Shadow Banking

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Introduction

Shadow banking has the potential to increase efficiency of the global financial system. However, economic growth stumbles these days and shadow banking is largely to blame. Following the subprime mortgage crisis that originated in the United States in 2007, GDP growth of both developed and emerging countries plunged below its long-term trend\(^1\). Much of current economic research focuses on the causes of the credit crunch\(^2\) as well as on its linkages with the real economy\(^3\). As a result, shadow banking has been pointed out as a significant contributor to the initial decline in liquidity that resulted into panic in financial markets and into the subsequent depression. On the other hand, it has also been emphasised that shadow banking does have the potential to increase the efficiency of the global financial system if it is properly structured and managed.

Although some regulatory measures have already been adopted in reaction to the financial turmoil (e.g. Basel III) the Group of Twenty Finance Ministers and Central Bank Governors (so-called G20) committed to “strengthen regulation and oversight of shadow banking” in order to “build a more stable and resilient international monetary system”\(^4\) in November 2010. The commitment spurred discussion and was followed by a series of analyses of the financial sector, coordinated by the Financial Stability Board (FSB), and was further reinforced at the G20 Summit in Cannes in November 2011\(^5\).

This paper provides a coherent qualitative analysis of the shadow banking sector and is structured as follows: Part 1 comments on various approaches to the definition of the notion shadow banking which can be found in the literature. It further analyses their relevance and describes an emerging consensus on the meaning of the term. Part 2 lays out the benefits and threats of shadow banking and focuses on the interconnectedness between the traditional and shadow banking sector as well as on their common and distinguishing features. Part 3 sums up ongoing regulatory efforts and offers a brief analysis of both the reasons for the regulation and its consequences. Finally, Part 4 concludes.

All the opinions, published within the discussion contributions to Occasional papers are exclusively those of the authors and do not express views of the Czech Banking Association.

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1 While the growth of emerging and developing economies decreased from about 7.9% p.a. in 2004 - 2007 to 6.2% in 2011, advanced economies slowed down from roughly 2.8% to 1.6% p.a., respectively. Source: [http://www.imf.org/external/pubs/ft/weo/2012/01/pdf/text.pdf](http://www.imf.org/external/pubs/ft/weo/2012/01/pdf/text.pdf), Table A1, pp. 190
3 e.g. Solimano: “IMF Research on Macro-Financial Linkages: Context, Relevance, and Diversity of Approaches”; June 2010
4 (16) G20 Seoul Summit, 2010: paragraph no. 11
5 (15) G20 Cannes Summit, 2011: paragraph no. 30
There is no general and commonly agreed on definition of shadow banking. However, a consistent and coherent description of the notion is of crucial importance: if regulation is to be effective, it needs to be applied on accurately defined entities otherwise a potential for regulatory arbitrage emerges. Therefore, the discussion about the definition matters.

This section overviews the debate by distinguishing two approaches existing in the literature: negative definition (section 1.1) and positive definition (section 1.2). The emerging consensus on the definition of shadow banking is then described in section 1.3 and alternative ways of processing the notion are presented in section 1.4.

1.1 Negative definition

A negative definition refers to a description of a concept in terms of what it is not (i.e. definition against a well-known notion) rather than what it actually consists in. The FSB, the coordinator of the discussion about shadow banking and its future regulation, provides the following broad definition: “the system of credit intermediation that involves entities and activities outside the regular banking system.”

However, this definition has several drawbacks: firstly, it implicitly gives the term shadow banking a negative connotation since it defines it as being outside the rules and hence undesirable. It further implies that future regulation will eventually leave the notion vague or, in other words, that shadow banking is a parasite that the global economy needs to get rid of. Moreover, it suggests that potential regulation of shadow banking defined as “outside the regular banking system” will mitigate the risk involved, which is a massive oversimplification. It is further suboptimal since shadow banking has many beneficial features which should be reflected in the definition.

Secondly, the definition is misleading. It will be argued in the next section that there are regulated shadow banking entities. Therefore, the negative definition misleads as it does not cover the whole of the shadow banking system.

1 This is not to suggest that the definition of shadow banking should list relevant entities. The situation is more complex (and is discussed in section 1.3) but [18] Institute of International Finance, June 2012, pp. 11 have emphasised that “regulation … will ultimately need to be applied to specific entities”.

