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## The cost of the Federal Government guarantee of Australia's commercial banks

(Outline of paper – work in progress)

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### Abstract

The too-big-to-fail (TBTF) status of Australia's major banks creates an implicit Federal Government guarantee of the non-deposit liabilities of those banks, as noted in the interim report of the Murray Financial System Inquiry (FSI). The FSI also questions the adequacy of the capital held by the major banks, and whether Australia's banks should not have capital adequacy ratios that are high by global standards, rather than 'middle of the pack'. Moving to a high ranking in capital adequacy, amongst comparable banking systems, would require Australia's major banks to hold 2-3% more capital as a fraction of risk weighted assets.

These two observations – about the TBTF guarantee and capital adequacy -- are closely related. Extra capital requirements would substantially reduce the value of the implicit guarantee of non-deposit liabilities of banks which is provided free of charge by the Federal Government. This study seeks to quantify the reduction in the cost to the Federal Government of providing the TBTF guarantee that would result from an increase of 2 or 3% in the capital adequacy requirement of Australia's major banks.

It has been suggested in several forums that the stakeholders of banks should be made to pay for the implicit TBTF guarantee, with an assets tax or liabilities tax. Those suggestions (which are not endorsed in this paper) also raise the question of how much the TBTF implicit guarantee is currently costing taxpayers.

## Introduction

### Explicit and implicit guarantees

The Australian Federal Government provides a variety of guarantees to commercial banks that are incorporated in Australia.<sup>1</sup> Some of these guarantees are intentional and made explicit, such as deposit insurance and the committed liquidity facility (CLF) provided by RBA to banks.

Other guarantees are intentional but not explicit. These guarantees are implied by precedent. That is, they are implied by the actions of the Federal Government and the RBA in previous financial crises, especially the GFC.

Still other guarantees are neither intentional nor explicit. In particular, the too-big-to-fail status of Australia's four major banks creates an implicit guarantee of the liabilities of those banks (other than insured deposits) which is not intended by the Federal Government.

Table 1 below lists the guarantees.

**Table 1 Categories of Government guarantees of Australian commercial banks**

	Type	Introduced
<b>Explicit</b>	Deposit insurance	12 October 2008
	Committed Liquidity Facility	16 November 2011
<b>Implicit intentional</b>	Access to discount window in a crisis	Historical
	Wholesale funding guarantee in a crisis	In GFC
	Short selling ban for bank shares in a crisis	In GFC
<b>Implicit unintentional</b>	Guarantee of bonds and bills of TBTF banks	Since banks became TBTF

### TBTF status creates unintended guarantees

The TBTF guarantee of Australia's major banks is the unintended consequence of the consolidation of Australia's deposit taking institutions since the late 1970s and the inability of foreign banks to gain a substantial share of corporate and retail banking in Australia. Each of the four largest banks is simply too important to the Australian economy to be allowed to become insolvent.

The implicit guarantee that the Federal Government will not allow any of Australia's largest banks to default on any liabilities is clearly not intentional government policy because it is economically inefficient and inequitable. The TBTF guarantee is inefficient because it encourages levels of risk taking that are too high by removing some risk from stakeholders in

<sup>1</sup> Some of these guarantees are provided by the central bank rather than the central government. In monetary policy considerations that distinction is important, but in stability considerations it is not. Consequently, the Federal Government and RBA are treated as one in most of this discussion.

the bank without removing benefits to shareholders of taking that risk. Moreover, the guarantee reduces the amount of monitoring of banks undertaken by money markets and credit markets.

The guarantee is inequitable because the cost of the guarantee is born by all taxpayers but much of its benefit is born by bank stakeholders, including shareholders. If the banking sector in Australia was less concentrated than the commensurately higher levels of competition would see the benefits of the TBTF guarantee flow through to bank customers; but of course the TBTF guarantee only exists because the banking is highly concentrated.

### Solutions to the TBTF guarantee problem

There are several ways in which the Federal Government could reduce the problem of the unintended TBTF guarantee.

First, the Government could make the guarantee explicit by insisting that commercial banks purchase a guarantee of their all their liabilities from the Federal Government. This would make the guarantee explicit and charge the cost of it to its beneficiaries. It would also have the advantage of providing certainty about who is absorbing the credit risk of the loan portfolios of the large banks, and would eliminate the deadweight loss that attends uncertainty in financial markets. However, the size of the contingent liability that the Federal Government would be explicitly taking on, plus the difficulty in dynamically pricing the guarantee, plus the absence of market monitoring of bank debt, would make a comprehensive guarantee unworkable.

