Funding Australia's Future:

From where do we begin?

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1. Introduction

The objective of this paper is to provide an overview of the current structure and trends in financing patterns and portfolio allocation in Australia, and an initial, high level, assessment of how those factors may affect the efficiency of the financing process and influence its future development. It aims to provide background material for subsequent research focused on identifying and influencing future possible developments in Australia's financial structure affecting efficient financing of economic activity.

Inherent in the approach of the paper is the premise that the financial sector is in a constant state of adaptation to new developments in technology, innovation and regulation, and changes in the pattern of demand for and supply of finance by end users (Australian households, business, government and entities in the rest of the world engaged with Australia). While the ultimate economic functions of the financial sector (as described in (Merton 1995) and discussed further in the paper in this collection by Dr Mulino) can be assumed to remain constant, the types of financial services and products used, and relative importance of different types of financial firms and markets, can be expected to adapt over time in response to such underlying forces. Understanding future possibilities for financial sector evolution thus requires recognition of its current structure and recent trends as the starting point – even though future developments in technology, innovation and real sector developments are, to large degree, unpredictable.

Also important to the analysis of this paper are a number of core principles.

- The level of risk in the economy must ultimately be borne by individuals (both local and foreign) as the ultimate owners of real and financial assets and taxpayers. The financial sector can influence the amount of aggregate risk taking (through allocation of funds to different real investments), affect how that risk is distributed (through financing structures), and amplify or moderate the effects of shocks to the system.
- In the short run in aggregate, and absent financial crises, the role of bank deposits as money gives them an aura of indestructibility. Financial and real decisions by others involve primarily a change in the ownership of system wide bank deposits rather than their total.
- In the longer run, the quantity of bank deposits and other financial assets will reflect portfolio preferences of ultimate end users of the financial sector (households, business, government and the overseas sector). That may involve adjustments to the absolute scale of bank balance sheets, reflecting preferences of end users, banks themselves, and governments (via the monetary authorities) regarding desired levels of leverage in the economy. (For example, expansionary monetary policy can

accommodate or induce increased bank lending which leads to increased bank deposits). However, at least some part of the adjustment is via any disequilibrium in asset holdings leading to changes in aggregate real income, prices, interest rates and exchange rates which affect asset demands and thus remove the disequilibrium.

- While one of the key roles of the financial sector is facilitating the efficient flow of new savings into new real investments, these (very important) flows are relatively small compared to the aggregate stock of financial assets (arising from past savings and investment decisions) in the economy.[1] Changes in portfolio preferences, including for leverage, which affect asset prices and returns can thus have significant effects on savings and investment. Analysis of sectoral balance sheet sizes, composition, and leverage are thus important in considering how underlying real shocks and financial sector shocks may be distributed and transmitted throughout the economy. A greater emphasis on determinants of balance sheet structures, financial products and financial institutions is the main point of differentiation with the paper by Professor Maddock and Mr Munckton also in this collection which pays more attention to real sector flows.

The Global Financial Crisis (GFC) marked a turning point in the dynamic evolution of the structure of the Australian financial sector ((Davis 2011), (Brown, Davis et al. 2011)). A number of pre-existing trends disappeared and many of the changes can be linked directly or indirectly to the GFC. Whether these changes are likely to be transient or longer-lasting is a key question for further research and analysis. Significantly, the disruption caused by that event meant that much attention was diverted from underlying structural changes in financing arrangements which are important for future financial development.

As at 2013 the structure of Australian financing arrangements is marked by a number of characteristics which differentiate it from structures observed overseas and which are important in determining whether the economic functions of the financial sector are performed as efficiently as might be the case. Some of those characteristics reflect legislative and regulatory influences, while others can be traced to distinguishing characteristics of the Australian economy and historical patterns of financial sector development.

But there are also some other underlying trends and influences relevant for future development – some of which are international, some domestic. At the international level,

1 Gross national saving is typically in the order of 20-30 per cent of GDP, whereas assets of financial institutions (which excludes direct holdings of equities etc by households) is currently in the order 350 per cent of GDP.

one short term consideration is the world-wide pervasiveness of a low-inflation, low interest rate environment with real interest rates being negative in many countries. A second is the widespread international adherence to freedom of international trade and capital flows, which links the Australian financial system to those overseas – such that expected real risk-adjusted rates of return tend to be linked (perhaps imperfectly) internationally. Also relevant has been the emergence of an international financial regulatory agenda emanating from the G20 and international organizations such as the BIS, Basel Committee, IOSCO, FSB, and the IMF, which is likely to increase the cost of intermediation relative to capital market funding.

At the domestic level, demographic factors, including an ageing population, are relevant to financing trends – particularly given the role of compulsory long term savings via superannuation. One of the major themes of this paper is that patterns of financing in Australia have not caught up with the fundamental long run shift in the flow of household savings into superannuation. This leads to two important issues. First, super funds are traditionally thought of as vehicles for investment in existing financial assets, rather than creators (such as banks) of new financial assets associated with new real investment opportunities. If banks face a declining share of new savings[2], how will the supply of new financial assets (securities) available for super fund investment be created? Will super funds take on, in some way, a larger role as creators of financial assets?

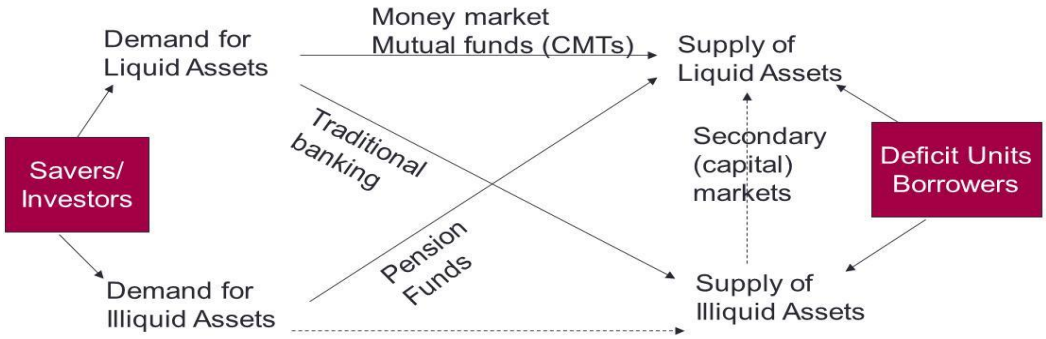
Second, there is also a more fundamental, complementary, change in prospect, illustrated by reference to Figure 1. An important traditional role of banks has been the creation of liquidity by issuing liquid liabilities (deposits) and investing in illiquid assets (loans). But with the development of superannuation, there is now a large pool of illiquid savings currently invested primarily in liquid assets (long term securities such as equities and debt which are given liquidity through the existence of secondary capital markets such as the ASX). Aligned with prudential regulation (the liquidity requirements of Basel 3) inducing less liquidity creation by banks, this growth of illiquid savings raises the prospect of less liquidity transformation being required, as well as alternative ways of it being done. Not only could super funds invest directly in new illiquid assets (with risk and return of the underlying real investment proposals and financial arrangements assessed either in-house or by third parties such as investment banks), they could also buy illiquid assets originated by others such as banks. An important issue in this regard is the extent to which super funds currently feel constrained to limit investments in illiquid assets to allow for potential future changes

[2] As noted earlier, in the short run, the role of bank deposits as money means that household super contributions lead to increased superfund holdings of bank deposits. But, unless there is a long run demand for such deposits by the super funds or by others from whom they purchase other financial assets, the long run consequence will be a decline in bank deposits relative to other financial assets.

in asset allocation (or member withdrawals), and whether there are investment structures (perhaps of the mutual fund variety) which could evolve to mitigate such liquidity constraints.[3]

Such greater "matching" of illiquid savings and investments could have significant structural implications. One is for the relative importance of capital markets (for equity and debt) where the role of creating secondary market liquidity would have lessened (albeit it still significant) importance. While there will always remain an important role for such markets to enable investors to make portfolio reallocations in response to new information or liquidity needs, a larger proportion of illiquid assets could be held directly (off-market) by entities (such as super funds) without such substantial liquidity needs. Such investments need not be held directly. Private equity investment firms cater to such investors and, via different governance arrangements for investee firms, may be able to improve their operational performance.[4] Whether such investments are held directly or indirectly, if such liquidity needs arise (or portfolio reallocation is desired for other reasons) continual advances in technology and financial innovation can be expected to find means to accommodate such demands via over the counter or brokered transactions.[5]

Figure 1 Resolving Liquidity Preferences



[3] While a real asset, such as a pipeline might be "illiquid", liquidity can be created by having a number of transferable financial claims on that asset (such as shares, debt, etc.) held by a significant number of investors.

[4] Whether private equity produces above normal, risk adjusted, returns is open to debate. (See Phalippou, L. and O. Gottschalg (2009). "The performance of private equity funds." Review of Financial Studies **22**(4): 1747-1776.

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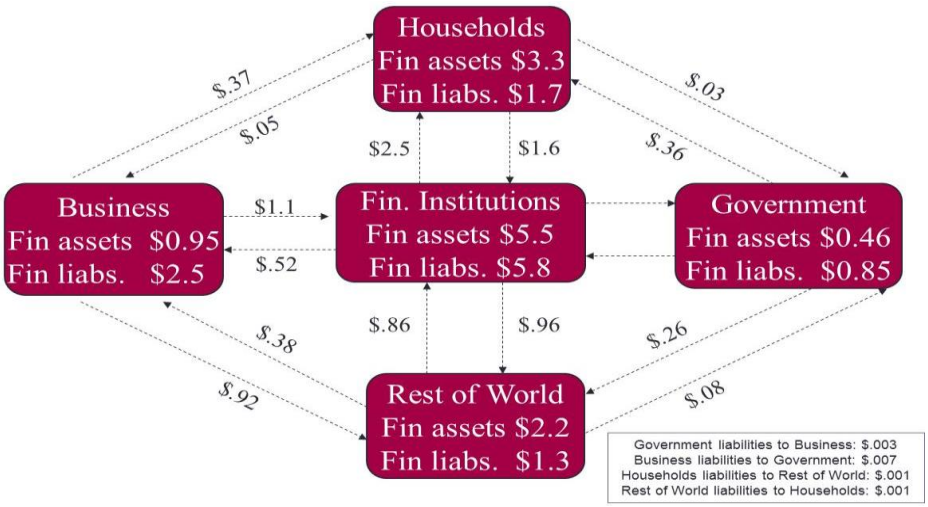
[5] It is worth noting that although individual super funds may face liquidity risk due to member choice of fund, withdrawals (except by members in the decumulation phase), do not affect pension fund assets in aggregate, but require a transfer of assets between funds. There is, to date, a relatively low use by members of the option to switch funds. It could be envisaged that, should switching become significant, technological advances and innovation would lead to mechanisms enabling efficient asset transfers between funds (such as of parcels of listed securities) rather than liquidation of assets to effect cash transfers.

Much of the analysis of this paper is based around the structure used for the National Financial Accounts which identifies four end-user (or real) sectors (households, non-financial businesses, government, and the rest of the world) as well as the financial sector which facilitates financial flows between (and within) those sectors. Figure 2 illustrates and shows the stocks of financial assets and liabilities of each sector as at December 2012, together with the pattern of inter-sectoral claims.

Figure 2 Inter-sectoral financial claims Australia: December 2012, $ trillion



Source: ABS Australian National Accounts: Financial Accounts, Cat No 5232.0, December 2012
Note: Only major inter-sectoral claims are shown. Government asset and liability stocks are for General Government (including State and Local) and do not include public sector non-financial corporations nor State Government Central Borrowing Authorities.

It is worth noting that domestic financial institutions provide less than half of the funding of incorporated businesses with the rest attributable to overseas funding (of both locally and foreign owned businesses) and household and SMSF equity investments. Bank lending to unincorporated businesses is included in funding of households.

While consolidated figures such as those in Figure 2 are useful in providing a perspective on the relative importance of particular sectors as suppliers and users of funds, it is also important to recognize that there is considerable heterogeneity within the sectors identified which also needs to be considered. There are also financial flows between entities within each sector, and financial transactions between end users can be undertaken directly via financial markets or through brokers and agents as well as via financial intermediaries.

Figure 3 thus provides another perspective on financing arrangements, useful for contemplating future possible developments. At any time, some individuals (households) will be savers (providing funds) and others will be investors (seeking funds) – with individual

circumstances changing over the life-cycle. Similarly, some companies provide finance direct to others such as via trade finance, while financial flows between foreigners and domestic entities involve some with foreigners as recipients of funds and others with them as providers of funds. The Australian government(s) may be in surplus or deficit at different times.

Figure 3 shows the four broad mechanisms available for enabling provision of finance from savers to investors, and through which transactions enabling structural changes in existing balance sheet portfolios can be adjusted. There are a range of financial sector agents (banks, super funds, stockbrokers, advisers etc.) and markets involved in enabling such transactions, and a wide range of financial instruments which can be created in the process. The characteristics of those instruments will determine the risk-sharing between savers and investors, while the financial sector agents (such as banks) may be involved in a role as principals and take on risk (albeit ultimately borne by those savers providing funds to them as shareholders, depositors etc).

