THE UNIVERSITY OF WESTERN AUSTRALIA
Achieving International Excellence

ECONOMICS

RESERVE BANK OF AUSTRALIA
THE ROLE OF FINANCE

by

Glenn Stevens
Governor

Shann Memorial Lecture
The University of Western Australia

DISCUSSION PAPER 10.20

RESERVE BANK OF AUSTRALIA

Embargo: 6.05 p.m. AWST, Tuesday, 17 August 2010
8.05 p.m. AEST, Tuesday, 17 August 2010

THE ROLE OF FINANCE

by

Glenn Stevens
Governor

Shann Memorial Lecture
The University of Western Australia
Perth – 17 August 2010

DISCUSSION PAPER 10.20

THE ROLE OF FINANCE[1]

Thank you for the invitation to deliver the 2010 Shann Lecture. It is an honour.

People are shaped by formative events, and Edward Owen Giblin Shann was no exception. Born in Hobart in 1884, his family moved to Melbourne a few years later. Growing up in the Depression of the 1890s – an episode that hit Melbourne particularly hard – Shann saw first-hand the effect that financial crises could have on peoples' lives. Those memories stayed with him and motivated much of his career's work.[2]

In his early adult life Shann exhibited some Fabian tendencies – and a flirtation with the Left would be a not uncommon response by a later generation of intellectuals as a result of the sense that capitalism had failed in the 1930s. But by the time he had become prominent as an economist, his views had shifted in a direction that we would probably today call Libertarian. One of his most noted works was a short pamphlet, published in 1927, that described the lead-up to and crash of the early 1890s. It was prescient in drawing parallels with the financial developments in the 1920s that preceded the 1930s depression.[3]

The 1880s were characterised by rapid population growth and increased urbanisation which fostered an investment boom dominated by construction. There was a spirit of optimism, which saw international capital flow in and asset prices – particularly land prices – increase. Leverage rose and lending standards fell. As Shann's monograph noted, financial regulation at the time abetted the excesses, including an 'untimely amendment' of the Victorian Banking Act in 1888, which allowed borrowing against a wider range of collateral.

In the 1920s, when Shann was applying this experience to contemporary issues, the problem was not so much excessive private debt or poor regulation.[4] This time the problem Shann saw was too much *public* borrowing. He viewed the extensive public works popular with State governments in the 1920s as not only increasing debt but also lowering productivity. So it would come as no surprise that, after Australia's terms of trade collapsed in the late 1920s and international capital markets made new borrowing much more difficult, Shann was among the group that argued that the standard of living that could feasibly be associated

[1] I would like to thank Paul Bloxham for his extensive research assistance in preparing this address.

[2] Snooks (1993).

[3] Shann (1927).

[4] In the 1890s more than half the note-issuing banks had suspended payment – one third never re-opened (Cornish 2010, Kent forthcoming). By comparison, only three minor banks failed in the 1930s' Depression.

with full employment was noticeably below that to which people had become accustomed in the boom. The Premiers' Plan of 1931, which Shann had a hand in producing, sought to recognise this, and to spread the associated decline in incomes across the different sectors of society.[5]

These two episodes had some important differences, but in a deeper sense both stories were rather similar, and all too familiar. The sequence goes as follows. Some genuine improvement in economic conditions leads to more optimism. It may be a resource discovery (including the opening up of new productive land), or a technological change, or a rise in the terms of trade, or even just greater confidence in economic policy's capacity to solve problems. Human nature being what it is, people (or governments) are inclined to project into the future with undue confidence and insufficient assessment of risk. They often decide to invest more in ventures that are marginal, or even speculative, borrowing to do so. Because their assessment of permanent income is that it has increased, they also decide to consume more now (either privately or in the form of public services). Financial markets and institutions – which are populated by human beings after all – help them do both these by making capital available. Then, at some point, an event causes people suddenly to realise they have been too optimistic. Maybe the 'new paradigm' disappoints in some way or the terms of trade decline again. The cycle then goes into reverse, usually painfully.

This pattern is fresh in our minds after the events of the past several years. But Shann was writing about it 75 years ago, and of course he wasn't the first. Narratives like these are peppered throughout history. The thought that 'This Time is Different' springs eternal in the human psyche, and is a fitting title to the recent work by Rogoff and Reinhart covering eight centuries of financial delusions. Moreover, financial instruments, markets and institutions are always central to the way these cycles play out.

So it is fitting, given Shann's own work, to ask the question: what is the proper role of finance? In particular, I will take up four questions:

1. What are the desirable functions of the financial system, and how did they evolve?

2. What problems are inherent in finance, and what issues do they raise for policymakers?

3. What questions arise from the growth and change of the financial system over the past couple of decades?

And finally,

[5] Shann and Copland (1931).

4. What are the challenges as we look ahead?

The Functions of the Financial System and its Origins

What is it that we need the financial system to do?

I think we can outline five key functions. We want it to provide:

i. a reliable way of making payments (that is, exchanging value);

ii. a means for pricing and pooling certain types of risks;

iii. a way of transferring resources from savers to borrowers;

iv. a way of transferring the returns back again, which requires that the savers' money is not lost and which, in turn, requires monitoring of borrowers and managers; and

v. liquidity.

