Discussion

1. John Laker

This is a thoughtful and provocative analysis of the US sub-prime crisis, which we now know to be another classic boom/bust event. It goes beyond 'official' analyses, such as the Report of the Financial Stability Forum in April, to try to identify factors that were causal to the sudden acceleration of the residential mortgage-backed securities (RMBS) market in the United States after 2004.

Alas, to a prudential regulator, the paper reads as an 'ode to futility'! Prudential regulators, we are told, are unable to predict future asset prices and volatility, are underpaid and under-resourced, and are unable to understand the inner workings of complex financial institutions. The paper is also critical of regulatory approaches to capital adequacy, particularly the new Basel II Framework. And yet, the paper looks to regulatory solutions to the sub-prime crisis and even gives a plug to Australia's 'twin peaks' regulatory arrangements.

The provocative part of the paper is the assertion that the transition to Basel II – in particular, the anticipation of much lower risk weights for mortgage lending – was a necessary if not sufficient condition for the sudden acceleration of the RMBS market after 2004. The catalyst was the regulatory limits imposed on the balance sheets of Fannie Mae and Freddie Mac, which it is claimed caused RMBS issuance by banks and other issuers in the United States to explode after 2004. Some basic econometric tests are provided to support this assertion. Certainly, it seems plausible that a pull-back by these agencies could have led to a rebalancing of activity in the US RMBS market toward less experienced players, contributing to the sub-prime crisis. But whether this would have happened absent the regulatory constraints on Fannie Mae and Freddie Mac is of course impossible to know.

More relevant for this audience (and the Australian Prudential Regulation Authority – APRA – in particular) is the causal role attributed to the impending introduction of Basel II in encouraging the market behaviour that we have witnessed. The authors go so far as to conclude, from their co-integration analysis, that over one-third of total off-balance sheet RMBS in February 2008 not explained by the standard variables can be attributed to banks anticipating the effect of Basel II on capital.

The authors back this assertion with logical analysis and anecdotal evidence. However, there are some remaining 'puzzles' to be resolved before this assertion can be fully convincing.

First, many of the originators and distributors in the private-label RMBS market in the United States were not subject to bank capital rules. This includes the mortgage finance companies and investment banks. The paper does not explain why bank capital rules would drive RMBS issuance by unregulated lenders and investment banks.

Second, the timing is problematic. Most of the fraudulent and sub-prime mortgages that were packaged into collateralised debt obligations were apparently of the 2006–07 vintage. The Basel II Framework was not in place in 2006 and there were

significant doubts, even then, about whether the Framework would be implemented in the United States. The objections of the Federal Deposit Insurance Corporation (FDIC), quoted at several points in the paper, were well-known. The assertion that US banks not only actively anticipated Basel II but actually adjusted their portfolios well in advance of obtaining any capital benefit (and thereby incurring a short-term capital penalty) does not seem consistent with our understanding of how banks manage their capital.

In addition, the capital impacts of Basel II have been subject to considerable uncertainty from the beginning, as illustrated by the divergence between the Quantitative Impact Study 4 (QIS-4) results cited by the authors and subsequent surveys. It will be some years before the full impacts on major US banks are clear.

Third, US banks were exceptionally well capitalised over the period in question (generally well above regulatory minima), due to strong economic conditions and profits. It is difficult to accept that regulatory capital requirements would have been a major driver of activity given that they were not binding. Even if capital requirements were a factor, the incentives with respect to securitisation activity should work in the opposite direction to what has been asserted. Basel II reduces housing capital risk weights in most cases. This should clearly discourage, not encourage, securitisation of mortgage loans by banks and encourage on-balance sheet origination.

Finally, if banks adjusted activity to anticipate Basel II, we would expect them to have reduced or repriced their asset-backed commercial paper liquidity lines, for which capital would have to be raised. There is no evidence they did this. Indeed, the Financial Stability Forum has argued that it was the pre-Basel II Framework that encouraged banks to securitise assets through instruments with low capital charges (such as 364-day liquidity facilities).

The assertion of a powerful causal role for Basel II would, of course, be most convincing if it could also be shown that impacts were similar in jurisdictions outside the United States. If banks' actions in originating sub-prime mortgages and securitising them were a response to arbitrage of capital rules, why did this also not occur in Australia? True, there was a significant increase in securitisation activity over the same period (2004–2007), but little evidence of imprudent credit practices by regulated financial institutions. The growth of Australian RMBS in this period can be explained by the mutually reinforcing recovery in the local housing market and the global availability of low-cost funding to Australian financial institutions. However, the larger banks that were likely to be beneficiaries of the advanced Basel II approaches do not make substantial use of securitisation markets, while the smaller banking institutions that do so for funding or capital management purposes have maintained strong lending and servicing records.

