Financial Law Institute

Working Paper Series

WP 2017

Eddy WYMEERSCH

Shadow banking and Systemic risk

March 2017

WP 2017

Eddy WYMEERSCH

Shadow banking and Systemic risk

Abstract

What constitutes shadow banking has been described by the international financial institutions, such as FSB, IOSCO, ECB and European Commission. A common characteristic is that several of the shadow banking activities are outside the banking field but are likely to have an impact on the banking sector and then may lead to systemic concerns. Before the financial crisis these were largely out of scope of the regulators. On the basis of recommendations from FSB, the European Union has adopted regulations addressing systemic risk for the main categories of intermediaries or activities. Three main groups emerge: asset management in its different forms (e.g MMFs), specific transactions in the financial markets mainly in the wholesale markets (derivatives, securitisation), and finally insurance. These limits are still open to discussion. In the asset management field, the main concern is a run and a corresponding fire sale, in the markets, disclosure, streamlining of transactions, but also regulating the whole market activity has been the approach. If the regulatory burden has been increased, the risks in the financial system has been reduced.

© Financial Law Institute, Ghent University, 2017

Shadow banking and Systemic risk

Eddy WYMEERSCH, professor, Financial Law Institute, Ghent University

I. Introduction 2
II. Terminology 3
III. What constitutes shadow banking? 3
IV. Shadow banking and financial stability leading to systemic risk 6
V. The transmission mechanism 7
VI. Systemic risk in the shadow banking markets 8
A. Investment funds, asset management 8
1. The hedge fund regulation 9
2. Future regulation of Money Market Funds (MMFs). 9
3. Systemic risk in Asset management and in Other collective investment institutions 12
B. Systemic risk in the financial markets 14
1. Systemic risk in Short selling 14
2. The regulation of derivatives trading 15
3. The regulation of Central Securities Depositories 17
4. The Securities Financing Transactions 18
5. Securitisation 20
6. Marketplace lending, crowdfunding and other parallel funding mechanisms 23
C. Insurance 24
VII. Conclusions 26
A. Shadow banking is not banking. And it is not "shadow", i.e. not regulated 26
B. Both aspects are complimentary. 26

I. Introduction

When studying shadow banking it is useful to investigate briefly why this topic has become of central importance. The reasons will also help to identify what is understood by shadow banking and how it relates to the rest of the financial system.

Shadow banking is usually understood as financial activity taking place outside the regulated banking or financial sector. The banking activity mainly concerns intermediation for credit, liquidity and maturity transformation, the three core functions of banking, so shadow banking is considered to involve the same activities but outside the perimeter of prudential regulation.

The notion of shadow bank was coined to identify the significant risks to the financial system which originate outside the main banking system, and therefore were not well perceived from the traditional prudential approach[1]. This characteristic was clearly present during the financial crisis of 2007 e.s., which to a certain extent was due to these risks, such as involving subprime CDOs and the CDS (Collateralised Debt Obligations and the Credit Default Swaps), derivatives and so many other financial innovations. In many cases the risks represented by these new instruments were not well known to the traditional banking world including their supervisors, and therefore measures for risk reduction or elimination were not readily available, nor well followed up. Conceptually, this short description identifies that shadow banking is essentially a term for defining significant risks that may affect the banking system but originates outside the purview of traditional, prudential banking. The description calls attention to the "transmission mechanisms" by which the non-bank risks may impact the banks. Only significant risks are considered in the sense that not only one bank may be affected, but more broadly several banks, and ultimately the entire financial system. These risks may affect a wider population of institutions, leading to threats to financial stability which may in their turn destabilise entire economic systems – creating "systemic" risks[2]. The regulations relating to shadow banking are therefore directly related to the subjects of financial stability and systemic risk, and hence take part of what is called the macro-prudential segment of financial regulation. This does not mean that micro-prudential and legal issues are not taken into account. Although not the only aspect, systemic risk is undoubtedly the common denominator for the different fields that are brought under the shadow banking denominator.

[1] According to the IMF, What is shadow banking? the term "shadow bank" was coined by economist Paul McCulley in a 2007 speech at the annual financial symposium hosted by the Kansas City Federal Reserve Bank in Jackson Hole. http://www.imf.org/external/pubs/ft/fandd/2013/06/basics.htm

[2] See among the early studies St. Schwarcz, Systemic Risk, Georgetown Law Journal, 97:193 (2008), https://ssrn.com/abstract=1008326

II. Terminology

Referring to this activity as "shadow banking" is very misleading: most of the time it does not refer to banking, and it does not take place in the shadow, unless perhaps in the eyes of some bankers. Sometimes it is said to refer to unregulated activity: even that is often not the case, as institutions belonging to this category are subject to different types of regulation, but the type of regulation is different from the typical prudential regulation applicable to the banks. For these reasons the expression of shadow banking should be avoided. There have been numerous definitions and translations of the expression "Shadow banking": "market based financing" "less regulated - or unregulated - financial sector" or "market led institutions" or "alternative financial institutions" are found in different types of documents but are equally imprecise. In French, the usual term is "finance parallèle" while in German, reference is often made to "Schattenbanken", in Dutch to " schaduwbankwezen", both literal translations. Italy refers to the "sistema bancaria ombra"[3].

It might have been preferable and more precise to define shadow banking as "financial activity outside the prudentially regulated field". This would also better situate the origin of the concerns about "shadow banking' which fundamentally relate to the effects of negative evolutions in these non-prudential fields on the banking world. "Non-bank financial intermediation" might be a good alternative[4].

However, we will use the expression, as it has become generally used by all financial institutions and authorities involved in this field such as the Financial Stability Board, the IMF, the World Bank, the Basel Committee for Banking Supervision, the European Commission and its agencies, the European Central Bank, and many national regulators. Confronted with this almost unanimous formulation, we can only give in, and use the term "shadow banking".

III. What constitutes shadow banking?

Financial stability concerns are voiced with respect to most of the activities of the established banks: capital, liquidity, operational risks, are the traditional domains of financial stability attention. "Too big to fail" and "moral hazard" may be added as overarching concepts.

Credit institutions are characterised by three main forms of intermediation taking place within the same legal entity or group: *Credit intermediation, Liquidity transformation, maturity transformation*

---

[3] See: http://www.consob.it/web/investor-education/il-sistema-finanziario-ombra. In Italian, reference is made to "banche ombra non regolamentate".
[4] See Daniel K Tarullo: Thinking critically about nonbank financial intermediation , speech 17 November 2015, https://www.federalreserve.gov/newsevents/speech/tarullo20151117a.htm

Credit intermediation refers to any activity where credit is granted by a creditor to a borrower, not directly, but as an intermediary: short term deposits are used for long term loans.This is the core activity of banking. *Liquidity transformation* takes place when an intermediate obtains liquid funds – e.g. cash or short term deposits -in order to invest them in less liquid assets: see a bank using savings deposits for granting mortgage loans. And *maturity transformation* results in receiving shorter term funds and using them for a longer term asset.

Shadow banking often intervenes where the same or similar outcomes are reached but through other techniques or processes, or by other separate institutions. This explains why these institutions have not been captured under the traditions definitions of "credit institution": the Financial Stability Board uses the following definition for shadow banking: "credit intermediation involving entities and activities (fully or partially) outside the regular banking system".

In most literature, the overview of this relatively new domain is studied analytically by describing each of the most important types of institutions or of instruments used. This rather pragmatic approach has the advantage that it allows to deal with the applicable regulations, as these are often proper to the specific types of entities. Therefore, one will find here too a regulation by regulation analysis, rather than an integrated, or conceptual approach. [5] The best sources for identifying what the term "shadow banking" covers are the Financial Stability Board, and closer to the regulatory field, the European Commission.

The FSB identifies shadow banking according to a narrow and a broad definition[6]. Its policy objective is to transform shadow banking into "resilient market–based finance"[7]. The concept has changed over time and has a tendency to expand over the entire financial system, banks excluded.

According to the narrow definition, shadow banking is defined as referring to different forms of credit intermediation: collective investment vehicles: MMFs, hedge funds, investment funds, or other financial institutions (OFI), often related to banking institutions and included in prudential consolidation

The FSB's broad definition includes:

According to the FSB, these Other Financial Institutions (OFIs) include:

- SPV for securitisation purposes ABCP conduits
- Mandatory clearing for OTC derivatives
- Short selling regulation and trade repositories

---

[5] Also in : J. Macey, It's all shadow banking, actually, Review of Banking and Financial Law, 2011-2012, 593, https://www.bu.edu/rbfl/files/2013/09/AllShadowBanking.pdf

[6] FSB, Shadow Banking: Scoping the Issues; A Background Note of the Financial Stability Board, 12 April 2011

[7] FSB Transforming Shadow Banking into Resilient Market-based Finance, An Overview of Progress, 12 November 2015

- Finance companies [8].
- Structured finance vehicles
- Credit Hedge funds
- Broker dealers
- Real estate investment trust
- Trust companies[9]

Also:
Pension funds
Insurance companies

The European Commission has formulated a first approach in its original “Green Paper on Shadow Banking”, where it identified the following financial institutions and activities as being considered to belong to shadow banking[10]:

- Special purpose entities esp., securities vehicles
- Investment funds, especially ETFs
- Money market funds
- Finance companies offering credit or preforming bank like functions
- Insurance undertaking including reinsurance

Under the category of activities

- Securitisation
- Securities lending and repos

From the regulatory point of view, this list is significant as it contains the main fields in which the European Commission has developed proposals or is still in the process of negotiating these, such as securitisation, Money market funds, Short selling and CDS[11].

