The shadow banking system and regulatory arbitrage: the eternal return?

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Abstract

Shadow banking is defined as financial intermediation carried out by non-bank institutions which has the following features: credit risk, leverage (scant own funds and predominance of external funding), and maturity mismatch (long-term assets funded by short-term liabilities). The shadow financial system played a predominant, and perhaps even a determining, role in the gestation of the 2007/2008 global financial crisis. This article takes a critical look at the efforts made to control the risk emanating from the shadow financial system. It concludes that, despite the efforts made, there is no guarantee that this risk is under control. The reason for this failure lies in the architecture of financial regulation, in the asymmetric measures taken (the current stringent regulation of the banking sector does not extend to shadow banking) and in the transformation produced by the fourth industrial revolution.

1 Introduction

If we were to ask about the causes of the global financial crisis, addressing not the general public but rather informed readers, the practically unanimous response would be that the banking crisis or banks are responsible for this deplorable episode of our recent history. Careful analysis of the inception of the crisis, between summer 2007 and autumn 2008, shows, however, that things were more complex.

In the author's mind the crisis began with the announcement by BNP Paribas of the suspension of a real estate investment fund, since it was not possible to calculate redemption values (the uncertainty caused by the subprime mortgage crisis in the USA prevented the market price of assets from being calculated). As a former executive board member of the CNMV, I recognised that the proper decision had been made: if redemption prices cannot be calculated accurately, there is a risk that the investors leaving the fund will be treated better than those who stay. Subsequently, although there were some resounding bank failures, the peak of the crisis was marked by the collapse of SIVs, structured investment vehicles (special purpose vehicles – SPVs – with a marked mismatch between the maturities of assets and liabilities) and of monolines (insurance companies specialised in the underwriting of credit risk), the government bail-out of AIG (a US insurance company which was the leading actor in the credit risk insurance market), the difficulties of money market funds running the risk of breaking the buck (realisable value below the nominal value) and, above all, the disorderly bankruptcy of Lehman Brothers, preceded by the fall of Bearn Sterns (ultimately bailed out by JP Morgan for $10). Although

Lehman was often referred to as an "investment bank", it had few of the characteristics of banks: it did not take deposits, it was not supervised by the Federal Reserve (FED) and it did not have access to central bank liquidity. It was what in Europe is called a securities dealer. The term "investment bank" in the USA has the same meaning as "securities dealer" in Europe.

In sum, at the peak of the crisis the leading players were investment vehicles, insurance companies (with non-traditional business models), securities dealers and a single bank. Evidently, the liquidity interconnectedness of banks with many of these players (SIVs and investment funds) finally triggered huge contagion and the crisis became an eminently banking crisis. But the presence of players that are not strictly banks should lead us to reflect on the role they played in the outbreak of the global financial crisis.

How did these non-bank financial institutions come to operate in the credit risk market? Owing to a combination of two factors prevalent in financial markets: innovation and regulatory arbitrage. Innovation creates completely new financial instruments which may generate added value (if they complete the markets á la Arrow-Debreu), but which may also have spurious purposes. And regulatory arbitrage exploits the weaknesses in all regulations which often allow them to be circumvented by financial agents operating outside the regulated sector and using innovative ways to obtain extraordinary returns, at least in the short term.

The question posed by this article is: what is the point of rigorous, prolific and stringent regulation of the banking sector when more than half of financial activity is in areas with considerably less supervisory oversight and regulatory requirements?[1] That is to say, in areas of financial activity in which the authorities acknowledge they do not know what happens,[2] what fragilities are being generated and what new linkages between risks and institutions are being formed in that new post-crisis financial ecosystem?

2 The role of the shadow financial system in the gestation of the crisis

To understand the role of the shadow banking system, first we have to step back and examine the "originate-to-distribute" banking model which predominated in the years before the crisis. Under this model, some universal banks packaged credit risk (assets) generated by them (and specifically conceived to be packaged) in a SPV.

1 See Table 1. The weight of the financial activity of banks is less than 50% of the total.

2 See Jenkins (2018).

This SPV proceeded to sell liabilities – divided in different combinations of seniority, yield and risk – to non-bank operators in financial supermarkets in the form of securities. This model, still existing, albeit less prevalent than before the crisis, combines banks' traditional risk management with modern forms of asset and risk transfer.

