”The Credit Crisis: Conjectures about Causes and Remedies“

By D W Diamond and R Rajan

Comments by W R White[1]

The title of this paper is very ambitious, implying a desire to assess the most basic questions that now concern us all. How did we get into this mess, and what can we do to get back out of it? While the paper itself hardly discusses the issue of regulation, to which this conference is dedicated, clearly we cannot suggest preventive regulatory solutions without understanding the underlying causes of our current difficulties. My comments will basically follow the structure of the paper. Broadly put, I will agree with their assessments, as far as they go, but I will also suggest that they do not go far enough.

A good first example is found at the beginning of the paper where the authors state “There is some consensus on the proximate causes of the (credit) crisis”, and they then go on to note that this cause was bad, longer term real estate loans, ultimately funded by shorter term bank borrowing. As Charles Goodhart put it at an earlier conference, the “originate and *pretend* to distribute model” eventually came unstuck.

I would take no issue with this, but would note the authors’ careful use of the word “proximate”. Perhaps this reflects the recognition that the still deeper cause of the current difficulties was a widespread reduction in lending standards over many years, masked in certain ways by the use of new instruments, against the backdrop of unusually low interest rates almost everywhere in the global economy. This led not just to reckless lending across a wide spectrum of sectors but, more importantly, reckless spending as well. In consequence, we can look forward to debt servicing problems, not just with respect to residential property, but also commercial property, consumer credit loans, cov-lite corporate loans, and a host of other credits. Moreover, as recklessly low household saving rates in many countries begin to rise (and perhaps recklessly high investment levels in China begin to fall) the effects on the real economy will mount, further threatening the health of the financial sector. In sum, the current credit crunch is only one part of the much broader macroeconomic problems we all now face.

Misallocation of Investment

The authors note that the current crisis was “born in some ways from previous financial crises”. Again, I agree, but would argue that the previous crises were by no means limited to those in Emerging market Economies as the paper suggests. Rather, I would contend that the music started to play with the sharp reduction in policy rates in the Advanced Market

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Economies in 1987 in response to the stock market crash. This contributed to the subsequent property boom and bust of the late 1980's, which again led to unusually low interest rates and set the stage for the Mexican and Asian crises. The latter elicited still more policy stimulus, leading in successive waves to the LTCM, Nasdaq and current real estate difficulties. Moreover, with debt levels rising in each round of the dance, monetary easing gradually lost its potency and restorative interest rate cuts had to become ever more dramatic. It now remains to be seen whether the music, and the dancing, has finally stopped.

The authors also note in this section that "net financial savings in one part of the world have to be absorbed by deficits elsewhere".. It is hard to argue with an identity, but what the authors do not note is that the identity does not "have to be" satisfied at full employment. In light of our current difficulties, successive attempts by monetary authorities in the (primarily) English speaking countries to stoke up demand, in the face of steadily rising internal and external imbalances, now looks like an act of folly.[2] Perhaps the principal lesson to be learned is that the authorites should be prepared to put up with little setbacks to growth and employment from time to time to avoid truly devastating setbacks at lower frequencies.

Concerning this last cycle, the authors rightly note that house prices have risen almost everywhere around the globe. To me, this suggests a more fundamental cause than financial innovation in the Advanced market Economies, though the authors do not pursue this issue. Rather, they focus on whether such innovations might explain why the crisis first manifested itself (and so seriously) in the US housing market, by "drawing more marginal-credit quality buyers into the market". Again, I would suggest that the surge in sub-prime lending was part of the explanation, but only a part. Ellis (2008) rather refers to the interaction of a number of longstanding institutional features in the United States to explain the recent dramatic developments in the US housing sector.

As for the US bubble being the *first to burst*, tax incentives and steadily lower interest rates (encouraging refinancing and equity withdrawal) had contributed to a sharp decline in household equity. This implied a greater willingness for homeowners on average (not just sub-prime) to simply walk away from their mortgage as house prices began to fall. It is noteworthy that, in other countries and other cycles in the US, arrears and foreclosures began to rise only after the recession had kicked in, not before, as in this recent case.

