Risk, Reward and Bank Resilience

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A. Incentives

Decisions are taken by human beings, not by inanimate institutions. So the determinants of the preferred risk profile of an institution, such as a bank, will be primarily influenced by the incentives facing the bank managers, with structural regulation of that bank often perceived by the managers as an obstacle to be surmounted in pursuit of their preferred risk profile. This implies, perhaps, that functional regulation of banks should play a secondary role to a more direct concern with the incentive structure facing such bank managers, and that there should be a willingness to intervene in order to recast such incentives, should they be regarded as inappropriate.

There is general agreement that the chief aim of bank managers is to focus on, and to maximise, the return on equity (RoE). Bank managers are answerable to shareholders and can be sacked by them. They are also usually large shareholders themselves, since their bonuses are often paid in the form of equity shares, or options on such shares, partly with the specific purpose of aligning the interest of managers with those of the shareholders.

Ever since equity shareholding was shifted into limited liability format, from the previous unlimited liability state, it was understood that such shareholders would have an incentive to assume more risk. Since the pay-off to a limited liability shareholder is equivalent to an option on the future cash flow, such a shareholder would prefer, for a given mean expected return, the outcome with a wider variance, i.e. one with a greater chance of either great riches or total ruin, since she gets the riches while the burden of the ruin falls on others.

The reason for the switch to limited liability in the 19th century was that, without it, there would not be sufficient equity capital forthcoming, especially from outsiders, to enable companies, such as steel-mills, factories and banks to reach a sufficient size to garner the available economies of scale and scope. On the European continent the new universal banks were showing the way. It was well appreciated at the time, however, that this same shift, from unlimited to limited liability, would remove the main incentive for managers to behave cautiously and prudently. So the counterpart, the *quid pro quo*, to this change was a requirement for much greater, accounting, transparency on the position and condition of the company, in the hope that such transparency would allow either market forces, or regulators, to put sufficient external pressure on bank managers to offset their own personal incentives to assume additional risk.

A keen contemporary observer, George Rae, in his book, *The Country Banker*, (1885), expressed such hopes in somewhat flowery language. Thus,

> "A further and abiding ground of confidence to depositors and the public will be found in the compulsory publication, at least once a year, of the balance-sheet of well-nigh every Joint Stock Bank in the three kingdoms, certified by independent auditors, and setting forth the liabilities of the Bank on one side and its resources in hand and in reserve on the other. The financial position of the Banks, therefore, need no longer be, as it was a few years ago, a matter of conjecture, more or less wild and alarming, in anxious times. It will be known to all, and the knowledge can hardly fail to have a tranquillizing effect on the minds of a large and influential section of the community in the monetary vicissitudes of the future." Page 317 (1976 Edition).

And

> "it is in our favour that there can never again be a failure like that of the City of Glasgow Bank, nor even a modified edition of Overend, Gurney & Co. The all but universal adoption of the Act of 1879, has rendered calamities like these beyond the reach of accomplishment by any stretch of human wickedness or imbecility. Bank failures we may have now and then, but not catastrophes like these. Our future

> failures, if any, will arise from imprudent banking,— from the locking up of deposits in unavailable forms of security, to cover excessive rates of deposit interest ; but there is no reason to suppose that this description of banking prevails to any extent." Page 314 (ibid).

Such hopes were patently over-blown. But we still keep on hoping that some combination of market and regulatory pressure will satisfactorily offset managerial self-interest. The latest fad is the belief that a shift from a taxpayer bail-out of failing banks to a creditor bail-in will put more market pressure on bank managers to behave prudently, since the cost of debt funding should, in theory, rise (sharply) otherwise.

This will not work. A subsidiary reason is asymmetric information. Even with all the reporting requirements, there are still buried skeletons, which (some) bankers know, and everyone else does not, including bondholders, and, (though better informed than bondholders), also the regulators. The main problem, however, which Minsky (e.g. 1982, 1986) and the BIS (Crockett/White/Borio, e.g. Borio and White, 2004) have emphasized, is that risk is often misperceived; risk and leverage build up in the good times, when the macro-economy and profits are steady and volatility is low, and is then crystallised in the bad times. Bail-in will just give another upwards ratchet to procyclicality. There is no evidence that a bail-in procedure would have prevented, or even lessened, the Great Financial Crash. Everyone, bondholders, the markets, credit ratings agencies, regulators, central bankers were just all too optimistic beforehand.

