Shadow banking - Improving the consistency of banking and non-banking regulations

This document was drafted by Eurofi with input from its members. It does not engage in any case the French Presidency of the G20 or the French financial authorities.

1. Introduction

1. The involvement of shadow banks in the financial system has increased significantly over time; since 1995 in the US, the gross size of shadow banking has been estimated to be larger than the banking sector. This trend has been accompanied by an increase in the links between banks and the shadow banking system within the framework of a financial intermediation chain which is increasingly long, complex and specialised. In this chain banks are providing shadow banks with liquidity and credit, and frequently interfacing them with customers. "The linkage between the banking system and the shadow banking system is going to be crucial"[1] and indeed shadow banks played a disruptive role during the crises in 2007-2008, experiencing runs and benefiting from Central Bank liquidity without having in the past been subject to the regulations and supervision applicable for banks.

2. Drawing lessons from the crisis, regulators are significantly tightening banks' capital and liquidity requirements. They may well be incentivising the development of an insufficiently regulated financial sector. "Risk will move from the regulated more transparent banking sector to a less regulated, more opaque sector"[2], as history shows that activity will always flow to the less regulated sector. Several regulatory efforts have been achieved on securitization, Money Market Mutual Funds (MMFs), Hedge Funds (HFs); etc., but "shifting risk into unregulated or differently regulated sectors won't make the financial system safer"[3].

3. In this context, to achieve a more resilient financial system, it is necessary to map the relevant financial value chain and identify the shadow banks and their specific roles, as well as their links with the banking system and their specific risks. Supervision must be consistent throughout the financial value chain, including on a geographical basis. Such holistic supervision that covers all financial players, avoiding focusing excessively on one part of the financial system, is vital, together with the implementation of shadow banking and banking specific regulations.

4. Great care must be taken when reviewing the shadow banks that are likely to develop – e.g. hedge funds - due in particular to tighter regulation on market activities and the restrictions prohibiting banks from carrying out certain activities. Although there is no consensus regarding the systemic importance of HFs, the links between banks and HFs should be seen as originators of dangers and vulnerabilities.

2. What are shadow banks?

5. The shadow banking system comprises the instruments, structures, firms and markets which, alone or in combination, and to a greater or lesser extent, replicate core banking activities, but without necessarily being subject to the prudential regulations applicable for banking institutions. Indeed, the activities performed by shadow banks concern all the main key financial mechanism banks ruled over, such as maturity transformation, credit transformation, liquidity transformation and asset management. Shadow banks may also carry out many investment banking activities, from market making to hedging. The shadow banking system encompasses MMFs, finance companies, special purpose vehicles (SPVs) that issue securities, government sponsored enterprises (GSEs), HFs, etc.

a. Shadow banks' specific added value

6. The peculiarity of shadow banks is that they are very specialised institutions and the reasons why banks have embedded shadow banks in the financial intermediation chain can be traced back to the intrinsic characteristics of these specialists.

They provide opportunities for banks to:

- Mitigate and spread out their risks;
- Involve specialised and efficient service providers;
- Pull out assets permitting banks to increase their business volumes, making them liquid and offering the possibility to reuse the regulatory capital freed up for new operations;
- Mobilise lighter regulatory capital than the level demanded in cases when the financial product remains in the banking system;
- Immediately materialise the net present value of the entire lifecycle of an asset portfolio;
- Sell short-term financial papers or find counterparties for a repurchase transaction (repo) to obtain liquidity.

The shadow banking system is also beneficial for investors:

- It diversifies their risk as their deposits are not concentrated on a single balance sheet;
- It broadens their investment opportunities, making available assets which would normally only be able to be accessed by banks (consumer credit, mortgage, corporate treasury financing, investment banking activities, etc.).

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1. Phililpp Hildebrand, head of the Swiss National Bank. Quoted by the FT - Finance: Shadow boxes - Brooke Masters and Jeremy Grant - February 3, 2011.
2. Gary Cohn, president of Goldman Sachs. Quoted by the FT – Finance: Shadow boxes – Brooke Masters and Jeremy Grant – February 3, 2011.
3. Vikram Pandit, Citigroup's chief executive. Quoted by the FT - Finance: Shadow boxes - Brooke Masters and Jeremy Grant - February 3, 2011.