These are very valuable things for a community to have. The modern economy could not have developed without these capabilities arising in the financial system.

We tend to think of financial activity and innovation as very recent, but in fact the history is a long one. There is not time to do justice to that history here, and there are some fascinating books on the subject which repay the reader generously for the investment of their time.[6] But it is clear that borrowing and lending is almost as old as civilisation itself. Evidence of such transactions, some of them remarkably codified, go back at least to eighteenth century BC Babylonian records.[7] Some scholars suggest that the records of the Greek and then Roman ages show considerable evidence of several activities we would associate with banking, including taking deposits, making loans and facilitating transactions.[8]

Developments seemed to accelerate during the Renaissance, particularly in Italy. Bills of exchange were by then in common use as a means to facilitate trade and also to circumvent usury laws. Traders were able to take a deposit in one city, make a loan to someone

[6] One of the most accessible recent treatments is Ferguson (2008).

[7] Banking activities were sufficiently important in Babylonia that there were written standards of practice that were part of the Code of Hammurabi, the earliest known formal laws (Davies 1994). These were carved on tablets of stone, including details of how loans, interest and guarantees would operate according to a set of standardised procedures.

[8] Temin (2004).

transporting goods to another city and then take repayment at the destination (possibly in a different currency) – with a suitable addition to the price in lieu of interest. This activity would appear to be a forerunner – by seven centuries – of an instrument that in our terminology would combine elements of a zero coupon or discount security, trade credit and a sort of foreign currency swap.

The most noted bankers of that era were of course the Medici family of Florence, who went further than their predecessors and contemporaries in the pooling of credit risk, by having a branch network with partners who were remunerated with a profit share.[9] The development of double-entry bookkeeping, in Genoa in the 1340s, also helped banking assume more modern features: the receipt of deposits, maintenance of current accounts, provision of loans and management of payments.[10]

This form of banking in Italy later became a model for Holland, Sweden and England, to which further innovations were added. In Amsterdam, the *Wisselbank*, which was the first exchange bank in Northern Europe, pioneered a system of cheques and direct debits circumventing problems with different currencies.[11] The Swedish Riksbank, formed in 1656 and the oldest institution recognised today as a central bank, is credited by some as having pioneered fractional reserve banking.[12]

Other key innovations were joint-stock ownership and limited liability. These allowed more capital to find its way into banking and further reduced the costs of intermediation. The Bank of England, established in 1694, was for many years the only bank in England allowed to operate on a joint-stock ownership basis. Walter Bagehot devotes a chapter in *Lombard Street* to the virtues of joint-stock ownership, noting that while these sorts of companies 'had a chequered history', in general the joint-stock banks of Britain were 'a most remarkable success'.[13] The same innovations helped to develop equity markets more generally.

---

[9] See de Roover (1946). The Medici family may have learned from earlier failures of the Peruzzi and Bardi families' banks in Florence in 1348 owing to defaults on payments when King Edward III failed to repay borrowings taken in the beginning of the Hundred Years' War (Kindleberger 1993).

[10] As an aside, it is from this era that we receive the term 'bank', which derives from the merchant's bench, or banco, in the market places of medieval Italy (particularly Lombardy; Lombard Street in the City of London is named after this region of Italy, as King Edward I granted this piece of land to the goldsmiths of Lombardy).

[11] Quinn and Roberds (2005).

[12] Ferguson (2008).

[13] Bagehot (1873).

Meanwhile bond markets had also developed. Again the earliest forms were in Renaissance Italy, where wealthy citizens were able to buy bonds and thereby invest their savings in one of the few activities that was seen as providing a significant return: war. Such instruments allowed governments (and later large corporations) to raise funds from a broader set of sources. In time, the formation of secondary markets for these securities meant that risk had a price set by a market. These innovations also spread to Northern Europe and, by the mid-eighteenth century, London had a well-developed bond market.[14] It was trading in the bond market that made the Rothschild family wealthy and for most of the nineteenth century its bank was the largest in the world.[15]

So by the middle of the nineteenth century a quite sophisticated financial system had arisen in major western economies. It included banks and other financial intermediaries, stock and bond markets and insurance. It allowed transactions to be made, and mobilised pools of savings for investment in enterprise while offering a degree of liquidity to savers. It pooled certain risks, and served in a fashion to monitor borrowers. It allowed payments to be made and funds invested across national borders. In the process, it facilitated the industrial revolution, which resulted in the biggest transformation in living standards seen in the history of western civilisation. This system did just about all the things we would want a financial system to do today, albeit with less technological efficiency. Arguably the biggest change a financier from much earlier times would notice today would not be the new instruments – nor the crises! – but the effects of the silicon chip and fibre optics on the way finance is conducted.