Recently new fields have been added to this list: Insurance, asset management including Exchange Traded Funds (ETFs) are the two most recent but very controversial additions.

The dividing line between traditional banking and shadow banking is often rather unclear, or even inexistent: banks engage in activities that are treated as shadow banking, or are behind some of the institutions that produce these products, often by

[8] A well-known example is the list of activities of the former General Electric Capital which has now left the GE group: ; https://www.ge.com/news/company-information/ge-capital; see also: https://www.vwfsag.de/content/sites/vwcorporate/vwfsag_de/de/home.html
[9] A type of business that is particularly widespread in China.
[10] EC GREEN PAPER on SHADOW BANKING, 19.3.2012 COM(2012) 102 final http://ec.europa.eu/internal_market/bank/docs/shadow/green-paper_en.pdf
[11] Regulation (EU) No 236/2012 14 March 2012 on short selling and certain aspects of credit default swaps, OJEU 24.3.2012

financing them. The risks that are generated in the shadow banking part of the financial system are therefore directly relevant to the banking world, whether by affecting the bank's balance sheet, or by creating a confidence crisis of which the banks are the first and main victims.

IV. Shadow banking and financial stability leading to systemic risk

How to explain the recent interest for what is called shadow banking?
The financial crisis revealed that financial systems are based on a balance between numerous factors, such as depositors, lenders, markets and investors, to name of few. If this equilibrium is changed, signals of instability appear, but generally markets adapt after a while, not necessarily at the same level (see the stock markets). If factors of instability concentrate in certain segments of the markets and are not set off e.g. by price changes , the system may collapse, and markets may not be able to timely adapt: these are the stock exchange crashes that occur from time to time. The same may happen in the banking market: the collapse of one bank may trigger a wider banking crises, leading to a massive run by depositors on several banks. Comparable phenomena play for institutional investors: the 2007 European side of the banking crisis started in August 2007[12] with a decision by a leading banking group to close down three French hedge funds, specialising in US mortgage debts. A confidence crisis resulted, leading to the first intervention of the ECB: the consequence was a considerable loss of confidence, and an intervention by the ECB of about 250 million euro[13].

Shadow banking has entirely been defined in terms of systemic risk. Subject matters that do not raise such risks are not analysed under the denominator of shadow banking; institutions that are not sufficiently large in terms of volume of assets or transactions – e.g. local banks, or smaller investment funds - will not be considered as belonging to shadow banking. Systemic risk concerns become more prominent with the size of the bank: banking groups that reach highest degree of intensity are qualified Global Systemically Important Institutions or G-SIFis[14], or domestically important institutions or D-SIBs[15] . In larger banking institutions, systemic risk is internal to the bank and is dealt with essentially by a range of internal measures, many dictated by prudential regulation: higher loss absorbency, such as additional capital buffers, leverage ratio, risk management, control of operational risks etc. In addition, systemic

---

[12] see https://www.theguardian.com/business/2011/aug/07/global-financial-crisis-key-stages; Recently suspensions took place in the real estate fund sector as a consequence of the Brexit vote. They were lifted 3 months later: Standard Life lifts ban on property fund withdrawals, FT 27 September 2016.
[13] NY Times, BNP Paribas suspends funds because of subprime problems. http://www.nytimes.com/2007/08/09/business/worldbusiness/09iht-09bnp.7054054.html
[14] D Sibs, or *domestic systemically important banks*: see: BCBS, A framework for dealing with domestic systemically important banks Issued for comment by 1 August 2012 http://www.bis.org/publ/bcbs224.pdf See for the list of these FSB, 2015 update of list of "global systemically important banks" (G-SIBs) , 3 November 2015, http://www.fsb.org/wp-content/uploads/2015-update-of-list-of-global-systemically-important-banks-G-SIBs.pdf
[15] See: Extending the G-SIFI Framework to Domestic Systemically Important Banks, 20 April 2012, http://www.fsb.org/2012/04/r_120420b/

risk characteristically may also derive from the relationship of the bank with the other segments of the financial system, especially segments that are – or originally were - less regulated. The existence of a risk transmission mechanism between the shadow banking world and the banks is a crucial factor in the analysis of this phenomenon.

At the same time, other objectives especially investor protection are addressed to the extent that they may lead to systemic risk: rules on "reuse" are part of the Securities Financing Transactions regulation as these may restrict the use of securities as collateral, although at the same time they may lead to protecting the owner of the securities against their use by the intermediary[16].

A very comprehensive overview of systemic risks can be found in the report of the US Financial Stability Oversight Council or FSCOC [17]. The list is very long leading, to some criticism about the its overinclusive character[18].

V. The transmission mechanism

The systemic risk that may develop in the shadow banking part of the financial system is taken into account in the regulation as it may affect the regulated banking system, while at the same time undermining confidence in the financial system and in its other segments such as the securities markets, the investment funds, or the insurance companies. This transmission of risks –or: interconnectedness - from one sector to another takes place following several paths.

The most simple transmission mechanism is reputation and confidence of the banking institutions and their leaders: banking crises often are started by loss of trust, triggered by a real or perceived liquidity shortfall, by abusive or manipulative practices often triggered by rumours, but ultimately leading to loss of reputation. A confidence crisis related to one banking group may affect other groups, in the same state or in other states. A general confidence crisis, a general meltdown in one state, or even worldwide may be the ultimate sanction.

Often transmission follows specific paths: a downgrading by a rating agency may affect several institutions. The presence in the balance sheet of highly risky assets will not only undermine the solvency position of that bank, but of many other banks holding similar assets. The ongoing debate about the securitisation was directly linked to these developments. The massive withdrawal of bank deposits, but also of insurance savings, or the redemption of investment funds will trigger a “run”, as all investors will

---

[16] see further 6.2 (iv).

[17] See FSOC, Annual report, 2016.For a quantitative measure of shadow banking worldwide, see: B. Tissot, Measuring the shadow banking sector, Jan 2016 https://www.bis.org/ifc/events/session2tissot.pdf, identifying high concentration e.g. in Ireland and the Netherlands

[18] See e.g. Melanie L. Klein. The shadow banking Charade, February 2013, referring to “shadow banking mythology”; https://www.sec.gov/comments/s7-04-09/s70409-95.pdf; Comp SEC Commissioner D.M. Gallagher, March 3, 2014, speech for the Institute of International Bankers, pleading for a “holistic view”.

try to be the first to exit, leading to forced sales, market upheaval and lower pricing, ultimately resulting in a downward spiral. The quality of the assets is not necessarily at stake, but the investors' behaviour. All parties holding similar assets will also be confronted with portfolio losses. In other cases, the bank's conduct may trigger a confidence crisis, especially when followed by huge financial sanctions. Massive short selling in a bank's shares may lead not only to price falls in its equity, but undermine the confidence in the bank and hence provoke a withdrawal of deposits.

Bad quality of the bank's products can undermine confidence: confidence will be destroyed if the bank is selling investment products that later proved worthless, or where it has mislead its investors: the worthless mortgages underlying the CDOs lie at the basis of the first stage of the financial crisis. The ongoing debate about the securitisation is directly linked to these developments.

The derivative markets are particularly prone to systemic developments: the nominal volume of the transactions is impressively high, and inherently based on credit which the parties – mainly banks - have granted each other. Therefore, guarantees, especially solid collateral, have to be constituted, and the overall risks brought down by interposing a central party, allowing setting off transactions in opposite directions. Here it is essential that the transactions are standardised, settled in one institution (the CCP), and to the largest extent possible set off against each other. The liabilities of the participants are further supported by collateral and other guarantees, reducing the risk in this market segment.

VI. Systemic risk in the shadow banking markets

The way systemic risk occurs in the shadow banking sector – outside the banks themselves – is rather diverse. Therefore a few of the most significant cases will be analysed here: these are also the cases in which regulation in the European Union has been adopted or is under consideration.

A. Investment funds, asset management

In a certain number of cases, the risk originates from the liabilities of an institution and their relationship with its assets. Financial institutions owning short term liabilities – such as deposits, or redeemable investment funds shares – can be confronted with a sudden request for reimbursement. This will trigger the need to liquidate some of its assets, which if massive will affect their market price. This is often designated as a "run", leading to "fire sales". The phenomenon is not proper to banks: it has been identified in the case of different types of investment funds, especially money market funds, but is now also identified for portfolios managed by asset managers and for

reimbursable insurance portfolios. The international financial institutions have been drawing attention to these risks to financial stability[19].

1. The hedge fund regulation

The AIFMD[20] was the first measure that drew attention to the systemic effects of decisions of investment funds, mainly as a consequence of their investment decisions implying concentrated holdings the disposal of which may be disturbing the market. The use of leverage is mentioned in this context as a reinforcing factor. Investor protection is also mentioned as an objective of the regulation, but in itself occupies a less prominent place in the regulation.