2 Regulatory arbitrage refers to the incentive of regulated institutions to adjust their activities such that these will not be subjected to regulation as a result and thereby gain a competitive advantage. The phenomenon can be interpreted as circumvention of rules and, as such, is highly undesirable since it undermines the purpose of regulation – internalisation of the true costs of risks, of which the financial system itself is incapable. [14] FSB, October 2011, pp. 12

3 [13] FSB, April 2011, pp. 1

4 The pejorative meaning of the term shadow banking has often been complained about. See, for instance, [1] Asset based Finance Association, May 2012; or [8] European Banking Federation, June 2012.


6 These are discussed in section 2.1.

7 Existing European regulation only applies to deposit-taking institutions that provide credit. [10] European Commission, March 2012. However, examples will be given of non-deposit instruments used in the regulated sector.
Thirdly, the FSB’s definition is too vague to form a solid cornerstone for regulatory legislation. If shadow banking is to be subjected to a set of rules, its accurate definition must be drawn up in the first place. However, the scope of regulation differs across jurisdictions, which requires clarification of the notion “regular banking system”. Should the definition not be accurate enough, the legislation is ineffective as space for regulatory arbitrage opens up.

On the other hand, it is fair to emphasize that the FSB’s definition is relatively recent. It was designed as a provisional definition and serves as a starting point for institutions to comment on. Its main purpose is, therefore, to indicate a broad direction of the policy and to spur discussion rather than to describe the notion exhaustively.

1.2 Positive definition

Unlike the negative definition, a positive definition describes a term by referring to its features rather than defining it against other systems. Two distinctive approaches to the positive definition can be distinguished in the literature: describing shadow banking as a list of entities and activities and defining the system through systemic risk with an emphasis on a case-by-case approach.

European Commission turns FSB’s negative definition into a positive one by listing entities and activities that are supposed to fall within the FSB’s definition. According to this list, shadow banking activities consist in i) accepting funding with deposit-like characteristics; ii) performing maturity and/or liquidity transformation; iii) undergoing credit risk transfer; and iv) using direct or indirect financial leverage. It further pins down securitisation, securities lending and repurchase transactions. As for entities, the Commission points out, for instance, special purpose entities, money market funds, exchange traded funds, insurance and reinsurance undertakings etc. These activities/entities have been selected as those that contributed the most to the amplification of the late 2000s credit crunch. While the Commission acknowledges that the list is not exhaustive, it remains doubtful whether listing activities/entities is the optimal way of defining shadow banking in the first place. Firstly, the line between the traditional and shadow banking sector is more subtle than a list can ever suggest. Many allegedly shadow banking activities (e.g. securitization, repurchase agreement) have been used by the traditional sector too. Therefore, one cannot label an activity as a shadow banking one since it does not depend on the activity per se but on the scale, to which an institution is engaged in it and on the resulting risk it bears. Moreover, the products of such activities, so-called asset-backed securities, are traded throughout the financial system making the difference between the traditional and shadow banking sector increasingly blurred. Thus, it follows that one should also consider the interaction of traditional and shadow banking institutions in order to assess properly whether an entity needs to be regulated and if so, how much. In other words, it is of crucial importance to understand the complexity of shadow banking and its rather amorphous character. Section 1.3 attempts to do so.

Secondly, the Commission lists exchange traded funds (ETFs) as a shadow banking entity and securitisation as a shadow banking activity, which in connection with the Commission’s explicit commitment to follow up on the broad FSB’s definition implies that ETFs are not regulated. However, this is not true since ETFs have been subjected to UCITS directive since 2001. Furthermore, securitisation is regulated on the level of some member states of the European Union too. These examples point out another drawback of a “definition by list”: one should not regard already regulated entities as a priory off the list and vice versa, which may be challenging in the presence of a rule that decides which institutions can and which cannot be listed. ETFs feature on the list despite not meeting the underlying rule of being outside the regular system, which clearly demonstrates the deficiencies of such a definition.

Thirdly, a list of explicit activities/entities makes the definition of shadow banking rather inflexible and, as such, leads to regulatory arbitrage. Moreover, shadow banking constantly develops as financial products and techniques are innovated, which makes any list quickly obsolete.

