

Agenda

Advancing economics in business

The cost of supporting banks: lower than expected?

Financial services regulation is undergoing a major overhaul, with specific focus on banks that are perceived to be ‘too big’ or ‘too systemically important’ to fail. The argument is that such institutions have benefited from implicit state support, which in turn is seen to have created incentives for excessive risk-taking and distortions of competition. Nevertheless, quantification of the scale of the underlying problem and the effectiveness of related policy proposals remains limited to date

The regulation of the banking sector and other financial services is currently subject to a major overhaul, at both national and international level. In the USA, the main initiative has been the Dodd-Frank Act. In Europe, new pieces of legislation have been adopted, and more are in preparation and expected before the end of this year—at the time of publication of this article, the European Commission has adopted a legislative package to replace the Capital Requirement Directives and strengthen the regulation of the banking sector.¹ In the UK, the Independent Commission on Banking (ICB) is expected to publish its final report in September. Creditor bail-ins, ring-fencing of retail banking activities from investment banking, and higher capital requirements are emerging as the main proposals that the ICB is likely to make, and that already appear to have found acceptance among policy-makers.²

At this point in the regulatory upheaval, one would hope to see serious economic analysis of whether and how the proposed solutions meet the desired policy objectives, but such analysis appears to be limited to date. Even back-testing of the reform proposals (ie, would the proposed measures have been effective in preventing the financial crisis or at least reducing its impact?) seems thin on the ground. Moreover, there is often a failure to link the proposed policy solutions to the underlying problems in the market.

One example relates to the important concerns that have been raised about banks that are perceived as ‘too big to fail’ (TBTF) or, more generally, ‘systemically important financial institutions’ (SIFIs). Much of the recent analysis (including by the ICB) has focused on the implicit state support as the source of the

underlying problems. The argument is that this implicit subsidy has created incentives for excessive risk-taking and distorts competition in the market—ie, the subsidy is seen to be at the heart of both financial instability and competition concerns.

There has been significant discussion of the state support to the banking sector, often referring to estimates that the value of the annual subsidy to banks exceeds £100 billion (£55 billion), based on estimates for 2009 (the 2007–09 average³). Oxera’s own analysis, described in more detail in this article (and referred to in the ICB’s interim report), shows that the annual value of state support is likely to be considerably lower, and can be expected to fall further once the existing reforms at industry and regulatory level have taken effect. From a policy-making perspective, it clearly matters whether the source of the underlying problem is quantified as £100 billion or a value that is much lower. After all, this should define the benchmark against which to evaluate additional regulatory reform proposals and their economic costs.

A framework for valuing state support, with application to the UK banking system, is presented below. The policy implications are also discussed, together with some open questions that need to be addressed in policy decision-making.

Measuring the value of state support to banks

The actual payments and other forms of state support provided to bail out the banks during the crisis were significant in the UK and elsewhere. However, these

This article draws from Oxera (2011), ‘Assessing State Support to the UK Banking Sector’, prepared at the request of the Royal Bank of Scotland, March.

amounts are not the same as the expected value of state support, and cannot be taken as a measure of the extent to which different banks benefit from an implicit state guarantee.

What matters for the analysis of potential distortions related to state support is the value of the *expectation* of state support, not the actual payments by the state once a failure has occurred. The actual payments made reflect only one of many potential market outcomes—they are realisations of particular scenarios in the distribution of possible market outcomes, and a different systemic shock could have resulted in a different market outcome and corresponding allocation of state support payments.

A comparison can be made with an insurance contract, where the insurance premium is clearly distinguished from claims on the insurance company if the risk event occurs. When analysing potential market distortions originating from state support in the financial system, the more relevant valuation metric is the ‘insurance premium’ rather than the ‘claim in the event’.

In line with this reasoning, state support can be valued as the expected payment from the state to the banking system in the event of a systemic shock. This corresponds to valuing a put option—the underlying instrument is the asset value of the financial system, and the strike price corresponds to the ‘systemic threshold’, defined as the maximum loss of asset value that could be absorbed by the financial system in response to a shock before the state would be required to step in.

Using option-pricing techniques and market data for the UK until October 2010,⁴ the central base-case estimate of the expected value of state support has been estimated at 8 basis points (bp) per £1 of assets (ie, 0.08%). For a banking system with a total asset value of approximately £7 trillion,⁵ this corresponds to an annual value transfer from the state of approximately £5.9 billion.