Figure 3 Financing Processes

Savers	Financing & Risk Allocation Processes	Investors
Companies	Direct (& Brokered)	Companies
Households	Traditional Intermediation (Originated & Funded)	Households
Governments	Securitisation etc (Originated & not funded)	Governments
Foreigners	Capital Markets (exchanges and OTC)	Foreigners

The relevant messages to be drawn from Figure 3 are as follows. First, the competitive advantage of each of the four broad mechanisms for linking various types of investors and savers can change over time, due to technological change, innovation and regulation. Arguably, we are at a point in history where the interaction of those factors is pointing towards a significantly lessened relative role for traditional intermediation.[6] Second, and for the same reasons, the past competitive advantages of particular financial agents in facilitating flows of funds to particular types of investment, and/or providing preferred avenues (and particular) types of financial instruments for the flow of funds from savers, are open to question. (For example, will the competitive advantages of banks in housing mortgage finance, evidenced by their dominant market share, be sustained into the future?

[6] Of course, the Wallis Inquiry (Financial System Inquiry (1997). Final Report. Canberra, AGPS.
) reached a similar view some fifteen years ago, but the subsequent changes have been less than they anticipated.

And while there is relatively little direct financing of households by households (P2P) and of business by business (B2B), apart from trade credit, ongoing developments in technology and information availability could facilitate such developments.) Reflecting these potential changes, it can be expected that existing financial institutions will attempt to influence the speed and direction of change (through both market responses and lobbying) and that their activities and structures may change as a result. Finally, the different risk allocation arrangements associated with different funding arrangements can be further altered through the use of derivatives or guarantee arrangements.

Recognizing that financial sector development is evolutionary (sometime revolutionary –and the introduction of compulsory superannuation in Australia may fit into that category), to assess future prospects it is important to know where we have been and where we are. In the next section of this paper, a number of major differences between the pre and post GFC environment are examined. This is then followed by an analysis of major characteristics of Australian financing patterns as at 2013, including comparisons with those observed overseas. The final section of the paper provides some thoughts on how such arrangements might develop, and implications for future development of the financial sector and financial flows, drawing on the evidence assembled in the earlier sections.

2. Consequences of the GFC for Australian financial flows

Although Australia escaped much of the economic and financial disruption experienced by the rest of the world from the Global Financial Crisis (GFC) which began to emerge in 2007, the experience has had a profound effect on subsequent patterns of financing, financial sector structure, and attitudes towards financial sector regulation. Identifying the extent to which these changes are transitory or likely to be more permanent is crucial to understanding how financing patterns and the financial sector will develop over the next decade or so.

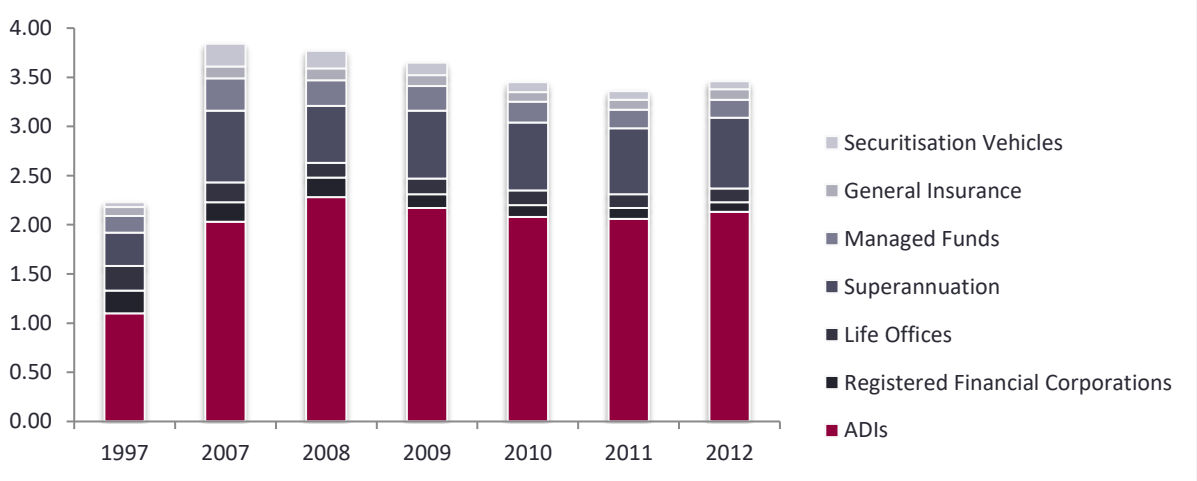
The major observable trend changes pre and post the GFC, although interrelated, can be divided into changes affecting the structure of the financial sector, those related to end-users of the financial sector, and attitudinal and regulatory changes towards the financial sector.

2-1 Financial Sector Structure and Size

1. Growth of the financial sector relative to GDP has ceased.

In the decade prior to 2007, assets of the financial sector grew from 2.2 to 3.8 times GDP, and have since declined somewhat to be around 3.5 times GDP at end 2012 (Figure 4). [7]

Figure 4 Financial Sector Assets/GDP



[7] Edey, M. (2013). The Financial System in the Post-crisis Environment. Remarks to the Australian Centre for Financial Studies (ACFS) and Financial Services Institute of Australasia (Finsia) Leadership Luncheon Series, Melbourne, Reserve Bank of Australia.

suggests factors relevant to explaining the pre GFC include: long run demographic and income trends; shorter term adjustment to lower inflation and deregulation; and the possibility of excessive expansion of the finance sector.

Source: RBA Bulletin Tables B01. ABS Cat No. 5206.0 Australian National Accounts
** Total excludes assets of self managed superannuation funds.*

The experience of pre GFC growth in the size of the financial sector is not unique to Australia, and has been accompanied by some questioning by researchers internationally of whether, following the widespread deregulation of the 1980s (and prompted partly by the GFC experience), financial sectors had grown too big. ((Greenwood and Scharfstein 2013) pose this question for the US, noting both the social benefits and costs of the significant growth in asset management and household credit (which has also occurred in Australia). In response, (Cochrane 2013) argues that size *per se* is not important and that the focus of attention should be on the efficiency of the sector, identification of distortions, and assessment of regulation.

Because some part of the growth reflects financial inter-relationships within the financial sector (such that assets of some institutions are liabilities of others), it is also useful to consider the contribution of the financial sector to national output. A similar pattern emerges, with the sector's contribution to Gross Value Added (Gross Domestic Product less indirect taxes plus subsidies) having fallen somewhat since 2007, after growing strongly over the previous two decades (Table 1).

Table 1: Finance & Insurance: percentage contribution to Gross Value Added

1979*	1985	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012
4.70	5.04	6.38	6.85	8.05	9.37	10.03	10.65	10.27	10.06	10.22	10.13	10.27

Source: ABS 5206 Table 6
** December quarter (trend value)*

The slowdown in growth of the financial sector, and financing generally since the GFC, is also reflected in the pattern of net financial claims growth shown in Table 2.[8] Net claims of the household sector on financial institutions (dominated by superannuation assets plus bank deposits less bank loans) ceased to grow, while financial sector provision of finance to the business sector also declined in net terms.

Table 2 Inter-Sectoral Net Financial Claims ($billion, at September)

Net financial claims of	On	2002	2007	2012
Household	Financial Corporations	388	826	857
	Non-Financial Corporations	87	219	357
	General Government	116	166	335
Rest of World	Financial Corporations	177	285	198

[8] These figures can also be derived from inter-sectoral gross claims such as shown in Figure 2. It should be noted that they are based on market values such that changes reflect both transactions and valuation effects.

	Non-Financial Corporations	223	383	613
	General Government	22	28	149
Financial Corporations	Non-Financial Corporations	354	862	677
	General Government	57	-65	58

Source: ABS 5232.0 - Australian National Accounts: Financial Accounts
**This table excludes the net position of government relative to the business sector which is of minor amount). The figures are at market value and are thus affected by valuation changes.*

The more rapid growth in net financial claims in the five years prior to 2007 relative to the subsequent five years is also reflected in the size of credit and investment markets (Table 3). In the five years to September 2007, total outstandings[9] grew at an annual rate of 14.0%, whereas the average rate for the subsequent five years was 3.5%. Table 3 shows that within that aggregate: deposit growth did not slow down as much; short term paper (Bills and Commercial Paper) on issue has declined; bonds outstanding which were issued in Australia have increased significantly since 2007 (Kangaroo, Government and financial institution bond issuance offsetting a decline in RMBS issuance), while bonds outstanding which were issued offshore have remained relatively constant; growth in loans and placements slowed after 2007 (to around 6% p.a.). Both listed shares and equity and unlisted shares and equity declined in aggregate size, with much of this decline reflecting valuation effects.

It is worth noting (given the focus of most academic finance research on listed equities) that the size of unlisted shares and equity exceeds the listed amounts.[10] Suppliers of these financial assets into the Australian market include private non-financial corporations (around 30 per cent of the $1.82 trillion outstanding at September 2012), non money-market financial investment funds (around 20 per cent) and the rest of the world (around 35 per cent). Of that latter category about one third is held each by Australian pension funds (such as equities listed on foreign stock exchanges) and private non-financial corporations (such as through foreign direct investment in subsidiaries).

Table 3 Australian Financial Instruments: September 2012

	Growth rate - 2002-2007	Growth rate - 2007-2012	Size ($ trill) at September 2012
Deposits & Currency	14%	9%	1.81
Bills & CP	15%	-6%	0.44
Bonds issued in Australia	13%	20%	1.15
Bonds issued overseas	13%	3%	0.56
Derivatives	21%	7%	0.40

[9] ABS Cat 5232.0, Sept 2012, Tables 23-34. Financial instruments included are currency, transferable and other deposits, bills of exchange, one-name paper, bonds, derivatives, short and long term loans, listed and unlisted shares and equity, accounts receivable.

[10] It is also worth noting that unlisted shares and equity do not include household equity in sole proprietorship or partnership businesses.

Loans	13%	6%	2.84
Listed shares & equity	20%	-6%	1.24
Unlisted shares & equity	14%	-1%	1.82
Accounts receivable	2%	6%	0.47

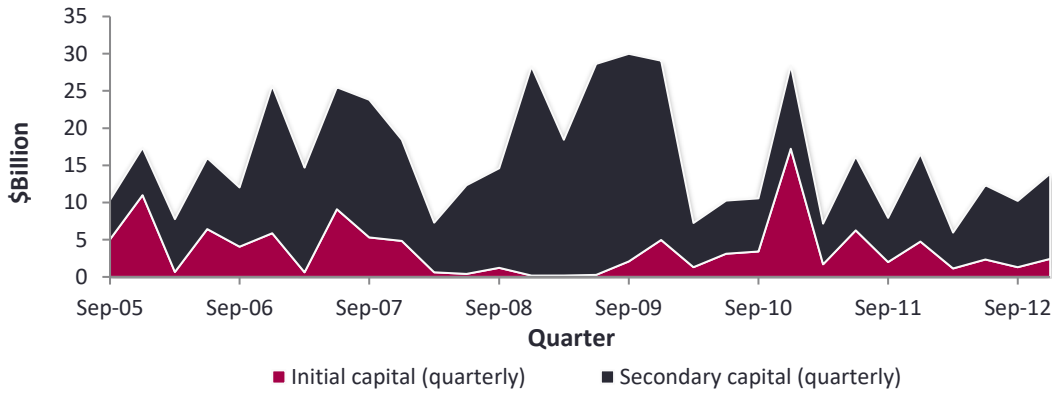
Source: ABS cat No 5232.0 Tables 23-34, September 2012

The contribution of the financial sector to GDP involves activities of financial firms organizing and participating in over the counter (OTC) and exchange traded financial markets – not just the financial institutions whose assets are shown in Table 1.

It is less easy to identify clear changes post-GFC in the contribution of those markets to GDP.

Equity security issuance on the ASX is shown in Figure 5, and the picture is dominated by the dearth of IPOs in the initial years of the crisis and the balance sheet rebuilding by listed firms (particularly banks) at around the same time.

Figure 5 ASX Equity Capital Raisings

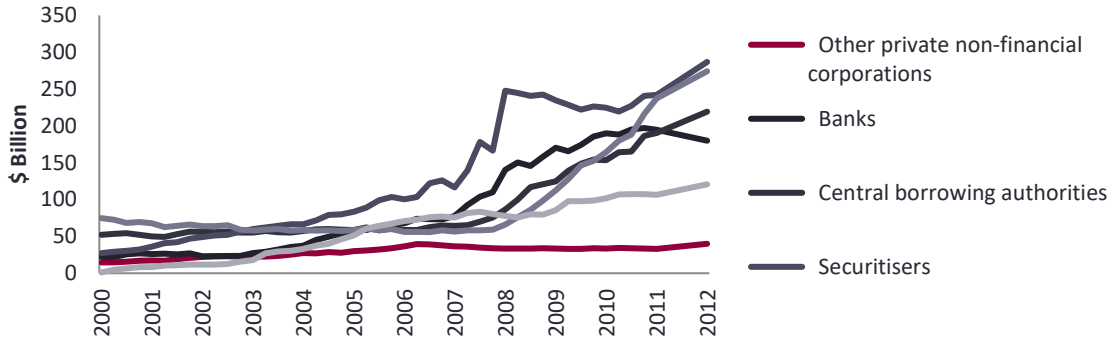


Source: ASX http://www.asx.com.au/research/market-statistics.htm

Similarly the bond market experience is varied. Figure 6 shows the time-series for bonds on issue in Australia, by different types of issuers.[11] Increased issuance by governments (due to budget deficits), banks (replacing overseas debt financing – facilitated by government guarantees), and international institutions (kangaroo issuers) saw increases in these types of bonds on issue. However, issuance by securitisers within Australia was limited – and initially restricted largely to issues supported by involvement of the Australian Office of Financial Management.

Figure 6 Bonds on Issue in Australia

[11] It thus does not include bonds issued overseas by Australian securitisers, financial institutions, or non-financial corporates.



