Faculty of Law, Economics and Finance

Shadow Banking in Europe: Idiosyncrasies and their Implications for Regulation

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Motivation

- To what extent were the acknowledged idiosyncrasies in shadow banking reflected in the FSB's policy recommendations & in their implementation in Europe?
- Cross-jurisdictional institutional specificities (EU vs. U.S.) are understudied.
- Are int'l initiatives useful in addressing the problems of shadow banking in local/regional markets (EU & U.S.)?

FSB & Eu regulation of shadow banking (SB)

FSB's 5 work streams to reform SB (2011)

1. Reforms of **MMFs** to reduce risk of runs;
2. Reforms of **other shadow banking entities;**
3. Reforms of **securitisation** to align incentives (skin in the game & transparency reqs, etc.)
4. Reforms of **securities lending & repos** (addressing the risks & **procyclicality;** transparency reqs, etc.)
5. Addressing **banks' interactions** with shadow banking entities (**indirect regulation**) to limit spillovers.

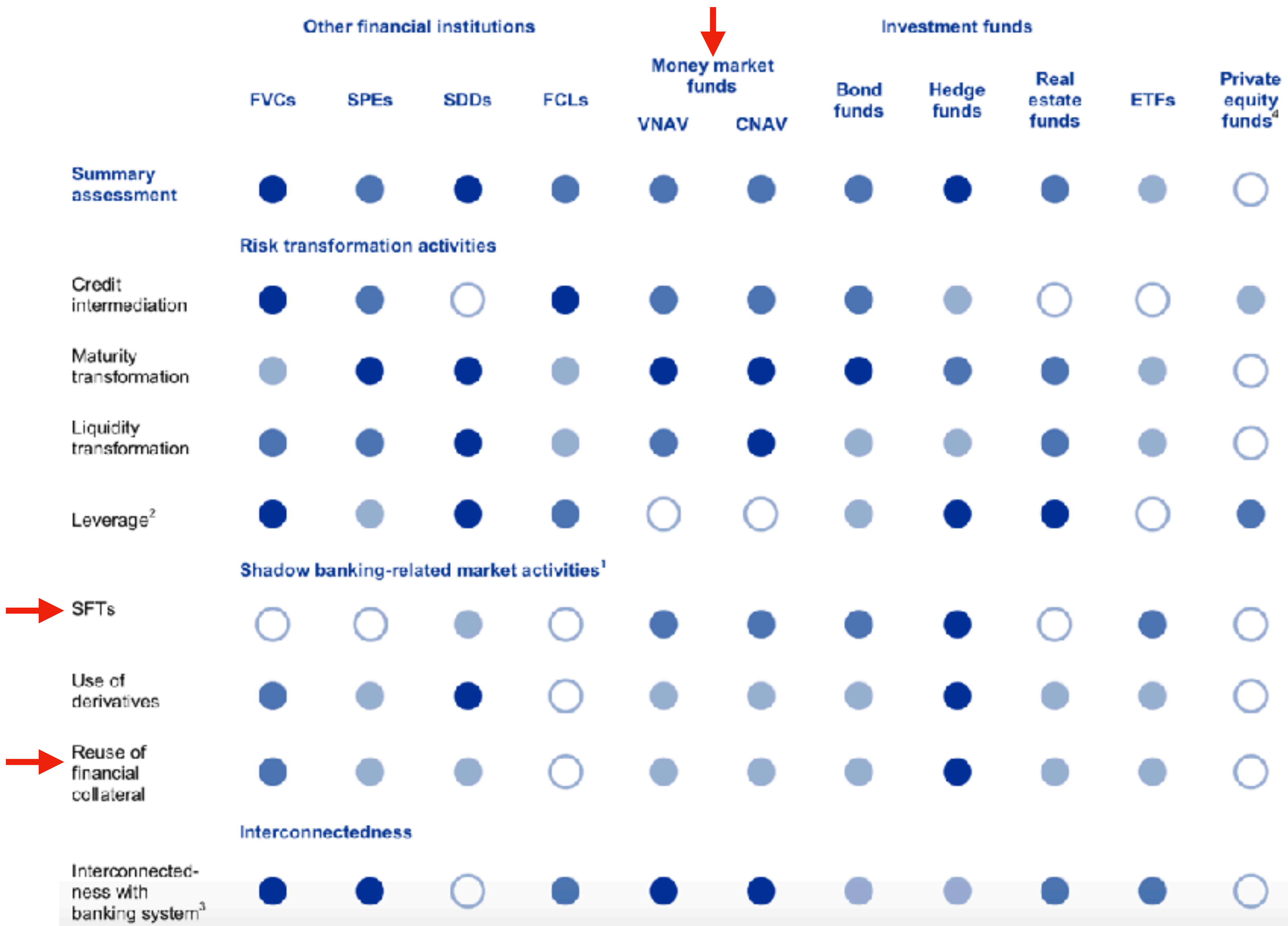
Eu regulation

1. **Regulating MMFs:**
