Monitoring universe of non-bank financial intermediation (MUNFI):
The experience of Bank of Portugal

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Monitoring Universe of Non-bank Financial Intermediation (MUNFI): The experience of Banco de Portugal

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Istanbul, 18-20 March: The use of financial accounts
Outline

I. From Financial sector to Shadow Banking (general concepts, definition, overview)

II. MUNFI and Shadow Banking

III. Wrap-up
Outline

I. From Financial sector to Shadow Banking (general concepts, definition, overview)

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I. From Financial sector to Shadow Banking

➢ General concepts

Financial sector

- institutional units which are independent legal entities and market producers, and whose principal activity is the production of financial services, such as financial intermediation and auxiliary financial activities;

MUNFI

- non-bank financial intermediation, comprising insurance corporations, pension funds, non-MMF investment funds, other financial intermediaries and financial auxiliaries;

OFIFA

- consist of the non-MMF investment funds, other financial intermediaries, except insurance corporations and pension funds, financial auxiliaries and captive financial institution and money lenders subsectors;

Shadow banking

- “credit intermediation involving entities and activities (fully or partially) outside the regular banking system” or non-bank credit intermediation in short.

Monitoring Universe of Non-bank Financial Intermediation: The experience of Banco de Portugal

March 18, 2019
I. From Financial sector to Shadow Banking

Overview

Financial Stability

- Credit intermediation
- Market liquidity
- Funding diversity
- Systemic risk
- Spillover effect
- Regulatory arbitrage

G20 recommendation

The Financial Stability Board assessed the evolution of shadow banking activities and related financial stability risks since the 2007-09 global financial crisis, and whether the post-crisis policies and monitoring efforts were adequate to identify and contain these risks.
I. From Financial sector to Shadow Banking

Latest developments

Monitoring aggregates 2017 (USD trillion)

Total Financial Assets
$382 trillion

MUNFI
$184 trillion

OFIs
$117 trillion

Narrow measure
$52 trillion

Source: Global Shadow Banking Monitoring Report 2018, FSB
Note: Total financial assets, MUNFI and OFIs are based on the 21+EA-Group, due to its broader sample. The narrow measure is based on data from the 29-Group, as the data from eight participating euro area jurisdictions are more granular than the aggregate euro area data from the European Central Bank (ECB).

“MUNFI’s share of total global financial assets increased for the sixth consecutive year (reaching 48.2%)”

“OFI assets grew faster than the assets of banks, insurance corporations and pension funds. OFI assets represent 30.5% of total global financial assets, the largest share OFIs have had on record”

“Investment funds continue to be the largest OFI sub-sector”

“The narrow measure of NBFI grew by 8.5%, to 51.6 USD trillion in 2017”
I. From Financial sector to Shadow Banking

Latest developments

Size of EU and euro area shadow banking system (investment funds and other financial institutions)

“A significant portion of assets held within the EU shadow banking system is concentrated in a few countries that function as international financial centers. These centers account for a larger share than those countries with a more domestically focused financial sector.”

“Investment funds represent about one-third of the total assets of the shadow banking system, while entities that come under the category of OFIs account for the remainder.”

Source: ECB and ESRB calculations (EU Shadow Banking Monitor, September 2018)
Notes: The continuous lines indicate annual growth rates based on changes in outstanding amounts. The dotted lines indicate annual growth rates based on transactions – i.e. excluding the impact of FX or other revaluations and statistical reclassifications.
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Portugal: Development of the financial sector

- Monetary financial institutions other than Central bank has kept his relative importance in the Portuguese financial structure
- Non-bank financial institutions have kept their weight around 30% over the years
- Central Bank has been increasing his relative importance in the last few years due to the Asset Purchase Program led by ESCB
II. MUNFI and Shadow Banking

- Portugal: Breakdown of financial assets of MUNFI institutions

- The expansion of loans in the MUNFI portfolio is justified by FVC engaged in securitisation operations, SPE and Holdings engaged in intragroup and external financing.
- Debt securities is the financial asset with more relative weight in the MUNFI portfolio, mainly supported by Insurance Corporations and Pension Funds.
II. MUNFI and Shadow Banking

Risk measures – ESRB indicators

**Maturity transformation**
- Short-term assets / Total assets
- Long-term assets / Short-term liabilities
- Long-term assets / Total assets
- Short-term liabilities / Short-term assets

**Liquidity transformation**
- Liquid assets / Total assets
- Short-term liabilities / Liquid assets
- Short-term assets / Short-term liabilities (current ratio)
- (Deposits with MFIs + Short-term debt holdings + Equity holdings) / NAV
- Liquidity mismatch: Liquid liabilities less liquid assets, as % of total assets

**Interconnectedness**
- Assets with OMFI counterpart / Total assets
- Liabilities with OMFI counterpart / Total assets

**Leverage**
- Leverage = Loans received / Total liabilities
- Leverage multiplier = Total assets / Equity

**Credit intermediation**
- Loans / Total assets
- “Credit assets” (loans and debt securities) / Total assets
II. MUNFI and Shadow Banking

Comparing credit intermediation in Portugal

Banks, FVC and FCLs have a very stable situation over time, with credit intermediation having an important weight in their activity.

