

AN ACFS – KPMG MONOGRAPH

The future of Australian bank funding

March 2011



Foreword

The Australian Centre for Financial Studies (ACFS) and KPMG are pleased to publish the ACFS-KPMG Monograph The Future of Bank Funding.

This monograph is an outcome of the research partnership between ACFS and KPMG and is central to the mission of both firms.

The subject of this study, authored by ACFS Research Director, Professor Kevin Davis, is the unique nature of bank funding in Australia. The study examines the current situation including the marked difference in funding patterns between major and second tier banks and the heavy reliance of the major Australian banks in particular on wholesale funding, much of it from overseas.

While Australian banks have weathered the recent Global Financial Crisis with distinction, the international liquidity drain has brought into stark relief the reliance of our banks on offshore funding. The need to generate liquidity domestically is further underlined by the proposed Basel III liquidity standards.

Increasingly policy makers have turned their attention to matters such as covered bonds, supporting the revival of the RMBS market and initiatives such as the development of retail bond markets to assist in reducing funding risk. These issues and more are examined in the monograph in exploring the potential future for Australian bank funding.

ACFS and KPMG gratefully acknowledges the industry participants who so obligingly contributed their time and thoughts to this monograph.



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About ACFS

ACFS is a not-for-profit consortium of Monash University, RMIT University, the University of Melbourne and Finsia (Financial Services Institute of Australasia), ACFS was established in 2005 with seed funding from the Victorian Government, but now generates much of its support through corporate partnerships.

ACFS specialises in leading edge finance and investment research, aiming to boost the global credentials of Australia's finance industry, bridge the gap between research and industry, and support Australia as an international centre for finance practice, research and education. ACFS facilitates industry-relevant and rigorous research and consulting, thought leadership and independent commentary. Drawing on expertise from academia, industry and government, the Centre promotes excellence in financial services. Visit www.australiancentre.com.au for more information.

About KPMG

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Businesses and governments are in perpetual cycles of challenge and response. During these times, access to relevant and timely thought leadership can save time and help reach key decisions faster. KPMG's Banking practice is committed to shaping the debate and delivering responsive thought leadership to our clients. Other publications which may be of interest include: Australian Major Banks Annual Performance Survey, Evolving Banking Regulation, Australia's medium term funding challenge, Canadian Economy and Major Banks: A Comparison with Australia can be found on our website kpmg.com.au

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Executive summary

Achieving an optimal funding mix to finance asset holdings is a crucial ingredient in bank competitive strategies and risk management.

Australian banks have diversified across a range of domestic and international funding sources, driven in part by balance of payments and savings patterns that have affected the relative availability and cost of different sources of finance. Regulation in the form of the Basel Accord has also played a role, as has the uneven nature of domestic capital market development, which has influenced the relative importance of bank versus capital market funding of borrowers.

There are substantial size-related differences in bank funding patterns. These differences reflect banks' ability to access particular types of funds and the incentives to do so. The December 2010 package of federal government initiatives in the *Competitive and Sustainable Banking System*¹ (CSBS) initiative includes measures aimed at improving access to some funding sources for smaller institutions and broadening the range of funding sources permitted to banks (through the limited issue of covered bonds).

The effects of these measures on funding patterns are, however, likely to be marginal.

The global financial crisis (GFC) exposed difficulties, particularly the heavy reliance of Australian banks on capital markets funding. The increased cost of this funding – together with the higher rates being paid on domestic deposits resulting from the induced increase in competition – has been at least partly reflected in higher loan interest rates.

Given the underlying structural features of the Australian economy and financial system, there are no simple changes to bank funding models readily available, such that adapting to regulatory pressures to 'de-risk' bank funding (and desires to do so anyway) presents significant challenges. Nevertheless attempts by the major banks to do so, such as by greater focus on domestic deposit funding, have significant competitive implications for smaller institutions that rely primarily on this source of funding. At the same time, however, government support for the banking sector during the GFC has implications for bank funding by affecting market perceptions of whether funds provided to certain types of banks are really at risk of default, i.e. whether at least some banks are 'too big to fail'. In that regard, the relative credit risk premiums that banks must pay to attract certain types of funds may have changed. For smaller institutions, the CSBS measures, including continuance of deposit protection (of size and funding arrangements yet to be

¹ <http://www.treasury.gov.au/banking/content/default.asp>

determined) under the financial claims scheme, should assist their competitive position vis a vis larger institutions (that have been perceived by many as 'safer') in deposit raising.

Looking ahead, funding 'mix' concerns may be moderated by a slower growth rate for the aggregate funding requirement due to deleveraging by households and businesses and slower economic growth. However, the observed decline in credit growth in 2010 was nearly matched by the decline in bank deposit growth. The high credit ratings of Australian banks enhance their ability to access particular funding sources, but also focus their attention upon the need to limit funding requirements to levels consistent with achieving target credit ratings and maintaining market perceptions of low risk.

The Australian banking system possesses several features that influence perceptions of risk.

- One is the relatively heavy reliance on wholesale funding, reflected in a high assets/deposits ratio on Australian bank balance sheets.
- A second is the dominance of the four majors with similar funding patterns which expose them (and the Australian financial system) to risk of contagion from, or common shocks to, investor perceptions of bank safety.
- A third is the asset portfolio structure of Australian banks with, by international standards, an unusually heavy emphasis on residential property lending, the low risk nature of which is not fully appreciated in international circles. With the wholesale funding requirement driven largely by the imbalance between household borrowings and deposits, housing market developments and household savings patterns are important influences upon future funding patterns.

The funding strategies of banks are being set in an environment of regulatory uncertainty with a range of relevant policy changes in progress or in prospect. Basel III requires greater use of equity funding by banks and a lessened role for some hybrid securities in meeting capital requirements. The introduction of a net stable funding (NSF) ratio imposes constraints on funding structures, and the appropriate definition of 'stable funding' is potentially contentious. Use of hybrid funding instruments that qualify as 'contingent capital' is also under consideration.

The CSBS announcement includes provision for the limited use of covered bonds as a funding instrument. This initiative requires changes to depositor preference legislation, the merits of which are arguably reduced by the existence of the financial claims scheme. Also relevant are government initiatives to develop a retail bond market catering *inter alia* to the strong growth in the self managed super fund sector – with banks as potentially important issuers with well developed distribution channels via their wealth management businesses. The re-emergence of securitisation as a funding alternative for, particularly, the non-major banks is also likely as the gradual alignment of average and marginal funding costs for the major banks means that origination for securitization becomes competitive once again with on-balance-sheet loan pricing. The government has resisted calls for introduction of some form of guarantee arrangements for securitization, but has (as part of CSBS) extended its support via the key investor Australian Office of Financial Management (AOFM) purchase scheme.

While there is strong advocacy for introduction of tax concessions on deposit interest income to reduce imbalances in the tax treatment across financial products, the likelihood of such an outcome, and ultimate effects on bank funding patterns and costs, remain unclear. While increased interest by superannuation funds in fixed interest products may prove to be a growing funding source, the design of suitable products and compatibility with the NSF requirement present challenges.

Future options for bank funding structures are limited by two main factors. The first is the ongoing national balance of payments position with banks being a main conduit for financing the current account deficit. Despite the strength of the resources boom and implications for an improved trade position, the net income deficit involved in servicing accumulated international borrowings suggests that foreign funding requirements will remain substantial for the foreseeable future.

The second factor is the significant ongoing flow of household savings into superannuation funds. While some part of those funds finds its way back to banks (such as by deposits by self managed super funds, or investments in bank debt securities and equity) the ultimate effect is to increase the importance of capital markets relative to bank balance sheet intermediation. These factors raise several strategic issues, both for banks individually and for policy makers.

Issues for banks:

- (a) Are the current funding models of the majors sustainable, involving significant international wholesale market funding? Alternatively, will market indigestion put further upward pressure on funding costs and expose banks to significant funding and liquidity risks?
- (b) Is an excessive focus on balance sheet growth putting undue pressure on funding mechanisms and inducing sub-optimal funding arrangements in order to meet that growth?
- (c) Are funding strategies appropriately matched with asset portfolios – in particular the heavy reliance on wholesale funding in financing large on-balance-sheet residential loan portfolios?
- (d) At what point do these funding tensions threaten existing credit ratings?
- (e) How easy will it be for Australian banks to respond to the revised regulatory capital and liquidity (funding) requirements of Basel III?
- (f) What alternative funding mechanisms and products can be developed?
- (g) How can an individual bank insulate itself from spillover effects should other banks experience funding difficulties in international wholesale markets?

Issues for government:

- (a) Does the similarity of funding structures of the major banks pose a systemic risk? Further, does the potential emergence of additional regulatory requirements for systemically important institutions under the Basel III framework mean this question should also be addressed as part of the policy responses to the broader Basel III proposals?
- (b) In what ways do current tax, regulatory arrangements and perceptions of government support of banks distort aggregate financial flows and bank funding patterns?
- (c) Is the aggregate size of Australian bank domestic balance sheets too large based on international comparisons, and are bank asset portfolios excessively focused on real estate lending?
- (d) Can funding initiatives such as covered bonds be permitted by rescinding depositor preference legislation without adverse implications for perceptions of deposit safety?

These are some of the questions on which this ACFS – KPMG monograph *The Future of Australian Bank Funding* seeks to shed light.

1. Introduction

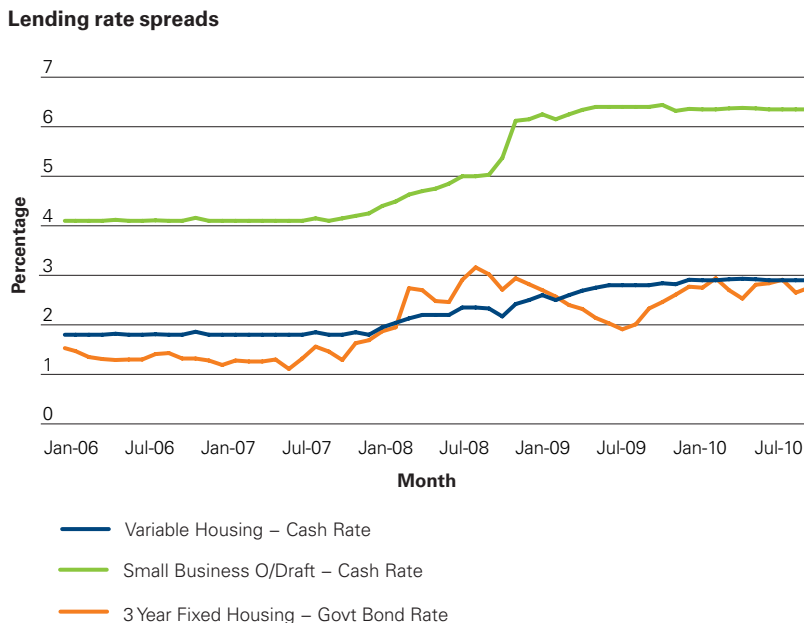
The GFC brought the viability of alternative bank funding models to centre stage.