Source: ABS 5232.0 Table 28

Somewhat more discernible effects can be seen in the levels of trading in the secondary markets for financial instruments and markets for derivatives.

2. Turnover in Australian physical and derivative, OTC and exchange traded financial markets for currencies and equity had been increasing strongly till the GFC and stagnated or declined thereafter. (Table 4)

Table 4: FINANCIAL MARKETS ACTIVITY

Year	Turnover (AUD billion)					
	Debt		Currency		Equities	
	Physical	Derivative	Physical	Derivative	Physical	Derivative
1999-00	8,804	11,886	5,706	10,842	361	541
2004-05	17,306	29,767	9,675	25,156	806	950
2009-10	11,134	46,110	14,680	27,461	1,359	2,801
2010-11	13,430	63,850	11,853	33,395	1,339	3,198
2011-12	13,549	65,903	10,843	30,007	1,185	3,387

Source: AFMA Australian Financial Markets Report (various issues)

While these figures suggest some slowdown in activity in the currency and equities markets (but not debt markets) interpreting these figures is somewhat problematic. The stagnation of the value of turnover in equities occurred at a time when equity market prices had declined substantially, although new issues meant that overall market capitalization did not fall by as much.[12] But turnover/market capitalization fell from around 110 per cent in 2007-8 to around 90 per cent in 2012. While this decline may seem *a priori* inconsistent with the increased prevalence and concern over high frequency trading (HFT), it is consistent with much of that activity involving more frequent submissions and withdrawals of bid and offer quotes for small parcels – rather than increased execution of trades. It is also one potential contributor to a significant reduction in recent years to the average trade size, although the

[12] It was $1.49 trillion in 2007/8 and $1.27 trillion in 2011/12.AFMA (2012). Australian Financial Markets Report. Sydney, Australian Financial Markets Association.

use of algorithmic trading by fund managers to place orders in a way which reduces execution costs is also relevant.

Similarly, a valuation effect may provide part of the explanation for the decline in the AUD value of currency trading. This occurred at a time when the AUD increased strongly from around 0.64 USD per AUD in early 2009 to parity or above in recent years - such that the amount of foreign currency involved in those trades would show considerably less, if any, decline.

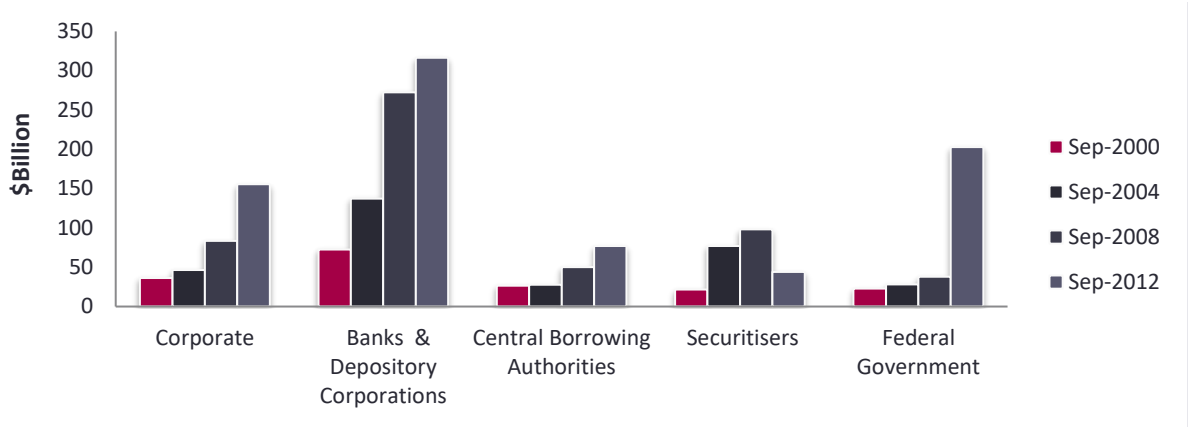
Given the size of the increase in debt securities outstanding (Figure 6) the physical debt market turnover values suggest a slower rate of turnover. In contrast, turnover in the debt derivatives market has continued to grow. Much of that growth has occurred in two segments of the market. One is the repurchase agreement (repo) market which, unlike its importance as a funding and leverage source for investment banks in the US and Europe prior to the GFC, had played a relatively minor role in Australian financial markets other than RBA use of such instruments for monetary policy operations. The other is growth in the OIS (Overnight Index Swaps) market used by banks, and others, for managing short term interest rate risk.

3. The previously rapid growth in domestic securitisation (of primarily residential mortgages) prior to the GFC slowed dramatically, while international issues largely ceased

Very little use of this funding technique was made for several years after 2007 (other than in issues supported by the AOFM as a keystone investor), although several large banks did make domestic issues (See Figure 6).[13] Although evidence of some recovery appeared in 2012 the introduction of covered bonds (permitted by legislation in October 2011), which may have cash flow and risk characteristics more appealing to institutional fixed interest investors may impede growth of traditional securitization products. Reflecting the lack of investor interest in securitized products internationally following the GFC, there was virtually no international issuance, despite the low risk nature of Australian securitization products (See Figure 7).

Figure 7 Australian Bond Holdings of Rest of World

[13] Debelle, G. (2013) Some Recent (and not so recent) Trends in Australian Debt Markets. Address to the KangaNews DCM Summit. KangaNews DCM Summit
provides more detail (including experiences in debt markets more generally)

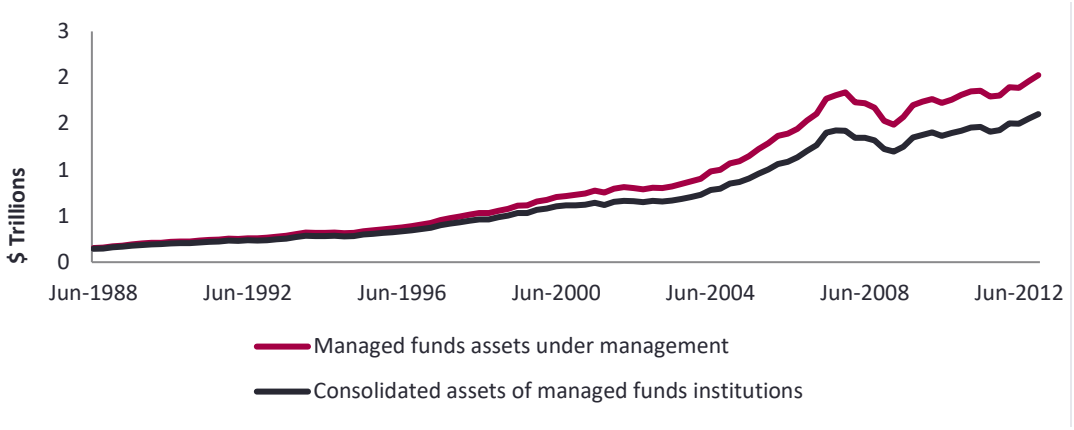


Source: ABS 5232.0 Australian National Accounts: Financial Accounts, Table 21

4. Strong growth in the funds management industry prior to the GFC was interrupted.

Figure 8 illustrates the slowdown in what was previously a very high growth rate of the managed funds industry. In the five years to December 2007, the annual growth rate of funds under management was 16.5 per cent. (The growth in mandates given by super funds to other fund managers is reflected in the widening gap between total fund manager assets and the consolidated figure). In the following four years to December 2011, the growth rate was effectively zero. A significant component of this is a valuation effect, reflecting the decline in the market value of assets under management, and less being a reduction of flows into fund managers – reflecting the compulsory nature of contributions into superannuation funds. From December 2011, the growth rate has increased significantly, reflecting recovery of asset values and ongoing contributions into superannuation. Other parts of the sector have not, however, experienced such a recovery, with little sign of any growth in direct investments by households in other publicly available managed funds vehicles. There is also an apparent trend towards more in-house asset management by super funds, which would reduce mandates available to specialist fund managers. While hedge funds have established a presence in the Australian market, and some are making offers to the public retail market, including SMSF, under PDS, the sector is still a relatively small one.

Figure 8 Australian Managed Funds Industry: 1988 - 2012

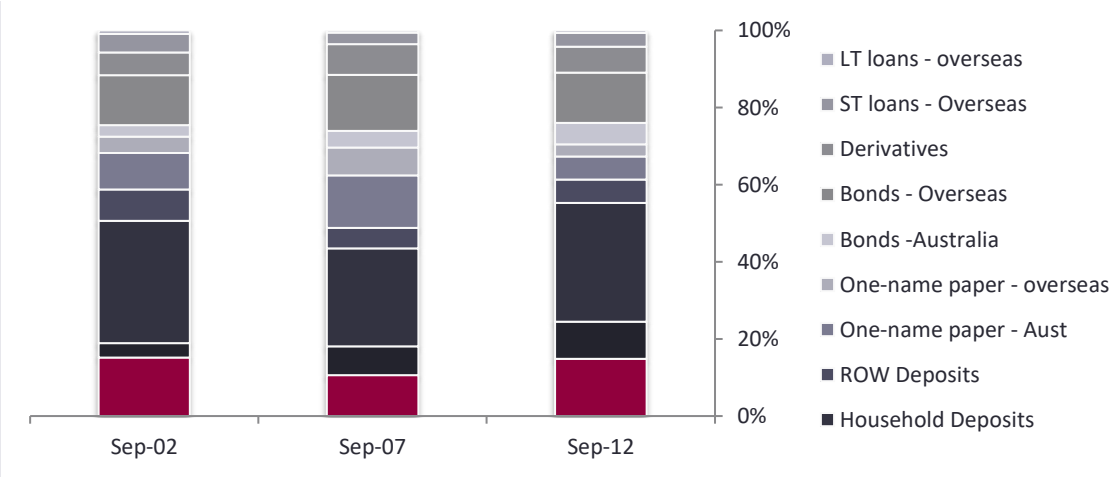


Source: ABS. 5655.0 Managed Funds, Australia, Table 1
Note: The difference between the two series is funds managed on behalf of investors other than other managed funds

5. Australian banks reduced their reliance on domestic deposits and increased their reliance on offshore funding between Sept 2002 and Sept 2007, but have reversed that trend since, with domestic deposits initially declining from around 51 to around 43 per cent of liabilities before increasing to around 53 per cent.

Figure 9 illustrates the change in the composition of bank liabilities. There has been a reduction in the use of short term, one-name, paper. The increased usage of deposit funding is likely to be reinforced by Basel 3 liquidity requirements which, in general, give greater weight to retail deposits as stable sources of funds and also induce use of longer term funding instruments.

Figure 9 Bank Liability Distribution



Source: ABS 5232.0 Australian National Accounts, Financial Accounts, Table 8

2-2 Sectoral Trends

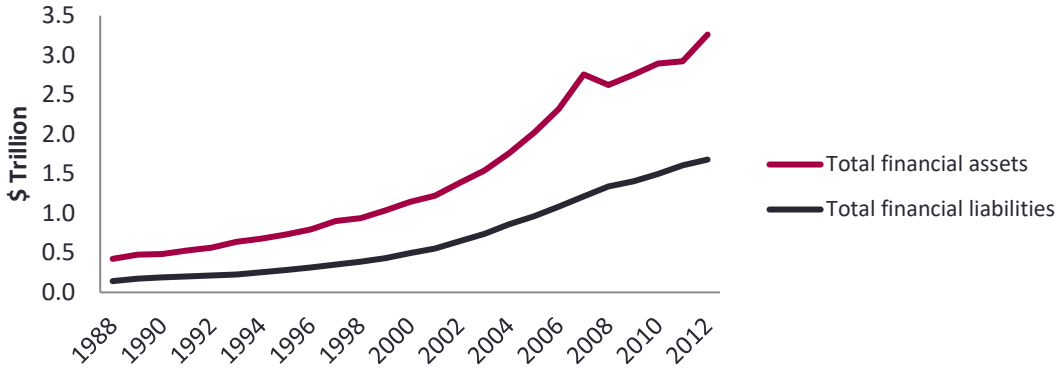
1. Increasing scale and leverage of household balance sheets has ceased.

In the two decades prior to 2007, the household debt/income ratio increased from below 50 per cent to around 150 per cent and has since stabilized. Over the same pre-GFC time period, household financial assets relative to disposable income doubled from around 170 per cent to 350 per cent (since declining to around 300 per cent) partly due to increased leverage, but also due partly to increasing valuations of assets such as housing and equities (Figure 10, Table 5). Relatively little of the pre GFC increase could be attributed to savings out of current income, although compulsory superannuation savings did have a positive influence in this regard.[14] The increased willingness of households to take on debt can be attributed to a number of factors. These include the consequences of financial deregulation and expansion of new bank lending and investment products which facilitated increased debt, while forced accumulation of illiquid long term superannuation savings may also have been a factor. Also relevant are the incentives which the Australian tax system gives to households to make levered investments in times when asset prices are expected to increase. However, it could also be argued that this pre-GFC experience reflected more a catching up to international norms for household balance sheets following the financial deregulation of the 1980s, and similar developments (albeit from a higher initial leverage position) were observed overseas. A further "short-run" adjustment explanation often argued by the Reserve Bank (see, e.g. (Ellis 2013)) is that the transition to a lower inflation (and nominal interest rate) environment has reduced the "front end loading" of real repayments which occurs in inflationary periods for standard credit foncier mortgage loans, enabling households to take on larger loans.