The systemic risk provisions are rather vague and generally call for oversight by the supervisors of the management companies of alternative investment vehicles. Attention mainly focuses on leverage, seen as a factor contributing to "systemic risk, risks of disorderly markets or risk to long-term growth of the economy"[21]. Liquidity coverage, to be verified in stress testing also receives due attention[22]. The larger management groups have to set a level of leverage, taking due regard to the "interlinkages" with financial institutions which could pose systemic risk[23]. In the exchange of information between supervisors a special part of their report should address systemic risks.

2. Future regulation of Money Market Funds (MMFs).

Money market funds are particularly prone to financial stability threats as their investors can claim at all times the reimbursement of the funds invested in the MMF, leading to a massive sale of their assets on the markets. Although, there is some controversy as to the financial stability sensitivity of these funds due to the fact that the risks are ultimately born by the investors[24], it is difficult to deny that both the volume of their

---

[19] see IMF, April 2015 report on "*The Asset Management Industry and Financial Stability*", IMF report notes high leverage is mostly limited to hedge funds and private equity funds, which represent a small share of the industry. Hence the report notes, solvency risk is low in most cases. Nicola Doyle, Lieven Hermans, Philippe Molitor and Christian Weistroffer, Shadow banking in the euro area: risks and vulnerabilities in the investment fund sector, ECB Occasional Paper Series https://www.ecb.europa.eu/pub/pdf/scpops/ecbop174.en.pdf?2cc4d889706adbcb918c06de4e5df144, June 2016

[20] Directive 2011/61/EU of 8 June 2011 on Alternative Investment Fund Managers and amending Directives 2003/41/EC and 2009/65/EC and Regulations (EC) No 1060/2009 and (EU) No 1095/2010

[21] Article 25 (!)Directive 2011/61/EU of 8 June 2011 on Alternative Investment Fund Managers

[22] Article 16 AIFMD, Directive 2011/61/EU of 8 June 2011 on Alternative Investment Fund Managers

[23] Article 14(4). Mentioning the risks flowing from reuse of collateral or guarantees. See IMF, report on "*The Asset Management Industry and Financial Stability*", April 2015 noting high leverage as being mostly limited to hedge funds and private equity funds, which represent a small share of the industry. Hence the report notes, solvency risk is low in most cases.

[24] See: Melanie L. Klein, The Shadow Banking Charade, fn 18, February 15, 2013

assets and the usually short term nature of these may have a considerable destabilising effect on the markets and sap investors' confidence. Therefore, the Financial Stability Board, the Basel Committee[25], IOSCO[26], the SEC and the European Commission have all insisted on developing an adequate regulatory framework for these funds. In Europe they usually are created as UCITS, leading to the application of the UCITS legal framework to which in the future the specific regulation on MMFs will be applicable. MMFs may also be set up in accordance to the AIFM Directive[27].

The total volume invested in MMFs in the EU turns around 1 trillion euro, creating a considerable liquidity risk. A large number of these funds, organised as UCITS are mainly located in France, Ireland and Luxembourg. In the US, the MMFs carry 2,7 trillion dollar in their books. Recently the SEC has adopted a regulation on MMFs that has inspired its European counterpart[28].

In the European Union, the Commission tabled a proposal[29], which was later accepted by the European Parliament[30], and by the Council, in both cases with considerable modifications. The final regulation has not been published at the moment of writing[31].

The regulation contains very detailed provisions on how MMFs have to be organised, invested and managed. The eligible assets have been defined in detail: safety of the asset is the main criterion, while some asset classes are prohibited being considered too risky[32].The regulation defines in detail the characteristics of each of the eligible asset classes: specific conditions apply to e.g. ABCPs, financial derivatives, repurchase agreements (repos) or reverse repurchase agreements, or other MMFs. There are also risk-spreading provisions or concentration limits capping the volume of the investment in these specific classes of assets, except for deposits with central banks, states or their subdivisions or pan European institutions. Formal internal quality

---

[25] Guidance on the application of the Core Principles for Effective Banking Supervision to the regulation and supervision of institutions relevant to financial inclusion, Sept 2016

[26] IOSCO, Peer Review of Regulation of Money Market Funds: Final Report, Fr 19/2015, September 2015.

[27] See recital 12 to the draft MMF regulation: Amendments adopted by the European Parliament on 29 April 2015 on the proposal for a regulation of the European Parliament and of the Council on Money Market Funds (COM(2013)0615 – C7-0263/2013 – 2013/0306(COD)) (1)

[28] Release No. 33-9616, IA-3879; IC-31166; FR-84; File No. S7-03-13; https://www.sec.gov/News/PressRelease/Detail/PressRelease/1370542347679; see for an overview: SEC Adopts Money Market Fund Reform Rules, 23 July 2014

[29] Proposal for a REGULATION on Money Market Funds /* COM/2013/0615 final - 2013/0306 (COD) */;

[30] See : Amendments adopted by the European Parliament on 29 April 2015 on the proposal for a regulation of the European Parliament and of the Council on Money Market Funds (COM(2013)0615 – C7-0263/2013 – 2013/0306(COD)) (1) Council position: 10 June 2016, 9874/16, Ecofin 556; ECON publishes new report on proposed EU Money Market Fund; Regulationfile:///Users/eddywymeersch/Documents/directives/MMFs/MMFs%20EuroP%2029%20April%202015%20-%20Money%20market%20funds%20***I%20-%20P8_TA(2015)0170.html; See Jim Brunsden, EU nears deal on regulating money market funds, FT, !) June 2016 ; William Fry III, Money market funds regulation, Fifth compromise proposal published http://www.williamfry.com/newsandinsights/news-article/2016/06/09/money-market-funds-regulation-fifth-compromise-proposal-published.

[31] See: Money market funds: Council confirms deal with EP, 7 December 2016 http://www.consilium.europa.eu/en/press/press-releases/2016/12/07-money-market-funds/

[32] See article 8, proposed regulation on Money market Funds

assessment methodologies have to be developed as well as credit quality management and stress testing. Of particular importance are the valuation rules: in principle, these will be based on marking to market (or to model) but for the shorter term funds, the amortised cost method is allowed. These accounting methods are linked to the allowance for MMFs to value their portfolios and express their entry- and exit prices as a constant price, irrespective of the changes in valuation of the portfolio (so-called Constant Net Asset value, or CNAV) as opposed to Variable NAV (VNAV), the preferred method both in the EU and now also in the US. In VNAV, the fund is valued as any other fund at the value of its assets in the market[33].

Much attention is paid, not only to the quality of the assets but also to their liquidity. Investors should at any time be able to leave the fund without suffering losses due to lack of liquidity in the fund. During the crisis, the pressure exercised on some of these fund has been so strong that they had to resort to exceptional measures to be able to honour the investors' demand for reimbursement: this was done whether by reducing the exit rights e.g. by imposing a certain surcharge on the early exits (up to 2% in the US) - or by installing a "gate" that would have prohibited, or at least controlled the exit[34]. Additional funding may be provided by the asset manager, promotor of the fund, shifting the systemic risk to the latter, but possibly endangering other funds managed by the same promotor. In some cases, funds have started to contract considerable loans with banks or other third parties in order to stabilise the value or provide liquidity in case of need. This practise has been forbidden in the European draft regulation[35] as it might increase the pressure for an early exit and therefore may give an incentive to a run and increase contagion risk[36]. Concerns of moral hazard have been mentioned[37]. Important in this perspective is the provision that the fund should also keep enough liquidity to honour the claim of its largest investor[38]. Finally concerns of unequal treatment may be raised, as the later exiting parties may run a higher risk of loss due to the evolution in the market.

[33] This leads to a difference in the accounting method: CNAV can follow cost accounting but VNAV accounting is based on making to market. See further: article 36 of the draft Council regulation

[34] FSB, Strengthening Oversight and Regulation of Shadow Banking Policy Framework for Strengthening Oversight and Regulation of Shadow Banking Entities , 29 August 2013 , cites the following instruments as "policy toolkits": Redemption gates; Suspension of redemptions ; Imposition of redemption fees or other redemption restrictions; Side pockets; Tools to manage liquidity risk: Limits on investments in illiquid assets; Liquidity buffers; Limits on asset concentration; Limits on leverage; Restrictions on maturity of portfolio assets

[35] Article 35 on "external support" including support by the sponsor of the MMF, No similar restrictions seems to apply to US MMFs.; See for the SEC, MMF, Final rule 33-9616, for sponsor or affiliate support, p 379 dealing with the matter in terms of disclosure

[36] See article 35-36 of the Commission draft regulation and recital 5 pointing to contagion to other funds from the same sponsor; compare with the UCITS regime, article 84 Dir 2009/65 and art 16 AIFMD Dir 2011. 61 and 47 Commission regulation 231/ 2013, See recital 47. The argumentation does not seem very convincing

[37] See for a discussion IOSCO, Money Market Fund Systemic Risk Analysis and Reform Options. .Consultation Report 27 April 2012

[38] Article 24(2) of the EP document

Recently the systemic risk analysis has been broadened to the activity of asset management and related to this, to other types of collective investment institutions[39]. This broadening of the systemic analysis is due to the considerable increase in assets under management, especially in the funds sector. Although the figures may be somewhat unsure, it seems that $ 31 Tr. is held in open ended funds, subject to instant withdrawal, of which about 9,8 Tr euro is held in the European Union. Also, the strong concentration of the management activity is a cause of concern: ten of the largest portfolio managers are responsible for portfolios between 4,5 and 1 trillion $. Or: 500 managers held $ 78,1 Tr assets end 2014, while the 20 largest managers held $ 32,5 Tr in assets, standing for about 40% of all assets[40]. Even smaller portfolio movements decided by these managers may considerably affect the markets and other portfolios as well. With these volumes, the systemic nature of the risk becomes evident and is likely to be addressed more comprehensively in the regulation[41].

