WHAT A CAPITAL IDEA!

How to make Britain's banks more competitive, innovative, and safer

John H. Cochrane
Kevin Dowd

with introduction by

Matthew Lesh

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EXECUTIVE SUMMARY

MORE CAPITAL AND LESS REGULATION IS THE ANSWER

- For as long as there have been banks, there have been recurring banking and financial crises, intermittently spreading economic distress. Rather than solve the problem, the last round of regulation just compounds the tried and failed remedies of previous rounds.

- A financial crisis is, at its heart, a bank run. A bank run causes systematic damage when a bank lacks the underlying assets to fund their liabilities, that is, they lack capital. Banks get their money largely from sources that are prone to runs.

- The government creates a moral hazard by guaranteeing deposits, this means people do not ensure banks are healthy before depositing money. Banks undertake risky behaviour, which then causes a cycle of crisis requiring large bailouts.

- Banks should be more like other businesses, which get their money by selling stocks and long-term bonds, rather than risky liabilities like deposits and very short-term wholesale borrowing.

- Banks should be required to issue immense amounts of capital (and long-term debt), so much that their remaining run-prone liabilities are never in question.

- The United States' CHOICE Act offers banks a choice to either continue with the existing system that requires low levels of capital, or if a bank operates with a higher level of capital it can be exempt from swaths of regulation.

LET'S GIVE UK BANKS CHOICE

- The history of UK banking prudential regulation is one of repeated failures.

- Prudential regulation fails because it is captured by the banks it seeks to regulate and because it presupposes 'forward-looking' abilities on the part of regulators that do not exist.

- The current UK system of prudential regulation of banking is bound to fail for the same reasons as its predecessors have failed.

- The best system is one of high minimum capital standards and strictly unlimited personal liability on the part of senior bankers, and such a system should not be subject to prudential regulation .

INTRODUCTION
Matthew Lesh

There is a rot at the heart of the banking system. During the financial crisis Britain's banks were bailed out by the taxpayer to the tune of hundreds of billions of pounds; since then, regulations and regulators have grown and grown; competition is seriously lacking; meanwhile we're told everything is just fine despite contrary evidence.[1]

The British public have lost faith in banks. The British Social Attitudes survey found that the proportion of people who think that banks are well run has declined from 90% in 1983 to 34% in 2014.[2] A poll last year found that two-thirds of the public do not trust banks to work in the interest of society, 72% believe banks should have faced more severe penalties for the banking crisis, and 63% are worried that banks may cause another financial crisis.[3]

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1 Kevin Dowd, "No Stress III: The Flaws in the Bank of England's 2016 Stress Tests" (London, UK: Adam Smith Institute, September 13, 2017).

2 John Curtice & Rachel Ormston, "British Social Attitudes 32 - Politics" (London, UK: NatCen Social Research, 2014).

3 Simon Youel, "Polling: 10 years after the financial crisis, the British public still don't trust banks," PositiveMoney, August 16, 2018.

It is often claimed that the financial crisis showed that the free market system does not work.[4] This is built on a false premise. There is no free market in the financial sector.[5] The market is highly regulated and directed by the state. The Bank of England issues currency and manipulates the supply of money. The Financial Policy Committee, the Prudential Regulation Authority, and the Financial Conduct Authority, which has an annual budget of £600 million, regulates banks and other financial services. The Financial Services Act 2012, just one of the laws relevant to banking, is an astonishing 140,000 words.[6]

Sometimes banks, like all businesses, will go bust. It is problematic, however, that banks have grown so big that it is no longer possible for banks to fail without a substantial ripple effect throughout the economy.[7] It is no coincidence that as banks have grown more regulated they have become more consolidated. The more regulated an industry, the more difficult it is for new entrants to enter the market and disrupt the existing players.[8] This is the experience of the banking sector. It takes thousands of pages of bureaucratic paperwork, millions of pounds, and fulfilling an arbitrary 'fit and proper' person test to start up a bank.[9] There has only been a single new high street bank in the United Kingdom in the last 180 years. The market is highly

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4 See, for example, Andy Beckett, "How Britain Fell out of Love with the Free Market," The Guardian, August 4, 2017.

5 For further discussion of this point see John A. Allison, The Financial Crisis and the Free Market Cure: Why Pure Capitalism Is the World Economy's Only Hope (McGraw Hill Professional, 2012).

6 Government of the United Kingdom, "Financial Services Act 2012," 2012.

7 Tom C. W. Lin, "Too Big to Fail, Too Blind to See," SSRN Scholarly Paper (Rochester, NY: Social Science Research Network, April 16, 2012); Ian King, "Some Banks Are Still Too Big to Fail, Bank of England Governor Admits," Sky News, September 29, 2017.

8 George J. Stigler, "The Theory of Economic Regulation," The Bell Journal of Economics and Management Science 2, no. 1 (1971): 3–21; Sam Peltzman, "Toward a More General Theory of Regulation," The Journal of Law and Economics 19, no. 2 (August 1, 1976): 211–40.

9 See Kevin Dowd, "Bank of Dave," Alt-M, September 27, 2016.

concentrated among a small number of players who have existed for hundreds of years. The regulatory barriers to starting up a new bank, all supposedly in the name of stability, have reduced competition and substantially increased the systematic danger of bank failure.

It has become possible for bankers to privatise benefits and socialise losses through deposit schemes, subsidies, public ownership and expected bailouts in the time of a crisis. This has created a moral hazard: bankers are encouraged by the regulatory regime to take on excessive risk, allowed to issue limited equity, and in case of a crisis, march up to the Treasury to demand a gigantic multi-billion-pound handout.[10] Banks are protected against risk and are therefore likely to take more risk. This is not the free market at work, it is crony corporatism at its absolute worst. There can be nothing good that comes out of cosy relationships between Big Banks and Big Government.

Tyler Goodspeed of the University of Oxford argued that the seminal 1772 Scottish financial crisis 'was made more rather than less likely by precisely those regulated or "unfree" elements of Scottish banking'.[11] Nevertheless, there were urgent calls for additional regulation following the crisis. Even Adam Smith was caught up by the shock of the events and backed limitations on bankers.[12] Smith understood well, however, that regulation should discourage excessive risk taking. Smith wrote that his aim was to ensure that bankers were

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10 Benoît Cœuré, "The Implications of Bail-in Rules for Bank Activity and Stability" (September 30, 2013); Asli Demirgüç-Kunt and Enrica Detragiache, "The Determinants of Banking Crises in Developing and Developed Countries," Staff Papers (International Monetary Fund) 45, no. 1 (1998): 81–109.

