial institutions to access new data sets, such as social data, that enable new ways of understanding customers and markets

5 Niche, Specialised Products

- New entrants with deep specialisations are creating highly targeted products and services, increasing competition in these areas and creating pressure for the traditional end-to-end financial services model to unbundle

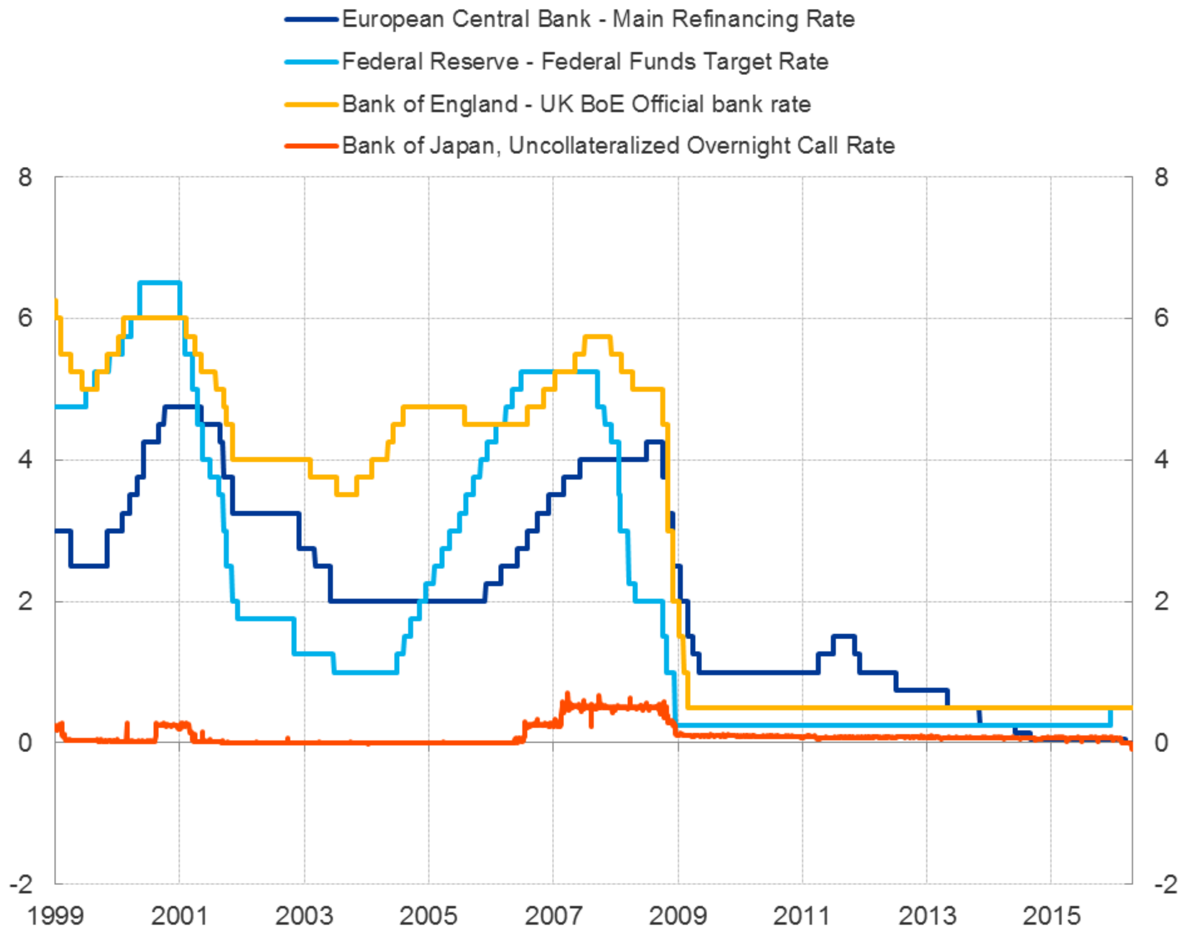
6 Customer Empowerment

- Emerging innovations give customers access to previously restricted assets and services, more visibility into products, and control over choices, as well as the tools to become "prosumers"