   - Regulation 2017/1131 on money market funds
2. **Regulation of other shadow banking entities**
   - e.g., Directive 2011/61/EU on AIFMs
3. **Regulation of securitisation**
   - Regulation 2017/2402 (**STS Securitisation**) + EBA guidelines on implicit support for securitisation
4. **Regulation of securities lending & repo**
   - Regulation 2015/2365 on transparency of securities financing transactions and of reuse… (**SFTR**)
5. Regulating bank / shadow bank nexus
   - **Banking structural reforms proposals**: Ring-fencing & structural initiatives (Withdrawn at EU level)+ EBA guidelines on limits on exposures to SB
   - **CRD IV & BRRD** and higher levels of capital, leverage & liquidity reqs + MREL & TLAC + CRR reforms

Overview:
Comparison of shadow banking components

- Money market funds (MMFs)
- **Securities financing transactions (including Repo)**
- Securitisation
- Derivatives
- AIFs
- Implications for shadow banking regulation

Entity-based monitoring vs. Activity-based monitoring

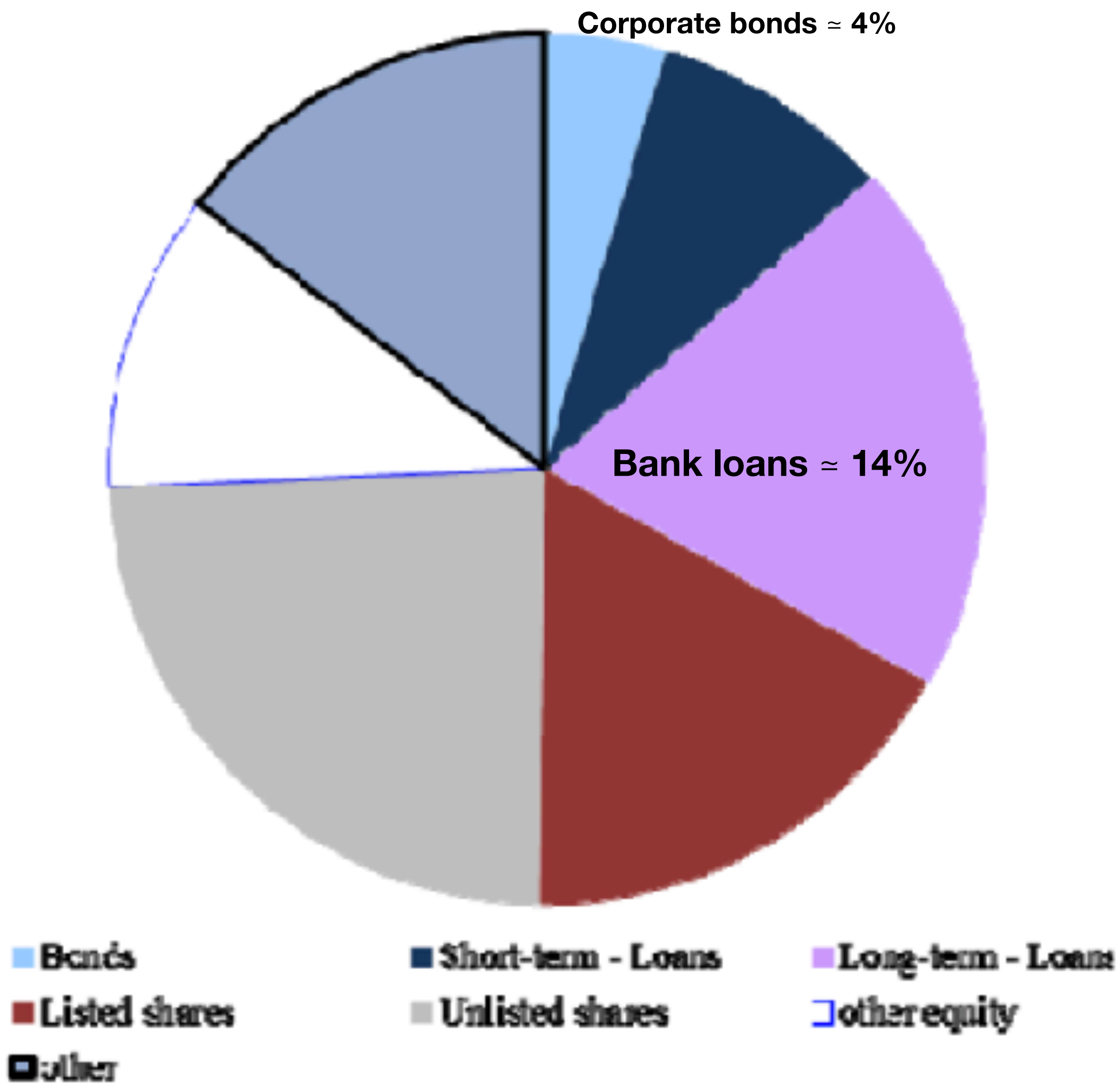


Source: ESRB, 2017

Shadow banking (SB) as a legacy issue: Europe vs. U.S.

