

# Is a less pro-cyclical financial system an achievable goal?

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## I. Introduction

Banking, indeed financial intermediation as a whole, is inherently pro-cyclical. Profitability and asset prices rise during up-turns. Defaults and non-performing loans decline. Volatility and risk appear, as currently measured, e.g. by Value at Risk estimates, to go down. Credit ratings get revised upwards. Inevitably banks (and OFIs) seek to expand, to put on additional leverage. The reverse happens in downturns, albeit often with greater ferocity, as has been seen recently.

The inability of banks, or indeed of policy makers and regulators, to iron out financial cycles is often attributed to myopia, and/or to recurring cycles of greed followed by fear. But the future is unknowable, and cycles do not have a regular periodicity. In the UK, for example, every single quarter from end 1992 until 2008 Q2 experienced, relatively steady, growth. The timing of turning points is remarkably hard to predict, whether by economist forecasters, market practitioners, or anyone else. So, the best estimate of the future is some combination of a continuation of current trends, combined with a mild tendency for reversion to the mean equilibrium (wherever that may be), (Goodhart and Wen Bin Lim, 2009). So, the behaviour of banks, and almost everyone else, that seems

largely based on the extrapolation of recent trends, and hence reinforces the cycle, is not driven by irrationality. It is the best that can be done.

Cyclicality in banking and finance is thus inevitable, but it can also exacerbate the amplitude of economic cycles, as is now the case. There is a need to avoid policy actions that do harm by enhancing the natural pro-cyclicality of the financial system. Despite the best of intentions, policy-makers around the world have adopted measures in recent decades that have, unwittingly, done just this. In Section II we outline a number of these steps which have served to increase the virulence of such procyclicality.

Then in Section III, we move on to current proposals for mitigating such procyclicality, touching on counter-cyclical macro-prudential measures, direct constraints on (bank) size or function, proposals for banks (and for Other Financial Intermediaries, OFIs) to self-insure, etc. One characteristic of banking, and financial intermediation more generally, is that it is much more closely linked to the property market, both to residential housing and to commercial property, than to any other sector of the economy. A much larger proportion of bank lending is for the purpose of purchasing property, than for any other purpose, and the most common sources of collateral for securing such lending, whether for buying such property or for other purposes, is also property. This does not lessen the general concordance between banking (and financial intermediation more broadly) and general economic cycles, a common cyclicality, since cycles in the housing market and in the broader economy have been closely intertwined, (Leamer, 2007). But it does mean that policy measures that influence the amplitude of cycles in the housing market are, by

the same token, likely to have a similar effect on banking cycles. Thus, in addition to examining policies that may enhance, or retard, such banking cycles, we shall also review measures that have similar effects in housing markets.

If policies to restrain financial cyclicity had been easy to devise, and were without serious side-effects (costs), they would already have been introduced, (the efficient regulator hypothesis?). So in Section IV we outline some of these problems. One notable implication is that they (or some of them) may raise the costs of bank intermediation. We end by discussing the implication of that for the future structure and development of the banking sector, and of financial intermediation, around the world.

## II. Measures that Enhanced Procyclicality

### (a) In the Assessment of Capital Adequacy

One of the purposes of Basel II was to align capital requirements to risk, and in particular to the internal risk estimates of the commercial banks themselves, more closely than Basel I had done. But such risk measurements, and market and model measures of risk, are based primarily on current (and recent past) values of key variables, mainly of profitability, volatility and correlation. Profitability rises in a boom, and volatility and correlations typically go down. It is not until a crisis strikes that all this reverses sharply. So (market) risk based measures are typically far more procyclical than the broad-brush, and somewhat naïve, risk buckets established in Basel I.

The problem is, of course, that the future is unknowable, and uncertain. There are certain conditions that make a financial crisis more likely, such as sharply rising asset (housing) prices, a rapid expansion in, and high levels of, leverage, etc., but it is difficult to put well defined estimates of probability to the likelihood, or scale, of any resultant downturn. In this context accountants are likely to be very averse to using, (somewhat subjective), estimates of future values, (such as involved in the Spanish dynamic pre-provisioning approach), and want to use measures of current values, as the best available yardstick.

So long as markets functioned well, and so long as the efficient markets hypothesis was believed to hold, there seemed to be no problem. Of course, the future is unknowable, but efficient arbitrage should keep the current market value of assets in line with the present value of the expected discounted future cash flows from an asset. Surely the future is unknowable, and markets can be, and are, mistaken, but what could be a better measure? Of course, turning points cannot be easily predicted, if at all; so the default market prediction tends to extrapolate recent developments. This is bound to involve market overshooting both towards the end of a boom, and in a bust.

