

“The 2008 Global Financial Crisis in Retrospect”

Comments made in the Final Panel

By William White

Introduction

In the invitation letter sent to all participants, the Conference organizers expressed the hope that this Conference might shed light on an important question. Have post-crisis changes to global financial regulations been sufficient to prevent future financial crises¹? Janet Yellen, in Congressional testimony, recently answered “yes” by saying she did not expect to see another financial crisis in her lifetime. In my comments, I will beg to differ. While I see welcome progress in many areas, some regulatory changes have been ineffective and some even harmful. One is led then to raise the possibility that more fundamental regulatory solutions might be needed if the expected costs of future crises are to be materially reduced.

Before evaluating solutions, it is best to be clear about the nature of the problem. In the spirit of Kindelberger and Aliber (2005), I suggest that the root of the crisis which began in 2007 was excessive credit creation by an essentially untrammelled fiat money system. While in the early days it looked like a liquidity crisis, it was at its heart a solvency crisis².

Four developments, each individually desirable, combined disastrously to support a credit “boom” in the advanced market economies (AMEs). These trends were then reflected in many emerging market economies (EMEs), in part due to what has been referred to as their “fear of floating”. The complexity of this explanation, involving changing behaviour on the part of

¹ An equally important question, beyond the scope of my remarks, is whether post-crisis developments have made it harder or easier to manage the next financial crisis. See The Group of Thirty (2018) where they express particular concern about US restrictions on the provision of lender-of-last-resort facilities to those who might need dollar funding in a crisis. The distinction drawn by economists between crisis prevention and crisis management seems broadly similar to the distinction drawn in other disciplines between system sustainability and system resilience. See Marchese et al (2018).

² It is not surprising that the onslaught of the crisis has been referred to repeatedly as a “Minsky moment”. At the heart of Minsky’s explanation of financial crises is Ponzi finance, which culminates in a moment of recognition, revulsion and sudden withdrawal. See Minsky (2008).

many economic agents, supports recent trends to see the economy, not as a deterministic machine, but as a complex and adaptive system³.

First, demographic factors (the baby boom generation and the return of socialist countries to the global economy) pushed down inflation everywhere. Second, the adoption of price stability as the sole objective of AME central banks implied that monetary policy responded by inadequate tightening during business upswings and excessive easing during downturns. Third, financial innovation made possible by technological innovation increased the “elasticity” of the financial system and its response to easy monetary conditions. Fourth, whereas tighter financial regulation might have leaned against the credit expansion thus unleashed, regulation was in fact moving in the opposite direction. Just as central bank ideology was premised on a false belief in a self-adjusting and equilibrating economy, regulatory ideology was based on the false belief that financial markets were “efficient”. Accordingly, financial deregulation was the order of the day from the late 1960’s onwards.

The credit “boom” thus generated then turned into “bust”. It began in the sub-prime mortgage sector in the United States but could have been triggered anywhere given that it was the whole system that was fundamentally unstable. For example, the crisis which began later in the peripheral countries of the euro zone might well have begun earlier if circumstances had been only slightly different⁴. Similarly, over valued stock prices might have crashed of their own accord, as in 1929. In the event, the spill-overs from the financial sector to the real sector, and from the United States to the rest of the world, were unprecedented in the post-war world. This should not have been surprising since (to repeat) it was the system as a whole that was unstable.

It is important to note that central banks and regulators failed to see the bust coming, just as they failed to anticipate its potential magnitude and the eventual slowness of the recovery. This in itself might be thought grounds for doubting that the same people could devise policies to prevent this from ever happening again⁵. However, it is equally important to note that other economic agents were similarly misled by false beliefs during the “boom”.

³ See Kirman (2010), Simpson (2013) and Miller and Page (2007). Work conducted under the aegis of NAEC (New Approaches to Economic Challenges) at the OECD and at INET (The Institute for New Economic Thinking) are based strongly on this fundamental insight. For a look at some of the policy lessons, for monetary policy in particular, see White (2017).

⁴ Suppose European banks had received less easy access to US dollars in the early stages of the global crisis.

⁵ A similar sentiment has been expressed by Tucker (2018).

Politicians and fiscal authorities wanted to believe that spikes in revenues were permanent, not temporary, so that they could devise new programs to spend the money. Bankers wanted to believe that their high profits were the result of clever investments (alpha) not just more risk taking (beta). Households, benefitting from higher house prices, also wanted to believe that such prices were on a “permanently higher plateau”. All of this testifies to the powerful psychological forces supporting credit expansions that policies, including financial regulatory policies, must somehow try to rein in.