The second approach defines shadow banking through the role of systemic risk in the sector. It emphasises the underlying reason for the discussion about shadow banking and the arguments for its regulation: the principle threat of shadow banking is its inherent inability to account for the systemic risk, which manifested itself during the recent financial crisis. The only purpose of regulation is, therefore, to mitigate this negative externality while preserving the benefits of shadow banking: “as in the case with banking regulation, the primary objective of regulation should not be to prohibit shadow banking activities. … [the objective

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9 Maturity transformation refers to using short-term liabilities to fund long-term assets (e.g. standard loan, i.e. a long-term asset, is funded by savers’ deposits, i.e. short-term liabilities). Liquidity transformation – liquidity is the relative ease with which assets are turned into cash – then refers to using illiquid assets to create a more liquid one (e.g. mortgage, i.e. an illiquid asset, can be used to create an equity, which is easily sold and hence more liquid – this process is called securitisation and is described thoroughly in section 2.3). Leverage then refers to capital lent/borrowed in order to multiply gains (or losses).
10 Refer to [10] European Commission, March 2012, pp. 3-4 for full list.
11 This claim is discussed in section 2.3.
12 Section 2.3 analyses the interconnectedness of traditional and shadow banking sector in greater depth.

15 [18] Institute of International Finance, June 2012
17 Systemic risk occurs “when core functions provided by financial institutions are fundamentally undermined in a way that (i) threatens the ability of the institutions concerned to meet their obligations in full and on time, (ii) has a contagious element so that the inability of some institutions concerned to meet their obligations is driven by ‘failures’ in others, and (iii) has significant macroeconomic consequences.” [18] Institute of International Finance, June 2012, pp. 8, Box 2.
1.3 Emerging Consensual Definition

Shadow banking is a moving target that evolves according to the financial climate and regulation in place. As such, its definition needs to be sufficiently broad to absorb all its forms yet explicit enough to be of any use to regulatory authorities. While the definition is still being shaped up by the discussion, the literature gradually converges to the following consensus: shadow banking consists in disaggregated credit intermediation which is not directly nor explicitly enhanced by official guarantees and, as such, poses systemic risk. It is mainly wholesale-funded and concentrates around securitisation-based lending as opposed to deposit-funded conventional banks based on hold-to-maturity lending.

Moreover, shadow banking can be in general thought of as a disaggregated traditional banking sector. Traditional banking has three principle functions, all of which are controlled under one roof: i) taking highly liquid deposits as capital; ii) extending credit medium or long term; and iii) providing a payments system. Regulation of conventional banking aims to limit the effects of risks stemming from maturity and liquidity transformation and from the leverage build-up which are contained in the principle functions. The shadow banking system, on the other hand, disaggregates this process by creating a net of asset managers, such as money market funds, hedge funds, exchange traded funds etc. Consequently, these managers specialise in certain types of financial services and trade their products, which results in long and complex chains of financial intermediation. Finally, the products of these chains are traded throughout the financial system (specific examples are presented in section 2.3 and their impact on the interconnectedness between the traditional and shadow banking sector is included too).

Threats and benefits of the shadow banking credit intermediation chains are analysed in Part 2. However, the upshot of the previous paragraph is to demonstrate the complicated character of the shadow banking system: once they are part of the chains, products can be purchased and sold by regular banks. On the top of that, even conventional banks themselves can transform the products, which makes it nigh impossible to draw a fine line between the traditional and shadow banking sector. Hence, the definition of the system by means of systemic risk and broadly specified activities seems preferable to an arbitrary and rigid list of activities and entities.

1.4 Alternative definitions

Shortcomings of the term shadow banking have led to two additional definitions of the system, both of which lie somewhat outside the mainstream discussion. First, New York Fed proposes to distinguish between shadow and parallel banking. Whereas the latter refers to the beneficial features of what has been described as shadow banking in section 1.3 (such as specialisation and risk diversification – these are analysed in section 2.1), the former refers to the part of the system that is based exclusively on regulatory arbitrage. This distinction makes use of the pejorative meaning of the term shadow banking and, therefore, only includes its ill-motivated elements under it. Consequently, the desirable functions of the system are labelled as “parallel banking” which raises no implicit concern.

Second, the Institute of International Finance doubts whether a definition of the shadow banking system is genuinely necessary. It argues that ultimately we are concerned with systemic risk because of its adverse effects on the real economy. The argument follows that a case-by-case approach should be adopted that considers every entity involved in credit intermediation regardless of the definition of shadow banking. Activities of such institutions should be analysed both on their own and with regard to their position in the market net and the systemic risk stemming from their activities should be assessed. Subsequently, regulation would be imposed should the systemic risk pose a substantial threat to the financial system.