So mark to market accounting will be procyclical, exaggerating both profits (losses) and capital strength (weakness) in a boom (bust), but what alternative is better? Problems, however, arise when market failures, and dysfunctionality, occur in a bust, particularly when market prices get driven down by forced, panic sales, and uncertainty (Uhlig, 2009), or bad publicity (who would buy toxic assets?) or short-termism (waiting for a

‘bottom’ to develop), prevent prices being restored to their present discounted cash flow (PDF) values. It is widely believed that, over much of the field of mortgage backed securities, current market values have fallen far below PDF values in the recent turmoil. Indeed, this belief has lain behind many of the policy steps proposed to revitalise the banking sector, notably the Troubled Asset Relief Program (TARP) in the USA.

But, if and when markets become dysfunctional, how should accounting procedures respond? My colleague, Avi Persaud in our Geneva Report, ‘The Fundamental Principles of Financial Regulation’, has advocated relating the accounting procedure to the liability structure of the financial intermediary. When the liabilities backing an asset, when the market has become dysfunctional, are long term, then the intermediary can wait out the crisis, and the asset could be valued in terms of its PDF. But in those cases, such as Northern Rock, Bear Stearns and Lehman Bros, when the liabilities are predominantly short term, the intermediary would be more likely to be forced into an immediate sale, so their assets’ current market price is the correct yardstick.

Whatever the analytical validity of this approach, there are practical problems of hypothecating particular liabilities to particular assets, since all liabilities jointly and severally support all assets. If this route towards accounting reform, therefore, proves unattractive, or impossible, the accounting profession will be forced to come up with some other suggestions for dealing with market failures and dysfunctions. We will see what they propose.

But, except for such special cases, mark-to-market, fair-value accounting will, and should, remain the yardstick. So, the best current methods of assessing individual bank risk, Basel II, and of valuing assets, via the International Financial Reporting Standards (IFRS) with its emphasis on mark-to-market, fair value, accounting methods, involve greater procyclicality than their predecessors, Basel I and historic cost accounting. We should not deal with that by reverting to worse measures again. Instead, we should offset such extra procyclicality by the application of new, focussed counter-cyclical instruments.

(b) Liquidity

The list of financial failures generally included those institutions which combined dubious assets, so their solvency was in question, with an excessive reliance on short-dated, wholesale funds. When these latter could not be rolled over, owing to fears of insolvency, these firms faced immediate illiquidity. They did not have sufficient liquid assets, or in the case of US broker-dealers access to Fed lending, prior to the revisions in spring 2008, to cope.

Some thirty, or forty, years ago most commercial banks held large proportions of their portfolios in domestic government bonds, which had liquid markets and little, or no, credit risk. But, being less risky, they had lower yields. Over the years since then, such holdings of low risk, low yield assets have been systematically run down by commercial

banks, almost everywhere, and replaced by higher-yielding, riskier assets, largely property and house-mortgage related.

Instead banks, and OFIs, turned for liquidity, and to finance leverage that outstripped the available retail deposit base, to funding from short-term wholesale markets. So funding liquidity came to replace asset liquidity. The idea was that, so long as bank capital sufficiency was assured, which adherence to Basel II was supposed to achieve, then banks could always rely on access to these large, efficient wholesale markets, such as the interbank and commercial paper markets. Basel II failed to provide such assurance; it was 'gamed' and manipulated by banks such as UBS and Northern Rock. Even more important, the large wholesale markets collapsed after August 9, 2007, and are still moribund.

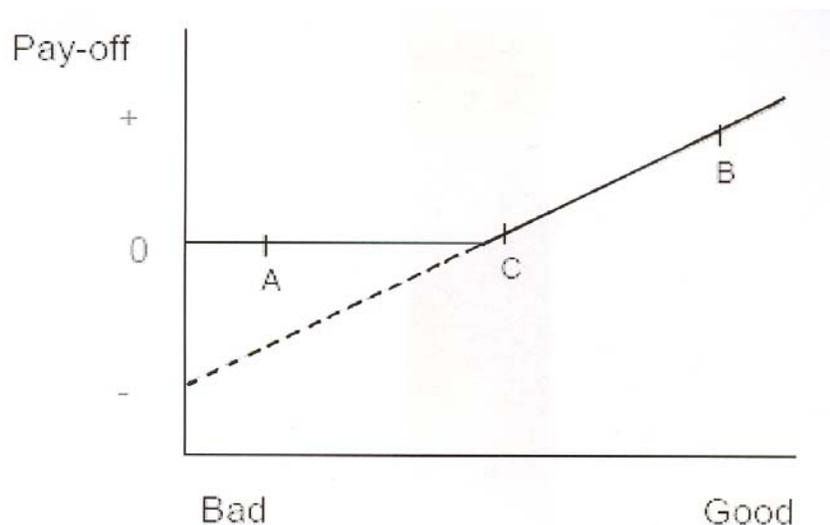
The Basel Committee on Banking Supervision (BCBS) had attempted, in the mid 1980s, to put together an Accord on banking liquidity as a supplement to the Capital Accord of 1988. But when that initiative failed, for a variety of reasons, no individual country regulator felt able to halt, let alone to reverse, the developing trend away from asset liquidity. So, when short-term wholesale markets did collapse after August 9, 2007, banks were left with little internal asset liquidity with which to ride out the storm. And this then forced Central Banks into having, kicking and screaming, to expand lender of last resort facilities to an ever-widening group of financial intermediaries, against the collateral of ever lower-quality assets, for ever longer tenors.