11 Tyler Beck Goodspeed, Legislating Instability: Adam Smith, Free Banking, and the Financial Crisis of 1772 (Cambridge, Massachusetts: Harvard University Press, 2016).

12 Adam Smith supported limits on the small denomination and contingent liability banknotes and rates of interest Wealth of Nations on the basis that they 'endanger the security of the whole society'. Notably, Smith was writing in a very different regulatory context. The Scottish banking system was the opposite of the contemporary United Kingdom. This was an era of largely 'free banking'. There was no central banking or lender of last resort, there was no public currency and individual banks each issued their own notes, there were no regulatory limits on the size of banks or capital requirements.

'more circumspect in their conduct, and by not extending their currency beyond its due proportion to their cash, to guard themselves against the ruinous runs'.

The two contributors to this volume would be in fervent agreement with Smith's 1776 comments about the importance of not over extending liabilities.

In the first chapter of this volume, John H. Cochrane, a Senior Fellow at the Hoover Institution at Stanford University, argues that capital is the answer. The ultimate threat faced by any bank is a run driven by a loss of faith among depositors. Cochrane explains how banks have built up excessive debt-based risk in the knowledge that in the case of a crisis they will be bailed out; and depositors (who make up a substantial amount of the bank's liabilities) know they will be bailed out by public deposit insurance as well and therefore have no incentive to check on the health of their bank. The response to such bank crises, Cochrane outlines, follows a consistent pattern:

> *"Bail out a larger class of creditors to stop the run. Expand asset regulation, anti-competitive regulation, and the scope of regulation in the hope to stop banks from taking risks next time. The tens of thousands of pages of Dodd-Frank regulation and vastly expanded powers are not novel, they are just more of the same. Horse is on the menu."*

Cochrane's solution is ingenious as it is simple:

> *"Why not just require that banks issue immense amounts of capital (and long-term debt), so much that their remaining run-prone liabilities are never in question? Then we would not need to regulate bank risk-taking, any more than we need to regulate Google's risk taking."*

Cochrane points to America's CHOICE Act model, which allows banks to either operate under the existing highly regulated system with a low level of capital; or operate with much higher levels of capital and be exempt from swaths of regulation. This model would allow for a new set of banks to emerge. It also addresses concerns that banks would not be viable if they issue higher amounts of capital, since they could choose to (1) allows for new banks to experiment with a different model, in fact a historically common model, of higher capital; or (2) continue to operate under the existing regulatory regime if higher capital requirements proved unviable to attract investors.

In the second chapter, Kevin Dowd, Professor of Finance and Economics at Durham University, places Cochrane's proposals for banking reform into the UK context. In a scathing assessment of the status quo, Dowd argues that Britain's banks, despite the repeated insistence of regulators, are no more safe today than they were pre-crisis:

> *By my estimates, market-value leverage ratios were just over 7% before the crisis and are about 4% now. This means that banks are considerably more leveraged now than they were going into the GFC, and greater leverage means that banks are more exposed to a downturn than they were in 2007. This single fact alone undermines the Bank's 'Great Capital Rebuild' narrative in its entirety: the 'Great Capital Rebuild' is as real as the Wizard of Oz.*

Dowd contends that prudential regulation will inevitably fail because it will be captured by bankers and dependents on a false presumption that the future is predictable. Nobody has a crystal ball, and especially not central bankers or financial regulators who have consistently been unable to predict crises. This brings Dowd to his ongoing critique of the Bank of England's stress tests, which use faulty assumptions and figures, is based on conflicting goals and pressures (trying to show the banking system is safe while simultaneously claiming to test the system).

Dowd concludes with a series of recommendations to improve incentives in the banking sector. These recommendations include a stronger capital adequacy regime and a regulatory off-ramp for those banks that are willing to accept even higher capital requirements:

> *Banks that satisfy these capital standards would be allowed the right to opt out from prudential regulation, including that stemming from Basel III and Solvency II for insurance companies. This opt-out would also include the right to withdraw from the Financial Services Compensation Scheme (i.e., deposit insurance) and not have to pay associated levies. The potential cost savings for banks that choose to opt out would be substantial.*

Additionally, Dowd outlines a series of options to increase liability in banking, including on directors and/or shareholders personal assets in the case of insolvency and regulators' being personally financially exposed for their failures.

Stable banking is fundemental to a nation's economy. In *The Bankers' New Clothes: What's Wrong with Banking*, academics Anat Admati and Martin Hellwig explain that:

> *A highly indebted bank is like an unstable, shoddily constructed building. When such a building is exposed to a strong storm or an earthquake, the walls may not be able to withstand the pressure, and their shaking may damage the plumbing. This will cause a "liquidity problem" at the water tap, but we should be most worried about the instability due to the building's being badly built, so the lack of liquidity is often due to the bank's being highly indebted.*

Higher capital requirements would reduce the likelihood of banks falling into distress and so demanding taxpayer money and therefore help alleviate the 'too big to fail' phenomenon. Banks that take on too much risk create substantial danger, not only to the financial system but the entire economy, and, more often than not, taxpayers. While some risk is necessary and welcome, excessive risk taking that threatens the entire economy and whose costs are borne by third parties, is not acceptable.

MORE CAPITAL AND LESS REGULATION IS THE ANSWER

JOHN H. COCHRANE

For nearly a thousand years banks have performed valuable economic functions. And for nearly 999 years we have had recurring banking and financial crises, intermittently spreading economic distress.

At last, the convergence of information, computation, and financial technology allows us to escape this conundrum. If we let it. Alas, the last round of regulation just compounds the tried and failed remedies of previous rounds.

Financial crises are, at heart, runs. The bank promises you can come get your money back at any time, first-come first-served, and should the bank fail to honor that promise, you and other creditors can shut it down and seize its assets. If there is any doubt, even unreasonable doubt, that the bank might fail, then you have an incentive to run and get your money out first.

A crisis is a systemic run. Hearing news of trouble at Bank A, with no actual information about your bank, Bank B, you suspect there may be trouble, or you suspect that others think there may be trouble, and you run to get your money out.

Even a run need not cause trouble. If the bank has solid assets, it should be able to borrow from other banks or from private investors to get cash. If the bank is, in fact, a good long-run investment, it should be able to issue stock to get cash. If the bank has good assets, it should be able to sell them to get cash. But in a systemic run, all these channels are, evidently, impaired.

Ponder for a moment the difference between the stock market crash of 2000 and the financial crisis of 2008. The loss of value in stocks was much larger than the actual losses of subprime mortgages, so why did the stock crash lead to a mild recession, while the mortgage bust led to the biggest crisis and recession since the Great Depression?