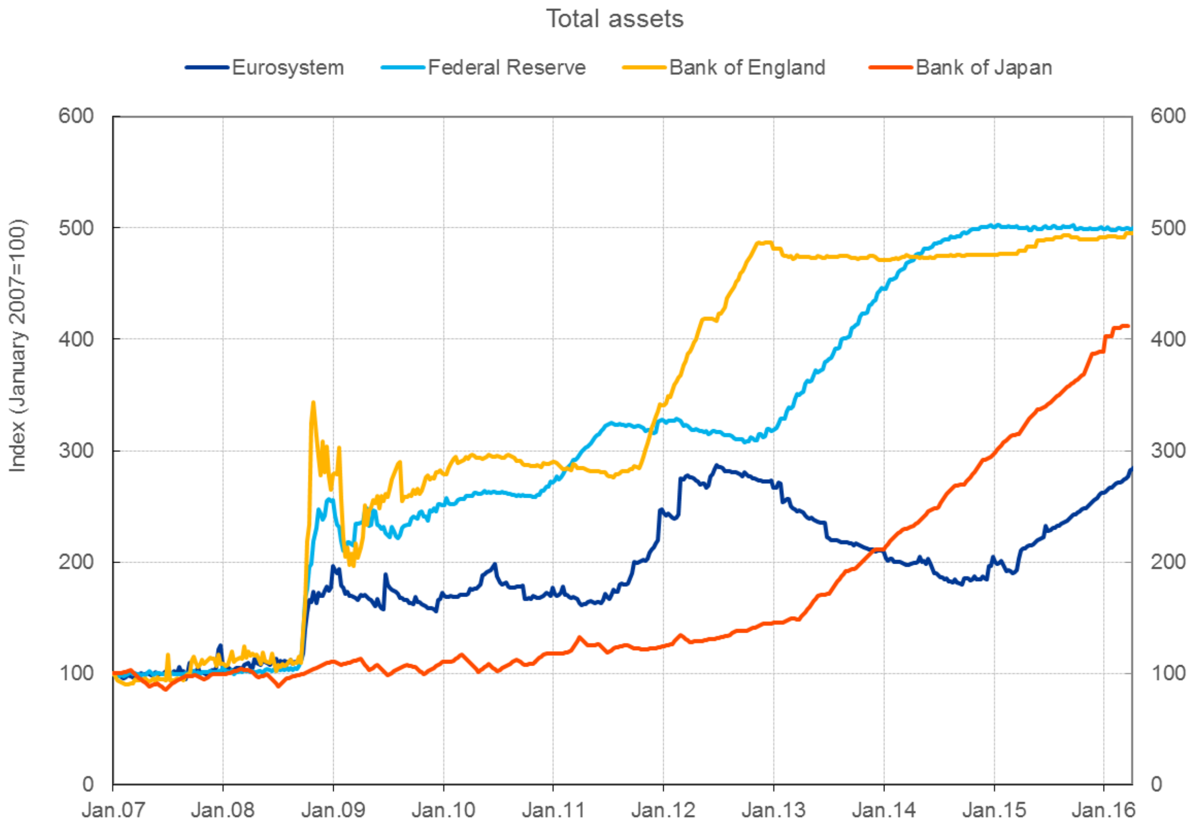
Source: World Economic Forum 2015

4. THE LOW-RATE WORLD

Policy Rates in Major Regions



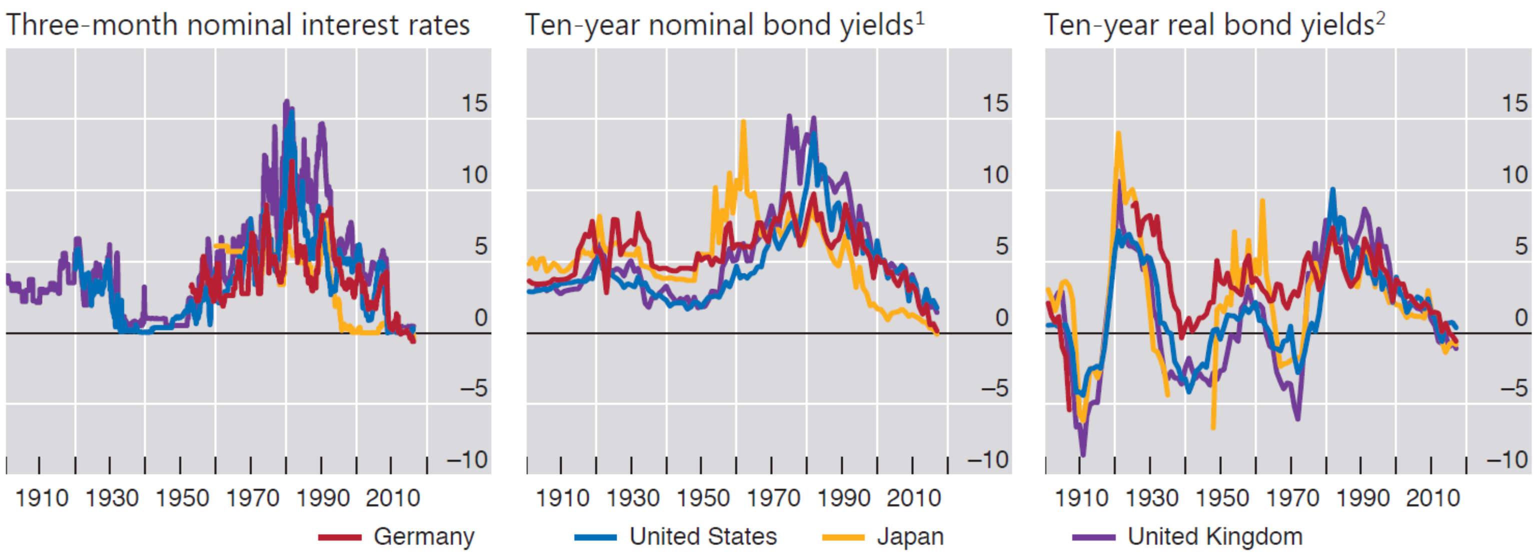
Central Banks' Balance Sheets



Source: ECB, Federal Reserve, Bank of England, Bank of Japan
Last observation: 15 April 2015
Note: Since September 2014, the Bank of England publishes the figures of balance sheet total assets on a quarterly basis with a five-quarter lag. Provisional figures are computed by assuming constant the information