

# Preventing systemic risk

**Jean-François Lepetit**

*Chairman of the Internal Control, Risk Management and Compliance Committee, BNP Paribas*

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## **Abstract:**

The 2008-2011 crisis provided a rationale for regulating credit intermediation by banks, which reduces, as much as possible, the risk that such intermediation will result in a systemic crisis. This is a welcome outcome. However, ring-fencing the banking function has expanded the role of market intermediation under conditions that make this mode of credit intermediation even more systemic.

In short, the 2008 crisis was a systemic market crisis in which banks should never have been involved had they been well-regulated. However, the subprime crisis would nevertheless have been a systemic crisis due to market intermediation vulnerabilities. The financial world, in the EU in particular, under the influence of the American model, has nevertheless decided to shift its credit intermediation model in a more systemic direction than before the crisis – in favour of market intermediation.

Flooded with capital due to central bank policy, debt markets will inevitably suffer a new systemic crisis that will lead Western countries to regulate the entire financial sphere – which they should already have done – or to nationalise it.

## **Systemic risk and crisis**

Systemic risk is the risk of a sharp deterioration in financial stability, triggered by a breakdown in the functioning of financial services, which then has repercussions for the real economy: systemic risk establishes the conditions for a systemic crisis. Systemic risk is itself the result of an accumulation of risks that are not adequately addressed by existing risk management, regulatory and supervisory mechanisms within the financial sector.<sup>1</sup> The dynamics of the systemic crisis result from the interconnections between financial actors whose failures create a domino effect.

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<sup>1</sup> Definitions set out in *Rapport sur le risque systémique*, Jean-François Lepetit, MINEFI (2010), La Documentation Française, April.

## **Scope of systemic risk prevention**

These definitions provide a broad scope for systemic risk prevention. Quite a large number of risk factors can be described as "systemic", not the least of which is unidentified risk.

First, these definitions highlight the necessary complementarity of the "micro/macro" pair, both in terms of prudential regulation – the individually regulated players – and in terms of overall risk mapping and monitoring in the financial sphere: the interconnections between stakeholders and between markets. Equal importance must be given to the wide range of potentially systemic actors. In addition to the banking function that is over-identified with the 2008 crisis (SIFIs), both experience and research reveal the systemic role of other financial players. These include US money market funds (\$3 trillion), insurers such as AIG and other credit enhancers (MBIA, Ambac, Dexia FSA, etc.), US mortgage financing agencies such as Freddie Mac and Fannie Mae, old and new clearing houses (derivative CCPs, and inverted risk funnels and pyramids), rating agencies (in conflict of interest and having failed in their duties) and IFRS (by nature pro-cyclical, and having allowed the deconsolidation of securitisation vehicles). The field of prevention also includes risk measurement instruments (models and their VaRs, stressed or not, and other expected shortfalls). It should also be noted that systemic risk is intrinsically linked to the behaviour of those involved (fads, irrationality, moral hazard, bitcoin-style bubbles, etc.), which shows the inefficiency of the markets and therefore their systemic character. To this we should add the multiplier effects of the nearly free innovations of the world of derivatives, as well as the systemic danger represented by the massive number of transactions generated by high frequency trading (HFT). Finally, there are traders' bonuses and stock options, which are real incentives that increase systemic risk.

Systemic risk prevention is justified by the negative externalities that the financial sphere inflicts on the real economy. While this is certainly true, the reverse is even truer. Monetary and fiscal policies are systemic factors outside the financial sphere. Monetary policy provides low-cost capital that allows stakeholders to accumulate debt and risk, and fiscal policy leads to the massive build-up of sovereign debt instruments whose highly uncertain liquidity is a major macro-prudential concern. More than ever, central banks are financing the debt of their own countries, and this debt is seriously vulnerable to a return to inflation and higher interest rates.

All these conditions that paved the way for the 2008-2011 crisis are still with us today, but worse. Outside the scope of regulators' preventive actions, these policies will produce the same effects.

## What do we mean by prevention?

Prevention is a broader notion than the verb “prevent”. It also touches on predicting, avoiding, limiting or even accompanying.

To be clear: a systemic crisis can't be predicted. It is identified post facto – and often after great cost. It is always surprising, unstoppable, otherwise it could have been avoided. On this level, the occurrence of a systemic crisis is comparable to the extreme risk calculated by models, over and beyond any sort of stress test. This is the “black swan” that statistical philosopher Nassim Taleb writes about in *The Black Swan*.<sup>2</sup> The probability of such a crisis is very low, but its consequences are by definition incalculable, and logically systemic. As with all disasters, the systemic crisis has no single cause. It is due to an unfortunate conjunction of factors, unexpected correlations, ill-fated interconnections, sudden and collective changes of opinion and spontaneous panic. Hence our inability to predict it.

Since we cannot predict a systemic crisis, we attempt to limit the systemic risks that the various stakeholders have accumulated, individually and collectively, and we prepare for crisis management, at an individual level to avoid contagion, or at a collective level. As a reflection of this, France's Prudential Supervisory Authority recently changed its name to the Prudential Supervisory **and Resolution** Authority.