Although Central Banks did, under extreme pressure, come up with numerous innovative responses, it was an uncomfortable exercise. So there is now another international BCBS attempt to revisit the question of regulatory oversight of liquidity management. The main difficulty on this occasion will probably be, with respect to large, international cross-border banks, the relative powers and responsibilities of the host regulator/supervisor vis-à-vis the home regulator supervisor.

(c) Remuneration

Perhaps the worst theory, in the field of finance governance, to have been promulgated in recent decades was that it was desirable to align the incentives of bank executives, who take the key decisions, with those of bank shareholders. As can be seen from Diagram 1, bank shareholders will always prefer a riskier option with the same mean expected return (50% chance of A; 50% chance of B) to the safe outcome, C in Diagram 1.

Diagram 1



In effect shareholders have a put option to give the bank back to its other creditors. The structure of most bank executive remuneration packages is equivalent to having a much more leveraged option, encouraging ever greater risk-seeking. In so far as bank losses could be, or were, internalised, by imposing such losses on subordinated debt holders and/or on depositors, there was some (but probably not a great) chance of having such creditors' actions restrain bank executive decisions. But the externalities, the contagion costs, of the failure of large, inter-connected financial intermediaries are (or are perceived to be, especially after the Lehman failure) so great that national authorities around the world have now guaranteed all the debt liabilities, both deposits and subordinated debt, of such creditors.

Who then picks up the bill for any such failures? As demonstrated, it falls on the taxpayer. One implication is that any steps to require banks to raise new capital does raise the cost of funding to such banks, (in contrast to the Modigliani/Miller theorem), since it reduces the value of the (unpriced) put option against the taxpayer. Another implication is that the government, and the regulatory authorities, do, and should, have a direct concern in adjusting the structure of bank executive incentives and remuneration.

Present measures towards such a realignment mostly involve trying to extend the averaging period over which bonus payments become payable. But in so far as much risk-taking involves small, steady receipts during normal, good times, against a small likelihood of a much larger pay-out in occasional bad times, such as carry-trade

strategies, writing CDS insurance, etc., this only scratches the surface. It will still be an optimal strategy for an executive to lever up, and to under-price risk, in normal times, since the probability of a bad outcome is low enough; and, should it occur, there is still limited liability.

(d) Direct Constraints

In so far as there remained direct functional constraints on the financial operations of banks during the last couple of decades, such as Glass-Steagall in the USA, these tended to be relaxed. The general ethos was that markets, and financial intermediaries within them, worked sufficiently well to allow for light-touch, principles-based regulation; and when a problem in asset/financial markets did occur, then a Central Bank, and especially the Fed, could, so it was thought, restore equilibrium by a judiciously aggressive lowering of interest rates. The credibility of such a 'Greenspan put' response was enhanced by its apparent success on October 19, 1987, October 1998, 9/11/2001, and the general response to the 2000/1 Nasdaq/IT bust. As Hy Minsky (1977, 1982) analysed, this very belief in greater, permanent stability encouraged reductions in the price of risk, and the over-extension of leverage, and hence leads on to instability. The proximate cause of the crisis was the generalised belief amongst, not only the credit ratings agencies, but almost all those operating in the US housing market, that, because housing prices in aggregate, diversified across the whole of the USA, had never fallen significantly for the past 50 years, the probability of them doing so over the next 10 years was vanishingly small. With the benefit of hindsight this belief now seems ludicrous, but

it was the cornerstone on which the huge sub-prime edifice was erected. There is no need to limit mortgage extension to no-income, no job, no asset applicants if the house itself provides perfect surety and collateral for the loan.

Thus, there was much delusion, and self-delusion, about the true riskiness of many of these assets, reinforced by the use of models whose parameters were drawn from a period of unusual calm in developed countries, the 'great moderation'. So, much of the excessive extension of leverage was due to an unwitting misreading of conditions. Nevertheless such extension was not entirely unwitting by any means. When the regulators allowed it, banks and OFIs took advantage of their ability to increase leverage in the pursuit of short term profits. In Europe, which had rejected simple leverage ratios as too naïve, banks took on huge volumes of highly rated, AAA and Super Senior, mortgage-backed securities, with such low risk weights that they did not impact on their Basel II CARs, in order to raise their leverage ratios; often these reached levels of 50 to 1, or worse, levels at which under the American FDIC Improvement Act, 1991, they would have been assessed in the USA as critically undercapitalised, (and shut down unless they raised more capital quickly). In the USA the SEC relaxed the limits on the leverage ratios of the broker/dealers, the large US investment houses, in effect by imposing Basel II CARs on them, (Halloran, 2009), and not surprisingly they took full advantage of that dispensation.