relative to the temporary liquidity assistance, which was discontinued on financial stability grounds.

Record Low Interest Rates and Yields

(in percent; a historical perspective)

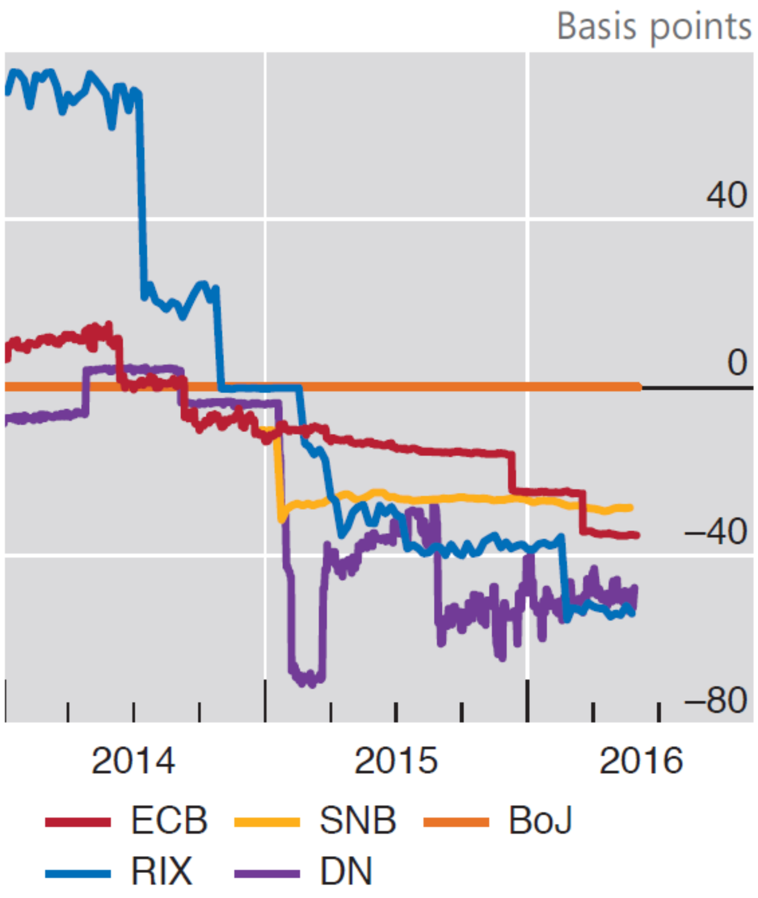


[1] The hyperinflationary years of 1922–23 are excluded for Germany. [2] The hyperinflationary episodes for Germany and Japan are not shown. Prior to 2006, nominal 10-year yields minus average inflation rates during the next 10 years; from 2006 onwards, 10-year index-linked bond yields.