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7. Transactions between financial entities – banks or shadow banks - rely on different markets (OTC) and products, such as the securities lending market, asset backed commercial papers (ABCP), asset backed securities (ABS), real mortgage backed securities (RMBS), credit debt obligations (CDO), etc. These transactions can be combined with funding from the banks to optimise the leverage and secure the financial product assembly, and can be performed through the use of central counterparties (CCPs).

b. Greater opacity and complexity of financial assemblies

8. Among these shadow banks, those most involved during the subprime crisis have been MMFs and SPVs. As presented in Figure 1, the long intermediation chain involves MMFs and SPVs. The former accept money from investors and lend out, purchasing various types of commercial paper from banks, as well as treasury bills, and providing repo financing. SPVs carry bank assets, such as mortgage pools, financing them by issuing bonds (mortgage-backed securities, MBS). SPVs act predominantly on the asset side of the banks' balance sheet and transfer the risk of pooled assets to the bonds' acquirers. In doing so, MMFs and SPVs give banks the possibility to increase their balance sheet turnover and therefore extract the maximum value from their capital. Moreover, SPVs - and to a much lesser extent MMFs[4] - perform liquidity transformation by issuing liquid liabilities for investments in lesser liquid assets.

9. The long financial intermediation chain also encompasses HFs. As presented in Figure 2, in the complex intermediation chain, HFs accept money from investors and invest out in a full range of financial products - such as equity shares, commodities and bonds - which may be bought on the markets. In doing this, HFs need liquidity facilities provided by banks. Moreover, they are highly leveraged, through loans provided by banks. Based not exclusively on a short-term strategy, they perform, as banks, maturity transformation and also, through the use of derivative instruments in particular, credit transformation. Lastly, they are active in lending money directly to companies.

10. Long and complex financial intermediation chains in which shadow banks are embedded and interlinked raise concerns, particularly because of increased information asymmetries between the various participants alongside the chains. More specifically, increasing the number of players involved in a financial assembly makes it more difficult to determine where the risks are and which players will actually cover them. Moreover, with an increase in the opacity or complexity of financial assemblies, it becomes extremely difficult to continuously assess the value and risk of the assets involved.

11. Nevertheless, the long and complex financial intermediation chain may be beneficial. For example, certain financial intermediaries specialise in specific borrowers, while others specialise in arranging repo transactions and others in securitising assets and selling them to investors.

c. Shadow banks' difficulties may be passed back to the banking system and the tax payer

12. Shadow banks' risks may be passed back to the banking system due to their strong mutual interconnectedness via explicit links - e.g. banks' liquidity commitments, repo agreements, etc. -, or via reputational risks that provide implicit guarantees to shadow banks – e.g. MMFs, SPVs, etc. originated or sold by banks.

13. One peculiarity of shadow financial institutions is that they perform financial activities without access to public support, e.g. central bank liquidity provisions or public sector credit guarantees[5]. The implicit state guarantee benefiting financial institutions receiving deposits - the so called moral hazard – concerns also shadow banks. Similarly, "in a long and complex value chain where no one takes responsibility for the whole chain, the moral hazard is high[6]".

3. Shadow banking requires extended regulation and supervision

14. Banks, due to their historical importance and involvement in monetary and payment systems, were under strict prudential regulations (capital and liquidity requirements). On the contrary, since shadow banks do not have access to central bank liquidity and public sector credit guarantees, they were not subject to similar attention until now. Moreover, the collapse of a shadow bank was considered to be an event without any negative externalities for other financial institutions or economic agents. In the end, the regulations applied for shadow banks did not cover capital or liquidity requirements, but focused mainly on information transparency.

15. However, the need for extended regulation and supervision for shadow banks stems from various key considerations:

    - The involvement of shadow banks in the financial system, as outlined in Figure 3, has increased so much during the past, and since 1995 in the US, the gross size of shadow banking has been estimated as larger than the traditional banking sector[7];

    - It is accepted that the shadow banking system played a disruptive role during the 2007 / 2008 crises. The increase in

4. In the US Money Market Mutual Funds are regulated under Rule 2a-7 of the Investment Company Act of 1940 and registered with the Securities and Exchange Commission. MMFs perform limited liquidity transformation within precise and restricted regulatory limits; actually their assets are to a large extent highly liquid e.g. overnight investments, T-Bills etc.
5. Federal Reserve Bank of New York, Staff Report n. 458, July 2010, peg 2.
6. As Barrie Wilkinson argued: "You (Regulators and Supervisor Authorities) still have the moral hazard where you have a chain of players where no one takes responsibility for the whole chain".
7. Federal Reserve Bank of New York, Staff Report n. 458, July 2010, peg 5.