As late as May 2007 Northern Rock, which collapsed in the following September, was the darling of the London Stock Exchange, largely because of, not despite, its sky-high

leverage ratio, aggressive expansion and reliance on wholesale funding. When times are good, the market applauds the aggressive use of capital. But that is just when regulators would prefer to see financial intermediaries rebuilding capital buffers for use in a subsequent downturn. Per contra, in a crisis when regulators would like to see financial intermediaries actually using their capital and liquidity base to undertake more lending to support the wider economy, the market will be more fearful of default and/or of government recapitalisation, and thereby applaud deleveraging and hoarding of capital/liquidity.

The idea that the market will help the regulator to sustain stability over the boom/bust cycle is fallacious. Unfortunately a financial regulator will, very often, find herself having to row against the inherent tides of the market. That will limit and constrain the ability of the regulator, and influence the way that regulation/supervision needs to be done.

(e) Housing

House ownership is often perceived as a public good. Hence governments are prone to support it by a variety of measures, with both direct and indirect subsidies. These include mortgage interest deductability, preferential treatment for capital gains, provision of mortgage guarantees, encouragement of securitisation, non-recourse terms in case of default, etc., etc. In so far as this raises housing price levels, it will generate an increased supply of housing, so that the ratio of houses to potential house owners shifts. Similarly

it will encourage, as it is meant to do, a weaker, and less stable, fringe of house owners into the market.

During good, normal times competition will lead to ever more generous loan to value (LTV), and loan to income (LTI), ratios. During crises, and bad times, these will be severely scaled back. Moreover, owing to inertia and lags, house price changes are strongly auto-correlated, and such auto-correlation may well get extended by extrapolative expectations. For all such reasons, there have been a number of severe boom/bust cycles both in housing markets, and in commercial property markets; there have been three such major cycles in the UK since 1970. Because of the close links between the real estate market (and its financing) and the financial sector, there has been a close concordance, with causal relationships in both directions, between housing and banking cycles.

Little, or nothing, has been done to restrain such cycles in housing and property markets. Indeed it has been argued that political support for the sub-prime market, (until the bubble burst), in the USA helped to worsen the intensity of the recent cycle there.

These cycles are so long that prior experience seems no antidote. The history of housing bubbles in the UK in 1972/73 and 1988-90 had little effect, as far as can be seen, in restraining enthusiasm for housing purchases in 2003-6.

(f) Moral Hazard

Around the world the recent crisis has seen the authorities provide liquidity on ever wider and more generous terms, while recapitalising banks and guaranteeing the par value of almost all non-equity debt. The safety net has become both larger and more comfortable for the financial sector.

Moral hazard will have risen sharply. One must expect executives in banks and OFIs to take full advantage. As noted above, Section 2(c), the incentive is to do just that.

So what is to be done?

III. Counter Measures?

(a) Direct Constraints on Bank Activity

One natural response to our present difficulties is to try to reset the structure so that we can return to the status quo ante, in which the State would no longer play a role as general guarantor; and bankruptcy, and the fear of private sector loss, would again provide some (enough?) discipline against excessive risk-taking. There are several versions of this proposal, most of which have a slightly quaint flavour of seeking to revert to an unspoilt, earlier and simpler Arcadian age before the wiles and innovations of investment bankers fouled the nest.

The first is the call to break up big banks, so they can be more easily shut. “If banks are too big to fail, they are too big”, Mervyn King has said, and he has the support of Paul Volcker. Whereas it is true that some banks are now too big to fail on their own even with zero contagion, the key systemic problem is contagion. Contagion depends on the (perceived) similarities between the failing bank and its confreres, and on the interconnections between them. Northern Rock, and IKB and Sachsen, were not large, but if Northern Rock had been allowed to fail, there would have been a run on Bradford & Bingley and Cheltenham & Gloucester the day after, and on HBOS they day after that.<sup>1</sup> If a large bank was broken up into segments that were just smaller-scale mirror images of the original, then the contagion/systemic problem would remain almost as bad.<sup>2</sup> As several economists, such as W. Wagner and V. Acharya (see for example Acharya 2009, and Wagner, 2007/2008) have noted, contagion is a positive function of similarities between banks. The micro-prudential supervisor wants diversification within each individual bank; the macro-prudential supervisor should want diversification between banks. A danger of micro-prudential regulation is that it forces all the regulated into the same mould.

