9. Dear Prudence (Regulation Needs To Be More Global *and* More National)

By Avinash Persaud

There is a widely held view that the Credit Crunch of 2007-2009 was a result of an insufficient reach of regulation and the solution is to take existing regulation and spread it without gap across institutions and jurisdictions. This would be a mistake for a few reasons. One reason is that highly regulated institutions in regulated jurisdictions lay at the heart of the crisis: Northern Rock, IKB, Fortis, Royal Bank of Scotland, UBS, Citigroup, et cetera. If there were no mortgage fraud in the United States, no tax-secrecy in Switzerland, no conflict of interest at rating firms, this crisis would still have occurred. This crisis was a national regulatory failure. The solution is not therefore more of the same, but better regulation, in particular, greater macro-prudential regulation. More macro-prudential regulation is coming at last. It has been recommended by the G-20 Leaders in their 2 April 2009 Communiqué, the UN Commission of Experts, the Turner Review in the UK and by the G-30, Jacques de Larosiere and Geneva Reports.

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This is not the first international banking crisis the world has seen. It is probably the eighty-fifth. If crises keep repeating themselves it seems reasonable to argue that policy makers need to carefully consider what they are doing, not just double-up. It also means that policy makers should not superficially react to the characters and colours of the current crisis. The last eighty-four crises occurred without credit default swaps and Structured Investment Vehicles. The last eighty something had nothing to do with credit ratings. Schadenfreude at bankers' expense is satisfying, but as US President Obama has observed, anger does not get us very far. This crisis is the loudest call yet to plug fundamental market failures that have either been ignored or improperly dealt with in financial regulation so far. The biggest of these concern national and international systemic risks.

Systemic Risks

It seems banal by now to point out that the reason why we try to prevent financial crises is that the costs to society are invariably enormous and exceed the private cost to individual financial institutions. We regulate in order to internalize these externalities on to the behaviour of financial institutions. The main tool regulators use to do this is capital adequacy requirements, but the current approach is too narrow. It implicitly assumes that we can make the system as a whole safe by ensuring that individual banks are safe. This sounds like a truism, but it represents a fallacy of composition. In trying to make themselves safer, banks and other highly leveraged financial intermediaries behave in ways that collectively undermine the system.

Selling an asset when the price of risk increases, is a prudent response from the

perspective of an individual bank. But if many banks act in this way, the asset price will collapse, forcing risk-averse institutions to sell more and the cycle turns round and round, leading to generalized declines in asset prices, enhanced correlations and volatility across markets, spiraling losses and collapsing liquidity. I have previously described these horizons where liquidity appears abundant before vanishing, as a liquidity black hole. But the critical point is that liquidity risk is not a solid to be measured and easily categorized, it is endogenous to market behaviour.

Through a number of avenues, some regulatory, some not, often in the name of transparency and standardization, the increasing role of current market prices on behaviour has intensified this endogeneity. These avenues include mark-to-market valuation of assets; regulatory approved market-based measures of risk, such as the use of credit default swaps prices in internal credit models or price volatility in market risk models; and the increasing use of credit ratings, which tend to be correlated with market prices.

Endogenous Risk and the Economic Cycle

In the up-phase of the economic cycle, price-based measures of asset values rise, price-based measures of risk fall and competition to grow bank profits increase. Most financial institutions spontaneously respond by (i) expanding their balance sheets to take advantage of the fixed costs of banking franchises and regulation; (ii) trying to lower the cost of funding by using short-term funding from the money markets; and (iii) increasing leverage. Those that do not do so are seen as under leveraging their equity and are punished by the stock markets. In the more prosaic words of Chuck Prince, CEO of Citigroup, “when the music is playing you have to get up and dance”.

When the boom ends, asset prices fall and short-term funding to institutions with impaired and uncertain assets or high leverage dries up. Forced sales of assets drive up their measured risk and, inevitably, the boom turns to bust.

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One of the key lessons of this crisis is that market discipline provides the wrong kind of discipline in booms. It is noteworthy that those institutions that have been most resilient to the crisis, such as HSBC and J. P. Morgan, had lower stock market ratings than those who proved most vulnerable, Northern Rock, Bear Sterns, Fortis and Lehman Brothers. Market discipline has a role to play in financial sector development more generally, but it cannot be in the front line of our defense against financial crises.

