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Shadow banking: Some considerations for measurement purposes¹

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Abstract

There is an increasing interest in shadow banking and in the way it can be measured and monitored. This requires a better understanding of the information available at both the micro- and at the macro-level, taking as an example the "macro-mapping" exercise as recommended by the Financial Stability Board. While there are still several open issues in the development of a framework for shadow banking and its definition, some general methodological considerations might be made on the use of macro data for measurement purpose.

This paper provides an overview of important aspects that need to be taken into account in addressing measurements issues for the shadow banking focusing on the use of aggregate data. The paper is structured as follows. First, it presents the macro approach and advantages and the limitations in using aggregate data for shadow banking purposes. Second, in sections two and three it sets out how the determination of a perimeter of the shadow banking is strongly related from a micro perspective to a better understanding of the regulatory and the accounting framework. It also highlights how these aspects might pose additional challenges in using aggregate data for measurement purposes.

The paper concludes, in section four, by explaining how the usage of granular data and supervisory data might reduce some information gaps between the micro and macro approach.

Section 1: Macro measurement framework, availability of data and future challenges.

1. The size of the shadow banking system and its relative riskiness varies depending on the defined perimeter², whereby the identification of an appropriate definition and its implementation in an appropriate framework and within a defined perimeter are substantial and sensitive issues. The perimeter of shadow banking as broadly defined³, *credit intermediation performed outside the traditional banking system*, needs to be addressed under a dual perspective: the macro and micro one. The macro perspective is mostly utilised for

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² There are several definitions of shadow banking. For a summary table see *The Deloitte Shadow Banking Index: Shedding light on banking's shadows*, page 15 (www.deloitte.com/us/shadowbanking).

³ FSB definition. *Financial Stability Board (2011a), Shadow Banking: Scoping the Issues. A Background Note of the Financial Stability Board, 12 April.*

monitoring and macro-prudential policy purposes. For a quantitative assessment of the perimeter and risk indicators for shadow banking, some relevant work has been undertaken at international and European level⁴ making use of the aggregate statistical data from National Accounts⁵. From the micro prospective, shadow banking analysis implies to identify and analyse the risk characteristics of entities and activities that are de facto outside both the regulatory banking perimeter and out of scope of any supervisory requirements.

2. The FSB's broad definition of the shadow banking system refers to "*the system of credit intermediation that involves entities and activities outside the regular banking system*". More precisely, according to the FSB, "*this implies that credit intermediation takes place in an environment where prudential regulatory standards and supervisory oversight are either not applied or are applied to a materially lesser or different degree than is the case for regular banks engaged in similar activities*". In its 2013 shadow banking monitoring report, the FSB made a first attempt to narrow down the broad measure filtering out "non-bank financial activities that have no direct relation to credit intermediation (e.g. equity investment funds) or that are already prudentially consolidated into banking groups". In particular, the FSB excluded (i) OFIs that are consolidated into (domestic) banking groups; (ii) securitisation without credit risk transfer from the banking system (retained securitisation mainly used to create collateral for central banks' refinancing operations); and (iii) equity funds as they do not contribute directly to credit intermediation.
3. Based on the FSB broad definition of the shadow banking system⁶, a first broad proxy for the perimeter of shadow banking has been constructed at European level by adding the European System of Accounts (ESA 2010) sector comprising "non-monetary financial intermediaries other than insurance corporations and pension funds" (basically OFIs) to "MMFs". Accordingly, this metric provides for an assessment of the broad scale and trends of the shadow banking system, and enables to focus on more specific types of shadow banking entities, in so far as data are also available for the more granular classifications. The European Systemic Risk Board's Joint ATC-ASC Expert Group on Shadow Banking (JEGS)⁷ has further elaborated on the FSB⁸ framework proposing risk indicators constructed for the subsector of OFIs⁹. Based on these risk

⁴ See work of ESRB's Joint ATC-ASC Expert Group on Shadow Banking (JEGS) and FSB. At the European level, the JEGS whose mandate also comprises the development of a monitoring framework for the European shadow banking system. The expert group delegated this work to the Task Force on Risk Metrics made up of members of the expert group. This report presents the status quo of the on-going development of the approach and first results for the European Union. The ESRB's Joint ATC-ASC Expert Group on Shadow Banking (JEGS) was constituted in autumn 2013

⁵ ESRB's Joint ATC-ASC Expert Group on Shadow Banking (JEGS) the Task Force relied on financial sector data published by the ECB for the euro area.

⁶ The FSB takes a two-step approach in defining the shadow banking system: a wider definition for "casting the net wide" (*the system of credit intermediation that involves entities and activities outside the regular banking system*) and a narrower one for evaluating regulatory options (*focusing on those entities and activities raising systemic concerns owing to maturity/liquidity transformation and/or leverage and/or showing indications of regulatory arbitrage*). See FSB (2011a).

⁷ See above note 3.

⁸ Financial Stability Board <http://www.financialstabilityboard.org/>

⁹ ESRB's Joint ATC-ASC Expert Group on Shadow Banking (JEGS) the Task Force relied on financial sector data published by the ECB for the euro area and, with some limitations, for non-euro area EU countries. "ECB data" (as it will be referred to in this paper) includes monthly or quarterly balance sheet statistics for MFIs (including MMFs), non-MMF investment funds (by investment policy), and FVCs. These monetary statistics are collected in accordance with ECB statistical regulations which provide a harmonised approach to sector and instrument classifications. ECB statistics are also published on insurance corporations and pension funds under a short-term

indicators and also within the parts of the broad measure more directly linked to financial activities, distinctions has been made by the JEGS Task force with respect to the degree of “shadow banking” attributes and risks. Using the risk metrics framework, together with other available information, the Task Force carried out an assessment of the engagement of types of entities in shadow banking risks. However, the Task Force (JEGS) did not undertake any narrowing down to exclude entities consolidated in banking groups, as this micro approach suggested by EBA¹⁰ is still difficult to implement due to the absence of a complete list of entities not consolidated (as it will be clear later), also due to the data gaps, and different regulatory frameworks, as explained below.