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18 [9] European Banking Group, June 2012, pp. 9
19 [18] Institute of International Finance, June 2012, pp. 12
20 Credit intermediation is a lending activity where the saver does not lend directly to the borrower. [3] Bakk-Simon et al, April 2012, pp. 9
23 [18] Institute of International Finance, June 2012, pp. 4
25 [18] Institute of International Finance, June 2012
The shadow banking sector has a potential to increase the efficiency of the global financial system. However, it had formed outside the regulated banking sector and, as such, amplified the effects of the recent financial crisis. In order to internalise its negative externality through regulation a careful analysis of its benefits and threats needs to be finished in the first place. Since some of the topics are still being examined this Part sums up the completed part of the research. Benefits of shadow banking are identified in section 2.1, followed by an overview of its threats in section 2.2 and an analysis of the interconnectedness of the traditional and shadow banking sector in section 2.3.

2.1 Benefits of Shadow Banking

Shadow banking does offer great benefits which formed the rationale behind its rapid growth in the 2000s. First of all, securitisation, around which much of the shadow banking sector has formed, diversifies and mitigates risk if resulting securities (generally asset-backed securities) are properly structured. Moreover, the process enables tailoring risk-return structure of the securities to clients’ needs.

Secondly, securitisation transforms illiquid underlying assets (e.g. loans) into liquid securities and thereby increases the liquidity of the financial system. Liquidity lubricates the system: the more liquid market, the smaller mismatch between market participants’ needs and, subsequently, the more efficient outcomes.

Thirdly, highly liquid and low-risk characteristics of securities led to their acceptance as collateral in repurchase agreements (repos). Consequently, securitisation of loans and purchase of resulting securities provided both the shadow and traditional banking sector with a new and highly liquid source of funding: had banks only held loans, they would have held them until maturity. However, holding an asset-backed security instead enables banks to use this security as collateral for repos and thereby raise cash for their investment strategies and increase their liquidity easily.

Fourthly, the credit intermediation involved in repos can, together with a mitigation of risk through securitisation, significantly reduce the cost of credit relative to direct lending. In other words, an efficiency improvement is achieved again.

Fifthly, unlike the traditional banking sector where the process of credit intermediation takes place under one roof (i.e. in one bank), the shadow banking system is decentralised. Decentralisation, first, enables specialisation and hence further efficiency gains; second, it may prevent existence of too-big-to-fail institutions; third, it supports competitive environment, which has a further beneficial effect on the price of credit; and, finally, spurs innovations in the market.

26 Section 2.3.1 explains logic behind securitisation.

27 Section 2.3.3 explains logic behind repurchase agreements.

28 (20) International Capital Market Association, March 2012

29 (30) Pozsar et al, February 2012, pp. 1
Potential benefits of shadow banking are vast. However, these can only be exploited if the system is properly structured, the risk involved in the securities and transactions is adequately priced, and transparency of both the products and institutions involved is maintained. If this is not the case, threats of the shadow banking system prevail.

2.2 Threats of Shadow Banking

If not properly structured, shadow banking represents a source of systemic risk that can easily infect both the rest of the financial system and the real economy as we have been witnessing since the late 2000s. Firstly, the decentralised character of shadow banking leads to long and complex financial intermediation chains. The process of securitisation can be – in theory – repeated ad infinitum and thereby creates specialised but increasing opaque securities. Consequently, pricing of these products becomes very complex as the price should reflect both the quality of the underlying loans and the risk structure at every single level. The opacity of securities and resulting incapability of analysts to price the risk adequately led to overreliance of the banking sector on credit rating agencies in the run-up to the credit crunch in 2007. Nevertheless, neither the agencies were able to price the risk of these financial instruments accurately and granted many securities of doubtful quality the top AAA rating. On the top of that, cases of quality polishing have been documented describing the negative relationship between the quality of the underlying loans and the length of the intermediation chain motivated by higher chances to obtain a good credit rating.

Secondly, acceptance of securities as collateral for repos builds up leverage⁴³. Although leverage is inherently related to credit intermediation and is not harmful per se, it can turn a non-systemic risk into a systemic one. Moreover, buildup of leverage deepens the procyclical nature of shadow banking and amplifies consequences of financial crises (as it happened in the late 2000s): a collapse of one segment of the intermediation chain (e.g. an entity going bankrupt) has a domino effect along the chain. A collapse of a whole chain is then followed by stress and rapid withdrawals of money from money market (i.e. market for credit), which results in a decrease in liquidity in the financial system. Since liquidity has been described as the lubricant of the system, its shortage causes the whole financial market to collapse. This simplified scenario took place, for instance, in 2008.