One of the reasons why market discipline was seen as such an important pillar in the previous approach to banking regulation is that the implicit model of crisis regulators had in their minds—that financial crashes occur randomly as a result of a bad institution failing and that failure becomes systemic, nationally and internationally. But our experience is different. Crashes follow booms. In the boom, almost all financial institutions look good and in the bust they almost all look bad. Differentiation is poor. This current crisis is nothing but yet another instance of this all too familiar boom and bust cycle. But if crises repeat themselves and they follow booms, banning the products, players and jurisdictions that were circumstantially at the centre of the current crisis will do little to prevent the next one. Unless we tackle the booms there will always be an unbanned instrument to take the place of the banned.

Moreover, the notion that financial products are safe and some are not and the use of unsafe products is the problem also looks suspect in a world of boom-bust and endogenous risk. Booms are often a result of things appearing safer than they are. Securitization was viewed as a way of making banks safer. Sub-prime mortgages were viewed as safe as houses. Micro-prudential regulation is necessary to weed out the truly reckless institutions and behaviour, but the main thing we need to do is to supplement micro-prudential regulation with macro-prudential regulation to calm the booms that the micro-prudential regulation lets slip through; and to soften the inevitable busts.

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Micro- and Macro-Prudential Regulation

Micro-prudential regulation concerns itself with the stability of individual institutions. Macro-prudential regulation concerns itself with the stability of the financial system as a whole. Micro-prudential regulation examines the responses of an individual bank to exogenous risks. By construction it does not incorporate endogenous risk. It also ignores the systemic importance of individual institutions such as size, degree of leverage and interconnectedness with the rest of the system.

One of the key purposes of macro-regulation is to act as a countervailing force to the natural decline in measured risks in a boom and the subsequent rise in measured risks in the subsequent collapse. How this is to be implemented is as important as what is being implemented. Supervisors currently have plenty of discretion, but they find it hard to utilize it because of the politics of a boom. Almost everyone wants a boom to last. Politicians are looking to reap electoral benefit from the sense of well-being and prosperity of booms. Policy officials convince themselves and try to convince others that the boom is not an unsustainable credit binge, but the positive result of structural reforms they have put in place. Booms have social benefits. They are associated with a higher appetite for risk and a perception that risks have fallen and this often means that access to finance rises for the unbanked and underinsured rises. Booms are not quite a conspiracy of silence, but there are few who gain from the early demise of a boom and so booms are accommodated, growing larger and larger and thus reaping more damage when they eventually collapse.

Counter-cyclical and Liquidity Charges

In the light of the observations above, there is a growing consensus around the idea that capital requirements need to be counter-cyclical in order to moderate the boom-bust cycle, or at the very least not amplify it. Counter-cyclical regulation is explicitly supported by the 2 April Communiqué of G-20 and by the earlier reviews and reports cited earlier. In practical terms, Professor Charles Goodhart of the London School of Economics and I have recommended regulators increase the existing or base capital adequacy requirements (based on an assessment of inherent risks) by two multiples.

The first is related to above average growth of credit expansion and leverage. Where they are separate, regulators should meet with monetary policy officials in a Financial Stability Committee. An outcome of that meeting would be a forecast of the degree of growth of the average bank’s assets that is consistent with the central bank’s target for inflation (or some other macro, nominal target). The forecast would have a reasonable band around it. If a bank’s assets grow above this band it will

have to put aside a higher multiple of its base capital charge for this new lending and if its assets grow less than the lower bound, it may put aside a lower multiple.

It is important to note that Financial Stability Committees already exist in many countries. They generally do not work because while worthy people meet and fret together, there is no consequence to their deliberations. A consequence, such as agreeing to the level of sustainable bank asset growth would focus these Committees in a more productive way.

The second multiple on capital charges should be related to the mismatch in the maturity of assets and liabilities. One of the significant lessons of the Crash of 2007/8 is that the risk of an asset is largely determined by the maturity of its funding. Northern Rock and other casualties of the crash might well have survived with the same assets if the average maturity of their funding had been longer. The liquidity of banks' assets has fallen far more than their credit quality of the assets or their performance.

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However, if regulators make little distinction on how assets are funded, financial institutions will rely on cheaper, short-term funding, which increases systemic fragility. This private incentive to create systemic risks can be off-set through the imposition of a capital charge that is inversely related to the maturity of funding of assets that cannot normally be posted at the central bank for liquidity. The 2 April 2009 Communiqué of the G-20 also explicitly mentioned the need for the greater regulation and management of liquidity. The Turner Review argues for liquidity buffers and minimum funding ratios though the measurement and effect of these are similar to our "liquidity charge": posting additional capital to reflect liquidity risks.

