The Australian Deposit and Wholesale Funding Guarantee Scheme and its Impact on Bank Risk

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This paper examines the impact of the Australian government's Deposit and Wholesale Funding Guarantee scheme on bank risk in Australia. An augmented market model is developed that models changes in bank systematic risk around the implementation of the Deposit and Wholesale Funding Guarantee scheme introduced on 12 October 2008. The scheme appears to have had a significant impact in reducing bank systematic risk, despite bank total risk increasing sharply in January 2008 in response to the major decline in global and local share markets. This increase in total risk continued from January 2008 through to the end of the sample period in May 2009.

EFM Classification: 520
Key words: bank guarantees, Australian banks, deposit insurance

Version dated: 14 January 2011

I. Introduction

The global financial crisis (GFC) in 2007 – 2009 had a major impact on countries around the world. While the Australian economy performed relatively well compared to other countries, the Australian government introduced several policies to minimise its impact and promote economic recovery. One such action was the Deposit and Wholesale Funding Guarantees (DWFG) scheme. It was designed to protect depositors against their bank's inability to repay deposits and so increase financial confidence. Arguably, this scheme should have reduced bank liquidity risk (Diamond and Dybvig, 1983; Santos, 2006). Some researchers however believed that the DWFG would cause moral hazard problems which would lead to misbehaviour and increased bank risk. This paper examines the relation between DWFG and bank systematic risk in Australia and whether Australian banks' systematic risk increased or decreased its introduction. An event period from 1 January 2007 to 31 May 2009 is employed using an augmented market model. The results indicate a significant decrease in bank systematic risk following the introduction of the DWFG despite a significant increase in total bank risk after January 2008 which reflected Australia's position in the financial crisis.

Since the 2007 subprime mortgage crisis, many US financial institutions which were subprime lenders or had invested in subprime assets were severely affected and some even went bankrupt. Given these events, people started to have concerns about the safety of their bank deposits – despite the USA's explicit deposit insurance scheme. The potential 'bank run' (Diamond and Dybvig (1983)) meant some banks, which would otherwise have survived the crisis, might have liquidity problems. This action pushed banks into a more precarious position worldwide and international liquidity tightened accordingly. In Australia, the economy and hence the local banks, felt much less impact from the crisis and showed a relatively steady performance compared to other international markets. However, in order to overcome the potential effect of the crisis and to

mitigate depositors' concerns in regard to their banks, the Australian government introduced the DWFG scheme some 14 months after the start of the GFC on 12 October 2008. As the Treasurer, Wayne Swan (2010) later explained, this was done "in the face of severe dislocation of global credit markets which forced most G20 member countries to introduce some form of funding guarantee." This scheme guaranteed bank deposits in case of bank insolvency and so limited the possibility of a bank run. This would, it was hoped, help banks continue their business as usual and avoid any temporary financial difficulties caused by the crisis.

While the Australian DWFG scheme was just one of many countries' responses to the global financial crisis, it has some unique aspects which justify its specific investigation. The first aspect is that unlike most countries, Australia lacked an explicit deposit insurance scheme prior to the crisis. So the DWFG's impact on bank systematic risk can be observed directly without the confounding impact of an existing deposit insurance program. Also unlike other countries' 2008 guarantee plans, the Australian version had no formally stated end date; it would simply be reviewed three years later. The scheme also applied to all authorised deposit taking institutions and so covered credit unions and building societies as well as banks. Finally, whilst the DWFG's retail deposit guarantee was provided at no direct cost, each wholesale guarantee was subject to a credit rating based risk adjusted premium which operated with a wider spread than in other countries. The wholesale scheme also covered a longer period – a rolling five year maturity – compared with other countries (Black & Schwartz, 2010).

The remainder of this paper is structured as follows. Part two introduces the scheme and the background to its introduction. Part three contains the literature review and hypothesis development. Part four discusses the data and methodology employed. Part five outlines our results. Finally, part six concludes the paper.