Incidentally, the difficulties that accompanied having only a rudimentary financial system were nowhere better illustrated than in the early Australian colonies, as one of Shann's other works, *An Economic History of Australia*, makes clear. The most commonly used means of exchange for many years was rum.[16] Indeed, he reports that in Sydney 'George Street between Brickfield Hill and Bridge Street cost four hundred gallons' of rum to build (p49). In today's prices for rum, this amounts to about $80 000. It is doubtful that a road of that length could be constructed for that sum today, such has been the increase in the price of labour in terms of rum (and indeed other commodities). The colonists began to issue

[14] The more market-oriented approach of British finance stood in contrast to mainland Europe, which was more bank-oriented (and remains so today). Both approaches provide different ways of achieving the functions listed above.

The contrast between systems has spurred much debate about their effectiveness. Some suggest a key role in the development of German industry in the nineteenth century, for example, was the large size and scope of the universal banks of Germany, which allowed them to develop a close relationship with industry (Gerschenkron 1962). Others suggest that markets provide the discipline required and also led to a superior allocation of capital.

[15] Ferguson (2008).

[16] Shann (1930).

‘notes’ or ‘cards’, which were forms of IOUs and which circulated as currency, although this system soon became unworkable partly because the quality of such IOUs varied greatly and tended to decline over time. Governor Macquarie famously sought to end the shortage of metallic currency by punching holes in a consignment of Spanish dollar coins, giving the ‘ring’ and ‘dump’ different values, and also rendering them less useful elsewhere, thereby retaining this currency in the new colony.

However, the need for credit facilities, for pastoral expansion and short-term financing for local and overseas trade, still required the development of a banking system. In 1817, Macquarie granted a charter to a group of leading traders and officials to form the Bank of New South Wales, with responsibility to issue a paper currency. As Shann points out, the stock holders were given limited liability in the operations of the Bank of New South Wales, which at the time in England was still an exclusive privilege of the Bank of England, and was not granted to other British banks until 1858.[17] So despite a somewhat shaky start, Australia’s own financial system was able to catch up rapidly on the other developed economies by adopting their technologies.

The Problems of Finance and Development of Regulation

As banking had developed, it had become more leveraged. No longer was it a case of a few wealthy individuals risking their own money in enterprises akin to venture capital funds – accepting the risk and illiquidity that went with it. In their more developed form, banks raised deposits from the public – redeemable at their face value, at notice or at call.

Leverage changes the dynamics of any business. Expected returns are higher but management needs to be on its game – which is an oft-quoted argument for having some debt in a corporation. In the case of banks, it meant that the business of banking became even more focused on monitoring, information gathering and risk management.

Of course the depositors had some protection in that the capital of the proprietors was at risk before deposits. But banks also undertook maturity transformation. They offered depositors liquidity, but held only a fraction of their own assets in liquid form – enough for normal day-to-day operations. The whole thing depended on confidence – if depositors wanted their funds back *en masse*, a bank could not provide them because its assets were not all in cash. If there was a loss of confidence for some reason, the bank would be under pressure: there could be a run. So banks themselves needed access to liquidity in situations of stress; that is, they needed to be able to liquify assets when a shock to confidence occurred.

---

[17] Shann (1930) and Newton (2010).

When such a shock was idiosyncratic, a bank might seek funding in the market. Other institutions, mindful of the possibility of contagion if a run got going, might support one of their competitors provided there was a reasonably held expectation of solvency. But if the confidence shock was more systemic in nature the question was how the whole system could be supported. This came to be seen as the proper role of a central bank and was ultimately encapsulated in Bagehot's famous (if widely misquoted) maxim that the central bank should be prepared to 'lend freely, against good collateral at a high rate of interest'.[18] Of course central banking was at that time embryonic at best: the central banks in existence in Bagehot's day mainly had been established to help sovereigns raise war finance; their stability functions evolved later, over time.[19]

But while the provision of liquidity in crises left the system less vulnerable to runs, it was no real solution to simple bad lending. Even if all the good assets can be liquified to meet a run, if not all the assets are good, failure may still occur. Failures of individual institutions could be allowed provided they did not damage confidence in others, but it is always difficult to know just how small or large a failure might cross the threshold. Inevitably, since there could be spillovers from failures, and since banks and others would accept funds from the general public, there would end up being a degree of regulation.

And so the history of banking and finance is not just a history of financial innovation, it is also a history of regulatory response. That regulatory response has had its own quite pronounced cycles. Moreover, regulation prompts further innovation, and so on.

From the 1930s, regulation became much more intrusive. In the United States, fear of the 'money power' saw some large institutions (J.P. Morgan for example) broken up, much as occurred in some other industries at the time. Yet simultaneously, competition between banks was intentionally curtailed in some respects, for fear of irrational behaviour. Regulatory intervention extended to interest rates, requirements for reserves, prohibitions on certain types of business, and even lending guidelines and quotas. In the 1940s this all became part of the war-time apparatus that essentially sought to run economies via direct intervention rather than by relying on the price mechanism. However, it persisted in finance for many years after the war had ended, perhaps in part to keep low the costs of servicing large war debts. It was only really in the 1980s and 1990s that this regulatory approach had finally passed, allowing banks to compete vigorously for all lines of business and allowing pricing to be driven by market forces.

---

[18] I spoke at length about the role of a central bank as lender of last resort in the Melville Lecture at ANU in 2008, so will not cover it here in further detail (Stevens 2008).