Figure 10 Household Sector Financial Assets and Liabilities

[14] Connolly, E. (2007). The Effect of the Australian Superannuation Guarantee on Household Saving Behaviour. Research Discussion Paper 2007-08. Sydney, Reserve Bank of Australia.

estimates that each dollar of superannuation savings led to a net increase of around $0.70 - $0.90 in total household savings.



Source: ABS 5232.0 Australian National Accounts: Financial Accounts, Table 20

Table 5 : Household Leverage Trends 1987 - 2012

	Debt/ Assets	Housing Debt/ Housing Assets	Debt/ Income*	Total Assets/ Income	Financial Assets/ Income	Interest Payments/ Income	Housing Interest Payments/ Income
Jun-1987	8.7	11.9	43.3	430.1	169.1	7.6	5.2
Jun-1997	11.6	18.6	74.7	560.4	222.0	6.1	4.7
Jun-2007	16.1	25.8	153.5	841.1	350.6	11.3	9.2
Jun-2008	17.1	26.9	150.9	787.6	318.3	13.1	10.8
Jun-2009	18.4	29.6	146.1	714.7	288.7	9.0	7.2
Jun-2010	17.3	26.9	152.2	783.8	302.1	11.1	9.0
Jun-2011	17.7	28.3	150.1	743.7	296.2	11.5	9.4
Jun-2012	18.2	30.0	148.0	723.6	299.2	10.4	8.5

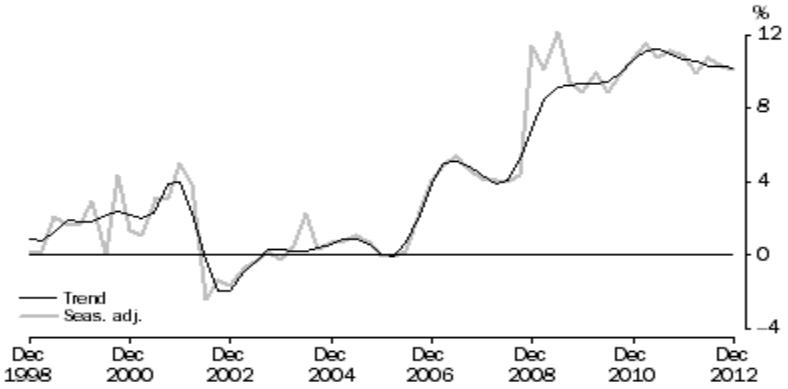
Source: RBA Bulletin Table B21

** Income measure is household disposable income*

The growth in household balance sheets, relative to GDP, ceased with the advent of the GFC, when equity values fell with particularly adverse consequences for those in or near retirement with retirement savings particularly exposed to equity values. Notably, household savings out of current income increased, partly offsetting the effect of the decline in asset values on household wealth. Both household debt and asset holdings as ratios to income appear to have stabilized at levels somewhat below their GFC peaks, with low nominal interest rates facilitating debt servicing. Measured in dollar terms, household financial assets and liabilities have continued to grow albeit at more subdued rates of around 5 per cent p.a. (compared to rates in the mid teens in the years prior to the GFC).

2. The household savings ratio (measured on a national accounts basis – ie excluding asset value changes) has climbed from a near zero figure in the two decades prior to 2007 to a level of around 11 per cent at end 2012.

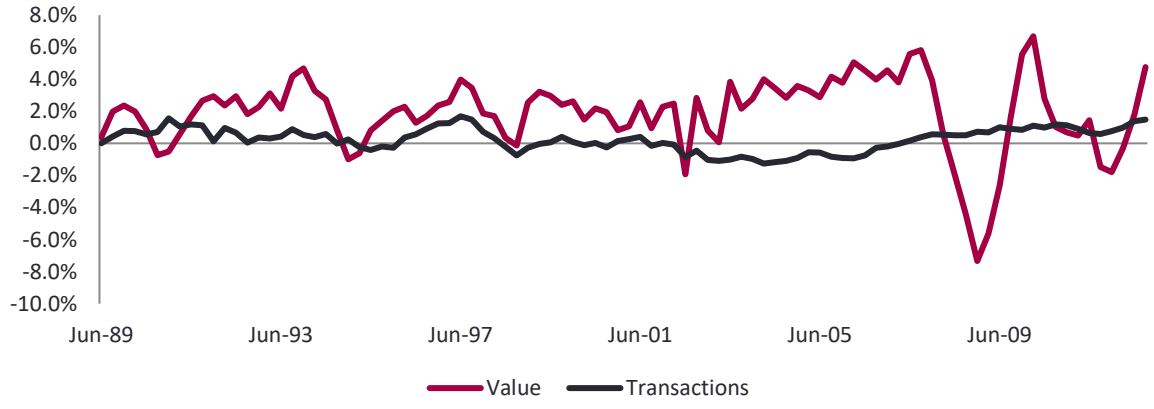
Figure 11 : Household Saving Ratio (National Accounts Basis)



Source: ABS Cat No 5206.0, December 2012

Despite having increased since the mid 2000s, the household savings ratio (shown in Figure 11) remains substantially below its high-teens value of the decade prior to the mid 1980s. Part of the explanation for the change in savings behavior can be seen from Figure 12 which shows the change in the net financial position of the household sector as a percentage of its prior financial position. The change in the value of the financial position reflects both asset valuation changes as well as contributions – with the change due to the latter also shown (as the dashed line). Some part of the reason for a low savings ratio in the decades prior to the GFC can be seen from the higher change in the value of the financial position due to asset value increases. These figures exclude real investments (housing) of the household sector, and strong growth in property prices over the same period is also relevant.[15]

Figure 12 Change in Financial Position: Four Quarter Moving Average

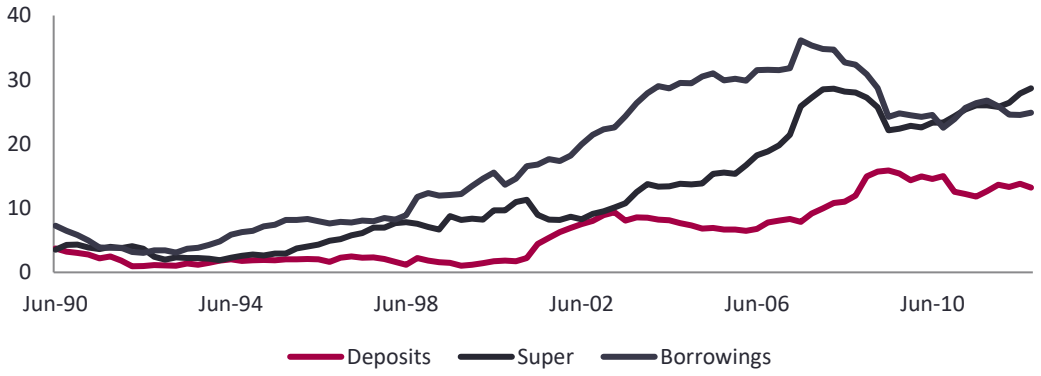


[15] Note that these figures understate household savings because they refer only to the change in value of financial assets, and exclude accumulation of equity in housing.

Source: ABS cat 5230.0 Table 20

Moreover, that figure is consistent with households making relatively little savings in the form of financial assets above that implied by compulsory superannuation contributions. Figure 13 illustrates, showing the (smoothed, eight quarter moving average) path of household acquisition of deposits, superannuation contributions, and borrowings. This suggests that, in aggregate, growth in household holdings of other financial assets (such as deposits) cannot be expected to grow faster than GDP growth unless accompanied by household debt growth. Rebuilding of balance sheets impacted by falling asset values is widely seen as one reason for the increase in the savings ratio arising from reduced use of debt to fund consumption – and reflected in the slow down in bank balance sheet growth.

Figure 13 Household Sector: Net transactions: eight quarter moving average



Source: ABS Cat No 5320.0, Table 20

3. The long run decline in the share of bank deposits in household asset portfolios was reversed.

Table 6: Composition of Household Financial Assets

	Deposits	Shares	Super/Life	Unfunded Super	Other
Sep-1990	29%	10%	36%	13%	11%
Sep-2000	19%	19%	44%	9%	9%
Sep-2007	15%	27%	46%	6%	5%
Sep-2012	22%	16%	46%	11%	5%

Table 6 illustrates the dramatic reversal of the prior decline in the share of bank deposits in household financial asset portfolios. Some part of the increase in deposit share from 15 to 22 per cent from 2007 to 2012 (perhaps half) reflects the effect of asset price declines and poor returns on investments. Household shareholdings declined in value terms between 2007 and 2012 much in line with the decline in the S%P/ASX200 share price index, and an

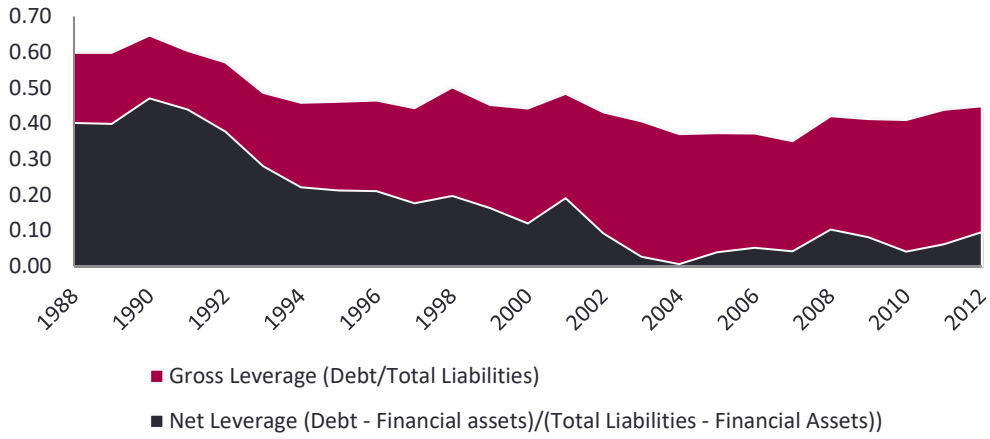
average return on super balances of around zero over this period, meant that growth in aggregate super balances was primarily attributable to net contributions. This suggests that the reversal in trend is unlikely to be long lasting. While some part of the increase in the total value of household bank deposits possibly reflects a reallocation of wealth to a perceived safety haven, some of it also reflects a once-off increase in the level of inter-bank competition for household deposits to replace international wholesale borrowings (leading to higher deposit interest rate), while the attempts of the authorities to ensure ongoing expansion of credit and bank balance sheets is also relevant.[16]

4. The long term decline in the share of non-bank lenders to the household sector and growth in the share of bank and securitized lending has ceased (with only a minor market share now being held by non-bank lenders).

In 1988 non-bank lenders had around 1/3 of the market and securitization was in its infancy. Between then and 2007, securitization grew to a share of around 20 per cent, many non-banks converted to bank status, and the share of non-bank depository corporations fell to less than somewhat less than 10 per cent. Since 2007, the relative shares have remained relatively stable.

5. The gradual decline in corporate leverage (debt/(debt + equity) measured using market values) in the decades prior to the GFC ceased.

Figure 14 Corporate Leverage Trends



Source: ABS Cat No 5232.0 Table 04

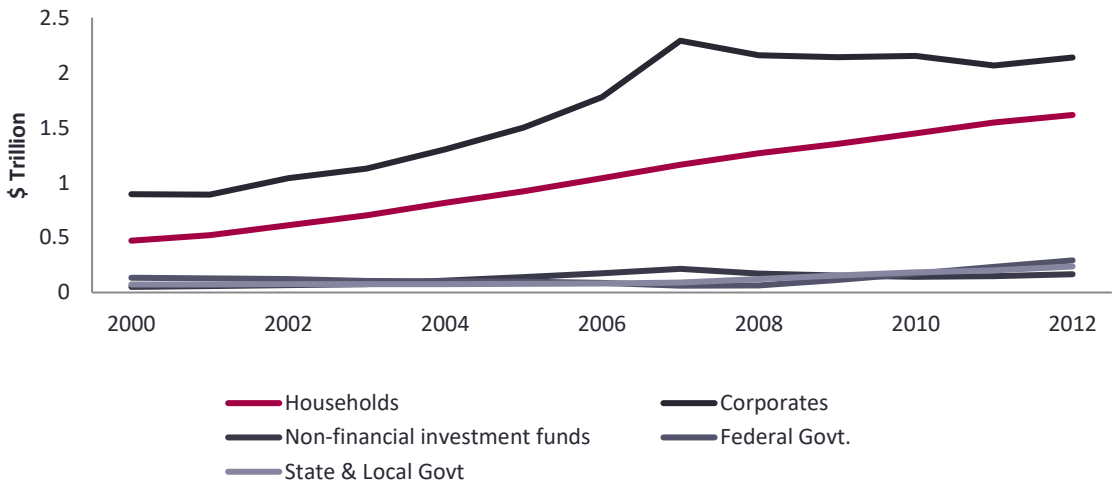
The change in leverage of non-financial private corporations (using the market value of equity) is shown in Figure 14, where a "net leverage" figure is also shown by adjusting for

[16] Because of the role of bank deposits as money, expansion of bank lending leads, in the short run at least, to an increase in bank deposits such that long run trends can be hidden by such short run effects.

corporate holdings of financial assets. The decline in leverage prior to the GFC was at a time of (generally) increasing market values in equity, but that cannot be seen as purely a valuation effect. Rather, it can be interpreted as a response to the introduction of the dividend imputation tax system in 1987 which largely removed tax incentives for use of debt relative to equity by Australian owned companies. Whether the post GFC stabilisation of the ratio reflects a new equilibrium or the effect of lower equity values remains to be seen. Figure 15 shows how the value of corporate total liabilities (debt plus equity) ceased to grow after the GFC.