4. While the broad definition and macro measure for shadow banking developed by the FSB and also utilised by the ESRB’s JEGS, might be a useful proxy for determining the size of shadow banking, there are several shortcomings in using aggregated data from National Accounts (European System of Accounts at European level)¹¹. First there is large part of assets in the non-bank financial sector that cannot be classified according to the ESA sub-sectors breakdowns (so called problem of residuals). Second national accounts data are based on residency framework, this implies the exclusion of the cross border component, aspect this that is becoming very relevant in the shadow banking. Third, there are still limitations in the coverage and breakdowns of some types of entities (i.e. other than funds and securitisation vehicles) and in the granularity of data for some instruments (in particular to allow a thorough analysis of liquidity and maturity transformation) in a European context¹². Fourth, while in the total OFIs sector, Investment fund (IFs) and FVCs are published by the ECB, since December 2009 and December 2010 respectively based on ECB regulations, data on Security and derivative dealers (SDDs), Financial corporations engaged in lending (FCLs), are not yet published. Furthermore, there is a residual part of the OFI sector that is not covered by detailed balance sheet statistics. This “residual” is significant and it is estimated to be 44% of OFIs. While some work has been done in LU in classifying the entities, considering that the largest share in terms of OFIs’ assets sub-categories is observed for Specialised Financial Corporations (other OFIs financial intermediaries)¹³, additional work needs to be done also in the other member states were large share of residual is observed.

approach based on the best available (mainly supervisory) national sources. Almost all of these ECB data used are publicly available, in many cases also at the national level, while some are not published. For OFIs other than investment funds and FVCs, only incomplete and unpublished information are collected for securities and derivatives dealers (SDDs) and financial corporations engaged in lending (FCLs). The remaining part of the OFI sector is uncovered by detailed balance sheet statistics

¹⁰ See following section for the development of shadow banking entities consolidated in the banking group .

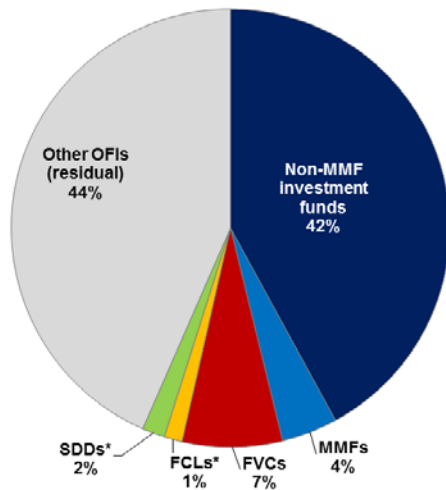
¹¹ The European System of National and Regional Accounts (ESA 2010) is the newest internationally compatible EU accounting framework for a systematic and detailed description of an economy. It will be implemented as from September 2014; from that date onwards the data transmission from Member States to Eurostat will follow ESA 2010 rules. The ESA 2010 was published in the Official Journal as Annex A of Regulation (EU) No 549/2013. The present document contains the complete text of Annex A of Regulation 549/2013 and offers several additional features like an index, hyperlinks and an easy to read two-column layout.

<http://ec.europa.eu/eurostat/web/products-manuals-and-guidelines/-/KS-02-13-269>

¹² An assessment of data gaps was also made by the JEGS.

¹³ According to ESA 2010, Specialised financial corporations are financial intermediaries, for example: (a) venture and development capital companies; (b) export/import financing companies; or c) financial intermediaries which acquire deposits and/or close substitutes for deposits, or incur loans vis-à-vis monetary financial institutions only; these financial intermediaries cover also central counterparty clearing houses (CCPs) carrying out inter-MFI repurchase agreement transactions

Chart 1: Breakdown of euro area investment funds and OFIs by type, Q1 2015 total assets



Source: ECB

Note: The "residual" represents the part of the euro area OFI sector for which ECB monetary data on balance sheets are not collected. Data for the total OFI sector are sourced from flow of funds statistics. () denotes incomplete coverage in the euro area.¹⁴*

- Another reason, to use aggregate data for the macro assessment only with some caution, is that the statistical breakdown is sector and domestic residency based and not based on a risk framework. National account data are not cross border consolidated, while shadow banking has a relevant component in transferring the risk cross borders and the on-going statistical framework is not adjusted for that.¹⁵ Finally, the framework constructed with the aggregated data still has relevant data gaps for the construction of risk metrics, as concluded by an ESRB assessment¹⁶ of the shadow banking data gaps. According to the ESRB analysis data on some activities particularly on liquidity transformation are still missing. Data covering S.126 (Financial auxiliaries) and S.127 (Captive financial institutions and money lenders), SDDs and FCLs are not publishable for the euro area¹⁷. Finally, as the regulatory regime plays an important role in

¹⁴ Part of the residual indeed might be now counted in the Specialised financial corporations as some other EU countries like NL where Special Financial Institutions (SFIs), as part of the Captive financial Institutions and money lenders (S.127), represent an important feature of the remaining old OFI sector (according to ESA95 named S123).

¹⁵ To this aim, the BIS work on national global consolidation is working on that. Arriving at a proper monitoring and measuring of cross-border exposures of financial and non-financial corporations, including foreign exchange and derivatives exposures, requires the measurement of financial positions and transactions on a globally consolidated basis. This approach would need to complement, and be articulated with, the SNA framework. That necessitates the combination of existing business accounting, supervisory and statistical standards and practices. BIS; Consolidation and corporate groups: an overview of methodological and practical issues *Prepared by a Task Force of the Inter-Agency Group on Economic and Financial Statistics Forthcoming October 2015* <https://www.bis.org/ifc/publ/iagrefdoc-oct15.pdf>

¹⁶ ESRB assessment on shadow banking is expected to be published in the 2016.

¹⁷ Under the "short-term approach", that is the basis of data available at the national level, data on Security and derivative dealers (SDDs), and Financial corporations engaged in lending (FCLs), are collected covering for the SDDs only the main asset and liability aggregates and no further additional breakdown is reported to the ECB. With the respect to the FCLs, the data are broadly available the following items: detailed breakdowns for assets (i.e. loans counterpart sector) and liabilities. For the other OFIs (including Financial Holdings Corporations, FHCs) only the total assets/liabilities are collected.

ensuring consistency in the definition and quality of the data, there are still different regimes among the euro area, which imply not harmonized data.