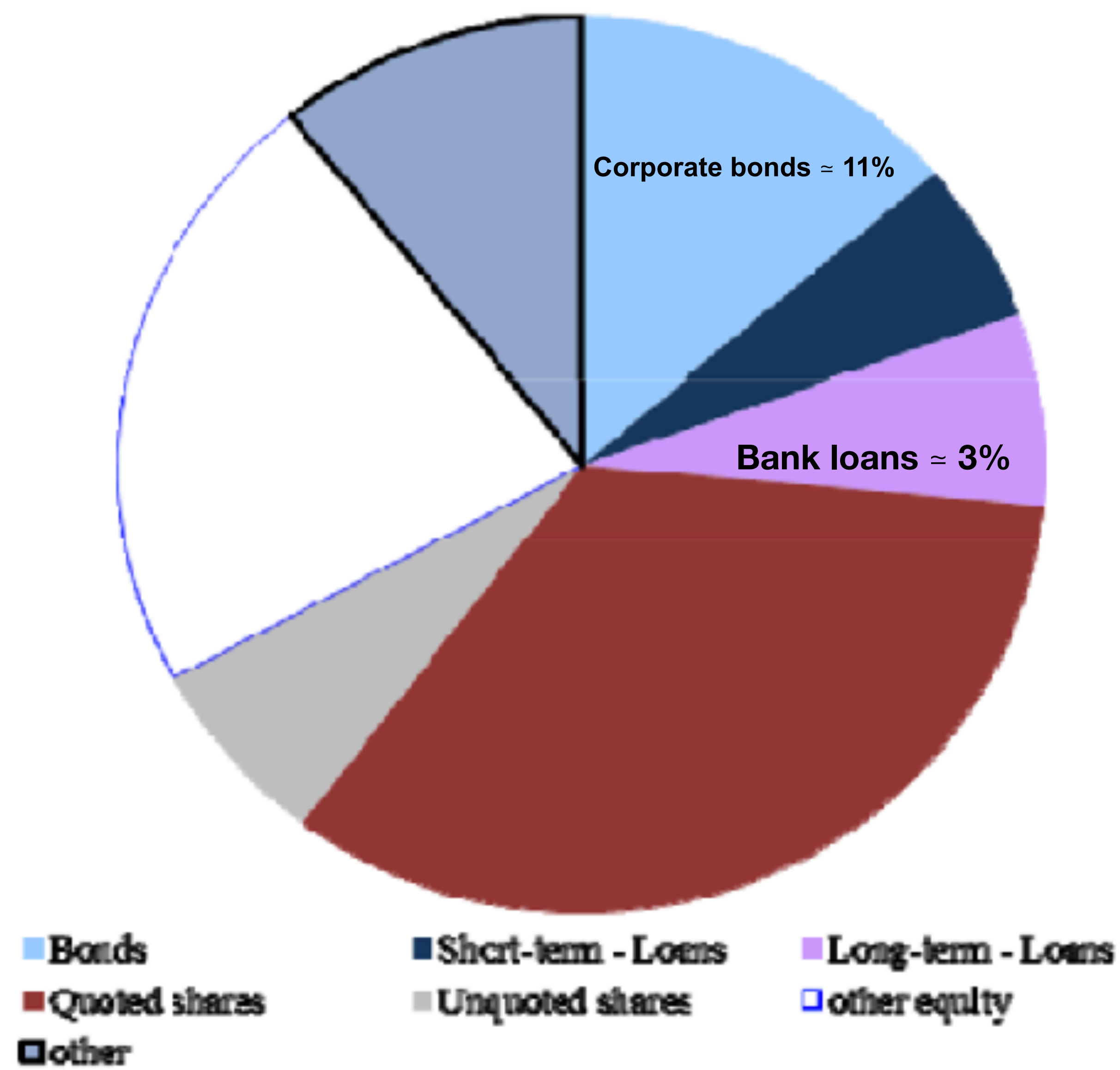
Bank-based vs. Market-based financial markets (Levine 1997, 2002, EC 2015)

Chart 6: Liabilities of the EU corporate sector, EU-28 non-financial corporations, 2013



Source: Eurostat.

Chart 7: Liabilities of the US corporate sector, non-financial corporations, 2013



Source: OECD.