A central issue here again is the difficulty some funds may have had in meeting their investor clients' demand to redeem their shares in the fund, while the funds' assets could not be liquidated in a short period of time[42]. Since the MMF crisis in the US, there have been several other cases where funds were obliged to suspend redemption, a decision that stirred some fear with other investors. Several regulators have called attention to the risks in the asset management business in general. Whether these measures would lead to a systemic situation is difficult to predict, and would only occur in rather exceptional cases[43].

The most vocal body defending the systemic nature of the collective investment institutions has been the FSOC, the US Financial Stability Oversight Council, analysing among others the risks presented by asset management and in its products. Five areas of attention were identified: (1) liquidity and redemption; (2) leverage; (3) operational functions; (4) securities lending; and (5) resolvability and transition planning. Among the recommendations, one should mainly mention: liquidity management directed to avoiding holding assets with limited liquidity and where applicable, the development an appropriate liquidity policy; introduction of gates and exit fees, and more disclosures.

---

[39] This analysis was strongly opposed by the Investment Company Institute, Why Asset Management Is Not a Source of Systemic Risk https://www.ici.org/viewpoints/view_14_assetmgr_sifi?WT.mc_id=; see Attracta Mooney ECBs' Shadow banking Label for Funds riles Asset managers, FT 2 November 2015

[40] The World's 500 Largest Asset Managers – Year end 2014: see https://www.towerswatson.com/en-GB/Insights/IC-Types/Survey-Research-Results/2015/11/The-worlds-500-largest-asset-managers-year-end-2014.

[41] Stafford, P and Binham C, Asset managers to face tougher systemic risks test, FT, 22 January 2017

[42] For an example, see Box E, FSoc Annual Report 2016,p 86

[43] See about this position: EFAMA Response to the FSB Consultative Document Proposed Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities; http://www.efama.org/Publications/Public/EFAMA_Reply_FSB_Structural_Vulnerabilities.pdf

Additional studies were undertaken by the FSB and IOSCO[44]. The most recent initiative is the FSBs Consultation Paper on "Proposed Policy recommendations to Address Structural Vulnerabilities from Asset Management Activities"[45]. The main points of attention are liquidity mismatch and leverage, both as a consequence of borrowing and of the use of derivatives. IOSCO on its side called for better data on the asset management activity. Operational risks and securities lending are other points of attention.

Whether and to what extent index funds or Exchange Traded Funds (ETFs) might create systemic risk is the subject of debate. In the US, the Financial Stability Oversight Council (FSOC) analysed the issue, mainly from the angle of liquidity in case of a large increase of investment in these funds. ETFs represented end 2015 $ 3.4 Tr or about 1.1 Tr in the EU, in both cases growing very fast[46]. In case of a confidence crisis, there may be a lack of liquidity to allow the positions of exiting shareholders to be netted against incoming shareholders, what is the normal practice called "internalisation"[47]. The intermediaries would be engaged and external liquidity might be needed in case of a confidence crisis what may lead to crash sales[48]. In other words, the liquidity pressure would be comparable to the one noticed in the open-ended funds. To the extent that some ETFs invest in smaller listed companies, or in less liquid assets, investors may not experience the liquidity they expected. From a certain level of concentration of holdings, the price formation process may become unreliable, being based on very small volumes. On the other hand, concentrated investments may have a procyclical effect[49].

Although identifying certain factors for follow-up, FSOC did not conclude to imminent financial stability concerns as far as ETFs are concerned[50]

---

[44]FSB/ IOSCO, Methodology for Identifying Non-Bank Non-Insurer Global Systemically Important Financial Institutions (NBNI G-SIFIs), **https://www.iosco.org/library/pubdocs/pdf/IOSCOPD479.pdf,** 4 March 2015. Already in 1999, IOSCO issued a report on Hedge Funds and other Highly Leveraged Institutions; see IMF, April 2015 report on "*The Asset Management Industry and Financial Stability*".

[45] FSB, Proposed Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities, 22 June 2016

[46] See EY, Global ETF Survey 2016: Integrated innovation: the key to sustainable growthhttp://www.ey.com/gl/en/industries/financial-services/asset-management/ey-global-etf-survey-2016

[46] FSB, Proposed Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities, 22 June 2016

[47] i.e. setting off entering and leaving demand, and if needed, engaging intermediaries and seeking external market liquidity.

[48] See FSOC annual report 2016, p 129/; see also: M.J. White, Enhancing Risk Monitoring and Regulatory Safeguards for the Asset Management Industry, speech 11 December 2014, drawing attention i.a. to Enhancing Controls on Risks Related to Portfolio Composition, esp, with respect to risks related to the funds liquidity and derivatives use. See Chr Flood, Debate over impact of ETFS intensified, FT 21 November 2016

[49] David Ricketts, Industry shunning systemic risk stigma, FT 22 April 2014

[50] FSOC annual report, 2016,p 129" Market participants, regulators, and supervisors should continue to examine the resilience and durability of market liquidity in times of stress". Moreover it concluded "the Council will continue to monitor other risks that could arise, such as the potential for ETFs to disconnect from the price of their underlying securities for an extended period, and whether such risks could raise financial stability concerns The Sec is investigating the ETFs functioning . The IMF considered medium risk in synthetic ETFs and private equity fund. See for an early analysis of the issue: Srichander

B. Systemic risk in the financial markets

1. Systemic risk in Short selling[51]

The EU short selling regulation dates from the early years of the financial crisis, at times when systemic risks did not occupy the prominent role it has today. In the short selling field, the systemic impact mainly comes from the accumulation of short positions that may have a disturbing effect on the markets, affect confidence, lead to a rise of interest rates or generally affect financial stability. The fear of an excessive downwards pressure on the share prices mainly concerned the equity of financial institutions where a dramatic fall in the share price due to the shorting of the shares may have led to a withdrawal of the deposits resulting in the collapse of the bank. Therefore “naked shorting” – i.e. shorting without holding the underlying asset - might be prohibited, although in a very flexible way, while monitoring of short positions was considered necessary. In a first stage, authorities were empowered to require disclosure of the positions of a certain importance, in the second allowing a ban on shorting securities to be imposed. At a low level of shorting, information on the short position will be accessible the regulator only, while at a higher percentage, public disclosure of the short position to the market at large will take place[52]. The power to impose a temporary ban is given to the national market supervisors, but was later extended to ESMA in the exceptional case that the national supervisors could not reach an agreement[53]. This was one of the few cases where the ECJ recognised that supervisory powers could be exercised by ESMA[54]. The disclosure and intervention powers were argued on the basis of systemic risk, abusive conduct and disorder in the markets[55].

The case relating to shorting government bonds is somewhat different: the Greek crisis had created the fear that shorting these bonds might have led to an increase in interest rates. In fact, the transactions concerned mainly took the form of net credit default swaps (CDS), which on their own are financially equivalent to naked short transactions. Therefore, the 2012 regulation took a strong stand forbidding CDSs on government bonds, unless the market participant also holds the underlying bonds.

Ramaswamy Market structures and systemic risks of exchange-traded funds, BIS Working Papers, 343, April 2011. In the same, EFAMA,s Response to the FSB Consultative Document Proposed Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities, p.10, in substance arguing that the risk will be supported by the investors.

[51] Regulation (EU) No 236/2012 of 14 March 2012 on short selling and certain aspects of credit default swaps

[52] Compare the threshold in article 5 and 6 , short selling regulation

[53] See article 28 and ECJ, C 270/12 United Kingdom of Great Britain and Northern Ireland, v European Parliament, and Council of the European Union.

[54] Although on the basis an indirect reasoning.

[55] See Preamble 7 and 33, short selling regulation

The regulation introduces a limited short selling prohibition on the sovereign debt instruments[56], but it can be lifted in order to support useful price discovery for these bonds. The prohibition can be lifted e.g., in case of a strong risk of a rise in interest rates.

Disclosure is a central feature of this regulation: net short positions have to be notified to the competent authority[57] or above a certain threshold publicly disclosed. The authorities may impose further restrictions or a prohibition to be applied in case of adverse events or developments which constitute a serious threat to financial stability or to market confidence[58].
The regulation repeatedly refers to financial stability and systemic risk, but also to the orderly functioning or the integrity of the markets. A more specific objective is action to limit an increase of the interest rate, especially with respect to sovereign debt instruments.

2. The regulation of derivatives trading

Derivatives are recognised as one the main drivers of systemic risk in the markets and serve i.a. to protect parties against financial risks. They are traded by different categories of financial intermediaries, mainly by banks trading as principal or as agent, and originate from a wide variety of transactions, many of a financial nature but others originating from commercial firms (such as airlines, covering their risk on fuel prices). The most frequently used derivatives today are the foreign exchange contracts and the interest rate swaps[59]. The nominal amounts are impressive, but the market value – this is the effective value at risk for the intermediaries - is considerably less.