Second, banks that are deemed systemically important (TBTF) could be made to pay for the TBTF guarantee with a tax that was a function of the size of their risk weighted assets. This solution has recently been proposed in political forums. Regardless of the merits of this proposal, if TBTF banks are to bear the cost of the implicit guarantee then an estimate of that cost is needed.

Third, the Federal Government could create rules that define the circumstances under which debtholders will not receive full payment on the bank debt held. That is the conditions under which debtholders will be opted-in to a bail-out of systemically important banks. The opt-in solution is inherently inefficient because of the uncertainty it creates for debtholders. The exact conditions under which opt-in will take place may be clearly defined, but whether those conditions have occurred or not will inevitably be a matter of regulator judgement. Moreover, there are many other sources of uncertainty in how opt-in arrangements would be implemented in a crisis. A debtholder opt-in solution creates uncertainty for bank debtholders and shareholders. The financial sector is efficient at processing risk, but can only process uncertainty at high cost. Policy that creates uncertainty creates deadweight loss for the Australian economy.

Fourth, the Federal Government could reduce the cost of the TBTF guarantee by increasing the capital adequacy requirements of systemically important banks. There are several advantages to this approach. Increasing bank capital improves the stability of the banking system by reducing the probability of bank insolvencies. This works in two ways – the extra capital can absorb larger losses, but it also reduces the moral hazard problem of bank shareholders gaining the benefits of riskier loans without taking on all the costs. Increasing capital does not suffer from any problems of uncertainty that opt-in arrangements have. It

also levels the playing field on which small banks and large banks compete. Finally it reduces the cost to taxpayers of providing the TBTF guarantee.

### Capital adequacy and guarantees

The Murray Financial Systems Inquiry (FSI) interim report asks for comments on whether a significant increase in the capital adequacy requirements of Australia's largest banks is needed. The FSI asks whether Australia's banks should not have capital ratios that are high by global standards, rather than 'middle of the pack'. Moving to a high ranking in capital adequacy, amongst comparable banking systems, would require Australia's major banks to hold 2-3% more capital as a fraction of risk weighted assets.

The FSI's focus is on increasing bank capital to improve stability rather than the efficiency and equity problems of the TBTF guarantee. Nonetheless, reducing the cost of the implicit TBTF guarantee is a significant advantage of increasing the capital requirements of systemically important banks. The question then is, how much will the cost of TBTF guarantee fall by if capital requirement increase by 2 or 3 percent? This study seeks to answer that question.

### Estimating the cost of guarantees

This study seeks to estimate the cost to the Federal Government of providing a TBTF guarantee of the (not explicitly insured) liabilities of systemically important Australian banks. It also seeks to estimate how much the cost of the TBTF guarantee will fall by if the capital adequacy ratios of systemically important banks rise by various amounts.

There are approaches to estimating the cost of the TBTF guarantee. The method is to estimate how much the debt cost of capital of banks is reduced by the guarantee. This is done by comparison with borrowers (banks and non-banks) that do not enjoy a government guarantee of their debt. The second approach is an asset pricing approach in which the losses incurred by the Government in different states of the world are discounted to the present and summed.

## Background

The intentional guarantees that are provided by the Federal Government to commercial banks – deposit insurance, the Committed Liquidity Facility (CLF) and access to the discount window in a crisis – are all part of the fundamental deal between the Federal Government and the banking sector.

### The fundamental deal between commercial banks and central government

Central governments gives commercial banks protection against the critical risk that banks cannot manage for themselves – the liquidity risk of a run on the bank.

1. Deposit insurance

Depositors do not withdraw their deposits from banks in a financial crisis (either systemic or bank specific) because they know that deposit insurance makes their deposits risk free. In fact money flows into large commercial banks in a financial crisis.

2. The Committed Liquidity Facility

The CLF is a collateralised line of credit provided to Australian commercial banks in exchange for a small fee (15 bps). The CLF is an explicit guarantee of access to a defined amount of central bank liquidity.

3. Access to the central bank discount window in a liquidity crisis

The CLF is an explicit guarantee intended to meet Basel III liquidity rules. But there is a long standing and larger implicit guarantee in every developed economy that commercial banks can take high quality long term assets to the discount window of the central bank to obtain the liquidity they need to weather any liquidity crisis.