[19] Most central banks in existence today were established in the twentieth century. The price stability mandate typically came later – since until the 1930s countries were typically on some sort of link to gold and the problem of continual inflation was not expected to arise in such a world.

We can trace many of these trends in Australia. The 1937 Royal Commission argued for greater control and regulation of the Australian monetary and banking systems, motivated by the perceived failings of the financial system through the depressions. Legislation on many of the recommendations from the Commission was enacted in 1945 and continued the tight controls placed on banks during the Second World War. The focus immediately after the war was on stability with little regard given to the efficiency of the financial system. This was consistent with extensive government intervention and regulations in other markets.

As a result, in the early post-war period, the Australian banking system was highly constrained. There were tight controls on interest rates for bank lending and borrowing, on terms to maturity of different types of deposits and loans, and quantitative and qualitative controls on banks loans in aggregate and to particular types of borrowers. These were introduced to guard against excessive risk-taking by banks with depositors' savings and also were regarded as serving the needs of macroeconomic policy.

Given the pervasive and restrictive nature of these controls, it is perhaps not surprising that the banking system was very stable. In the almost five decades from the early 1930s until the problems of the Bank of Adelaide in 1979 no Australian bank failed or even faced serious financial problems.[20] This was in a very real sense a result of the terrible 1890s depression which had been so influential on the young Shann. As Selwyn Cornish points out, that episode had a significant effect on the nature and form of much of Australian economic policy throughout most of the twentieth century, including financial regulation and central banking.[21]

But the constrained banking system left a gap into which others stepped.[22] As early as the 1960s, new, less regulated, financial institutions began to arise. The banks' share of financial intermediation in the Australian economy steadily declined from the mid 1960s, reaching a little over half at its lowest point in the early 1980s (Graph 1).

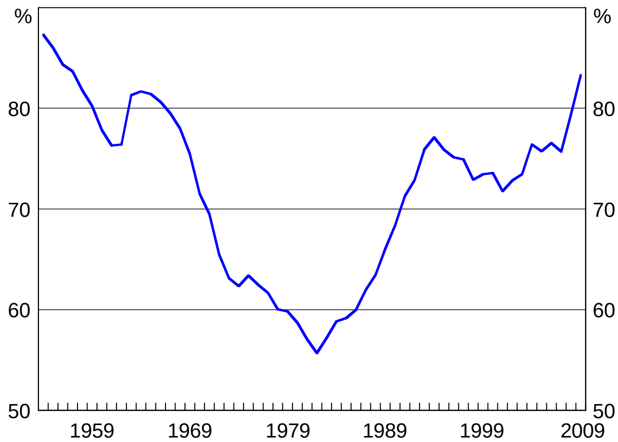
---

[20] Macfarlane (2006).

[21] Cornish (2010).

[22] This 'regulatory arbitrage' has antecedents, in the Medici example I used earlier, and descendents in the form of the recent North Atlantic financial crisis. In the recent case, as we all know, a great deal of financial activity moved outside the regulatory net, via the so-called shadow banking system which enabled the creation of a whole array of off-balance sheet vehicles, for example SPVs and conduits, to circumvent capital requirements.

Graph 1
Banks' Share of Intermediaries' Assets



Sources: ABS; APRA; RBA

The increasing size and complexity of the system and the rise of non-bank financial institutions made the regulatory architecture increasingly less effective. By the late 1970s, the philosophical tide was turning against intervention as efficiency costs became more apparent – a trend not confined to finance.

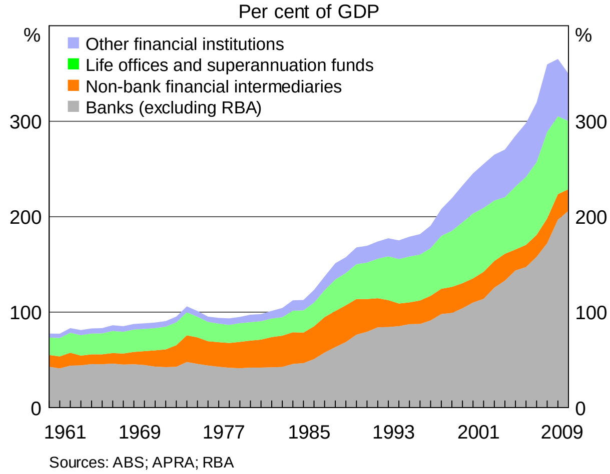
Eventually these inefficiencies led to calls for financial liberalisation and so, around 40 years after the Royal Commission, the Campbell Inquiry laid the foundations for the intellectual and practical shift towards liberalisation and the current system. In addition to freeing up banks, the floating of the currency and the opening up of capital markets, a range of technological advancements – as well as economic development and policy changes affecting other sectors in the economy – also were important drivers of change in the financial system.

Questions Arising from the Growth of Finance

The past 20 years has seen a major increase in the size and breadth of activity of the financial sector in most economies, as well as an acceleration in the globalisation of finance.

Statistics abound to demonstrate this: the turnover in various markets, the real value of assets, the amount of gross derivative positions outstanding; all have grown considerably faster than the size of overall economic activity. Again some of these same trends are seen in Australia. Total assets of financial institutions relative to the size of the economy have increased from the equivalent of around 100 per cent of annual GDP in the early 1980s to almost 350 per cent in recent years (Graph 2).

