Why a bad bank needs to be big

Daniel Gros

4 February 2009

There is wide agreement that a recovery in bank lending is possible only if banks can get rid of the vast amounts of 'toxic' assets on their balance sheets.

What makes these assets 'toxic' and not just 'bad investments'?

When a bank makes a big investment that goes bad, the bank has problems. But these are problems in which the financial system is well versed. The problem is straightforward. One just values assets properly, determines exactly the loss of the bank, and recapitalises the bank as needed, if it is too big to fail.

This approach can work even if many banks have made similar bad investments – e.g. in the US S&L crisis of the 1980s. This was the thinking behind the Troubled Asset Relief Program (TARP).

TARP had been based on the assumption that most losses would arise from residential mortgage-backed securities (RMBS) in the US, and that one could assign a value to these securities. However, the unprecedented drop in housing prices has invalidated this assumption. Moreover, given the deep recession that has now started, huge additional losses are appearing from a variety of other sources (credit card and auto loans in the US, leveraged loans, etc.). The common factor across all these markets is that suddenly creditworthiness becomes much more difficult to assess.

Getting banks back to work when creditworthiness is difficult to assess

For example, until house prices started falling at an unprecedented pace in the US, mortgage lenders felt that they could reasonably well predict default rates on the bases of a few variables (income, employment, etc.). The market for residential based mortgage securities (RMBS) started to break down when the old models no longer worked.

A similar phenomenon is now spreading to many more markets where it becomes impossible to predict default probabilities on the basis of past standards because the current economic environment is unprecedented.

Uncertainty over government policy makes things worse

Uncertainty is further increased by the various proposals to provide mortgage debt relief that are being discussed by many political actors (the administration, Congress, etc.). Moreover, in the US households that can access chapter 7 of the US bankruptcy code can be discharged of their debt within 2-3 months. By contrast, households in Europe often have to wait 5-7 years before their debt is discharged.

Generalised uncertainty and credit markets break down

This generalised uncertainty is the key reason why credit markets have broken down, as [Ricardo Caballero (2009)](#) and Olivier Blanchard (2009) have pointed out in last week's *Economist*. Caballero and Blanchard apply this to everything from consumer behaviour to a firms' investment decisions, but here the focus is on bank lending.

Soured loans and the market for lemons

The particular problem as far as bank lending is concerned is what economists call it the 'lemon' problem. Consider the market for used cars, which is familiar to many. Buyers of used cars cannot know as much about the quality of a used car as does the car dealer selling it. The buyers assume that when a dealer wants to sell a particularly cheap car, it is likely to be a 'lemon'; it might look OK, but will have some hidden default. The market just does not work unless participants find some way to remedy the informational asymmetry, for example with independent evaluators or dealers who put their reputation at stake.

RMBSs and used cars

Today, investors similarly assume now that anyone who tries to sell a securitised credit portfolio is selling the worst risk – even if the true motive is just the need to de-leverage. They cannot verify this assumption quickly because in general those who granted the credit have much more information about the creditworthiness of their borrowers. Moreover, the judgment of rating agencies has become worthless and most banks have little reputation to lose.

This is the reason why credit markets dry up.

There is simply no price that will clear the market as long as there such uncertainty about value of the securities offered for sale. This then is the heart of asset 'toxicity'.

Certain assets are toxic due to the high degree of informational asymmetry – a feature that makes them hard to value, and thus makes them illiquid.

No bottom-feeders to speculate on highly risky securities

This is also the reason why one cannot rely on hedge funds buying up distressed assets and other 'bottom feeders' to solve the problem. These investors will only buy at prices that are probably well below true value (if held to maturity) because they know that they cannot avoid the lemon problem.

Public intervention is needed

Hence the need for public intervention. The way to do this is to create a 'bad bank', i.e. an institution that takes over assets that do not have a market.

The basic logic of the bad bank/good bank policy is very much like a bankruptcy procedure. The goal of the bankruptcy process is to save the good parts of a firm and shut down the bad parts, writing down the firm's debt so that the good parts can continue producing profit. We let bygones be bygones; creditors and shareholders write off part of their investments, thereby reducing the company's debt burden enough to allow the good parts to continue doing business. Ultimately, creditors get paid back more this way, and some business is salvaged. Likewise, the goal of creating a bad bank is to allow the bank to continue being a bank. In addition to reducing losses to creditors, this would also allow banks to restart normal lending.