Some derivatives are traded on regulated markets (esp. futures and options, ($6.5 Bn), what now has become mandatory according to Mifir[60] but most other derivatives are traded on OTFs or “organised trading facilities” ($544 Bn), in direct contact between buyers and sellers. Derivatives that are not based on standard characteristics are a separate segment.

Apart from the trading obligation, Emir[61] has introduced a clearing obligation by obliging all standardised derivatives to be cleared through a CCP, or Central

---

[56] article 4 and article 13 for sovereign debt and 14 for CDS on sovereign debtors, short selling regulation.

[57] article 7, short selling regulation

[58] See article 18 and 20, short selling regulation Regulation (EU) No 600/2014 of 15 May 2014 on markets in financial instruments and amending Regulation (EU) No 648/2012

[59] See BIS Statistics, half 2016 resp.Foreign Exchange (74 Bn) and Interest rate swaps (418 Tr). Equity instruments (6,6 Bn), Credit default swaps (11, 7Tr) and Commodity contracts (1,320 Tr)

[60] Regulation (EU) No 600/2014 of 15 May 2014 on markets in financial instruments and amending Regulation (EU) No 648/2012 (Mifir) article 28.

[61] Regulation (EU) No 648/2012 of 4 July 2012 on OTC derivatives, central counterparties and trade repositories(EMIR)

Counterparty. The function of clearing is to set off the individual relations between the market participants resulting in a claim against the CCP (novation). This process of setoff presupposes that the derivatives cleared have largely been standardised. Standardisation is not always the case for bespoke derivatives: here additional guarantees under the form of collateral have to be constituted. As a consequence of the clearing process, the CCP become the debtor or creditor on the remaining positions, while the clearing parties are protected against failure of one of them. Clearing is mandatory for standardised derivatives and aims as reducing risk by interposing the CCP between multiple buyers and sellers, resulting in a set-off of identical transactions. For not standardised transactions, additional safeguards must be constituted (esp. collateral[62]).

Before the transaction on derivatives is transmitted to a CCP, some firms are specialised on a compensation process called "compression", resulting in transactions to be fully offset against each other so that they disappear from the balance sheet of the parties involved[63].

The liabilities of the CCP are supported by several lines of safeguards, among which in the first place the constitution of collateral by the trading parties[64], secondly by the capital and collateral requirements applicable to the CCP, by an pre-funded internal default fund covering the insolvency of one or more clearing members and of at least of the largest clearing member. Liquidity will be funded by the clearing members. Solvency risk may be dealt with in several ways, first by the collateral of the defaulting member, then by his contribution to the default fund, and further by a limited form of liability from the members of the CCP by way of using the default fund contribution of the non-defaulting members[65]. This successive lines of liability is referred to as the " default waterfall"[66]

Reporting to a Trade repository is a further step to guarantee oversight of this market segment. The obligation to report applies to all derivatives, whether standardised and hence centrally cleared or not. In case no trade repository has been designated, reports will be sent to ESMA. The data stored at the trade repository will be accessible to the public on an aggregate basis, or individually provided the parties involved have given their consent. ESMA supervises the trade repositories.

These measures have been designed to reduce risk in the derivatives area, on the one hand by making trade on a regulated market and on an OTF mandatory and imposing clearing through a CCP followed by reporting to trade repositories. Important are the financial guarantees, first attached to the individual transactions[67], but also relating to

---

[62] http://ec.europa.eu/finance/financial-markets/docs/derivatives/161004-delegated-act_en.pdf
[63] See article 78 (5) also referring to trade matching; recital 30, delegated regulation 149/23013
[64] Article 41(1) EMIR
[65] Article 44(2) and (3)
[66] Article 45, Emir
[67] 41 (1) Margin requirements until the liquidation of the position. In addition the CCP must collateralise up to 99% of its exposures to all clearing members on a daily basis. See ESMA, EMIR Review Report no.2 Review on the efficiency of margining requirements to limit procyclicality, 13 August 2015.

the CCP position itself. Finally, the monitoring of this market and the confidence from market participants is made possible thanks to centralised reporting. Systemic risk is a core concern in this field: the Commission is mandated to assess the systemic risk in OTC trading of derivatives and report on systemic risk in the interoperability arrangements [68]. Moreover, the RTS as developed by ESMA expressly is placed under the heading of refusing systemic risk[69]

3. The regulation of Central Securities Depositories

Central securities depositories (CSD) are the central entities where securities transactions for a certain market are registered, conferring legal title to the securities holder, at least according to some legal systems[70]. Transfers of securities are formally registered in the CSD, although some may also take place on the books of the intermediate banks, or in some jurisdictions on the books of external registrars. Entities acting as a CSD are part of the market infrastructure in a given jurisdiction and may be closely related to the local regulated market, or stock exchange. In most EU states, there is a local CSD registering transactions in the securities listed in that market. CSDs are not banks, although specialised banks may exercise a CSD function, subject to banking and CSD regulation. These normally cater for the international operators on these markets and are called iCSD, or international CSDs.

CSD are not normally classified under "shadow banking" but are considered market infrastructure. However, they present some features that make them comparable to the shadow banking institutions: normally, although not banks, they offer a substantial package of specialised financial services to the banking and financial world, especially by organising the provisions of collateral and providing liquidity through repos. Although they may be authorised to exercise certain banking activities, they act as a communication system between market participants, banks and non-banks. Also, at the EU level, ESMA is the authority in charge of developing regulations for CSD[71], while for banking matters EBA takes the lead[72].

As core market infrastructure, CSDs play a central role in the securities markets and therefore the systemic dimension is part of the framework to which they are subject[73]. As mentioned in the regulation, they act as the depositories for trillions of securities, play an essential role for ensuring the integrity of the issue avoiding creation or reduction of securities issues through the daily reconciliation, and provide an important

[68] Article 87 (4)
[69] Article 5 (4) and the RTS
[70] This is e.g. the case in the Belgian and Luxembourg legal system.
[71] See IOSCO-CPSS, Principles for financial market infrastructures, April 2012
[72] See article 60 CSD Regulation for the ancillary services; article 54(8) for determining the risk based capital surcharge.
[73] See CSD regulation: Regulation (EU) No 909/2014 of 23 July 2014 on improving securities settlement in the European Union and on central securities depositories and amending Directives 98/26/EC and 2014/65/EU and Regulation (EU) No 236/2012, Recital 4

support to the collateral process, underpinning the provision of the liquidity in the markets.

This crucial role leads to a considerable number of obligations for the CSDs and for the securities settlement process. A European regulation of 2014, the main provisions of which will enter into force in 2016-2017, deals with several aspects of the role of CSDs, of their activity of safekeeping and transferring securities traded in the markets, but also with respect to their organisation and supervision, funding requirements, operational functions, recovery and resolution, to name a few. It also contains some provisions that are of direct importance to investors, such as the Delivery versus Payment rule (DVP), according to which the transfer of securities will only take place against cash[74], while orders entered into the system will be final and non-revocable, eliminating second thoughts, or allowing clients to hold securities in an individual segregated account[75]. But these provisions have a double function as they play an important role in the efficient and reliable functioning of the CSDs: DVP protects not only the investor, but allows the settlement system to function effectively and safely while protecting its credibility and reliability. The quality of the registration of the holdings in individual or accounts holding securities of different clients ("omnibus accounts") are an important feature supporting the efficient functioning of the system as a whole. The directive also contains provisions stimulating competition between CSDs, such as the rule that allows issuers to choose the CSD of their choice for their securities[76], or the right to access other CSDs by establishing a link, except where "such access would threaten the smooth and orderly functioning of the financial markets or cause systemic risk"[77]. Systemic risks may still subsist in the settlement activities outside the CSDs, by the so-called " settlement internalisers"[78] where weaker processes may have repercussions on the entire settlement processing cycles.
The CSD regulation has a wider ambit than the previously analysed regulations as it introduces a full legal regime for CSDs, dealing with the different aspects of their position and functioning. The systemic risk aspect is therefore not the predominant one but rather the background against which several of the organisational requirements have been formulated. The efficient, flawless functioning of the CSD as a core objective has also a strong link with the assessment of its compliance with the systemic objectives.
Systemic risk mitigation is pursued by strict regulation and supervision, providing for strict operational efficiency, pursuing safety in all respects and protecting the rights of the customer. It is a core element in the build-up of confidence in the markets.

4. The Securities Financing Transactions

[74] Finality to be achieved whether intraday or at the end of the day as the latest; article 39 (5)
[75] See article 38 CSD Regulation
[76] Article 49 CSD Regulation
[77] Article 52 CSD Regulation; Recital 58
[78] See Article 9 and recital 81, CSD Regulation

Pursuant to a recommendations from the FSB[79], the European Union has adopted a regulation dealing with specific aspects of "securities financing transactions"[80] being according to its definition: repurchase transactions[81], securities lending or borrowing[82], buy-sell transactions and margin lending transactions. These are central elements in the financing of the financial transactions markets and one of the main sources of liquidity. Not only banks, but also central banks and other market participants such as investment funds make a very intense use of these instruments, and this for a wide range of objectives. The securities may be transferred in full property and by way of guarantee (comp. pledge), and often at a very short term repurchased.