Such misperception extended also to the commercial bankers. There is little evidence that they realised how risky their condition really was, and were consciously betting the bank because they were relying on a taxpayer bail-out. Rather the bulk of the evidence suggests that they, like the markets and the regulators, simply did not appreciate the underlying fragility of the conjuncture in 2006/7 in the run-up to the GFC (e.g. Fahlenbrach and Stulz, 2009). Of course an implication is that if everyone, including bank managers, misperceives risk, then financial crises become inevitable, whatever the structure of incentives, information sets or regulation. That is probably largely true. Even when the presence of unlimited liability for bank shareholders provided a major incentive for caution in the earlier years of the 19th century there were numerous bouts of systemic bank failures and financial crises, made worse by the small size and lack of diversification of the banks then.

So even should there be some retrogression from the practice of limited liability for bank managers, this would not eliminate banking crises. But it is better not to try to swim against the tide, and the tide is driven by bank managers trying to maximise RoE. If bankers' incentives were better structured, they would not focus so single-mindedly on RoE, and would be more amenable towards the adoption of more safely structured bank portfolios with a much higher ratio of equity to debt, as well as being more cautious and concerned about low probability, high cost disasters, the lower extremity of the tail.

The structure of remuneration in the big (US) investment banks was appropriate when they were maintained as partnerships, with very high earnings in good times balanced by potential calls on the partners' wealth in bad times. But that remuneration arrangement got carried over into the era when all such banks adopted limited liability format. After that the high earnings, in good times, were no longer balanced by potential penalty calls in bad times. So, the remuneration structure became unbalanced. An objective of reform could thus be, artificially, to return the remuneration package of senior management (the erstwhile partners) to roughly the form that it might have taken under a partnership arrangement, while leaving the limited liability conditions for external shareholders unchanged.

How might we proceed to do so? Four suggestions:-

a) At least half of any bonus must be paid in bail-inable debt form.

b) Any employee, or director, who earns more than a certain sum, say £1 million, (or averages over £1 million over n years, n < 5) will have additional personal liability of £X, where X is the average of his two prior years' earnings, should his bank fail in the next two years. The additional liability would be reduced, or perhaps forgiven, if the employee should both leave the bank *and* explain to the regulators the grounds for his fears that he might face such an additional personal liability. Whistle-blowing, prior to failure, should be rewarded.

c) Any employee earning more than £1 mn, and a*n*y director, must, as in New Zealand, sign each year an affidavit stating that she has checked the internal risk management procedures in her own area of responsibility and has found them satisfactory. The purpose is to make them vulnerable to law suit, should such risk-management procedures be found wanting.
N.B. it should be made illegal to take out insurance against penalties levied under (b) and (c) above.

d) One of the incentives for debt leverage is the tax advantage of debt, relative to equity. It is worth exploring further whether that advantage can be eliminated, or reduced, consistent with maintaining the same overall burden of taxation on the company sector as a whole. Being in a country that was attractive to high equity/low debt ratio companies would provide benefits in countercyclical resilience.

B. A bank with more equity is more resilient

There is no doubt that a bank with more equity and less debt is more resilient to adverse shocks than a bank in the reverse state. The various empirical exercises done by Miles, et al. (2013), Barrell, et al. (2010), and reported by Admati and Hellwig (2013), all suggest that, in a static equilibrium, the advantages from greater resilience outweigh the minor costs of a higher spread, cost of borrowing, until the equity ratio reaches a much higher level than today, or proposed under Basel III. Thus rather than a Risk Weighted Assets ratio of 7%, and a simple leverage (backstop) ratio of 3%, one might envisage a RWA ratio of, say, 20% and a leverage ratio of 10%.

The real problem does not lie, however, in a comparison of static equilibria, but rather in the dynamic issue of how to get from here to there. The difficulty is that just as greater leverage benefits RoE, and raises potential costs to creditors (and taxpayers), so reduced leverage benefits creditors and thereby harms shareholders' RoE, via dilution. So long as managers' interests and incentives are aligned with those of shareholders, to focus on and to support RoE, they will not voluntarily move in that direction.