Now for the “good news”

Many of the regulatory developments in the post crisis world would seem supportive of financial stability. Micro prudential regulations affecting **individual banks** have clearly tightened. On average, risk weighted capital has tripled in the post crisis world and its quality is now much higher. In addition, there are now requirements for banks to meet explicit leverage ratios (non-risk weighted) whereas these were not required before. These dual requirements reflected the growing understanding by regulators that the banks were “gaming” the risk weights in the pre-crisis period, not least by using their own internal models for risk evaluation. Liquidity requirements have also tightened. Banks must hold more liquid assets to reflect shorter term requirements (the Liquidity Coverage Ratio) and must be more mindful of the stability of longer-term funding sources (the Net Stable Funding Ratio). More broadly, supervisory oversight of banks, especially large banks, has become significantly more intrusive. As well, portfolio “stress tests” have become more demanding and more regular.

Micro-prudential regulations have also been tightened for **non-bank** financial institutions. In part this reflects the important role played by the “shadow banking” system in the pre-crisis period. The development of long intermediation chains, not only more complex and fragile, but also more prone to procyclicality, made a material contribution to the size of both the boom and the bust⁶. Insurance companies are also now more tightly regulated under the requirements of Solvency 3, loosely based on the three pillars supporting Basel 3 for banks. Finally, regulators and supervisors have been looking more carefully at other financial actors such as money market mutual funds and

⁶ See Singh and Aitken (2010)

pensions funds. Overall, micro-prudential rules have been tightened significantly and the health of individual institutions considerably enhanced.

A recent and welcome regulatory insight is that **systemic risks** to the financial sector as a whole can be significant even if its individual components are healthy. By way of example, “fire sales” or a sudden evaporation of market liquidity can have knock-on effects with broad systemic implications. In response to this insight, bodies have been established to oversee such risks in important jurisdictions⁷. The centralisation of derivatives clearing is also directed to lowering such risks. Further, higher capital requirements for Systemically Important Financial Institutions (SIFI’s) have been imposed, as have requirements for other forms of funding that can absorb losses (Total Loss Absorbing Capital). More attention has also been paid to another aspect of systemic risk; namely, that such risks can change over time. The fact that national supervisors can call for higher capital requirements if they see signs of a credit induced “boom” must also be judged a welcome development.

Finally, it must be noted that these changes have been negotiated at the global level, under the influence of the Financial Stability Board, in committees that now include members from all of the G20. This is a welcome change from the days when only one or two countries set rules that others were expected to follow.⁸ Further, the “home” regulators of internationally active institutions are now expected to react to the concerns of “host” regulators as well, particularly when the latter are concerned about excessive or imprudent lending.

Now for the “not so good news”

Policies followed to manage the crisis, and other policies followed since the crisis, have arguably made the task of the regulators appreciably more difficult. In a number of countries, mergers and acquisitions designed to “save” troubled financial institutions wound up increasing concentration/complexity and worsening the “too big to fail problem”. The nexus of initial regulatory forbearance, bailouts of financial institutions and monetary stimulus (all safety nets leading to moral hazard) may also have emboldened the imprudent. Perhaps most important, ultra-easy monetary policies over the last decade have encouraged the risky behaviour in financial markets that financial regulation is supposed to discourage. If a car were to be driven with one foot

⁷ Consider the Financial Stability Oversight Council in the US, the Financial Policy Committee in the UK and the European Systemic Risk Board.

⁸ Basel 1 was essentially decided upon by the US and the UK. See Silber (2012)

on the accelerator, and another on the brake, we would not be surprised if signs of instability were to emerge.

It also bears noting that the analytical foundations of many of the post-crisis regulatory reforms have been questioned, as has the overall adequacy⁹ of the measures taken. Consider overall capital requirements. Risk-weighted capital requirements under Basel 3 are certainly higher than Basel 2, but Basel 2 levels have been described by Tucker (2018) as “wafer thin”. Moreover, the Basel 2 requirements were simply more granular versions of Basel 1 levels, which Goodhart (2011) claims never had any analytical justification; they were essentially set to preserve the capital levels then prevailing. This in turn raises doubts as to whether the fundamental question of what capital is for – a buffer against expected or unexpected losses or both - was ever properly assessed¹⁰. Against this historical back ground, it is not surprising that many respected analysts¹¹ have called for capital requirements much higher than those being currently imposed. Newly introduced leverage ratios still allow levels of leverage ranging from twenty to over thirty, which seems dangerously high.

A number of commentators¹² have approached this issue by looking at the market’s assessment of the likelihood of default of banks affected by new capital regulations. Summers and Sari (2017) summarize their findings by noting “they find no evidence that markets regard banks as safer today than they were before the crisis”. In effect, they argue that the buffer against insolvency, provided by higher capital, has been offset by reductions in the franchise value of the business imposed by other regulatory changes.