This originate-to-distribute banking model attracted a cluster of new agents and innovative financial instruments along with old actors which took on different roles. The new agents include, inter alia, the so-called *monoline* insurance companies (specialised in the underwriting of credit risk, a risk not traditionally handled by the insurance sector). The innovations included CDOs, CDO2s and CLOs, i.e. payment obligations backed by the debt of third parties (initially corporate debt, and later mortgages and consumer debt) in the form of bonds and loans, divided into different yield and risk tranches based on their seniority. SIVs were similar, except that they were sponsored by a bank (which provided lines of liquidity) and they focused on maturity transformation (the assets had longer maturities than the liabilities), not being consolidated on the sponsoring bank's balance sheet until the crisis.[3] Notable among the traditional agents which took on new roles in the vigorous credit risk market were certain insurance companies (AIG), which began to offer credit risk insurance in the derivatives markets, and credit rating agencies, which expanded their activity not only to assign ratings to these new instruments, but also to help in their design.

In short, the global financial crisis is often wrongly described as a basically banking crisis because of the need to bail out a large number of large, highly complex banks (Spain was an exception, as the problems were mainly in medium-sized savings banks, while the large international banks were actually an anchor of stability). But the truth is that the shadow financial system not only played a fundamental role in the genesis of the problems, but also triggered the crisis.

3 The taxonomy of the shadow financial system

Shadow financial system, shadow banking system or, according to the latest terminology of the Financial Stability Board (FSB), non-bank financial intermediation,[4] generally refer to all financial activity performed by non-bank agents – insurance companies, hedge funds, real estate funds, money market funds and investment

3 In Spain they were not developed because the Banco de España clarified that SIVs had to be consolidated on the sponsoring banks' balance sheets and SPVs' assets were therefore subject to capital and provisioning requirements. Under these conditions, SIVs were not profitable and Spanish banks did not develop them.

4 With the 2018 Report, the FSB moves away from the term "shadow banking" and adopts "non-bank financial intermediation" (hereafter NBFI), to emphasise the forward-looking aspect of the FSB's work.

Table 1
MACRO REPRESENTATION OF THE FINANCIAL SYSTEM
December 2017 data

	Total global financial assets	Central banks	Banks	Public financial institutions	MUNFI (a)			
					Insurance corporations	Pension funds	Other financial institutions	Financial auxiliaries
Size (USD trillions)	382.3	30.1	150.8	17.0	32.8	33.7	116.6	1.2
Share of total global financial assets (%)	100.0	7.9	39.4	4.5	8.6	8.8	30.5	0.3
Growth in 2017 (year-over-year, %)	5.3	8.8	2.8	4.9	4.8	6.8	7.6	22.6
Growth 2011-2016 (annualised, %)	5.9	8.9	3.6	4.2	6.0	6.1	8.9	7.0

SOURCE: FSB (2019a), p. 13.

a Monitoring Universe of Non-bank Financial Intermediation.

vehicles, and the like – which engage in banking operations (entailing leverage, credit risk assumption and maturity transformation, i.e. funded by short-term liabilities) that thus bypass or fall outside of banking regulation. It is not in itself harmful, since it meets the objective of complementing the banking sector's financing of the productive economy. However, when it becomes overly developed as a result of regulatory arbitrage and is unable to be properly controlled, it may pose a threat to global financial stability.