The answer is simple. If a tech company loses money on a new app, all a stockholder can do is to go home, have a strong drink, and bemoan his poor fortune. He or she cannot go to the company, demand his or her investment back, and seize assets in bankruptcy court. Even a hypothetical rush to irrationally sell stock, driving its price down, is not a crisis. A company can completely ignore stock market value, at least for a while. All such a panic does is to create a buying opportunity for savvy investors.

The problem with banks is not their assets — where they invest money. Loans, mortgages, and even subprime mortgages (in a long-only diversified pool), are not particularly dangerous investments. Tesla's electric cars, Google's AI programs, or even Walmart's investments in stores and Ford's investments in auto plants are orders of magnitude more risky investments than a portfolio of loans and mortgages. So why are we devoting billions of dollars of regulatory effort to monitoring the riskiness of the least risky assets in the economy?

The answer: Banks are dangerous because of their liabilities — where they get their money, not where they put their money. Banks get money from deposits, from very short-term wholesale borrowing, a little bit from long-term debt, and a tiny bit from capital — from selling stock, or retaining profits inside the company to raise the value of existing stock. Banks get their money largely from sources that are prone to runs.

The answer would seem simple. Banks should get their money like other companies do, largely by selling stock and long-term bonds. When a bank gets in trouble, the stock price and bond price falls. But nobody can run to the bank on a rumor, demand their money back instantly, force panicked asset fire sales, and close down operations while the lawyers argue over the entrails.

Our regulators have chosen the opposite course. Banks now issue much less equity than they did a century ago. We have followed a course epitomized by the children's song, the little old lady who swallowed the fly. (And then a spider to catch the fly, a bird to catch the spider, and so on until finally she swallows a horse, and dies, of course.) Each step is sensible but leads eventually to disaster.

Once a run has started, there really is only one way to stop it: The government guarantees depositors (and other creditors) that they will get their money back.

That works, but serves up an appetizer of moral hazard. Depositors, knowing they will be bailed out, have no incentive to choose healthy banks. Banks can raise money more cheaply from insured deposits than they can from equity and invest it in risky activities. Deposit insurance is like sending your wayward uncle to Las Vegas with your credit card.

So, the government adds risk regulation and stifles competition, making sure the banks don't do risky things with the money. If banks can't compete by offering better interest rates, then they have less incentive to expand and make risky loans. But banks evade risk regulations, build up risks, and next thing you know there is another crisis requiring a new and larger bailout. Or, the competition stifling is so successful that banks become a sleepy place offering easy lives but no innovation.

So, around and around we went. From the 1930s to the 1970s we had a sleepy, uncompetitive, protected banking industry. Corporate debt, money market funds, and an inevitable deregulation undermined that, but inaugurated crisis after crisis, each one becomes bigger than the last.

The next crisis will be bigger. The last one cost about a trillion dollars in direct spending, and about 10 trillion dollars in cumulative deficits during the ensuing recession. There is a good chance the next round of bailouts and stimulus will be beyond even our governments' fiscal resources. Many banking crises have turned in to sovereign debt crises. It could happen again. Our fiscal firehouse is not infinite.

After each crisis, our government followed the same script. Bail out a larger class of creditors to stop the run. Expand asset regulation, and anti-competitive regulation in the hope of stopping banks from taking risks next time. The tens of thousands of pages of Dodd-Frank regulation and vastly expanded powers are not novel, they are just more of the same. Horse is on the menu. Now, under the guise of "macro-prudential" policy and "regulating the credit cycle," central banks are urged to directly control lending and asset prices, so that nobody ever loses money again in the first place.

Why not just require that banks issue immense amounts of capital (and long-term debt), so much that their remaining run-prone liabilities are never in question? Then we would not need to regulate bank risk-taking, any more than we need to regulate Google's risk taking.

As the anti-competitive and anti-innovation effects of the last round of regulation are becoming clear, a new deregulation effort is underway in the US and the UK will likely follow after Britain leaves the European Union. Now we face the crucial challenge whether we will take this direction, and how, and finally escape the cyclic trap of bailout and doomed risk regulation. Or, whether we will follow the pleading of the banking industry, and merely remove risk regulation, lower capital requirements, and allow another profit bonanza for highly leveraged banks until they need to be bailed out once again.

Why not just demand more capital? Well, for hundreds of years, because bank liabilities were thought to be important. Banks "provided liquidity," or "created money." A loan is an illiquid asset. The borrower, by definition, can't repay the loan instantly on demand before it matures. And selling a loan to someone else, quickly, is difficult. By pooling depositor's investments, when one wants to buy, it is likely another wants to sell, so the loan becomes more liquid. A bank account, by having a fixed value, is extremely liquid. If I offer to give you a part of my bank account in exchange for a good or service, you do not question that I know the bank account is overvalued.

Every economy needs money. It is useful for money to have backing — a real asset value limiting money's natural tendency to inflate. Loans, and the underlying houses and businesses that give collateral for loans, are a natural asset for backing money, again precisely because they are so safe.

But we no longer need to face this conundrum. (If we ever did. I acknowledge the school of thought that says banks were never necessary for these purposes. But we need not fight that battle.)

Liquidity no longer requires a fixed value, instantly redeemable investment. Technology now would allow you to pay for coffee with a debit card, linked to a long-only exchange-traded fund that holds mortgage-backed securities. Such a fund would fluctuate in value, usually by a small amount. But it would be as liquid as money.

And, a bright side of our fiscal situation, we now have nearly a full year's GDP worth of government debt floating around. Government debt is a claim on future tax payments. It is one source of backing for money that is, in principle, more sound and more long-lasting than a pool of mortgages and corporate debts. So, to the extent that we still need fixed-value run-prone securities in the economy, they can be backed 100% by government debt. As the government stepped in at the end of the 19th century and replaced privately-issued banknotes with government-issued currency, thereby ending forever banknote runs, the government can step in at the beginning of the 21st century and replace privately-issued electronic money with government-issued money, either reserves, money market funds backed 100% by reserves, or direct issues of fixed-value floating-rate debt. Electronic technology and ample debt means we no longer need banks to "create" money.