Other reservations about current capital requirements for banks have also been expressed. There continue to be a wide range of views about the relative importance that should be given to risk-weighted capital ratios as opposed to leverage ratios. The fact that risk weights assigned using internal models can

⁹ For a much fuller analysis, see White (2014). Also Sandbu (2017) who summarizes a CEPR conference by saying “The consensus was that we still fall far short from what would be a safe financial system”

¹⁰ The assignment of risk weights implies a belief that expected losses can be calculated on the basis of a known probability distribution. Under Basel 3, unexpected losses are based on the standard deviation calculated from the same probability distribution. Does this mean that losses likely to result from uncertain (as opposed to risky) events have essentially been ignored? If so, this implies a chronic undercapitalisation problem.

¹¹ For example, Admati and Hellwig (2013) call for a 25 percent capital ratio on an unweighted basis. See also Thakor (2018). Lord Vickers and Martin Wolf of the Financial Times have expressed similar sentiments. See Sandbu (2018)

¹² Summers and Sarin (2017). See also Acharya (2010) and Blundell-Wignall (2013).

still move “procyclically” is a long standing issue. Finally, maintaining zero risk weights on sovereign bonds fails the test of historical experience. Moreover, it worsens the potentially systemic problem of the “sovereign – bank” nexus, particularly in Europe and most particularly in Italy.

Similar analytic issues raise doubts about the effectiveness of other post crisis reforms. Non-banks have received more attention, but still much less than banks¹³. Moreover, the application to insurance companies of a methodology developed for banks, seems to ignore the fundamental difference in their business models. Turning to market reforms, does the greater use of collateral, say in centralized clearing, actually reduce systemic risk or does it just shift around the losses? Have stricter liquidity requirements for banks contributed materially to the reported loss of liquidity in many markets? Indeed, Thakor (2018) raise a more fundamental question. If the underlying problem is one of solvency, are increased liquidity requirement not just a distraction?

Turning finally to issues of systemic risk, in spite of post-crisis changes, doubts persist as to whether an internationally active SIFI could in fact be wound down without massive collateral damage. As for higher capital requirement for SIFI’s, this has clearly reduced the probability of an insolvency crisis, but it remains to know by how much¹⁴. Should more consideration not be given to the British initiative to cut the links that make such institutions systemically important in the first place? Further, introducing time varying capital ratios makes sense only if there is a chance that they will actually be activated. The degree of discretion afforded to national systemic risk overseers in different jurisdictions calls this into serious question. The fact that most such oversight bodies are committees, made up of different agencies with different views and different priorities, is also an important impediment to action.

While surveys indicate that most national jurisdictions are implementing Basel 3 and other new regulatory measures, the extent to which reforms have been implemented still varies widely across countries¹⁵. At the least, this invites unwelcome regulatory arbitrage. A still greater danger is that individual countries come to be seen as non-conforming and this induces back sliding elsewhere. In the end, the whole regulatory effort could implode. National

¹³ See Group of Thirty (2018) p.24 and Jenkins (2018).

¹⁴ Lehman Brothers was judged to be well capitalized on the day before it went bankrupt. Stress tests also indicated that all the Irish banks were well capitalized not long before the liabilities of the entire system had to be given a comprehensive guarantee by the Irish government.

¹⁵ See Group of Thirty (2018) p.7 and Basel Committee on Banking Supervision (2018)

lobbying by the financial industry to weaken regulations or to induce regulatory capture is another source of concern in many countries.¹⁶ Indeed, in the United States, there is a worry that some of the key provisions of the Dodd-Frank Act might be rolled back. Given the late stage of the current economic cycle, this would effectively repeat a similar error made in the run up to the crash which began in 2007.

Finally, and returning to the theme of complex, adaptive systems, new regulations invite evasion. Just as Basel 2 regulations led to the growth of the “shadow banking system”, tighter regulation since the crisis has led to a massive increase in the issuance of lowly rated corporate bonds and to the associated issue of CLO’s. Moreover, most of the funds raised have been used to buy back equity or to pay dividends. As a result, the corporate sector in many countries has become increasingly leveraged¹⁷.

As a counterpart to this increase in global liabilities, there has also been a very large increase in the size of asset management companies. As well, private equity firms have expanded significantly and are increasingly lending to borrowers rather than using their funds to buy equity in troubled firms. One school of thought says that such developments mean risks are better dispersed and the core banking system is accordingly safer. Another school of thought worries that, should trouble arise involving new lenders or borrowers, the safety net provisions would be extended once again. This is precisely what happened during the shadow banking crisis in 2008.