II. Background

The 2007 subprime mortgage crisis was triggered by the end of the US housing bubble and was reflected in a drop of housing prices and an increase in interest rates. The world economy subsequently went into a recession. From August 2007, many countries experienced a credit crunch. Soon after, many central banks including the European Central Bank, the Bank of England and the US Federal Reserve began injecting cash into the market to enhance liquidity and cutting interest rates. Some banks, including Swiss Bank UBS and Citigroup, reported severe losses on the sub-prime related investments. All of these events signalled the start of a global financial crisis which later brought all countries into an economic recession of varying degrees.

During late 2007, Australia seemed immune to the credit crunch. The Reserve Bank of Australia actually increased local interest rates while most other countries were cutting theirs. Nevertheless, in January 2008 the global share markets experienced a huge fall and Australia followed accordingly. It was at this point that the Australian share market became unstable. Soon after the global financial crisis, many countries introduced deposit guarantees (Schwartz, 2010). In order to ensure Australian banks were not disadvantaged, the Australian government announced its own Deposit and Wholesale Funding Guarantee schemes on 12 October 2008. The deposit guarantee scheme applied to all retail depositors with deposits equal or less than 1 million Australian dollars with authorised deposit taking institutions[1]. If banks were unable to repay depositors, the government would do so, thus reducing the chances of a bank run. Unlike deposit insurance schemes in other countries, the Australian deposit guarantee is free of charge. This means both the authorised financial institutions and their depositors benefited at no direct expense. In contrast to retail deposits, the wholesale funding guarantees had a risk-adjusted premium charged to banks. This scheme applied to individual deposits and debt instruments over 1 million dollars. If the

[1] Authorised deposit taking institutions are those corporations authorised under the Banking Act 1959 and include banks, credit unions and building societies.

DWFG scheme achieved its objective, a decrease in bank systematic risk should be observed after its introduction. However, many academics have argued that such guarantees may actually increased bank risk. This will be discussed in the next section.

III. Literature Review and Hypothesis Development

Current literature has researched the impact on bank risk of the introduction of deposit insurance but not on deposit guarantees. This is because few countries had adopted deposit guarantees before the GFC. As deposit insurance and deposit guarantees both protect depositors and prevent bank runs so as to reduce liquidity risk, this section considers the deposit insurance literature from which our hypothesis is developed. Deposit insurance is designed to limit depositors' fears, prevent bank runs, and therefore reduce bank liquidity risk. Some studies, such as Santos (2006), found that bank risk was lowered with deposit insurance. Yin et al. (2002) also showed that risk-based deposit insurance and risk-based capital adequacy related regulation are adequate substitutes in controlling bank risk.

The discussion thus far suggests that deposit insurance reduced bank liquidity risk, but that other bank risks, such as credit risk, may increase after its introduction due mainly due to the moral hazard problem. This refers to the banks' incentives to take excessive risks at the expense of others (Gup et al. 2007). The moral hazard problem is that if risky investments result in higher returns, the bank enjoys the benefits. If the bank fails, the insurer must compensate depositors. Banks hope that the excessive risk associated with the expected higher returns will benefit them and they tend to ignore the potential losses borne by others. Additionally, once the depositors feel safe about their deposits under deposit insurance, their incentives to monitor banks are diminished and their demand for compensation based on a bank's risk is lowered. Less depositor monitoring of risk may give banks further incentives to take more risk.

The flat-rate deposit insurance premium used by many countries has only a limited migtigaton of the moral hazard problem (Horvitz, 1975; Gueyie, 2003 and Santos, 2006). Risk-adjusted deposit insurance premia have been tried instead but have also not solved the problem. Firstly, banks with higher assessed risks would simply seek more risky investments and hope that their expected higher returns would cover the extra premium (Goldberg, 1991). Secondly, due to the availability and the accuracy of observable data and the complexity of risk assessment process, an accurate quantification of the risks becomes problematic (Ronn and Verma, 1989). A few pricing methods have been developed. Merton (1977) derived a formula from option pricing model to determine the deposit insurance premium. Others have used the arbitrage pricing model (Acharya and Dreyfus, 1989; Allen and Saunders, 1998; Fries and Mella-Barral, 1997). Because of their underlying assumption of complete and perfect markets, these models do not work so well in practice. Later models were developed to incorporate asymmetric information (Chan et al. 1992). However none of the research to date has been definitive. Theoretical models based upon restrictive assumptions can result in estimated premiums not fully reflecting bank risk, and consequently banks may still seek excessively risky investments. Thirdly, in financial markets where deposit insurance is voluntary, the banks seeking deposit insurance may well be the banks at most risk. These more risky banks believe that their premiums have less value than the value of deposit insurance and so can benefit. Wheelock and Wilson (1994) and Ting-Fang (2007) both showed that under a voluntary deposit insurance system, banks with deposit insurance had lower capital levels and a higher failure rates than those without deposit insurance.