Alternatively, if bank leverage is so important, modern financial technology allows it to be placed outside the banking system. Rather than a bank borrow a lot of money and issue a little stock to make a loan, let the bank issue 100% stock. But now, let an exchange-traded fund borrow money, issuing very little stock of its own, and buy the bank stock. All the "transformation" and "liquidity provision" alleged to be provided by banks is still provided. The end investor holds exactly the same securities. But if the bank loses a little money on its mortgages, the bank can ignore that fact entirely. The equity of the exchange traded fund is wiped out, or it may even suffer a run. But a fund whose assets are bank stock, and whose liabilities are exchange traded debt and equity, can be resolved by a computer in a matter of seconds. No bailouts, no emergency lending needed, and no dismembering of the bank's operations. The ATMs never go dark.

There are many practicalities to face, and many what-ifs. They have been addressed extensively in the academic literature. The most important practical question however is how to get there. Another bottom to top overhaul of financial regulation, this time going back to the beginning and undercutting all the assumptions that got us to this mess, is not an appetizing path, or one likely to be adopted.

Fortunately, we do not have to follow this path. Do not bother fixing the existing system. Instead, let a new system emerge in parallel, and wait for the new one to work and the old one to die on the vine. The CHOICE Act, passed by the US House of Representatives includes a clever instance of this approach. Rather than refight capital standards for the existing banking industry it offers a choice. Sure, you can operate with the current low level of capital, and the current immense level of regulation, or, if you choose to operate with much higher levels of capital, you can be exempt from swaths of regulation.

This rather clever ploy also embodies another deep insight, constantly absent from financial reform: Focus not on what you would like current institutions to do differently. Offer instead a vision of what new institutions should look like. What should a new financial services company do to operate in a way that poses no systemic risk at all and hence requires no systemic risk regulation? There simply is no answer in current law; anything smacking of "finance" must be regulated tightly.

The CHOICE act, like any real world legislation is imperfect. For my tastes, the level of capital is too low . The measure of capital by a straight leverage ratio is imperfect. (I would rather see a ratio of market value of equity to face value of short term liabilities, using option prices to measure tail risk and riskiness of assets.)

However, the direction is promising and the overall conceptual direction of the discussion surrounding regulation is promising. Levels of capital that were unthinkable in 2009 can now be discussed in polite conversation. Even 40% is now not derided as economically idiotic, but merely pooh poohed as politically impractical given the power of the big banks.

LET'S GIVE UK BANKS CHOICE

KEVIN DOWD

The core purpose of prudential regulation is to promote the safety and soundness of individual financial firms and of the financial system as a whole. The issue, however, is how this function should best be carried out and by whom. To put it in Coasean terms: what are the most appropriate institutional arrangement by which markets—including the firms operating in them—should be regulated?

The modern approach to this problem is to have state-sponsored "regulatory systems" with armies of regulators and hundreds of thousands of pages of regulatory rulebooks, and large compliance units inside the regulated firms themselves. The Basel system of bank capital adequacy regulation is a perfect example. Such systems have a history of repeated failure. Take Basel: Basel I was introduced to address issues with previous approaches to bank regulation, but soon proved inadequate; it was then replaced by Basel II, but Basel II had barely come into operation in Europe when the financial crisis hit; Basel III was then hurriedly put together to fix Basel II and Basel III is performing poorly too and will eventually have to be replaced.

The Basel system is not just *prone* to failure but *designed to fail*. Why do I say that? Because although the core stated purpose of the Basel system is to ensure that banks maintain higher levels of capital, banks *do not want* higher levels of capital because that would constrain their risk-taking and dampen their short-term profits. The banks then undermine the system by lobbying for rules that undermine its stated purpose and then everyone else wonders why the system didn't work. So the system is designed *by the banks* to fail and the regulators are too weak and too captured to resist them.

Additionally, consider UK non-bank prudential regulation. There was little such regulation to speak of until the 1980s, but then we had the Norton Warburg scandal in 1981. The resulting uproar led to the Gower Report in 1984 which led in turn to the Financial Services Act of 1986. The resulting Securities and Investment Board regime with its numerous (so-called) 'Self-Regulatory Organisations' (i.e. LAUTRO, FIMBRA, IMRO etc.) was going to do much better, but it didn't and scandals continued: BCCI (1991), Barings (1995) etc. So that system was overhauled and replaced with the Tripartite System, in which responsibilities were divided between the new Financial Services Authority (FSA), the Bank of England and the Treasury. The new system was also going to work much better but then the Global Financial Crisis (GFC) hit. It soon became clear that the new system was not fit for purpose, something I had been saying all along. In response, the regulatory, he regulatory system was overhauled again. The FSA was replaced with the Financial Conduct Authority and the Prudential Regulation Authority (PRA), with the latter becoming part of the Bank of England. The new system is working just fine or so we are told. But the new boss is always the same as the old boss. There is no reason to think that this system will work out any better than its predecessors did. In fact, for those with eyes to see, the wheels are already falling off.

It was not always so. The modern approach to financial regulation only goes back to the later twentieth century. Prior to that, there was little in the way of formal regulation and supervision (if one may even use so strong a term) was light and informal: 'nods and winks' and the Governor's eyebrows. The system worked because it put a lot of emphasis on personal reputation ("Name"), mutual trust and common principles of conduct. The bonds of the informal club limited the potential for cowboys to weaken the system. Club membership was a prized asset and granted only to those with the most upright reputation.

An example of this system was the establishment of the Accepting Houses Committee in 1914. The membership privileges of the committee included the assurance of their 'acceptances' (trade bills) being guaranteed by the Bank of England:

> *Membership of the Accepting Houses Committee was a privilege that was jealously guarded. It was granted only grudgingly to S.G. Warburg in 1957, when it bought the Accepting House Seligman Brothers, and to Harry Kissin when he merged Lewis and Peat with the Accepting House Guinness Mahon in 1972. Only after an eight year delay did Kenneth Keith at Philip Hill, Higginson gain entry in 1959. When Edward du Cann, already Chairman of the 1922 Committee of the Conservative Party and soon to feature prominently in Margaret Thatcher's elevation to political power, requested membership for Keyser Ullmann in 1973 he was rejected altogether. ("They do not like some of your colleagues," as Sir Leslie O'Brien, Governor of the Bank of England, bluntly told du Cann.) Only the most reputable were allowed into the sanctum sanctorum. (Dowd and Hutchinson, 2010, p. 31)*

Earlier still, the Bank of England had even less responsibility, and we had the famous free banking systems of Scotland, Australia, Canada and other countries.[13] These systems worked well and bank failures were few and far between.[14]

Back to basics

The central prudential problem in all modern financial systems is the combination of excessive risk-taking and inadequate capital that leaves the financial system exposed to damaging crises and taxpayer losses when institutions are then bailed out: privatised gains from risk-taking and socialised losses. Equivalently but more succinctly, we can also say that the central problem is to minimise the cost of the 'taxpayer put': the expected cost to taxpayers of future bank bailouts.