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<sup>1</sup> The sceptic will note that all these banks did eventually fail and have to be taken over, but crisis resolution is, in some large part, about playing for time, and seeking to avert panic. If such time is not well used, one may then just get a slower-moving collapse. The difficulty in 2007/8 was that the basic concern was ultimately about solvency/capital adequacy, and this was not really addressed until after the Lehman failure.

<sup>2</sup> But this approach might at least allow the first small bank to run into difficulties to go bankrupt, pour encourager les autres, even if runs on similar banks are then vigorously rebuffed. When Barings was allowed to fail in 1995, the Bank prepared prophylactic measures to support the remaining British merchant banks.

So, apart from the legal issues of whether the government should over-ride private property contracts by enforcing a break-up, there are doubts whether having many smaller banks would help to ease contagious crises. Recall that it was the myriad of small banks that failed in the USA in 1929-33, whereas the more oligopolistic systems in some other countries, e.g. Canada and the UK, were more resistant. A more realistic approach is to try to assess how far the larger banks involve greater systemic risk, and then impose additional offsetting charges, (as discussed further below).

A second approach is to try to limit the range of institutions/functions to which the safety net applies. This theme goes under several headings, such as Narrow Banking, bring back Glass-Steagall, with the associated populist phrase that current banking combines ‘a casino with a utility’. This has obtained surprising traction, even in the august pages of the Financial Times, given how silly the idea is. Perhaps the worst error of the crisis was to allow Lehman Bros to fail, but this had no retail deposits. In the populist jargon, it, and AIG and Bear Stearns, were casinos, not utilities. For reasons set out in my paper on ‘The Boundary Problem in Financial Regulation’, (Appendix to the Geneva Report, 2009, and National Institute Economic Review, October 2008), regulatory constraints on the protected, narrow sector will drive business to the unregulated sector during normal times, but provoke a flight back to safety during crises, thereby worsening the crisis.

Banking is about risk-taking, e.g. with maturity mismatch. Securitisation and derivatives are used to lessen and to hedge such risks. A narrow bank which has to hold all its assets (unhedged) to maturity can be very risky; is a fifteen year fixed rate mortgage loan a

suitable asset for a bank, or a specialised building society (S&L) to hold? What exactly do the proponents of narrow banking suggest in the case of relationships with industry? Relationship banking, as practiced in Asia and in Europe, places these banks far more at risk to the changing fortunes of their major clients, than in the more arms-length, and capital-market-integrated, Anglo-Saxon model.

(b) Remuneration and Risk-Taking

The recent crisis suggests that banks (and OFIs) took on excessive risk. Was this because they were fools, and did so unwittingly? Their regulators, who allowed them to do so, were probably fooled by the opacity of the shadow banking system, by the use of fancy mathematical risk models, and by the gaming of Basel II. But if the bankers were also fooled, they hardly deserve their over-the-top remuneration packages.

More likely, as outlined in Section 2(c) above, they took on more risk because it was in their own self interest to do so; that is they were (social) knaves. A right-wing maxim is that ‘guns do not kill banks; people kill people’. Transformed into financial terms, this could be rephrased as ‘excessive leverage does not kill banks; chief executives kill banks’. Decisions on how to run banks are generally made by a handful of top executives, with occasional input by large equity investors. The most important determinant of the risk profile of a bank is not, therefore, going to be the regulations on CARs, but the incentives facing top management.

Moral hazard arises when those taking decisions are insured against failure, since there will then be an incentive to gamble. The public fury against the rewards, bonuses and pensions, for those in charge of failing banks is partly a witch-hunt, but it is also grounded in the perception that the expectation of such high returns, whatever the outcome, was not only partly responsible for the genesis of this crisis, but will lead to the next one as well.

Perhaps there might be two classes of equity, with limited liability for all outside investors, and unlimited liability for senior executives, who are forcibly vested each with an unlimited liability share on reaching a top executive position, and have to continue holding it, (non-transferable), until death or the termination of their bank? Sir Fred Goodwin, Dick Fuld, etc., would now be paupers. Might that make bank executives too cautious and risk averse?

Perhaps we should start from the other end. Exactly how risk-averse do we want our banking CEOs to be? How might we start to think about this question? Then if we knew how risk averse we want our bank executives to be, could we then engineer their remuneration package to achieve the desired level of risk aversion, always remembering that those who get to the top of the tree are likely to be supremely self-confident in the first place?

Regulators have hesitated to become involved in remuneration issues, for obvious reasons, but, if this is where the fundamental moral hazard resides, perhaps they should overcome their cold feet.