Somewhat mixed signals are provided by Figures 16 and 17. Figure 16 shows the ratio of share issues to total new liabilities for the corporate sector. From the mid 1990s until mid 2000s, share issues (listed and unlisted) were around half of total new external liabilities.[17] These (ABS) figures become distorted in the mid 2000s due to such transactions as a transfer of domicile of NewsCorp in December 2004 and a global restructuring of another major company in June 2005. In contrast, listed equity raisings (Figure 17) indicate substantial growth, both of IPOs and seasoned (secondary) issues in the years leading up to the GFC, when IPOs largely ceased, but large companies (including the banks) used secondary issues to strengthen their capital positions.

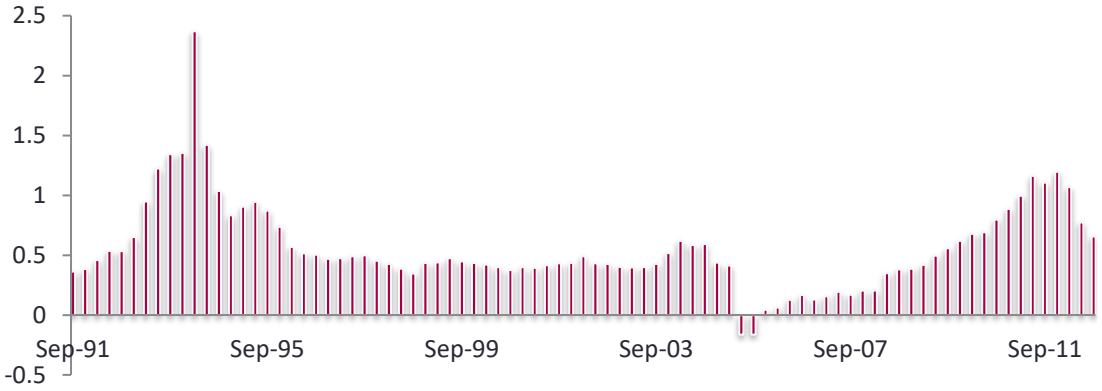
Figure 15 Liabilities Outstanding



Source: ABS 5232.0 Australian National Accounts: Financial Accounts, Table 1

Figure 16 Corporate Financing Transactions: Share Issues/Total New Liabilities (12 Quarter Moving Average)

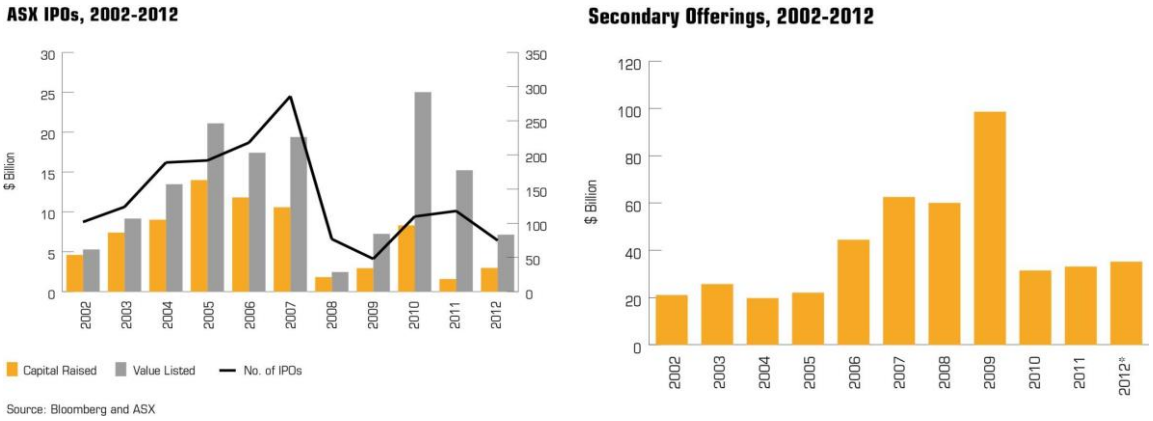
[17] Those figures do not include retained earnings as a source of financing (although they do include funding from dividend reinvestment plans).



Source: ABS Cat No 5232.0 Table 04

Note: A moving average is used to smooth out the effects of one-off transactions.

Figure 17 ASX IPOs and Secondary Offerings 2002-2012



Source: ASX communication

6. Net funding of the business sector directly by households and the ROW has increased relative to funding from the financial sector.

Between Sept 2002 and Sept 2007, increased net funding of (claims on) non-financial corporations by the ROW and the household sector occurred both directly as well as indirectly via increased net funding of those sectors by financial corporations. At September 2007, the direct and indirect sources of funding of the non-financial corporate sector were roughly equal. Between Sept 2007 and Sept 2012, the direct funding increased by around 50 per cent while the indirect funding (via financial corporations) declined by around 20 per cent. (See Table 2)

6. Corporate accumulation of financial assets slowed markedly after the GFC

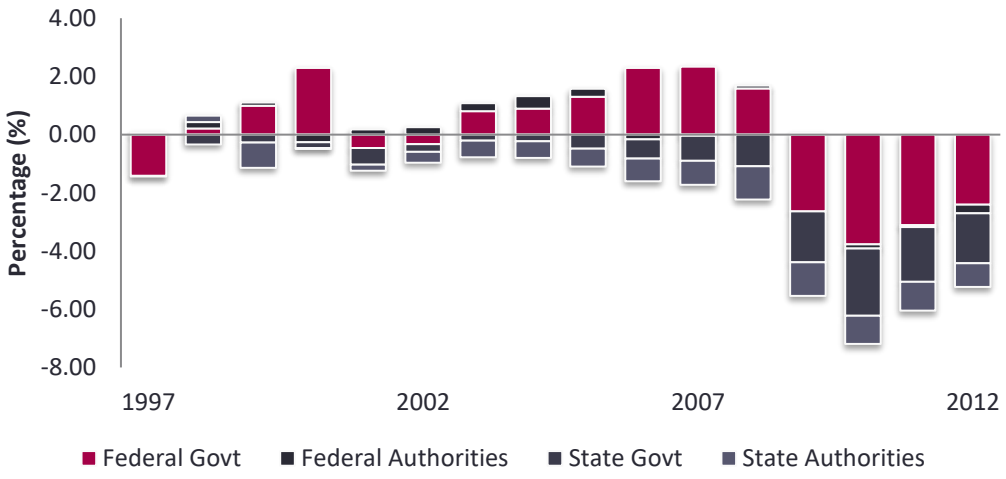
The corporate sector increased its holdings of financial assets at an annual rate of 13.2% from September 2002 to September 2007, and this growth rate dropped to 3.1% in the five years after September 2007. Deposits (primarily with banks), Shares (primarily overseas) and Accounts Receivable have consistently accounted for around 80 per cent of the total financial asset holdings, although individual components have varied somewhat. The main source of slowdown in growth since 2007 has been a negative growth rate of share holdings of -5.1 % p.a. (from 12.1% p.a. over the previous 5 years, partly reflecting share price movements), while accounts receivable growth slowed from 17.3% to 4.3% p.a.

7. The decline in Government Debt/GDP over the prior decade was reversed.

While the Federal Government remains committed to the principle of budget balance over the cycle, the run of budget surpluses ("headline" (cash) basis) over the past decade which saw Australian government debt on issue fall to 9.7% of GDP in 2007-8 was broken in 2008-9

and has continued to date, with the debt/GDP ratio increasing to 22.7% at June 2012. (If debt of State Governments is included the corresponding ratios were 11.9 per cent at December 2007 and 32.1 per cent at December 2012).[18] Public sector lending/borrowing (including State Governments and public authorities) moved from near balance over the decade to 2007 (causing, in conjunction with GDP growth, the decline in debt/GDP), to an average borrowing of 6 per cent of GDP in the four years ending June 2012. (See Figure 18)

Figure 18 Government Lending/GDP



Source: RBA Bulletin Table E11

8. The marked decline in Australian financial institution holdings of Federal Government debt was significantly reversed, but dwarfed by the increased holdings of the ROW.

Table 7: Government Debt: Percentage held by Rest of World

	State CBAs	Federal
Mar-2000	36%	30%
Mar-2001	33%	28%
Mar-2002	31%	37%
Mar-2003	31%	34%
Mar-2004	31%	46%
Mar-2005	37%	56%
Mar-2006	41%	53%
Mar-2007	48%	55%
Mar-2008	47%	65%
Mar-2009	40%	61%
Mar-2010	40%	69%
Mar-2011	40%	69%
Mar-2012	36%	79%

[18] Source: RBA Bulletin Table D4, ABS 5206.0

Mar-2013	32%	70%

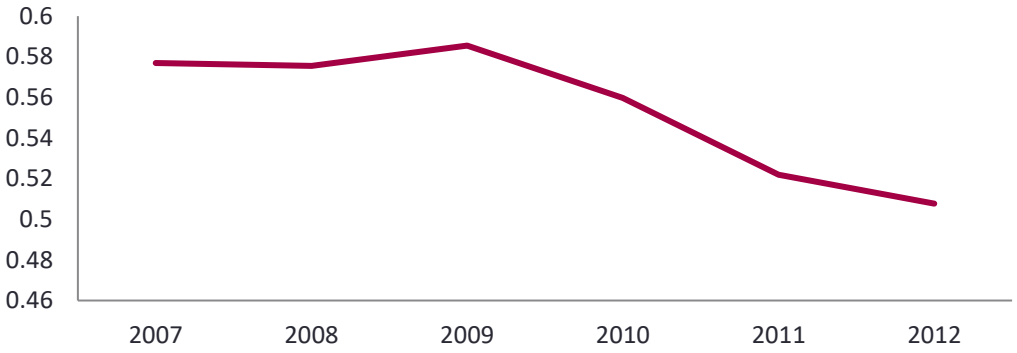
Source: ABS 5232.0 Table 28.

The increase in foreign holdings of Australian federal government debt may be attributable to its high credit rating (AAA) during a time of financial crisis, as well as the higher interest rates in Australia relative to most other major countries – although this implies that foreign investors are happy to carry the foreign exchange rate risk involved. Combined with increased bank demand due to Basel liquidity requirements, it can be argued that Australian government bond rates are no longer an indicator of risk free time preference rates, but are pushed lower due to a liquidity effect. Notably, however, a similar increase in the foreign share of Semi-government bond holdings has not occurred.

9. Growth in net claims of the Rest of the World (ROW) on Financial Corporations turned negative, while ROW claims on Government and the non-financial corporate sector grew.

Table 2 shows the change in net claims. One reason for the decline in net claims of the ROW on the financial sector is the ongoing investments by Australian superannuation funds in international assets. However, also relevant are lower international borrowings by Australian banks plus the effect of exchange rate appreciation on the value of outstanding international debt issued in foreign currencies. Figure 19 shows the decline in the share of foreign liabilities of the finance and insurance sector.

Figure 19 Finance 7 Insurance Share of International Liabilities



Source: ABS 5302 Table 84

10 Since the GFC there has been an increase in concentration in Australian Financial Markets

The increase in concentration and dominance of the four major banks has been most evident in housing loan markets. But similar changes can be observed in the markets for wealth management (with financial planning firms (dealer groups) owned by banks and life

offices increasing their share of total funds under advice), and in the syndicated loan market due to reduced participation of many overseas banks.

11. There has been a significant strengthening of financial sector regulation

(Brown, Davis et al. 2011) provide an overview of regulatory changes in Australia (and also New Zealand) following the GFC. These include increased capital and (new) liquidity requirements on banks and enhanced resolution arrangements. How significant is the penalty (or removal of prior implicit subsidies) to bank intermediation[19] is a matter of ongoing debate ((Admati and Hellwig 2013)), but in Australia it interacts with several major changes in flows of funds outlined above – including increased flows of savings to superannuation and less reliance by banks on offshore funding.There has also been increased emphasis on protection of consumers of financial products and investors. The paper by Dr Mulino in this collection provides more detail.

[19] In Australia, the dividend imputation tax system means that any cost faced by most international banks due to reduced leverage causing a loss of interest tax shield would not occur (or be significantly moderated).

3. Current Australian Financing Patterns

The fundamental question addressed in this section is whether there is anything special about the structure of the Australian financial system and patterns of financing. Addressing such a question requires identification of a benchmark against which comparisons can be made, and the obvious benchmark is that of other developed economies. While there is little homogeneity in financial structures internationally, it is possible to identify some key departures from international norms as well as other aspects where the Australian situation is not substantially different from the average. Identifying why significant departures exist is important for understanding how financing patterns may develop in future years, as well as for assessing whether there are aspects of current arrangements that may impede the efficiency of financing arrangements.