In the valuation model, the most important drivers of the value of state support are the riskiness of the bank assets in the financial system, and the ‘systemic threshold’. Given the measurement challenges for these parameters, sensitivity testing delivers a range of estimates around the base-case estimate. For example, flexing the estimate of asset volatility by one percentage point (which is significant, given that the central estimate of asset volatility is 4%) changes the value of state support from the central point of 8bp (and £5.9 billion per annum) to 2bp (and £1.5 billion) for the lower end of the range, and 22bp (and £16.2 billion) for the upper end.

Moreover, the basic valuation model can be extended in different ways as follows.

- *Asymmetric shocks and fat-tail events*—the central estimate of state support is based on a model that is symmetric in nature and where the probability of fat-tail (extreme) events is low. While there is no straightforward way to control for this potential bias, an attempt has been made to take this into account by adopting a conservative (ie, relatively high) base-case estimate of asset volatility. In addition, Oxera considered extensions to the basic model that seek to take account of asymmetric shocks and fat-tail events in the valuation of the put option. At the high end of the range (a scenario where extreme shocks are assumed to be perfectly correlated), the value of the state support is estimated at 15.8bp.
- *Financial distress costs*—the basic valuation model does not account explicitly for the costs of financial distress, which tend to drive a wedge between the value of the state support to the system and the cost to the state of providing this support. As such, the base-case estimate should be understood as the value transfer from the state to the banks in the system in terms of the costs of the support to the state (as opposed to the value of the support to the banks, which also includes avoided financial distress costs). Extensions of the basic model suggest that, under plausible assumptions for the costs of financial distress, the resulting state support value that also captures the ‘surplus’ created due to avoided financial distress costs is estimated to be in the range of 17bp to 31bp.
- *Idiosyncratic shocks*—an alternative modelling approach can be adopted to examine the value of state support at the level of individual banks (ie, valuing the individual put options on the assets of *each* bank). Using implied asset volatilities for five UK banks as at September 2010, the average state support for the banks is estimated to be 10.1bp. However, this approach would require further (downward) adjustment to account for the fact that idiosyncratic shocks that affect the asset value of individual banks may not all have systemic implications and may not require state support—it is only systemic shocks that require state support, which is why Oxera’s basic model values state support at the system level (ie, as the put option on the system assets).

Although the range of estimates is wide, also depending on the modelling assumptions, it is of note that even the upper end of the range is lower than some of the existing estimates of state support for the UK.

Irrespective of what the point estimate or range is, the Oxera modelling framework explains that two key parameters drive the value of state support: the riskiness of the assets in the system, and the ‘systemic

threshold' (which reflects the system's loss-absorbing capacity). The ongoing regulatory reforms are therefore likely to have a significant impact, to the extent that the measures increase the loss-absorbing capacity of the system (eg, due to higher capital levels and more effective resolution) or reduce the asset volatility in the system (eg, due to de-risking). These two factors are the primary focus of many of the reforms that have already been introduced or been proposed.

Questions for policy-makers

Looking at the investigation by ICB in the UK, the above suggests that its focus on de-risking and increasing the loss-absorbing capacity of banks is the right way to go about achieving the policy objective of reducing, or eliminating, the exposure of taxpayers' money to bailing out the banks in future.

However, in its interim report, the ICB has not yet delivered an assessment of the extent of the remedies required (and in what combination) to meet the relevant policy objectives. Put differently, no attempt appears to have been made to set the costs of remedies against the benefits associated with a reduction in the implicit subsidy. If the value of the implicit state guarantee were indeed 'considerably more than £10 billion per year' (as is stated in the ICB interim report without reference to the underlying analysis, whereas Oxera's own estimates discussed above show that the value may well be lower, especially if current initiatives have taken effect), there is clearly a point at which the costs of implementing further remedies exceed the benefits of the reduced guarantee.

What appears to be missing to date (and may be delivered as part of the ICB's final report in September) is an assessment of the magnitude of the underlying problem in the status quo and analysis of the incremental impact of additional reform proposals. The relevant questions include, for example: how do the costs of remedies compare with the value of state support? By how much does the value of the subsidy fall (or what is the remaining implicit subsidy) once equity capital is 10% and/or resolution is made to work?

