Shadow Banking – Developments in Times of Financial Crisis

Bogdan Munteanu
Associated lecturer with the Department of International Relations and European Integration, National School of Political and Administrative Studies
Bucharest, Romania
bogdan_munteanu_ro@yahoo.com

Abstract

"Shadow Banking" phenomenon discussed in this paper aims at revealing trends in the financial industry, providing a view upon the shift of classic banking activities towards a process of activities fragmentation via non-bank financial entities that resort to bridging differentials in maturities of various financial products, to liquidity transformation and lending, without having access to lender of the last resort's liquidity (central banks) or insurance safety net of asset sources (Deposit Insurance and Guarantee).

The paper considers the following entities and activities, without limitation to or completeness of viewpoints: finance companies, asset backed financial instruments, structured investments, financing vehicles, money market funds, asset managers, credit hedge funds and venture capital, providing characteristics of shadow banking and their economic functions relative to the classic banking system, as they pose a systemic risk due to asymmetric information and gaps created in matching liquidity tenures with duration, by using synthetic leverage finance.

Key words: asset management, financial intermediation, investment funds, market liquidity, shadow banking
J.E.L. classification: G23

"There is strong shadow where there is much light."
Johann Wolfgang von Goethe,
"Götz von Berlichingen"

1. Introduction – Defining "Shadow Banking"

Although these entities and activities are not new for the financial markets, their activities and development intensified after the financial crisis onset of 2008.

In a session of questions and answers that took place on July 2, 2014 at International Monetary Fund headquarters, the Managing Director Ms Christine Lagarde asked the President of Federal Reserve Banks of United States of America how to address risks from non-banks, which include hedge funds, private equity and derivatives. Ms. Yellen replied: "*You're pointing to something that is an enormous challenge.*" (Yellen, 2014, p.1)

The Financial Stability Board (FSB) is the forerunner authority in monitoring the "shadow banking" phenomenon. It defines the term as "credit intermediation that involves entities and activities (fully or partly) outside the regular banking system" (FSB, 2011, p3). Some authorities prefer the term "market based financing", as not all such operations are of non-bank origination.

The term of "shadow banking" has been introduced by Paul McCulley from PIMCO in 2007 when he referred to special purpose vehicles set up by banks to sell packages of loans as new bond issues, reflecting off-balance sheet riskier operations. The bond investment fund PIMCO was in a taking position for such asset classes.

"I coined the term "shadow banking system" in August 2007 at the Fed's annual symposium in Jackson Hole. Unlike conventional regulated banks, unregulated shadow banks fund themselves with uninsured short-term funding, which may or may not be backstopped by liquidity lines from

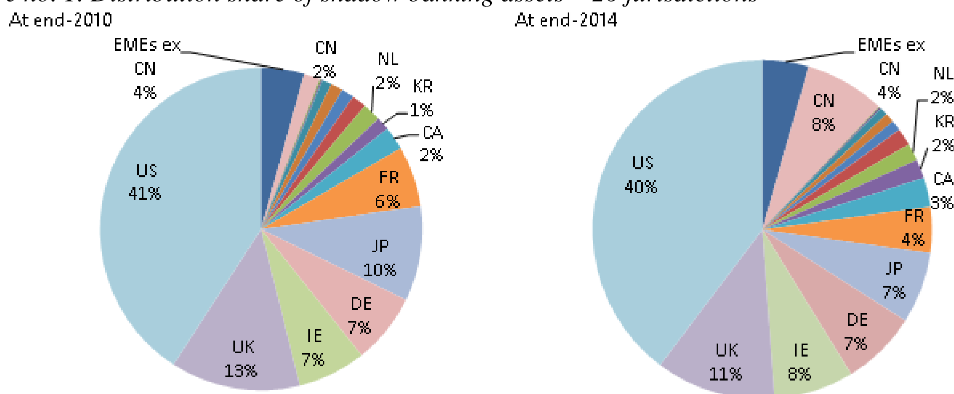
real banks. Since they fly below the radar of traditional bank regulation, these levered-up intermediaries operate in the shadows without backstopping from the Federal Reserve's discount lending window or access to FDIC deposit insurance." (McCulley, 2009, p.1)

FSB approaches shadow banking from two perspectives: entities and activities.