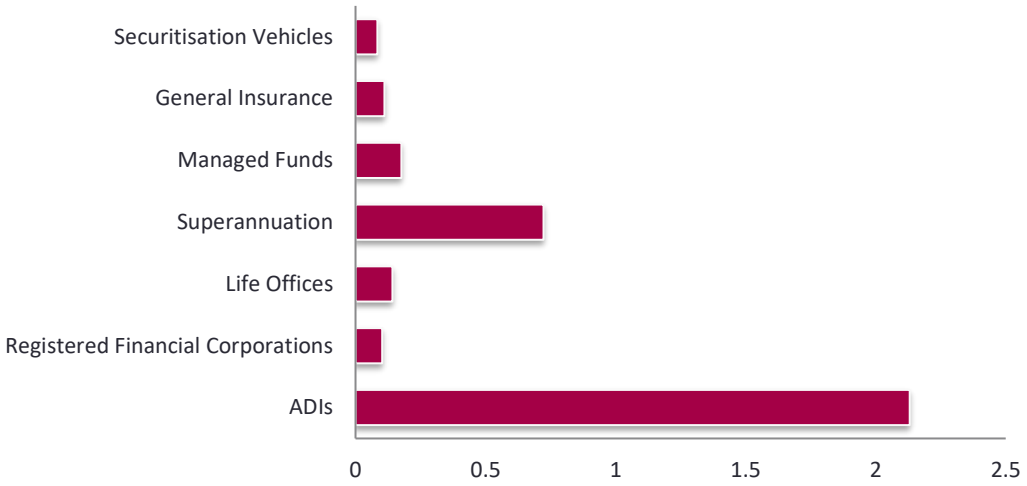
We commence by focusing on the financial sector, and follow that by considering each of the ultimate suppliers and demanders of funds (households, business, government and the rest of the world). Thirteen significant features of Australian financing arrangements are identified:

- There are relatively few significant sized financial institutions which are outside the regulatory perimeter
- Banks and superannuation funds dominate the financial sector in scale
- The Australian banking sector is not unduly large by comparison with other developed economies
- The superannuation (pension) sector is very large by international standards
- The ASX (ie listed corporate equities) is relatively large by international standards
- Australian banks have asset portfolios which are heavily skewed towards residential (and commercial) mortgage loans
- The contribution of the financial sector to GDP appears somewhat larger than in most other developed economies
- Households are significant net borrowers from banks
- Household balance sheet scale and leverage does not appear markedly at variance to that of other developed economies
- The Corporate sector has very low leverage by international standards
- Australian government debt/GDP ratio is low by international standards
- Australia has large private sector international liabilities arising from ongoing current account deficits as well as lesser international asset holdings.
- A significant part of the foreign exchange exposure arising from net foreign liabilities appears to held by the rest of the world

3-1 Financial Sector

Two main types of financial institutions, banks and superannuation funds dominate the financial sector, holding approximately ¾ of financial sector assets. (See Figure 20)

Figure 20 Financial Institution Assets/GDP: December 2012



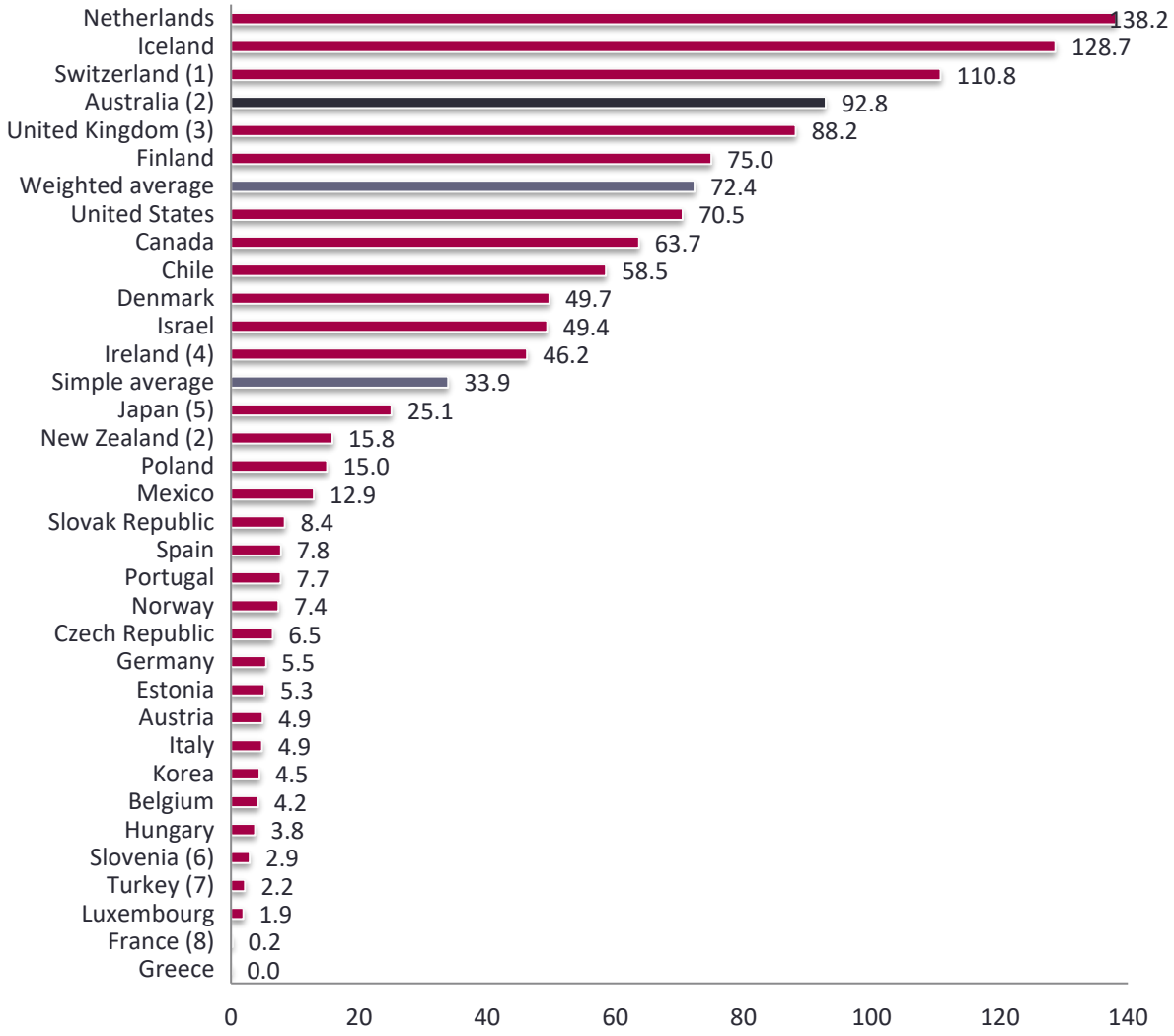
Source: RBA Bulletin Table B01 and ABS Cat No 5206 Table 3
Note: The figure for superannuation excludes self managed super funds.

There are relatively few financial assets held by non-prudentially regulated financial institutions (or, other than claims on such institutions, by other domestic investors). Registered Finance Corporations (RFCs)[20] managed funds and securitization vehicles hold around 10 per cent of financial institution assets. The household sector had financial assets of around $3.26 trillion at end 2012, of which around $0.5 trillion is held directly in shares and managed funds (outside of superannuation) and $0.3 trillion invested in a range of assets (including bank deposits, shares, managed funds etc) via self managed super funds, with most of the remainder in bank deposits and institutional superannuation funds. The corporate sector's financial asset holdings are primarily in bank deposits and foreign shares.

Australia has one of the largest pension fund sectors in the world, both in absolute terms (third largest behind USA and Japan in 2011) and relative to GDP (fourth largest behind Netherlands, Iceland and Switzerland).

[20] RFCs are money market corporations and finance companies,

Figure 21: FUND ASSETS AS A PERCENTAGE OF GDP – SELECTED OECD COUNTRIES: 2011

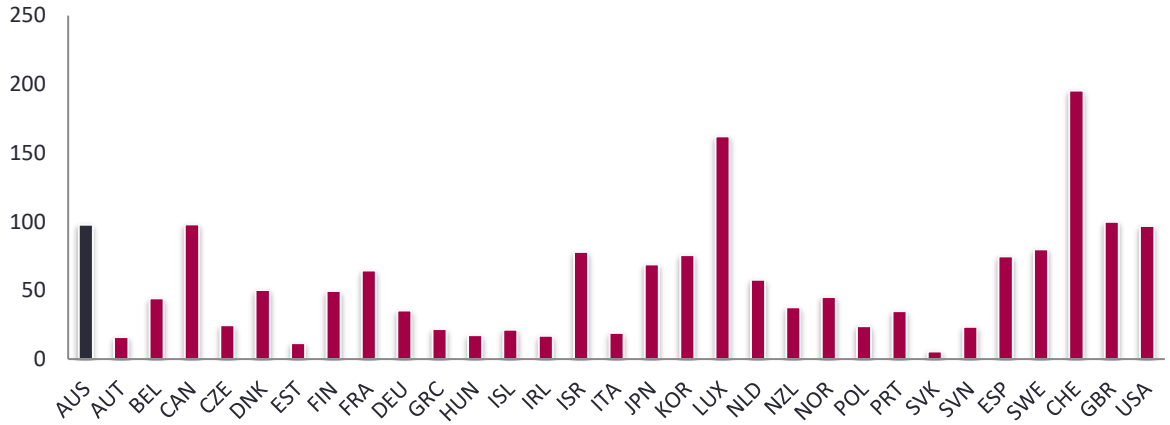


Source: Pension Markets in Focus: September 2012, Issue 9, OECD

The Australian funds management sector has relatively few foreign assets under management for foreign clients. At December 2012 funds managed on behalf of overseas investors were only 4.8 per cent of the consolidated assets of the Australian funds management sector. According to (Johnson 2010) the "percentage of funds under management sourced offshore in the UK, Hong Kong and Singapore are 31 per cent, 64 per cent and 80 per cent respectively."

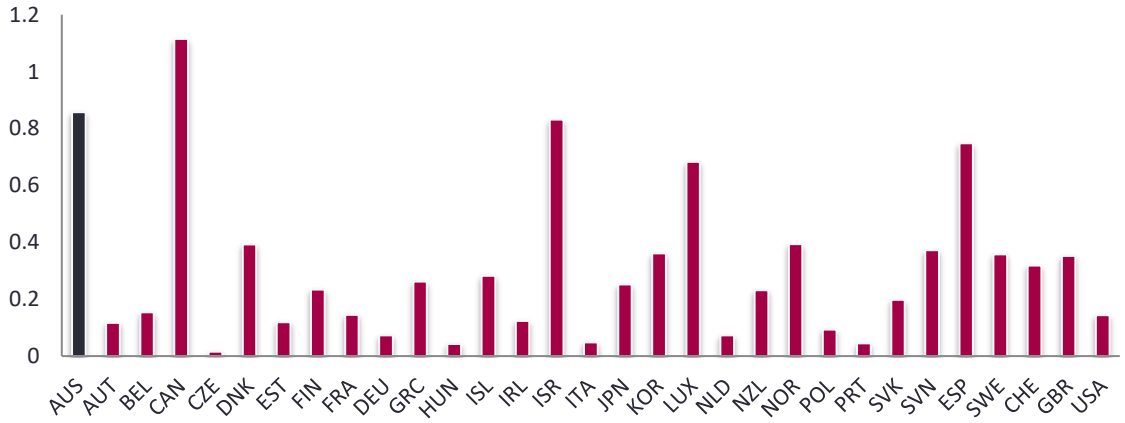
Australia's Stock Market is large by international standards, whether measured by market capitalization/GDP (Figure 22) or listed companies/population (Figure 23). The ASX is the 7th largest exchange internationally measured by market capitalization and 5th largest measured by free-float market capitalization.

Figure 22 Stock Market Capitalisation/GDP:2010



Source: World Bank A Database on Financial Development and Structure (updated September 2012), http://go.worldbank.org/X23UD9QUX0

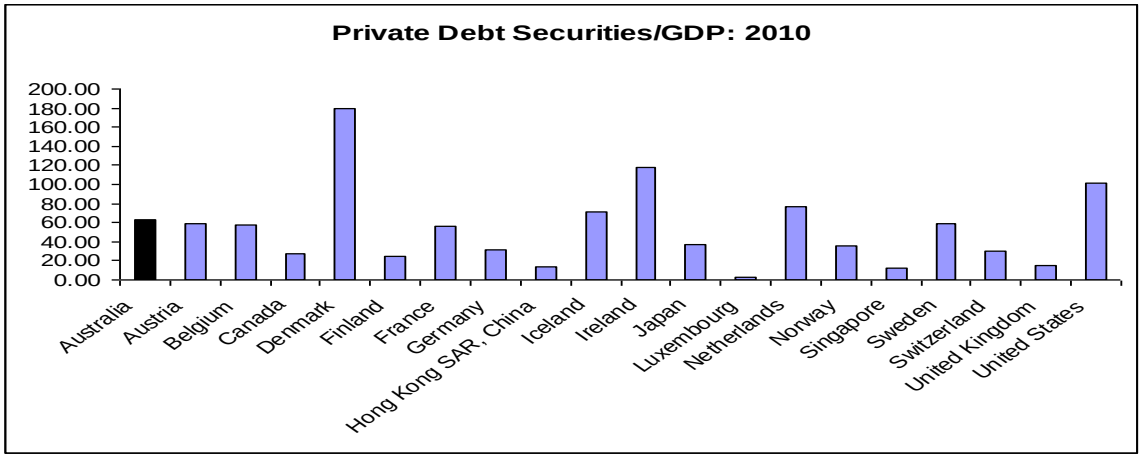
Figure 23 Listed Companies/Population (10,000): 2010



Source: World Bank A Database on Financial Development and Structure (updated September 2012), http://go.worldbank.org/X23UD9QUX0

Relative to GDP, Australia's domestic bond market is of comparable size to most other OECD countries (Figure 24). But amount on issue by non-financial corporations is relatively small, with banks, securitisers, overseas entities ("Kangaroo" issuers), and in recent years Federal and State Governments being the major issuers (see Figure 6).