Point of divergence: Structural differences

- **Bank-based vs. Market-based financial markets**
  - Most Euro repos are interbank
- **Universal vs. commercial / investment banking model**
  - Most EU MMFs are sponsored by banks

Small size of the EU & U.S. MMFs

Europe

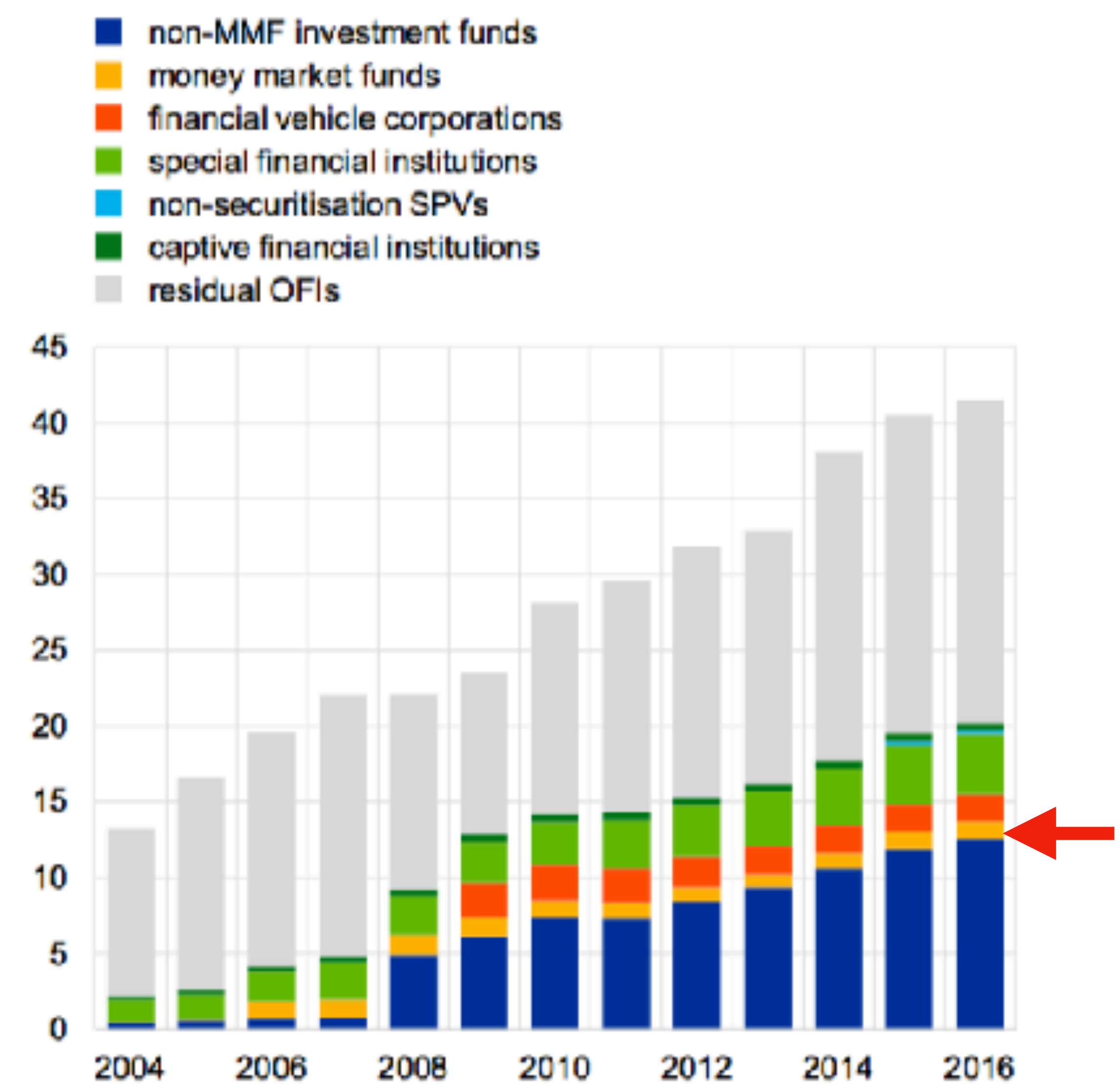
- MMFs ≃ **€1.1 tr. &**
- Non-MMFs ≃ **€10.3** tr. (FSB, 2017)

U.S.

- MMFs' size is **$2.83 tr.** as of Feb 14, 2018.
- Mutual fund industry ≃ **$16 tr.**
- MMFs > 50% of global MMFs. (FSB 2017)

Breakdown of EU investment funds and other financial institutions by type

(€ trillions; last observation: Q4 2016)



Sources: ECB, Central Bank of Ireland, De Nederlandsche Bank, Nationale Bank van België/Banque Nationale de Belgique and ECB calculations.
Note: Data on euro area MMFs commence in Q1 2006, data on euro area non-MMF investment funds in Q4 2008 and data on euro area FVCs in Q4 2009.

MMFs- Differences

- **EU**: VNAV structure is prevalent. (FSB 2017).
- **U.S.: CNAV** structure is predominant (substitute for **deposits**)

- **EU:** predominantly institutional investor base
- **U.S:** 1/3 of the investors are **retail**. (Bakk, 2012)
  - Risk of runs; insurance?