Therefore, the core criterion by which all systems of prudential regulation should be judged is whether they succeed in reducing the value of this put to a negligible level. A necessary condition to have achieved this outcome is to ensure that financial institutions are strongly capitalised. It is clear that UK financial institutions are *not* strongly capitalised despite repeated Bank of England claims to the contrary.

The key to successful reform is to look for models that are known to work reasonably well, such as the loosely regulated or (so-called) unregulated systems of the past. The key features of such systems were (a) strong personal incentives to refrain from excessive risk-taking created by high levels of personal liability; (b) high levels of capitalisation, and (c) minimal or zero supervision by state-agencies or the central bank. My recommendation is to go back towards those systems as much as possible within the confinements of the Overton Window (or the range of policy choices currently deemed 'politically

13 For more on these experiences, see, e.g., White (1984), Selgin (1987) or Dowd (1989).

14 It was the same in insurance. The 'freedom with publicity' regime which defined the insurance regulatory approach (if one can even call it that) from 1870 to 1970 worked well too. See Booth (2018).

acceptable'), whilst continuing (and this point is more important) to push the Overton Window itself in that direction.

Section 1 of this chapter begins by discussing the current prudential regulatory system in the UK. It discusses its statutory objectives and the three "characteristics" of the Bank's approach to supervision and regulation of which it is, one has to say, inordinately proud: its 'judgement', its 'forward-looking' abilities, and its 'focus'. Section 2 examines the 'forward-looking' characteristic in more detail, including the Bank's more spectacular forecast failures and it's 'worse than useless' stress tests. Sections 3, 4 and 5 focus on the three areas where substantial progress could be made – it proposes a '3-pillar approach' (regulators are fond of these!) based on strengthening personal liability, building a better capital regime and establishing a regulatory off-ramp that would exempt strong financial firms from prudential regulation provided they remained strongly capitalised. Section 6 concludes.

1. THE CURRENT UK PRUDENTIAL REGULATION

In the UK, prudential regulation is the remit of the PRA which is a part of the Bank of England. To quote from its website, the PRA:

> *is responsible for the prudential regulation and supervision of banks, building societies, credit unions, insurers and major investment firms. …*
>
> *[It] has two statutory objectives: to promote the safety and soundness of these firms and, specifically for insurers, to contribute to the securing of an appropriate degree of protection for policyholders. It makes an important contribution to the Bank's core purpose of pro-*

tecting and enhancing the stability of the UK financial system. …

[It's] approach to regulation and supervision has three characteristics:

- *A judgement-based approach: The PRA uses judgement in determining whether financial firms are safe and sound, whether insurers provide appropriate protection for policyholders [etc.] …*

- *A forward-looking approach: The PRA assesses firms not just against current risks, but also against those that could plausibly arise in the future. Where the PRA judges it necessary to intervene, it generally aims to do so at an early stage.*

- *A focused approach: The PRA focuses on those issues and those firms that pose the greatest risk to the stability of the UK financial system and policyholders.*

The first statutory objective is to promote safety and soundness, both at the firm and at the system-wide level. How well is the PRA performing on this criterion? According to the Bank, it is performing swimmingly, thanks to its own wise policies. To paraphrase Governor Carney's comments when the 2015 stress tests were released: the post-GFC period and the long march to higher capital are over. Consider also this typical quote from Governor Carney:

The resilience of the system during the past year in part reflects the consistent build-up of capital resources by banks since the global financial crisis … the UK banking system is well placed to provide credit to households and businesses during periods of severe stress … That conclusion is corroborated by the 2016 stress test [which is] broad, coherent and severe… (Bank of England, 2016)

Such claims are part of a standard Bank narrative – the 'Great Capital Rebuild' – that paints a highly misleading picture of great progress made since the GFC.

The evidence, however, crushingly contradicts the Bank's rosy narrative. Little has been done to rein in the excessive risk-taking that was a key cause of the GFC. In fact, the post-GFC monetary policy response (low interest rates and quantitative easing) has only made that problem worse by encouraging a search for yield. Furthermore, banks' true capital positions – I am referring to their market-value leverage ratios, as opposed to unreliable book-value ratios – are lower than before the GFC, so our banks even less well placed to withstand a shock than they were during the GFC.

By my estimates, market-value leverage ratios were just over 7% before the crisis and are about 4% now. This means that banks are considerably *more leveraged now* than they were going into the GFC, and greater leverage means that banks are more exposed to a downturn than they were in 2007. This single fact alone undermines the Bank's 'Great Capital Rebuild' narrative in its entirety: the 'Great Capital Rebuild' is as real as the Wizard of Oz.

The second statutory objective is "specifically for insurers" and aims "to contribute to the securing of an appropriate degree of protection for policyholders." So how well is the PRA performing on this policy protection mandate? My recent report, *Asleep at the Wheel* (Dowd, 2018), helped expose a new under-valued guarantees problem in the UK equity release sector. This problem is on a bigger scale than the last big policyholder protection fiasco, that of Equitable Life. The victims of this new scandal are policyholders whose funds are invested in the sector. The scale of the problem is alarming, but it turns out that the PRA had been aware of this problem since at least 2014 and has still to take truly effective action. Worse still, the PRA also allows insurers to create fake capital using an obscure regulatory practice known as Matching Adjustment. This fake capital scandal is on an even larger scale than the equity release one. The victims of this second and still largely unrecognised scandal are those same policyholders whose protection is the PRA's statutory responsibility. The PRA's performance on this objective is not just a scandal, but at least two.

Then consider the three 'characteristics' of the PRA's approach: those areas of its expertise advertised by the Bank. The first – the quality of its 'judgement' – is illustrated by the equity release and Matching Adjustment fiascos currently unfolding, and one could give other examples too (see below). The next is its "forward-looking" ability. Suffice for the moment to note that the Bank's abilities in this regard rank below those of Mother Shipton and its track record is a joke. I elaborate on this theme in the next section. As for the third characteristic, the Bank's ability to focus on the "greatest risk to the stability of the UK financial system," one can only hope they have become better at this task than they were before the GFC. Now, as then, the Bank's own statements suggest that they don't have much of a clue, but then again, it would be heroic to expect otherwise. The Bank's incompetence in this regard is not only unfortunate, but also unnecessary, because the task of promoting financial stability is actually quite simple: what is needed is to roll back incentives towards excessive risk-taking and focus on rehabilitating or closing down the weaker banks, and these are easy enough to identify.