Graph 2
Total Assets of Financial Institutions



Noteworthy in some countries has also been a significant increase in the share of financial activity in the economy's value added and the proportion of people employed in the financial sector.

It is widely assumed that financial deregulation played a major role in this increase, and the timing seems to fit. Now, in the aftermath of the crisis, there is a more questioning tone about whether all this growth was actually a good idea: maybe finance had become too big (and too risky). This question is certainly a live one in the United Kingdom, where the City of London was very prominent in the economic success of the country since the mid 1980s.[23]

There are at least two potential problems in a world where the finance sector becomes 'too big'. If it is accepted that finance has its own cycle – of risk appetite, leverage, crisis and then de-leveraging – then a bigger financial system compared with the economy, unless accompanied by much more capital (and it wasn't in the case of the big international banks – the reverse was true), risks de-stabilisation of the whole economy. Because crises can be costly, moreover, calls are inevitably placed on the public purse for support. These are very difficult to resist. In the current episode, the direct costs to the public purse of restoring financial stability in some of the North Atlantic countries are non-trivial. But the cost of lost revenue in the lengthy periods of economic weakness that seem invariably to follow financial crises is an order of magnitude larger. It is this factor really that has unleashed the recent round of concerns about public finances in the affected countries.

[23] See for example the recent conference on The Future of Finance at http://www.futureoffinance.org.uk, and particularly the papers by Turner (2010) and Haldane (2010).

Secondly, as well as making incomes and activity less stable, an overly large financial sector, if characterised by perverse incentives that can drive extraordinary remuneration for individuals, may draw in too many resources that could otherwise be employed at a higher social return. To put it in practical language, too many PhD physicists, mathematicians and engineers working on options pricing and designing structured products could lower, rather than increase, the productive capacity of the economy.

For finance is not, for the community, an end in itself. It is a means to an end. Ultimately it is about mobilising and allocating resources and managing risk and so on – providing the five outputs I listed earlier. Yet people have become suspicious of the way much of the activity in the financial system amounts to the production of 'intermediate' financial services, delivered to others within the same sector: the 'slicing and dicing' of risk, re-allocating it around the system to those who are most willing and best able to bear it (or, sometimes perhaps, and much more troublingly, to those who least understand it).

Some commentators – among them the chair of the UK Financial Services Authority – have openly questioned the social usefulness of much of this activity. In essence people are asking whether the rising size and pace of transactions of the finance sector is actually a sign of higher economic prosperity, or of something wrong. They are also questioning implicitly whether the thrust of financial liberalisation in the 1980s and 1990s was correct, or at least may have gone too far, if it helped to produce these outcomes.

These questions are likely to be debated intensely over the next several years. This will be a growth sector of the conference and consulting industry. It is therefore premature to draw strong conclusions, but a few observations may be useful.

First, a small point of measurement. In most modern economies, the share of GDP accounted for by services generally has long been growing as agriculture and manufacturing get (relatively) smaller. It would not be surprising for the finance sector to be part of that. So it might make more sense to measure the financial sector as a share of the services sector, rather than as a share of total GDP. On this basis it will still have shown a distinct rise, but not quite as much. In Australia's case, by the way, the finance sector's share of services sector employment peaked around 1990, thereafter declined somewhat and has changed little for a decade.

Second, a fair bit of the growth in financial sector activity was surely bound to happen in view of changes in technology. These dramatically lowered costs, so that the provision of news and information became instantaneous and ubiquitous, as did the ability to respond to news. The capacity to monitor and manage a portfolio more actively is likely a 'superior good': people will want more of it as their affluence increases. The increasing development of financial management techniques and new instruments – another kind of technology, if you will – also led to a lot more gross activity. For example the conceptually simple process of keeping to a benchmark drives a good deal of transaction volume. So surely *some* of the growth in the finance sector *has* been genuinely useful, and the technological changes mean that much of it has been accommodated without much in the way of real resources being used. That is not to deny that there is a very important set of questions about the price the general public is paying for some of the services and about whether the capacity to respond to every piece of 'news' is resulting in an excessively short-term focus in management. The latter is, of course, a question that extends much more widely than just the finance sector.

Third, the increasing integration of the global economy – itself assisted by financial development – brought the savings of literally hundreds of millions of Asians into the global capital market. This meant that differences between countries' policies and saving and investment appetites became more likely to affect financial trends and market prices. These factors were certainly one reason that interest rates, including long-term rates set in markets, not just the ones set by central banks, were so low in the middle of last decade. Surely this had a major bearing on the pace of growth of intermediation and, ultimately, the appetite for risk in the global system.