The entities perform the activities out of the regulated banking system: taking funds similar to bank deposits (investment funds: MMF, Exchange Traded Funds, Special Investment Vehicles, Special Purpose Vehicles, Finance Companies, Insurance Companies, FinTech companies (Dietz & Vinayak & Lee, 2016, p.3), Non-Bank Financial Institutions), executing liquidity transformation by maturity change, undertaking credit risk and using financial leverage.

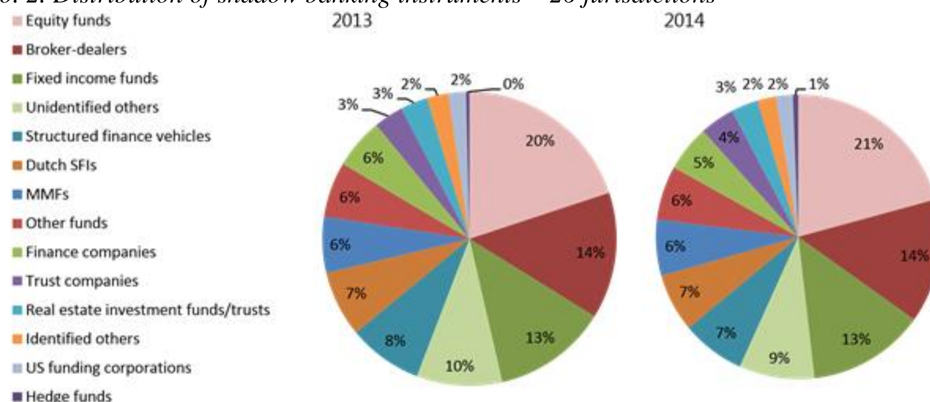
Activities cover a wide spectrum countries and of structured finance and derivative operations and instruments: securitization (asset backed financial instruments), lending against securities, collateralization and collateral management (including re-use of collateral by multiple rank pledging), REPO operations and so on. The activities can be on-balance sheet funding of depository institutions (for investment funds), debt issued by government or guaranteed by governmental entities, off-balance sheet activities of depository institutions, asset management activities e.g. bank affiliated funds (hedge, MMF) and securities lending activities of custodian banks.

Figure no. 1. Distribution share of shadow banking assets – 26 jurisdictions



Source: (FSB, 2015, 11)

Figure no. 2. Distribution of shadow banking instruments – 26 jurisdictions



Source: (FSB, 2015, 41)

Relevant literature on the subject approaches the market based financial intermediation (Corrigan, 2000), the role of banks (Gertler & Boyd, 1993), the types of shadow banks, flows and assets (Pozsar, 2008) and the functions of security brokers and activities for regulation enhancement (Adrian & Shin, 2009).

The Financial Stability Board estimates that *"Global assets of financial entities classified as shadow banking under the economic functions approach in 26 jurisdictions continued their upward trend, increasing $1.1 trillion in 2014 and reaching $36 trillion [...] aggregate global shadow*

banking assets in these jurisdictions have increased on average by $1.3 trillion each year since 2011" while *"the growth in shadow banking assets globally in 2014 occurred against the backdrop of a slight decline in global banking system assets. After increasing significantly in 2011 and 2012, global banking system assets in 26 jurisdictions remained roughly stable in 2013 and decreased slightly in 2014, reaching $135 trillion."* (FSB, 2015, p.9).