## Prevention after the 2008-2011 crisis

Although it has rightly been noted that the 2008-2011 crisis occurred due to inadequate financial regulation, we can state that the lessons have been learned. In this article, we will not review all of the initiatives in this area, but limit ourselves to residual issues of prevention. The G20's "never again" has borne fruit. Today's major<sup>3</sup> banking systems have considerable capital and liquidity potential that, in the 2008 test case, would have protected all the large banks. Should this self-insurance prove insufficient, mechanisms put in place by local recovery and resolution authorities, which include other creditors in bail-ins, should make it possible to manage the bank's recovery or winding-up in good order, without public contributions. QED. The scale of these reforms is such that there are those who wonder whether the regulatory scales have not tipped too far towards correcting their shortcomings.

Fortunately, this micro aspect has been complemented by a macro-prudential regulatory policy, under the auspices of national and international organisations (Systemic Risk Boards, which bring together all the financial regulators concerned), which are in charge of supervising and managing systemic risks in the financial sphere as a whole. This aspect of regulation was non-existent before 2008.

Have we thus "prevented" systemic crises in all their forms?

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<sup>2</sup> Nassim Taleb was a currency trader at Banque Indosuez, part of the team that created currency options. He is a researcher and writer, and is considered an expert on market risk.

<sup>3</sup> We cannot rule out that a systemic crisis could start from "small" banking or non-banking institutions not identified as systemic; Northern Rock has proved this.

## **The limits of prevention**

Insofar as prevention is organised by regulation, it is clear that the unregulated financial sector is not directly covered by anti-crisis measures. Broadly speaking, the regulated and unregulated financial sectors correspond to banking intermediation and market intermediation, respectively. Regulation does exist in the market professions; it focuses not on the "prudential" side of the market and its players, but on investor protection. The possibility of losses, even systemic ones, is in principle left to investors who are supposed to be responsible and well-informed. Caveat emptor!

The media emphasise that governments bailed out the banking systems, and the much-quoted G20 communiqué focuses on the consequences of these bail-outs.

What actually happened during the 2008 crisis completely belies this simplistic vision of governments being forced to bail out only banking systems. The biggest bail-out efforts were for investors rather than banks. As far as I know, AIG was not a bank, the three trillion dollars in money market funds guaranteed by the US Treasury were far in excess of all bank bail-outs combined, and assistance to US mortgage refinancing institutions – Freddie Mac, Fannie Mae, etc. – was comparable to that of the American banking system. In France, the determination of regulators and policymakers to encourage banks to ensure the liquidity of the funds they managed on behalf of third parties casts serious doubt on effectiveness of "caveat emptor".

The issue of market intermediation is all the more worrying at systemic level because the clear effectiveness of the new banking regulation measures has heightened the importance of such intermediation, and will continue to do so. Market intermediation is carried out by the shadow banking sector. This is a source of concern for regulators, but they are unable to know the full extent of such risk or to take action against it because shadow banking is not within their regulatory scope.

## **The case against market intermediation**

The advantages – and drawbacks – of market intermediation lie in its freedom of action and the virtual absence of regulation.

When bankers extend credit, in addition to experience gained in practising their profession, their expertise is based on knowledge both of their client (derived from privileged information and years of contact) and of the full range of financing solutions they have given the client. In case of a problem, a banker's first reaction is to seek solutions. The credit scoring and the capital associated with the loan portfolio give managers and regulators a "micro" view of risk. Aggregated at the banking sector level, this gives a "macro" view of risk.

This well-managed and well-regulated banking intermediation is not very systemic. The proof is that the major French commercial banks (BNP Paribas, Société Générale and Crédit Agricole), all three universal banks, weathered the crisis without experiencing the same difficulties as their European peers. Conversely, the systemic crisis was triggered and fuelled by all those banks, commercial or otherwise, that wanted to engage in poorly-regulated investment banking by piling up debt instruments in their trading portfolios or in their special purpose vehicles. Had there been adequate regulation, the banking crisis would not have occurred – but there would still have been a systemic market crisis.

Market intermediation gives market participants the freedom to create financial instruments and package them for sale to investors. In reality, these instruments are not sold directly to end investors, but to those acting on their behalf via vehicles – funds – or directly by management companies. The important point here is that market intermediation is thus based on agents. Unlike bankers who are responsible for their balance sheets, fund managers have no direct responsibility for the results of their management. Fund managers are less responsible than anyone else because, in the words of Nassim Taleb, a fund manager "never pays for the risk he takes".<sup>4</sup> Fund managers are primarily concerned with their relative rather than their absolute performance, and there is a great temptation to "do like everyone else", the systemic expression *par excellence*. Passive, benchmarked and indexed management is the cornerstone of marginal volatility driven by hedge funds, high-frequency traders and trend-following speculators: three groups that, in the 2008 crisis, showed that even though they are perhaps not generators of systemic risk, they certainly propagated and accelerated the crisis.