Thirdly, the reliance of shadow banking on short-term liabilities (acquired through repos) to fund illiquid long-term assets (loans) is inherently fragile since it is susceptible to modern bank-runs. It has been mentioned above that shadow banking institutions do not accept deposits, which is the reason why they are not currently regulated, but deposit-like assets (i.e. short-term highly liquid assets such as government bonds). Consequently, they reuse the collateral for another repo and thereby build up the leverage. However, once the system is exposed to an exogenous shock, investors start selling the short-term assets and withdrawing money, which – due to a lack of minimum capital standards – results into a rapid reduction in liquidity as described above.

Fourthly, shadow banking suffers from moral hazard in the two following respects: first, shadow banking institutions are not regulated but, in turn, investors’ funds are not insured by central banks, and entities cannot rely on central banks as the lender of last resort. However, the collapse of the system would have deepened the financial turmoil even more than it had done had shadow banking been not bailed out by governments⁴⁴. Therefore, the issue of moral hazard arises because shadow banks have little incentive to manage their assets responsibly if they are helped by the government when they get into trouble. Second, unlike in the traditional sector where credit intermediation is carried out under one roof, the existence of a long shadow banking chains leaves no one responsible for their quality. Consequently, the incentive for a careful analysis of the risk involved in the chain as a whole (as opposed to a risk involved in every single transaction which is accounted for very carefully by institutions) is limited – this is the source of the negative externality.

Fifthly, all of these threats get transferred to the rest of the financial system quickly when stress hits the market: if the shadow banking system is exposed to a shock, resulting uncertainty and panic spread along the credit intermediation chains. The next Part, therefore, examines the interconnectedness between the traditional and shadow banking sector and analyses the spillover effects using some empirical evidence from the recent financial crisis.

2.3 Interconnectedness between Traditional and Shadow Banking

Shadow banking does not lie outside the banking sector. It should be clear from Part 1 that traditional and shadow banking overlap and form one financial system together. It has been argued that the line between these two is blurred and any attempt to define it clearly is inherently arbitrary and of limited use. Therefore, understanding the interconnectedness between these sectors is important in order to further enhance our understanding of shadow banking, to realise its effects on the traditional banking sector (and reverse effects of the traditional sector on shadow banking), and to draw up a relevant and effective regulation accounting for the negative externality of the shadow sector.

The interconnectedness between regular and shadow banking is demonstrated on four specific examples which represent the areas around which shadow banking had...

30 Pozsar et al, February 2012, pp. 1
31 Since securities can be re-used as repo collateral asset managers, who create the securities by pooling and repacking loans, are often nicknamed “collateral mines”. Pozsar and Singh, December 2011, pp. 4-5, 12
32 International Organisation of Securities Commissions, February 2011, pp. 20
33 Pozsar et al, February 2012, pp. 1
34 In the US the government bail-out helped to ease the contraction of 5 trillion USD in the size of shadow banking in the summer of 2007. Pozsar et al, February 2012, pp. 9. The initial bail-out was then followed by additional financial help to both banks and the real economy.
originally formed: securitisation, money market funds, repurchase agreements, and securities lending. None of these caused the crisis directly but it is widely accepted that their existence contributed to the amplification of its effects.

2.3.1 Securitisation

Securitisation is a process of pooling various debt contracts in order to repack them according to clients’ needs. The final packages are generally called asset-backed securities: e.g. asset-backed commercial papers or mortgage-backed securities depending on the character of the underlying assets.

Shadow banking has to a large extent formed around securitisation and, consequently, its segments have specialised in specific types of securities. The idea goes as follows: a bank makes loans and receives regular instalments of the principal and interest in return. However, this cash-flow is risky since the borrower may go bankrupt. It is, therefore, preferable for the bank to sell the loan to a fund or special purpose vehicle36 for a present value of the future cash-flow of the loan. Thereby the bank gets rid of the risk related to the loan, receives cash and does not need to keep the loan on its balance sheet anymore, which gives it a better position to borrow in future. Consequently, a fund or special purpose vehicle buys up various loans with various risks, pools them and repacks them in order to minimise the risk of the package: riskiness of individual loans varies according to borrowers’ backgrounds and purposes of loans. Put very simply, risk is basically calculated as a correlation of the cash-flow generated by a particular loan with a cash-flow generated by a market portfolio or as a correlation with certain macroeconomic aggregates. By pooling and repacking the loans the risk structure of the final packages can be designed to minimise their risk or, more generally, to meet investors' demand for the risk-structure. Therefore, financial institutions developed elaborate risk models that are claimed to be able to compute the resulting risk accurately. Finally, the fund or the investment vehicle issues asset-backed securities (equities), price of which is supposed to be derived from the underlying loans and whose owners receive dividends coming from the instalments of the underlying loan. Moreover, the papers can be pooled and repacked again and again until the desirable risk structure of a resulting security is achieved. On the top of that, the process can be done by both shadow and conventional banks. Therefore, once again, securitisation cannot be regarded as a shadow banking practice per se. It is its scope and resulting risk – both of which vary case by case – that makes it either a shadow banking or a conventional transaction. Finally, the securities are traded throughout the financial system (the drawbacks of securitisation were discussed in section 2.2).