Sources: Barclays; Bloomberg; Global Financial Data; national data; BIS calculations.

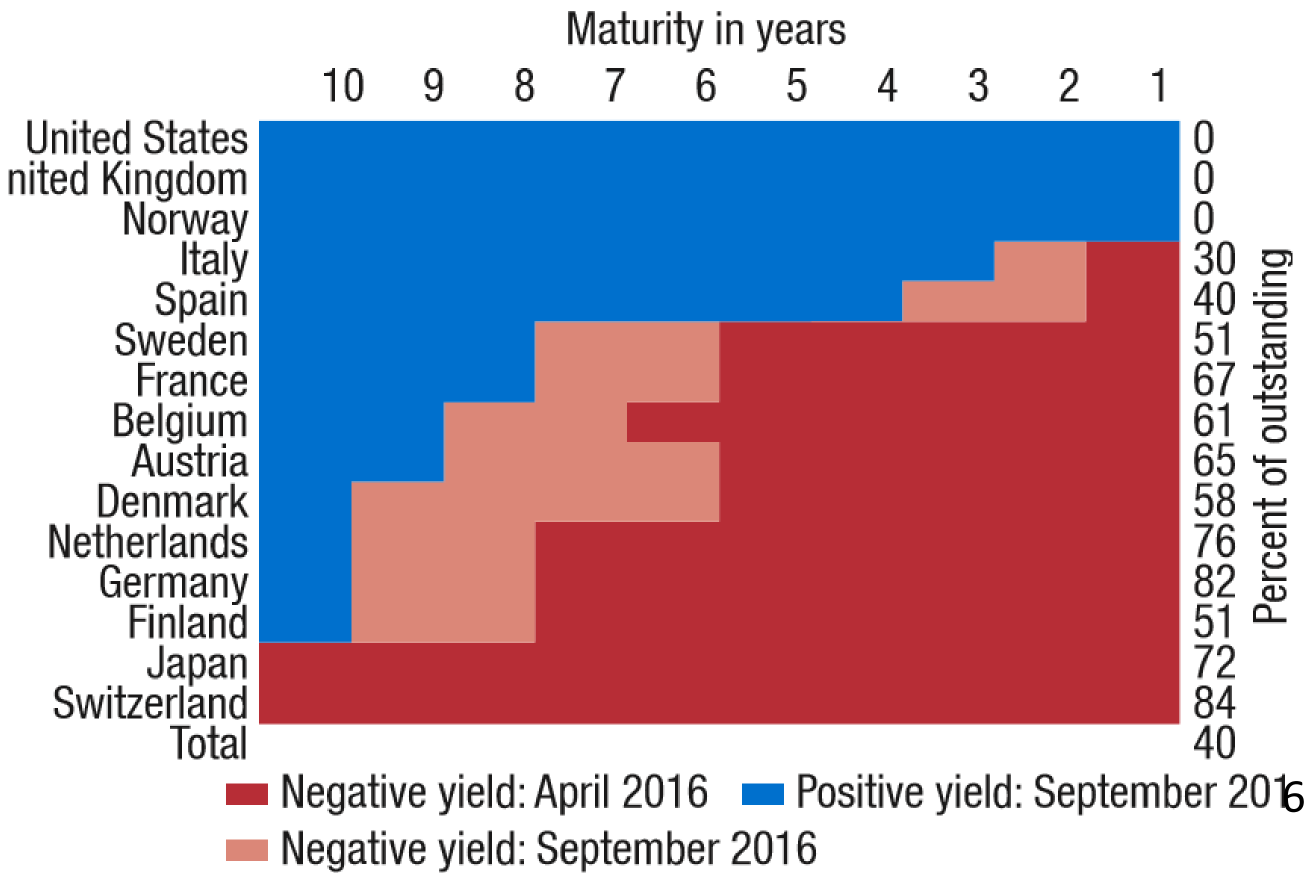
BIS Annual Report 2016

Average Remuneration of Central Bank Liabilities



Source: BIS Annual Report 2016

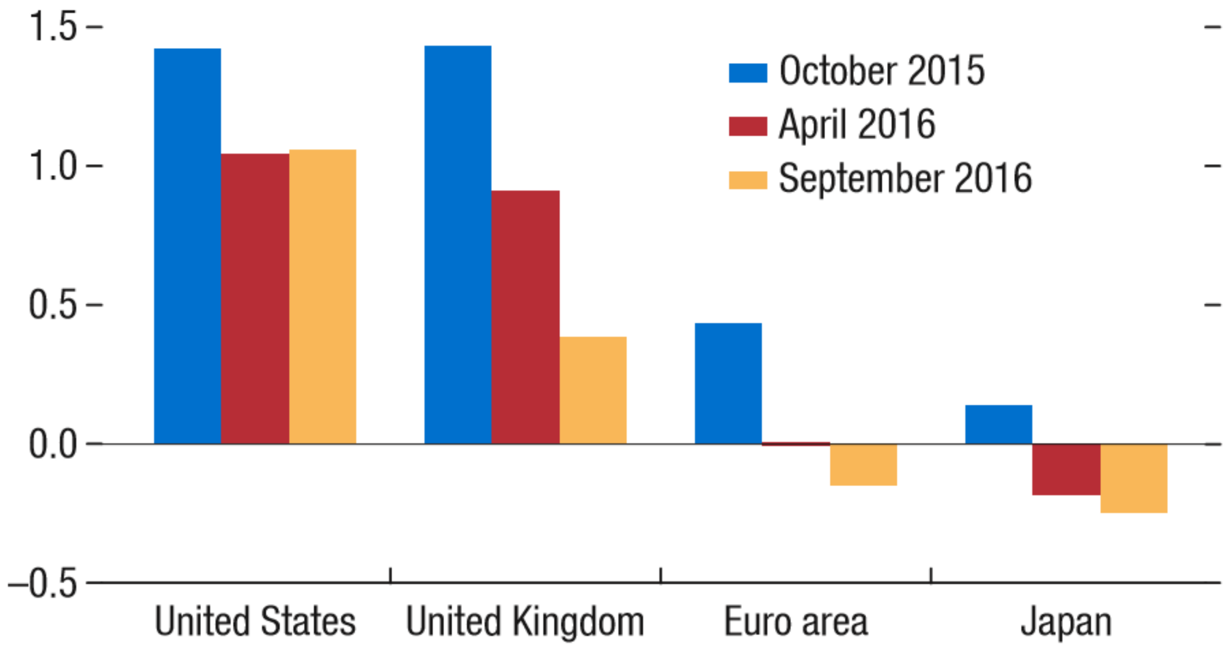
Share of Sovereign Bond Markets with Negative Rates



Source: IMF October 2016

Policy Rate Expectations

(End-2020; Percent)



Sources: Bloomberg L.P.; and IMF staff estimates.

„Unintended Consequences“ (I)

- **Zero/negative policy rates and a wash of liquidity** for too long generate **distorting effects** in the medium to longer term:

  - **Financial stability** risks
  - **capital** is being **misallocated** and
  - **moral hazard** enhanced

„Unintended Consequences“ (ii)

- Reduces the incentive for **balance sheet adjustment** („Zombie“- companies and -banks)

- **Pressure on governments** to take **resolute action** (fiscal, structural) has **eased** (moral hazard)

- **Sowing seeds of new market exaggeration and crises**
  (i.a. search for yield; underpricing of risk)