There is, however, the lemon problem to deal with. How do we get the bad bits off the bank's balance sheets if no one is buying them, and so there is no market price?

Separating and pooling equilibria: Buy it all

The 'lemon' analogy suggests that a bad bank should be big. If you buy cars one-by-one, you must be able to estimate the value of each. But if you buy the entire lot of cars, all you have to do is estimate the average value of the cars – surely an easier task.

This buy-it-all strategy goes a long way to solving the lemon problem; the government would pay for the average of the toxic assets.[1]

Other schemes have been proposed (e.g. by Eichengreen, Wyplosz) that involve reverse auctions. But the lemon problem implies that it would be futile to hope for price discovery via reverse auctions (as foreseen in the original TARP). Instead the mechanism should be mandatory. All financial institutions should be forced to surrender all assets in certain categories to the 'bad bank'.

…. at what price?

The prices at which the 'toxic' assets are transferred to the 'big bad bank' would be determined by the government on the basis of a mixture of market prices, models and other valuation approaches. Those banks with insufficient capital once their 'troubled' assets have been transferred to the bank would of course have to be closed or recapitalised, but the healthy ones could start a new life with a clean balance sheet and could thus resume normal lending.

How much the government pays is actually not important given that the capital of the large banks, which are the main holders of toxic assets, is close to zero. If the government pays a very low price, it might make a profit in the long run, but it has to spend more on recapitalisation in the short run. And vice -versa, if the government pays a high price it might in the end make a loss on its holdings of toxic assets, but it would have to spend less on recapitalisation.

How large would the bad bank have to be?

In the US it was initially thought that the set of 'troubled' assets would be relatively small – around $1 trillion was the guess in September – assuming that the problem came only from sub prime RMBS. A programme of $700 billion could then be relied upon to have a significant impact.

It is now clear, however, that the lemon problem has spread to many other markets, including basically all credit to US households, which amounts in total to about $14 trillion.

The US government already holds (via the agencies) a large part of mortgages (which are much more difficult to value in the US because of their no-recourse feature). Of the remainder a large part has been securitised, leaving about $3-4 trillion in securitised debt that might now be difficult to value. The market value of these securities has now dropped a lot, but the government would still have to invest probably between $2-3 trillion (15-20% of US GDP – comparable to the fiscal cost of other large-scale real estate and banking crises).[2]

How it could operate

A bad bank that buys up mainly securitised credit could operate differently from other institutions that in the past had a similar task (e.g. the Resolution Trust Company in the US that dealt with bad loans from the 1980s S&L crisis in the US). These institutions had to manage a large number of individual credit relations with households and enterprises. By contrast, a bad bank with mainly securitised assets would not need a large staff. In principle it could just hold the securities to maturity and then be dissolved.

The key choice facing the US government (and many European governments) is the fundamental one between muddling through with partial recapitalisation schemes that leave banks alive but too weak to lend or a big-bang approach that clears balance sheets and allows the survivors to resume lending without looking back.

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[1] See a related argument applied to bank recapitalisation by Acharya and Sundaram (2008).

[2] Another way to arrive at the same order of magnitude is to look at the ratio of US household debt to GDP (or income). This ratio has been stable for decades, but started to increase after 2001 (when house prices overshot longer-run valuation ratios) and was by the end 2007 about 30 percentage points of GDP above the longer-run average. Corporate debt levels, by contrast, have been roughly constant, or slightly declining over this period.

Epilogue

The end result of a 'big bad bank' in the US would be that the US government would hold directly or indirectly (via the agencies) a large chunk of the debt of US households. At that point it does not really matter from the aggregate point of view whether this debt is being serviced via mortgage and credit card payments or via taxes.

The key question for policy-makers is in which way the unavoidable de-leveraging process for US households leads to lower transactions costs:

- forcing households to service their debt (with mass foreclosures and personal bankruptcies) or,

- relieving households of their debt through a general debt forgiveness and servicing the resulting public debt via higher taxes.

References

G. Akerlof, "The Market for Lemons: Quality Uncertainty and the Market Mechanism", *The Quarterly Journal of Economics*, Vol. 84, No. 3. August 1970.