Figure 1: Long intermediation chain

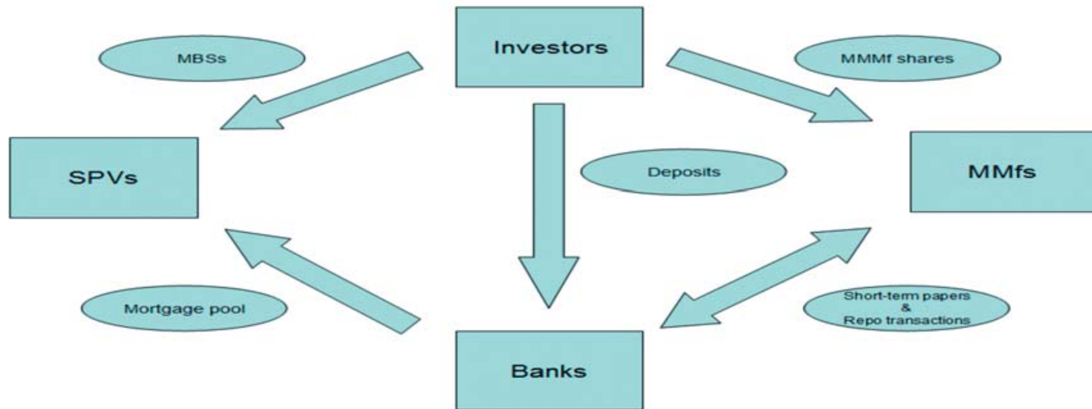


Figure 2: HFs in a complex intermediation chain

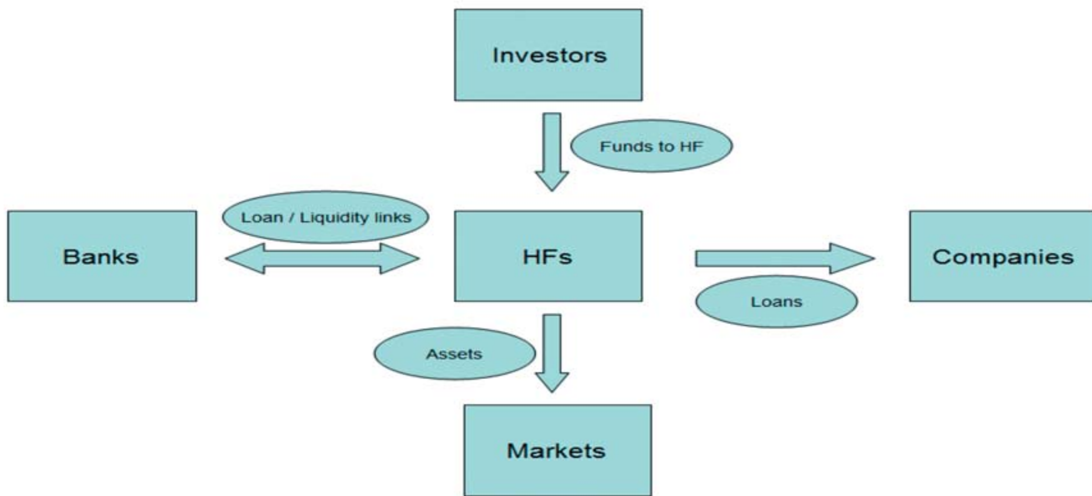
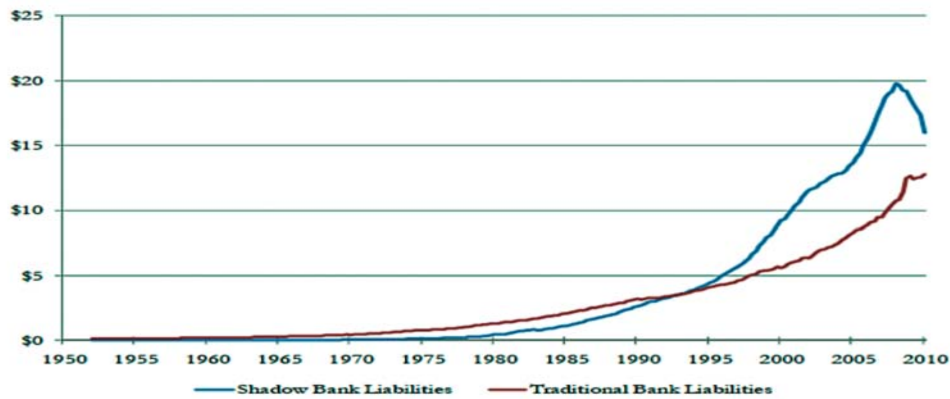