While Australian banks navigated the international liquidity and funding crises of that period relatively smoothly (with timely support from the Australian government and the Reserve Bank), the aftermath of that shock on the viability and implications of their current funding model is now increasingly the subject of public debate and inquiry.

There are three dimensions of bank funding arrangements which are particularly relevant in this context.

First, the cost of funding flows into bank loan interest rates. The higher cost of wholesale markets' funding since the GFC has pushed up Australian loan interest rates and sparked political and economic arguments about what increases are justifiable. It has also spilled over into increased competition for retail deposits, the relative cost of which had fallen, with the increased rates being paid on these funds also having implications for loan interest rates. Figure 1 illustrates how the variable home rate margin over the cash rate has increased from around 180 basis points prior to the GFC to around 290 basis points currently. A similar increase has occurred for fixed rate home loans, while the effect on small business overdraft rates has been even more substantial.

Figure 1: Lending rate spreads post GFC



Source: RBA, Statistical Tables, F1, F2, F5

Second, funding arrangements involve liquidity and 'name' risks, as the GFC underscored dramatically. Banks faced with substantial refinancing needs in wholesale markets may find the task impossible in a time of crisis, or may in more normal times find that the market's appetite for their debt has diminished. If substantially higher credit spread margins must be paid to raise funds there are adverse consequences for borrowers and bank competitiveness. Table 1 illustrates how credit spreads in bond markets blew out for AA rated issuers (such as the major Australian banks) and still remain well above pre GFC levels.

Table 1: AA bond spreads (1-5 year maturity)

	AA spread over Australian Govt.	AA spread over swap
Jun-2007	58	15
Jun-2008	216	106
Jun-2009	174	154
Jun-2010	151	103
Sep-2010	139	96
Dec-2010	121	89
Feb-2011	114	81

Source: RBA Statistical Tables F3

Third, providers of funds to banks are exposed to risk of bank failure with consequences for them that differ according to the nature and seniority of their claims. An initial blanket government guarantee of Australian bank deposits during the GFC (subsequently reduced to a \$1 million capped amount per depositor) and fee based guarantee scheme for new debt issues (terminated in May 2010) ameliorated such concerns during the crisis. Going forward, however, this may be an issue in accessing funds despite the strong financial position of Australian banks and widespread perceptions of implicit government support of banks. The Banking Act provision for depositor preference puts depositor claims ahead of all other creditors in event of failure and prevents banks from issuing debt securities with senior ranking. The government's recent CSBS initiative will involve amending depositor preference legislation to allow limited issuance of 'covered bonds', but is unlikely to provide for more general issuance of capital market instruments with priority (or equal status) to depositors.

A common depiction of bank funding sees it consisting of four main components: local deposits, local wholesale market funding, international capital markets funding, and equity (and other forms of capital instrument). But reality is much more complicated. We should be aware of the overlap and potential substitutability between various funding sources and specific issues which their use creates.

First, many banks operate across national borders competing in a number of national deposit markets. The major Australian banks, for example, dominate the New Zealand deposit market. Deposits raised by subsidiaries or branches in foreign markets can be transferred (subject to any national restrictions) to fund lending in home markets. The ANZ strategy of expansion into 'deposit rich' Asian markets may be in part prompted by such considerations.

Second, the boundaries between funding types can be blurred, such as whether to classify bank negotiable certificates of deposit (NCDs) as deposits or wholesale market funding. Proposed new liquidity requirements for banks to maintain a minimum NSF ratio will make such distinctions a significant influence upon future funding patterns.



Third, banks often accommodate borrowers by origination and/or guarantee of capital market instruments. Bank accepted bills are one instance where banks take on exposure to customer default risk, but do not ultimately provide the funds,² but which accounting standards cause to be displayed as a liability on bank balance sheets (a source of funds) matched by the equivalent customer liability as an asset. Similarly, banks may securitise mortgages (or other assets) which they have originated, but that funding arrangement (nor the securitized assets) is not included on the bank balance sheet (unless some part of the risk is retained). Another complication arises from the use of techniques such as repurchase agreements to fund holdings of specific assets. Normal accounting practice involves recording the 'repo'd' security as an asset and the repo as a collateralised borrowing,³ but at least one failed US investment bank treated these transactions as a sale of the security (and thus not disclosing the funding involved).⁴

2 Banks may initially provide the funds to the customer by discounting the bill for the customer, but then typically sell (rediscount) the bill into the market.

3 Since a repo is in essence a secured borrowing, its compatibility with depositor preference legislation as a method of bank funding is open to question.

4 Kevin Davis "Adding up numbers the creative way" *Australian Financial Review* 17/3/2010

2. What is the status quo?

Apart from the problems of adequately identifying and classifying bank funding sources, analysis of Australian bank funding arrangements faces a significant and unfortunate data deficiency, which contributes to the often misguided debate over bank funding costs.

While the Australian Bureau of Statistics (ABS), the Australian Prudential Regulation Authority (APRA) and the Reserve Bank of Australia (RBA), as well as the banks themselves, all compile figures on bank funding sources, the detail readily available to the public is relatively limited. Figures available are also often incompatible or difficult to reconcile due to different methods of calculation and measurement. For example, the national financial accounts figures produced by the ABS (Cat. No. 5232.0) measure bank assets and liabilities (including equity) using market values wherever available. In contrast, APRA and RBA data for bank balance sheets, and particularly for bank capital, are generally (except where assets are marked to market) measured at book value.

Complications in examining funding patterns also arise from the complex legal and operational structure of banks operating across national boundaries and in both 'traditional' banking and non-banking markets. There are four main categories of banks operating in Australia: the (four) major banks; other domestic banks (seven, plus around 100 building societies and credit unions – often referred to as CUBS), foreign bank subsidiaries (nine), and branches of foreign banks (thirty-four).⁵ The Australian domestic banks (with the exception of Macquarie Bank) are structured with the bank as both an operating company undertaking banking business and as the holding company for other activities.⁶ Consolidated accounting figures thus include non-banking activities. They also include activities both within Australia and overseas through branches and subsidiaries – such as the New Zealand operations of the four majors, the UK subsidiaries of NAB, and branches (or majority owned subsidiaries) in other countries. Such consolidated data is useful in assessing the global scale and thus potential risk exposure of a country's banking system; it may be less relevant for assessing domestic loan market implications of funding arrangements.

In APRA's quarterly performance statistics, aggregated data for banks and CUBS is provided on this consolidated basis, but no division is made between funding from domestic or overseas sources. Table 2 provides a summary based on this data, and illustrates the dominance of the four majors. What is generally noticeable is the reliance on non-deposit funding to finance loans (loan/deposit ratios > 100 percent), except for foreign branches whose activities are less focused on lending and for the CUBS, which have very limited access to non-deposit funding. Also noticeable is the low share of deposits in funding total balance sheet assets (deposit/asset ratios well below 100 percent), with only a small part of the gap generally being met by equity funding.

⁵ Numbers as at August 2010.

⁶ Suncorp-Metway has recently announced an intention to restructure based on a non-operating holding company structure.

Table 2: Australian bank characteristics (consolidated data): June 2010

	Majors	Other domestic	Foreign subsidiaries	Foreign branches	CUBS
Total assets (\$b)	2,486	307	109	305	49
Average deposits (\$b)	1,332	130	67	88	42
Net loans to deposits	118.7%	123.8%	126.3%	76.6%	92.3%
Deposits to assets	54.8%	43.0%	62.2%	28.6%	86.6%
Equity to deposits	10.8%	22.2%	11.9%	n.a	9.8%
Number of entities	4	7	9	34	108

Source: <http://www.apra.gov.au/Statistics/ADI-Quarterly-Performance-Statistics.cfm>

APRA's monthly banking statistics,⁷ provide information only on transactions with residents on the Australian books of the individual banks – hence providing no information about their overseas funding. International comparisons of such data based on transactions on the 'domestic' books can indicate the relative importance of that nation as a financial centre. Table 3 shows deposit funding on the Australian books of the four major banks, and implies that only around three-quarters of the deposit funding shown in Table 2 is from within Australia (with New Zealand deposits accounting for a large part of the remainder). Also noticeable is the fact that only around 40 percent of Australian deposit funding is from the retail sector, with much of the larger deposit base of CBA and Westpac being traceable to greater retail deposit market penetration and use of certificates of deposit.

Table 3: Major banks: Australian deposit funding: September 2010

March 2010	Non-financial corporations	Financial corporations	General government	Retail	Certificates of deposit	Total deposits
Australia and New Zealand Banking Group Limited	59,242	35,543	1,368	68,752	29,621	194,527
Commonwealth Bank of Australia	62,771	36,511	11,769	133,494	44,013	288,559
National Australia Bank Limited	79,408	40,431	5,953	67,596	23,360	216,748
Westpac Banking Corporation	69,794	47,180	4,022	117,710	38,201	276,907
Total	271,215	159,665	23,112	387,552	135,195	976,741

Source: APRA, <http://www.apra.gov.au/Statistics/upload/MBS-September-2010.xls>

Table 4 provides detail on the deposit/asset ratio for all domestic banks, illustrating that a low deposit/asset ratio is generally common, with the exception of Bank of Queensland and Bendigo-Adelaide Bank (and also the CUBS, which are not shown). Drawing on Table 3 it can be observed that retail deposits only provide around one-quarter of the funding of the domestic assets of the major banks.