As regards the proposals to break up the universal banks, or to ring-fence retail banking, do we know (or has anyone proven) whether a break-up of the banks would actually reduce the need for government support to banks, over and above what is being done in terms of higher capital, resolution, etc? Do we know by how much the value of the implicit guarantee could fall if the banks were broken up or the retail function ring-fenced? The burden of proof appears to be with those who want to break up the banks, as much as it is with the banks themselves, which need to show why the economy benefits from having large, universal banks.

It may be worth conducting the following very simplistic thought experiment. Had one of the rescued banks been, say, two or three separate institutions, but collectively with the same liabilities and assets, would this have meant that the losses across that total set of holdings could have been pinned to the counterparties of those liabilities in a way that was not possible when they were all in one bank? Which asset holders take the hit? And why can they take the hit in the disaggregated structure, but not the aggregated one—in particular if, in aggregate, the hit to be taken has to be at least the same, if not higher?

Also, given that some banking functions are 'essential' (and possibly will be ring-fenced in the UK, according to the ICB's proposals), there may always be a need for some guarantee or insurance against the risk of failure, and the state may well be the most efficient provider of this insurance. There are industry-funded deposit-guarantee schemes. In practice, however, when crisis hits (and bank crisis can occur irrespective of whether there are many small narrow banks or fewer large universal banks), the state is likely to step in—and it may well be efficient for the state to step in and provide this insurance. The alternative is to have someone else pick up this insurance cost. This would be likely to fall on the consumers of banking services. If it is more efficient for the state to provide the insurance, then any distortion caused by switching the cost from bank users to taxpayers may be worth paying.

If, on the other hand, the objective is to shift the cost of the implicit guarantee somehow to 'the banks', it is important at least to specify who is meant—the shareholders? The bond holders? The highly paid traders? Perhaps just the Chairman or Chief Executive Officer? One then needs to show how the regulatory levers that are going to be pulled will actually end up at the chosen recipient (and whether these levers are an efficient way of achieving this objective). This is far from obvious, because in a competitive market cost shocks to an industry are usually just passed through to customers.

Concluding remarks

In the current policy debate, there often appears to be a disconnect between the policies or rules that are being applied (or currently further developed) and the underlying problems in the market. In regulatory reform, one needs to know, at the very least, what problems are being addressed and how big they are. Surprisingly, this is far from being observed in current regulatory policy developments. What is also missing is a comprehensive system-level assessment of the impact of reforms, as opposed to partial analysis of the impact of specific rules or undue focus on individual banks.

Some policy proposals appear to be driven by political calls for measures that ‘punish’ the banks. Financial services are an intermediate economic activity—ie, the services are inputs into other economic activities. Over the market as a whole, the providers of financial services may not be the ones carrying the main burden of the cost of regulation. Rather, the cost is likely to be incorporated in the price of the services provided to customers. This means, for example, that the ultimate cost of a higher bank levy or of higher capital requirements will likely be borne by customers and not the banks themselves. It also means that any measures that simply aim to ‘punish’ banks in general may not be effective.

Regulation of banks and other financial services needs to strike the right balance between promoting financial stability and not choking off economic growth. Striking the right balance is difficult, but it calls for policies that meet the principles set out in basic economic theory—namely that regulation needs to address market failures and should be focused on those areas where markets fail to deliver efficient outcomes. For intervention to be successful, this requires careful analysis of the underlying problems, and an assessment of the full costs and benefits of reform proposals. Any partial analysis may result in the wrong policy choices and a failure to deliver improved market outcomes.

¹ European Commission (2011), ‘Commission Wants Stronger and More Responsible Banks in Europe’, press release, IP/11/915, July 20th.

² Independent Commission on Banking (2011), ‘Interim Report: Consultation on Reform Options’, April. See also, for example, *The Telegraph* (2011), ‘George Osborne to Back Ring-fencing of Retail Banks’, June 15th.

³ The estimates are provided in Haldane, A.G. (2010), ‘The \$100 Billion Question’, comments given at the Institute of Regulation & Risk, Hong Kong, March 30th. Similar estimates are given in Bank of England (2010), ‘Financial Stability Report’, December.

⁴ The detailed methodology is discussed in Oxera (2011), op. cit.

⁵ Estimated as the sum of the market value of equity and book value of debt in September 2010 for five UK listed banks: RBS, HSBC, Barclays, Lloyds, and Standard Chartered.

If you have any questions regarding the issues raised in this article, please contact the editor, Dr Gunnar Niels: tel +44 (0) 1865 253 000 or email g_niels@oxera.com

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