5- Sponsor support for MMFs- Direct contagion channel

- Higher **<u>bank sponsorship of EU MMFs</u>** (Bengtsson, 2013)

- Euro area: > 50% of large asset management companies are owned by banks or BHCs. (Doyle et. al., 2016)

- **<u>90%</u>** of the **<u>largest EU MMF</u>** managers are sponsored by commercial banks. (EC, 2015)

- Funds sponsored by institutions with greater financial strength take on more risk (Kacperczyk & Schnabl 2012)

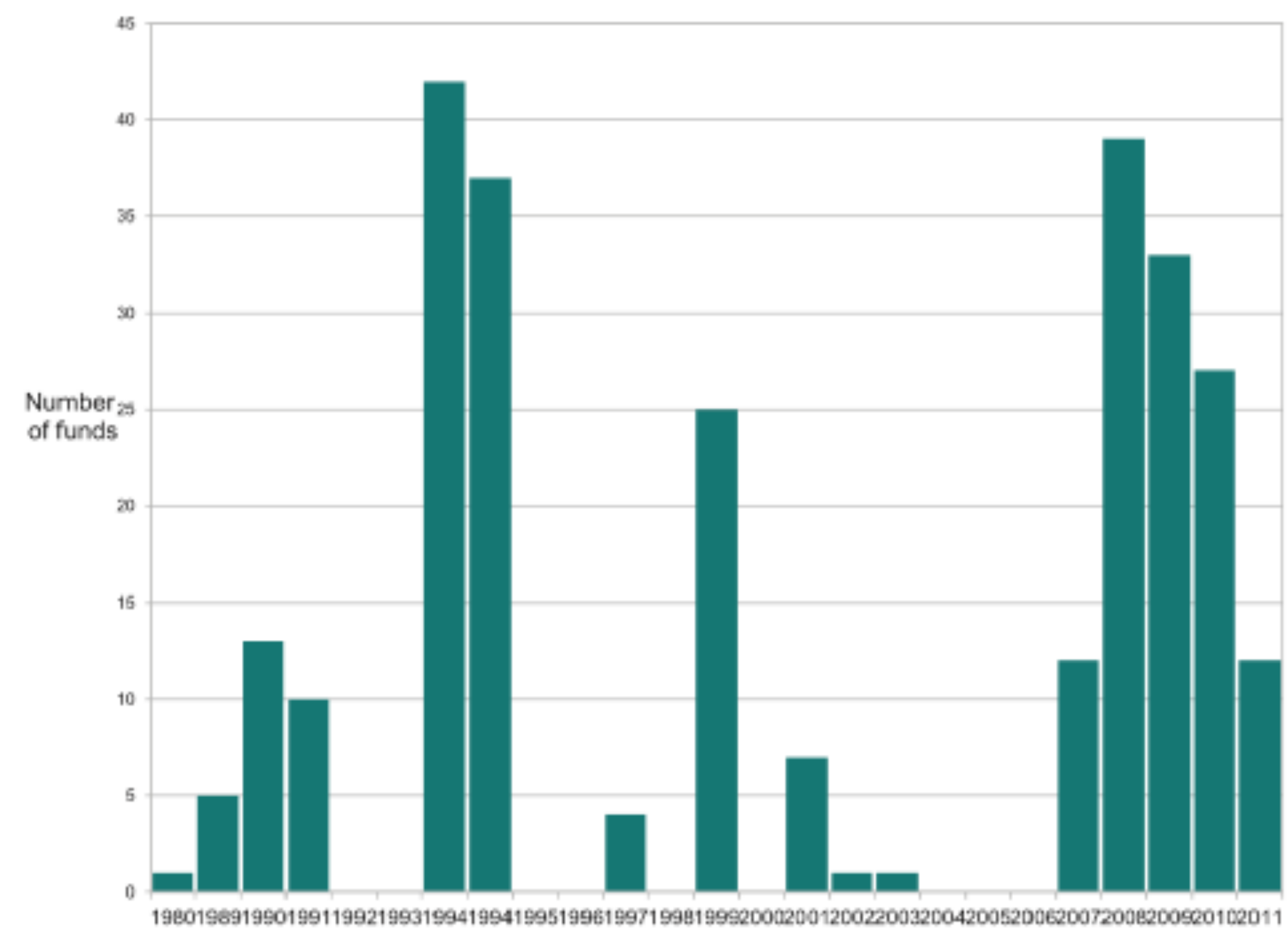


Fig. 1. Number of funds receiving support: 1980–2011. Data sources are Brady, Anadu and Cooper (2012).