Figure 24 Private Debt Securities/GDP: 2010



Source: World Bank Global Financial Development Database (GFDD) http://go.worldbank.org/AWACYAMMM0

The Australian banking sector is of comparable size to that of other OECD countries (with bank assets/GDP = 131.4 in 2010 versus median bank assets/GDP = 130.9 for the OECD). (There is significant dispersion in this measure with the USA = 64.6 and the UK = 202.6). Similarly bank deposits/GDP at the lower figure of 98.8 (reflecting the role of wholesale and equity funding of assets) is close to the OECD median.[21]

The Australian banking sector has a significantly higher ratio of housing mortgage loans/total loans than other OECD countries.

Table 8: Bank Real Estate Lending Concentration: Selected Countries

	Residential real estate loans/total loans	Commercial real estate loans/total loans
Australia	62.7	9.7
Canada	34.7	2.9
China	15.8	6.8
Germany	16.7	5.7
Ireland	29	15.5
Italy	18.7	8.8
Korea	21.8	20.6
Norway	41.4	2
Portugal	32.9	10.4
South Africa	32.8	9.5
Switzerland	33.6	6.8
UK	16.2	3.6
USA	35.6	15.8

Source: IMF Financial Soundness Indicators; End 2011 Data. http://fsi.imf.org/

[21] Source : World Bank Financial Structure Database, 2012

There are always difficulties in making cross country comparisons. In that regard, it should be recognized that a significant part of home mortgage lending by Australian banks (perhaps twenty or more percent) is in fact small business lending which is secured by mortgage against the family home. International differences in the role of public housing provision and securitization arrangements are also relevant. Nevertheless the differences in Table 8 appear quite stark.

The contribution of finance and insurance to gross value added (and GDP) appears to be significantly larger for Australia than for any of the G7 countries (Table 9). The crucial, unanswered, question here is whether this reflects a larger real contribution to economic activity, perhaps reflecting financing requirements of the high level of investment in Australia, or higher relative rewards to factors of production in that sector in Australia. Gross Value Added is, essentially, remuneration of employees plus profits, such that higher GVA could reflect a lower level of competition with the consequences being higher remuneration and profits.

Table 9 Finance and Insurance Sectors Share of Gross Value Added

	Year	Gross Value Added
Australia	2010	10.6%
Canada	2008	6.6%
France	2011	4.7%
Germany	2011	5.2%
Italy	2011	5.4%
UK	2011	8.3%
USA	2012	7.9%

Source: UN, USA – www.bea.gov;

3-2 Household Sector

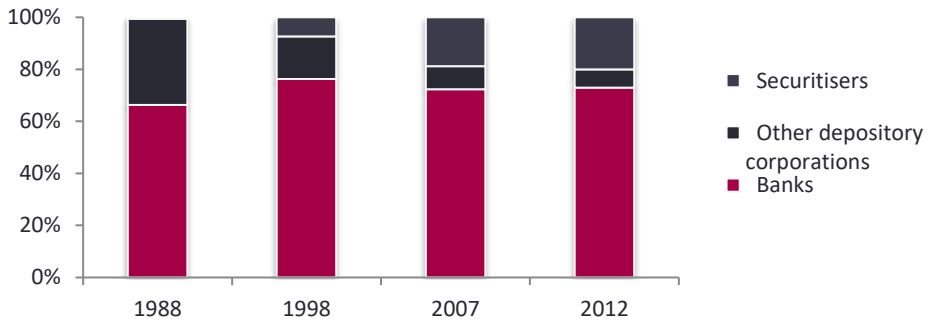
*The household (and unincorporated enterprises) sector is a significant **net** borrower from banks*. At September 2012 household bank deposits were around $660 billion and loans from banks around $1,130 billion. Other claims on financial corporations included equity in super and insurance at that time of around $1,491 billion, shares in financial corporations of around $151 billion and prepaid insurance premiums of $54 billion.

Other liabilities to the financial sector included loans from securitisers of around $310 billion and from other depository corporations of around $100 billion. Together with other minor amounts these aggregate to give net claims on all financial corporations overall of around $857 billion.

The composition and sources of household debt is also worthy of note. The share of loans for investment housing increased dramatically from around 15 per cent in the mid 1990s to around 30 per cent by the GFC and has stabilized since. The share of owner occupied housing loans has fluctuated between the mid fifties and mid sixties, and has been relatively stable at around 60 per cent since the GFC. The share of non-housing related borrowings has thus declined over time to recent values of around 10 per cent. Some part of this decline presumably reflects the development of housing loan arrangements which enable individuals to access finance for other purposes within mortgage loan limits.

Over the longer term there has been a significant change in the relative shares of lenders to the household sector (Figure 25). In the mid 1980s, banks provided around two-thirds of household sector finance and non-bank lenders the other third, with virtually no securitization financing. By the mid 2000's, and relatively unchanged since, the share of securitisers in loans outstanding is around 20 per cent, with banks having around 70 per cent, and other lenders around 10 per cent.[22] Although securitization involves capital market rather than bank balance sheet funding of loans, a significant part of the origination and servicing activities for such loans occurs within banks - such that the growth of securitization includes some disguised growth in the role of banks in this market.

Figure 25 : Household Sources of Debt Finance



Source: ABS 5232.0 Australian National Accounts: Financial Accounts, Table 1

The advent of compulsory (and tax incentives for voluntary) superannuation savings have had relatively limited impact on the broad composition of household wealth. Since the mid 1990s, the share of financial assets in household total assets has fluctuated between 37 and 42 per cent, with increased value of superannuation assets largely matched by increased valuations of housing.

[22] Some part of the earlier change reflected conversions of building societies into banks and the reclassification of some mutual credit unions and building societies as banks which commenced recently will tend to further reduce the relative size of the "other" category.

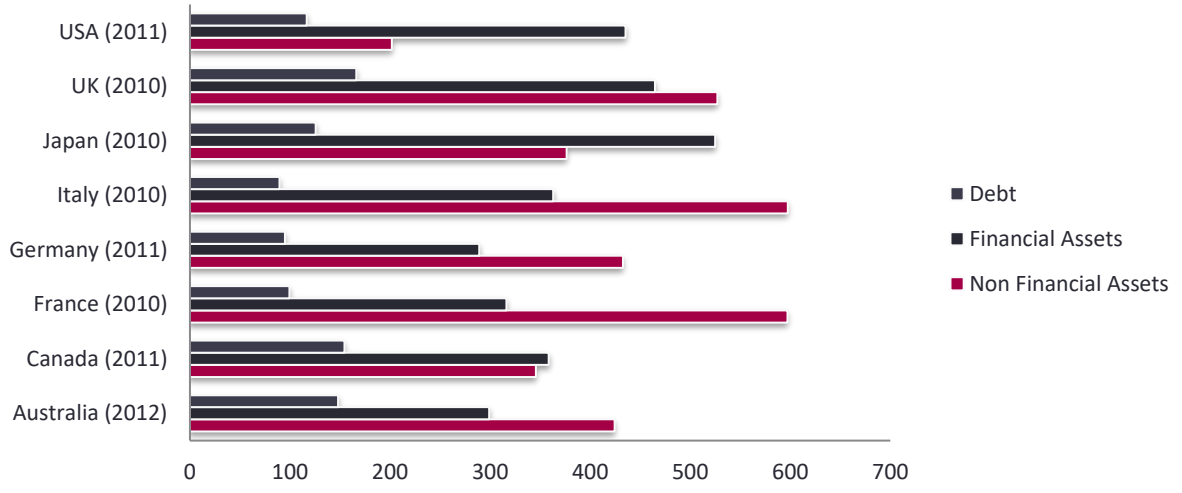
In terms of financial asset allocation (see Table 6), superannuation, privatizations and demutualizations have led to Australian households having significant direct and indirect holdings (via super funds) of shares and other assets exposed to market risk. Moreover, the structure of the Australian personal tax system gives substantial incentives for households to invest in, and take levered positions in, assets with market risk. Favourable tax treatment of capital gains, dividend imputation, and negative gearing are the main factors, and the adverse tax treatment of low risk fixed interest investments such as bank deposits is shown in Chart A1-19 of (Henry 2010)

Households have increased their net financial wealth position substantially over the past decade (Table 2). In the five years to 2007 net claims on financial institutions (including superannuation funds) increased markedly but have stagnated since – largely a consequence of the decline in equity prices after November 2007. In contrast, net claims on non-financial corporations have continued to grow steadily, while claims on general government (primarily unfunded superannuation) increased significantly after 2007.

Figure 26 provides a comparison of the Australian household sector balance sheet with those in G7 countries. While the scale and composition (financial / non-financial assets) of the Australian balance sheet relative to disposable income does not look unusual by this comparison, the debt/assets ratio of 20.5 per cent is somewhat higher than the average (15.6 per cent) and exceeded only by Canada (21.9 per cent).

Figure 26 Household Balance Sheets: International Comparison

(Assets & Liabilities relative to Disposable Income)



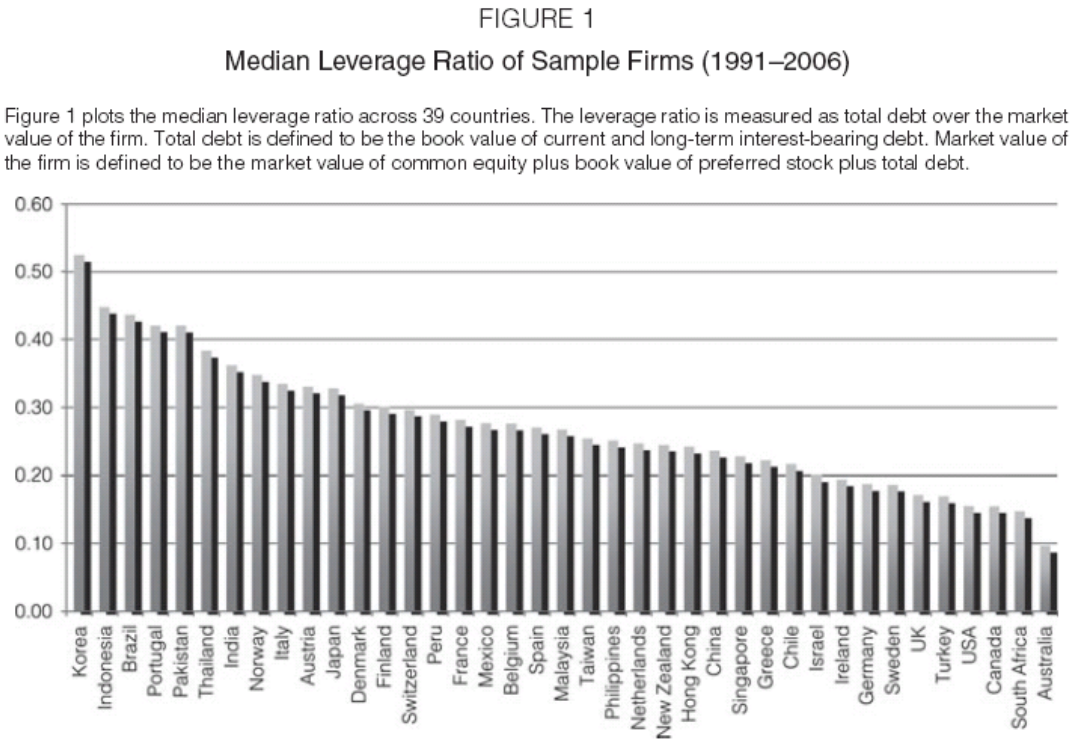
Sources: OECD Economic Outlook No. 92 (database); RBA Bulletin

3-3 The Corporate/Business Sector

1. The Australian corporate sector has relatively low leverage by international standards.

As Figure 14 shows, for non-financial private corporations leverage stands at around 0.4 on a gross basis (debt/(debt + market value of equity)) and near zero on a net basis – if measured as (debt – financial asset holdings)/(debt + market value of equity – financial asset holdings). (Fan, Titman et al. 2012), based on a large sample of listed companies on international exchanges, show Australian leverage to be easily the lowest internationally on average over 1991-2006 (see Figure 27).

Figure 27 Median Leverage Ratio of Sample Firms: 1991-2006



Source: (Fan, Titman et al. 2012)

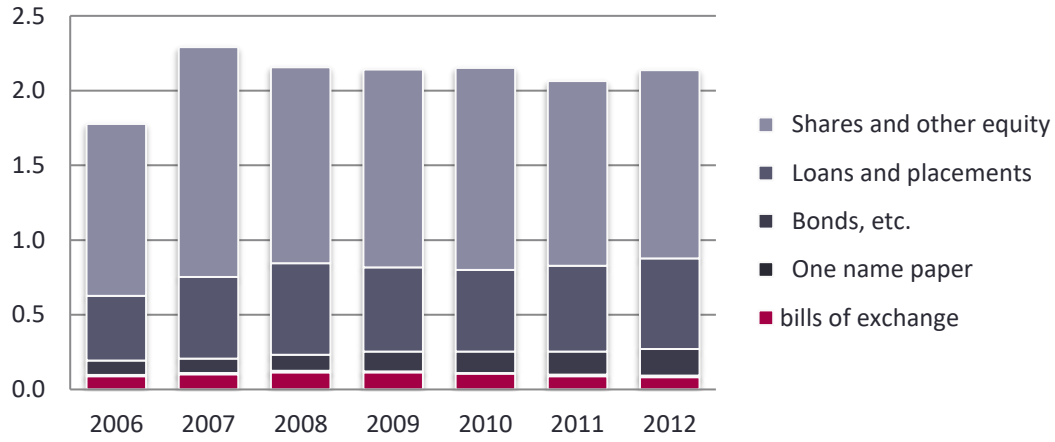
Figure 28 showing total liabilities of the non-financial corporate sector, illustrates the relatively low leverage of Australian companies (both listed and unlisted) and also illustrates the relatively small contribution made by debt capital market funding relative to loans and placements of debt. Also noticeable is the relatively small contribution of funding via bills of exchange or one-name (commercial) paper.