In conclusion, while the use of aggregated data might be useful for macro-prudential policy and for monitoring purposes, there are still some limitations and shortcomings in making use of these data. Furthermore, definition and perimeter of shadow banking will need to take into account to the regulatory framework and consolidation of the entities to be consistent with the micro approach, these will pose additional challenges in the use of aggregated data for measurement purposes, as it will be clear in the next section.

Section 2: Perimeter of shadow banking: the micro measurement

6. The perimeter and the definition of shadow banking involve also a micro dimension, mostly based on the regulatory regimes of the different entities. While from a macro perspective, the FSB and JEGS exercises required a mapping of the aggregated data with the list of entities and activities "*that undertake credit intermediation outside the regular banking system*", from a micro perspective, the mapping of shadow banking implies to identify and specify the criteria according by which a credit institution is defined, and to list which entities and activities are *de facto* outside both the regulatory banking perimeter and out of scope of any supervisory requirements¹⁸. The aim of this section is to highlight how the available aggregated statistical data might not be fitted for this micro approach.
7. One relevant on-going data initiative on shadow banking at the micro level is the EBA collection of data on banking large exposures to shadow banking. In this regard, EBA noted in its Guidelines¹⁹ that, in the absence of a definition in the CRR of the terms 'shadow banking entities', 'banking activities' and 'regulated framework', for the purposes of the Guidelines, shadow banking entities should be based on the two following criteria, : 1) entities that carry out credit intermediation activities, defined as bank-like activities involving maturity transformation, liquidity transformation, leverage, credit risk transfer or similar activities; and 2) entities that are not within the scope of prudential consolidation²⁰ nor subject to solo prudential requirements under specified EU legislation (or equivalent third country legal frameworks). Furthermore, EBA also excludes from the scope of the definition entities, which are subject to an appropriate and sufficiently robust prudential framework, considered to be equivalent to that applied in the Union. In particular, the Guidelines make clear that entities carrying out one or more of the activities listed in the *Annex 1 of the CRD shall* ²¹be

¹⁸ From a micro-prudential perspective, shadow banks are generally not subject to prudential regulation (or are not subject to the same standards of prudential regulation as core regulated entities such as institutions), do not provide access to deposit guarantee schemes to investors, and do not have access to central bank liquidity. See EBA. Draft EBA Guidelines on limits on exposures to shadow banking entities which carry out banking activities outside a regulated framework under Article 395 para. 2 Regulation (EU) No. 575/2013 [https://www.eba.europa.eu/documents/10180/1019894/EBA+CP+2015+06+\(CP+on+GL+on+shadow+Banking\).pdf](https://www.eba.europa.eu/documents/10180/1019894/EBA+CP+2015+06+(CP+on+GL+on+shadow+Banking).pdf)

¹⁹ Guidelines are the ones "*Proposing criteria to set limits on EU institutions' exposures to shadow banking entities*"

²⁰ This criterion is still being debated at the international level mostly due to the different regulatory settings and the data gaps

²¹ See Annex 1 of the CRD ,DIRECTIVE 2013/36/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC

<http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32013L0036&from=EN>

automatically regarded as carrying out credit intermediation activities. The second part of the definition of shadow banking entities for the purposes of the Guidelines exclude certain entities that are subject to an appropriate and sufficiently robust prudential framework. As regards investment funds, notwithstanding the regulatory, EBA proposes that all money market funds (MMFs), regardless of whether they operate under the rules of Directive 2009/65/EC²², should fall within the scope of the definition of shadow banking entities for the purposes of these Guidelines²³.

8. Further work on shadow banking undertaken by the EBA mostly focuses on the interpretation of the term 'credit institution' in the Capital Requirements Regulation (CRR) and the prudential treatment of those entities established in the Union which carry on credit intermediation but are not 'credit institutions'. A 'credit institution' is defined in the CRR as 'an undertaking the business of which is to take deposits or other repayable funds from the public and to grant credits for its own account'. In the report²⁴, the EBA observes that there is a degree of variation across EU Member States as to the interpretation of the term 'credit institution' and also observes that there is wide variation between the Member States as to the prudential treatment of entities established in the Union which carry on bank-like activities within the scope of credit intermediation but are not subject to solo prudential requirements under relevant Union measures²⁵. Finally, the EBA observes that any future work in relation to the shadow banking sector should take account of the need to ensure that the perimeter of credit institutions is clearly defined. And this is line with the sector classification of the National accounts.
9. The EBA in setting the above tentative definition of shadow banking entities and in linking the shadow banking sector with the perimeter of credit institutions, is initiating a micro framework that might imply some differences with the current macro framework and might pose furthermore challenges to the use of the macro data for the measurement purposes and for comparability of the data. In first instance, the EBA takes the stance that if entities are consolidated in credit institutions, their assets should be excluded from shadow banking, while the aggregate data²⁶ used for the macro risk assessment (perimeter and indicators) do not distinguish the two components, consolidated and unconsolidated parts. Second, this criterion has not yet been agreed at international level and data gaps show the difficulty in building up the perimeter and risk indicators for the unconsolidated part. Third, regulatory requirements for shadow banking entities prudentially consolidated within banking groups might be different and less stringent than for banks, reason this for potentially not excluding these entities from the shadow banking. Furthermore in order to exclude entities subject to an appropriate and sufficiently robust prudential framework, more comparability between regulatory requirements is required. And in order to overcome the present challenges to ensure more comparability, on-going exercises are in place at the Basel Committee on Banking Supervision (BCBS) and at the European Banking Authority (EBA), which aim at ensuring the consistency of the consolidation perimeter of banks' balance sheets. Both initiatives BCBS and EBA might have implications for

²² UCITS – Undertakings for the collective investment in transferable securities

²³ The inclusion of the MMF in the shadow banking is similar to the the macro approach of ESRB JEGS and FSB.

²⁴ EBA Report to the European Commission on the perimeter of credit institutionse established in the *Member States*

<https://www.eba.europa.eu/documents/10180/534414/2014+11+27+-EBA+Report+-+Credit+institutions.pdf>

²⁵ The EBA observes that there may be merit in the Commission conducting or commissioning further analysis of the sector to determine whether it would be appropriate to put forward any Union legislative proposals with respect to some or all such entities

²⁶ See note 5 on the use of national accounts data.

the macro prospective . Fourth, as there is not yet an agreements on the list of shadow banking entities that are deconsolidated from accounting principle and not captured in the regulatory framework according to the Basel and accounting framework²⁷, divergences among the jurisdictions makes difficult to use the aggregated data for comparative purposes. In conclusion, while the EBA micro-prudential criteria might pose additional challenges to the measurement of shadow banking with the available macro data, as the aggregate data of OFIs are available without any distinguish of the unconsolidated part and on the regulatory framework among the entities. In this respect, the use of granular data from supervisory sources for shadow banking purposes might reduce the information gap, between the micro and macro approach.