In the previous Section we discussed how managerial remuneration and incentives might be reformed so as to wean them off this focus on RoE, and become more cautious. But direct political intervention into the issue of corporate remuneration is always a delicate and contentious issue. It would be optimistic to believe that anything helpful will be done along such lines, and foolhardy to believe that any such reform might happen soon. So the question remains, how to get from here to there? The worst approach is that which has been adopted in Europe which is to demand an immediate increase in the required equity ratio, while leaving managerial incentives to focus on RoE untouched. The result of that is bound to be a resort by bank managers to deleveraging. The insistence of the monetary authorities in each country that banks domiciled in that country do not cut back on lending in their own countries is causing cross-border banking to shrivel, leading to a fragmentation of European banking systems back into national enclaves.

A much better approach, which the Americans followed in the course of their stress tests, is to require banks to meet a certain level, absolute amount, of equity, and then, if the banks cannot, or will not, meet it themselves, by new issue or retention, require the banks to accept taxpayer funded loss-absorbing capital injections on terms that are adverse to the banks and beneficial to the taxpayer/Treasury. This was done under TARP. Virtually all the taxpayer funding thus extended has now been repaid at a profit.

One of the problems in this field is that, in a severe downturn after a financial crisis, micro-prudential and macro-prudential objectives are likely to conflict. The crisis has, by itself *ipso facto*, demonstrated that bank capital and liquid assets were insufficient. So, the micro-prudential imperative will be to require more (of both). But in a severe downturn the macro-prudential objective should be to get banks to lend more on easier terms. Liquidity can be provided by the Central Bank sufficient to satisfy both micro and macro objectives; but who provides the capital?

We desperately need an answer to this last question. Perhaps the best way to do so is to link the required additional amount of equity to the additional pay outs of the bank in the shape of dividends, buy-backs and increased staff remuneration. Suppose that the increase in total such bank payments is zero, or negative, then the increase in equity capital required is also zero, subject to the constraint that neither the RWA or leverage equity ratio falls. (Note that if assets decline in value, so can the requisite equity holding; also note the qualification below.) Then, for every pound in additional pay-out, the authorities require £1 times X of additional equity, (where X is a multiplier whose value is to be determined and may vary depending on conditions). The X multiplier should be a negative function of the current level of the equity ratio and a positive function of the rate of change of assets. Although the functional relationship should be common to all banks, the precise value of X would vary from bank to bank, being highest for banks with low current equity ratios and high percentage asset growth.

The aim of managers is to make payments to shareholders and staff. The purpose of the above proposal is to try to align the interests of society in having a safe well-capitalised banking system with the incentives of management. Management cannot hand out benefits, until and unless society more widely shares in the improvement.

Assume that a mixture of good fortune and good management, e.g. in setting X above appropriately, enables (some of) the banks to hit the desired levels of capital ratios, say 20% RWA 10% leverage ratio. Then the multiplier X can be reset (relaxed) so as to maintain such ratios under normal times for such banks.

But crises do, and will continue to, occur. Also adequate equity capital levels are meant to enable them to act as a buffer, to absorb losses without being forced into bankruptcy, *not* as a minimum. There really must be, a preferably large, difference (margin) between the desirable level of equity capital and the minimum acceptable level, at which the bank must be closed. This has now begun to happen with the application of the conservation range of RWA equity ratio between 7% and the minimum acceptable of 4½%. But, if the suggestion here, i.e. that the desirable RWA ratio is 20% is agreed, then a much longer ladder of sanctions with more rungs would need to be developed.

One of the difficulties of required ratios is that any breach is treated as a stigma. It would have to be reiterated that (minor) breaches of the desired ratio would be common and expected in the normal course of business.

The rungs could consist of some, or all, of the following:-

1) Additional supervisory oversight.
2) No pay-outs of dividends or buy-backs.
3) Trigger for activation of high-trigger Co-Co, or other mechanism transmuting debt, or debt interest payments (ERN) into equity format. Such high-trigger Co-Cos or ERNs would themselves probably have to be required by the regulators, since why else would the shareholders issue them?
4) Trigger for activation of the Recovery part of a bank's recovery and resolution plan (RRP).
5) Trigger for resolution.

C. Conclusion

The self-interest incentive for the bank manager is to focus on, and maximise, RoE. In so doing his interests often run counter to those of society as a whole. Shifting from taxpayer bail-out to creditor bail-in will do little to mitigate this conflict and will have other adverse consequences, e.g. procyclicality and contagion. Instead, we suggest measure either to reform the remuneration structure of managers and/or to align their incentives more closely with that of the wider society through regulatory action.

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