⁷ <http://www.apra.gov.au/Statistics/upload/MBS-August-2010.xls>

Table 4: Australian bank deposits and assets: September 2010

	Total Deposits	Total resident Assets	Deposits /Assets	Securitisation /Assets
AMP Bank Limited	3,524	7,746	45%	46.1%
Australia and New Zealand Banking Group Limited	194,527	360,592	54%	0.1%
Bank of Queensland Limited	27,232	32,901	83%	16.7%
Bank of Western Australia Ltd*	42,622	70,877	60%	4.2%
Bendigo and Adelaide Bank Limited	33,417	41,306	81%	18.2%
Commonwealth Bank of Australia	288,559	515,805	56%	1.2%
Macquarie Bank Limited	29,929	60,560	49%	18.6%
Members Equity Bank Pty Limited	4,186	6,255	67%	210.4%
National Australia Bank Limited	216,748	407,793	53%	0.3%
Suncorp-Metway Limited	32,390	70,813	46%	4.6%
Westpac Banking Corporation	276,907	528,148	52%	2.0%

* Still reported separately in APRA Statistics although taken over by CBA

Source: APRA Monthly Banking Statistics, August 2010

The differences in balance sheet composition for the majors are reflected in the figures available from their latest annual financial statements, although presentation differences make comparisons hazardous. There are substantial differences in their funding profiles, partly reflecting their international and domestic strategies, although regulatory and market pressures mean that capital positions do not differ substantially. Table 5 presents some key figures from the latest financial statements of the majors for their consolidated balance sheets. The relatively greater overseas focus of NAB and ANZ is apparent. CBA and WBC have much larger Australian deposits, but the difference in total deposit funding is less when international activity is taken into account. CBA has utilized non-deposit funding more intensively in order to support its domestic loan book. The expansion of Australian banks outside of traditional banking activities into areas such as life insurance and wealth management is also apparent from the not insignificant size of life insurance policy liabilities.

Table 5: Consolidated balance sheet key features: major Australian banks, September 2010, \$Billion

	NAB	ANZ	CBA (at June)	WBC
Total liabilities	647	498	611	578
Deposits	353	311	375	337
Bonds etc	93	60	130	151
Life policy liabilities	54	29	15	12
Total equity	39	34	36	40
Total customer deposits				
Australia	216	165	335	245
Overseas	127	93	40	35
<i>Of which</i>				
New Zealand	25	45	31 (NZD)	28
Europe	76			
USA	18			
Asia	8			
Risk weighted capital ratio (%)	11.4	11.9	11.5	11.0

Source: 2010 Financial statements of each bank

Table 6 looks in more detail at the wholesale funding of each of the majors, indicating that there is a substantial difference in both the size and maturity structure of such funding across the banks.

Table 6: Major bank funding (September 2010), \$billion

	NAB	ANZ	CBA (at June)	WBC
Customer deposits	353	267	324	281
Short term wholesale	na	41	101	110
Long term wholesale	na	116	134	114
Of which < 1 year residual maturity)			27	31
Total funding (excluding equity)	na	424	559	505
Equity	39	33	36	39

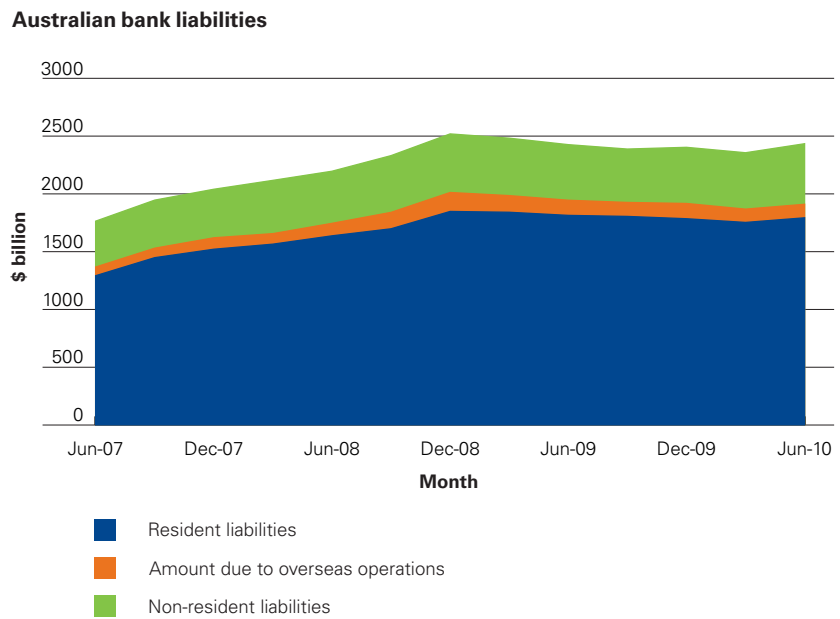
Source: 2010 Financial Statements of each of the banks

The RBA provides aggregate figures for foreign liabilities on the Australian books of the different categories of banks (majors, other domestic, foreign subsidiaries and branches),⁸ but this does not fully capture international funding carried out through overseas branches, etc.

8 <http://www.rba.gov.au/statistics/tables/xls/b03hist.xls?accessed=1310-15:33:29>

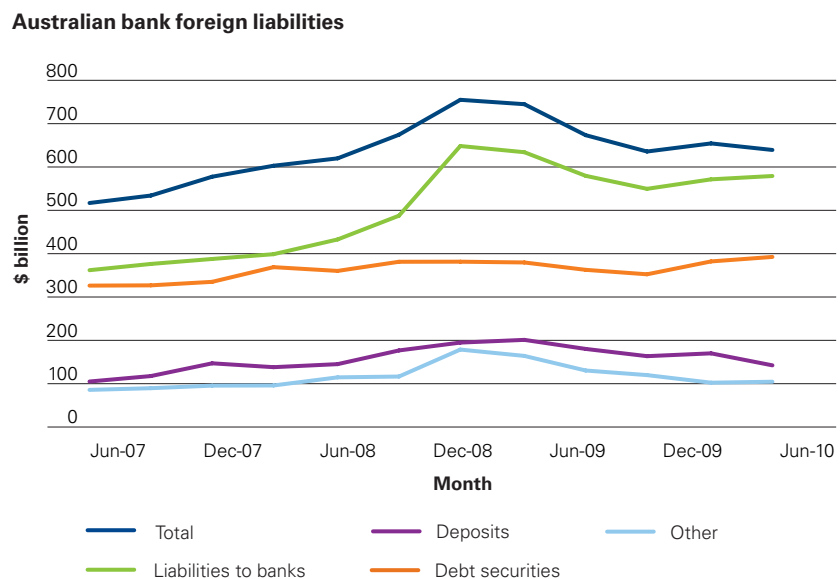
Just over 20 percent of total liabilities on the Australian books of the majors are foreign liabilities with another five percent being amounts due to foreign operations (such as loans from foreign branches). Figure 2 illustrates recent trends, with the stagnation of overall funding since the onset of the GFC being readily apparent. Figure 3 provides more detail on the behaviour of foreign liabilities of Australian banks. Since December 2008 there has been a decline in foreign liabilities, driven primarily by a decline in foreign deposits and other liabilities, while debt securities on issue have remained relatively constant.

Figure 2: Australian bank liabilities



Source: RBA Bulletin Table B3

Figure 3: Australian bank foreign liabilities



Source: RBA Bulletin Table B12

Nor are the banks individually forthcoming with easy to access information. While some information can be gleaned from annual reports and financial statements, it is limited. The Basel II Pillar 3 disclosures that the banks are required to produce quarterly give little or no information on this score, even though funding arrangements are important in assessing liquidity risk.

There is a need for better statistics on bank funding to enable analysts and investors to better understand the risks and issues associated with Australian bank funding patterns.

The picture which emerges from the data is that Australia's banks have a funding situation that is somewhat atypical by international standards. It is also becoming increasingly regarded as undesirable in, at least two regards.

First, deposit funding is relatively low by international standards. For the banking sector in aggregate, deposits currently account for around 57 percent of total liabilities,⁹ although there are some indications of an upward trend in that figure reflecting heightened competition in domestic deposit markets.

Second, the reliance on funding from international capital markets is also relatively high by international standards. In aggregate, around 22 percent of liabilities on the banks' Australian books are due to non-residents. Nearly 60 percent of overseas funding takes the form of negotiable debt securities (the remainder being deposits and other liabilities). It is often difficult to determine who are the ultimate holders of these securities and thus the sensitivity of demand (and thus secondary market yields and ultimately funding costs) to market developments. Around half the overseas funding is in USD with AUD and Euro funding being the next most important.¹⁰

Table 6 provides an overview of the liabilities side of the Australian banking sector using ABS national financial accounts data (which measures listed shares on issue at market value). The importance of both long term (bonds, etc) and short term (one name paper, etc) offshore funding is apparent (and understated relative to bank accounting values due to the measurement of shares at market value). The desirability and sustainability of this short-term funding in light of the Basel III liquidity reforms is questionable - Figure 3 indicates that much of this funding is sourced from other financial institutions, which is treated as being of high run-off risk under the Basel III proposals for calculating the liquidity coverage ratio.

9 <http://www.apra.gov.au/Statistics/upload/BANK-Quarterly-Mar-10-Final-5.xls>, RBA Table B3

10 <http://www.rba.gov.au/statistics/tables/xls/b12bhst.xls?accessed=1310-14:14:22>

Table 6: Australian bank liabilities: June 2010

	\$ billion	Percentage
Deposits	1150	48.7%
Bonds, etc. issued offshore	324	13.7%
Bonds, etc. issued in Australia	117	5.0%
One name paper issued offshore	83	3.5%
One name paper issued in Australia	137	5.8%
Long term loans and placements	16	0.7%
Short term loans and placements	83	3.5%
Acceptance of bills of exchange	24	1.0%
Derivatives	123	5.2%
Other accounts payable	10	0.4%
Unlisted shares and other equity	12	0.5%
Listed shares and other equity	281	11.9%
	2,360	

Source: ABS 5232.0

International comparisons of banking statistics are notoriously difficult, and differences reflect a variety of institutional features including relative importance of banks, capital markets, and other non-bank financial institutions. Table 7 provides summary statistics for a small number of similar countries. The ratios of bank deposits/GDP and bank credit/GDP appear relatively low for Australia, except by comparison with the USA where capital markets play a significantly greater role. Both Australia and the UK have had somewhat higher non-deposit funding of bank credit than the other two countries, although Canada's position appears to have changed since the GFC.

