**Capital-** How much is enough?

**Banks are having to puff up their capital cushions**

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IMAGINE A DRIVER’S licence that reflected your driving history. The longer you had gone without a crash, the faster you would be allowed to go until your chance of crashing was judged about average, when you would be told to stick to that speed. Or imagine cars with better brakes that could take the place of airbags, or aero-engines whose increased reliability could be offset by less frequent maintenance, leaving airlines about as safe as they were in the 1950s. The main aim of innovation would be not to reduce risk but to make cars or flights cheaper. The idea seems absurd, yet it has underpinned thinking about financial stability for the past three decades—and is proving remarkably persistent.

At the centre of the debate about how safe banks should be is the question of how much capital they should be required to hold. Having too little capital in the system may leave it crisis-prone and in need of regular bail-outs. Too much capital, on the other hand, could result in huge swathes of the banking business becoming unprofitable. This might result in higher borrowing costs and slower economic growth, though nobody knows for sure. A more pressing danger is that money and risk will flow into more dangerous and unregulated parts of the economy, possibly making the system even less stable.

Capital in a bank does many things. Its first job is to absorb losses, acting as a cushion to protect those who have entrusted the bank with their money from the mistakes of those who own and run it. Its second job is to restrain bankers’ instinct for gambling by raising the stakes. It is clear that some banks had too little capital before the crisis. Royal Bank of Scotland, for instance, needed a huge bail-out not because its losses were so large but because it entered the crisis with a dangerously thin capital cushion of only about 3.5%.

This had become possible thanks to two sorts of innovation. The first concerned the rules themselves. Under the original international capital accord struck in Basel in 1988, banks were meant to hold capital worth 8% of their assets. Since some assets are safer than others, and some banks are better at lending safely than others, it seemed sensible to allow banks to calculate how much capital they actually needed, gauged by the probability of their own loans defaulting. Basel 2, a revised set of rules, explicitly permitted this. Banks with the most creditworthy clients could hold the least capital whereas those who pursued riskier business had to hold more. Yet financial models of the riskiness of loans failed badly when put to the test because they were based on data gathered in an unusually benign economic climate.

The second set of innovations concerned capital. In the years running up to the crisis, an army of bankers and lawyers put together new sorts of instruments that were supposed to be as cheap for banks as debt (interest payments in many countries are tax-deductible whereas dividends are not), yet still looked sufficiently equity-like to satisfy regulators. “Every week some banker or lawyer would come in and say they had some new tweak on a capital instrument,” says a bank supervisor. “Of course what they were doing was just pushing the boundaries.”

The new rules on capital, known as Basel 3, try to deal with both these points by forcing banks to hold a lot more capital and by requiring much of it to be in equity. In essence, they will more than triple the amount of equity that most large banks will have to hold compared with the period before the crisis. Minimum capital is to rise from 8% to 10.5% by 2019, but many banks are getting there early to show they are ready. The increase is much larger than it appears because under the new rules banks must hold at least 7% in equity, the gold standard of capital. These rules have also closed loopholes that allowed banks to hold less capital, for instance by shifting assets off their balance-sheets or classifying them as trading assets.

The massive increase in capital envisaged should show convincingly that the system itself is better buffered against loss. This will involve huge sums of money. Standard & Poor’s, a rating agency, looked at 75 of the world’s biggest banks and found that between them they will have to raise $763 billion in equity just to meet the new minimum. By McKinsey’s reckoning, which includes smaller institutions, European banks will need to come up with €1.1 trillion in equity by 2019. American banks will have to raise $870 billion.

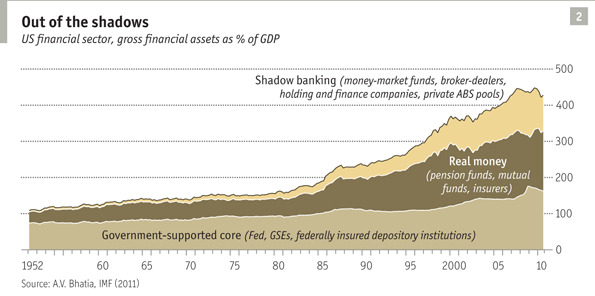
Many countries are now also considering getting banks to hold an additional cushion of convertible capital and bail-in debt. Convertible capital instruments, usually known as **Cocos**, are the simpler of the two. These are bonds that turn into equity if the bank’s capital ratio falls too low. So far, Swiss regulators have been the most enthusiastic. They have asked their two biggest banks to hold Cocos worth up to 9% of their risk-weighted assets (out of total capital of 19%). As they see it, Cocos are not just a way for the banks to increase their capital reserves on the cheap but may also make them a bit more cautious, knowing that their shareholders will suffer big losses from dilution if the Cocos ever convert. There are still some worries about whether investors will buy the billions of dollars of Cocos that would have to be issued, but they lifted somewhat when Credit Suisse raised $8 billion in February.