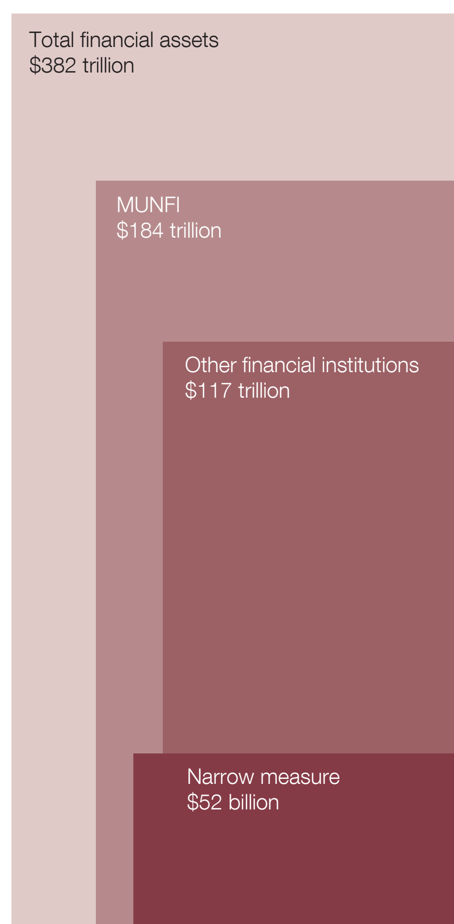
Non-bank financial intermediation is identified by a process of elimination, so its composition and size are not easy to calculate. Since 2010 the FSB has persevered in its definition and monitoring effort, publishing each year a report on this sector[5] and on the interconnectedness of financial segments. Evidently, the quality of the monitoring has improved much since it began, as refinements are made to the methodology and more countries contribute to the exercise. It would not serve any purpose to repeat here the FSB's exercise, but it is of interest to take a look at some aspects of the analysis made in it (see Tables 1 and 2).

First, banks, although individually they are the largest institutions in the global financial system, only represent 40% of it. Moreover, since 2011 they are the institutional group which has grown least, so that 40% share shows a clear downward trend. Second, examination of what the FSB calls "the narrow measure of non-bank financial intermediation" (that representing the greatest risk of instability because it

5 See FSB (2019a).

Table 2
NON-BANK FINANCIAL INTERMEDIATION (NBFI)
December 2017 data

1 NARROWING DOWN



2 COMPOSITION OF THE NARROW MEASURE

Economic functions	Size ($ trillion)	Share (%)	Change in 2017 (%)
EF1			
Collective investment vehicles features that make them susceptible to runs	36.7	71.2	9.1
EF2			
Lending dependent on short-term funding	3.5	6.7	5.8
EF3			
Market intermediation dependent on short-term funding	4.2	8.2	5.2
EF4			
Credit facilitators	0.2	0.3	4.4
EF5			
Credit intermediation based on securitisation	5.0	9.6	9.1
Unallocated	2.0	4.0	9.7
TOTAL	51.6	100.0	8.5

SOURCE: FSB (2019a), p. 7.

is susceptible to large-scale withdrawals in the form of runs, owing to leverage and maturity mismatch) shows that it accounts for somewhat less than 14% of the global financial system. Although 14% may seem little, the fact is that, since it is an activity carried on by quasi-banks outside the perimeter of banking regulation, it is a not insignificant source of vulnerability. What's more, between 2011 and 2017 it grew from representing 61% of GDP of the countries participating in the FSB's exercise to 75%. In some jurisdictions, such as China, the aggregate growth in that period exceeded 40%. In 2017 its growth of nearly 9% doubled that of banks.

On closer examination of that non-bank financial intermediation (see Table 2), specifically, when it is defined more narrowly and disaggregated by economic function, there seems to be more reason for alarm. First, the most delicate component of non-bank financial intermediation, i.e. that susceptible to runs, represents more than 70% of the total of the narrower definition. Moreover, its growth of 9% in 2017

tripled that of banks. When we add other segments dependent on short-term funding (and thus liable to suffer supply restrictions and bottlenecks when they roll over funding at times of market tension), it takes us up to nearly 90% of the total of that narrow measure.

In short, there is increasing non-bank financial intermediation activity, which moreover is concentrated in highly problematic segments because of its need to roll over short-term funding. Far from being a problem under control, regulatory arbitrage continues to fuel the growth of this truly unregulated parallel banking system.

As an additional thought, the interconnectedness of these sectors is of key importance because it is responsible for contagion between one area and another. Given the intrinsic fragility of banks, any difficulty in a segment of the shadow banking system will end up becoming a problem for the regulated banking system, as it did in 2007/2008. And, as occurred then, the word "bank" will prevail in the press headlines without distinguishing whether the entities which caused the disaster lived in the shadows or under the spotlight of stringent regulation.