Section 3: The accounting perimeter and the consequences for the shadow banking

10. The definition of the perimeter of shadow banking from a micro prospective, while still being under development, appears in any case to heavily depend on the regulatory setting. In most jurisdictions the starting point for the determination of the regulatory scope of consolidation is the accounting scope; adjustments are then made to accounting scope to arrive at the regulatory scope²⁸, the link between the two scopes of consolidation is important. Hence, understanding the banking regulatory scope²⁹, depends to a large extent on having an understanding of the accounting scope. The aim of this section is to investigate whether the application of new IFRSs 10³⁰ (*Consolidated Financial Statements*) and 12³¹ (*Disclosure of Interests in Other Entities*) might imply some potential changes in the perimeter of shadow banking. In particular, this section in exhibiting how the accounting consolidation scope and disclosure information might represent a challenge in measurement of the shadow banking perimeter and how these aspects might not be captured by the aggregate statistics.
11. IFRS 10 (which replaces IAS 27)³² establishes new principles for the presentation and preparation of consolidated financial statements when an entity controls one or more other entities. The

²⁷ See next section

²⁸ As mentioned above, the Basel Committee's work points out there are still differences between the accounting and regulatory perimeter as well as in the definition of some legal commercial entities, and activities should rather be ascribed to the financial institutions performing them, and thus subject to consolidation, rather than as a commercial entity and consequently excluded. Consequently it is worth understanding how these differences might affect the shadow banking measurements.

²⁹ As it has been underlined by EBA work on the perimeter of shadow banking, this depends also on the way it is defined the perimeter of banking institutions.

³⁰ IFRS 10 *Consolidated Financial Statements* outlines the requirements for the preparation and presentation of consolidated financial statements, requiring entities to consolidate entities it controls. Control requires exposure or rights to variable returns and the ability to affect those returns through power over an investee.

IFRS 10 was issued in May 2011 and applies to annual periods beginning on or after 1 January 2013.

³¹ IFRS 12 *Disclosure of Interests in Other Entities* is a consolidated disclosure standard requiring a wide range of disclosures about an entity's interests in subsidiaries, joint arrangements, associates and unconsolidated 'structured entities'. Disclosures are presented as a series of objectives, with detailed guidance on satisfying those objectives. IFRS 12 was issued in May 2011 and applies to annual periods beginning on or after 1 January 2013.

³² International Accounting Standards Board (IASB) adopted IAS 27 Consolidated Financial Statements and Accounting for Investments in Subsidiaries, which had originally been issued by the International Accounting Standards Committee in April 1989. IAS 27 replaced most of IAS 3 Consolidated Financial Statements (issued in June 1976). In December 2003, the IASB amended and renamed IAS 27 with a new title—Consolidated and

IFRS 10³³ defines the principle of control and establishes control as the basis for determining which entities are consolidated in the consolidated financial Statements. The IFRS also sets out the accounting requirements for the preparation of consolidated financial statements. New definition of control is based on: "An investor controls an investee when it is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee". In particular, three are the elements of the definition of control (IFRS 10.7), 1) power over an investee 2) exposure, or rights, to variable returns from an investee and 3) ability to use power to affect the reporting entity's returns.

12. One important consequence is that, where a bank has a risk exposure (eg reputational risk) but no power to direct the activities of the entity, it is not consolidated for accounting purposes (although separate disclosure requirements exist). While some first impact assessment studies show that some banking groups will not have a significant change in the banking consolidation perimeter, initial concerns started to emerge considering that in general terms, the application of the IFRS 10 might imply a reduction of the accounting perimeter. As matter of fact, the new IFRS 10 principle is only based on control and the ability to control relevant activities and replace the SIC 12 "risks and rewards" approach³⁴. This will imply that the deconsolidation of the some entities might reduce the banking accounting perimeter having potential implications on shadow banking³⁵. Furthermore, different applications of the IFRs at European level among the Member states might have potential consequence in the in the cross comparability of the banking financial information³⁶
13. According to the IFRS 12, an entity shall decide, in the light of its circumstances, how much detail it provides to satisfy the information needs of users, how much emphasis it places on different aspects of the requirements and how it aggregates the information, also for the unconsolidated entities. The entity shall present the disclosures in a manner that clearly explains to users of financial statements the nature and extent of its interests in those other entities. However, it will be not requested the disclosure of the name of the entity, creating areas of

Separate Financial Statements. The amended IAS 27 also incorporated the guidance contained in two related Interpretations (SIC-12 Consolidation-Special Purpose Entities and SIC-33 Consolidation and Equity Method—Potential Voting Rights and Allocation of Ownership Interests).

³³ Comparing IFRS 10 with the standard that it replaces (IAS 27), it should be noted that: It establishes a single control model which applies to all entities, ie "traditional entities" as well as "structured entities" and it substantially converges with the US GAAP approach to consolidation, in particular because, for structured entities, it is no longer based on risks and rewards but rather on the combined assessment of control and returns.

³⁴ SIC takes a broader view . It requires and evaluation of every entity for the controlling party.