Since the asset-backed papers are highly liquid they diffuse quickly and, subsequently, create a very dense net connecting tightly the traditional and shadow banking system. Therefore, if underlying loans cease to generate a cash-flow (e.g. if the borrower goes bankrupt), investors stop investing in these securities. Due to the interconnectedness, this leads to a reduction in liquidity in the financial system as a whole and may ultimately result in credit crunch with adverse effects on the real economy as was the case in the late 2000s.

2.3.2 Money Market Funds

Money market funds (MMFs) are ‘investment funds that have the objective to provide investor with preservation of capital and daily liquidity, and that seek to achieve that objective by investing in a diversified portfolio of high-quality, low duration fixed-income instruments’37. Since MMFs manage investors’ money instead of accepting deposits they are not subjected to existing banking oversight and regulation. Their most attractive features are traditional stability with a resulting sense of security manifested in a fixed share price (e.g. 1 USD in the US) and their commitment to meet withdrawal requests on demand.

The funds are interconnected with the rest of the economy on several levels: firstly, MMFs invest in high-quality, short-term debt (such as government bonds) and, as such, provide short-term credit to the economy. Secondly, traditional banks invest in MMFs and thereby implicitly support and guarantee the funds38. Thirdly, large institutions use MMFs as outsourced cash managers of their cash pools as it is more efficient for them than saving money with insured banks. Consequently, if a large enough part of a MMF’s portfolio falls apart (e.g. assets that the fund invested in lose value), investors panic and start withdrawing money39. Due to a lack of minimum capital standards this results into a rapid reduction in liquidity of the system affecting all institutions involved in the process. This scenario took place after the collapse of Lehman Brothers in the US in 2008 when the Reserve Primary Fund failed, having invested vast resources in the assets of Lehman Brothers.

2.3.3 Repurchase Agreements

A repurchase agreement (repo) is a way of borrowing money while using assets as collateral. The repo initiator sells his asset to a lender with a commitment to buy it back for a specific price at a specific date. In other words, the borrower borrows money from the lender for the price difference between the repurchase and initial price and uses their assets as collateral. Moreover, collateral may be provided, for example, in the form of government bonds, equities or asset-backed securities (though the share of repos purchased against securities has declined sharply since the recent crisis)40. Subsequently, the lender can re-pledge borrower’s collateral and borrow

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36 A special purpose vehicle is an ad hoc created entity that purchases loans from banks in order to pool, repack and sell them.

37 [22] International Organisation of Securities Commissions, April 2012, pp. 1

38 Historically MMFs used to be sponsored by regular banks directly but this reliance became risky for the banks and the relationship has, therefore, transformed into an implicit support. [22] International Organisation of Securities Commissions, April 2012, pp. 8

39 Due to the commitment to meet money withdrawals on demand MMFs are likely to attract primarily risk-averse investors who are, in turn, very likely to withdraw their funds if the risk they face increases. [22] International Organisation of Securities Commissions, April 2012, pp. 18

40 [12] Financial Stability Board, April 2012, pp. 4
against it themselves, which further builds up the leverage and increases systemic risk.

The repo is primarily used as a source of short-term funding and, as such, significantly increases liquidity in the financial system. In fact, the shadow banking sector regarded repo as a “near-substitute for central bank and insured bank deposit money” in the run-up to the financial crisis. Repos, therefore, interconnect traditional and shadow banking both by the transactions per se and, on the top of that, by using asset-backed securities as collateral.