Fourth, we need to be careful how much blame we ascribe to changes in regulation for everything that went wrong. Of course it cannot be denied that the regulations had shortcomings. But while all significant countries were operating on more or less the same minimum standards for bank supervision, some countries had serious financial crises, but many – in fact most – did not. Moreover, a significant part of the problems arose in the 'shadow banks' – more lightly regulated institutions which were not banks (though some of them became banks subsequently when there was a regulatory advantage to doing so). Many observers have concluded that in the major countries, allowing large regular commercial banks to engage in more 'shadow banking' type activity without more capital was a mistake. But all this says that supervisory practice is as important as the formal regulations. Moreover, if those freedoms were granted in response to the demand by the commercial banks to get in on the action happening elsewhere, that points to the general environment as a big part of the story. As we know from our own history, if there is an incentive for risk-taking activity to occur (like low interest rates, for example), it will eventually occur even if it has to migrate to markets and institutions where fewer regulatory impediments are in place. To put this point at its most extreme, it could be argued that that the overall environment dictates the appetite for risk-taking financial activity, and that the nature of regulation simply determines the location of the activity. That is, as I say, extreme, but there is some truth to it.

Looking Ahead

Where then does this leave us?

The regulatory cycle has come fully around. After two or three decades of liberalisation and allowing markets and private agents in the financial sector more sway, the international debate has of late been consumed with issues of financial regulation: how to re-design it, and generally increase it.

This is understandable, and it is entirely appropriate that these questions be posed in the light of the events of the past decade. My point is simply that we have been here before. If we think far enough back in history, there are things to learn about regulation and its cycle, just as there would have been – had people been more inclined to look – about the nature of private finance and *its* cycle.

The objective shouldn't be to suppress finance again to the extent it was for so long in the past. There would be a cost to the economy in attempting this, and in any event the financiers will be quicker to figure out the avoidance techniques than they used to be. The objective should, rather, be to foster arrangements that preserve the genuine benefits of an efficient and dynamic financial system, but restrain, or punish, the really reckless behaviour that sows the seeds of serious instability. Such arrangements surely have to include allowing badly run institutions to fail, which must in turn have implications for how large and complex they are allowed to become.

There is a large reform effort under way at the international level. I have spoken about this before on several occasions and so I will not revisit the regulation issue here. I would only say that while no doubt regulations can always be improved – and who would say otherwise? – it is unlikely that regulation *per se*, becoming more and more complex and widespread as it is, will be the full answer. A big part of the answer must come from practice, not just black-letter law.

The finance industry, certainly at the level of the very large internationally active institutions, needs to seek to be less exciting, less ambitious for growth, less complex, more conscious of risk and more responsible about where those risks end up, than we saw for the past decade or two. And, of course, it does have to be better capitalised.

Equally, surely regulators and supervisors in some jurisdictions need to be more intrusive and assertive, to be prepared to go beyond minimum standards and to be a little less concerned about the competitive position of their own banks, than they have been in the past. It has been not uncommon, for example, for Australian bankers to complain about APRA's relatively strict rules on definition of capital for regulatory purposes, where other jurisdictions were more lenient. But the international supervisory community is at this moment in heated debate about what can and cannot be counted as capital, and it is moving, belatedly, in APRA's direction.

But to be effective, supervisors need support from their legislatures and executive government – in having strong legislation, adequate funding, and a high degree of operational independence from the political process in the conduct of their duties. In several countries legislatures are working now, in the aftermath of the crisis, to strengthen supervisory arrangements. That is good, but the most important time to have this support is in the boom period – when a cashed up private sector, which would much prefer the party to keep heating up, can bid quality staff from regulatory agencies and is not averse to looking for other ways of tilting the playing field in the direction of short-term profits. It is precisely then that capable, well-resourced and well-supported regulators need to be able to say 'no'.

Conclusion

Edward Shann died tragically in 1935. He did not live to see the full recovery from the Great Depression, nor the long post-war prosperity. He could not take part in the subsequent debate about financial regulation in its ebbs and flows. But were he to have been able to observe the past fifteen years in the global economy and financial system, I think he would have recognised many of the features.

Finance matters. Its conduct can make a massive difference to economic development and to ordinary lives – for good or ill. Moreover, finance has its own cycle – of risk appetite, innovation and occasional crisis. That won't change. Shann understood that and so must we.

The sort of financial system we should want is what was once described as 'the hand-maid of industry':[24] reliably facilitating transactions, fostering trade, bringing savers and investors together, pooling risk and so on. We don't actually want too many of the financiers to be 'masters of the universe'. There will always be a risky fringe, but it should stay at the fringe, not be at the core.

But the man we remember tonight would not want the financial system to be simply an arm of the state either, subject entirely to bureaucratic or political direction. We shouldn't be looking to go back to the 1940s and 1950s.

So we have to find the right balance involving regulation, supervision and financial industry practice. That is the task that lies before us.

---

[24] I first heard this phrase in remarks by Ed Frydl at a conference many years ago – about a previous financial crisis. I have several times tried to find its origins. To my knowledge Withers (1916) was the first to use the phrase.

REFERENCES

Bagehot W (1873), *Lombard Street: A Description of the Money Market*, Henry S. King and Co., London.

Cornish S (2010), *The Evolution of Central Banking in Australia*, Reserve Bank of Australia, Sydney.

Davies G (1994), *A History of Money: From Ancient Times to the Present Day*, University of Wales Press, Cardiff.

de Roover R (1946), 'The Medici Bank Organization and Management', *Journal of Economic History*, 6 (1), May, pp 24–52.