³⁵ In this line, is the opinion of Banca Italia, according to which the new IFRS 10 replacing part the IAS 27 and SIC 12 might imply for a reduction the accounting perimeter. See also C. Calandrini *Consolidated Financial statements: fu vera gloria? IFRS 10, the key issues of accounting and disclosure standards*. Bancaria n172013 IFS 10 Rome 2013

³⁶ Some first analysis in the work of JEGR on the usage of the IFRS and the use of FINREP in the European countries³⁶, have pointed to some different application among the countries. As matter of fact, the use IAS/IFRS as the basis for prudential reporting provides scope for further alignment of supervisory and financial reporting and ultimately for harmonization of the prudential reporting frameworks within the European Union, such as to avoid divergences and increase clarity in the reporting. The eventual further harmonization might imply some reduction in accounting and regulatory arbitrage among the European countries . As in some jurisdiction the regulatory scope might be in line with the accounting scope³⁶. Their different applications might have potential consequence in the opacity of the information in the banking financial intermediation and in the in the cross comparability also of the shadow banking activities. Please see the work of the Joint Expert Group on Reconciliation of credit institutions' statistical and supervisory reporting requirements MFI balance sheet and interest rate statistics and EBA guidelines on FINREP and COREP/large exposures, ECB may 2012 JEGR)

<https://www.ecb.europa.eu/pub/pdf/other/mfibalancesheetintereststatisticsguidelines201203en.pdf>

differences between the accounting and the Basel recommendations. In nutshell, according to the IFRS 12 it will be possible not to show the list of unconsolidated entities, but only their aggregation according to their industry level or nature of activity, without any specific list of the entities left out of the accounting scope³⁷.

14. In conclusion, reducing the information disclosures and increasing the entities outside the accounting scope and potentially not captured by regulatory frameworks, might imply some further reduction of information not captured by the available aggregate statistics. While it is still not clear cut how these new standards will in principle affects the current statistical classification, aggregated data will not be able to capture the changes of the allocation of entities between the accounting and regulatory perimeter. In this respect, also a recent ECB survey³⁸ failed to assess the quantitative difference between the accounting and regulatory perimeter with the aggregated data.

BOX: Differences of accounting and regulatory perimeter: consequences for the shadow banking

According to the on-going work of Basel Committee's Macprudential Supervision Group (MPG) "Scope of consolidation"³⁹, it can be observed that there are hundreds of legal entities that are deconsolidated for regulatory capital purposes but not for accounting purposes⁴⁰. Furthermore, there are two key relevant aspects in the Basel Committee's standards on scope of consolidation: (1) the types of entities that are required to be consolidated for regulatory purposes (referred here as the "covered entities"); and (2) the "threshold of consolidation". While Committee's standards list the

³⁷ Some information can be obtained from Paragraph 16 of the Basel Committee's composition of capital disclosure standards according to which banks are required to disclose the list the legal entities that are included within accounting scope of consolidation but excluded from the regulatory scope of consolidation. <http://www.bis.org/publ/bcbs221.pdf>. In fact, according to Paragraph 16 of the Basel Committee's composition of capital disclosure standards of Inadequate implementation of public disclosure requirements includes the following requirement: "banks are required to disclose the list of the legal entities that are included within accounting scope of consolidation but excluded from the regulatory scope of consolidation. The above disclosure requirements could be likely produce a rich set of granular information that could be used to analyse the differences in the scopes of consolidation for accounting and regulatory purposes. However, it seems that many jurisdictions have not yet implemented the requirements.

³⁸ WGMFS survey on the Survey questionnaire on Shadow Banking entities: accounting versus regulatory perimeter . Frankfurt 2015

³⁹ Basel the Macprudential Supervision Group (MPG) is looking into the divergency of scope of prudential consolidation and the accounting standard sets some relevant conclusions that can help us to understand the issue. In particular See FSB" Strengthening regulation of the shadow banking system "*The BCBS also continues to work on reviewing the scope of consolidation for prudential regulatory purposes with a view to developing guidance for public consultation by end-2015 to ensure that all banks' activities, including interaction with the shadow banking system, are appropriately captured in prudential regimes.*

<http://www.financialstabilityboard.org/wp-content/uploads/Overview-of-Progress-in-the-Implementation-of-the-G20-Recommendations-for-Strengthening-Financial-Stability.pdf>

⁴⁰ The majority of these entities seem to be various types of securitisation vehicles. Whether securitisation vehicles are deconsolidated from the regulatory balance sheet could have a material effect on the consistent application of these other standards across jurisdictions is still under investigation

entities to be consolidated within the regulatory scope⁴¹, at same time the Basel framework endorse the deconsolidation of commercial entities (or *non-financial entities*)⁴². For example, some of the following types of entities were listed, by at least some of the G-SIBs, being excluded from the regulatory scope of consolidation: i) Asset management companies and investment vehicles, including venture capital companies, bank employee pension/investment management. ii) Property management companies (including some that appear to be managing properties that have been repossessed by the bank and others that act as property leasing companies). iii) Trade finance companies and factoring companies. iv) Stockbroking companies and entities providing investment banking services. However, according to the Basel paper while these results might have some implication for the identifying shadow banking entities, as these will be unregulated entities, it is worth mentioning that is missing at moment an exhaustive comparative study of the different entities consolidated according the two perimeters in the EU jurisdictions. Also the work of the Joint Expert Group on Reconciliation of credit institutions' statistical and supervisory reporting requirements (JEGR)⁴³ is following the differences consolidation perimeter in the European law⁴⁴ and the accounting perimeter⁴⁵. However also in this analysis is missing at moment an exhaustive comparative study of the different entities consolidated according the two perimeters.⁴⁶ In conclusion the Basel paper show a large variety of entities included in the accounting scope of consolidation and not in the banking

⁴¹ Entities to be consolidated within the regulatory scope are Banking entities; Securities entities and other financial entities (as entities involved in "financial leasing, issuing credit cards, portfolio management, investment advisory, custodial and safekeeping services and other similar activities that are ancillary to the business of banking").

⁴² However, the Macroprudential Supervision Group (MPG) "Scope of consolidation" is still investigating whether some legal commercial entities and activities should rather be treated as a financial institution, and subject to consolidation, rather than as a commercial entity and consequently excluded.

⁴³ <https://www.ecb.europa.eu/pub/pdf/other/mfibalancesheetinterestratesstatisticsebaguidelines201405en.pdf>

MFI balance sheet and interest rate statistics, securities holdings and implementing technical standards on supervisory reporting ECB 2014 may.