Table no. 1 Assets of financial intermediaries – 26 jurisdictions

Type of entities	Size in 2014 (trillion USD)	Growth rate 2014 (YoY %)	Average growth rate 2011-2014 (%)
Banks	135	6.4	5.6
Other financial institutions (OFI)	68	9	6.3
Shadow Banking	36	10.1	6.3

Source: (FSB, 2015, p.9)

Table no. 2 Financial institutions – 26 jurisdictions

Year	Financial Institutions	Central Banks	Banks	Banks' assets to OFIs	Banks' liabilities to OFIs	Insurance Companies	Pension Funds	Public Financial Institutions	Other Financial Intermediaries (OFIs)	Money Market Funds	Finance Companies	Structured Finance Vehicles	Hedge Funds	Other Investment Funds	Brokers Dealers	Real Estate Intestment Trusts and Funds	Trust Companies	Others (identified)	Others (unidentified)	Financial Auxiliaries
2014	316.1	23.3	142.2	6.4	7.0	28.0	29.2	12.8	79.8	4.6	3.1	5.4	0.5	31.8	9.4	1.9	2.7	0.7	19.7	0.9

Source: (FSB, 2015, source data in excel)

At a growth rate of 10% in 2014 and weighting almost 27% of total banking assets, as estimated by FSB in the mentioned report, "shadow banking" is posing a significant stake for the global financial system and for regulators.

2. The economic context for the past 8 years

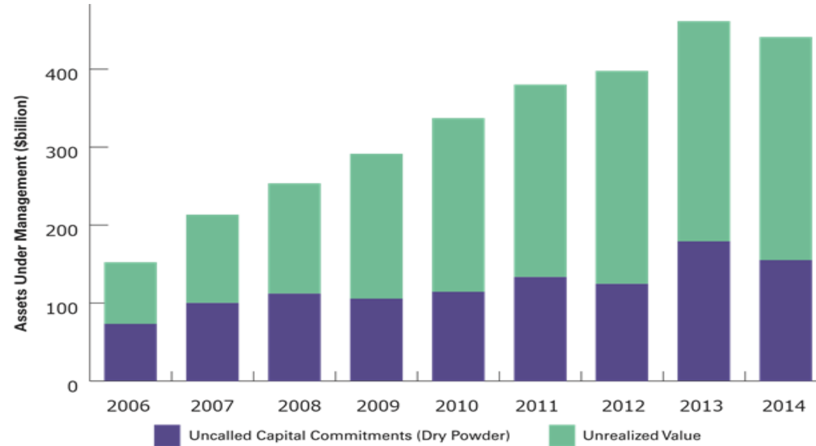
A combination of factors contributed to the expansion of so-called "shadow banking". The losses suffered by the classic banks in the aftermath of 2008 and reflected in their distressed balance sheets, adding pressure to fix the need for liquidity and capitalization, rather than focusing on servicing the market demand for lending (heavier regulations and penalties), the low interest rates environment and the cost of assuming investments risks that drove investors to use cash and credit lines rolling instead of classic intermediation (banks attract deposits and provide lending combined with reserves creation).

Also, low interest rates supported by the lenders of the last resort (central banks) do not necessarily mean access to easy funding and recapitalization. It has been an alternative to borrowing money where classic banking is poorly represented or too expensive for providing desired financial capital. Companies that are in need of cash have the alternative of getting access to money by issuing corporate bonds at low yields and securing cheap capital directly.

More asset managers turn attention to shadow banking activities. This can be spotted in the numbers provided by the financial services holding Brown Brothers Harriman and source data provider Prequin. For instance, Prequin (www.prequin.com, 2016) provides data for the following activities: private equity, hedge funds, real estate, infrastructure, private debt, venture capital, secondary instruments and markets, natural resources, enhanced funds, with a wide range of detailed analyses performed by their research center. Brown Brothers Harriman (www.bbh.com, 2016) provide specialized services and consultancy upon private banking, investment management, advisory services and research (expertise for all kinds of funds, collateral management and cross-border transfers, hedging and risks management).

In two surveys, published by Brown Brothers Harriman and Prequin, the assets of shadow banking industry in asset management financing (Brown Brothers Harriman, 2015, p.5) via private debt (Brown Brothers Harriman, 2015, p.2-5) more than tripled over the past 8 years. This fast expansion of the private debt market with the direct involvement of investment funds raised the signal for needing enhanced regulation, even if not all asset management activity is considered "shadow banking" (asset management activity is regulated, as presented in this paper).