Given the risk of financial institutions failures and economic downturns, Australia adopted the Deposit and Wholesale Funding Guarantees on 12 October 2008. Its purpose was to mitigate the negative consequences from bankruptcies of financial institutions and a possible economic recession. As Schich (2008) pointed out, coverage is very important to the effectiveness of the

deposit insurance or guarantee policy. If so, the Australian deposit guarantees which have a wider coverage – deposits up to A$ 1 million dollars compared to the US$ 100,000 (raised to US$ 250,000 in the crisis) in the US, should be more efficient at reducing bank risk. This leads to the key hypothesis of this study:

> *H_0: The introduction of Deposit and Wholesale Funding Guarantee scheme in Australia on 12 October 2008 decreased the level of systematic risk in the Australian banking system.*

IV. Data and Methodology

Seven currently listed[2] Australian commercial banks - Australia and New Zealand Banking Group Limited (ANZ), Commonwealth Bank of Australia (CBA), National Australia Bank Limited (NAB), Westpac Banking Corporation (WBC), Bank of Queensland Limited (BOQ), Bendigo and Adelaide Bank Limited (BEN) and Suncorp-Metway Limited (SUN) - form our sample. Unlike other developed countries, Australia has a relatively concentrated banking industry. Together, the 'big four' banks (ANZ, CBA, NAB and WBC) comprise some 80% of total bank market capitalisation: their capitalisation at the close of trading on 30 June 2009 is displayed in Table 1. Therefore, the results derived from this study should well represent the Australian banks.

<INSERT TABLE 1 ABOUT HERE>

The methodology employed in this study utilises an augmented market model with dummy variables that capture changes in bank systematic risk during the sample period. In order to implement this model, excess market returns and the excess return of each bank in the sample are computed. Daily stock returns and market returns are collected from the Datastream database over

[2]Macquarie is effectively a listed investment bank. Given the difference its operations from the other commercial banks, it is excluded from the sample.

the sample period, 1 January 2007 to 31 May 2009. In total there were 609 daily return observations for each bank. Daily stock/ market returns are calculated by taking the logarithm of stock price/all-ordinaries index on day (t+1) over day (t). By subtracting the risk-free rate from the daily stock/market return, the excess stock/market return is derived. The risk-free rate is proxied by 90-day bank bill rates and is collected from the Reserve Bank of Australia website (Hogan and Sharpe, 1984).

The augmented market model employed in this study must clearly be conditioned on two key events, the start of the GFC and the date of the implementation of the DWFG. However there is a third event that is less apparent, the massive bear market that began in late November 2007 and continued until well into February 2009. During this period the All Ordinaries Index lost over 50% of its value. Figure 1 displays the level of the All Ordinaries Index over the sample period.

<INSERT FIGURE 1 ABOUT HERE>

In the aftermath of this massive bear market it would seem reasonable to speculate that bank return volatility rose considerably. In order to verify this speculation, an equally weighted portfolio of the four big banks (ANZ, CBA, NAB and WBC), and an equally weighted portfolio of the three small banks (BOQ, BEN and SUN) were formed and daily returns calculated on both of these portfolios. Figure 2 displays the returns on both portfolios over the sample period.