There are answers to this puzzle in Australia's case, which address some of the FDIC's criticisms about Basel II. One is that expectations of substantial reductions in regulatory capital, prompted by the early QIS results, gave way during APRA's accreditation process to a greater recognition – particularly when boards and senior management became involved – that Basel II was much more about improved risk management systems and pricing for risk. Related to this, banks were not allowed to set

their own (low) capital requirements. The accreditation process led to a considerable uplift in banks' original risk estimates, which were generally developed using data from a benign part of the credit cycle; APRA also imposed a 20 per cent floor on loss given defaults (LGDs) in housing lending, which will remain until institutions develop higher-quality, more forward-looking estimates in this area.

In general, the jury may need to stay out longer on the causal role of the Basel II Framework. Much as I would like to think that prudential regulators do wield real influence, it is nonetheless difficult to accept that savings in regulatory capital (real or anticipated) in the United States outweighed fundamental business pricing and risk judgments. Regulatory capital arbitrage may save a few basis points on a transaction, whereas bad debt and fair value charges incurred to date have wiped out entire principal portfolios.

Let me turn to the paper's more general concerns about the Basel II Framework. The paper concludes that the Framework:

- fails to address concentration risk;
- is procyclical; and
- can lead to undercapitalisation of banks by allowing regulatory arbitrage and letting banks set their own capital requirements.

As a consequence, the authors favour simple over more complex regulation, such as a leverage ratio with prompt corrective action triggers.

A simplified capital framework, which is not subject to arbitrage, is not procyclical and deals appropriately with risk concentrations would indeed be the holy grail of capital regulation. A simple rule that effectively covers all risk situations and sets the right incentives! But, in the meantime …

We need to remind ourselves that the move away from simple leverage ratio-type rules, initially to the 1998 Basel Accord, then to Basel II, was aimed at more accurate capital requirements that better reflect the risk profiles of institutions and, in comparison, lessen opportunities for regulatory arbitrage. After all, a leverage ratio penalises low-risk assets and may lead institutions to take on more risks. Basel II was also a response by supervisors to support improvements in risk measurement/ management techniques being made by major international banks.

This is not to say that the Basel II Framework or for that matter any capital regime is perfect. Certainly we agree that more attention is needed to address concentration risks, as the Basel Committee has also recognised. This is not an issue that is, or can be, dealt with by simple leverage-type ratios. The authors offer some high-level suggestions, but the really tricky (and important) piece is the identification and proper measurement of risk concentration exposures.

Procyclicality is also a feature of Basel II as it is for banks' internal risk measurement systems; it exists even with the Basel Accord and other more simplistic capital regimes. The issue is a difficult one, although it is a matter of conjecture how much Basel II might in reality add to the already considerable procyclical forces operating more generally within the economy and financial sector. But again, Basel II recognises the issue and there are elements of the Framework intended to help deal with the possible effects.

I have already commented about the concern that Basel II will effectively allow banks to set their own capital requirements and exploit the complexity of their risk estimates to lower these requirements. Ask any of the larger Australian banks if this is so! Nonetheless, we would acknowledge that the setting of capital requirements under the advanced Basel II approaches is challenging for supervisors but there is an issue of materiality here and there is no need to chase all rabbits down their burrows. In any event, the Framework does not simply take whatever estimates banks decide to put forward for regulatory purposes. Within the credit risk area, for example, the Framework does not accept banks' full portfolio credit models (only certain inputs to those models), introduces the concept of downturn LGDs and sets criteria for acceptable risk estimates.

Any assessment of the Basel II Framework at this early stage in its implementation should bear in mind the warning of the previous Chairman of the Basel Committee '… to not let the best be the enemy of the good' (Le Pan 2008). Capital requirements are just one tool (though an important one) for prudential oversight, not a replacement for sound risk management and a deep understanding of the regulated institutions' business and risk profile.

Perhaps what the paper is really arguing, deep down, is that more capital is better than less capital. This might be music to a prudential regulator's ears, and well-capitalised banks are certainly better placed to weather current global market turmoil. But is a regulator's job simply and always to require more capital? Over time, if capital requirements are set too high (and too bluntly, for example, via a leverage ratio) regulated institutions will have strong incentives to take on more risky business and arbitrage the regulations – that is, to appear safer than they are. The unregulated sector might also expand at the expense of regulated institutions. None of these outcomes can be considered conducive to financial system stability.