- **Traditional business models and financial instruments** challenged

- **International spillovers**

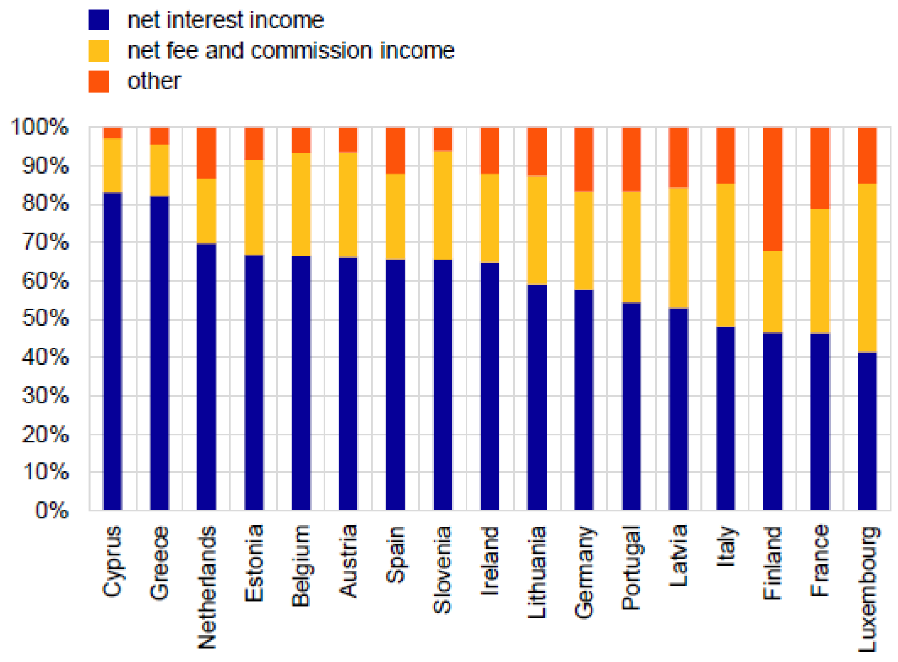
Possible NIRP-Effects

NIRP and QE an *act of desperation*?

- Risk of **cash hoarding**: implications for functioning of market economy
- Banks‘ interest **margins squeezed**
- Banks may **shift** from reserves **to cash and/or restraining credit** (counterproductive)
- Incentive to take **excessive risk**/search for yield
- **Negative income effect**

EA-Banks‘ Income Structure

(Q1 2015 – Q3 2015; percentages)



Source: ECB consolidated banking data.
Note: Country-level data are based on domestic banking groups and stand-alone banks, foreign (EU and non-EU) controlled subsidiaries and foreign (EU and non-EU) controlled branches.

ECB Financial Stability Review, 2016

ECB Operations ….

- **OMT** – **O**utright **M**onetary **T**ransactions

- **QE** – (APP = PSPP, CBPP, ABSPP, CSPP)
  in combination with **NIRP**

  - Inappropriate
  - Ineffective
  - **O**utside the **M**andate (**T**ransactions)

4. NEW MACRO-PRUDENTIAL POLICY TOOLS

Macroprudential Policy Tools

	Policy Tool				
	Restrictions related to borrower, instrument, or activity	Restrictions on financial sector balance sheet (assets, liabilities)	Capital requirements, provisioning, surcharges	Taxation, levies	Other (including institutional infrastructure)
Expansionary phase	Time varying caps/limits/rules on: - DTI, LTI, LTV - margins, hair-cuts - lending to sectors - credit growth	Time varying caps/limits on: - mismatches (FX, interest rate) - reserve requirements	Countercyclical capital requirements, leverage restrictions, general (dynamic) provisioning	Levy/tax on specific assets and/or liabilities	- Accounting (e.g., varying rules on mark to market) -Changes to compensation, market discipline, governance
Contractionary phase: fire-sales, credit crunch	Adjustment to specific loan-loss provisioning, margins or hair-cuts (e.g., through the cycle, dynamic)	Liquidity limits (e.g., Net Stable Funding Ratio, Liquidity Coverage Ratio)	Countercyclical capital requirements, general (dynamic) provisioning	Levy/tax (e.g., on non-core liabilities)	-Standardized products -OTC vs. on exchange -Safety net (Central Bank/Treasury liquidity, fiscal support)
Contagion, or shock propagation from SIFIs or networks	Varying restrictions on asset composition, activities (e.g., Volcker, Vickers)	Institution-specific limits on (bilateral) financial exposures, other balance sheet measures	Capital surcharges linked to systemic risk	Tax/levy varying by externality (size, network)	- Institutional infrastructure (e.g., CCPs) - Resolution (e.g., living wills) - Varying information, disclosure

Enhancing resilience

Dampening the cycle

Dispelling gestation of cycle

Source: Claessens, Ghosh and Mihet, 2013.

5. Conclusions
Brave New World for Finance?

Regulation, regulation arbitrage, innovation and ultra-lose monetary policy will not lead to transitory changes in the financial system only.

- The financial stability risks (another financial crisis) have increased

- The current regime will have far-reaching economic and social consequences as markets are distorted by central bank interventions and as the interest rate has lost its signalling and steering function in the economy

- It will have consequences i.a. for economic performance, the savings behaviour and the financing of the pension systems.

Is this the „new normal“?