Geographic concentration in Eu & euro area

E. Bengtsson / Journal of International Money and Finance 32 (2013) 579–594

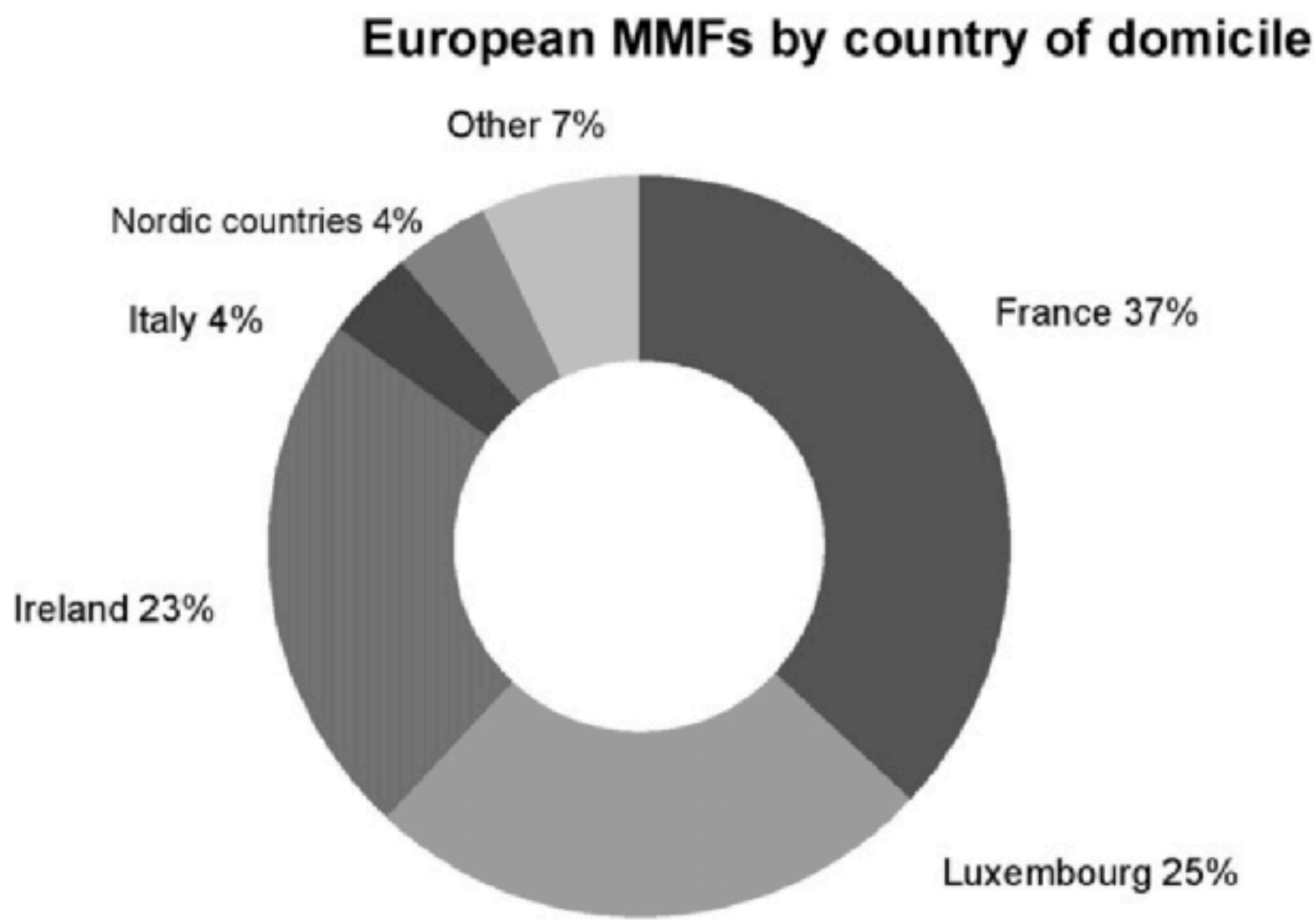


Fig. 1. European MMFs by country of domicile. Source: EFAMA, IFIA in Fitch Ratings (2010).

EU regulation on MMFs

➡ Regulation 2017/1131 on **money market funds**

1. **Types of MMFs allowed (Art. 3)**
   - ➡ VNAV MMFs
   - ➡ Public debt CNAV MMFs
   - ➡ Low volatility NAV MMFs (LVNAV MMFs)

2. Prohibition on sponsor support (Art. 35) + EBA guidelines on limits on exposures to SB

3. Portfolio rules including daily/weekly **liquidity reqs** (Articles 21 & 22)

4. A **capital cushion** of 3% for CNAV funds? (NAV buffer, Art. 30 of the proposal, withdrawn)

Repos: Micro-level harmonisation, but institutional disparities

1. **Contract design:** Security financial collateral arrangement (+ bankruptcy safe harbours) vs. title transfer financial collateral arrangement (TTCA). BRRD amending FCD.