If I can express one disappointment with this otherwise engaging paper, it is that it has given market participants something of a free pass. The paper concedes, *en passant*, that '[p]rivate-sector practices need to be improved, to be sure …' but later claims that it is impossible to change certain human behaviour. The implication is that the reaction of market participants to increase their risk appetite and vastly misprice risk was somehow 'to be expected'. 'Boys will be boys' when the global liquidity tap is turned on appears to be the authors' assessment and real blame is instead saved for regulators in setting rules that encourage this risk-taking behaviour.

Any comprehensive analysis of the sub-prime crisis would surely acknowledge that through poor risk management oversight and an inability to think beyond the then buoyant economic cycle, many institutions and investors were lulled into thinking that their liquidity and credit exposures were very low. It is interesting that, of the eight underlying weaknesses identified in the Report of the Financial Stability Forum, poor underwriting standards and shortcomings in firms' risk management practices ranked one and two. Weaknesses in regulatory frameworks, such as those related to the pre-Basel II Framework, ranked eight. This view from Paris could not be more different!

Understanding the failure of market disciplines during the sub-prime crisis would require a rich vein of issues to be analysed. What roles were played by boards of

financial institutions scarred by the crisis? Has the discipline of shareholders as owners been diluted by the involvement of institutional funds managers, owning shares on behalf of pension funds? Did executive compensation provide sufficient, if any, penalties for failure? How did the incentives in the RMBS market in the United States for recovering sub-prime loans compare with the incentives to package and distribute these loans? I could go on, but I hope that I have said enough to tempt the authors of this paper to embark on a second round of research.

Reference

Le Pan N (2008), 'Remarks on Basel II', *Financial Markets , Institutions and Instruments*, 17(1), pp 19–29.

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2. Brian Cahill

Adrian Blundell-Wignall and Paul Atkinson's paper provides a detailed overview of the sub-prime crisis and analysis of likely causes of the crisis. In particular, it outlines regulatory influences in the creation of the crisis and concludes by listing a number of factors that the authors believe are likely to have caused the crisis. It also suggests 10 elements that need to be thought about in the context of regulatory reform.

The paper, at least from my perspective, mostly focuses on the regulatory framework – especially Basel I and II – and the way in which such a framework encouraged the explosion in RMBS issuance and off-balance sheet vehicles post 2004. This is not my area of expertise and – given John Laker is sitting next to me – I thought it wise to perhaps leave that major theme of the paper to others to discuss.

The paper also touches on the role of the credit rating agencies (CRAs) in the crisis and – if I might paraphrase some of the authors' comments in this area – suggests that the agencies were a key enabler in allowing lemons to be sold into the capital markets. It also highlights an issue that has been the subject of intense debate now for almost a year: that moral hazard and conflict of interest issues arise from the issuer-pays model, or more succinctly, problems can arise when the person whose debt you rate, pays your fees.

Given my role at one of the CRAs, I thought it might be a useful contribution to the discussion if I provided some of my thoughts on these comments.

- First, it is obviously correct that any analysis of the sub-prime crisis must look at the role of the CRAs. Indeed multiple organisations are – the Financial Stability Forum, the US Securities and Exchange Commission, the Committee of European Securities Regulators in Europe and the International Organisation of Securities Commissions – to name some international organisations, and closer to home the Australian Treasury and the Australian Securities and Investment Commission.
- Second, I think the key concern in the paper with respect to CRAs could be summarised as anxiety concerning our independence. Are the CRAs truly independent given the issuer-pays model? We would argue that we are, and

that the checks and balances, which were in place before the crisis and which have been subsequently strengthened, prevent the issuer-pays model affecting the independence of our ratings. We are engaging on many fronts to seek to demonstrate this and – where appropriate – make further changes to provide further reassurance. This is a hugely important issue for us, as it massively reduces our credibility and value if people believe we give ratings that are influenced by those who pay us. We do not. We are doing our absolute best to demonstrate this and to reassure people about this.