<INSERT FIGURE 2 ABOUT HERE>

A simple visual inspection of both graphs in Figure 2 reveals a considerable increase in the variability of bank returns after 16 January 2008. To test the hypothesis that bank return volatility increased significantly after Jan 16, 2008, a standard GARCH model is augmented with a dummy

variable where $d_t = 0$ if *t* is before Jan 16, 2008 and $d_t = 1$ otherwise. The augmented GARCH model is thus specified as:

$$h_t = \alpha_0 + \alpha_1 r_{t-1}^2 + \beta h_{t-1} + \delta d_t \quad (1)$$

where $h_t = Var(r_t|\Omega_{t-1})$ is the conditional variance of portfolio returns, Ω_{t-1} is the information set available at time $t-1$, r_t is the log return of the prices series and $\alpha_0, \alpha_1, \beta$ and δ are fixed parameters to be estimated. Employing daily log returns from the equally-weighted portfolio of big banks and small banks over the period Jan 2, 2007 to May 28, 2009, the GARCH model defined in (1) is estimated and the results are displayed in Table 2. The January 16, 2008 dummy is significant in the GARCH volatility models for the portfolio of big and small banks. The coefficient δ corresponds to the increase in volatility after January 16 2008. Expressed as an annual standard deviation of returns, the increase in volatility was 12.48% p.a. for the portfolio of large banks and 14.89% p.a. for the portfolio of small banks. The preceding analysis offers some evidence on the need to condition bank risk on the periods before and after 16 January 2008.

Consequently, for portfolio of banks *i*, following model is estimated;

$$r_{it} = \alpha_{i0} + \left(\sum_{j=1}^{3} \alpha_{ij} D_{jt}\right) + \beta_{i0} r_{Mt} + \left(\sum_{j=1}^{3} \beta_{ij} D_{jt} r_{Mt}\right) + \varepsilon_{it} \quad (2)$$

where a_{ij} and β_{ij} are fixed parameters. Variable r_{it} is portfolio *i's* excess return on day *t* and r_{Mt} is the excess market return on day *t*. Variable ε_{it} it is a normally distributed error term with expected value equal to zero.

Variable *j* denotes the j^{th} event relevant to the introduction of the DWFG. (*j=1, 2, 3*), where *j=1* refers to start of the GFC or 1 August 2007, *j=2* refers to January 16th, 2008 when the economy was in a severe bear market and bank return volatility rose significantly, and where *j=3* refers to the introduction of the DWFG. The three dummy variables $D_{jt}\ (j = 1,2,3)$ are constructed so as to capture the cumulative effect on the abnormal returns and systematic risk after the three events. Specifically, $D_{1t} = 0$ before 1 August 2007, and $D_{1t} = 1$on or after 1 August 2007, $D_{2t} = 0$ before 16 January 2008, and $D_{2t} = 1$ on or after 16 January 2008, and.$D_{3t} = 0$ before 12 October 2008, and $D_{3t} = 1$ on or after 12 October 2008.

These dummy variables in this way offer a useful interpretation of the estimated parameters. The parameter a_{i0} is referred to as Jensen alpha and represents portfolio *i's* abnormal return before the GFC. If a_{i0} is non-zero, then the portfolio's expected return differs from that modelled by the standard CAPM. The parameter $a_{ij}\ (j = 1,2,3)$ captures any changes in abnormal returns after the j^{th} event from that in the preceding period. Consequently, in the period between GFC and 16 January 08, portfolio *i's* abnormal return is given by $a_{i0} + a_{i1}$, in the period between 16 Jan 08 and the introduction of the DWFG, portfolio *i's* abnormal return is given by $a_{i0} + a_{i1} + a_{i2}$ and in the period after the introduction of the DWFG, portfolio *i's* abnormal return is given by $a_{i0} + a_{i1} + a_{i2} + a_{i3}$. If the estimate of $a_{ij}\ (j = 1,2,3)$ is insignificant then we have no evidence of any changes in abnormal returns due to the j^{th} event. The sign of $a_{ij}\ (j = 1,2,3)$ is also of interest as it indicates if there was an increase or decrease in an asset's abnormal return after that event.

Parameter β_{i0} models the sensitivity of portfolio *i's* return to market returns, that is, its systematic risk or beta before the GFC. Parameter β_{ij} $(j = 1,2,3)$ captures the changes in the systematic risk of asset *i* after the j^{th} event from that in the preceding period. In the period between GFC and 16 January 08, portfolio *i's* beta is given by $\beta_{i0} + \beta_{i1}$, in the period between 16 Jan 08 and the introduction of the DWFG, portfolio *i's* beta is given by $\beta_{i0} + \beta_{i1} + \beta_{i2}$, and in the period after the introduction of the DWFG, portfolio *i's* beta is given by $\beta_{i0} + \beta_{i1} + \beta_{i2} + \beta_{i3}$. The significance and sign of β_{ij} $(j = 1,2,3)$ is taken as evidence of any changes in the level of systematic risk after the j^{th} event.