When the faith in asset-backed securities drops, the value of collateral decreases, which leads to a subsequent reduction in repos and to a decrease in market liquidity. Moreover, if borrowers cease to be able to buy collateral back, the reduction in its price leaves borrowers with a monetary loss. Consequently, since collateral can be re-pledged the losses accumulate along the credit intermediation chain that includes both traditional and shadow banking entities and result in an immense loss that further decreases liquidity of the system. This phenomenon (called “run on repos”) was witnessed during the recent crisis. However, it should be emphasised that it mainly applies to repos purchased against asset-backed securities. Empirical evidence shows that other repos experienced no contraction between 2007 and 2009. These formed a majority of all repos on the market at the time.

Regulation of the traditional sector may not necessarily prevent banks from engaging in riskier repos. Accounting regimes differ across jurisdictions, some of which indicate clearly whether assets on borrowers’ balance sheets are out on repo but others do not regardless of regulation. Moreover, a rather deceitful accounting practice, so called Lehman’s Repo 105, was documented within Lehman Brothers after its collapse. Although the practise was not downright illegal it was evidently designed to exploit a legislative loophole and, as such, contributed to the opacity of repos in the run-up to the financial crisis. However, these examples should not be extrapolated to the repo market as a whole as they only document unique cases. Nonetheless, regulators need to learn from those too.

2.3.4 Securities Lending

Securities lending refers to lending of securities to a borrower in exchange for collateral in the form of either securities or cash. The rationale behind the transaction may be a borrower seeking specific securities that they need for their financial interests (e.g. as collateral for repos) or that their clients demand. Contribution of security lending to the interconnectedness between the traditional and shadow banking system is similar to the one of repos in the sense that both regular banks and shadow banking entities engage in this type of lending.

Since both the borrowed security and collateral can be re-used in further repo contracts securities lending adds to the length of credit intermediation chains. Thus, it further increases the build-up of leverage and systemic risk and highlights the need for securities-based funding of leveraged intermediaries.

All in all, the interconnectedness between the traditional and shadow banking sector increases the liquidity of the financial system and, hence, improves its efficiency. On the other hand, in the absence of clear rules on the risk structure of asset-backed securities or on leverage the interconnectedness ultimately leads to opacity and subsequent failure of the system. Therefore, face to face with an exogenous shock liquidity dries up and the net of credit intermediation chains that holds the system together during a boost turns into chains that pull the system down. Consequently, the procyclical character of shadow banking activities adversely affects the real economy by shortage of credit.

42 For details on the issue of encumbrance see [22] International Organisation of Securities Commissions, April 2012, pp. 19-20
43 [22] International Organisation of Securities Commissions, April 2012, pp. 14-15
44 For details see [22] International Organisation of Securities Commissions, April 2012, pp. 21
Regulation of shadow banking is necessary because the sector is incapable of accounting for the negative externality it poses on society. However, since shadow banking offers many benefits to the financial system and ultimately to the real economy, regulation should only mitigate the risk and by no means discourage – let alone prohibit – the development of the sector. Moreover, great emphasis has been put on international coordination of the effort. Shadow banking is a global phenomenon and, as such, requires a global approach. National legislations are heterogeneous and the success of future regulation depends on the quality of harmonisation of national differences. Should regulators fail in this key respect, space for regulatory arbitrage would open up, which would, consequently, undermine the regulation as a whole. Therefore, the coordination of regulation keeps being stressed in literature and policy papers regularly.

Regulation has its pros and cons that need to be carefully weighted prior to implementation of any regulatory directives. Firstly, the principal benefit of regulation is the mitigation of systemic risk. The recent credit crunch demonstrated that shadow banking amplifies effects of financial crises and this would have happened to a lesser extent had the sector been regulated. Secondly, regulation would make shadow banking more transparent. The experience of opaque and overly complex financial instruments that no market institution can deal with in the long term would, therefore, not repeat. Thirdly, limited systemic risk and increased transparency make the financial system more stable and, hence, its evolution sustainable. On the other hand, regulation will limit the activity of shadow banking and, as such, will slow down the economic growth slightly. Furthermore, the cost of credit will increase as shadow institutions will be obliged to keep minimum capital, leverage and liquidity standards.