Most of these transactions take place by way of support for the payment or as a guarantee to another, main transaction, e.g. the payment of derivatives or ensuring the delivery of securities. The large banks and the CSDs play an important role in this part of the market. Although the use and reuse of collateral was already regulated in a directive of 2002, it is stated[83] that this regulation is wider than the regime of directive 2002/47 where specific restrictions apply[84]. Delegation is given to the Commission for imposing haircuts, especially on not centrally cleared transactions[85]

The regulation introduces two additional safeguards to the collateral regime as regulated in previous directives. It requires reporting of SFTs to a trade repository (TR) to be recognized by ESMA, or in the absence of recognition, to ESMA itself. These TRs are the same as under EMIR. The data reported will be made accessible to the numerous authorities mentioned in the regulation[86], allowing for more effective market monitoring. Aggregate information will be made publicly available by the TR.

An additional reporting requirement has been imposed on UCITS and AIFs on their use of SFTs and total return swaps. Also, a reference to the type of instruments that

---

[79] FSB Strengthening Oversight and Regulation of Shadow Banking Policy Framework for Addressing Shadow Banking Risks in Securities Lending and Repos 29 August 2013

[80] Regulation (EU) 2015/2365 of 25 November 2015 on transparency of securities financing transactions and of reuse and amending Regulation (EU) No 648/2012 (SFT Regulation)

[81] Consists of a transfer of assets (including securities, commodities or guaranteed claims) with a guarantee of a stock exchange which holds title to the asset,) with a repurchase commitment

[82] These are the usual repos where securities are transferred in full property or as a security interest against liquidity. A haircut may apply: see FSB, Transforming Shadow Banking into Resilient Market-based Finance .Regulatory framework for haircuts on non-centrally cleared securities financing transactions, 12 November 2015, http://www.fsb.org/wp-content/uploads/SFT_haircuts_framework.pdf.

[83] See recital 23; compare article 5 (4) of Directive 2002 of 6 June 2002 on financial collateral arrangements

[84] See article 5 Collateral Directive 2002/47/EC; see also: Directive 98/26/EC of 19 May 1998 on settlement finality in payment and securities settlement systems Directive 2009/44/EC f 6 May 2009 amending Directive 98/26/EC on settlement finality in payment and securities settlement systems and Directive 2002/47/EC on financial collateral arrangements as regards linked systems and credit claims

[85] Article 29(3), SFT Regulation; see: COMMISSION DELEGATED REGULATION (EU) No .../.. of 4.10.2016 supplementing Regulation (EU) No 648/2012 of the European Parliament and of the Council on OTC derivatives, central counterparties and trade repositories with regard to regulatory technical standards for risk-mitigation techniques for OTC derivative contracts not cleared by a central counterparty, 4 October 2016, C(2016) 6329 final. FSB, Transforming Shadow Banking into Resilient Market-based Finance , Regulatory framework for haircuts on non-centrally cleared securities financing transactions , November 2015

[86] Article 12(2) SFT Regulation. The information will be widely available to regulators and supervisors .

the fund may use will be included in the fund's prospectuses or other information made available to investors.

An important section of this regulation deals with the possibility of having the securities subject to a title transfer collateral arrangements which were used in previous collateral transactions, leading to a "re-use"[87], thereby possibly destroying the security interest included in the first collateral agreement. The underlying reasoning is that at the due date the same or equivalent securities will be handed back[88]. Taking into account the frequency of this type of action, parties are aware about the risks involved while there is a need to organise collateralisation effectively and speedily. The system could be considered safe if the debtor is still in going concern: if, as was the case in Lehman Brothers, the group is a gone concern, major difficulties may arise, securities are lost for their owner. Therefore, the regulation states that these agreements are valid and binding, provided the securities holder has given his prior express consent to the reuse in writing or in a legally equivalent manner[89].

The provisions on reuse have an investor protection function, but were included in this regulation to facilitate the use of collateral by the intermediaries and to eliminate possible limitations on the reuse of securities, especially in the wholesale markets and with professional counterparties such as investment funds. It will also facilitate the use of securities held in a omnibus accounts.

5. Securitisation

The financial crisis has largely discredited securitisation, as a large part of the losses, but also of the resulting problems were due to asset backed securities that had been whether created or acquired by the banks, or sold to third parties. The first objective therefore consisted of developing a framework in which the quality of the products could be ensured, and their circulation protected against former abusive practices. In the meantime, it is more widely accepted that a revival of healthy securitisation is one of the important instruments to restart the economic system on its way to growth. Securitisation is an important part of the Commission's action plan on the Capital Market Union. To achieve this however, the conditions have to be created for developing reliable and safe securitisation instruments, while the conditions for the financial institutions' intervention have to be adapted to make it sufficiently competitive for them to develop this part of the financial system. This is the case both on the side of the offer – here mainly the banks, subject to additional obligations – as from the

[87] Previously this was often called re-hypothecation, but the terminology is not technically correct. For a recent position on this topic: see Re-hypothecation and collateral re-use: Potential financial stability issues, market evolution and regulatory approaches http://www.fsb.org/wp-content/uploads/Re-hypothecation-and-collateral-re-use.pdf and the Non-Cash Collateral Re-Use: Measure and Metrics . http://www.fsb.org/wp-content/uploads/Non-cash-Collateral-Re-Use-Measures-and-Metrics.pdf, 25 January 2017

[88] See article 5, Directive 2002/47/EC of the European Parliament and of the Council of 6 June 2002 on financial collateral arrangements

[89] Article 15, SFT Regulation; the restrictions in article 5 of directive 2002/47 would probably not apply.

user's side, essentially the institutional investors, pension funds, insurance companies, sovereign wealth funds, etc.

After the crisis, a certain number of regulations have been adopted applicable to securitisation: these were often quite restrictive, as securitisation was generally considered unsafe. The regulations can be found in the CRR[90], in Solvency II[91], the rules on the CRAs and on the AIFMs . However, these provisions directly addressed specific risk aspects of securitisation, but did not constitute a regulatory framework in which securitisation could be developed and safely prosper. In order to activate the growth of the economy, there is now a clear need to launch "Safe Transparent and Standardised Securitisation" ("STS"), an objective pursued in a Commission proposal, presently pending before the Parliament. At the same time a proposal to modify the CRR aims at reducing some of the administrative and financial charges caused by securitisation transactions[92]. Appropriate risk calibration for STS securitisation by adapting capital requirements, a minimum risk floor and a different risk weight for the inclusion of credit enhancement will facilitate the redevelopment of securitisation.

The Commission proposal[93] introduces common rules for all securitisations by creating a European Framework for securitisation transactions. These provisions contain the basic requirements for securitisation relating to disclosure, due diligence, and risk retention, and to "protect investors and manage systemic risk by avoiding a recurrence of the flawed "originate to distribute" models" [94](sic).Securisation activities can be developed by any "originator" which may be any commercial firm[95], but the distribution is to organised by a "sponsor" which is subject to banking supervision. Originators should be subject to a supervisory regime, to be organised at the national level if none is provided in EU regualtions. [96]

[90] Regulation 575/2013 CRR, e.g. article 109, Chapter V on STS securitisations, article 405 (skin in the game) article 449, and the delegated regulation on leverage ratio. Also the consolidation of the SPVs: IFRS 10, 11 and 12, See also IFRS 7 on disclosure for off-balance sheet items

[91] Directive 2009/138 and the delegated regulation on prudential requirements for insurer. Also to be taken into account are the regulations 1060 /2009 on the credit rating agencies or the Directive on the AIFMs 2011/ 61. Prospectus

[92]For changes to the CRR: Proposal for a Regulation amending Regulation (EU) No 575/2013 on prudential requirements for credit institutions and investment firms, Council secretariat 30 November 2015 14536/15

[93] Proposal for a Regulation laying down common rules on securitisation and creating a European framework for simple, transparent and standardised securitisation and amending Directives 2009/65/EC, 2009/138/EC, 2011/61/EU and Regulations (EC) No 1060/2009 and (EU) No 648/2012, COM/2015/0472 final - 2015/0226 (COD); Opinion of the European Central Bank of 11 March 2016 on (a) a proposal for a regulation laying down common rules on securitisation and creating a European framework for simple, transparent and standardised securitisation; and (b) a proposal for a regulation amending Regulation (EU) No 575/2013 on prudential requirements for credit institutions and investment firms (CON/2016/11) (2016/C 219/03)

[94] 1.4.1. of the legislative financial statement attached to the Commission proposal

[95] E.G. car distribution organisations are important sources of securitization. Student loan stand for $ 1,3 Tr in the US. For a comprehensive overview of different types: see R. Watson and J.. Carter (Eds), Asset Securitisation and Synthetic Structures, Innovations in the European Credit Markets, 2006

[96] See article 14 (4) for entities not subject to EU financial regulation.

A separate chapter deals with the requirements for 'simple, transparent and standardized' (STS) securitisations, which will be considered of higher technical quality. In addition, further strict requirements apply to Asset Backed Securities, the most commonly used type of securitisation instruments. e.g. with respect to portfolio composition, according to which the sponsor has a due diligence obligation as to the underlying assets[97]. STS securitisation models have already been developed by the Basel Committee and IOSCO.

Interesting is the idea that in some cases, institutional investors are expected to play a 'guardian' role: before entering into a securitisation transaction, they are expected to undertake a certain number of due diligences relating to the securitisation process, but this only with respect to securitisations originating from non-bank entities.