Figure 3: Shadow bank liabilities vs. traditional bank liabilities, $ trillion



Source: Flow of Funds Accounts of the United States as of 2010:Q1 (FRB) and FRBNY.

the shadow banking system was accompanied by an increase in the interconnectedness between the shadow and banking sectors through the links explained above;

- Shadow banks contribute towards creating or at least channelling and amplifying systemic risk, and therefore together with the banks, benefited from government support. Indeed, regulators are convinced that restoring the banking system's resilience could not be separated from moves to restore the shadow banking system's resilience. For instance, the US Treasury had to set up a Temporary Guarantee Program to stop the massive redemptions the MMFs faced;

- The scale of the systemic risk was revealed by the 2008-09 crisis, determining the implementation of macro-supervision. It seems impossible to consider shadow banking as a financial constituent remaining out of reach of this new supervisory framework;

- Lastly, changes to banking regulations provide an incentive for banks to introduce and develop shadow banks within the financial intermediation chain.

This context suggests to better factor systemic risks in "Shadow-banks" regulations and subsequent supervisory practices. It also highlights the necessity to permanently check that banking and "shadow-banking" regulations remain fully consistent.

4. Do we need to build up a Chinese wall between banks and shadow banks

16. Specific benefits achieved through the shadow banking sector are related to the transfer of banks' assets to investors and involve specialised institutions which are best able to manage them with the corresponding risks. Moreover, shadow banks may increase and diversify the financial counterparties. However, these potential benefits must be taken into account simultaneously with the threats posed by shadow banks to the financial system, since they replicate banking activities without similar regulation, supervision or protection, the cost of which can be significant as demonstrated by the current financial crisis. The intention is also to prevent regulatory arbitrages with banks relocating assets in areas with inappropriate regulations.

17. In line with the objective to reduce the risk represented by the shadow banking system, three different possible solutions have been put forward:

    - The first considers shadow banking to be part of the banking sector, subjecting it to banking regulations;

    - The second develops dedicated regulations for each type of shadow bank;

    - The third eliminates the banks' vulnerability in relation to the shadow banking sector by ring fencing it.

18. The first possible solution, which includes shadow banks under banking regulations, could eliminate some of the benefits provided to banks by the shadow banks, such as increases in the efficiency of the intermediation financial value chain, benefiting from dynamic asset management and mitigating risks, spreading them out to specialised players. This solution may be rightly considered as a "one size fits all" solution. The second requires a permanent and extensive regulatory process, notably to avoid possible loopholes due to financial innovation; this approach also requires global coordination to avoid geographical regulatory arbitrage. Lastly, ring fencing the shadow banking system is challenging since it is not easy to envisage a shadow banking sector without any relation to the banking system; indeed, banks represent a key access to liquidity, hold subordinated tranches and provide liquidity on the secondary market for trading the securities issued, etc., as seen in the financial intermediation chain.

5. Various regulatory reforms have already been achieved reducing banks' vulnerability

19. So far, regulators have come up with regulations combining ring fencing and specific shadow bank regulations. Basel III's general higher bank capital and liquidity requirements will enhance systemic stability to the extent that banks will be less vulnerable to financial shocks, whatever their cause – shadow banks, bursting of a bubble, etc. - and have general countercyclical effects, which are beneficial for banks' resilience. Basel III also includes a number of specific elements that should reduce the risks resulting from the shadow banking system, e.g. heavier risk weightings for securitisation exposure and off-balance sheet vehicles. The Basel III regulations do not ring fence banks per se, but provide them with significant dampeners, particularly against shadow banks' threats.

20. In the meantime, many regulatory efforts have been made on various "shadow bank" regulations. The securitisation process has been reviewed in Europe and the US. There, MMF investment rules have also been adjusted in view of lessons learned from the crisis. In addition, the Dodd-Frank law has also given US regulators the power to freeze hedge funds' operations overnight if they fear they are on the verge of collapse. In Europe, the AIFM Directive, which covers the managers of hedge funds and private equity funds, represents an attempt to create a comprehensive framework in the alternative fund industry, e.g. fund managers, their key service providers, including depositaries and administrators. In the context of the major differences in HF business models, this directive mainly provides transparency for supervisors and focuses in particular on governance standards and management practices for risk and liquidity.

21. All the approaches described before have both merits and shortcomings. Actually they should be thought as complementary and be adapted to the different countries, as longer financial value chains are not playing the same role in the financing of economies.