Global regulatory efforts are currently at a stage of discussing and analysing the quantitative impact of the lack of pre-crisis regulation of shadow banking on the financial system and on the real economy. This effort was formally initiated by G20 in Seoul in November 2010 and, subsequently, confirmed at Summit in Cannes in 2011. Although specific regulatory limits can hardly be predicted at this point, three main areas of regulation have been suggested: firstly, the financial industry needs to improve the granularity of provided data and to be obliged to supply it. Insufficient data significantly hinders the ongoing effort to calculate quantitative effects of shadow banking on the rest of the economy during the current economic slowdown. However, exact specifications of such data are yet to be pinned down. Secondly, the shadow banking sector should be subjected to liquidity and leverage requirements in order to mitigate the systemic risk it poses.

45 The short-term impact on economic growth is estimated between -0.18% to -0.15% per percentage point with the long-term impact approaching 0%. Cost of credit is expected to rise by 0.11% per additional percentage point in the short term and be close to 0% in the long term. [6] Directorate General For Internal Policies, June 2011

However, current consensus emphasises that entities should be considered case by case rather than endorsing one-size-fits-all approach\(^\text{48}\). Thirdly, direct regulation, i.e. regulation of specific shadow banking entities, is preferred to indirect regulation, i.e. further regulation of already regulated institutions in order to control their interaction with the shadow banking system, as the latter is believed to be more effective. On the top that, every regulation should assess the potential for regulatory arbitrage it creates both across the industry and across jurisdictions.

Despite the current emphasis on globally coordinated approach several regulatory efforts have already been completed as a spontaneous reaction to the crisis. These include, for instance, Basel III and Dodd-Frank Bill. Firstly, Basel III “proposes many new capital leverage and liquidity standards to strengthen the regulation, supervision and risk management of the banking sector\(^\text{48}\). However, it focuses exclusively on the traditional banking sector and, as such, is unlikely to address any of the shadow banking issues. The opposite may actually be the case as the emphasis on the traditional sector is likely to support the unregulated activities of shadow banking as it encourages regulatory arbitrage. Secondly, Dodd-Frank Bill\(^\text{50}\) which was passed through the US Parliament and signed by President Obama in 2010 is an example of an adjustment of regulatory framework on national level and a direct response to the financial crisis of the late 2000s. The United States are not the only jurisdiction that has augmented their regulatory legislation. However, regional laws such as this one will need to be encompassed by a global approach in future.

Although the shadow banking sector does need to be subjected to regulation the global character of the discussion makes it inevitably a long-distance run. The process of initial consultations, responses, processing of various remarks, and final implementation will take years rather than months.

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\(^{48}\) This statement is still a matter of discussion with advocates of both the one-size-fits-all (e.g. [19] International Banking Federation, July 2011) and the case-by-case approach (e.g. [18] Institute of International Finance, June 2012). Nevertheless, the latter seems to dominate currently.

\(^{49}\) [28] Moody’s Analytics

\(^{50}\) officially the Dodd-Frank Wall Street Reform and Consumer Protection Act
Shadow banking has the potential to increase efficiency of the global financial system. However, it had formed outside the regulated banking sector and, as such, consequently amplified the effects of the recent financial crisis. Effort is therefore being made to account for the negative externality of shadow banking while preserving its benefits.

The amorphous character of the sector makes it rather challenging to define the notion shadow banking. It has been shown that a definition listing features of shadow banking and pinning down shadow banking activities and entities is both nigh impossible and pointless. Shadow banking is not an antonym of regular (i.e. regulated) banking. These two overlap substantially and are interconnected profoundly. Moreover, both these sectors form one financial system. Understanding of the term, therefore, needs to adopt the idea of a moving target and identify systemic risk as the underlying source of the concern with shadow banking. Although the decision may be very simple in some cases filing certain institutions into the shadow banking slot will often be a matter of discussion and opinion. However, such a character should not be regarded as an obstacle to research and regulation.

There are significant benefits that shadow banking offers to the financial system including reduced cost of credit and increased liquidity of the system. However, the downside of the shadow banking sector consists in the systemic risk that the sector increases in the financial system as a whole. Even a relatively short-term shock may then result in a rapid decrease in liquidity and, consequently, in a collapse of the system with long-term consequences.

Shadow banking is a phenomenon, to which all financial institutions should pay attention. The sector has either a direct or indirect effect on every entity in the financial system. It is important for traditional banking to understand the links since these are likely to develop significantly with the introduction of future regulation. However, one can hardly assess the impact of regulation until specific laws are drawn up. Nevertheless, the regulation will undoubtedly have a profound effect on the character of shadow banking and, subsequently, on the character of the financial system. If traditional banks pay attention to the issue now, they will be able to adjust to the effects of regulation flexibly and at lower costs in future.
References