Measuring the liquidity maturity of assets and liabilities is not straight-forward. A ten year, AAA, government bond has almost immediate liquidity. Assets that cannot be posted at the central bank for liquidity can be assumed to have a minimum liquidity maturity of two years or more. If a pool of these assets was funded by a pool of two-year term deposits there would be no liquidity risk and no liquidity charge. If on the other hand the pool of funding had a maturity of one month and so had to be rolled over every month, the liquidity multiple on the base capital charge would be near its maximum—say two times, so the minimum capital adequacy requirement would rise from 8% to 16%. In a boom when the counter-cyclical multiple is also at 2 times, the final capital adequacy requirement would be 32% of risk-weighted assets (8% x 2 x 2). I recognize that liquidity multiples will make lending more costly given that banks traditionally fund themselves short and lend long. However, the liquidity multiple will give them an incentive to find more long term funding and where they cannot, will address a real, systemic risk. Moreover, recall that bank capital in excess of 20% of risk-weighted assets was common in the industry before the crash and proved insufficient.

To further reduce the spiral of sales in a crisis and support financial institutions lengthening the maturity of their funding, I also propose that instead of suspending mark-to-market value accounting, financial institutions should compliment mark-to-market accounting with mark-to-funding valuations. Under mark-to-funding valuations there are essentially two alternative prices for an asset: today's market price and the present discounted value of the future earnings stream. In normal times, these two prices are near-enough the same. In a liquidity crisis the market price falls substantially below the PV. If an institution has short-term funding, the realistic price is the market price. If it has long-term funding, the PV price is a better

measure of the risks being faced by the institution than the market price. In mark-to-funding accounting, a weighted average of the market price and PV is taken depending on the weighted average maturity.

To Each According To Their Risk Capacity

There is a very big idea lying a little hidden in this approach to liquidity charges. By placing a charge on the degree of maturity mis-match between assets and funding we are discouraging institutions without a capacity for liquidity risk from holding it and, perhaps, encouraging institutions to develop a capacity through longer-term funding. The response of financial regulators to the crisis has been that we need to require banks to set aside more capital, in part because we had previously underestimated systemic risks. If risk is allocated to places without a capacity for that risk, the amount of capital required to protect the financial system from systemic crisis is beyond the economics of banks. At this point governments step in. However, an alternative approach is to try and incentivize risks to flow to places with a capacity for that risk. If this could be done the system could be safe with less capital. But what does this mean?

There are broadly three types of financial risks: credit risk (the risk of a default), market risk (the risk that prices fall) and liquidity risk (the risk that the previous market price can only be achieved over some period of time). In thinking about risk capacity it is useful to think how these risks are best hedged. Credit risk rises the more time there is for a default to occur. Credit risk is best hedged by diversifying credit risks and trying to find credits that are supported by circumstances that undermine others. Banks have the greatest capacity for credit risks because they generally have the greatest access to differing credits and expertise in credit. A pension fund or insurance company has much less capacity for credit risk. Liquidity risk is best hedged through time. Pension funds, insurance companies and other investment vehicles with long-term funding or liabilities therefore have the greatest capacity for liquidity risk because they can hold on to assets that cannot be sold straight away and wait for buyers to return. Market risk is best hedged through a combination of diversification across other market risks and through time.

In a financial system where risks are allocated to capacity we should therefore expect to see banks holding most credit risks, least liquidity risk and some market risk. We should expect to see long-term investors holding most liquidity risk, least credit risk and some market risk. However, the previous approach to financial regulation ignored issues of capacity and as a result, credit risk sailed to long-term investors and liquidity risk sailed the other way, increasing the system's aggregate fragility and increasing the amount of capital financial institutions needed to avoid systemic failure. Requiring margins or capital charges for liquidity mis-matches and separately analyzing the risks of a portfolio of credits could go a long way to pushing risk to where there is a capacity for risk, increasing systemic stability and ultimately reducing the amount of deadweight capital required for there to be confidence in the system.

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Can The Cycle Be Measured?

Many people, most notably Sir Alan Greenspan, voice the concern that it is very hard to know when you are in a boom or not. Of course measuring the cycle is what

inflation-targeting central banks do day-in, day-out. But this misses the point a little. If the purpose of counter-cyclical capital chargers were to end boom-bust cycles, then we would need to be more confident about the calibration of booms than we are today. However, if our purpose is to lean against the wind, our calibrations can be less precise. Recall that without counter-cyclical charges the natural inclination in a boom is to lend even more because measured risks fall. The previous approach took the economic cycle and amplified it. Our approach would at worse squeeze the financial cycle back to the magnitude of the economic cycle, and at best would serve to moderate that economic cycle through changing the cost of lending through the cycle. The goal is to moderate the worst excesses of the cycle, not to kill the cycle. Indeed, the cycle is an important source of grand ambitions and creative destruction.