⁴⁴ REGULATION (EU) No 575/2013 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012

⁴⁵ As matter of fact, the approach to prudential consolidation foreseen in the CRR is defined in Article 18, 'Methods of prudential consolidation', require that the institutions that have reporting requirements on a consolidated basis shall carry out a full consolidation of all institutions (credit institutions and investments firm) and financial institutions that are its subsidiaries, or subsidiaries of the same (mixed) parent financial holding company. Article 18(2) of the CRR adds that the business of undertakings providing ancillary banking services and asset management companies should also be consolidated

⁴⁶ In practice, for capital requirements purposes, parent credit institutions (or parent financial holding companies) consolidate financial institutions, but not insurance undertakings neither non-financial subsidiaries. Consequently, holdings in these unconsolidated undertakings have to be deducted from Common Equity Tier 1 capital, to ensure that the bank is not bolstering its own capital with capital that is also used to support the risks of an insurance subsidiary. Furthermore, supervisory authorities may require information about these subsidiaries when deemed relevant for the purpose of supervising subsidiaries which are credit institutions (CRD Art. 122(1)), in particular in the context of Directive 2002/87/EC on the supplementary supervision of credit institutions, insurance undertakings and investment firms in a financial conglomerate. In addition, for prudential purposes and for the calculation of capital requirements, a credit institution may be required to consolidate the business of a subsidiary of an entity which is not itself included in the group consolidation – for example, an investment firm that is a subsidiary of an insurance corporation (not consolidated) within a group headed by a credit institution. Finally, according to the EU law CRD IV (Directive 2013/36/EU of the European Parliament), the regulatory scope of consolidation includes all financial entities that are majority owned or controlled by banks (with the exception of insurance companies) and these ones are subject to the same prudential requirements that apply to banks, whereas non-financial commercial entities will be excluded

regulatory scope. Result this that need to be taken in consideration for the measurement of the shadow banking according to the micro approach.

Section 4: Different use of granular data⁴⁷.

15. While the use of aggregated data points to some limitations for the measurement of shadow banking also for micro perspective, the importance and potential usefulness of granular and supervisory data has started to be stressed by the international community. The aim of this section is to present the ongoing work in the area and to point to more granular data collection also for the monitoring of shadow banking. Recently the Office Financial Research (OFR)⁴⁸ and the FED are undertaking joint projects aiming in understanding the uses of short term funding and related markets (broker –dealers), linking quarterly data with more granular and frequent data sources and increasing coverage of financial activity represented. Furthermore, some central banks⁴⁹ have already started to employ granular data on financial vehicle corporations (FVCs), money market funds (MMFs) and investment funds (IFs). This bottom-up approach facilitates the classification of entities engaged in shadow banking activities – any top-down definition inevitably excludes entities that engage in shadow banking and/or includes some that do not. The use of granular data sheds light on categories, such as hedge funds and exchange-traded funds (ETFs), where there is some debate as to whether they undertake these activities. These results show that shadow banking activity does not fit neatly into the broad categories of published statistical data, as also was commented in the above sections⁵⁰.
16. An initial exercise has recently also undertaken making use of granular information on securitisations in Italy, as a large database is available on granular data. The Bank of Italy has historically carried out a close oversight on securitisation transactions by means of different instruments and at present, on supervises servicers and the intermediaries involved in the transactions (originators, swap counterparties, liquidity providers, etc.)⁵¹. The exercise undertaken in Italy consisted in constructing some risk indicators only for the un-retained part.

⁴⁷ Granular data are considered here for the purpose of the paper individual data

⁴⁸ Pozsar, Z. (2014), 'Shadow banking: The Money View', Office of Financial Research Working Paper, No. 14/4.

⁴⁹ As for example Bank of Ireland

<https://www.centralbank.ie/publications/Documents/Measuring%20Shadow%20Banking%20in%20Ireland%20using%20Granular%20Data.pdf>

⁵⁰ Brian Godfrey and Brian Golden " Measuring Shadow Banking in Ireland using Granular Data" Bank of Ireland Quarterly Bulletin 04 / October 12

<https://www.centralbank.ie/publications/Documents/Measuring%20Shadow%20Banking%20in%20Ireland%20using%20Granular%20Data.pdf>

⁵¹ In Italy, the securitization transactions are regulated by the Italian Securitisation Law, enacted in 1999 (L. 130/99)⁵¹. The securitization, Italian structures have only some of the typical characteristics of "shadow banking" (namely they generate non-deposit funded credit, but much less leverage, liquidity and maturity transformation), due to some form of regulation. Furthermore, the Italian legal and supervisory framework has discouraged (though not eliminated) the issuing of the most complex structures, like synthetic CDOs, through the Italian SPVs. At present, the Bank of Italy exerts supervision on servicers (banks or financial intermediaries enrolled in the "Special Register ex art. 107 TUB), which have the legislative duty to check the compliance of each single securitisation with the provisions of the Securitisation Law and with the contents of the prospectus. More importantly, Sivs and Conduits are included in the consolidated accounts of the Italian banks when there is a "legal" or a "substantial" control (according to the accounting principle IAS 27).

In particular, in Italy much of the securitization activity following the crisis has been in retained securitizations. Such a securitization⁵², which is not traded between market participants, might be unlikely to foster risks to financial stability and for these reasons in general are to be excluded from the narrow perimeter⁵³. Results show some remarkable differences between the risk indicators obtained from the total of the FVCs and the ones with granular data: liquidity and maturity indicators points to some lower quality for the un-retained part⁵⁴. In conclusion, granular data might complete and add the information content of the risk assessment made with aggregated data on the shadow banking.

17. Also additional granular data for the OFI sector, as for example the leverage in the investment fund sector coming from the AIFMD data base, will lead to enhanced data availability from this year onwards, which should improve the monitoring and facilitate empirical work in the investment fund sector with a view to monitoring systemic risks. In particular, limits on the use of leverage are in the UCITS Directive and the AIFMD, where asset managers have to report the leverage of the funds they manage. In both cases, while data on leverage in the investment fund sector are not collected and not yet readily in the official statistics, these will be available in the near future also at micro level. Finally also addition micro data available for the SSM, might shed some light on the shadow banking entities consolidated and the related prudential requirements. Further work in this area is very much encouraged.

Conclusions:

Non- bank financial intermediation and shadow banking is a complex phenomenon from both a micro and a macro measurement prospective. From a macro prospective, the use of aggregate data, the lack of focus of regulatory regime and lack of data on assets consolidation in the banking sector might imply some divergences between the micro and macro approach with potential consequences on some differences in risk measurements. From micro prospective the application of accounting standard and the regulatory framework matters for the determination of the relative size of shadow banking, while the current macro data might not be able to capture these aspects. As the two dimensions (micro and macro) and the relative measure of shadow banking might diverge, the paper suggests as a way forward, to integrate the metrics constructed with aggregated statistical data with the one using granular data. These data might help to better use the information content of the macro framework and overcome some of the limitations in using aggregated data that have been here addressed.