V. Results

Table 3 displays the results of the two regressions (equation (2)) on the portfolio of big and small Australian banks. In both regressions, before the GFC and after each event, regression alphas are not significantly different from zero. Thus we have no statistical evidence of any change in abnormal returns as a consequence of any of the three events. There is also no evidence of any change in bank systematic risk to the start of the financial crisis in August 2007 as reflected in the insignificance of the β_{i1} parameter. There does, however, appear to be a significant increase in systematic risk in the portfolio of the four large banks as reflected in the significance of the β_{i2} parameter. However, this is not the case for the portfolio of three small banks which shows no significant change in systematic risk. These results indicate that for small banks the market return had already captured the impact of the crisis and no additional increase resulted. Of central interest is the sign and significance of the β_{i3} parameter which models the impact of the DWFG on bank systematic risk. For both portfolios, the β_{i3} parameter is both negative and significant indicating a decrease in the level of systematic risk after the DWFG's introduction.

The question arises as to why there should be an observable effect for the four major banks after January 2008, but not for the smaller, so-called regional banks. This is may be due to many interrelated factors but two particularly ones suggest themselves. The first related to the different size of the large banks compared to the smaller ones and hence their treatment in the stock market. The second is a function of differences in the opperational risk profiles of the two groups.

In respect to the market treatment, the four large banks with their large market capitalization are included as significant components in almost all Australian market indices (ASX 50, ASX 100 and MSCI EAFE) whereas the smaller banks appear only in the ASX200 and ASX300. As a result, the larger banks are more likely held by instutional investors, particularly foreign ones. When international markets declined and fund managers needed liquidity to fund client withdrawals, they would be forced to sell from their portfolio with preference all things being equal for their more liquid holdings. The four major Australian banks are all quite actively traded and listed across a range of markets. In contrast, the three smaller banks are much less active and so would present difficulties in liquidating any substantial holdings, particularly during such a crisis period.

The operations of two groups of banks also are a marked contrast from each other. The smaller banks are almost exclusively retail commercial banks with their operations confined to Australia and often concentrated mainly in one state. They also rely substantially on locally sourced retail deposits. In contrast, the larger banks operate in both the retail and wholesale markets, have extensive operations outside Australia with extensive branching operations in at least New Zealand, a branch presence in the major financial centres (London, New York, Tokyo, Hong Kong and Singapore) and often branches and/or equity interests in banks elsewhere in the Asia Pacific. They also source an important part of their funding from the US and international capital markets. These differences suggest that the larger banks would be much more impacted by

overseas events than their smaller competitors. The fact that the wholesale guarantees were used heavily in the few months after its introduction especially among large banks (Schwartz, 2010) also supports this international linkage story. The Australian Government – Guarantee Scheme for Large Deposits and Wholesale Funding statistics show the four major banks and Macquarie Bank (effectively an investment bank) accounted for 327 of the 478 use the wholesale guarantee (Australian Government, 2010).[3]

Unlike the January 2008 event, both groups of banks benefited from the DWFG's introduction. This can be explained in terms of banks' exposure to systemic risk. Once the guarantee was in place, the likelihood of any particular bank being subject to a run is reduced. Because one bank run would likely impact on all banks, each bank benefits from the reduction in risk of all the other banks in the market. Two points potentially follow. The first is that this effect will be observed only in more concentrated markets, where the cost of one bank failure exceeds the potential benefit that the surviving banks might gain from acquiring that failed business. The second is that banks only hold capital against their own risk exposures not the risks that arise from the failure of other banks. The reduced risk of other bank failures as a result of the guarantees thus reduces the risk for all banks. This lack of capital for other banks' risk is one of the underpinnings of the Basel III proposal for larger banks also to hold capital for systemic risk. These findings may suggest that the major Australian banks should simimlarly be subject to these additional capital requirements.

VI. Conclusion:

[3] CBA used 119 times. WBC used 93 times. ANZ used 41 times. MBL used 39 times. NAB used 35 times.