Moreover, a fund manager's expertise cannot be compared to that of the banker. No decades of experience in the loan business, and no privileged information because that is prohibited. Internal credit research and analysis is too expensive for a fund manager; you have to trust rating agencies and market "noise". No commercial relationship with the debtor. In the event of a problem, the important thing is not to save the debtor, but to save oneself, to be the first to dump one's debt securities – another completely systemic attitude.

In this case, the instruments must still be liquid. For once, IFRS accounting is of assistance: in a trading portfolio, instruments are classified into three levels, based on the degree of liquidity in their market. Only level 1 concerns instruments with an active market. Without going into detail, we note with concern that level 1 represents only 10% to 15% of all financial instrument portfolios on the market.

In the wake of the 2008 crisis, the banking sector has clearly been ring-fenced, but the triumph of market intermediation – which is unregulated or lightly regulated, is not sufficiently well-mapped to allow for macro-surveillance and is led by shadow "bankers" – means that we can safely assert that the financial sphere remains systemic. The crisis came from the United States, and we are importing the model. President Trump promises to free banks from the Dodd-Frank straitjacket, and to allow banks and markets to make more loans – Heaven forbid!

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<sup>4</sup> *Skin in the Game*, Random House.

## **The general case of market risk measurement**

We have said that the risk of a systemic crisis can be equated with extreme risk as statistical and mathematical models try to calculate it. Beyond calculation methods (VaR, stressed VaR, expected shortfall, etc.), whose mathematical limits we know, the impossibility of quantifying the probability and magnitude of extreme risk is at the very heart of its systemic nature. This impossibility is due to the fact that the only statistics we have are those of the past, which in no way predict the future. The magnitude of the possible risks is commensurate with the wildly oversized financial sphere itself.

Under these conditions, wanting to insure oneself in advance against the consequences of a systemic crisis is illusory. The premium covering potential losses would be too high for such a minor probability. No regulations about capital ratios, bail-ins or liquidity would be sufficient, and these solutions are all the more inconceivable in unregulated shadow banking. In the event of a crisis, it is therefore up to the government, which is ultimately responsible for the solvency of all the major financial players, to step in. The central bank, the source of liquidity of last resort, will have to provide the necessary liquidity to the market and its players. All central banks know how to do this, and they already do so.

To reduce extreme risk, we have evoked most of the regulatory measures. We should now turn to the measurement of "normal" risk, the 99% of cases that are probable and measured by all the models universally used to set traders' position limits, counterparty risks and clearing house risks.

The main problem with measurement is that we only have price statistics on instruments traded in active markets. This represents a minority of instruments, at best 15% or 20% of the market. How valid are the price assumptions used for the rest of the market? A second problem is that the best statistics are prices collected in the past. Does one drive a car by looking in the rear-view mirror?

Models are reassuring because their logic is mathematical; they are unavoidable but unreliable. As for extreme risk, it is similar to our view of mortality: one does not live by anticipating one's death.

## **Good prevention: universal regulation of the financial sphere**

If there are two forms of financial intermediation, one of which – in the banking sector – presents little or no systemic risk because it is well-regulated, one is tempted to assert that market intermediation should be regulated under the same conditions with the same prudential purpose. To note that the fund manager, the market agent, is a poorly-informed and even incompetent banker requires a reaction other than to remark "come what may".

In the above-mentioned report I prepared for Christine Lagarde on systemic risk, I mentioned the beginnings of a solution. Observing that the vast majority of public and private debt instruments on the financial markets did not have an active market and, as such, were potentially systemic (an observation which is still valid), I referred to the works of Arthur Pigou. In the absence of possible prudential regulation of investments made by fund

managers, I proposed creating a tax, both to discourage investment in illiquid instruments (levels 2 and 3) and to build up systemic reserves. A tax whose base would consist of the systemic positions of all financial players, the identified source of indisputable negative externalities. Ironically, the bankers were the ones most opposed to this proposal!

Since freedom is the rule, it is also fashionable to encourage speculation, as well as a wide variety of technological innovations, such as HFT.<sup>5</sup> The truth is that speculation, which is essentially trend following, and HFT deprive the market of liquidity, when they are not actually front running. These are all good reasons to regulate these unnecessary parasites.

## **By way of conclusion**

The crisis made it possible to justify a banking intermediation regulation, which eliminates as much as possible the probability that banks will be the source of a systemic crisis. This is a welcome outcome. However, ring-fencing the banking function has expanded the role of market intermediation under conditions that make this mode of credit intermediation even more systemic.

In short, the 2008 crisis was a systemic market crisis in which banks would never have been involved had they been well-regulated. The financial world, in the EU in particular, has nevertheless decided to shift its credit intermediation model in a more systemic direction than before the crisis.

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<sup>5</sup> The Bank of England, continually complacent about the City's markets, has even published a report asserting that HFT has brought liquidity to the market.