The decreasing of credit intermediation ratio of IF over time is justified by disinvestment of bond IF in debt securities, mainly in the course of 2008 crisis.

Source: OECD Financial accounts data; FVC, IF and FCLs primary statistics data (Banco de Portugal)
Note: 1 Credit intermediation was measured as the ratio of credit assets over total assets. Credit assets comprise loans granted and holdings of debt securities.

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II. MUNFI and Shadow Banking

- Securitised loans and credit intermediation (FVC at end 2017)

Most of the countries under analysis have a loans to total assets ratio above 70% in 2017.

Ireland’s FVC are increasing diversity in business models, including nursing home receipts, royalties and life settlements.
II. MUNFI and Shadow Banking

➢ Interlinkages: A risk analysis framework of interconnectedness between banks and OFIFA

Source: Global Shadow Banking Monitoring Report 2017, FSB

High-level interconnectedness measures:

Source: Global Shadow Banking Monitoring Report 2017, FSB
II. MUNFI and Shadow Banking

Interlinkages: A risk analysis framework of interconnectedness between banks and OFIFA for Portugal

Banks

Interconnectedness risks for banks (% of bank assets)

Source: Financial accounts data for Portugal (Banco de Portugal)

OFIFA

Interconnectedness risks for OFIFA (% of OFIFA assets)

The interconnectedness between Banks and OFIFA is explained by a significant amount of securitised loans that took place in 2007-2011 period.
II. MUNFI and Shadow Banking

➢ Interlinkages: A risk analysis framework of interconnectedness between banks and OFIFA

Banks’ interconnectedness with OFIs as % of bank assets at end-2017

Source: Global Shadow Banking Monitoring Report 2018, FSB
Portugal data based on financial accounts: OFIFA includes data for investment funds
II. MUNFI and Shadow Banking

- **Interlinkages:** A risk analysis framework of interconnectedness between banks and OFIFA

OFIs' interconnectedness with banks as % of OFIs' assets at end-2017

Source: Global Shadow Banking Monitoring Report 2018, FSB

Portugal data based on financial accounts: OFIFA includes data for investment funds
II. MUNFI and Shadow Banking

- Total investment funds’ leverage: dispersion measures for European countries

Leverage in % of total liabilities

Source: ECB; Data for 22 European countries

Note 1: Adapted from Agresti and Brence (2017), Statistical work on shadow banking: development of new datasets and indicators for shadow banking.
II. MUNFI and Shadow Banking

Total investment funds’ liquidity: dispersion measures for European countries

- Liquid assets / Total assets

25% of the countries have a liquidity ratio below 50% over time.

Source: ECB; Data for 26 European countries

Note 1: Liquid assets includes currency and deposits, listed shares and investment funds shares

Note 2: Adapted from Agresti and Brence (2017), Statistical work on shadow banking: development of new datasets and indicators for shadow banking
II. MUNFI and Shadow Banking

➢ **Total investment funds’ maturity: dispersion measures for European countries**

**Maturity transformation**

Short-term assets / Total assets

75% of the countries have a maturity ratio below 20% over time

**Source:** ECB; Data for 26 European countries

**Note 1:** Short term assets includes deposits, loans <1 year, debt securities < 1 year.

**Note 2:** Adapted from Agresti and Brence (2017), Statistical work on shadow banking: development of new datasets and indicators for shadow banking.

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## II. MUNFI and Shadow Banking

- **FSB approach**: Narrow measure of shadow banking based in 5 economic functions

<table>
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<tr>
<th>Economic Function</th>
<th>Definition</th>
<th>Typical entity types</th>
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<tr>
<td>EF1</td>
<td>Management of collective investment vehicles with features that make them susceptible to runs</td>
<td>Fixed income funds, mixed funds, credit hedge funds, real estate funds</td>
</tr>
<tr>
<td>EF2</td>
<td>Loan provision that is dependent on short-term funding</td>
<td>Finance companies, leasing companies, factoring companies, consumer credit companies</td>
</tr>
<tr>
<td>EF3</td>
<td>Intermediation of market activities that is dependent on short-term funding or on secured funding of client assets</td>
<td>Broker-dealers</td>
</tr>
<tr>
<td>EF4</td>
<td>Facilitation of credit creation</td>
<td>Credit insurance companies, financial guarantors, monolines</td>
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<tr>
<td>EF5</td>
<td>Securitisation-based credit intermediation and funding of financial entities</td>
<td>Securitisation vehicles</td>
</tr>
</tbody>
</table>
II. MUNFI and Shadow Banking

- FSB approach: Moving from MUNFI to the narrow measure to Portugal (end of 2017)

Source: Primary statistics, BdP Statistics Department
Note 1: CFIMLs – Captive Financial Institutions and Money Leders
Note 2: Adapted from Global Shadow Banking Monitoring Report 2018, FSB
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- Challenges

- Monetary Policy Decision
- Financial Stability
- Cost-Benefit Analysis
- Report Burden

More detail

- From Shadow Banking to MUNFI
- Interconnectedness
- Financial sector
- Cross-border linkages
- OFIFA breakdown
- International cooperation
- New harmonized statistics to OFIFA sectors
- Primary statistics
- Cost-benefit analysis

Report Burden

Anacredit, SHS, CSDB

International cooperation
Thank you for your attention

Questions?