⁵² See ECB regulaton https://www.ecb.europa.eu/ecb/legal/pdf/en_02013r1075-20131127-en.pdf

⁵³In particular, SPV information are collected and provided by SPV divided by each single operation of securitisation. In order to calculate data for the narrow perimeter of FVC, we subtracted from the entire set of securitization those operations whose securities are held completely (self-securitisation) or partly (not permitting derecognition according to IAS 39 principles at individual bank level).

⁵⁴ Additional analysis has been undertaken in terms of outstanding amounts, additional information can be obtained from the ratio of retained debt securities issued and the total in terms of flow. Information expressed in terms of flow will indicate the size of securitization which will be traded between market participants at later stage. In term of flows, results show that Interconnection and liquidity transformation are larger for the FVCs in terms of flow for the not-retained part compared to the respective ones constructed using the outstanding amounts

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Irving Fisher Committee on
Central Bank Statistics

BANK FOR INTERNATIONAL SETTLEMENTS

IFC workshop on *"Combining micro and macro statistical data for financial stability analysis. Experiences, opportunities and challenges"*

Warsaw, Poland, 14-15 December 2015

Shadow banking: Some considerations for measurement purposes¹

Anna Maria Agresti, European Central Bank

¹ This presentation was prepared for the meeting. The views expressed are those of the author and do not necessarily reflect the views of the BIS or the central banks and other institutions represented at the meeting.



EUROPEAN CENTRAL BANK

EUROSYSTEM

Anna Agresti
DG-Statistics/MFS

***SHADOW BANKING:
SOME CONSIDERATIONS FOR
MEASUREMENT PURPOSES***

*Irving Fisher Committee Workshop –NBP
Warsaw, 14–15 December 2015*

Overview of presentation

1 Introduction

2 Macro measurement of Shadow banking

3 Micro approach

4 Way forward and conclusions

Introduction

- “Macro-mapping” exercise as recommended by the Financial Stability Board is the most commonly applied framework
- FSB macro methodological framework broadly endorsed at EU level by European Systemic Risk Board (ESRB) Joint Expert Group on Shadow Banking (JEGS) for use of aggregated data
- A relevant issue is the consolidation of shadow banking entities within banking groups
- Other initiatives on shadow banking stress the micro aspects for measurement purpose
- Data gaps and limitation of aggregated data for risk assessment
- Granular data might reduce the information gap

Macro measurement: FSB approach

Practical two-step approach of FSB for monitoring the Shadow Banking System (SBS), implementation (so far) mainly entities-based:

1. Broad measure:

- *“System of credit intermediation that involves entities and activities outside the regular banking system”*
- Approximated by the financial assets of the **Other Financial Intermediaries (OFIs)** sector **plus Money Market Funds (MMFs)**

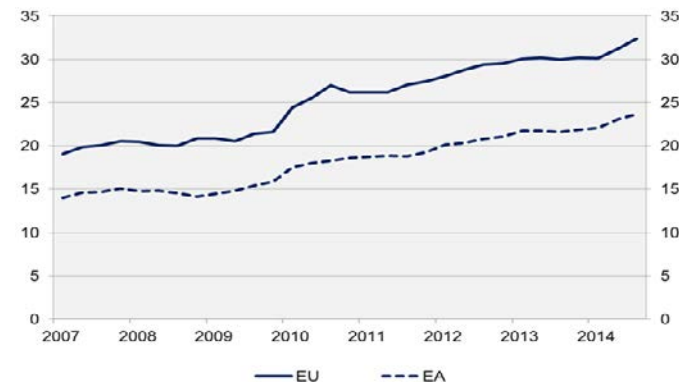
2. Narrowing down the broad measure:

- *“A system of credit intermediation that involves entities and activities outside the regular banking system, and raises i) systemic risk concerns, in particular by maturity/liquidity transformation, leverage and flawed credit risk transfer, and/or ii) regulatory arbitrage concerns”*
- **Narrowing down the broad measure by focusing on parts that potentially pose systemic risks; preliminary attempt in 2013 report by filtering out:**
 - Self-securitisation*
 - Entities not involved in credit intermediation*
 - Entities prudentially consolidated into a banking group*

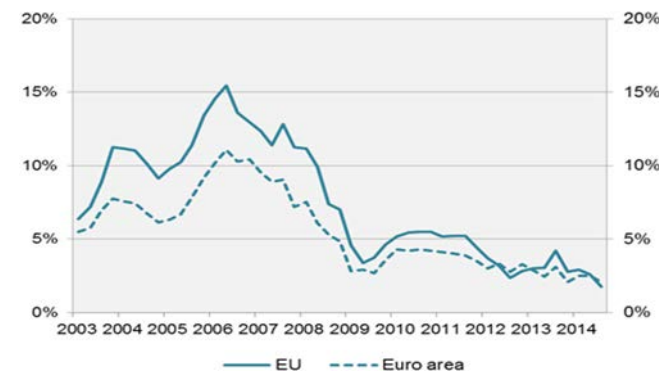
Macro measurement: JEGS Metrics task force (1/2)

- Comprises the **OFI sector plus MMFs**
- **EU-wide** is estimated to amount total assets to **€34 trillion** (in Q4 2014)
- **Euro area** estimate is **€24 trillion**
- Outstanding amounts nearly **tripled** in the last decade. The **upward trend** goes on in EU and euro area
- **36%** of the EU financial sector
- JEGS Task Force decided **not to apply** the FSB criterion for narrowing down the focus on risks

EU and euro area broad measure, EUR trillion



Broad measure annual growth rates, per cent

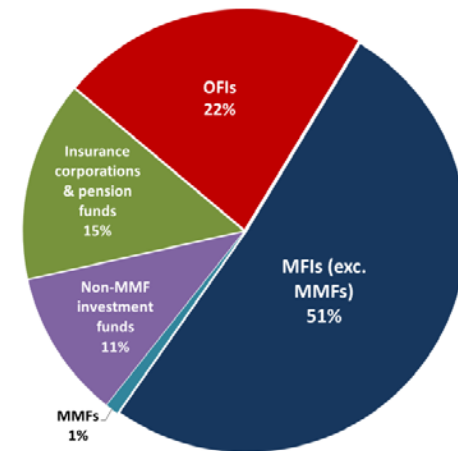


Growth rates based on financial transactions, i.e. excluding impact of revaluations or reclassifications.