It is enormously difficult to measure that interconnectedness. There have been no more than a few attempts of a static nature to describe it,[6] and the conclusion is that, even with a purely static definition, the inter-relationships between the actors of the shadow banking system and of the other sectors are incredibly complex. As an anecdote, one of the diagrams setting out those ties is so intricate that it would have to be printed on a sheet of paper the size of a meeting room table in order for the text describing them be able to be read.[7] In sum, we are far from understanding, measuring and controlling the inter-relationships generated by the shadow banking system.

Finally, the digital revolution and the emergence of a buoyant fintech industry, which will foreseeably help to do away with the boundaries between countries and sectors, can only aggravate this problem in the future. Regulatory arbitrage already existed in the years before the 2007 crisis, but the emergence of the digital world will boost it.

4 The flawed architecture of financial regulation

Financial regulation has historically been based on the type of institution rather than on the activities they engage in. This means that, even when financial activities are actually very similar, they are regulated differently depending on whether they are carried out by a bank, an insurance company or a money market fund. Of course, this description of the problem is overly stylised. For example,

6 See Pozsar (2014) and Pozsar et al. (2012).

7 https://www.newyorkfed.org/medialibrary/media/research/economists/adrian/1306adri_map.pdf.

the taking of deposits is an activity reserved to banks, i.e. to institutions subject to banking regulation. But the increasing haziness of the distinction between deposits and other short-term liabilities has substantially reduced the value of this protection of deposit-taking. Or, in other words, as that distinction disappears, there will be more and more financial institutions which are near-banks (not regulated as banks) and thus subject to suffer bank runs.

The source of that regulatory distinction by type of institution is obvious. Not only are the activities of banks, insurance companies and other collective investment instruments genuinely different, but moreover they were being supervised and regulated by different authorities. Spain is a good example of this, since the Banco de España, the Directorate General of Insurance and the National Securities Market Commission regulate and supervise banks, insurance companies and investment funds, respectively.

In the international arena, a similar specialisation exists: the Basel Committee on Banking Supervision (BCBS) focuses on banks, the International Association of Insurance Supervisors (IAIS) on insurance companies, and the International Organization of Securities Commissions (IOSCO) on investment services. However, the emergence of the FSB has improved the coordination between these three bodies (essential for the consistency of post-crisis regulation).

However, the flaw in this architecture is clear. Since post-crisis regulatory reform raised banks' capital requirements (threefold for banks as a whole, although up to tenfold for certain portfolios), it also increased the incentive for regulatory arbitrage. In fact, the potential gain from operating outside the regulatory perimeter has been multiplied by the same factor as capital has. The tougher the rules, the more attractive it is to avoid them: that is precisely the nature of regulatory arbitrage. We have made banks safer. They are more solvent, more liquid, better managed from the standpoint of risk, endowed with better corporate governance and more tightly supervised. But we are shifting risk to a part of the financial system where that improvement has not occurred. The problem of a shift in activity from banks to the shadow financial system is not just one of competition (given the unequal comparative treatment of banks by the regulator). It is fundamental to know whether shadow banking is raising the risk of financial instability, and even the likelihood of another systemic crisis due to quasi-banks operating outside the regulatory perimeter.

Another clear example of those flaws in regulatory architecture can be seen in the area of the systemically important financial institutions (SIFIs).

One of the lessons of the global financial crisis is that when a financial institution is too big, complex or interconnected with other parts of the financial system, winding it up in the event of difficulties is not an option, and it may have to be bailed out with public money to preserve financial stability. This is not only an aberration, contrary

to the required market discipline (where poorly managed companies are replaced by better managed ones), but also an intolerable use of taxpayers' money in bad times.[8] Examples of cases in point abound, the most notable being the US federal mortgage agencies (such as Fannie Mae and Freddie Mac), AIG and numerous international banks.

In Spain this was what happened with many savings banks. What stands out is the wide range of institutions bailed out: not only securities dealers, banks and insurance companies, but also entities with peculiar ownership structures and corporate governance, such as the US mortgage agencies or the Spanish savings banks.