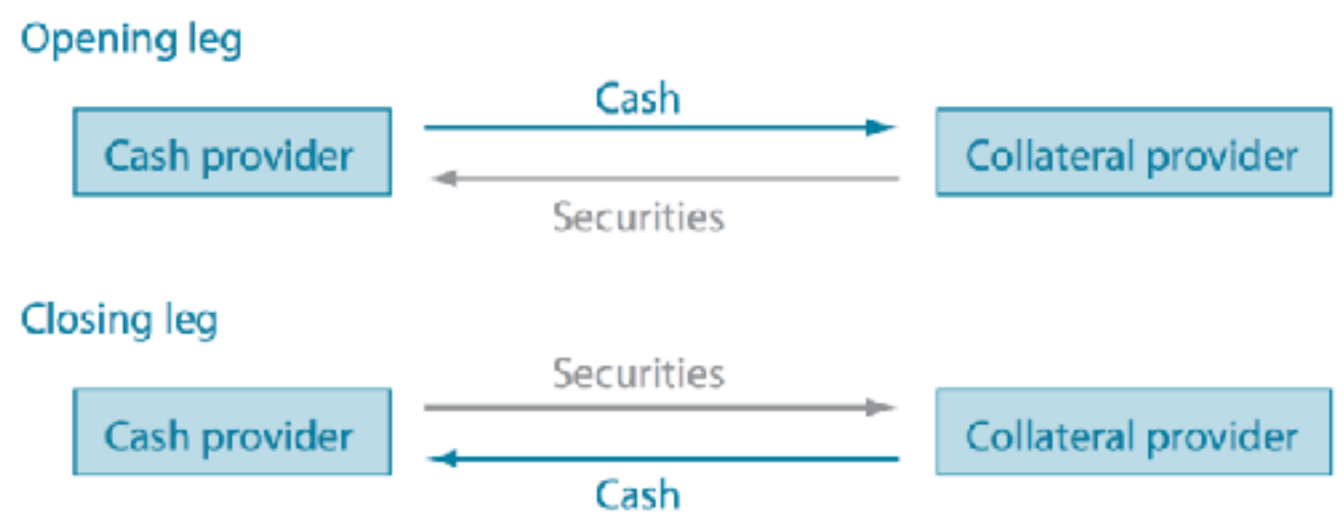
2. **Maturity:** Overnight tri-party repos dominate the U.S. repo markets,

3. **Central clearing:** More repos are centrally cleared in Europe.

4. **Collateral composition**: the EU repos mainly use gov't collateral

5. EU: No (harmonised) limit on **reuse**
   U.S.: capped at 140% of the liabilities of the client to the broker-dealer.

Exhibit 1
A Typical Repo Transaction



6. **Participants:** Dominance of interbank repo markets in the EU

1- Central clearing

- Market structure of repos affects market fragility. (Mancini et al, 2015)
- Safety enhancing features in repo markets:
  - CCP-based infrastructure,
  - Safe collateral,
  - Absence of unwind mechanism
- From 2009 to 2013, centrally cleared repos increased from **42% to 71%,** bilateral repos declined from **50% to 19%**. (ECB 2013)
- In the U.S., the GCF Repo market constitutes a small portion of the dealer repo market.

2- Bilateral vs. Tri-party repos

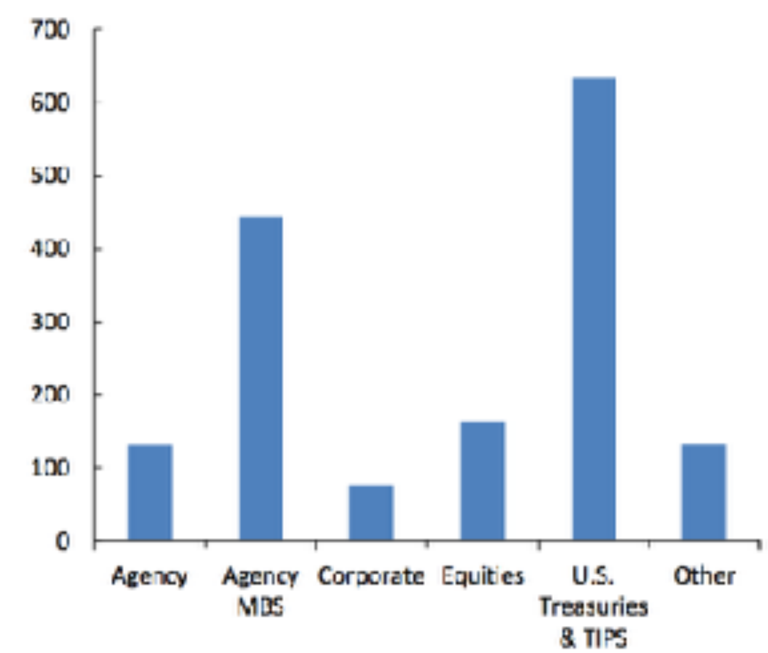
- Tri-party repo ➙ more resilient than bilateral repos, perhaps b/c of the underlying collateral

- Tri-party repos: **<u>2/3 of the U.S. repos with overnight maturity vs. EU (10% tri-party)</u>**

- **<u>EU repos are largely centrally cleared. (≃70%)</u>**

Figure 5: Collateral Composition in the Triparty Repo Market ($ billions)

Participants in the triparty repo market mainly use collateral consisting of U.S. Treasury and agency MBS securities