Although Australia initially appeared isolated from the effects of the 2007 – 2009 global financial crisis, there was still an increase in risk as reflected from the banking sector from January 2008. This was a few months after other countries started to experience the crisis. In order to maintain the health of Australian financial system, government introduced its Deposit and Wholesale Funding Guarantees scheme to improve bank liquidity and promote financial confidence. The empirical results from this study found a decrease in overall bank risk as expected. So the DWFG scheme would have appeared to have achieved its objective.

This paper contributes to the existing literature in the following ways. It is perhaps the first paper to have examined bank risk changes due to the introduction of deposit guarantee. As few countries (before the GFC) have introduced deposit guarantees, the opportunities for its testing have been rather limited. Australia also differs from most other countries in that it introduced its deposit guarantee scheme without first having a deposit insurance scheme in place. So the impact of guarantee can be observed without the potentially confounding impact of an existing explicit insurance scheme.

This study offers some practical implications for regulators. It suggest that at least in the Australian case, a deposit guarantee, as the government hoped, can reduce overall bank systemic risk. It also shows, however, that as local banks become more involved in international activities, that they may also become more subjected to the impact of adverse international events. This provides some support to the Basel III views concerning system risk capital requirements. It can also offer bankers some insights as to the consequences of their own operational decisions and to what extent this behaviour may change their risk exposure.

Figure 1: The All Ordinaries Index, 2 January 2007 to 31 May 2009.

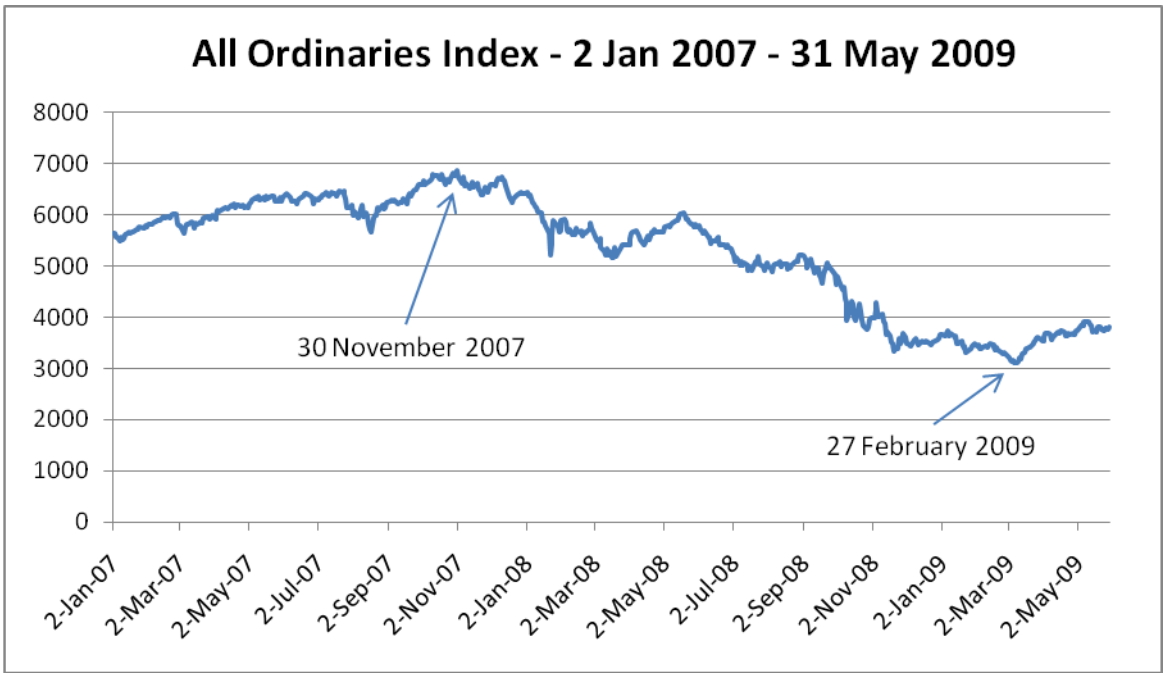
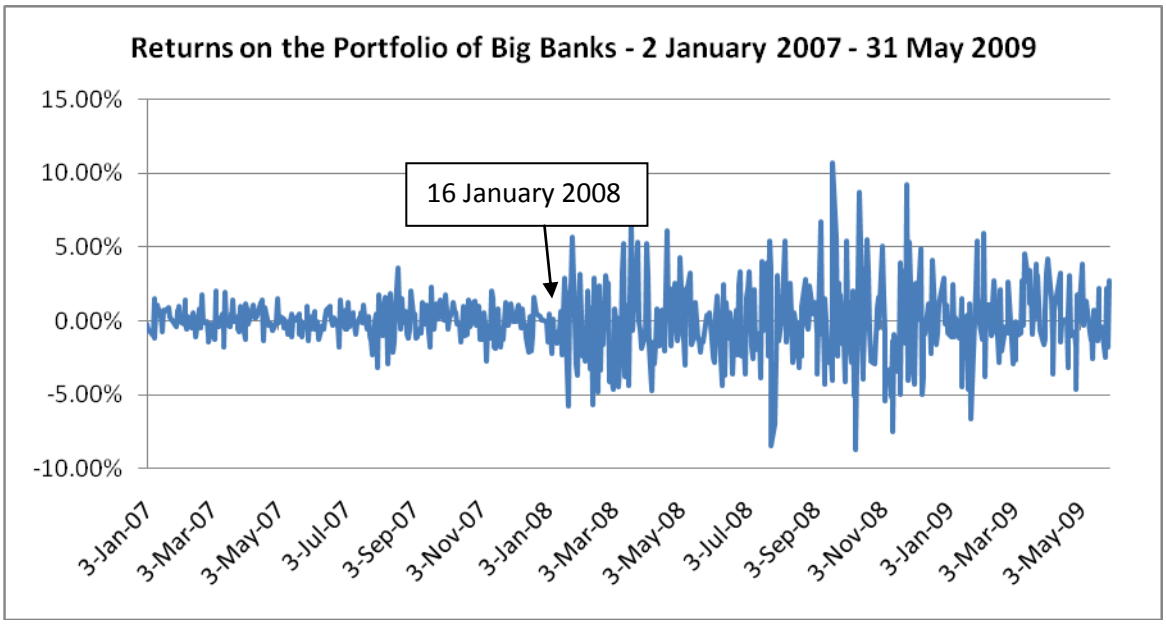