Ferguson N (2008), *The Ascent of Money: A Financial History of the World*, Allen Lane, London.

Gerschenkron A (1962), *Economic Backwardness in Historical Perspective*, Harvard University Press, Cambridge.

Haldane A (2010), 'What is the Contribution of the Financial Sector: Miracle or Mirage?', in *The Future of Finance: The LSE Report.* Available at <http://www.futureoffinance.org.uk>.

Kent C (forthcoming), 'Two Depressions, One Banking Collapse: Lessons from Australia', *Journal of Financial Stability*.

Kindleberger C (1993), *A Financial History of Western Europe*, Second Edition, Oxford University Press.

Macfarlane IJ (2006), *The Search for Stability*, Boyer Lectures 2006, ABC Books, Sydney.

Newton L (2010), 'The Birth of Joint-Stock Banking: England and New England Compared', *Business History Review*, 84 (1), pp 27–52.

Quinn S and W Roberds (2005), 'The Big Problem of Large Bills: The Bank of Amsterdam and the Origins of Central Banking', Federal Reserve Bank of Atlanta, Working Paper 2005-16.

Reinhart CM and KS Rogoff (2009), *This Time Is Different: Eight Centuries of Financial Folly*, Princeton University Press, Princeton.

Shann EOG (1927), *The Boom of 1890 – And Now*, 2nd edn, Cornstalk Publishing Company, Sydney.

Shann EOG (1930), *An Economic History of Australia*, Cambridge University Press, Cambridge.

Shann EOG and DB Copland (1931), *The Battle of the Plans: Documents Relating to the Premiers' Conference, May 25th to June 11th, 1931*, Angus and Robertson, Sydney.

Snooks G (1993), 'Bond or Free? The Life, Work, and Times of Edward Shann, 1884–1935', in MAB Siddique (ed), *A Decade of Shann Memorial Lectures 1981–1990*, Academic Press International.

Stevens G (2008), 'Liquidity and the Lender of Last Resort', Seventh Annual Sir Leslie Melville Lecture, RBA *Bulletin*, May, pp 83–91.

Temin P (2004), 'Financial Intermediation in the Early Roman Empire', *Journal of Economic History*, 64(3), September, pp 705–733.

Turner A (2010), 'What do Banks do? Why do Credit Booms and Busts Occur and What can Public Policy do About it?' in *The Future of Finance: The LSE Report.* Available at <http://www.futureoffinance.org.uk>.

Withers H (1916), *International Finance*, Smith, Elder and Co., London.

ECONOMICS DISCUSSION PAPERS 2009		
DP NUMBER	**AUTHORS**	**TITLE**
09.01	Le, A.T.	ENTRY INTO UNIVERSITY: ARE THE CHILDREN OF IMMIGRANTS DISADVANTAGED?
09.02	Wu, Y.	CHINA'S CAPITAL STOCK SERIES BY REGION AND SECTOR
09.03	Chen, M.H.	UNDERSTANDING WORLD COMMODITY PRICES RETURNS, VOLATILITY AND DIVERSIFACATION
09.04	Velagic, R.	UWA DISCUSSION PAPERS IN ECONOMICS: THE FIRST 650
09.05	McLure, M.	ROYALTIES FOR REGIONS: ACCOUNTABILITY AND SUSTAINABILITY
09.06	Chen, A. and Groenewold, N.	REDUCING REGIONAL DISPARITIES IN CHINA: AN EVALUATION OF ALTERNATIVE POLICIES
09.07	Groenewold, N. and Hagger, A.	THE REGIONAL ECONOMIC EFFECTS OF IMMIGRATION: SIMULATION RESULTS FROM A SMALL CGE MODEL.
09.08	Clements, K. and Chen, D.	AFFLUENCE AND FOOD: SIMPLE WAY TO INFER INCOMES
09.09	Clements, K. and Maesepp, M.	A SELF-REFLECTIVE INVERSE DEMAND SYSTEM
09.10	Jones, C.	MEASURING WESTERN AUSTRALIAN HOUSE PRICES: METHODS AND IMPLICATIONS
09.11	Siddique, M.A.B.	WESTERN AUSTRALIA-JAPAN MINING CO-OPERATION: AN HISTORICAL OVERVIEW
09.12	Weber, E.J.	PRE-INDUSTRIAL BIMETALLISM: THE INDEX COIN HYPTHESIS
09.13	McLure, M.	PARETO AND PIGOU ON OPHELIMITY, UTILITY AND WELFARE: IMPLICATIONS FOR PUBLIC FINANCE
09.14	Weber, E.J.	WILFRED EDWARD GRAHAM SALTER: THE MERITS OF A CLASSICAL ECONOMIC EDUCATION
09.15	Tyers, R. and Huang, L.	COMBATING CHINA'S EXPORT CONTRACTION: FISCAL EXPANSION OR ACCELERATED INDUSTRIAL REFORM
09.16	Zweifel, P., Plaff, D. and Kühn, J.	IS REGULATING THE SOLVENCY OF BANKS COUNTER-PRODUCTIVE?
09.17	Clements, K.	THE PHD CONFERENCE REACHES ADULTHOOD
09.18	McLure, M.	THIRTY YEARS OF ECONOMICS: UWA AND THE WA BRANCH OF THE ECONOMIC SOCIETY FROM 1963 TO 1992
09.19	Harris, R.G. and Robertson, P.	TRADE, WAGES AND SKILL ACCUMULATION IN THE EMERGING GIANTS
09.20	Peng, J., Cui, J., Qin, F. and Groenewold, N.	STOCK PRICES AND THE MACRO ECONOMY IN CHINA
09.21	Chen, A. and Groenewold, N.	REGIONAL EQUALITY AND NATIONAL DEVELOPMENT IN CHINA: IS THERE A TRADE-OFF?