This latter possibility highlights a fundamental problem with how the modern financial system operates. Because we have a fiat money system, the build-up of leverage in banks is inherent to how the system operates. However, leverage can become excessive, leading to the possibility of “runs” when depositors lose confidence and want their money back. Because such runs can have costly implications (financial crises) the authorities put in place “safety nets” such as deposit insurance and lender-of-last-resort facilities. However, safety nets encourage bad behaviour (the moral hazard problem) which the authorities then try to offset through financial regulation. The problem here, as

¹⁶ See Bair (2018), Johnson (2009) and Taibbi (2012). One objective of lobbying is to reduce the burden of regulatory requirements on sectors (like banks) already targeted by regulators. Another is to keep problems in other sectors “off the radar” until the new sector (like shadow banking in the last crisis) has grown too big to fail and must receive government support.

¹⁷ See Lund (2018). While the author asserts that there is not a corporate leverage bubble, the evidence cited could easily be interpreted as supporting the conclusion that there is such a bubble.

noted above, is that regulation invites evasion¹⁸. In turn, this raises the possibility of “runs” outside the banking system, and then another whole chain of public and private interactions, ad infinitum. Complex and adaptive, indeed.

The need for more fundamental change?

Recognizing the deficiencies of our current “whack a mole” approach, one is led to ask whether our management of the financial system does not require more fundamental change? Financial crises are indeed becoming more common and more costly. Some suggested remedies work within the structure of the current financial system. They are consistent with the traditional belief that the problem is one of identifying “market failures” in the current system and then trying to devise means to offset them. Other, more radical, suggestions imply we need to change the basic structure of the financial system itself. This latter approach is more consistent with the emerging literature which identifies the economy as a complex, adaptive system.

a) Improving the current system

Tucker (2018) has suggested a number of regulatory changes directed to ensuring that “runs” become extremely unlikely. He distinguishes between two strategies, but presumably both could be implemented together. The first is to tighten regulations so as to ensure the safety of certain designated deposits *ex ante*. The second is to alter resolution procedures so as to ensure the safety of certain deposits *ex post*. In principle, the suggestions he makes would materially reduce the likelihood of bank runs, and therefore the need for safety net interventions and associated regulations. In practice, Scott (2016) suggests that depositors and financial markets are always subject to “panics”, when rational evaluation of the probability of losses disappears, and safety net provisions would continue to be required.

As has been noted above, a number of commentators suggest that much higher capital requirements for banks would also reduce the probability of runs. Counterarguments would include reduced lending and economic growth through the transition period, and an aggravation of the boundary problem. It has also been suggested that a greater reliance on the self-discipline of bankers (to avoid excessively risky behaviour) and similar discipline imposed by the markets would also be helpful. However, the former demands a change in

¹⁸ This is often referred to as the “boundary problem”

culture, which will not be easy¹⁹, while the latter demands a revolution in the accounting treatment of banks and also how they are audited²⁰.

Finally by way of improving our current system. It could be argued that steps should be taken to prevent monetary and regulatory policies working at cross purposes. That implies that monetary and macro-prudential regulatory policies should be tightened together to restrain a credit “boom”²¹. The problem here is that most central banks have indicated a marked reluctance to direct monetary policy to any other purpose than the achievement of “price stability” (generally defined as CPI inflation of around two percent) over a relatively short horizon. Similarly, both monetary policy and macro-prudential policies should be eased during the credit “bust”. The problem here is that central banks and others have increasingly advocated tightening macro-prudential policies to allow “lower for longer” monetary policies. The dangers of continuing with this combination of offsetting policies have already been noted above.

b) Some more radical suggestions

Given the problems raised by suggestions for more incremental change to the management of the existing financial system, some critics are proposing more radical change to how the financial system works. Three such suggestions are briefly considered below. Whether recognized by their proponents or not, these proposals tend to be consistent with suggestions made for ensuring sustainability in other complex systems. Not least, they involve identifying positive feedback mechanisms leading to crisis and replacing them with negative ones²².

A first set of proposals would involve rolling back three of the most important secular trends in the post War financial sector; globalisation, consolidation and securitization. Globalisation could be reduced through more stringent capital controls and/or the replacement of international branches with well capitalized subsidiaries or national holding companies. The trend to consolidation could be reversed through the forced break-up of institutions

¹⁹ Some have suggested that more bankers should face jail penalties to help “focus the mind”. The Financial Times recently reported that only 47 bankers worldwide went to jail after the crisis, with 23 of them being in Iceland.