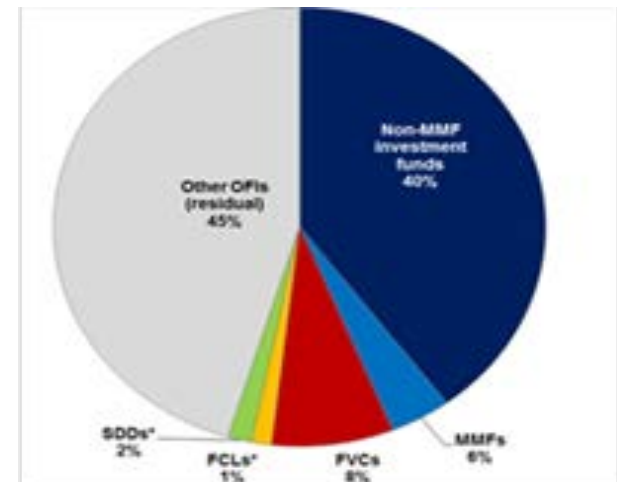
Macro measurement: JEGS Metrics Data sources (2/2)

- **Flow of funds** data from national accounts
- Monetary statistics under **ECB Regulations**:
 - MMFs (from MFI data)
 - Non-MMF Investment funds
 - Financial Vehicle Corporations (FVCs)
- Statistics collected under **ECB Guideline** (unpublished, incomplete coverage)
 - Securities Dealers (SDDs)
 - Financial Corporations engaged in Lending (FCLs) – Factoring, Leasing, etc.
- Relevance of “**residual**” where no further breakdowns readily available ... also affected by statistical changes to OFI sector
- Alternative sources: **Commercial data** providers, public sources
- **Ad hoc surveys** (e.g. SFT survey)

EU financial sector, Q4 2014



Euro area OFIs and MMFs, Q4 2014



Macro measurement: Methodological and data issues

- **Excluding all consolidated entities in banking groups** may be subject to criticism:
 - regulatory regime may not be so stringent compared to “regular” banking system and national differences regulation and licences in some cases may not fall within the scope of credit institutions
- **Data Issues:**
 - The “**residual**”- remaining part of OFI sector not broken down by detailed balance sheet statistics- is significant and it is estimated to be **37%** of OFIs.
 - **Aggregated data** are for the macro assessment and are **not based on risk framework**; National Accounts data are not cross-border consolidated, while shadow banking has relevant component in transferring the risk cross borders
 - **Data gaps** for the construction of risk metrics, as concluded by ESRB assessment: some activities e.g. on liquidity transformation are still missing; also data covering S.126 and S.127, SDDs and FCLs are not are not yet available and publishable for the euro area

European Banking Authority (EBA) guideline for data collection on banking large exposures to shadow banking :

- **Absence of a definition** in EU Capital Requirements Regulation (CRR) of terms ‘shadow banking entities’, ‘banking activities’ and ‘regulated framework’, for the Guideline the EBA defines shadow banking entities as entities that are:
 1. **carrying out credit intermediation activities**, defined as bank-like activities involving maturity transformation, liquidity transformation, leverage, credit risk transfer or similar activities; and
 2. **not within the scope of prudential consolidation**, nor subject to solo prudential requirements under specified EU legislation (or equivalent third country legal frameworks)
- As regards **investment funds**, EBA considers that they should fall within the scope of the definition of shadow banking entities for the purposes of these Guidelines, as in the approach of the JEGS

Perimeter of SB might depend on different scope - accounting and regulatory perimeter

IFRS 10 defines the **principle of control** and establishes control as the basis for determining which entities are consolidated in the consolidated financial statements.

*New definition of **control**: “An investor controls an investee when it is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee*

IFRS also sets out the accounting requirements for the preparation of **consolidated** financial statements

One important consequence is that, where a bank has risk exposure (e.g. reputational risk) but **no power to direct the activities of the entity**, it is **not** consolidated for accounting purposes (although separate disclosure requirements exist)

Aggregated data points to some limitations for a measurement of the shadow banking also for micro perspective:

- **Entities outside the accounting scope**, might imply further reduction of information not captured by the available aggregate statistics
- Aggregated data will not be able to capture the changes of the allocation of entities between the accounting and regulatory perimeter
- In this respect, also a recent ECB survey failed to assess the **quantitative difference between the accounting and regulatory perimeter** with the aggregated data
- Importance and potential usefulness of granular and supervisory data has started to be stressed by the international community

Micro macro approach: Granular data

- Recently the U.S. **OFR** (Office for Financial Research) and FED in understanding the uses of short term funding and related markets (broker–dealers), linking quarterly data with more granular and frequent data sources and increasing coverage of financial activity represented
- Furthermore, central banks (e.g. Central Bank of Ireland) have started **using granular data on financial vehicle corporations (FVCs), money market funds (MMFs) and investment funds (IFs)**
 - This bottom-up approach facilitates the classification of entities engaged in shadow banking activities – any top-down definition inevitably excludes entities that engage in shadow banking and/or includes some that do not.
- Granular data for other OFI sector for investment fund sector coming from the **AIFMD data base**, will lead to enhanced data for leverage
- Micro data available for the SSM, might shed some light on the entities consolidated and the related prudential requirements

Conclusions and way forward

- **Non- bank financial intermediation** and shadow banking is a complex phenomenon from micro and macro measurement perspective
 - From **macro perspective**, aggregated data might imply some measurements problem due to the data gaps, residuals and lack of risk based framework
 - From **micro perspective** the application of accounting standards and the regulatory framework matters for the determination of the relative size of shadow banking, while the current macro data might not be able to capture these aspects.
- As the two dimensions (micro and macro) and the relative measure might diverge, the paper suggests **as a way forward**, to integrate the metrics constructed with aggregated statistical data with the one using granular and supervisory data