Figure no. 3. Global Private Debt Fund Market



Source: (Prequin, 2015, 2)

What sets apart shadow banking from classic banking is its lack of access to public sources of liquidity (directly from a central bank or indirectly as a guarantee from a deposits insurance entity). When in 2008 and afterwards, there has been a lack of liquidity at banks' level, the liquidity provided by central banks and other governmental bodies bridged to shadow banking, via the balance sheets of banks and counter-parties. The facilities of quick and easy access to cash effectively tackled down credit intermediation by shadow banks and exposure of banks to the shadow banks.

The run on the shadow banking system ceased only after liquidity facilities and public sector guarantees replaced private sector guarantees. Shadow banking creates financing by relying on the private sector guarantees (corporate bonds with transferrable coupons, insurances, asset backed securities, collateralization by multiple hypothecation, etc). When private sector guarantees lack trust in redemption and credibility, it becomes a problem of securitization for the whole shadow banking system, as it started with poor assessment of asset price correlations and fair market value appraisals at all levels: credit ratings agencies, risk managers, investors and regulators.

The process of transformation of products and maturities to mitigate risks up to the point of opacity involves separating the stages of classic credit intermediation process:

- Origination of loan by finance companies via commercial papers and medium term notes (e.g. factoring and forfeiting)
- Warehousing by issuing asset backed commercial papers
- Pooling asset classes based on common characteristics such as risk level, maturity, financial flow pattern, etc via syndication.
- Clustering asset backed securities via trading books funded by repurchasing agreements and swap operations
- Issuing collateralized debt obligations based on asset backed securities to create eligible instruments for reinvestment via syndicate desks
- Distributing by special investment vehicles to financial markets the debt instruments collateralized with asset backed securities, via hedge funds for instance
- Transmitting the wholesale funding to other entities such as ETFs and MMFs, pension funds and insurance funds.

This long process is applicable to low quality long term mortgage portfolios, while for high quality and short term assets, the process is shorter. As one can see, each shadow bank involved in this mechanism appears only once in the chain, but they all are linked among themselves and to the originating bank in the regulated banking system. This explains the contagion risk, the systemic importance and the dysfunctional ties arising from fundamental liquidity.

3. Risks and Benefits

In two interviews for "Financial Times" in 2015, the Hermes Fund asset manager David Pitt

Watson debated that fund managers bridged the gap in the quest for capital under price-to-value market constraints, stepping up to financing the real economy (Watson, 2015, p.1), while David Blake mentioned that the cost of financing in the banking sector is high due to risk pricing and low collateral market value (Blake, 2015, p.1), but the question is whether they have the expertise in assessing and undertaking risks directly by transformation of liquid investments employing financial engineering techniques that require utmost trust between borrowers and lenders (Coombes, 2004, p.1).

In the years following 2008, the discrepancies in approach to an improved financial environment and the regulatory mismatches for banks and non-bank financial entities, partial supervision, the lack of transparency and asymmetrical information in assessment of complex risks related to structured complex financial products allowed the expansion of "shadow banking". These permitted to bypass regulations, however had also a positive effect: it created additional lending capabilities and provided investors with alternatives to bank deposits.

The main risk identified by FSB is that shadow banking can carry a systemic risk for financial industry and banking sector alike. The initiatives taken by FSB are on the following five coordinates:

- Basel Committee on Banking Supervision (BCBS) will address the regulations environment concerning cooperation among banks and shadow banks
- International Organization of Securities Commissions (IOSCO) will address the regulations environment concerning the mitigation of systemic risks of Money-Market Funds (MMF)
- IOSCO + BCBS assess the requirements for securitization
- A subgroup of FSB will look at regulation concerning other shadow banking entities
- A subgroup of FSB will look at securities lending and REPO mechanisms (REPO, or repurchasing agreements are operations by which a financial institution can obtain cash by selling government issued debt instruments to a lender and having the obligation to buy them back at a future price set at the date of sell, for the agreed period of time. Usually, commercial banks manage daily liquidity by REPO with the central bank for a day. This is not considered shadow banking as banks are acting in a specifically regulated environment. [note of author]).