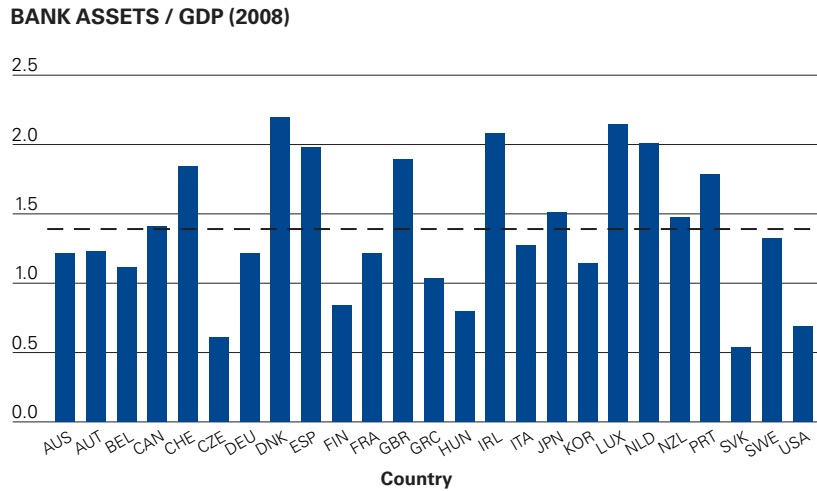
Table 7: Australian banking size: international comparisons

	Australia		UK		Canada		USA	
	Credit /GDP	Deposits /GDP	Credit /GDP	Deposits /GDP	Credit /GDP	Deposits /GDP	Credit /GDP	Deposits /GDP
1999	0.88	0.63	1.22	0.98	0.91	0.72	0.83	0.64
2000	0.9	0.61	1.3	1.04	0.88	0.7	0.84	0.65
2001	0.91	0.65	1.36	1.08	1.51	1.55	0.89	0.68
2002	0.98	0.64	1.41	1.08	1.51	1.52	0.91	0.68
2003	1.01	0.69	1.45	1.12	1.45	1.45	0.92	0.68
2004	1.06	0.72	1.53	1.16	1.47	1.44	0.92	0.67
2005	1.09	0.72	1.62	1.27	1.52	1.49	0.95	0.69
2006	1.15	0.77	1.72	1.37	1.66	1.6	0.97	0.71
2007	1.31	0.93	1.88	1.5	1.54	1.12	1.01	0.77
2008	1.37	0.97	2.12	1.72	1.78	1.23	1.05	0.81
2009	1.43	0.96	2.29	1.79				

Source: IMF International Financial Statistics

That impression of the Australian banking sector size relative to GDP being somewhat low by international comparisons is reflected in Figure 4. The importance of the funds management sector and superannuation, together with a dividend imputation tax system which gives less incentive to debt finance compared with equity, are contributing factors to this situation.

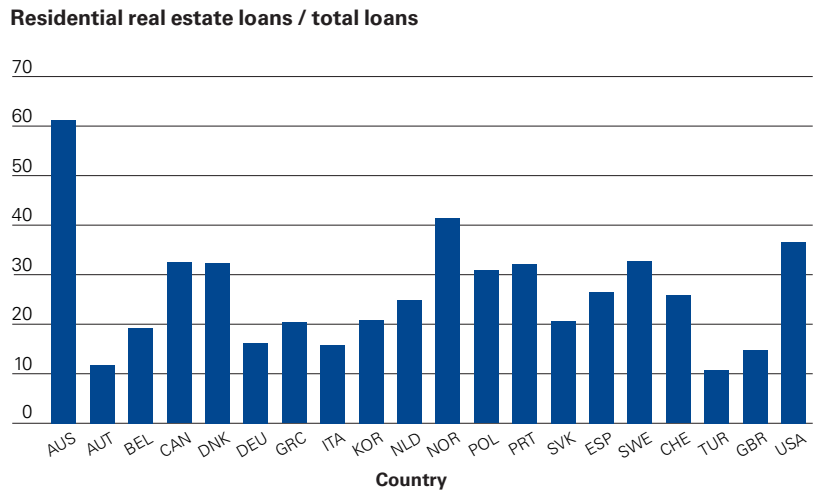
Figure 4: Banking sectors internationally



Source: A New Database on Financial Development and Structure <http://go.worldbank.org/X23UD9QUX0>

Also noticeable from international comparisons is the very high emphasis of Australian bank lending on retail housing finance. As Figure 5 illustrates, in Australia residential housing loans are a significantly greater proportion of bank lending than in other developed countries. Given recent problems residential mortgage markets have faced internationally, this is a potential risk factor that attracts attention internationally.

Figure 5: Banks and residential mortgage funding internationally



Source: IMF Financial Stability Indicators <http://fsi.imf.org/FSIHome.aspx>

Table 7 provides information on bank capital ratios for a number of G20 countries. Although Australian banks have generally increased their capital positions (via new issues and earnings retention) over the past several years, the capital positions appear to be towards the lower end of the scale. Such figures, should, however, be interpreted cautiously, because differences in scope (e.g. consolidation) and regulatory treatment (e.g. risk weightings) create problems of comparability. While adjusting for such differences can alter the relative position, there is the risk that international perceptions of capital strength will not recognize these subtleties.

Table 7: Bank capital ratios: OECD, 2010a

Country	Regulatory capital to risk-weighted assets	Regulatory tier 1 capital to risk-weighted assets	Capital to assets
Australia	11.6	9.5	5.7
Austria	16.5	12.6	7.2
Belgium	12.0	10.0	3.7
Canada	14.7	12.1	4.5
Czech Republic	15.0	13.7	6.5
Denmark	16.1	13.5	5.6
Estonia	22.2	16.6	9.0
France	12.4	10.2	4.1
Germany	15.2	11.2	4.6
Greece	11.3	10.6	6.9
Hungary	11.2	9.2	n.a
Italy	11.7	8.3	4.8
Korea, Republic of	14.4	10.9	7.3
Luxembourg	15.4	13.0	4.8
Mexico	17.4	15.5	10.8
Netherlands	13.7	11.8	4.3
Norway	10.1	7.5	n.a
Poland	12.2	11.1	8.2
Portugal	10.3	8.2	6.2
Slovak Republic	11.1	10.7	8.2
Spain	12.2	9.7	6.4
Sweden	10.1	7.3	n.a
Switzerland	17.9	15.2	5.1
Turkey	19.2	17.5	12.4
United Kingdom	14.8	11.6	5.4
United States	14.5	12.1	12.7
Average	14.0	11.5	6.7

(a) Latest data; for most countries (including Australia) this is 2010

Source: IMF Financial Stability Indicators http://fsi.imf.org/docs/group/All%20FSI_Table_1_OECD.xls

In summary, features of Australian bank funding worthy of note as potential causes for concern are:

- **Relatively low core equity ratios** (despite major equity raisings post GFC). The equity/assets ratio of the four major banks is around 6 percent,¹¹ and for the banking system as a whole is around 5.8 percent of consolidated assets. .
- **The advances/deposit ratio exceeds 100 percent** and is in the order of 115 percent. The importance of residential mortgage lending in total advances is also noteworthy relative to other nations.
- **Substantial reliance on international wholesale capital markets funding**, particularly by the four major banks.

11 <http://www.apra.gov.au/Statistics/upload/BANK-Quarterly-Mar-10-Final-5.xls>



3. Drivers of the status quo

Two main factors drive the pattern of Australian bank funding.

One is the long standing deficit on the current account of the balance of payments, necessitating capital inflow in the form of foreign investment in Australian (real and financial) assets, or borrowing from abroad by Australian resident entities. The second is the pattern of domestic savings and investment.

Australian banks have assumed a major role in funding Australia's international financing needs through their overseas debt issues and borrowings. In addition to the persistent current account deficit, increased international investment by superannuation funds and other Australian investors has meant that the gross international financing task has been larger than that implied by the current account deficit. The outcome of this situation can be seen in Table 8, which shows foreign holdings of Australian financial assets, with over one third of the total being Australian bank liabilities of some form.

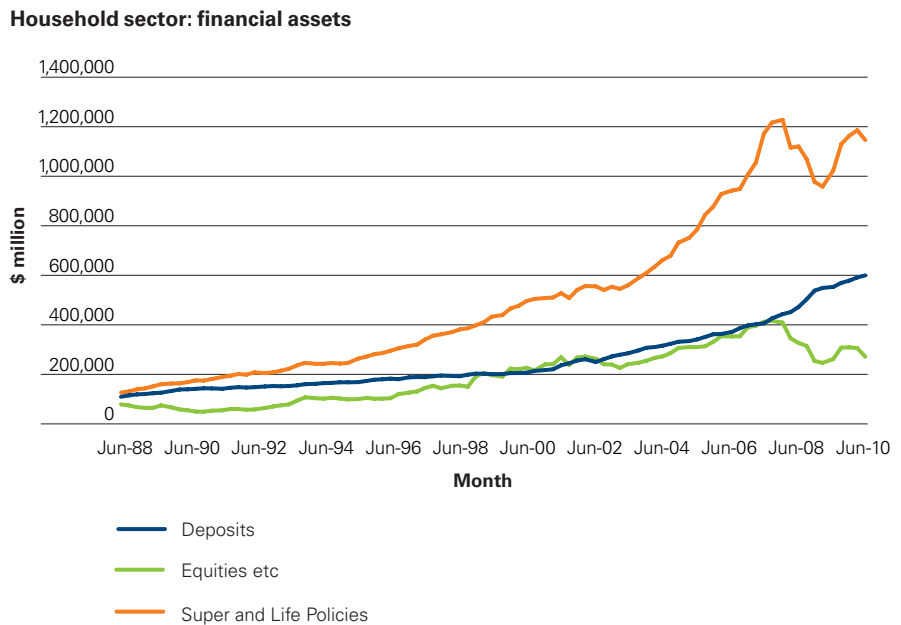
Table 8: Foreign holdings of Australian financial assets: June 2010

	\$ billion
Total financial assets	1,957.2
<i>Of which</i>	
Equities	666.6
Bank	
Deposits	108.7
One-name paper	87.4
Bonds	352.7
Derivatives issued	81.2
Borrowings	99.7
Private non-financial corporations	
Borrowings	108.1
Bonds	118.3

Source: ABS52320, June 2010

The growth of superannuation has seen a larger share of household savings flowing into superannuation funds (versus bank deposits) and those funds being invested in equities and other capital market instruments rather than flowing through the banking system. Figure 6 shows how household superannuation assets have grown relative to holdings of bank deposits and equity (and managed fund) investments – with the latter declining sharply with the GFC decline in equity market values.