Macro-Prudential Issues Beyond the Cycle

Not all financial institutions pose the same systemic risks. It stands to reason that regulation should acknowledge that some banks are systemically important and the others are less so. In each country, supervisors establish a list of systemically-important institutions that experience closer scrutiny and greater containment of behaviour.

All banks, and any other financial institution subject to deposit insurance, should be subject to some (low) minimum capital requirement as a protection for the deposit insurance fund. Systemically-important institutions would be subject both to micro-prudential regulation and to macro-prudential regulation, related to their contribution to systemic risk. This can be done by adjusting the micro-prudential ratio by a coefficient corresponding to their macro-prudential risk.

However, we do not share the zeal of some for governments to be involved in the decisions of private firms in matter of executive compenzation at systemically important institutions. While not ruling out particular measures to lengthen bankers' horizons, we hope that macro-prudential regulation will push banks to develop incentive packages that are more encouraging of longer-term behaviour. If that failed, regulators should do more. Incentives are important.

Macro-Prudential and Host- vs. Home-Country Regulation

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I have argued above that the most critical steps we need to take to reduce the incidence of financial crises are counter-cyclical capital charges, charges for liquidity and movement in the direction of incentivising risk to shift to where there is risk capacity. These measures cannot be implemented or set globally, but need to be done nationally. Economic cycles are not global, they are sometimes regional and most often national. Even in 2009, in the middle of the mother of all global recessions, most countries are at different points along the economic cycle. What is appropriate for India and Brazil today, is not appropriate for the US and UK. Liquidity and risk capacity are also best measured locally, not globally.

There is a clear need for information sharing and coordination of regulatory actions. Convergence of regulatory principles would also improve the flow of global finance. In some aspects of regulation such as anti-money laundering efforts and value accounting, global standards are important—but these are not crisis prevention measures. In the avoidance of crisis, through the setting of capital rules and bank supervision, I recommend a switch back from "home-country" regulation to "host-country" regulation.

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This is currently an unfashionable view; I believe it has three further practical benefits. First, if foreign banks were required to set up their local presence as independent subsidiaries that can withstand the default of an international parent, it would reduce exposure to lax jurisdictions more effectively than trying to force all to follow a standard that would likely be inappropriate to many. The second benefit applies to a common-currency area—formal or otherwise. Nationally-based counter-cyclical charges could give the common-currency area, a much needed additional policy instrument that could provide a more differentiated response than a single interest rate does, to a boom in one member state and deflation in another.

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The third benefit is that it gives developing countries more policy space. Large financial centers often use rule-setting behaviour as a form of protectionism. It is my personal note, that while tax evasion is a common occurrence on OECD countries, and foreign investment in many OECD, on-shore financial centers carries little or light taxation, black lists on jurisdictions with harmful taxation policies do not include any OECD countries. We are led to believe from this process, where OECD countries are judge, jury and excluded from equal scrutiny, that a lynchpin in the global financial crisis was Costa Rica.

Final Word

Warren Buffet famously remarked that you only see who is swimming naked when the tide runs out. By this I think he means that while the frauds and unethical practices are going on unseen all the time, they come to the surface when the veil of rising market prices are removed. But they are not the cause of the tide going out or the cash. They are merely revealed by it. We must continue to clamp down on frauds and ethical abuses but this is not a sufficient crisis-avoiding solution. We cannot avoid crises without avoiding the booms which are always underpinned by a good story that explains why it is prudent for individual institutions to lend more. Micro-prudential regulation is not enough and must be supplemented by macro-prudential regulation that catches the systemic consequences of all institutions acting in a like manner. An interesting point, however, is that macro-prudential regulation is best carried out nationally, not internationally. Cycles are national and protecting the financial system from lax regulation elsewhere requires stronger national boundaries. While we cannot hope to prevent crises completely, we can perhaps make them fewer and milder by adopting and implementing better regulation. Spreading a regulatory mechanism that has failed further a field, or focusing on the products and players of this crisis, is unlikely to be a successful route to follow.

Avinash Persaud
Chairman, Intelligence Capital Limited; Emeritus Professor, Gresham College and Chairman, Warwick Commission