Within the framework of Mifir, securitisation instruments – part of "structured finance" under Mifir, - should be eligible for trading on regulated markets or on Organised Trading Facilities[98]. This would entail pre-trade transparency (bid and offer prices to be published[99]) along with post-trade disclosure[100]. The regulation aims the creation of a Europe-wide market by introducing similar criteria applicable to all securitization trading in Europe. Securitised portfolios also qualify for ECB interventions under its Asset-Backed Securities Purchase Programme (ABSPP) and should therefore meet common safety standards[101]. The treatment of transactions in accordance with different national provisions would be made more difficult, as the basic rules are partly laid down in the CRR and also in the proposed regulation.

The regulation has a clear investor protection objective: by protecting the potential, mostly institutional investors it will contribute to opening up this form of financing, e.g. of infrastructure, and thereby contribute to growth. The provisions however also aim at protecting retail investors, of which there were quite of few who invested before the crisis in the failed securitisations.

From the systemic risk point, this is another example where a financial activity and related product which previously was considered outside the field of activity of the banks will be subject to strict regulation avoiding flawed instruments to be offered on the market. The due diligence of several of the parties involved and other requirements e.g. in terms of disclosure should avoid a similar major incident to happen again. As the banks are expected to be important investors in securitisation products, this will also protect their position, and hence also that of their investors.

---

[97] See article 13 c.q. 14 (2) of the proposed Regulation as to the required due diligence by the bank originator or by a non-bank originator.

[98] See Mifir: Regulation (EU) No 600/2014 of 15 May 2014 on markets in financial instruments and amending Regulation (EU) No 648/2012

[99] Article 25 Mifir

[100] Article 21 Mifir

[101] OPINION OF THE EUROPEAN CENTRAL BANK of 11 March 2016 on (a) a proposal for a regulation laying down common rules on securitisation and creating a European framework for simple, transparent and standardised securitisation; and (b) a proposal for a regulation amending Regulation (EU) No 575/2013 on prudential requirements for credit institutions and investment firms (CON/2016/11) (2016/C 219/03)

The Commission proposal for STS securitization has received support from the main trading associations, both from the sell and the buy sides[102] . In the European Parliament the proposal has met with delay.[103]

6. Marketplace lending, crowdfunding and other parallel funding mechanisms

The questions can be raised whether alternative forms of financing, such as marketplace lending, crowdfunding and other new formulae for financing certain activities, which might be considered to belong to the shadow banking world, also raise systemic issues[104].

The relationship of these forms of financing to the banking world are very diverse: some belong to and are managed by regular banks, others are financed by these banks, while others have no relationship to the established financial institutions and bypass entirely the financial system. Increasingly, at least in the US, banks, hedge funds, insurance companies use marketplace lending to offer their products[105]. Also, the forms of intervention of these platforms are very diverse, leading to quite different risk positions. Finally, the range of objectives and products to be financed is very broad going from financing the election campaign for a candidate to a country's presidency, to the acquisition of art works, travel expeditions, environmental projects, or more traditional financial objectives. Due to their still relative small size, their importance from the angle of financial stability can still be considered too small to justify intervention under that heading. Official reports on financial stability have not drawn much attention to these alternative forms of financing[106]. However, one should not underestimate the impact these techniques may have on public confidence as it seems that in several cases, abuse and even outright fraud have taken place in the financial segment of this market. The authorities have therefore warned for potential abuses;

---

[102] See AFME, 'Press Release: Buy and Sell Side Join Forces in Support for SDS Securitization', 3 March 2016; and the Joint position paper, March 2016.

[103]Committee on Economic and Monetary Affairs, Working Document on Common rules on securitisation and creating a European framework for simple, transparent and standardised securitization, 19 May 2016, Rapporteur: Paul Tang;
Jim Brunsden, European parliament puts brake on plan to boost capital markets:
Lawmaker say measures need careful review to ensure they do not revive pre-crisis excess, FT, 3 March 2016, https://www.ft.com/content/32cc5642-e091-11e5-8d9b-e88a2a889797

[104] Todd Baker, Marketplace Lenders Are a Systemic Risk, 17 August 2015 http://www.americanbanker.com/bankthink/marketplace-lenders-are-a-systemic-risk-1076047-1.html, pointing to the liquidity risks in case of a market squeeze. In the same sense, but also pointing to proc=cyclical effects in the real estate sector: A. Milne and P. Parboteeah, The Business Models and Economics of Peer-to-Peer Lending, May 2016, European Credit Research Institute , : https://www.ceps.eu/system/files/ECRI%20RR17%20P2P%20Lending.pdf.

[105] The volume of this activity was considered small by FSOC, in comparison to the 3,3Tr consumer lending market consumer, FSOC, Annual report 2016,126. See for a European example: Th. Hale, Non-banks shake up Dutch mortgages: Pension funds and insurers have made a move on the Netherlands' €660bn home loan market, bypassing traditional lenders. FT December 27, 2016

[106] BCBS has mentioned microfinance and unregulated microlenders, with the recommendation that these nonbank financial institutions should be regulated and supervised, Guidance on the application of the Core principles for effective banking supervision to the regulation and supervision of institutions relevant to financial inclusion, Consultative document, December 2015, p.10

weakening of lending or underwriting standards and lax administration practices may lead to losses, that may spill over in other segment of the loan or underwriting markets. How important these alternative forms of financing will become on their own is very difficult to predict, while it seems likely that the traditional financial world might become an important player in this field, directly or indirectly. This does not obviate the need to strengthen the needs for better protecting investors and participants in this market segment. The national authorities in the EU have taken initiatives to inform the users of these alternative financing techniques against possible dangers[107]. Moreover, these new forms of financial activity may in fact be forms of regulatory arbitrage, aimed at avoiding prudential or consumer protection regulations.

This short analysis illustrates that there are financial activities outside the banking field that can be considered to be part of shadow banking, in the sense that they are not only lightly regulated and up to now do not raise issues of financial stability. Other examples might include the field of money transfers, formal or informal (such as hawalla[108]) . Here only money laundering and terrorist financing rules would apply.

C. Insurance

Although insurance is generally not classified as "shadow banking", there are a number of features that point to similar risks to financial stability. With respect to the world nine largest insurance companies the Financial Stability Board has established a list of Global Systemically Important Insurers (G-Siis[109]). Some of these risks are endogenous and will be dealt with under the appropriate internal measures such as capital requirements, etc. But others are directly linked to the relationship of the insurance activity to other segments of the financial sector, creating concerns in terms of interconnectedness.

---

[107] See Belgian FSMA_2012_15 dd. 12/07/2012: **Reglementair kader voor crowdfunding, FSMA 2012, 15, 12 juli 2012; Dutch** AFM en crowdfundingplatformen bespreken nieuwe voorschriften en wenselijke aanpassingen, https://www.afm.nl/nl-nl/professionals/nieuws/2016/jan/crowdfunding-voorschriften https://www.afm.nl/nl nl/professionals/nieuws/2016/jan/crowdfunding-voorschriften
French AMF, Guide du Financement particiupatif (Crowdfunding) a destination du Grand Public,14 mai 2013; Guide du financement participatif (Crowdfunding) à destination des plates-formes et des porteurs de projet, 14 may 2013;
Italian Consob. Regolamento Consob n. 18592 sulla raccolta di capitali di rischio da parte di start-up innovative tramite portali on-line. http://www.consob.it/web/area-pubblica/equity-crowdfunding-normativa-nazionale-secondaria

[108] An informal system of money transfer, based on a network of correspondents, essentially in the Middle East and operating outside the official financial channels.

[109] See for the initial list; FSB Global systemically important insurers (G-SIIs) http://www.fsb.org/2015/11/fsb-publishes-the-2015-update-of-the-g-sii-list/ and the policy measures that will apply to them, referring to the methodology developed by IAIS and referring to the FSB's Key Attributes.

A recent statement published by the European Systemic Risk board [110] pointed to different types of systemic risk in the insurance business: these relate to the non-traditional non insurance activities, such as certain types of guarantees, derivative transactions (reference to AIG[111]) and variable annuities, formulae which are closer to financial investments. Insurers hold very important positions in long term debt including government debt, with a preference for the home issuers. Insurers are also important investors in investment funds – in money market funds, in hedge funds, although decreasingly – and bonds markets, securitisation instruments. …. Liquidity risks comparable to the ones noticed for investment funds can develop as a consequence of policy holders surrendering their policies leading to an outflow of funds, and destabilising the markets or entities where the insurer has invested the funds. Here too penalties may reduce this risk. Suddenly falling asset prices with low interest rates may lead to severe loss of confidence, especially in the absence of a recovery and resolution scheme, and hence putting these insurance companies under liquidity pressure. If fixed return rates have been promised, these may threaten the survival of the insurance company in a low or zero interest rate environment.

The International Association of Insurance Supervisors (IAIS) has published a detailed analysis on the features of insurance products that may lead to systemic risks, excluding risks related to the aggregate exposure, risks related to size, global activity, or to transmission channels. Especially liquidity risks and risks from interconnectedness are highlighted.