2. THE BANK'S 'FORWARD-LOOKING' APPROACH

The Bank's faulty crystal ball

Turning now to the Bank's 'forward-looking' abilities, the publication of the minutes of the Bank of England's Court – its board of directors – in 2015 reveal the Bank's total failure to appreciate the scale of the impending meltdown in 2007/8:

- As late as July 2007, the Court had no idea of impending trouble. There were some liquidity problems in the markets, they were told, but these were not sufficiently serious to warrant any action. The crisis started the next month.
- On September 12th 2007 the Court was told that despite some market turmoil, the Tripartite System was working well and the banking system was sound. The very next day, they were called to an emergency meeting as the BBC announced that Northern Rock had applied for a rescue. The day after that, there was the run on the Rock – the first English bank run since 1866.
- Even after that, the Bank continued to downplay the scale of the crisis: it confidently maintained that there was only a liquidity problem and that the banking system was adequately capitalised. In fact neither was true: the next year the Government intervened to put much of the banking system on life support to prevent a systemic collapse, and the big banks were subsequently revealed to have made losses of nearly twice their capital.
- By October 2008, after the Lehman crisis, the Bank felt that it had solved the crisis and gave itself a pat on the back: "there was now a real sense that a corner had been turned and the bank could be proud of its work", the minutes reveal. Some success: the UK went on to experience the longest recession since WWII and even now the banking system is weaker than it was before the crisis and too weak to be weaned off state support.

And after all that, the Bank – which never ceases to remind us of its openness, transparency and accountability – fought the Treasury Committee for four years to prevent the publication of the Court's minutes.

Those same minutes also suggest possible reasons for these failures. They paint a picture of an incompetent and self-serving public agency with an inadequate governance structure. They depict the Bank as a hierarchical organisation run by a tyrannical CEO. Its Executive had an exaggerated idea of its own capabilities and its discussions were permeated by complacency and groupthink; dissent was heavily discouraged; and there was a pathological obsession with control and secrecy. For its part, the Court was a pasture for connected has-beens; instead of providing scrutiny over the Executive, its role was to act as cheerleaders for the party line; meanwhile the Executive treated it with contempt, even paranoia, and often kept it in the dark.

One must wonder about the quality of 'judgement' that such an organisation can be expected to deliver. One might also wonder how much has changed.

The Bank would have us believe that that was then and it is very different now, but fast forward to January 2017 and its own chief economist, Andy Haldane, acknowledged that there had been a Michael Fish moment (a spectacularly failed prediction) in 2008 but then acknowledged that the Bank had got its Brexit vote forecasts wrong the previous year. "It's a fair cop," he said, referring to the economics profession's failures in both cases. Mr. Haldane received considerable praise for his frankness, but he should really have taken the blame for these failures on behalf of his own institution. Not all economists got the GFC or the Brexit outcome wrong, but the Bank got it wrong in both cases and in spectacular fashion too.[15]

Going back to prudential regulation, UK bank regulators have never

15 And, ahem, a number of us on the Brexit side told the Bank and the Treasury and the bulk of the UK economics profession at the time that these projections were wrong.

anticipated major banking problems before they hit.[16] The former head of BB&T Bank in the US, John Allison, offers an assessment that could equally well apply to any European regulator including the Bank of England:

> *One observation in my 40-year career at BB&T: I don't know a single time when federal regulators—primarily the FDIC—actually identified a significant bank failure in advance. Regulators are always the last ones to the party after everybody in the market (the other bankers) know something is going on. … regulators have a 100 percent failure rate. Indeed, in my experience, whenever they get involved with a bank that is struggling, they always make it worse—because they don't know how to run a bank. (Allison, 2014, p. 345)*

Mr. Allison's last point is worth noting too: when regulators get involved, they always make it worse.

The Bank's 'worse than useless' stress tests

A stress test is a hypothetical exercise in which the banking system (or, rather, a model of the banking system) is put through a hypothetical adverse stress scenario to assess its resilience in the face of the stress. The Bank of England uses its stress tests to reassure the public that the UK banking system is safe – recall the Carney quote above about the stress tests corroborating the Bank's claim that "*the UK banking system is well placed to provide credit to households and businesses during periods of severe stress*."

These exercises are riddled with problems. For a start, their credibil-

16 A possible exception was the 'war games' exercise of 2005, in which they set out a stress scenario was turned out to be eerily close to one subsequently experienced by Northern Rock. But then they did nothing about it and were still caught off guard when something like their scenario subsequently came to pass.

ity is undermined by:

- The conflict between the two main objectives of the exercises, namely, to determine the financial strength of the banking system and to promote confidence in the banking system.
- Pressures from the industry and from the government, both of whom have a vested interest in the 'banking system is sound' narrative.
- The central bank's own responsibilities and self-interest. If the central bank were to conclude that the banking system was unsound, then it couldn't ever admit that in public: to do so would undermine public confidence and concede that its own policies towards the banks had been a failure. Consequently, the stress tests can only be expected to come to one conclusion, i.e., that the banking system is sound.
- The presence of a massive blind spot at the heart of any central bank stress testing programme: the single biggest factor contributing to the GFC was the regulatory system itself, including the Bank, the FSA and the Basel system, which had effectively encouraged the risk-taking that was the proximate cause of the crisis. Regulators then introduce stress tests to demonstrate the resilience of the banking system to the risks it faces, but those stress tests do not take account of the risks to financial stability created by the regulatory system itself.

There are also a string of other problems. Among these, the stress tests relied on: book values instead of market values, unreliable metrics such as risk-weighted assets and Tier 1 capital and a single stress scenario when best advice is to use multiple scenarios. The Bank also used insufficiently demanding pass standards, produced implausibly low projected losses and created hidden systemic risks.

Whenever I have redone the Bank's stress tests with plausibly high pass standards and/or market-value capital instead of book, I found that the results drastically changed, and most or all of the banks involved failed the stress tests (see, e.g., my 'No Stress' reports for the Adam Smith Institute, e.g., Dowd, 2017). Thus, the stress tests properly considered confirm the view – based on the pre-GFC market-value leverage ratio vs. that prevailing now – that banks are more exposed now than they were before the GFC.

Far from providing credible assurance that the banking system is safe, the stress tests are *worse than useless because they provide false comfort*, suggesting that the UK banking system is safe when it is clearly not. In this sense, the stress tests are like a ship's radar system that cannot detect an iceberg in plain view.