(c) Insurance

I doubt if much traction will be obtained with (a) the attempt to turn back the clock towards a simpler world, because that is essentially misconceived, or (b) to reset the incentives of bank executives via intervening in remuneration, because that is difficult to accomplish and a political hot potato. That leaves us with two main sets of proposals. The first, which has greater support in the USA, is to reassess the relationship between the public authorities, (Ministry of Finance; Central Bank; Regulator/Supervisor), and the commercial banks (and OFIs) as being one of insurer/insured, rather than of banker/client, and then to ask how such insurance might best be priced and provided.

The new reality, post the Lehman failure, is that the public sector, the State, has become the ultimate guarantor of both the liquidity and the continued viability (solvency) of all the systemic parts of the financial sector. Or, in other words, that the public sector insures the systemic parts of the financial sector. Once upon a time, the relationship followed a banking paradigm. Just as a commercial bank assessed the potential solvency (credit-worthiness) and the quality of collateral offered by the bank's client, so a Central Bank was supposed to assess the solvency and quality of collateral of a commercial bank

coming to it for Lender of Last Resort assistance. If these were not good enough, the commercial bank should be let go, and allowed to fail (Bagehot, Lombard Street, 1873).

Under the pressure of recent events, this latter paradigm has been abandoned, in favour of broader insurance of the liquidity and solvency of all ‘systemic’ financial institutions.

Liquidity assistance has been provided to an ever-widening range of financial intermediaries, on ever more dubious collateral, for ever-lengthening durations.

Similarly, apart from equity holders, most bank creditors have been guaranteed. So, in effect, the public sector is insuring the core, systemic financial system.

Seen in this light, the potential for moral hazard and hence of costs to the insurer, in this case the taxpayer, are immense. The question then is how to price and provide such insurance in order to reduce (minimise) the costs whilst still retaining the benefits. One strand of thought is to try to require the insured to take out considerable self-insurance (co-insurance) as a precondition. One suggestion (Kashyap, et al., 2008, on ‘Rethinking Capital Regulation’) is to require all such systemic financial intermediaries to issue debt instruments, which could be forcibly switched into equity, at the fiat of the authorities, whenever a financial crisis was – in the opinion of those same authorities? – called. A second suggestion (Hart and Zingales, 2009, ‘A new capital regulation for large financial institutions’) is to require any bank whose Credit Default Swap (CDS) price moves too high for too long either to raise more capital or be taken over by the authorities.<sup>3</sup> The

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<sup>3</sup> Oddly enough, Hart and Zingales do not appear to have recognized that exactly the same idea lay at the heart of the Prompt Corrective Action feature of the FDIC Improvement Act of 1991, and yet that failed to work in 2007-9.

implications of such ideas for the cost and availability of capital to the banking sector have yet to be assessed.

A second strand of thought considers the price, or premium, at which the public sector might provide such insurance. An article of faith amongst such American economists, (not reciprocated with European policy-makers), is that the private sector is far superior to the authorities in price discovery, so that premia (the price for insurance) should be set by private sector insurers. But, ‘Quis custodiet, ipsos custodes’? If the systemic financial sector cannot be allowed to fail, neither can its (private sector) insurers, (N.B. AIG!). A compromise solution, suggested by the economists at NYU, (Chapter 13 in Restoring Financial Stability, eds. Acharya and Richardson), is to require private sector insurers to take on a small proportion of all such insurance, say 5%, big enough for them to price the risk carefully, but small enough for them to survive calls if/when a crisis occurred. Then the public sector would provide the remaining bulk (95%) of the insurance, piggy-backing on the price set by the private sector insurers.

(d) Counter-Cyclical Regulation

One reason why (some) Americans have been pushing the insurance approach is that it may be designed to give a greater role to private sector markets. They tend to regard the phrase ‘smart regulation’ as an oxymoron, and there is considerable evidence to support that position. Nevertheless, the main thrust of proposals within Europe, of which our Geneva Report on ‘The Fundamental Principles of Financial Regulation’ is a good

example, has been to try to mitigate the pro-cyclical effects of recent regulation (Basel II and IFRS mark-to-market) by introducing time and state varying counter-cyclical capital charges, in response to cycles in leverage and in asset prices.

One of the main defects of the BCBS approach, at least up until now, has been that they have not been willing to recommend, or even to discuss, a ladder of sanctions. This was on constitutional grounds, that they had no legal standing for doing so. Consequently any proposed target, or standard, that they proposed normally transmuted into a reputational minimum; this made infra-minimal holdings effectively unusable, while leaving the size of the effective buffer (above the minimum) entirely at the discretion of the regulated.

This must change, and any proposal for counter-cyclical capital or liquidity requirements needs to be supported and bolstered by an accompanying ladder of sanctions, as in FDICIA 1991.