Sensibly, the FSB, in cooperation with the BCBS, IOSCO and IAIS,[9] decided to address the problem of SIFIs by developing a new methodology to correct the externality posed by the too-big-to-fail (TBTF) status. The methodology development work was finished, but only the banking sector has a list of global systemically important banks and a set of clear and complete measures which assign additional capital ratios on the basis of systemic importance. The other sectors, except for market infrastructures[10] (including Clearing and Settlement Systems, or CCPs), have not been subjected to the same degree of surveillance and currently there is no clear methodology to identify the main actors, no specific countermeasures and not even a list of potentially affected institutions.[11] Banks are clearly subject to corrective measures, but the systemic risk of insurance companies, asset managers or hedge funds is unknown. For example, after four years of putting off its decision, the FSB concluded that asset managers, which account for the majority of the non-bank institutions included in this concept of shadow banking, were not systemic. They thus dodged specific, more stringent regulation, even though some of them currently have $6.5 trillion of assets under management, nearly five times their volume in 2008.

Some may argue that this decision is reasonable, since the funds they manage do not have maturity mismatch and invest in liquid assets and are therefore not prone to runs by investors. The counter-arguments are twofold: first, as we have seen, the FSB itself acknowledges that the more unstable non-bank financial intermediation (vulnerable to runs) represents 14% of total global financial intermediation; second, given the size of these asset managers, we need to understand the consequences, in times of turmoil, of the decisions taken by a small number of managers on how to

8 This is the reason why one of the major new developments of post-crisis regulation is the resolution of complex financial institutions, i.e. setting up legal and institutional schemes to combat the crisis without extensive recourse to public money.

9 See FSB (2019b).

10 For example, in the USA the following market infrastructures are considered to be SIFIs: The Clearing House Payments Company, CLS Bank International, Chicago Mercantile Exchange, The Depository Trust Company, Fixed Income Clearing Corporation, ICE Clear Credit LLC, National Securities Clearing Corporation and The Options Clearing Corporation.

11 See FSB (2018).

mobilise the huge amounts of funds managed by them. In any event, this is a controversial issue on which the author has a clear position which others may not share.

If we look at the developments in the main financial centers, the situation is definitely no better. Thus, the attempts of the US macroprudential authority, the Financial Stability Oversight Council (FSOC), to designate an insurance company as systemically important, were contested by the insurer, and it managed to have the decision overturned by the courts.[12]

When the new US Administration came into power, it placed on hold the application of too-big-to-fail rules to areas beyond the banking sector.[13] For its part, the EU does not seem to have a clear interest in this matter. It is thus obvious that the incentive for regulatory arbitrage is stronger than ever and that we run the risk of controlling the banking TBTF problem at the cost of shifting the risk to more loosely regulated sectors.

5 The digital revolution: is a new shadow banking system emerging?

The world of technology represents another challenge for which traditional regulation may not be prepared: technology erases boundaries between sectors and between countries, so firms can find ways to sidestep the control systems in place in the financial system. Fintechs now form part of the financial sector but are not subject to the stringent regulation applied to banks. And bigtechs are starting to show interest in also forming part of this shadow financial world. Although fintechs represent for banks both a threat and an opportunity (to improve the provision of financial services), in the new digital era bigtechs, i.e. the large international technology firms well known to everyone, may become the main competitors of banks, thanks not only to the advantages derived from their business model, but also because they are subject to less stringent regulation and thus have a clear competitive advantage.

True, there has been some progress, and banks' complaints on this score are gradually making some impression on regulators, who are now taking steps to level the playing ground. Thus, for example, in Spain the draft bill on Measures for Digital

12 Metlife was designated by the FSOC as a SIFI in December 2014 but the designation was overturned by a federal court. In January 2018, the FSOC and Metlife decided not to continue litigation and Metlife's designation as a SIFI was eliminated.

13 See FSOC, U.S. Department of the Treasury (2019). The process of "de-designation" was as follows: June 2016 GE Capital Global Holdings, September 2017 AIG, and October 2018 Prudential Financial. In March 2019 a consultation stage was opened for changes in the FSOC's SIFI designation methodology to make it more restrictive (less interventionist).