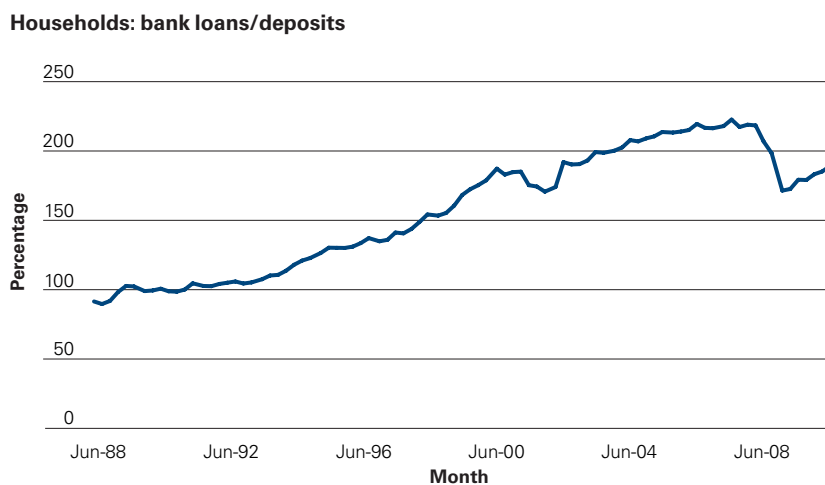
Figure 6: Household sector financial asset holdings



Source: ABS 5232.0 Table 20, June 2010

Demand for bank financing has not, however, diminished with households exhibiting a high willingness to incur mortgage debt for purchases of residential property. As Figure 7 indicates, households have shifted from being in net balance as suppliers and consumers of funds from banks at the start of the 1990s to now receiving loan accommodation twice that of their deposit supply. Lack of a significant domestic corporate bond market also causes business borrowers to look to banks for loan accommodation. Superannuation growth has also seen an increase in foreign equity holdings, creating another cross border outflow which needs to be financed on top of the current account deficit.

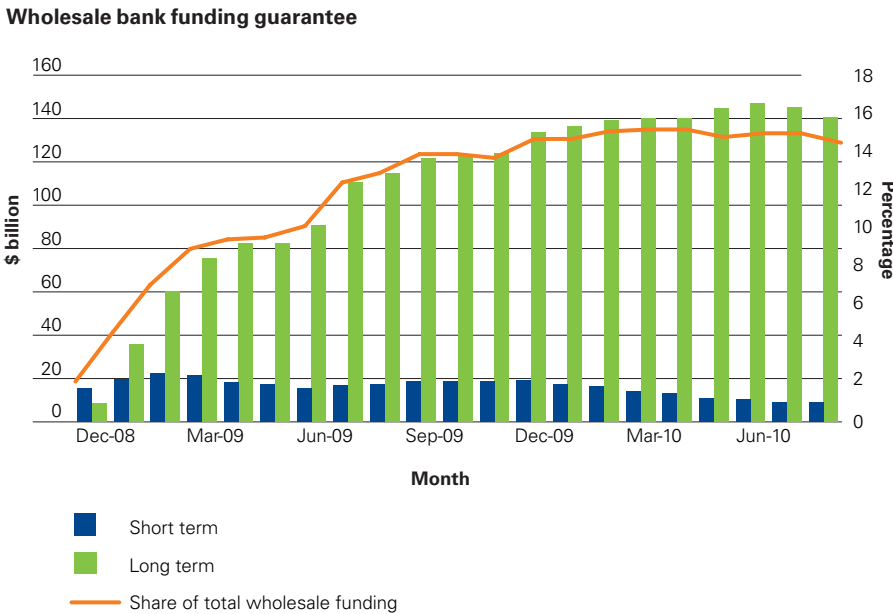
Figure 7: Household sector: loans and deposits



Source: RBA: Tables B20, D5

In the last few years, GFC related events have had a substantial effect on Australian bank funding. First, banks have taken the opportunity to utilise government guarantees of debt to make substantial issues into overseas and domestic markets. Consequently there will be large amounts of debt finance requiring renewal in the near future. Figure 8 illustrates the growth in guaranteed bank debt on issue.

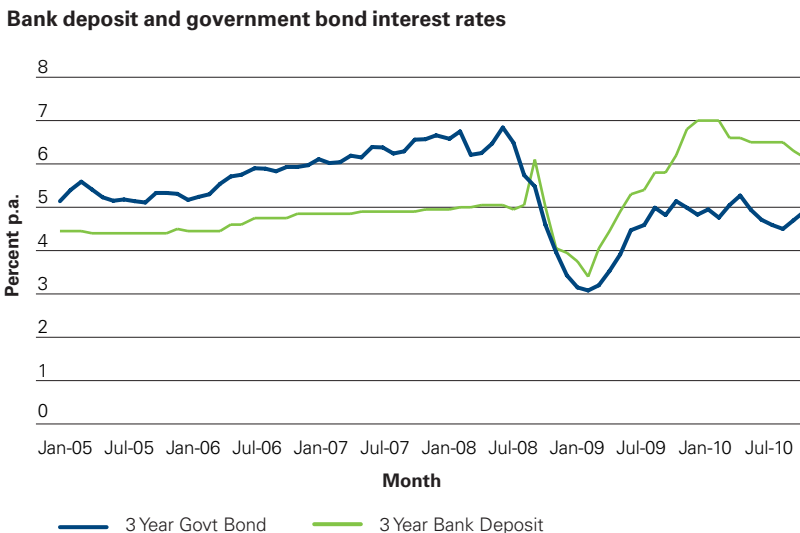
Figure 8: Government guaranteed bank debt on issue



Source: <http://www.guaranteescheme.gov.au/liabilities/xls/summary-information.xls>

Second, because of the relative increase in the cost of wholesale market debt financing compared to deposit financing, there has been an increase in competition for domestic deposits, particularly term deposits. This is reflected in the changed relationship between term deposit and government bond rates shown in Figure 9.

Figure 9: Bank term deposit interest rates



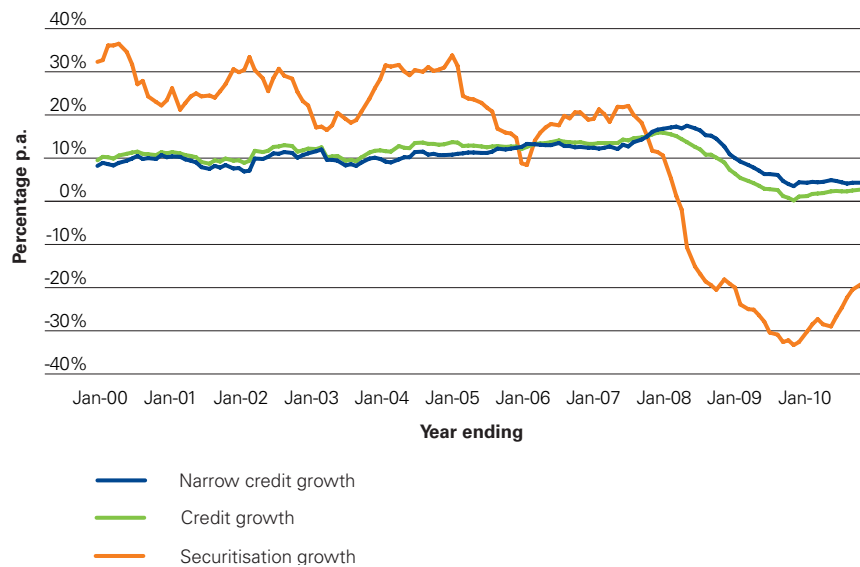
Source: RBA Statistical Tables F2, F4

The GFC has also had another important effect on bank funding requirements. As Figure 10 illustrates, bank credit growth has slowed markedly from the high levels of several years ago. Banks moved strongly into housing lending both prior to the GFC in anticipation of the reduced capital adequacy requirements of Basel II, and then following the onset of the GFC when the securitisation market froze. The marked decline in securitisation credit outstanding is readily apparent in Figure 10. With substantially more modest credit growth currently occurring, the funding requirements of banks are significantly reduced, provided deposit growth rates

do not fall to the same degree, reducing concerns about the sustainability of bank funding models relying on substantial capital market funds to supplement deposits.

Figure 10: Credit and securitisation growth Australia

Credit and securitisation growth



Source: RBA Statistical Tables: Table D2 LENDING AND CREDIT AGGREGATES

Taxation arrangements for superannuation are also a factor affecting the pattern of bank funding. The concessional tax treatment (in addition to the compulsory element) has been one relevant factor influencing household savings patterns. The Australian banks have been vocal in attempting to have the income tax rate on deposits lowered to offset the tax disadvantage relative to superannuation and other investments (equities, levered property investments). The 2010 federal budget provided a minor gain in this regard, with the announcement of a 50 percent discount to the personal income tax payable on the first \$1,000 of interest income from June 2011.

Interest withholding tax on funds raised from foreigners is also another potentially important influence on bank funding patterns. Again, while the 2010 budget contained announcements of future reductions in the tax rate applied to certain types of transactions, they were of less substance than the banking industry had hoped for. The withholding tax rate on funds raised by borrowings from banks offshore (including via retail deposits) is to be progressively reduced, but retail deposits made by foreigners in Australia would still be subject to a 10 percent withholding tax.

Given the importance attached to bank funding patterns for systemic stability, there is a case for further examining how much effect tax arrangements have on funding patterns and the design of optimal arrangements.

4. The cost of bank funding

One feature of the GFC was a marked increase in the cost of raising funds in particular financial markets, most notably the international wholesale debt markets.

This effect was also important in Australian wholesale markets, and particularly for securitisation. For some time it was simply not possible to issue mortgage backed securities, and the recovery of that market has been slow despite federal government assistance by way of the \$18 billion (to date) keystone investor program operated by the AOFM. The slow recovery of that market reflects characteristics of bank loan pricing as well as residual investor aversion to securitized products following the GFC.

Whereas banks can operate a form of average historical cost loan pricing, in which higher credit spreads on new borrowings gradually increase the average balance sheet funding costs incorporated into both new and old loans, each new residential mortgage backed security (RMBS) issue by securitisers is funded at current (or marginal) cost. Consequently, following a marked increase in debt funding costs, competitive forces would lead to interest rates for on balance sheet loans by banks increasing gradually to a new higher level (as new higher cost funding replaces old cheaper funds). This can be seen in the behavior of the housing loan interest spread relative to the cash rate shown in Figure 1 on page 5. In contrast, securitisation would only remain viable if mortgage interest rates charged by securitisers could be increased immediately to reflect the higher marginal cost of funds. (A similar effect can be seen in the sharp increase in the three year fixed loan rate in early 2008 shown in Figure 1). Recovery of the securitisation market is thus a slow process, depending on how long the average cost of bank funding remains below the marginal cost and provides a competitive advantage.

Debate about the cost of bank funding following the GFC and implications for loan interest rates has been vigorous, and not always well founded. One important reason is that there is no unique definition of the overall cost of bank funding. Banks source funds from a variety of markets and in different forms involving differences in maturity and repricing characteristics. The overall cost of funding achieved by a bank is specific to the overall structure of its liability portfolio, which has particular interest rate risk characteristics. Moreover, banks enter various derivative contracts (swaps, etc) which change the interest rate risk of their liability portfolio and the terms of which cause the overall portfolio cost to differ from that calculated by looking simply at the original fund raisings.