ECONOMICS DISCUSSION PAPERS 2010		
DP NUMBER	**AUTHORS**	**TITLE**
10.01	Hendry, D.F.	RESEARCH AND THE ACADEMIC: A TALE OF TWO CULTURES
10.02	McLure, M., Turkington, D. and Weber, E.J.	A CONVERSATION WITH ARNOLD ZELLNER
10.03	Butler, D.J., Burbank, V.K. and Chisholm, J.S.	THE FRAMES BEHIND THE GAMES: PLAYER'S PERCEPTIONS OF PRISONER'S DILEMMA, CHICKEN, DICTATOR, AND ULTIMATUM GAMES
10.04	Harris, R.G., Robertson, P.E. and Xu, J.Y.	THE INTERNATIONAL EFFECTS OF CHINA'S GROWTH, TRADE AND EDUCATION BOOMS
10.05	Clements, K.W., Mongey, S. and Si, J.	THE DYNAMICS OF NEW RESOURCE PROJECTS A PROGRESS REPORT
10.06	Costello, G., Fraser, P., Groenewold, N.	HOUSE PRICES, NON-FUNDAMENTAL COMPONENTS AND INTERSTATE SPILLOVERS: THE AUSTRALIAN EXPERIENCE
10.07	Clements, K.	REPORT OF THE 2009 PHD CONFERENCE IN ECONOMICS AND BUSINESS
10.08	Robertson, P.E.	INVESTMENT LED GROWTH IN INDIA: HINDU FACT OR MYTHOLOGY?
10.09	Fu, D., Wu, Y., Tang, Y.	THE EFFECTS OF OWNERSHIP STRUCTURE AND INDUSTRY CHARACTERISTICS ON EXPORT PERFORMANCE
10.10	Wu, Y.	INNOVATION AND ECONOMIC GROWTH IN CHINA
10.11	Stephens, B.J.	THE DETERMINANTS OF LABOUR FORCE STATUS AMONG INDIGENOUS AUSTRALIANS
10.12	Davies, M.	FINANCING THE BURRA BURRA MINES, SOUTH AUSTRALIA: LIQUIDITY PROBLEMS AND RESOLUTIONS
10.13	Tyers, R., Zhang, Y.	APPRECIATING THE RENMINBI
10.14	Clements, K.W., Lan, Y., Seah, S.P.	THE BIG MAC INDEX TWO DECADES ON AN EVALUATION OF BURGERNOMICS
10.15	Robertson, P.E., Xu, J.Y.	IN CHINA'S WAKE: HAS ASIA GAINED FROM CHINA'S GROWTH?
10.16	Clements, K.W., Izan, H.Y.	THE PAY PARITY MATRIX: A TOOL FOR ANALYSING THE STRUCTURE OF PAY
10.17	Gao, G.	WORLD FOOD DEMAND
10.18	Wu, Y.	INDIGENOUS INNOVATION IN CHINA: IMPLICATIONS FOR SUSTAINABLE GROWTH
10.19	Robertson, P.E.	DECIPHERING THE HINDU GROWTH EPIC
10.20	Stevens, G.	RESERVE BANK OF AUSTRALIA-THE ROLE OF FINANCE

10.21	Widmer, P.K., Zweifel, P., Farsi, M.	ACCOUNTING FOR HETEROGENEITY IN THE MEASUREMENT OF HOSPITAL PERFORMANCE
10.22	McLure, M.	ASSESSMENTS OF A. C. PIGOU'S FELLOWSHIP THESES
10.23	Poon, A.R.	THE ECONOMICS OF NONLINEAR PRICING: EVIDENCE FROM AIRFARES AND GROCERY PRICES
10.24	Halperin, D.	FORECASTING METALS RETURNS: A BAYESIAN DECISION THEORETIC APPROACH
10.25	Clements, K.W., Si. J.	THE INVESTMENT PROJECT PIPELINE: COST ESCALATION, LEAD-TIME, SUCCESS, FAILURE AND SPEED
10.26	Chen, A., Groenewold, N., Hagger, A.J.	THE REGIONAL ECONOMIC EFFECTS OF A REDUCTION IN CARBON EMISSIONS
10.27	Siddique, A., Selvanathan, E.A., Selvanathan, S.	REMITTANCES AND ECONOMIC GROWTH: EMPIRICAL EVIDENCE FROM BANGLADESH, INDIA AND SRI LANKA