As for the *severity* of the US housing downturn, Ellis emphasizes the remarkable increase in the supply of houses in the US as house prices rose. Akin to the hog cycle, this left excess supply in the United States when the bubble burst. This was not seen in most other countries. Moreover, there had been a sharp deterioration of lending standards, affecting all

[2] Keynes evidently called for stimulus in deep recessions. Indeed, even Hayek eventually came to this conclusion. See Haberler (1986) More doubtful is whether Keynes would have recommended such policies in the face of a simple deceleration of growth, much less "preemptive easing" in the face of even a prospective slowing as happened repeatedly in the United States after 1987.

classes of borrowers. This reflected the effects of financial innovation (allowing misaligned incentives within the orginate-to-distribute model), but also some other factors unique to the United States. After the massive rollover of US mortgages early in the decade, a development not possible in most other countries[3], fees from originating and servicing normal mortgages fell sharply. This fostered the search for alternative sources of income. Moreover, lending constraints placed on Fannie and Freddie in 2003 provided opportunities for less principled, indeed even predatory lenders to step in. In the end, many borrowers were induced to take on commitments that they would have trouble servicing should circumstances become more difficult. And finally, the fact that householders chose to spend a large proportion of the "wealth" extracted from their houses, as prices rose, left them with high debt levels[4]. This further increased their vulnerability once the downturn began.

Finally, the authors also note in this section how the role of rating agencies in the securitisation process had "unintended consequences". Since rating agencies could only process hard information like credit scores and loan to value ratios, originators soon ceased to collect other relevant information. W hile I do believe that rating agencies bear much of the blame for the effective collapse of much of the US mortgage market, I am not sure they can be held responsible for the failure of originators to collect all of the relevant data. In their search for fees, originators explicitly chose to rely more on mortgages that were less well documented (both subprime and Alt A) and that fell outside the standard fixed rate GSE model. Even worse when it comes to appropriatedata collection, originators apparently hid from mortgage lenders the fact that a large proportion of the mortgages they originated had down payments which had been raised by "silent" second mortgages[5]. These now constitute a significant impediment to normal work out procedures.

Why did banks hold these instruments?

The authors contend that the "real answer seems to be that bankers thought these securities were worthwhile instruments, despite their risk. Investments in MBS seemed to be part of a culture of excessive risk taking that had overtaken banks". Again, I agree, but would also contend that such behavior spread well beyond the realm of the bankers.

During the upward phase of the credit cycle, virtually everyone had a tendency to extrapolate short term returns and underestimate the associated risks, especially tail risks. In this last regard, think of the massive writing of CDS swaps (AIG?)and out of the money

[3] Only in the United State and Denmark do house s have the option to refinance their mortgages as rates decline.

[4] The word "wealth" is used advisedly. In fact, increases in house prices do not constitute "wealth" if wealth is defined as a capacity to have a higher standard of living in the future. The higher price of a house is offset by the higher implicit rent charged for living in the same building. Fundamentally, nothing has changed. See White (2005) and Mullbauer (2007). However, if the householder has taken on more debt, collateralized by the increased value of the house, this debt still has to be serviced. Those who spoke of the welcome capacity of new financial instruments to support inter temporal spending reallocations, to help moderate the economic slowdown in the early years of this decade, generally failed to note the payback requirement.

[5] Ashcroft and Shuerman (2008) estimate that by 2006 around 40 percent of AltA and 25percent of subrime mortgages were encumbered by a "silent second" mortgage

options of all kinds. Think too of massive carry trades in foreign exchange markets and, closely related, households taking out their mortgages in foreign currencies. In each case, the probability of eventual large losses was excessively discounted. Think in addition of insurance companies and pension funds that bought unusual and potentially dangerous products for a rate pick up of only a few basis points. Think moreover of the satisfaction with which central bankers both took responsibility for "The Great Moderation" and extrapolated it into the fuure. And finally ,think of regulators who have only recently and grudgingly admitted that the financial system might be inherently and dangerously procyclical. In sum, so many diverse kinds of people succumbed to the same temptations that one is led to conclude it must have something to do with human nature. Such problems are not likely to be solved by simply "tweaking" the regulations applied to new instruments.

I also agree with the authors that CEO's focus as much (if not more) on their relative as opposed to absolute performance. This implies excessively risky behaviour even when (as in recent years) most banks were extremely profitable by historical standards. However, the authors fail to note the even worse failing of top bankers that Allen Greenspan rvealed before Congress had left him "shocked". Far from worrying about longer term value for their shareholders, indeed even the eventual solvency of the firm, the preoccupation of many top managers seemed to be taking out as much money as they could before the tail event they knew they had encouraged could materialize.[6] As for flawed internal compensation and control, the real key here (as the authors suggest) is finding a way to measure the full range of the risks inherent in position taking and using it to adjust prospective returns for compensation purposes.. We now know what does not work (for example, use of VaR estimates, especially using short data sets) but the real problem is we do not yet know what does. Perhaps, particularly with respect to tail risk, there is something more to be learned from the experiences of the insurance industry.