6. The need for greater consistency for the regulation and coordination of supervisors

22. In this perspective, one specific effort is required, namely increasing the efficiency of supervision, focusing on the coordination of specialised micro-supervisors and enhancing macro-supervision over all financial players - banks and non-banks – in order to avoid focusing excessively on any one part of the financial system.

23. Indeed, in the current framework which involves several regulators and supervisory authorities, each specialised in a specific financial sector (banks, insurance and financial markets), in different countries, etc., the growing role of shadow institutions combined with the increase in their interconnectedness with all other financial players calls for more coordinated decisions and actions.

24. Moreover, the need to continuously adapt the regulatory approaches requires a greater role for macro-supervisors. Only improved knowledge of the financial system as a whole, together with a complete mapping of the relevant financial value chain, including the shadow banking system, country by country, can provide the most appropriate and balanced solutions. More specifically, only macro-supervision makes it possible to reduce regulatory arbitrage and its negative consequences.

25. This effort towards ensuring a holistic view of the system may lead to the implementation of additional specific shadow banking regulations being considered, including when necessary access to central bank liquidity facilities, the setting up of specific safety nets, leverage limits and liquidity requirements, etc.

7. Systemic importance of shadow banks: Hedge Funds under scrutiny

26. Broadly, an institution, market or instrument is defined as systemically important if its failure would cause widespread distress, either as a direct impact or as a trigger for broader contagion across the financial system and the real economy. Are there any shadow banks that could be considered to be systemically important? Freddie Mac and Fannie Mae represent the most relevant example of systemically important financial institutions managing bank assets without coming under banking regulations. In addition, when numerous shadow banks of a limited size behave similarly – e.g. MMFs, Hedge Funds, etc. - they are systemically important. In such cases, “the financial cluster” is systemically important, as well as each of its components which may eventually become the trigger for a systemic event. The tighter the network of direct or indirect links among such institutions and the banking system, the more systemic the downturn.

27. There is no doubt that the volume of money managed by HFs has been increasing since the beginning of 2010. Indeed, more stringent banking regulations on market activities and the ban of certain activities for banks[8] are increasing the size of the non-banking financial sector: e.g. HFs are hiring proprietary traders from banks. In this context, a thorough review seems necessary, particularly for HFs. There is no consensus regarding the systemic importance of HFs. As stated by M. Billio et al.(2019)[9], the strategies implemented by shadow banks, and HFs in particular, are not in themselves a threat to the financial system. On the other hand, in addition to their size, because of the links between banks and HFs, they should be seen as possible originators of dangers and vulnerabilities.

8. Conclusion

28. The major costs borne by public authorities were to a great extent unexpected costs, due to the misunderstanding of the shadow banking system and its interconnectedness with the banking system. In this regard, Eurofi is calling for a holistic macro-supervision framework which factors in all financial players and avoids focusing primarily on one part of the financial system, together with the implementation of specific shadow banking regulations. Thus recognizing that each part of the financial system requires appropriate supervision.

29. It is vital to map the relevant financial value chains and identify the shadow banks, as well as their specific roles and risks. In this way, supervision, control and protection need to be provided along each segment of the chain, providing consistency for supervision on a geographical basis as well. In addition to coordinated supervision among the various micro-supervisors, as seen in the previous paragraphs, there must be supervision at macro level, with specific regulations and supervision provisions put in place for shadow banks, particularly those which are growing in size, such as HFs, on a consistent basis with those applicable for regulated banks.

30. This is vital in order to:

    - Limit the build-up of risks within the shadow banking system;

    - Reduce the vulnerability of the banking system in relation to shadow banking institutions;

    - Check if the optimum changes being considered in regulations for banks are also optimum when the whole financial system is considered, thus taking into account the responses of financial institutions out of the institution-specific modified regulations.

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8. See the Dodd-Frank Wall Street Reform and Consumer Protection Act.
9. M. Billio, M. Getmansky, A. W. Lo, L. Pelizzon. (2010). ‘Econometric measures of systemic risk in the finance and insurance sectors.’ Working paper 16223.

31. There should be global and regional regulatory committees which are devoted to each of the main financial value chains and group together all the relevant regulators / supervisors – markets, products, banks, insurance, etc. Such committees should complement the current Basel Committees. They would be responsible for looking into possible regulations for new ad hoc institutions from the shadow banking system, without losing the added value they provide for banks. More specifically, this means streamlining regulations across sectors, making them consistent and detecting any possible regulatory arbitrage incentives, particularly within the banking system.