Shadow banks have evident benefits for the economy, as they fill in four main roles:

- They provide more solutions for return on investment and selection of investment instruments for capital providers, compared to bank deposits
- They are efficient in resource allocation to maximize return per invested unit, leading to specialization
- They substitute dysfunctional banking markets, especially for lending at lower costs, generating economies of scale
- They disperse risk and bring diversification of portfolios outside the banking system

There is no clear borderline between classic banking and shadow banking, while the interlinked financial markets and the free flow of capital disseminate risks all over the financial world via mobility of investment instruments.

The risks are the following:

- The MMF that invest only in fixed income instruments (term deposits, bonds, etc.) and are susceptible of attracting investors that traditionally would have preferred the safety of bank deposits, are equally exposed to a panic from investors to withdraw cash immediately from the fund. There is a hidden mismatch between tenors of investment instruments and cash.
- Shadow banks use leverage to create traction in the portfolio, having the pressure for higher than market's benchmark to generate increased returns on investments. Margin tranzactions provide the leverage power and brings the augmented risks.
- Bypassing the rules and regulations, impacting reflection of assets and operations in the balance sheets. Shadow banks create chains of break-up parts of products, flows, processes and entities by packaging and re-packaging and distributing the risks throughout the financial world. It is a fragmentation process escaping regulations of

conventional banking and opaque in assessing adequate risks.
- Erratic failures can pose a systemic risk due to contagion and spill-over effects.

4. EU and Shadow Banking

Besides the national authorities competent to regulate the financial markets in each country, at EU level the competence resides with the following entities that coordinate among themselves and with the international bodies, like FSB:

- The European Central Bank (ECB)
- The European Banking Authority (EBA)
- The European Securities and Markets Authority (ESMA)
- The European Insurance and Occupational Pension Authority (EIOPA)
- The European Systemic Risk Board (ESRB)

The main regulations are:

- Capital Requirements Directive (CRD IV) that apply to banking and insurance fields and forces shadow banks (usually entities created by insurance companies and banks as SPVs) to align the activities to correspondent regulated institution. The directive required originators and sponsors of securitized assets to retain a large portion of underwritten risks and reinforced the accounting practice of reflecting liquidity lines and credit exposure to securitization vehicles. It also introduced explicit liquidity requirements for SPVs, products and activities linked to reputational risk of banks. The International Financial Reporting Standards (IFRS 17) issues new standards on consolidation of balance sheet and participations in shadow banking entities and asset backed securities.
- Markets In Financial Instruments Directive (MiFID) does not impose capital requirements but classifies investors in three categories: retail, institutional and eligible counter-parties, and defines the risk classes, imposing bank-like prudential regulation on shadow banking activities. It separates for banks the banking financial activities and investment activities.
- Alternative Investment Fund Managers Directive (AIFMD) addresses shadow banking issues for the entities falling in the category of "alternative investment funds". Asset managers monitor liquidity risks and use a liquidity management system.
- Undertakings for Collective Investment in Transferable Securities (UCITS) is applicable to investment funds EU-wide.
- Solvency Directive (SOLVENCY II) is applicable to all insurance companies conducting activities in EU, as it explicitly covers credit risks in capitalization and requires full consolidated balance sheet for entities and exposures at group level, similar to CRD IV for banks.
- European Securities Financing Transactions Regulation (SFT) allows market participants to access secured funding, i.e. to use their assets to finance themselves. This involves the temporary exchange of assets as a guarantee for a funding transaction.

5. Conclusion

Shadow banks, well represented by investment funds behaved as a buffer for the real economy, when banks lending to private sector crashed. The distribution of risks and diversification of exposures became larger and wider. Maturity change and liquidity transformation, resorting to leveraged financing and lack of access to direct refinancing from a central bank or a guarantee from a governmental insurance company are just the main aspects of shadow banking. The open-end funds provide the idea of stable liquidity but there is an assumption that markets are perfectly functional. When irrational fear grips investors, it leads to the risk of adverse liquidity spiral.