Short term debt

The authors pose the question of why bankers were prepared to finance these holdings of longer term risky assets with shorter term liabilities. They conclude that bankers underestimated liquidity risk (similarly to market and counterparty risk) against the backdrop of the joint expectation that interest rates would stay low, and that the "Greenspan-put" would support them if anything went wrong.

What I find a more intriguing question is the effect on leverage and maturity transformation of the "measured" increases in US interest rates between mid 2004 and mid 2006[7].On the one hand, the Fed seemed to believe that this approach would give investors the opportunity to withdraw from risky positions in an equally measured way, thus avoiding the kind of turmoil that greeted Fed tightening in 1994. On the other hand, it could also be

[6] Even more "outrageous", AIG was brought down by a small unit in London, whose traders are now insisting they receive substantial bonuses to stay on and unwind the remaining positions they themselves took on.
[7] Recall the long series of regular 25 basis point increases through this period, all of which were effectively signaled by the Federal Reserve in advance.

suggested that the effect of removing all uncertainty about prospective movements in short rates was to encourage people to maintain their positions. Indeed, with the "carry" being incrementally reduced, the effect of this certainty might have been to encourage even more leverage to maintain previous rates of return on capital. If the latter is true, the Fed's tactics might actually have contributed to the severity of the market turmoil when the deleveraging program finally began. This is an important issue about "transparency" which warrants further research.

The crisis unfolds

The authors note that the "the crisis had a certain degree of inevitability". With this, I agree. However, they say this reflects the "proximate causes of high bank holdings of mortgage backed securities… financed with… short term debt". In contrast, I feel the deeper causes of the previous boom would eventually have resulted in crisis, regardless of the exposure of the banks. Indeed, it might even be argued that the subprime crisis, centred on the banks, actually did us a favour by interrupting the more general credit boom before it went on to even further excesses.

My interpretation also conflicts somewhat with the suggestion by the authors that the crisis began as a liquidity crisis and then, under the influence of falling asset prices, became one reflecting fears of potential insolvencies. My interpretation would be that the interbank term crisis, which began in August of 2007, was effectively a Minsky moment, the culmination of many years of imprudent lending. While it looked like a problem of illiquidity, it reflected from the start the fear of each individual bank that both it and their prospective counterparties might well be insolvent. In this environment, no one was prepared to lend for any period much longer than a day. Moreover, this question of interpretation is important, since it leads to different policy responses. In particular, my focus on solvency would have called for more drastic and much earlier action concerning the adequate capitalization of banks, particularly large, systemic ones.

The credit crunch

In this section, the authors make the novel suggestion that banks could be hoarding liquidity because of "greed" rather than "fear". The hypothesis is that banks have consciously positioned themselves to be in a position to buy assets at "fire sale"prices should such opportunities eventually present themselves. This might be the case for a small number of banks, but it is hard to see this as a motivation for a significant number of banks together. In that case, presumably the opportunities for gain would be significantly reduced by the number of potential buyers and the strategy would seem much les appealing.

Dealing with the crunch

The authors focus on the overhang of "toxic assets", with their well known valuation problems, and suggest three ways to deal with them. While I am no expert in this area, I have trouble seeing how the first suggestion is practical without the second one and vice

versa[8]. This implies that the third suggestion is the only practical possibility among the three they suggest. We need some combination of pricing these assets, and then making some tough decisions about who can survive alone, who can survive with government help, and who must be wound down. Lurking behind, will be a host of other tough decisions, not least the extent to which investors other than shareholders (in particular bond holders and counterparties in derivative arrangements) should also pay a price before turning to the taxpayers. And, of course, all of these decisions will have to be announced simultaneously if the current uncertainty about the health of the system is not to persist.

While there is no mention of temporary nationalization in the paper, there seems to be growing sympathy for a definitive "Swedish" type of solution rather than the piecemeal approach followed in the 1990's by the Japanese authorities. This approach would seem all the more required once one accepts as fact that the problems the banks face extend well beyond "toxic assets" If banks are to begin lending again, to help moderate the size of the real downturn, then more radical measures might well be called for.

[8] Suggestion one is that the authorities buy the assets at auction and then house them for later resale. But what if not enough entities want to participate, casting doubt on the reliability of the auction price even as a first estimate. More important, what if the price that emerges implies that some systemic firms are bankrupt. This implies having a plan to deal with such firms, which is implicitly to say we need the second solution. As for the second solution, there is no possibility of separating the wheat from the chaff without having a price for the toxic assets. This brings us back to suggestion one.