- Third, in this context it is worth asking: which CRA fee model would be more independent? For example, an investor-pays model? That is not independent, it simply changes the pressures. I would suggest to the authors – and many others that comment on the business model of the CRAs – that the focus should be on the checks and balances, not the model itself. This is essentially what many regulatory initiatives are focused on.
- Finally, I thought I might add a suggestion as to what else might have been covered by the paper in more detail. A keen area of debate surrounding the crisis has not only been the role of rating agencies in providing AAA ratings to some structured finance products, but what context allowed such paper to be sold. If these products were indeed lemons – as the authors argue – why did people buy them? To my mind this is an area that might have been further explored in the paper. A recent paper from the Committee on the Global Financial System (CGFS 2008) – on ratings in structured finance during the sub-prime crisis and what went wrong – highlights a number of analytical shortcomings at the CRAs that they believe need addressing. It also highlights perhaps a too heavy reliance on ratings by investors and the need for investors to strengthen their own risk assessment going forward. The paper also suggests the need for greater information transparency. We would support this and are actively taking steps to improve the information flow around how we arrive at ratings and what they mean. We would support greater *market* transparency, in respect to information disclosed about structured finance products. That ratings should support, not replace, investor due diligence is a key conclusion from that paper which we would heavily support.

In conclusion, Adrian and Paul's paper gives an illuminating overview of the background and likely causes of the sub-prime crisis, with a key focus on regulatory frameworks. In particular, it focuses on the enablers or motivators that drove the creation of sub-prime products from the sell-side. If I might say so, it lets the non-bank buy-side off a little lightly to my mind, by not further exploring their role as large buyers of sub-prime products. What lessons can be learnt from this? Part of the answer involves looking at the credit rating agency industry, but this is clearly not the whole story.

Reference

CGFS (2008), 'Ratings in Structured Finance: What Went Wrong and What Can Be Done to Address Shortcomings?', CGFS Papers No 32.

3. General Discussion

In their paper, Adrian Blundell-Wignall and Paul Atkinson argue that two key causes of the recent financial turmoil were changes in the capital adequacy and balance sheet restrictions of the government-sponsored entities and the release of Basel II. They argue that these were primary drivers of the large pick-up in sub-prime lending in the United States after 2004. Much of the general discussion was associated with these particular results.

One participant suggested that although the timing of these events matched the run-up in sub-prime lending, the change in incentives as a result of the regulatory adjustments were actually likely to have worked in the opposite direction to that argued in the paper. In particular, the Basel II rules reduced the capital charges for on-balance sheet assets, so it would seem peculiar that this change would cause a large move of assets to off-balance sheet vehicles, such as structured investment vehicles. In response, Adrian Blundell-Wignall suggested that the capital charge for off-balance sheet assets did not apply at the time these changes were taking place, and that the financial institutions planned to bring these assets back onto bank balance sheets when Basel II came into effect. Other participants offered alternative explanations for the timing of the run-up in sub-prime lending. It was suggested that given an expectation in 2003–04 that real US interest rates would rise quite rapidly, financial institutions chose to lower underwriting standards, rather than accept slower rates of growth in lending. It was argued that part of the reason for this was that bank staff were compensated for their near-term performance relative to other banks. There was some debate about whether sub-prime lending was even the right place to look for causal factors of the financial turmoil at all, with some participants indicating that the large decrease in interest rates globally (the global 'savings glut') and the widespread decline in the volatility of output and inflation were more important.

Following on from this debate there was some discussion about the design of Basel II. One participant pointed out that Basel II was a response to pressures by financial institutions and it was the private-sector institutions that had encouraged greater weight to be placed on internal capital modelling. Many private-sector institutions reportedly viewed previous guidelines as inadequate in a number of respects. For example, they treated a loan to a small business as having the same risk as a loan to a large conglomerate. Nevertheless, it was suggested that there was still much debate about what constitutes an acceptable capital modelling framework for the purposes of determining minimum capital requirements. One participant suggested that a positive feature of Basel II was that it had been developed in consultation with the banks and was based on a framework that had developed gradually, in an iterative way. Another participant disagreed, suggesting that the regulators had been bullied into the Basel II arrangements.

There was also consideration of the role of credit rating agencies. In particular, some participants raised concerns about the independence of the rating agencies, pointing to the adverse impact on their clients' profitability that could come from a poor rating. In line with the paper, there was support for the idea that authorities

should act to help increase competition in the ratings industry. It was suggested that reducing the reliance of the regulatory system on ratings could force purchasers of securities to obtain information by other means and encourage greater transparency by the issuers themselves. In response to these comments, Brian Cahill noted that Moody's welcomes competition and pointed out that it was the regulators who embedded ratings in the system, not the credit rating agencies.