Thus, for example, it is not appropriate to directly compare the overall cost of bank funding with the interest rate charged on a variable rate housing mortgage unless the bank liability portfolio also has the same interest rate risk characteristics. The appropriate comparison is with the cost of raising funds at a variable interest rate, and here the distinction between marginal and average cost becomes important. When banks raise funds at a variable interest rate (such as BBSW30 + X) where X is a credit spread margin, the margin is locked in for the term of the borrowing, but the base indicator rate can change. Movements in the base rate can be expected to be passed through into variable rate loans. In contrast, if the spread required in the market increases, the bank will not need to pay that higher spread until current borrowings mature and need to be rolled over.

Thus for assessing the effect of higher funding costs on the variable rate mortgage, the appropriate comparison is with BBSW and the lowest margin which banks can achieve either by direct floating rate borrowing, or by borrowing fixed and swapping into floating. And while changes in that cost indicate where a new longer term equilibrium for mortgage loan rates might be, the adjustment path to that level will depend upon the term for which banks have locked in a margin on current borrowings and how much competitive pressures force banks to pass this benefit through to their borrowers. In most current discussion about mortgage interest rates, the comparison is primarily made with the cash rate – the overnight rate at which banks lend to each other and which is the target rate of monetary policy. But as the preceding discussion makes clear, there are a number of slippages in the link between the cash rate and the funding cost of variable rate loans.

- First, BBSW may differ from the cash rate, both for credit risk reasons and different maturity.
- Second, the swap curve may shift relative to government (default free) rates.
- Third, the credit spread margin which banks are required to pay on fixed rate debt may change.

5. The funding cost and funding mix outlook

Developments in Australian bank funding and its costs will depend on changes in both domestic economic and financial conditions and international market conditions.

Balance of payments outlook

Fundamental to the outlook is the continuation of the overseas funding requirement from the balance of payments deficit.

Despite the strength of the resources boom and the terms of trade, investment requirements associated with the boom, currency appreciation and income payments to foreign holders of Australian assets imply that the current account is likely to remain in substantial deficit for some years to come. While the goods and service balance can fluctuate (and may improve) substantially (such as the recent change from a \$3 billion deficit in the March 2010 quarter to a \$6 billion surplus in the June 2010 quarter), the primary income deficit is slow trending – driven primarily by the accumulated net liability position. At best, there will be a need to rollover maturing international borrowings, which are substantial, with a current account deficit of around \$6 billion per quarter at June 2010 levels implying additional net capital inflows of that amount.

The accumulated role of banks (depository corporations) in financing past deficits is illustrated in Table 9.

Table 9: International debt composition

Gross debt: Australia	Jun-10 (\$ million)
Depository corporations	681,569
Other financial corporations	149,760
Other private sector	111,854
Total	1,290,645

Source: ABS Cat No 5302.0, Table 31

The requirement for ongoing capital inflows to finance a balance of payments deficit indicates that either bank offshore funding will continue to be important, or other substantial changes to financing patterns must occur. The latter could include foreign investments in Australian real assets or Australian equities, or increased international borrowings by Australian governments or companies. Despite some tendency towards government deficit financing, overseas borrowings by government are not likely to fill the gap, and currency volatility and high local interest rates seems likely to inhibit foreign investment in real assets. Consequently, alternatives to bank funding would appear to be primarily increased capital inflows into equities or corporate offshore borrowings.

Continued growth of superannuation savings (with a planned increase in compulsory contributions to 12 percent) is also relevant. With some proportion of that growth invested in offshore assets (and not fully offset by equivalent offshore investment in Australian securities by pension funds elsewhere) the balance of payments funding task will continue to be substantial.

Winding down of government guaranteed debt outstandings

The major Australian banks took advantage of the debt guarantee facility made available to them by the government in October 2008. For the major banks, the guarantee fee of 70 basis points meant that the all-up cost (including guarantee fee) of debt was substantially below what would otherwise have been paid, and was below that charged by most other nations that introduced similar programs.

While the Australian Government budget will record substantial receipts of guarantee fee income, it should not be forgotten that this is in the nature of an insurance premium, which was lower than it might have been at the time. In this regard, Australian taxpayers were subsidising bank customers and/or shareholders through the favourable terms charged for guarantees.

Although credit spreads have declined from their elevated levels of 2008 and 2009, the effect on bank funding costs from rolling over debt issued at that time will be moderated by the shift from guaranteed to non-guaranteed issues. In effect, the guaranteed cost was that of AAA plus 70 basis points, while the unguaranteed cost for the four majors is that of AA.

Exchange rates and global market appetite

Australia's major banks have been major borrowers in international markets, and the question arises as to what appetite the markets possess for continued or increased borrowings by the majors.

The increase in the AUD over the past year means that to roll over a maturing USD bond and receive the same amount of AUD requires a substantially larger new issue in USD terms than the maturing bond. While there is currently no apparent sign of investor satiation with Australian bank international debt issues, the stability of this funding source is clearly a factor to be watched by both bank treasurers and official policy makers.

One development in this regard is the expansion of Australian banks, particularly ANZ, into regional economies with high savings ratios. Branches and subsidiaries established in such countries which can generate a surplus of deposits over lending opportunities provide potential for transfer of at least a limited amount of funds back to the Australian balance sheet to help meet Australian funding requirements.

6. Policy considerations

Covered bonds

Australian bank lobbying of the government to allow the introduction of covered bonds has had some success, as reflected in the CSBS announcement of 12 December 2010.

Covered bonds are a form of securitisation popular in Europe. They are treated as on-balance sheet rather than off-balance sheet funding.

Covered bonds involve banks issuing debt instruments which are secured against a pool of mortgage loans held by the bank. Investors thus have a claim on the bank in the form of the bond and, should the bank fail, have a first claim ahead of other creditors and depositors on that package of mortgage loans.

It is this priority ahead of depositors which has been an initial impediment to issue of such securities by Australian banks, because the Banking Act incorporates a depositor preference condition preventing banks from issuing claims which rank ahead of depositors. (See, for example, APRA's letter dated 29 April 2008 to ADIs¹².) That depositor preference requirement, which is relatively uncommon internationally, has been one of the planks upon which Australian authorities for a long time resisted the introduction of deposit insurance. The argument was that depositor preference allied with the loss absorbing buffer arising from capital requirements and substantial reliance by banks on wholesale market (non-deposit) funding meant that the likelihood of depositors suffering losses was minimal.

A number of factors have coalesced to influence the decision to allow limited covered bond issuance.

- First, the financial claims scheme now provides some level of depositor protection, and the need to reassess the current coverage cap of \$1 million before October 2011 made this an opportune time to review the rationale for depositor preference.
- Second, covered bonds are a popular investment class for European investors and they may be easier to issue than other wholesale market instruments.
- Third, the example of a Canadian bank (CIBC) issuing an AUD covered bond (based on Canadian mortgages) in the Australian market at a relatively low yield suggests that investor demand exists. (So also does the success of a New Zealand issue by BNZ).
- Fourth, to the extent that the Australian banks are now seen as too big to fail, the relevance of arguments based on priority in failure is diminished.

Other arguments can be advanced in support of covered bonds. Under a traditional securitisation, mortgages are taken off the bank's balance sheet and are thus not available for depositors in the event of failure. With covered bonds, the assets remain on the balance sheet and are financed by non-deposit funding, and are not available to depositors in the event of failure. Thus when the relevant counterfactual is used, the consequences for depositors may not be particularly significant.

However, one difference between standard covered bonds and off-balance sheet securitisation is that the former involve a topping up of the mortgage pool (for prepayments or loan failures) to remain at a constant size such that the investors are not subject to prepayment risk as occurs in off-balance sheet securitisation. A concern for prudential regulators is that such topping-up could lead to an increasing proportion of the bank's high quality assets being committed to the pool, thus weakening the asset quality supporting depositor claims. But whether the choice

¹² <http://www.apra.gov.au/ADI/upload/Covered-bonds-letter-to-all-ADIs-v2-April-2008-2.pdf>

for Australian banks should be the either/or one of a standard off-balance sheet securitisation or the standard covered bond, or whether some amalgam of the two is possible, needs to be considered.

In the CSBS announcement, government support for development of ‘bullet’ style tranches of off-balance sheet securitisation securities indicates that innovative, alternative, types of securities are under consideration. In the case of on-balance sheet secured bonds, instruments which are subject to the pre-payment risk of a given initial pool of mortgages would be a possibility that may appeal to particular investor groups and warrants further consideration. Whether European fixed interest investors more familiar with fixed maturity covered bonds would be willing to accept securities with prepayment risk is problematic, but such securities may be of interest to domestic investors such as superannuation funds.

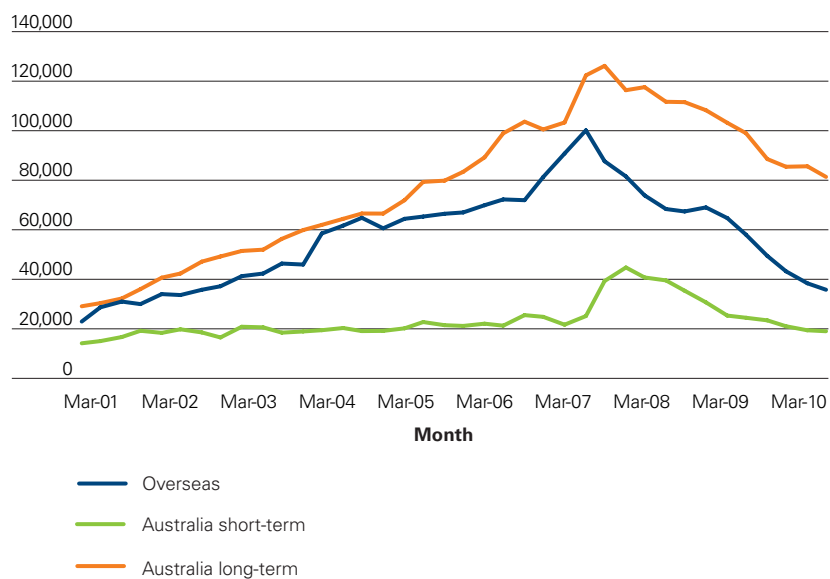
Given the need for banks to meet new net stable funding (NSF) ratio requirements, use of covered bonds as a stable funding source is an attractive proposition, which may help recycle household savings via superannuation funds back to the banking sector.