Another potential source of capital for banks would be to convert some of their long-term debt into equity, or bailing the debt in. This would be similar to Cocos, but would ideally apply to all of a bank’s long-term debt instead of just a thin sliver of it, so might be expected to be more controversial. Surprisingly, bond investors are generally more comfortable buying bonds that could be bailed in than they would be buying Cocos. The difference, in their eyes, is that the former would convert only when a bank actually went bust, at which point they would be taking losses anyhow, not when the bank was merely ailing. But any transition to these sorts of instruments will take years and they have yet to prove themselves in a crisis.

Two further layers of padding will also be stuffed into capital cushions. The first is a surcharge on very large cross-border banks because of their potential to cause an enormous amount of harm if they fail. The second is a “countercyclical buffer” intended to expand when economies are booming (which should make bubbles slower to inflate) and soften the landing when they crash. It will ensure that banks have surplus capital well above the minimum level to write off bad debts. This will help not only banks but also the economy as a whole, since the cushion would give banks the required level of capital even as they continue lending.

Countercyclical provisioning has gained much currency since its use by the Bank of Spain in trying to restrain the country’s rampant property boom before the crisis. The Spanish experiment did not, in the end, protect the country from a huge property crash and banking crisis, but without it the fall would have been harder still. The idea is sound but difficult to implement, mainly because it requires central bankers or bank supervisors to be brave enough to spoil the party as it gets going.

Financial markets are also leaky. Credit can flow across borders and from shadow banks, which complicates the efforts of central bankers who hope to use capital regulation as a way of pricking bubbles, says James Mason of Roubini Global Economics. Japan provides a useful lesson. Two decades ago Japan’s finance ministry clamped down on the loans that banks could make against property, hoping to prick the bubble that subsequently burst so catastrophically. Its efforts probably came too late to make much of a difference, but in any case they were thwarted by housing-finance companies able to sidestep the restrictions because they were not banks.



In America and Europe the huge growth of money-market funds and of the shadow banking system in the decades before the crisis largely reflected a shift of risk away from banks to escape regulatory capital charges (see chart 2). This trend was reversed during the crisis but is now resuming, with fixed-income hedge-fund activity and other alternative-asset managers growing much faster than banks.

One solution might be to widen the definition of banks and banking to encompass lending of all kinds. Anil Kashyap of the University of Chicago is among those who reckon that regulators ought to impose capital-like rules on repo markets, a part of the world’s financial plumbing that does not usually attract much attention—until it gets blocked.

Deciding how much capital banks need ought to be a fairly simple mathematical process, but there is widespread disagreement even over how much capital banks should have held to have survived the past crisis, never mind the next. The disagreement has intensified in recent months after the publication of two influential papers, one co-authored by David Miles of the Bank of England and the other by a group of economists including Anat Admati and her colleagues at Stanford and Martin Hellwig of the Max Planck Institute in Bonn. They argue that banks should hold two or three times more equity than currently proposed because of the huge costs a collapse imposes on society. Moreover, they think that this should not cost all that much.

Part of the argument is about whether banks should simply have enough capital to survive a crisis without running out of money or whether they should have enough to absorb large losses and still keep lending. If the aim is the former, then the current levels are probably about right. In the recent crisis American banks absorbed losses equivalent to about 7% of assets. Since these took place over time, and some parts of the banks were still generating profits, setting capital levels at about 7% would do. If, however, the aim is to ensure that banks not only survive but are strong enough to keep lending, then capital levels would need to rise to about 15%, according to a paper by Mr Kashyap.

Over the past few decades regulators have tended to err on the side of too little capital. They now recognise their mistake. But most regulators and central bankers, with a few notable exceptions, are still reluctant to ask banks to hold much above 10%. Apart from Switzerland, which is proposing the highest capital standards in the rich world for its own big banks, and Britain, which is pondering a minimum of 10% in equity, it seems unlikely that any other developed countries will demand buffers of 15-20% of banks’ assets.

That is because capital is costly. Higher capital standards reduce returns to shareholders and may slow expansion in fast-growing economies such as India or Indonesia, where bank lending is growing by 20-25% a year. Aditya Puri, managing director of HDFC, one of India’s fastest-growing private banks, reckons that his bank can fund most of its own growth without having to raise much more capital because it is so profitable. So too can ICICI, India’s second-largest bank. Yet the country’s largest bank, the government-controlled State Bank of India, may have to ask shareholders for additional capital.