Overseas experience is also relevant. The relentless message from stress tests overseas was that the system is sound and policymakers were often lulled into a false sense of security. Again and again, individual institutions (e.g., Fannie Mae and Freddie Mac in the United States, Dexia Bank in Europe, etc.) and even entire national banking systems (Iceland, Ireland, Cyprus, Greece) were signed off as safe by stress tests only to collapse unexpectedly afterwards.[17]

3. A BETTER REGULATORY SYSTEM (I): A STRONGER CAPITAL ADEQUACY REGIME

Incentives matter. The fundamental reason why state-sponsored regulation fails – as opposed to market-based or self-regulation – is not because regulators are hopeless at forecasting or because their stress

17 Nor can I identify a single case where regulatory stress testing was ever proven to be of any use, i.e., by warning of an impending build-up so appropriate remedial action was then taken that allowed the banks concerned to weather the subsequent stress event. Instead, stress testing has repeatedly offered false comfort by blinding those involved to the dangers they were facing.

tests are worse than useless. The reason why modern state-sponsored regulatory systems fail is because they set up inferior incentive structures that undermine their own stated objectives: they create incentives towards excessive risk-taking by firms, despite their stated purpose, and they create insufficient incentives for salaried regulators with little stake in the game to rein in that risk-taking. Regulators are not making decisions with their own money at stake; they are making decisions with other people's money and the incentives they work to are quite inadequate. And the regulatory system inevitably gets captured by the industry it is meant to regulate. It is naïve to expect such a system to deliver on its stated objectives and therefore it is hardly surprising that it does not.

The first pillar in a reformed regulatory system would be stronger minimum capital standards. Capital standards can be defined in terms of a minimum required ratio of capital to total assets.[18] The numerator, capital, is best measured by the most conservative of the main capital measures, the Common Equity Tier 1. CET1 is equal to common shares plus realised earnings, accumulated other items and disclosed reserves and certain not too clear regulatory adjustments.[19]

So what should the minimum required capital to assets ratio be? In his book, *The End of Alchemy*, former Bank of England Governor Mervyn King wrote that "[a] minimum ratio of equity to total assets of 10 per cent would be a good start" (King, 2016, p. 280). Sir John Vickers has also supported a high minimum capital to assets ratio. Many experts are of the view that this minimum should be *multiple*

18 Note that we use total assets or some similar 'total amount at risk' number, not the gameable and unreliable-to-the-point-of-discredited 'Risk-weighted assets' measure. See, e.g., Haldane (2011) or Dowd (2014).

19 For a more complete definition of CET1 capital, see Basel Committee on Banking Supervision (2011), p. 13. We should remember that even CET1 capital materially exaggerates the true common equity figure owing to the substantial portions of retained bank earnings attributable to mark-to-market derivatives 'profits'; these latter are hoped-for profits that have not yet been realised.

times the current minimum leverage ratio requirements anywhere in the world. (The ratio of capital to assets is sometimes referred to as a leverage ratio.) There is no magic number but one is seeking a minimum requirement that is high enough to remove the overwhelming part of the risk-taking moral hazard that currently infects the banking system.

A famous example is an important letter drafted by Anat Admati in the *Financial Times* in 2010, in which no less than 20 renowned experts recommended a minimum ratio of equity to total assets of at least 15 percent, noting that "the social benefits would be substantial … and the social costs would be minimal, if any." Martin Hutchinson and I have called for minimum capital to asset ratios of at least 15 percent, Neil Kaskari ("Make big banks put 20% down—just like home buyers do"), Allan Meltzer, Walker Todd ("Start with 20 percent on a leverage basis, not risk adjusted, for the big boys, and then we'll talk") and Martin Wolf have recommended a minimum of 20 percent for the largest banks.[20] Admati and Hellwig suggested a minimum "at least of the order of 20-30 percent," Martin Hutchinson and I have suggested a minimum of 30% for the big banks, Gene Fama and Simon Johnson recommended a minimum of the order of 40-50 percent.[21] See also John Cochrane's accompanying chapter in this volume.

This minimum could be enforced by a rule stipulating that banks cannot make distributions of dividends or bonuses or buy back their own stock if their leverage ratio falls below the minimum requirement. Should a bank's capital fall below the minimum, these prohibi-

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20 Sources: Kaskari (2017), Meltzer (quoted in AH, 2013, p. 311, n. 54), Todd (personal correspondence), Wolf (2017).

21 Sources: Admati and Hellwig (AH, 2013, p. 211), Dowd and Hutchinson (2016, p. 398), Fama (quoted in AH, 2013, p. 308, n. 45), and Johnson (quoted in AH, 2013, p. 311, n. 54). See also the careful analysis of optimal leverage ratios in Goldstein (2017).

tions would come into effect and operating profits would be retained to help rebuild the bank's capital. Bankers would have an incentive to build up their bank's capital to a level above the required minimum in order to be able to resume distributions.

There would also need to be a second, lower, minimum required leverage ratio for a bank to be permitted to continue to operate at all: we do not want zombie banks operating freely to trade whilst insolvent or gambling for resurrection. This rule might state that any bank that falls below this lower minimum would be put into receivership. Alternatively, it might specify that once the minimum was breached then the bank be given a final chance and a tight deadline to gets its leverage ratio back above this level. A good guide to what this minimum might be is suggested by the Prompt Corrective Action rules in the US, which stipulate that a bank with a leverage ratio of 2% or less should be put into liquidation. This 2% lower minimum would seem to be a suitable level for the UK too.

4. A BETTER REGULATORY SYSTEM (II): A REGULATORY OFF-RAMP[22]

Consider too that there is no need for prudential regulation of strong institutions that already meet high prudential standards, such as the ones that would satisfy the high capital standards outlined in the previous section. High capital standards and prudential regulation are alternatives to the same end: a strong and safe system. High capital standards therefore make prudential regulation redundant. We then come to the third pillar of reform, a regulatory off-ramp. Banks that satisfy these capital standards would be allowed the right to opt out from prudential regulation, including that stemming from Basel

22 A regulatory off-ramp was a key feature of the Financial CHOICE Act (2017) in the US.

III and Solvency II for insurance companies. This opt-out would also include the right to withdraw from the Financial Services Compensation Scheme (i.e., deposit insurance) and not have to pay associated levies. The potential cost savings for banks that choose to opt out would be substantial.

The prudential regulatory system would then become a kind of rehab clinic. Banks would remain patients until they clean up their act and get their capital ratios into healthy shape. By that the point, the incentives to take excessive risks would have been largely eliminated and they would be eligible for release.