The general desirability of counter-cyclical regulatory requirements has been broadly accepted, in Europe, though less so in the USA, as outlined above. The problem lies much more in the detail, though this applies to some considerable extent to both approaches. For example, just how does one assess which institutions are systemic? Closely aligned with that query, just how does one measure the systemic risk that the failure of an institution would generate? Regulators should only be concerned with externalities, not with (the risk of) such losses as can be internalised. The measurement problems are severe; some academic work has been undertaken to seek to answer these

questions (Adrian and Brunnermeier; Segoviano and Goodhart), but it remains in its infancy.

(e) Housing

At several stages in this paper, the close inter-linkages between banking and the property (housing) market has been stressed. In so far as it is, arguably, sensible and appropriate to impose counter-cyclical regulations on banks, and on other systemic financial intermediaries, by exactly the same set of arguments one would advocate introducing counter-cyclical regulatory controls on the mortgage market.

These could take the form of limits on Loan to Value, or Loan to Income, ratios that would tighten (weaken) as the housing cycle fluctuated. The penchant in several (small European) countries for borrowing in foreign currencies should also be controlled. There are obvious ways of trying to avoid such controls, but there are (legal) steps that can be taken to make such measures effective.

#### IV. Future Outcomes?

In any interface between bankers and regulators/supervisors, the bankers are always likely to come out on top. They have far more resources, and hence can hire better skilled employees, and will normally have more political clout. If they do not capture the regulators, they will subdue them. There are several implications. The first is that the

structure and form of the underlying incentives facing the bankers themselves, including social norms, will be at least as, if not more, important than the details of the regulations and the efficiency of the supervisors. The second is that the attempts by regulators/supervisors to constrain bankers, (and effective regulation must be intended to do so), will be a losing battle. Bankers will innovate around regulations, and regulators will tend to lag behind in the dialectic dance. Since financial supervision is, therefore, such an inherently unrewarding exercise, in which failure is all too obvious and success goes unnoticed, there are good reasons for a Central Bank to delegate as much of the process, as is consistent with the maintenance of systemic financial stability, to a notionally independent agency. Otherwise it may suffer damaging reputational contagion.

Nevertheless, in the aftermath of the current financial crisis, something will have to be done. Bankers took on excessive leverage in the boom, and so when the bust came, cut back so sharply that markets collapsed, trade declined sharply, and economies fell into depression, despite frantic countervailing efforts by the authorities. Although the key driving force lies in the incentives facing the bankers, (and their remuneration has, not surprisingly, been the main focus of public anger), it is unlikely that much will be done to constrain the form of such remuneration directly. To do so runs contrary to the basic tenets of capitalism; the bankers will fight any such proposals; and the threat of transferring business to more accommodating sites will be credibly deployed.

Instead, what is more likely is that banks will be faced with greater restrictions on expansion and leverage during upturns. At a minimum the Europeans are likely to introduce a maximum leverage ratio, as the Swiss National Bank has already done, (and as the US had in place via FDICIA), and, probably, to make it adjustable (downwards) at the discretion of their macro-prudential regulator. Whether European regulators will go further down the road of requiring counter-cyclical CARs, or Spanish-style dynamic provisioning, is unclear. The latter is inconsistent with IFRS; the technical details of establishing the former are complex.

Moreover, the banks see counter-cyclical requirements as a bit of a con-trick. Such requirements will bite in booms, but during recessions the market will require an ever higher buffer on top of the lower official requirements. So the bankers will see counter-cyclical requirements as more simply equivalent to higher capital charges at all times.

What will happen to the debate in the USA, whether they go for the (self) insurance or the counter-cyclical route, or a mixture of both, is as yet unclear. Banks will, naturally, give their support to whichever seems best, and least arduous, for themselves.

Once again there could be divisions in approach between the US and the Europeans, though that remains to be seen because the political and Congressional time-table in the USA has been, and remains, so long drawn out. If such divisions develop, it will further complicate the process of reaching international agreement at the BCBS and Financial Stability Board (FSB).

Moreover, the whole exercise is becoming diverted from the central, more important, subject of what should be done, with what instrument, to mitigate financial boom/bust cycles, towards the subsidiary, less important, question of which agencies should have the powers/responsibilities. In other words the whole exercise is being deflected into 'turf wars'. In the UK such a 'turf war', on the relative responsibilities of the specialist supervisor, the FSA (Financial Services Authority), and of the Bank of England, is in full swing, with the current Labour government favouring the FSA and the prospective future governing party, the Conservatives, favouring the Bank. The battle lines over turf in the USA are even more convoluted, as others can describe better.