²⁰ The Financial Times recently presented a whole series called “The Big Flaw: Auditing in Crisis”. They also conclude that accounting rules need to change if trust in the audit process is to be re-established.

²¹ The Bank for International Settlements has been recommending such a policy for decades.

²² An early piece that still resonates is Meadows D (1997) whose author was involved in the “Limits to Growth” project.

thought “too big to fail”. Finally, securitization could be rolled back through efforts to reduce collateralized lending, especially when the collateral involves property.

A second set of proposals involves structural changes to allow “free banking”. Selgin (2017) argues that central banks should never have been created as they have created more problems than they have solved²³. By acting as a safety net to the financial system, through lender-of-last-resort facilities and easy money, they have encouraged imprudent private sector behaviour. Accepting that a return to a specie standard is not politically acceptable, Selgin suggests that the current expansive role of central banks should be “stripped down” to maintaining a stable supply of reserves in support of the current fiat money system. As a complement to this, the financial system should also be freed from “harmful, restrictive regulations” which he contends have actually created the distortions behind most financial crises in the past. As an alternative, Selgin suggests a system of “free banking” in which system stability would be ensured by market discipline. Any bank that created credit imprudently would be reined in by other banks fearing the systemic fallout. As a further positive attribute, he contends this system would stabilize aggregate spending, allowing aggregate prices to rise or fall depending on movements in productivity²⁴.

A third set of proposals starts from a totally different assumption about the private financial system. It is not self-stabilizing as the proponents of “free banking” assert. Rather, it is asserted to be inherently unstable and prone to “boom and bust” cycles. The solution to this is “narrow banking” akin to proposals made by the Chicago School in the 1930’s²⁵. The current capacity of banks to create money (by writing up both sides of their balance sheet) would be taken away by forcing them to hold 100 percent liquid assets (Government securities) against all current accounts.

²³ Selgin (2017) p. 13 contends that Walter Bagehot also believed that giving monopoly rights to the Bank of England to issue currency was a big mistake. However, recognizing that it was politically impossible to roll this back, Bagehot recommended the provision of lender-of-last-resort facilities as a second best approach to deal with prospective crises.

²⁴ By targeting near term CPI inflation, central banks have been forced to resist inflation which falls below their target in response to productivity gains. The resulting monetary stimulus then shows up as asset price increases and other imbalances.

²⁵ A number of institutes advocating such policies have sprung up in recent years, including the Positive Money group in the United Kingdom. In June of 2018, a proposal to install such a system in Switzerland was actually put to a referendum. It was soundly defeated, although in part at least due to fears of Switzerland being alone in adopting such a system.

However, recognizing that technological developments (digitalisation) have made the “boundary problem” much worse than in the 1930’s, McMillan (2014) makes the additional suggestion that all limited liability companies should be subject to a “systemic solvency rule” that would prevent them from buying financial assets that exceeded the equity in the firm itself. To those concerned that this blanket rejection of leveraged finance would reduce financial flows (and economic growth) overall, McMillan responds that the same technological developments (Fintech) now allow savers and investors to be brought together without financial intermediaries. Similar to the “free banking” proposals, both safety nets and financial regulation would be done away with²⁶.

Conclusion

A reasonable case can be made for believing that the post-crisis regulatory reforms to the financial system have not succeeded in ruling out future crises. Indeed, a case could be made for concluding that the expected costs of a future crisis might even exceed the costs of the crisis that began in 2008²⁷. Given this possibility, what regulatory changes might be suggested to minimize such costs? Unfortunately, a complex, adaptive world is also one that is full of different shades of grey, especially when it comes to policy prescriptions. The best policy to follow is not likely to be obvious, and the likelihood of unanticipated consequences is also likely to be high. At the least, policymakers should be thinking seriously about such issues and comparing the costs and benefits of alternative measures, some incremental and others radical, to minimize the probability of a future crisis and also its economic costs should it occur.

However, we should not be politically naïve. There is a ground swell of resistance to even incremental tightening of financial regulation in both the United States and Europe. More radical change is totally off the political agenda. This suggests that future measures aimed at crisis prevention will not be any more successful than past measures. In turn, this leads to the conclusion reached by the Group of Thirty (2018) that policymakers should now be focussing much more intently on ex ante preparations to allow the

²⁶ Note, however, an important difference. This would be a **precondition** to ensure that “free banking” would generate stabilising outcomes. In contrast, under “narrow money”, imprudent behaviour would no longer be possible and so both regulation and safety nets would be **redundant**.

²⁷ See White (2016).

better management of future crises. Unfortunately, it might take just such a crisis to reopen serious debate on the measures required to make our financial system much safer.

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