EIOPA has recently published its response to the Commission consultation on macroprudential risks [112]. The Authority considers that systemic risk in the insurance sector, especially in the traditional sector (casualty) is considerably less than in banking. The specific nature of the insurance sector, the fear of overreaction and of unintended consequences are highlighted. The Authority agrees with findings by other bodies that in the so-called "non-traditional, non-insurance activities and products"[113], special attention should be devoted i.a. to the liquidity risk. In the IORP (pension fund sector) but also in insurance, a prolonged period of low interest rates is mentioned as a significant challenge, especially to Defined Benefit IORPs.

---

[110] See ESRB, Report on systemic risks in the EU insurance sector, December 2015. https://www.esrb.europa.eu/pub/pdf/other/2015-12-16-esrb_report_systemic_risks_EU_insurance_sector.en.pdf?d171a63f6e1d433f82e477d67416fbd5

[111] For a description of this case see Adam Davidson, How AIG fell apart, http://www.reuters.com/article/us-how-aig-fell-apart-idUSMAR85972720080918; see also: http://insight.kellogg.northwestern.edu/article/what-went-wrong-at-aig

[112] IAIS, Systemic Risk from Insurance Product Features, 16 June 2016, European Commission Consultation on the Review of the EU Macroprudential Policy Framework, 25 October 2016 http://ec.europa.eu/finance/consultations/2016/macroprudential-framework/docs/consultation-document_en.pdf; see EIOPA response to the Consultation: EIOPA-BoS-16/219-rev 25 October 2016, https://eiopa.europa.eu/Publications/Responses/EIOPA-BoS-16-219%20EC%20Consultation%20-%20EU%20Macroprudential%20policy-rev%20_final.pdf#search=SYSTEMIC%20RISK

[113] See: variable annuities, credit guarantees, derivatives, index linked products: IAIS, Systemic Risk from Insurance Product Features (previously referred to as Non-traditional Non- insurance activities and products), 16 June 2016

VII. Conclusions

A. Shadow banking is not banking. And it is not "shadow", i.e. not regulated

This is the first conclusion from this overview. It deals with the activities of financial intermediaries and operators especially on the financial markets. The banks intervene in these markets in different capacities[114] and as a consequence they may be affected by the risks that are being generated in each of these capacities. As their intervention has become very large, the risks may have reached the level of a potential systemic danger. Therefore, the financial authorities, especially the FSB, have insisted on having these risks brought under control, on the one hand by strengthening the banks' position, on the other by providing a safer regulatory regime for these "shadow banking" activities.

B. Both aspects are complimentary.

The international financial institutions have invested very considerable efforts in the analysis of the shadow banking world, identifying the different segments active under this label, their characteristics and their weaknesses in terms of creating risks to overall financial stability. In several fields, comprehensive systems of regulation and supervision have been proposed and in many states implemented. These efforts will result is what was labelled by a prominent regulator as "Prudential market regulation"[115] .

On the other hand, the banks as important players on these markets, have been obliged to adapt their structure, behaviours and balance sheets to the risks that may flow from their participation in these markets. In most cases, the effect resulted in taking into account the risks that flew from these markets to the banking system, resulting in the activation of the usual internal instruments, such as capital requirements, leverage ratios, collateral provisions and the like, however adapted to the specific "shadow banking" instruments in which the banks are dealing[116].

On the other hand, these mostly new regulations reveal an interesting institutional feature: they all belong to the securities field, using the typical instruments of the securities regulation such as disclosure and reporting, or defining uniform conditions for instruments.

---

[114] As traders, as producers of the products, as investors, or agents for investors, and in other capacities as well.

[115] Daniel K Tarullo: Thinking critically about nonbank financial intermediation, Speech nt. 4

[116] See the CRR rules on securitization; in the early post-crisis years, other instruments were introduced such as :" skin in the game". The rules on accounting consolidation will also avoid SPVs to be deconsolidated; see IFRS 10, 11 and 12, See also IFRS 7 on diclosure for of- balance sheet items. Leverage for AIFM will be capped if judged excessive[116]. A stricter regime for rating agencies was introduced.

As a logical consequence ESMA, the central European Securities regulatory authority has been designated as the body in charge of their development, monitoring and further implementation, while the ECB and the European Banking Authority have been less visibly involved. With respect to the further implementation ESMA will be charged not only with further developing the system, but also with direct supervisory powers. It is the securities supervision that will be in the first line.

The financial crisis has created strong awareness of the interconnectedness of the different fields of financial activity. This is one of the main drivers behind the regulation of the shadow banking activity, as analysed in this paper. The risk of contagion is one of the paramount risk drivers leading to adapt both the shadow banking side of the financial activity, as the more specific banking side. Although many segments of the overall financial activity are actively related to each other, potentially leading to risk contagion, the need to tackle the issues is most of the time limited to the "systemic" dimension: the need to intervene in these mechanisms mainly arises when the potential damage to the financial system, and especially to the banking system, is most acute and might create a major social upheaval. The banking system relying on deposits from the public at large is among the most sensitive in this respect, along with the money market funds and therefore these have been the main drivers behind regulating the shadow banking field.

The comparative analysis of the European regulations indicate that there is no one single way of dealing with the different segments of the shadow banking world: each segment has its own characteristics and answers should be formulated taking the specific features into account. But there are some commonalities. The most striking one is the cry for "information". In all analysed fields the first and most clear demand from the regulators' side, but also from the market participants, consists of having more information on these transactions. This illustrates the considerable gaps which existed before the financial crisis. Information will in the future have to be filed to the authorities, individually, or in an organised way through Trade Repositories, CSDs or similar constructions. Some of this information will also be disclosed to the wider market, e.g. for trading purposes, or for better assessing the risks in these markets. Individual information remains restricted to the authorities.

The techniques for dealing with the shadow banking segments are very diverse: however, they all tend to reduce the risk present in their market segments. Also some techniques may be used cumulatively.

In some segments, the regulation aims at structuring the entire activity or a large party of it: this is the case for the CSDs, for SDS securitisations, and for the derivatives that have to be cleared in CCPs. Standardisation of transactions also reduces risks: clearable derivatives are defined, CSDs transactions are strongly streamlined.

Liquidity is a recurrent theme, especially in the asset management part of the analysis. Putting the risk exclusively in the hands of investors would be strongly destructive to

confidence and inflict lasting damage. There are no ready answers to the threat of illiquidity in emergency cases: emergency lending to non-bank entities would be an interesting innovation[117]. Setting up an emergency liquidity fund might be considered among parties having the same interests, e.g. the fund managers.

In terms of solvency, crucial for the banking sector, progress has been made on several strands: derivative trading on OTFs is supported, the CCPs should be able to withstand shocks, collateral provision has been improved, securitisation will be much safer, and MMF valuation more realistic.

With respect to other aspects of the shadow banking system, the transactions themselves are now being regulated: derivatives for OTF trading or for CCP clearing have to meet certain standardised conditions, short sales are defined directly, or indirectly by including CDS. STS securitisation would be the preferred form.

Imposing safeguards to limit risks is a technique used in most regulations: the liquidity of investment funds and asset managers calls for a variety of approaches, CCP clearing is considered a safeguard offering protection against the galloping development of the derivatives markets. Both contribute to the orderly functioning of the financial markets.

Some of the regulations impose conditions as to the intermediaries involved: the AIFM, the CCPs and CSDs are clear addressees, but also the producers of StS securitisation.

Finally, it is striking that in most of the regulations analysed, investor protection motives are largely absent: this is logical as the objective to be protected is most of the time the overall financial stability, to be achieved by strengthening the position of the financial intermediaries. In a few instances, investor protection rules were identified: however, one should be aware that these rules or techniques most of the time have primarily a macro function, insuring the efficient and reliable functioning of a specific activity (e.g. for the CSDs) or allowing easier liquidity provision to the market operators (Reuse rules). In these cases, investor protection and institutional protection run parallel, reinforcing each other.

The changes in the shadow banking segment of the financial system cannot be seen on themselves, but have to be analysed on the background of the changes imposed in the banking sector as well. By so doing, account has been taken of the interconnectedness of the two parts of the financial system. Strengthening regulation and developing adequate safeguards are needed in both fields, as they are so strongly interdependent. In addition, in the market related sphere itself, the different subsegments of “shadow banking” strongly interact among themselves leading to risk transfers and contagion. This strong interaction in all directions pleads for a

[117] Although indirectly they often may be able to tap liquidity lines: see in that sense the early reflections by Paul Tucker: Shadow banking – thoughts for a possible policy agenda, 27 April 2012, http://www.bis.org/review/r120427a.pdf.

comprehensive approach, whereby in each segment, specific risks are brought under control while full awareness of the transmission risks to the other segments should be kept in mind. It is not clear whether in the present stage of regulation these two objectives have already been fully achieved.

Financial Law Institute

The **Financial Law Institute** is a research and teaching unit within the Law School of the University of Ghent, Belgium. The research activities undertaken within the Institute focus on various issues of company and financial law, including private and public law of banking, capital markets regulation, company law and corporate governance.

The **Working Paper Series**, launched in 1999, aims at promoting the dissemination of the research output of the Financial Law Institute's researchers to the broader academic community. The use and further distribution of the Working Papers is allowed for scientific purposes only. Working papers are published in their original language (Dutch, French, English or German) and are provisional.

© Financial Law Institute
Universiteit Gent, 2012

More information about the Financial Law Institute and a full list of working papers are available at:

http://www.law.UGent.be/fli