The banking industry being the clubby business it is, the better banks would be keen to leave the sick banks' club at the first available opportunity to make profits free of unnecessary regulatory burdens and in any case they can't make distributions until they leave. They can then promote their superiority over the sickly banks still in the regulatory system: "Unlike them, we do not *need* deposit insurance for our customers to trust in us". The PRA could then focus its efforts on the sickly banks remaining in its clinic: to repeat the third "characteristic" emphasised on its website, it could then genuinely focus on a "focused approach [on] those firms that pose the greatest risk", as opposed to the current "focused approach" which focuses on them all. The policy discussion could then move on to the question of how long they should be allowed to remain in the clinic before the doctors give up on them and have them liquidated: they can check out any time they like, but they definitely have to leave.

The opt-out would entail the following. First, the bank would be exempt from the normal (i.e., Basel as implemented under CRD IV in the UK) capital adequacy and liquidity rules, in their entirety. Second, the bank would be free to leave the Financial Services Compensation Scheme and if it did leave, it would have no obligation to contribute levies to it. Third, the bank would be exempt from normal PRA supervision (but see below). Finally, any proposed new bank that wanted to set up on this basis would get automatic approval to go into business.

Strictly speaking, it is not possible to have a binary 'you are either in the regulatory system or you are not' system. There would always be a requirement to prove you were not in the system, which requirement would put you in the system. So a bank would have to apply for the opt-out and demonstrate that it qualified for it. To do the latter, I suggest that it provide a set of audited accounts that demonstrate that it's CET1-to-total-assets ratio meets the minimum requirement (say, 20%), where both CET1 capital and total assets were defined in accordance with current (IFRS) accounting standards. Each quarter, it would be required to provide its financial statements to the PRA which would take no action if the bank's CET1-to-total-asset ratio was above the minimum. If that ratio fell below the minimum, the bank would be prohibited from making distributions of dividends or bonus payments, or from buying back its stock. If the ratio fell below the lower minimum requirement (say below 2%), then the PRA would be required to put it into receivership, and the PRA would have a maximum of a year to complete the process. The process itself would entail either selling the bank to a third party (but not the government) or putting the bank through a bankruptcy process that would have it broken up and its assets sold to pay its creditors.

We can then restore a virtuous competitive cycle. Being strongly capitalized, free of their former compliance burdens and having good prospects, the strong banks would then be well placed to increase their market share at the expense of the zombies still in the state system, who would have none of these advantages. Combined with measures to reduce regulatory entry barriers, it would also be much easier for new banks to enter the market and further increase competition, thereby providing the maximum scope for disruptive fintech innovators or old-fashioned bankers of the George Bailey mould. Over time, the good banks – new and old – would gradually displace the bad ones and eventually drive them out of business. In the process, the whole prudential regulatory apparatus would wither on the vine, and the banking system would once again become strong, stable and competitive.

5. A BETTER REGULATORY SYSTEM (III): STRONGER PERSONAL LIABILITY

If we want the people managing our money to take as much care of our money as they take with their own, the most direct way to incentivise them is to put all their money at risk. A way to do that was proposed by a Private Member's Bill put to Parliament on February 29th 2012 by Steve Baker MP. The underlying objective of this Bill was to minimize moral hazards within banking by making those who make or preside over risk-taking as liable as possible for the consequences of that risk-taking, and it sought to achieve that objective by enforcing unlimited and strict personal liability on directors of financial institutions. Unlimited liability means that directors' personal assets would be at risk, and strict liability means that no fault would have to be demonstrated for those assets to be forfeit: if it happened on your watch, then it's your problem. The Baker Bill was an attempt to restore the strong personal incentives that used to be imposed on bank directors in the past, and which had been highly successful in reining-in excessive risk-taking, short of going all the way back to abolishing limited liability altogether in banking. In other words, it imposed strict unlimited liability on bank directors, but fell short of restoring unlimited liability for shareholders too. It was a good bill, but it never got past the First Reading.[23]

There should also be serious consideration given to going all the way with unlimited liability and extend it to shareholders. That is, if a bank lacks liquidity and is approaching bankruptcy, rather than seeking a bailout from the taxpayer, shareholders could be required to contribute some of their money to keep the organisation afloat. In practice, this would substantially increases shareholders oversight of a bank's financial position and therefore reduce the likelihood of excessive risk taking. Additionally, regulators should perhaps also be financially exposed for their failures, possibly losing funding organisationally or individual regulators losing part of their salary if they fail to do their job.

An alternative along similar lines would have been to impose severe criminal sanctions on bank directors (e.g., as per Sarbanes-Oxley in the US) but these seemed to me to be inappropriate and counterproductive for reasons set out in Campbell and Griffin (2006). The Bill did however call for the establishment of a Financial Crimes Investigation Unit and for the opening of criminal investigations in all cases where a bank fails, the thinking being that bank failures usually involve criminal activity and so investigators should automatically go looking for it.

It was a shame the Steve never got his Bill passed because we can be confident that it would have worked. Consider this passage from Michael Lewis's book *The Big Short*:

> *At some point I could not help but ask [former Salomon Brothers CEO] John Gutfreund about his biggest and most fateful act: Combing through the rubble of the avalanche, the decision to turn*

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23 But then I might say that; I helped draft it.

the Wall Street partnership into a public corporation looked a lot like the first pebble kicked off the hill. "Yes," he said. "They – the heads of the other Wall Street firms – all said what an awful thing it was to go public and how could you do such a thing. But when the temptation rose, they all gave in to it." He agreed, though: The main effect of turning a partnership into a corporation was to transfer the financial risk to the shareholders. "When things go wrong, it's their problem," he said – and obviously not theirs alone. When the Wall Street investment bank screwed up badly enough, its risks became the problem of the United States government. "It's laissez-faire until you get in deep shit," he said, with a half chuckle. (Lewis, 2010, pp. 263-264).

CONCLUSIONS

So what to do about prudential regulation? Ideally, scrap it. Prudential regulation is ineffective at best and counterproductive at worst. It achieves nothing that cannot be achieved by a combination of strict personal liability for key decision makers and higher and tighter capital standards on banks and other financial firms. If it is judged to be politically unrealistic to scrap it, then the next best alternative is to counter its worst excesses as much as possible.

If I may offer four principles to guide any such reform, it would be these:

- (1) Don't use regulatory tools that rely on forecasts or projections, because their track record demonstrates that central bank forecasts or projections cannot be relied upon;
- (2) Minimise reliance on regulatory judgment, because that judgment has repeatedly proven to be highly unreliable;
- (3) Maximise reliance on incentives and capital; and
- (4) Rely on the past experience of systems that have good track records.

We know which systems work and which do not. Any reform that does not take these lessons into account stands zero chance of success.

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