Figure 2: Returns on the portfolio of big and small Australian banks over the period 2 January 2007 to 31 May 2009.



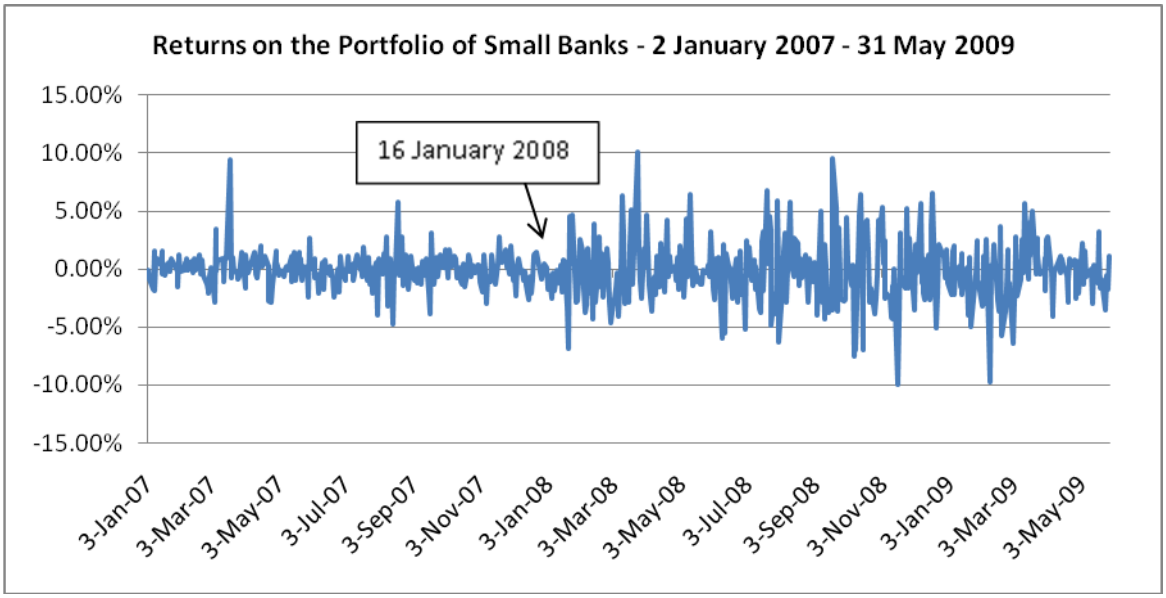


Table (1):