The redeemable equity of investment funds triggers leveraged risks via derivatives, repo and securities lending. Vulnerabilities reside with financial institutions of systemic importance. The investments are concentrated in assets managed by a few large funds and there is a preference of

investors to take on more risk in looking for higher returns. Any investment is governed by a simple rule of thumb: there is a trade-off among three elements – risk taken, liquidity assumed and expected return. The reinvestments distribute risks at financial industry level widespread.

Shadow Banking is about redefining the economic paradigm for entities and activities, by repositioning the role of asset managers and traditional banks.

Notes

1. The purpose of this article is to analyze public data and information. All this information is available from public sources in a complete form and according to specified methodology and can be accessed and seen in the sources indicated for reference. Therefore, it is not in the scope of the article to reproduce tables and charts, but to use the relevant data to address causes, effects, time, locations, impacts, costs, responsibilities, actions, benefits.
2. This article focuses on a very specific subject ("shadow banking") and takes into account a financial and legal perspective. Being a broad topic, it needs future observation, analysis and in-depth survey on all coordinates. It remains open for further development.

6. References

1. Adrian, Tobias and Shin, Hyun Song, "The Shadow Banking System: Implications for Financial Regulation," Banque de France, Financial Stability Review 13, 2009
2. Blake, David, (Pensions Institute, Cass Business School), interview for „Financial Times", 2015, London.
3. Corrigan, Gerald, "Are Banks Special? – A Revisitation" The Region, Banking and Policy Issues Magazine, March 2000
4. European Central Bank, "Shadow banking in euro area", Frankfurt am Main, 174/2016
5. European Commission, "Green paper on Shadow Banking", Brussels, COM (2012) 102/2
6. Federal Reserve Bank, "Shadow Banking", New York, 458 / February 2012
7. Financial Stability Board, "Global Shadow Banking Monitoring Report 2015", November 2015
8. Gertler, Mark and Boyd, John, "U.S. Commercial Banking: Trends, Cycles and Policy," NBER Macroeconomics Annual, editors Olivier Blanchard and Stanley Fischer, 1993
9. McKinsey & Co., Coombes, Paul, "Agenda of a shareholder activist", Quarterly, 2/2004
10. McKinsey & Co., Dietz, Miklos & Vinayak, H.V. & Lee, Gillian, "Bracing for seven critical changes as fintech matures", Financial Services, November 2016
11. Pozsar, Zoltan, "The Rise and Fall of the Shadow Banking System," Moody's Economy.com, 2008
12. Watson, David Pitt, (London Business School, Hermes Fund Asset Managers), interview for "Financial Times", 2015, London.
13. http://blogs.wsj.com/economics/2014/07/02/transcript-of-yellen-and-lagarde-comments-at-imf-event/
14. http://ec.europa.eu/finance/bank/regcapital/legislation-in-force/index_en.htm
15. http://ec.europa.eu/finance/financial-markets/securities-financing-transactions/index_en.htm
16. http://ec.europa.eu/finance/insurance/solvency/solvency2/index_en.htm
17. http://ec.europa.eu/finance/investment/alternative_investments/index_en.htm
18. http://ec.europa.eu/finance/investment/ucits-directive/index_en.htm
19. http://ec.europa.eu/finance/securities/isd/index_en.htm
20. https://www.bbh.com/
21. https://www.bbh.com/blob/4096/226a51c6d04c412b68b6f9fa9426f3b5/private-debt-in-2015--thinking-outside-the-bank-pdf-data.pdf
22. https://www.bbh.com/blob/5136/a91b82c0ec97a517dd708316e8fe5e43/exploring-the-private-debt-segment-infographic-pdf-data.pdf
23. https://www.preqin.com/
24. https://www.pimco.com/insights/economic-and-market-commentary/global-central-bank-focus/the-shadow-banking-system-and-hyman-minskys-economic-journey