Transformation of the Financial System included the application of a sandbox (a controlled testing environment) for banks and other interested firms to experiment with new digital financial services in a more flexible regulatory framework. Also, greater awareness is also perceived on the issue of unequal treatment in the application of the new payments directive, known as PSD2, which opens the payment services of banks to third-party firms – the so-called third-party payment service providers (TPPs) – through the platforms which banks must create for such payments. The new entrants will thus have access to the bank data of customers that so authorise.

For their part, banks are pushing to be allowed access the data of the customers of other types of services and sectors so as to offer them all the advantages which go with a data-based economy.

But these hesitant steps forward do not offset the serious problems created by a global financial regulation based on institutional type rather than on the specific activities that supervisors should actually be regulating. And although earlier we have mentioned, above all, the risk to financial stability posed by regulatory arbitrage (regulatory capital arbitrage), other risks do also exist. Specifically, they are the risks associated with arbitrage to side-step regulations on conduct (or investor protection), risks of a fiscal or tax nature, and the risk of arbitrage to get around data protection regulations. Let us look briefly at these three areas.

Starting with regulations on conduct, or on protecting financial customers, it should be noted that these are defined on a sectoral basis, although recent years have seen a clear effort towards convergence of the banking, securities and insurance sectors. In this area, no clear sectoral differences are apparent either for or against any sector nor has there been any visible shift in activity for this reason. In the regulated financial sectors, the level playing field issue is not a significant problem.

However, in the unregulated sectors, the situation changes radically. Here the applicable consumer protection rules are relatively undefined and, to put it plainly, much less strictly supervised than in the financial sector. And the golden rule is that regulation is only as good as the supervision of its proper application. That is to say, it is of no use to have perfect consumer protection rules if they are not policed.

At present, fintechs and bigtechs providing financial services are in a limbo regarding the rules of conduct that affect them. In general, none of the sectoral regulations apply to them because they lie outside the sectoral regulatory perimeter. This anomaly is not unknown to the public authorities, be they national or supranational (European Commission or International Monetary Fund), but the perception that the emergence of these new players may fuel competition in certain segments (such as

payments), and thus lower costs for consumers, outweighs the problems of consumer protection architecture.

The problem for the regulated sectors, i.e. for the *incumbents,* is that such competition, if based on laxer consumer protection rules, may be unfair. This is because, since all regulation has a cost, if that price advantage is not based on lower costs derived from the use of technology, but rather on lower compliance costs, it is not only unequal, but also potentially damaging, because when the digital *challengers* drive out the traditional operators and dominate those markets, consumer protection will have been degraded forever.

The situation regarding the large digital operators, i.e. bigtechs, is much more complex, since the distance between their operating practices, which are not just supranational, but universal, and that general consumer protection regime, usually in the hands of local authorities (municipalities), is enormous. In practice these firms circumvent national and sectoral boundaries and exploit the shortcomings of all the old consumer protection architecture. It may be considered that this is an inevitable and undesirable result of the digital revolution. But it is unacceptable that existing operators, which have to adapt to this new digital world, are being burdened with heavier regulatory saddlebags that hamper that adaptation.

As regards possible tax dumping by new digital operators, a look at the tax burden on the regulated financial sector, compared with that of these emerging sectors, suffices to appreciate the problem. If the price transfer mechanisms of multinationals have always been a headache for tax authorities, the challenges represented by this emergence of the new digital world are formidable. A paradox in this respect is the lively debate on the tax contribution of the regulated financial sectors, which can be readily calculated and checked and is equal to that of other sectors, and the lack of debate over the new digital operators. It seems as if there is a wish to raise the tax pressure on the regulated sectors simply because it is feasible, and because the issue of taxation of digital firms poses such a challenge that authorities that have to decide on it end up in a logjam.