Source: Federal Reserve Bank of New York, June 2015

Source: Baklanova 2015

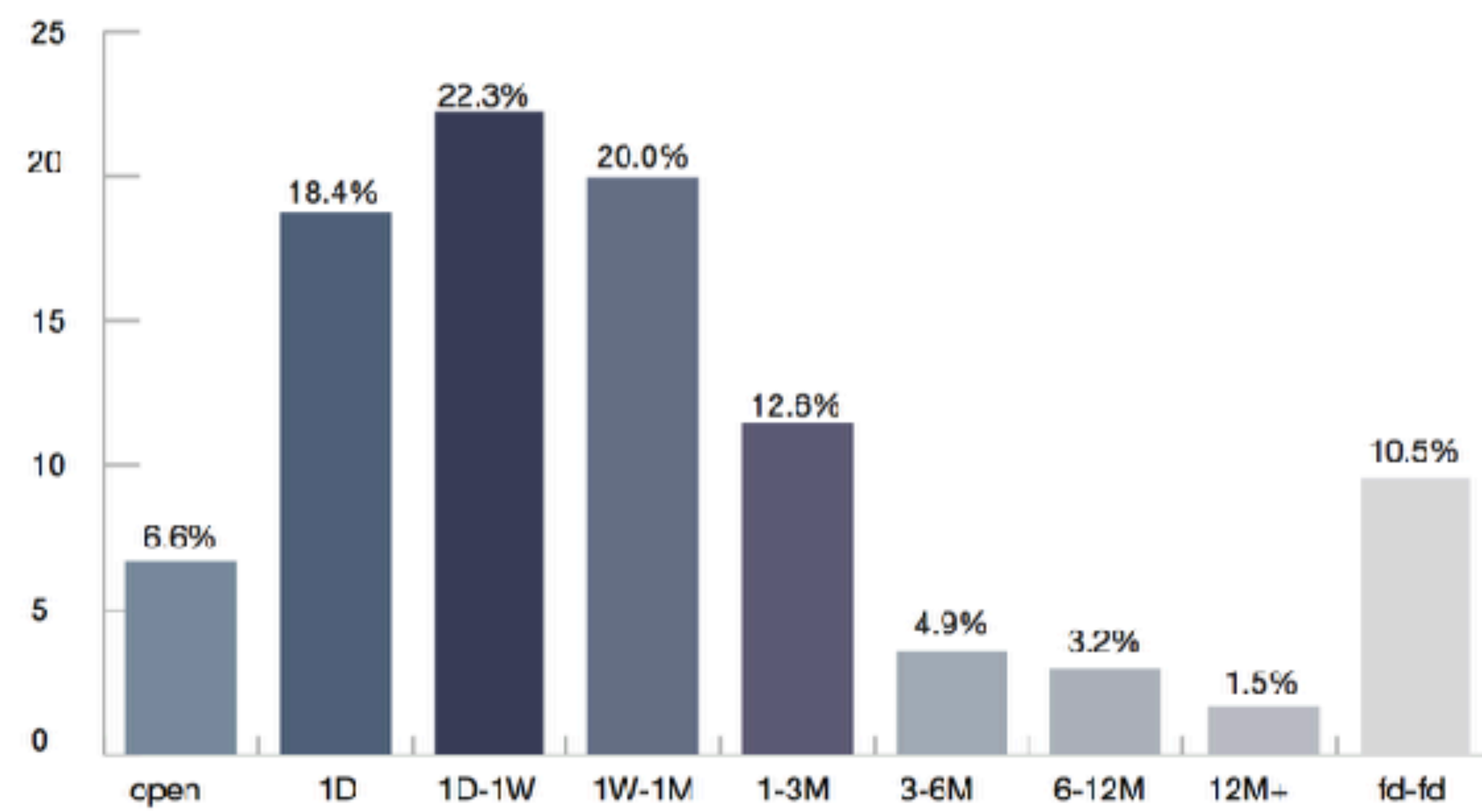
3- Maturity

- Average maturity of U.S. repos is shorter (largely overnight). (ICMA)

- EU overnight repos = **<u>18.4%</u>**

- Higher maturity transformation (overnight funding of longer-term assets) in U.S. repos ➙ risk of runs (prone to runs)

Figure 2.14 – Maturity analysis (main survey)



Source: ICMA European repo market survey, June 2017

Regulation of repos

- Amendment to **financial collateral directive** by BRRD (2014)
  - Articles 70-71 & 118 (inserting new Art. 1(6) to FCD)
  - Stay of enforcement & close-out netting provisions for up to **48 hours**.

- Regulation (EU) 2015/2365 (SFTR) imposing transparency (reporting to trade repositories) & consent reqs for reuse.

Conclusion

- Policy recommendations of the int’l forums should remain **high-level** and heed the institutional specificities

- **Smarter implementation** of recommendations (attention to specificities & institutional details)

- Further studies of the **institutional idiosyncrasies** would inform policy choices.

- Further empirical studies on the **significance** of these institutional differences — needs more granular data (emerging)