Government involvement in securitisation

The decline in Australian securitisation following the GFC is readily apparent in Figure 11.

Figure 11: Recent Australian securitisation experience

Securitisation funding



Source: RBA Statistical Tables B19

There have been a number of calls for introduction of a government agency to promote the growth of securitisation by providing guarantees of various forms. The Canadian scheme has been mentioned, and while its activities are wide ranging, a significant activity involves purchasing residential mortgages and issuing government guaranteed claims against those mortgages that can then be repackaged and on-sold into investment markets.

Australian Government support for the securitisation market has been limited to date to the AOFM acting as a key investor in selected issues as shown in Table 10.

Table 10: AOFM support of securitisation, 2010

Date	Issuer	Series	Amount
29-Jan-10	AMP Bank	Progress 2010-1 Trust	36.00
17-Feb-10	Bank of Queensland	Series 2010-1 REDS Trust	250.00
10-Mar-10	CUA	Series 2010-1 Harvey Trust	143.00
15-Mar-10	Members' Equity Bank	SMHL Securitisation Fund 2010-1	250.00
24-Mar-10	Bendigo and Adelaide Bank	TORRENS Series 2010-1 Trust	123.00
31-Mar-10	IMB	Illawarra Series 2010-1 RMBST Trust	157.50
17-May-10	RESIMAC	RESIMAC Premier Series 2010-1	10.00
9-Jun-10	Suncorp Metway	APOLLO Series 2010-1 Trust	300.00
14-Jul-10	Members' Equity Bank	SMHL Securitisation Fund 2010-2E	250.00
20-Jul-10	Bendigo and Adelaide Bank	TORRENS Series 2010-2 Trust	19.50
20-Jul-10	Bendigo and Adelaide Bank	TORRENS Series 2010-2 Trust	476.50
4-Aug-10	MyState Financial	ConQuest 2010-2 Trust	20.00
4-Aug-10	MyState Financial	ConQuest 2010-2 Trust	139.25
4-Aug-10	MyState Financial	ConQuest 2010-2 Trust	10.75
18-Aug-10	Liberty Financial	Liberty Prime Series 2010-1	90.00
18-Aug-10	Liberty Financial	Liberty Prime Series 2010-1	10.40
27-Aug-10	Bank of Queensland	Series 2010-2 REDS Trust	497.60
2-Sep-10	Macquarie Bank	PUMA Masterfund P-16	247.50
9-Sep-10	FirstMac	FirstMac Mortgage Funding Trust Series 1-2010	164.00
9-Sep-10	FirstMac	FirstMac Mortgage Funding Trust Series 1-2010	26.77
28-Sep-10	Members' Equity Bank	SMHL Securitisation Fund 2010-3	290.00
20-Oct-10	ING Bank (Australia)	IDOL Trust Series 2010-1	250.00
			\$3,761.77

Source: www.aofm.gov.au

It is far from clear that any rigorous cost-benefit analysis would lead to support of a guarantee type scheme, and the wider consequences for the structure of the financial system would be significant. As Table 11 (from Lea, 2010) indicates, such levels of government support are relatively uncommon.¹³ The CSBS announcement did not include any such measures.

13 International Comparison of Mortgage Product Offerings Dr. Michael Lea Director, Corky McMillin
Center for Real Estate San Diego State University San Diego State University Research Foundation September 2010

Table 11: Government mortgage market support internationally

Country	Government mortgage insurer	Government security guarantees	Government sponsored enterprises
Denmark	No	No	No
Germany	No	No	No
Ireland	No	No	No
Netherlands	No	No	No
Spain	No	No	No
U.K.	No	No	No
Australia	No	No	No
Canada	CMHC	CMHC	No
Japan	No	JHF	Possible
Korea	No	No	Korean Housing Finance Corp.
Switzerland	No	No	No
U.S.	FHA	GNMA	Fannie Mae, Freddie Mac, FHLBs

Source: Lea (2010)

Bond market development and retail bank bonds

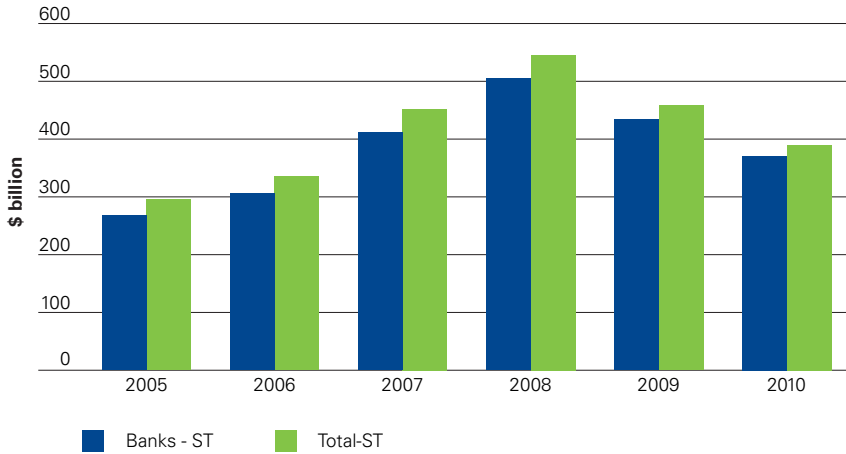
Australian banks once were significant issuers of debentures to retail customers through their finance company subsidiaries. Those securities were generally unsecured, and while there is in principle nothing to stop banks from issuing such instruments themselves, this has not been a major funding source.

While term deposit funding may appear to give an equivalent funding outcome, the development of a secondary market in bonds would enable longer potential maturities. It may also better tap into additional investor groups. SMSFs (self-managed super funds) could be expected to be attracted to such securities, while the banks own substantial wealth management businesses and their legions of financial advisers provide a mechanism for creating interest in and distributing such financial products.

Figure 12 illustrates the relative importance of banks as issuers into both domestic and international debt markets, and the relatively small size of Australian debt markets can be seen from the scale of total issues. Figure 12 also illustrates the relatively small scale of the government debt market, which provides room for greater private issuance.