Another matter is the emergence of criptoassets or private cryptocurrencies, whether decentralised (like bitcoin) or supported by bigtechs (such as that recently launched by Facebook, called *libra).* The challenges posed by these proposals go well beyond the territory of shadow banking and regulatory arbitrage, and directly affect the current monetary architecture. It is not the purpose of this article, nor, frankly, is it easy, to analyse the implications of developments of this type. Certain similarities with issues analysed here should, however, be mentioned, i.e. how the digital revolution and innovation are posing challenges which we can label unreservedly as vital, not only for the current regulatory framework, but also for monetary policy.

6 The shadow banking system and the financial cycle: possible effects on procyclicality

When the economic performance of the USA is compared with that of Europe from 2007/2008 onwards, it is customary to point out the greater capacity of the former to withstand the crisis, and the slower response of Europe. The main factor explaining this differing behaviour is the greater weight of market financing in the USA. Indeed, although market discipline acts rapidly and brutally, the adjustment is sharp but short. In the case of a systemic banking crisis such as that in Europe, the process is inevitably more gradual, since it is necessary to assess which banks have damage that can be repaired, separate them from those failing or likely to fail and, within the latter, identify those which are systemically important (too big to fail) and those which can be resolved more expeditiously.

For this reason, the EU is setting in train the Capital Markets Union initiative to supply the private sector with financing less dependent on the banking sector, which would not only diversify the funding sources of the productive economy, but would allow more rapid adjustment in crises and a faster return to normal.

But evidently this benevolent view has a darker side. Specifically, the pre-crisis build-up of the US shadow banking system was a key factor in the global financial crisis. Or, as recently noted by the ECB vice president, Luis de Guindos, only when market financing “remains resilient in the face of shocks”, can it improve the European economy’s current dependence on the banking sector.[14]

This is thus another dark spot in the shadow financial system: as mentioned earlier, while risks in the banking sector are assessed and reassessed by stress tests, in that part of the financial system which we do not see, a storm may be brewing like that in the run-up to the 2007 crisis. The mere fact that we do not know it, because the macroprudential monitoring mechanism for this segment is still in its infancy,[15] should be cause for deep concern by the authorities.

In sum, an uncontrolled shadow banking sector may increase the procyclicality of the financial system, not reduce it. Arguably, the evidence from the years leading up to the 2007 crisis points to this, at least in the past financial cycle.

14 See De Guindos (2019).

15 See De Guindos (2019).

7 Conclusion

It seems obvious that controlling risks in the banking sector is not enough to control all the risks stemming from the financial system. Thus, rather than continuing to talk about (more or better) regulation, it is necessary to address immediately the problem of shadow banking, i.e. include in the regulatory perimeter all the financial agents that generate systemic risks. Regulation should treat all agents according to the risk represented by their activity, regardless of whether they are banks, asset managers or another type of fund. If the activity and the risk are the same, the rules should be the same. And this also goes for the new financial actors from the digital world, particularly the bigtechs, i.e. those large IT operators which, because of their size, may give rise to systemic risk or even to problems of collusion which limit competition and hamper consumer protection.

Another corollary points to the need to avoid the proliferation of inappropriate developments stemming from the "originate-to-distribute" model. This has been one of the objectives of the regulation set in place after the crisis. However, paradoxically the new regulation is introducing incentives for regulatory arbitrage, i.e. for activity to shift from banks to the shadow financial system, since the new regulations are aimed at institutions (banks, insurers, etc.) and not at types of transactions (use of short-term liabilities to fund long-term credit risk). The key issue is whether the emergence of quasi-banks outside the regulatory perimeter is raising the risk for financial instability, or whether these new intermediaries may cause customer protection problems (since they engage both in capital arbitrage and in arbitrage of financial customer protection regulations).

The regulatory reform is recent and still being implemented, so it is too early to give an answer, but it is a contradiction that we are making banks much safer at the cost of shifting risk to parts of the financial system that we neither see nor control.

Additionally, bigtechs represent an even greater challenge because of their universal (non-national) nature, their enormous innovative ability (which nobody questions) and their talent for circumventing the restrictions under which other sectors operate (e.g. in the area of data protection).

In short, the issue of regulatory and supervisory treatment of the shadow banking system is far from having been resolved. Considering the role which it played in the incubation of the 2007/2008 global financial crisis, this vulnerability should be foremost in the thoughts of those responsible for global and local financial stability.

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