There is little argument that higher capital standards may slow growth, but the scale of the effect is in dispute. The New York Federal Reserve reckons that for each percentage point of extra capital that banks must hold, economic growth slows by about 0.09% a year. The Basel Committee and the Bank for International Settlements reckon the damage is only about a third of that and that it disappears over time. The OECD has come up with a range so wide that it can be reconciled with both. And the Institute of International Finance, a club of banks, reckons the impact could be up to ten times bigger.

Yet it is not clear that this would matter much. The OECD thinks that since the impact on growth will be caused mostly by higher borrowing costs, central banks could offset it with a slightly easier monetary policy. Nor should the costs be seen in isolation. Banks would be buying an insurance policy that might help to avert or mitigate another financial crisis.

It is also useful to think of capital as insurance when looking at the additional capital buffers that large global banks may be required to hold. Under Basel 2 the world’s biggest banks were generally allowed to hold less capital than smaller ones because their risks were spread more widely. By and large that turned out to have been sensible. A number of big banks such as HSBC and J.P. Morgan kept credit flowing and assumed risk during the crisis as smaller banks withdrew. Yet the failure of Lehman and the bail-outs of Citigroup and AIG also showed that big and interconnected financial institutions could cause widespread harm if things went badly wrong.

Another lesson of the crisis was that supervisors should look at the health not only of individual banks but of the system as a whole. There is still disagreement about how to measure interconnectedness or think about systemic shocks, yet a consensus is emerging that banking involves complex networks where risk can arise from the interactions among banks rather than just from individual banks going broke. The implications are enormous because it means that financial systems may crumble even if most banks are fundamentally sound. It also suggests that some healthy banks may have to hold much more capital than they need to stay solvent to help guarantee the smooth functioning of the rest of the network.

Drawing a comparison with biology, Andrew Haldane, an economist, and Robert May, a zoologist, argue in a paper for *Nature* that big financial institutions are “super-spreaders” of financial contagion because they are connected to so many other participants. Just as epidemiologists looking at sexually transmitted diseases such as HIV-AIDS attribute much of its spread to a few very promiscuous people, Haldane and May argue that a few very big universal banks have a disproportionate number of connections to many small ones and thus pose an extraordinary danger. Forcing just a few big banks to adopt safer practices could significantly reduce the amount of risk in the system.

One way of getting them to do this would be to insist that big, systemically important institutions hold an extra layer of capital. There is, however, considerable opposition to a global capital surcharge, not least from the largest and most promiscuous banks. They have the support of regulators in several countries with big banks that largely escaped the crisis, such as France and Japan. These countries argue, with some justification, that size alone is a poor measure of the systemic importance or riskiness of banks. Japan’s biggest banks, for instance, are focused on their home market and are funded by deposits in Japan. Were one to fail, it would cause little harm beyond the country’s shores, so slapping the same extra charge on all big banks across the globe would not be appropriate.

There is also some doctrinal opposition to having a list of big banks that pose a systemic risk. Any bank on it would be seen as too big to be allowed to fail, deserving a bail-out if necessary. When Elijah Brewer of DePaul University and Julapa Jagtiani of the Philadelphia Federal Reserve looked at bank mergers in America between 1991 and 2004, they found that banks were willing to pay a considerable premium to grow larger than $100 billion in assets, which at the time was seen as the threshold above which banks were considered too big to fail. Another study, by the New York Fed, found that when a list naming 11 American banks that were thought to be too big to fail was released in 1984, their credit ratings jumped and their borrowing costs dropped.

The advantages of a surcharge may, however, outweigh this risk in three respects. The first is that most of the banks concerned are already easily identifiable as systemically important. Naming them would make little difference. Second, a sufficiently large surcharge would reduce the probability of a bail-out by strengthening the banks. Third, if the charge were set high enough to offset the subsidized borrowing costs that come with big banks’ implicit state guarantee, it could encourage them to become simpler and smaller.

Much, then, depends on the level at which the surcharge is set. The Basel Committee is likely to release its proposal on how much extra capital big banks should hold in June. The additional amount will probably end up somewhere between 1% and 3% and may consist only of convertible capital instruments, a cheaper and potentially weaker form of capital than equity. If so, the surcharge will be largely symbolic, neither big enough to reduce the risk of systemic failure by much, nor costly enough to encourage big banks to reduce the risk they pose to the system. The onus will then fall on regulators to force banks to cut back on their riskier trading business—and perhaps consider ways of separating their activities to make any failure less damaging.