In return for solving the critical instability of banks that results from them having one foot in the money markets and one foot in the credit markets, the central governments demands two things in return.

1. Capital adequacy

Banks must hold an amount of capital that matches the amount of credit risk, interest rate risk, and operational risk that is born by the bank. The Basel III agreement sets out the rules for how much capital must be held. National Governments can set additional capital adequacy requirements.

2. Monitoring

Banks are heavily monitored by their regulators to ensure that they are not taking on too much credit risk, liquidity risk, interest rate risk, market price risk or operational risk.

To summarise, the fundamental deal between banks and the Central Government: banks get what they need to solve their critical instability – deposit insurance and access to the discount window; the Central Government gets what it needs to ensure that banks will be able to fulfil their role in monetary policy and financial crisis management – capital adequacy and heavy monitoring of banks. Banks want liquidity protection and central governments want financial system stability.

## TBTF status of Australia's major banks

### *Distressed small bank*

What would happen if a smaller Australian bank became financially distressed? The distressed bank would be merged into one of the healthy major banks. Finding healthy banks to takeover a distressed banks is always a first step in managing a banking crisis.

We saw this happen in Australia in in late 2008 when St George, then the fifth largest bank in Australia, was merged into Westpac and BankWest, then the seventh largest bank, was merged into CBA. St George and BankWest were not facing imminent collapse, but they were sufficiently distressed (by problems with their funding model and bad debts respectively) for stability concerns to trump competition concerns.

What if the distressed bank had substantially negative equity? Then the Federal Government would most likely provide inducements for one of the major banks to take over the distressed bank; in particular the Federal Government might guarantee repayment on a pool of distressed assets, just as the US Government did when JPMorgan took over the distressed Bears Stearns in March 2008. If a distressed ADI (authorised depository institutions) was very small then the Australian Government might simply allow it to go into bankruptcy, but otherwise it would seek to merge the bank into a healthy major bank.

### *Distressed large bank*

What if one of Australia's four major banks became financially distressed? Allowing the distressed major to go into bankruptcy would be out of the question. In a post Lehman Brothers world the damage to consumer and business confidence that would be wrought in Australia by the failure of on of the four majors would be intolerably large.

None of the Government's choices would be palatable. The Federal Government might be able to merge the distressed bank into one of the other three Australian banks, or into a large international bank. However, the Government would be loathe to abandon its four pillars policy in banking competition. In any case, if the distress was the result of a global crisis then there might not be a healthy bank at hand.

If merger was not an option then the Federal Government would either have to explicitly guarantee payments on some of the assets of the bank and thereby reduce the risk weighted assets of the bank, or inject capital into the bank by buying shares, or both. In either of these scenarios the non-depositor lenders to the bank would gain from government action and the shareholders would gain.

The point is that scenarios in which a major Australian bank is allowed go into bankruptcy are unlikely in the extreme, and if the majors have an implicit Federal Government guarantee against bankruptcy, then both the debt cost of capital of the bank and the equity cost of capital are reduced.

## Methodology

The aim of the study is to measure the cost to the Federal Government of providing the TBTF guarantee.

### Reduction in the cost of capital

One way to estimate the cost of the TBTF guarantee is by estimating the reduction in the cost of capital of the bank as a result of the guarantee. This requires an estimate of the reduction in the cost of: uninsured deposits; money market funds; bond market funds; and equity capital. Making these estimates is problematic; especially for the uninsured deposits and equity capital.

A more feasible approach is to estimate a lower bound on the cost of the TBTF guarantee by restricting the study to yield on bank bonds. The lower bound of the annual cost of the TBTF guarantee is then the volume of bank bonds multiplied by the yield on bank bonds without the guarantee minus the yield on bank bonds with the guarantee. The task then is to find bonds that are equally risky and illiquid that are not guaranteed or to estimate the difference using a model of credit risk.

### Asset pricing

An asset pricing approach to the same problem can give an estimate of the present value of the guarantee. A model of the evolution of the value of the bank assets is needed. That of course is the challenge. The model must have a brownian motion process plus a jump process. Choosing the parameters of such a model is highly problematic given that bank asset values are not high frequency market values. A range of plausible parameter values will give a range of guarantee costs. But that range is likely to be very wide.

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