Moreover, the process of reaching international agreement has already been made more difficult by differences of viewpoint over the relative responsibilities of home and host regulators. The large international banks, and the Institute for International Finance, argue vehemently for centralising regulation/supervision with the home regulator, in order to maximise operational efficiency/minimise the administrative costs of compliance with supervision, using the argument of the need for a 'level-playing-field'. Against that, crisis resolution has, during the recent turmoil, been entirely national in character, and very expensive. Since the national taxpayer has borne the brunt of such resolution, (with international banks being 'international in life, but national in death', and with legal insolvency regimes that vary from country to country), there is an opposing ground-swell amongst many national regulations for a transfer of more regulatory powers back to host regulators. Euro-zone countries are, however, ambivalent, since most (federally minded

Europeans) would prefer to centralize regulation/supervision to some central federal bodies, without having the fiscal powers to undertake crisis resolution at the central federal level.

So the outcome of current (international) efforts to re-regulate remains obscure. The most likely outcome will be a generalised introduction of a leverage ratio, adjustable at local discretion, the promulgation of some form of (internationally agreed) liquidity ratio, and a tightening of capital adequacy requirements, though whether with, or without, counter-cyclical characteristics remains to be seen.

The effect of all this will be to raise the cost of capital against banks. In response banks will have to raise the spread between their deposit and loan rates. This spread marks the cost of bank intermediation. As the cost of intermediation via banks rises, financial intermediation will become diverted, possibly via securitisation again, into other channels. What these channels may be, what risks they will entail, and how the next major financial crisis will unfold, will be a subject for the next generation to discover.

## References

- Acharya, V.V., (2009), 'A Theory of Systemic Risk and Design of Prudential Bank Regulation', Journal of Financial Stability, Vol. 5, Issue 3, September.
- Acharya, V., and M. Richardson, (eds), (2009), Restoring Financial Stability: How to Repair a Failed System, New York University Stern School of Business.
- Adrian, T., and M.K. Brunnermeier, (2008), 'CoVaR', working paper, Princeton University and Federal Reserve Bank of New York, <http://www.princeton.edu/~markus/research/papers/CoVaR>
- Bagehot, W., (1873/1999), Lombard Street, (originally published 1873, New York: Scribner, Amstrong; republished 1999, Chichester, UK: John Wiley & Sons).
- Brunnermeier, M.K., Crockett, A., Goodhart, C.A.E., Persaud, A., and H.S. Shin, (2009), The Fundamental Principles of Financial Regulation, Geneva Reports on the World Economy, 11, (Geneva: International Center for Monetary and Banking Studies, ICMB, and Centre for Economic Policy Research, CEPR).
- Geneva Report, by Brunnermeier, M.K., Crockett, A., Goodhart, C.A.E., Persaud, A., and H.S. Shin, (2009), The Fundamental Principles of Financial Regulation, Geneva Reports on the World Economy, 11, (Geneva: International Center for Monetary and Banking Studies, ICMB, and Centre for Economic Policy Research, CEPR).
- Goodhart, C.A.E., and W.B. Lim, (2009), 'Interest Rate Forecasts: A Pathology', Financial Markets Group, London School of Economics, Special Paper 185, April.
- Halloran, M.J., (2009), 'Systemic Risks and the Bear Stearns Crisis', Chapter 10 in The Road Ahead for the Fed, edited by J.D. Ciorciari and J.B. Taylor, Hoover Institution Press.
- Hart, O., and L. Zingales, (2009), 'A New Capital Regulation for Large Financial Institutions', CEPR Discussion Paper No. DP7298.
- Kashyap, A.K., Rajan, R.G., and J.C. Stein, (2008), 'Rethinking Capital Regulation', Proceedings, Federal Reserve Bank of Kansas City Symposium, 'Maintaining Stability in a Changing Financial System', Jackson Hole, Wyoming, August 21-23.
- Leamer, E., (2007), 'Housing IS the Business Cycle', Proceedings, Federal Reserve Bank of Kansas City Symposium, 'Housing, Housing Finance, and Monetary Policy', held in Jackson Hole, Wyoming, August 30 to September 1.
- Minsky, H.P., (1977), 'A Theory of Systemic Fragility', in E.I. Altman and A.W. Sametz (Eds), Financial Crises, Wiley, New York.

Minsky, H.P., (1982), Can “It” Happen Again? Essays on Instability and Finance, M.E. Sharpe, Inc.

Segoviano, M. and C. Goodhart, (2009), ‘Banking Stability Measures’, IMF Working Paper 09/04, (Washington: International Monetary Fund).

Uhlig, H., (2009), ‘A Model of a Systemic Bank Run’, NBER Working Paper No. 15072, June.

Wagner, W., (2007), ‘Diversification at Financial Institutions and Systemic Crises’, University of Tilburg Discussion Paper No. 71, also forthcoming in Journal of Financial Intermediation.

Wagner, W., (2008), ‘The Homogenization of the Financial System and Financial Crises’, Journal of Financial Intermediation, vol 17, issue 3, pp 330-56.