This table displays the market capitalisation of the ‘big four’ Australian banks at the close of trading on 30 June 2009.

Bank	**Capitalisation AU$(billions)**
Commonwealth Bank of Australia (CBA)	$63.2
Westpac Banking Corporation (WBC)	$63.8
National Australia Bank Limited (NAB)	$49.0
Australia and New Zealand Banking Group Limited (ANZ)	$44.4

Table (2):

This table displays parameter estimates and t-ratios from estimating the GARCH equation $h_t = \alpha_0 + \alpha_1 r_{t-1}^2 + \beta h_{t-1} + \delta d_t$ where $h_t = Var(r_t|\Omega_{t-1})$, Ω_{t-1} is the information set available at time $t-1$, r_t is the log return of the prices series and $\alpha_0, \alpha_1, \beta$ and δ are fixed parameters to be estimated.

	Portfolio of Big Banks	Portfolio of Small Banks
α_0	9.47E-06	3.06E-05
$t(\alpha_0)$	(2.40)	(2.92)
α_1	0.1481	0.0804
$t(\alpha_1)$	(4.02)	(2.96)
β	0.7696	0.7732
$t(\beta)$	(13.19)	(13.23)
δ	6.18E-05	8.80E-05
$t(\delta)$	(2.29)	(2.99)

Table (3):

This table displays the results of estimating the regression equation $r_{it} = a_{i0} + \left(\sum_{j=1}^{3} a_{ij}\ D_{jt}\right) + \beta_{i0} r_{Mt} + \left(\sum_{j=1}^{3} \beta_{ij}\, D_{jt} r_{Mt}\right) + \varepsilon_{it}\ \left(equation\ (3)\right)$, on an equally weighted portfolio of the four big Australian banks and an equally weighted portfolio of the three small Australian banks over the period of 1 January 2007 and 31 May 2009. The table includes parameter estimates, t-stats and p values, the regression R^2 and number of observations. Parameters a_{i0} and β_{i0} are the pre-GFC abnormal return and the beta of each bank. Parameter a_{ij} is the change in the abnormal return of each portfolio after each event. Parameter β_{ij} represents the change in beta (bank equity risk) after the each event.

			Portfolio of Big Banks	Portfolio of Small Banks
Alphas	Pre GFC	α_{i0}	-0.0002	0.0002
		t-statistic	(-0.2796)	(0.1666)
		p-value	0.7799	0.8677
	Post GFC	α_{i1}	0.0000	-0.0016
		t-statistic	(-0.0312)	(-0.7249)
		p-value	0.9752	0.4688
	Post Jan 08	α_{i2}	-0.0008	0.0002
		t-statistic	(-0.6276)	(0.0804)
		p-value	0.5305	0.9360
	Post DWFG	α_{i3}	0.0012	-0.0014
		t-statistic	(1.0883)	(-0.7442)
		p-value	0.2769	0.4570
Betas	Pre GFC	β_{i0}	0.7118	0.4477
		t-statistic	(7.8647)	(2.9338)
		p-value	0.0000	0.0035
	Post GFC	β_{i1}	0.0391	0.2489
		t-statistic	(0.3485)	(1.3141)
		p-value	0.7276	0.1893
	Post Jan 08	β_{i2}	0.1473	0.0367
		t-statistic	(2.0696)	(0.3062)
		p-value	0.0389	0.7596
	Post DWFG	β_{i3}	-0.1156	-0.1834
		t-statistic	(-3.1753)	(-2.9870)
		p-value	0.0016	0.0029
		R^2	79.66%	45.53%
		Observations	609	609

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