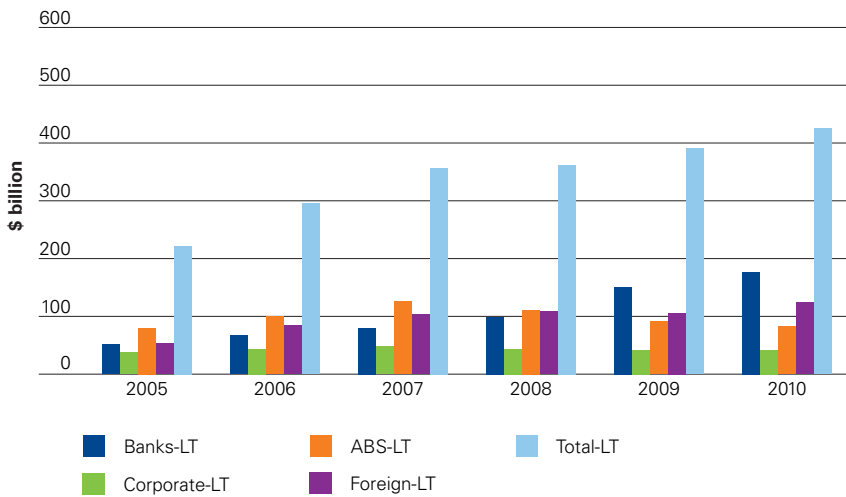
Figure 12: Australian debt markets

Domestic short term private debt



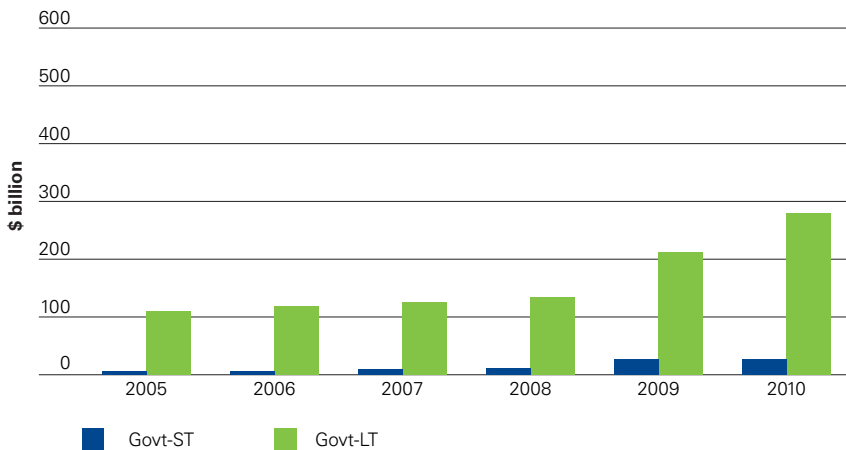
Source: RBA Table D4

Domestic long term private debt



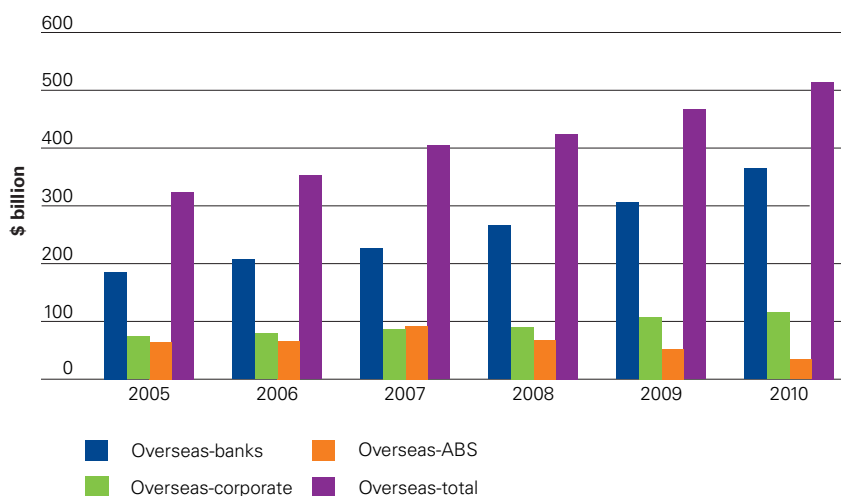
Source: RBA Table D4

Government debt



Source: RBA Table D4

Overseas private debt



Source: RBA Table D4

Basel III

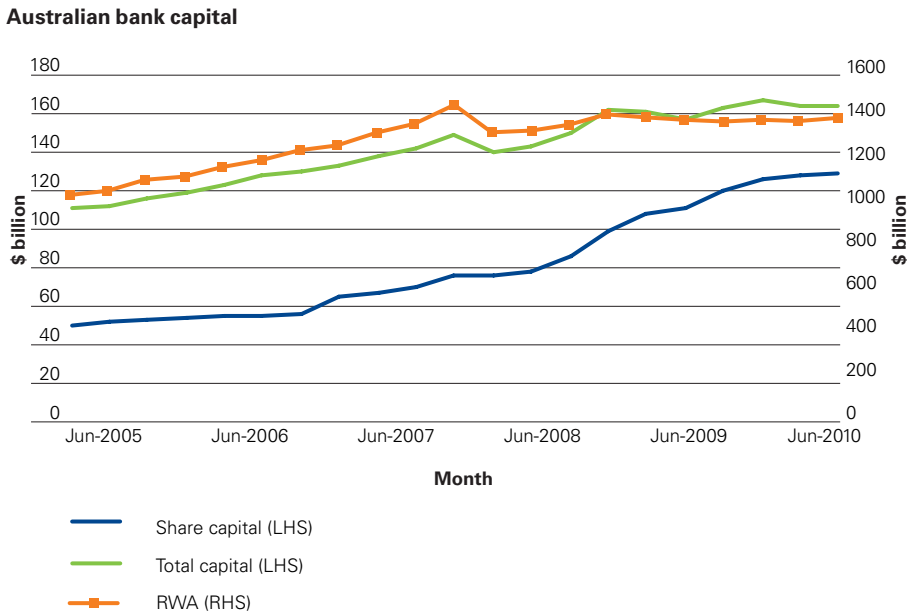
Proposals released in September and December 2010 (almost on the 2-year anniversary of the Lehmann collapse) by the Basel Committee, referred to as Basel III, involve five major changes to bank capital requirements to be phased in over approximately 7 years.

- First, a capital conservation buffer, comprising common equity, of (eventually) 2.5 percent that complements the current minimum capital requirement of 8 percent of risk weighted assets (RWA). If a bank's capital falls below the 10.5 percent level, constraints are placed on distributions (dividends, bonuses, etc).
- Second, banks will be required to possess (eventually) common equity of at least 4.5 percent of RWA (plus another 2.5 percent in the capital conservation buffer).
- Third, the 'quality' of allowable capital will be increased by limits on acceptable hybrid instruments, greater required deductions (of things like deferred tax assets, equity investments, goodwill, etc) in calculating common equity, and an increase in the 'Tier 1' part of the total from 4 to 6 percent of RWA.
- Fourth, a non-risk-weighted leverage ratio will be introduced (with a minimum ratio of common equity to assets of 3 percent being trialed until a final decision on the minimum value is made in 2017).
- Finally, increased risk weights (which increase RWA and thus required capital) had already been announced in December 2009 for various bank activities (such as securitisation and trading).

Thus an increasingly important component of bank funding will be equity financing and banks will be less able to rely on innovative hybrid securities to meet capital requirements.

In Australia, banks have used a range of such securities, including converting preference shares and reset converting preference shares that have appealed to the retail investor market. Whether banks will see value in issuance of such securities if they are no longer substitutes for expensive equity capital, but an alternative to other forms of debt or deposit funding, is a moot point, but their relative role as a funding source can be expected to decline. Figure 13 illustrates that this process of less reliance on non-equity regulatory capital has already commenced, with the proportion of share capital in total capital increasing substantially over the past 2 years.

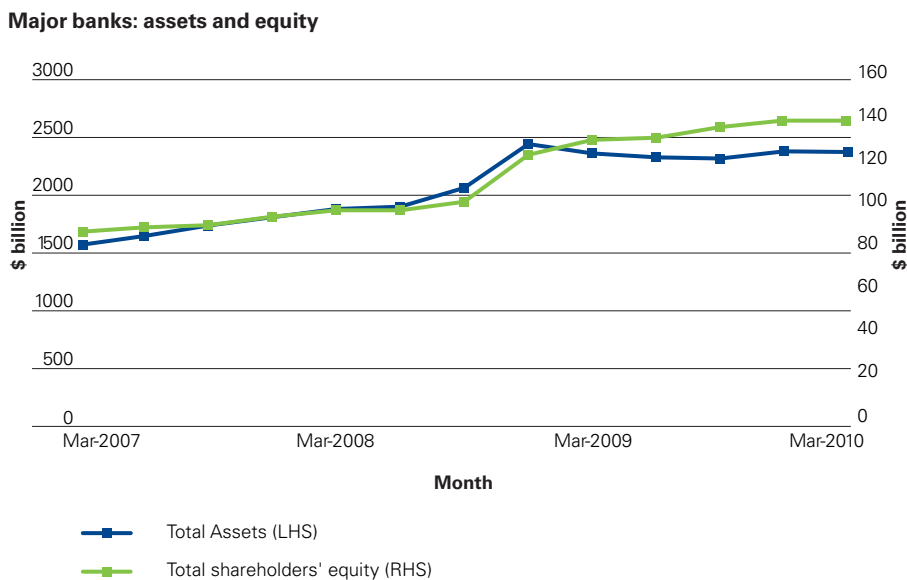
Figure 13: Bank capital



Source: RBA Table B6

While Australian banks have been active in increasing their equity capital since the GFC as Figure 14 indicates, Table 7 on page 17 suggests that by international standards (or at least for international perceptions based on ‘official’ data such as that provided by the IMF) there is still a need for higher capital ratios. Although resistance has been strong to a simple leverage ratio requirement as a Basel III supplement to the Basel II risk weighted assets based capital requirement, recent agreements at the G20 level have mandated this as a future policy instrument. While the timing is deferred and the minimum requirement low, international market and regulatory pressures will force bank compliance with international norms. And while risk weighted capital ratios are high, due to the high proportion of low-risk-weight mortgages in bank portfolios and recent capital raisings, Australian bank leverage ratios are still relatively low at around the 6 percent mark.

Figure 14: Bank assets and equity



Source: APRA <http://www.apra.gov.au/Statistics/ADI-Quarterly-Performance-Statistics.cfm>

NSF ratio requirement

Another component of the Basel prudential framework relevant for future bank funding arrangements is the introduction of a NSF ratio. The standard will require banks to have some minimum proportion of long term stable funding over a one-year horizon, based on an assessment of the liquidity of assets and contingent liabilities. This proposal together with the liquidity coverage ratio (LCR) requirement aims to address the failings in bank liquidity management that became apparent in the GFC, particularly the use by investment banks of repos to finance asset holdings and the proliferation of structured investment vehicles (SIVs) and conduits relying on commercial paper and parent bank liquidity guarantees.

Australian banks did not utilise such funding techniques to the same degree as their overseas counterparts, so in that regard the NSF ratio requirement is less likely to impact upon their funding activities. However, Australian banks rely extensively on offshore capital markets funding, although much of this is for longer term funds. Given the disruptions in international capital markets experienced in the GFC, there are concerns about the financial stability implications of this, and the banks themselves have attempted to reorient their funding more to domestic retail deposit markets. But the scope for much success there is limited by the macroeconomic flow of funds' constraints arising from the balance of payments and superannuation arrangements. It can be expected that there will be greater focus on lengthening the average term of funding. While this would seem compatible with the natural preference for superannuation funds for longer-term investments, it requires design and generation of interest in attractive fixed interest products.

What may happen (and the future is always hazardous to predict) is that the Australian banks might move some way towards a different intermediation model.

Currently, the major banks effectively fund Australia's large and longstanding balance of payments current account deficit by borrowing offshore – and then lending on-balance sheet to Australian companies. Very few of those companies issue debt themselves in the international market, and much less so than in comparable countries internationally. For the large banks with significant securities origination, distribution and underwriting capacity, the option of generating fee income by taking Australian companies to the international debt markets to issue their own paper (rather than the current practice of the banks borrowing to on-lend) is one way of changing their funding mix. And if the credit rating or investor recognition of the Australian companies is inadequate, bank guarantees could be provided (for a fee) to make the securities more attractive to international investors.

7. Conclusion

Fundamental, slow changing economic and institutional factors (primarily balance of payments and superannuation arrangements) mean that substantial changes in the patterns of Australian bank funding are unlikely to occur in the short term.

Slower on-balance sheet credit growth reflecting deleveraging (and, optimistically, recovery of the securitisation market) is reducing overall funding requirements, although slowing deposit growth has meant less of a decline in required capital markets funding. And while government initiatives to develop local bond markets may see this funding source increase in importance, there remains a national requirement for financing of the balance of payments deficit that banks (particularly the majors) are best placed to meet through international capital markets. Government approval to issue covered bonds will enable major banks to tap different investor groups (both domestically and internationally), but tight limits on amounts issued relative to balance sheet size, and issuance costs for smaller amounts, will make it difficult for smaller institutions to tap into these funding sources.

There is also limited scope for substantial changes in the mix of bank funding towards greater reliance on stable household deposits in the absence of significant contractions in bank lending and asset holdings. In aggregate, deposits will adjust to a level (or growth rate) compatible with the settings of monetary policy by the RBA. Increased competition for such funds because of their desirable 'stickiness' and use in meeting new funding liquidity requirements has more effect on the price (interest rate) paid, rather than on the aggregate quantity. This increased deposit funding cost, already observable, is bad news for smaller institutions such as credit unions and building societies that rely primarily on deposits as their funding source. While the CSBS package involves investigating ways of facilitating access of such institutions to wholesale funding markets, the scope for substantial developments in this regard seems somewhat limited by the small scale of the institutions involved. Continuation of the financial claims scheme, and other related measures should, however, assist their ability to compete in retail deposit markets.

Growth in off-balance sheet funding by way of securitisation seems set to resume following the collapse of the market during the GFC. There have been competition induced adjustments in the relative cost of deposits and wholesale capital market funding, and average costs of on-balance sheet funding for banks have increased (as pre GFC wholesale funding has been rolled over at higher spreads). Whether these changed cost relativities are sufficient to draw the major banks into substantial securitisation activities remains to be seen, but smaller institutions will benefit from the restored viability of securitisation.

But the financial world post GFC is a riskier place.

The potential volatility of securitisation funding is readily apparent, as is that of international wholesale capital market funding. Increased competition also increases the potential volatility of deposit funding flows (and costs), with more retail deposit funds having the characteristics of 'hot money'.

Managing funding risks will remain a vital part of bank planning, with much attention paid to finding new ways to diversify funding sources as part of risk mitigation strategies.

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