The relatively low leverage of Australian companies (and the decline since the late 1980s) can be attributed in large part to the operation of the dividend imputation tax system in operation since 1987. Unlike the classical, or non-integrated, tax systems operating in most

other countries[23], the imputation tax system provides no (or less) tax incentive towards leverage.[24] The only tax incentive for leverage is for companies with significant international shareholder clienteles, for whom franking credits cannot be used to reduce tax at the investor level. Higher leverage levels for unlisted subsidiaries of foreign owned companies can be expected – with thin capitalization rules aimed at preventing undue exploitation of the tax minimization strategies otherwise possible.

There are significant differences in leverage within the corporate sector. Whereas resources and industrial companies have relatively low leverage, infrastructure companies and real estate investment trusts have relatively high leverage, reflecting the high level of fixed assets, and characteristics of expected future cash flows. In 2009, for example, market value gearing (debt/equity) of resources and industrial companies was in the order of 30 per cent, whereas for infrastructure and real estate, the corresponding figures were 146 and 82 per cent ((Reserve Bank of Australia 2010)). It is perhaps worth noting that at least some part of the high gearing of the latter two sectors can be attributed to the significant use of stapled securities (where units in a trust are stapled to a loan note and/or equity of an associated company).

Figure 28 Corporate Liabilities ($Trillion)



Source: ABS 5232.0 Australian National Accounts: Financial Accounts, Table 1
Note: Shares and other equity outstanding are measured at market value

[23] Fan, J. P. H., S. Titman, et al. (2012). "An International Comparison of Capital Structure and Debt Maturity Choices." Journal of Financial and Quantitative Analysis **47**(1): 23-56.
provide relevant information on tax systems in range of countries.

[24] In classical tax systems, deductibility of interest payments at the corporate level reduces the total tax paid (at company and investor level) on income generated by the company. Under the imputation system, such a reduction in company tax reduces the amount of franking tax credits which are available for distribution with dividends to shareholders, and whose use by shareholders offsets the tax paid at the company level.

2. Australia has one of the highest ratios of private gross investment/GDP among OECD countries.

Australian private gross investment/GDP ranks 26th in world at 28.2%, compared with Canada 23.7%, Japan 21.1%, European Union 18%, UK 13.9%, USA 12.9%.[25] A significant part of this investment is financed by foreign capital flows (including retention of earnings by foreign owned companies operating in Australia)[26]. This larger than average level of investment could provide an explanation for a financial sector larger than in other developed economies in order to facilitate the financing requirement.[27]

3. Australia has a relatively large SME sector

"Small businesses play a significant role in the Australian economy, accounting for almost half of employment in the private non-financial sector and over a third of production" ((Connolly, Norman et al. 2012)). In general, leverage of small business is less than that of listed companies, with major sources of debt finance including credit card and mortgage financing. The attrition rate of small businesses is relatively high.

There is a relatively large use of the limited liability corporate form for small business in Australia. Australia has around 6 new limited liability firms per 1,000 of working age population registered each year compared with an OECD average of around 4. (World Bank, Entrepreneur Database). One reason (as well as the benefit of limited liability), suggested by (Connolly, Norman et al. 2012) is that the corporate tax rate is lower than the personal tax rate for many owners. Retention of earnings and subsequent realization of profits via sale is a tax preferred strategy due to concessional capital gains tax arrangements.

Although use of debt finance by SMEs is lower than for large companies, equity funding is largely from personal sources ((Matic, Gorajek et al. 2012)). The Venture Capital industry in Australia is quite small (Table 10). There are a considerable number of small businesses listed on the ASX, which provides an alternative source of equity finance to owner's equity and venture capital firms.

[25] CIA FactBook (2012)

[26] This gives rise to an income debit in the current account of the balance of payments and an equal offsetting capital inflow in the accounts.

[27] However, a high level of business saving and internal financing via retained earnings would be an offset.

Table 10 Funds Raised by Venture Capital and Private Equity Firms, AUD Million

	Venture Capital		Private Equity		Total	
Year	Amount	No. of Funds	Amount	No. of Funds	Amount	No. of Funds
FY2003	161.82	5	391.3	5	553.12	10
FY2004	96.09	5	1,631.11	5	1,727.20	10
FY2005	349.87	6	1,496.35	19	1,846.21	25
FY2006	120.6	4	4,092.69	15	4,213.29	19
FY2007	356.92	4	8,690.04	20	9,046.96	24
FY2008	313.4	5	1,817.74	16	2,131.14	21
FY2009	174.89	9	1,485.21	17	1,660.10	26
FY2010	158	13	1,207.92	10	1,365.92	23
FY2011	80	2	2,014.79	10	2,094.79	12
FY2012	240.02	4	3,094.74	17	3,334.76	21

Source: AVCAL, 2012 Yearbook http://www.avcal.com.au/documents/item/441

The private equity sector in Australia does not appear atypical in size (relative to GDP) compared to other developed economies. Increasing amounts of funds under management which have longer term horizons (such as with superannuation) and able to make longer term illiquid investments could be expected to promote growth of this sector.

3-4 Government Finances

Australia still has one of the lowest Government Debt/GDP ratios in the developed world despite the emergence of government deficits since 2008 (Table 11). There are significant overseas holdings of that debt (all issued in AUD).

Table 11 Gross Government Debt/GDP

Country	AUS	CAN	CHN	DNK	FRA	DEU	ITA	JPN	KOR	ESP	GBR	USA
Gross Government Debt /GDP 2012	27	88	22	47	90	83	126	237	33	91	89	107

Source: IMF WEO Database

3-5 International Position

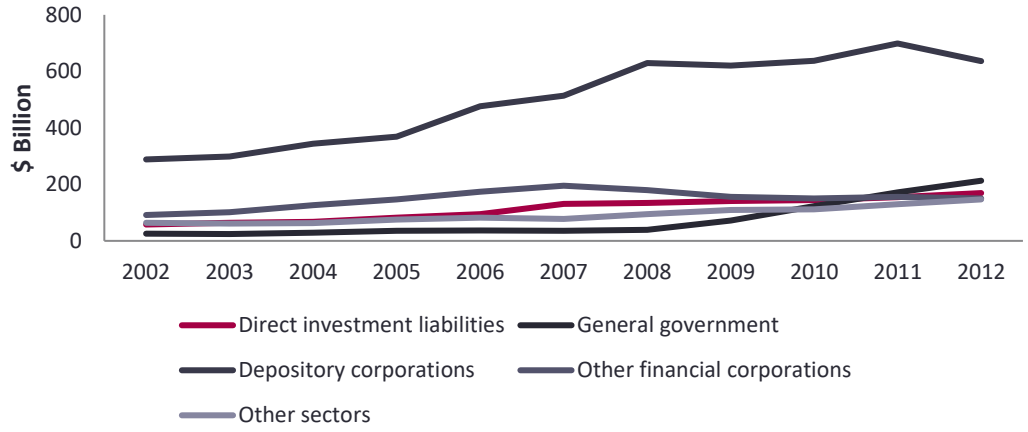
The Australian banking sector has around half of the outstanding gross liabilities to the ROW (Figure 29) associated with offshore borrowings providing capital inflow which offsets the Balance of Payments current account deficit. In net terms borrowings overseas by banks and others are partly offset by holdings of foreign assets by superannuation funds (Table 12). Together with foreign direct investment abroad, the composition of Australian holdings of overseas assets is highly concentrated in equities (Figure 30).

Table 12 Industry Assets/Liabilities

	Assets 07	Assets 12	Liabilities 07	Liabilities 12
Mining	119,488	154,594	157,195	282,261
Manufacturing	70,589	57,211	106,260	137,424
Utilities, Trade, Power, Transport	16,889	22,709	68,865	111,069
Financial/Insurance	746,860	889,723	959,422	1,076,652
Other	95,989	140,473	371,259	513,254

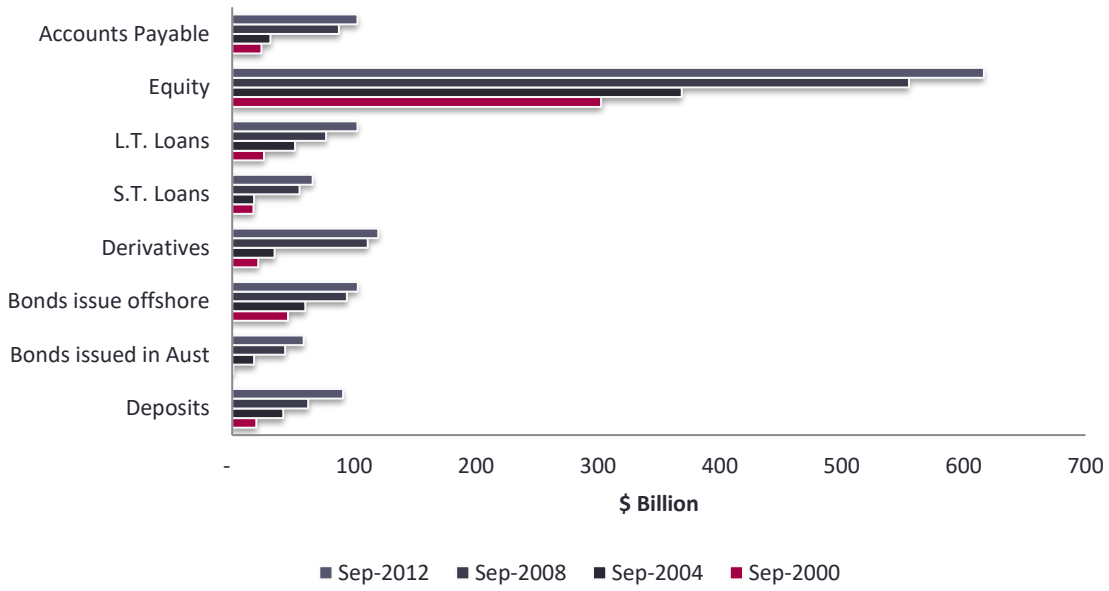
Source: ABS 5302.0 Table 84.

Figure 29 Gross External Debt



Source: ABS 5302.0 Table 31

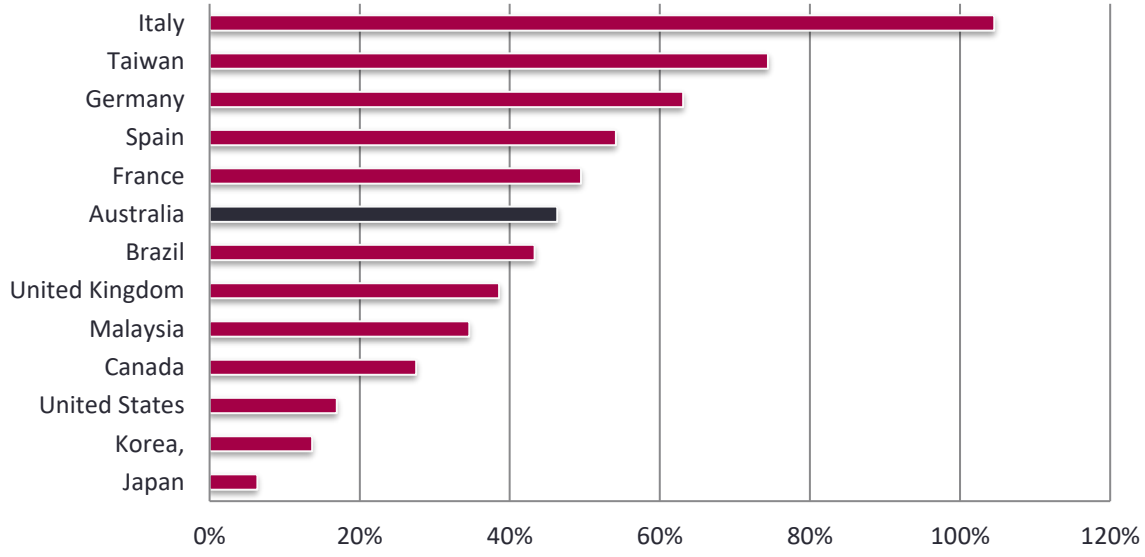
Figure 30 Australian foreign financial asset holdings



Source: ABS 5232.0 Australian National Accounts: Financial Accounts, Table 21

The Rest of the World (ROW) has significantly reduced its net claims on financial corporations since 2007 and has significantly increased claims on non-financial corporations and also on general government While Australian banks substantially increased bond issuance to foreigners in the early years of the GFC (aided by government guarantees), outstandings peaked in 2010 and have since fallen while foreign holdings of government and corporate bonds have grown. One characteristic of Australia's international capital flows is a relatively large component of inward foreign direct investment giving rise to a significant number of Australian domiciled companies which are foreign owned. (Figure 31 provides some international benchmarking, where the expectation that countries in the EU would have larger foreign ownership should be noted). This is particularly relevant for the potential future development of the Australian bond market, because such companies do have a tax-based incentive towards debt finance. In contrast Australia's level of outward foreign direct investment is relatively low – such that while the G7 countries are net providers of foreign direct investment, Australia is one of the largest net receivers (Figure 32). While the dividend imputation tax system may be a factor (given the apparent preference of Australian investors for franked dividends, which offshore profits do not enable) this seems unlikely to provide the full explanation.

Figure 31 Inward Stock of FDI/Stock Market Capitalisation



Source: OECD, FDI Stocks 2011

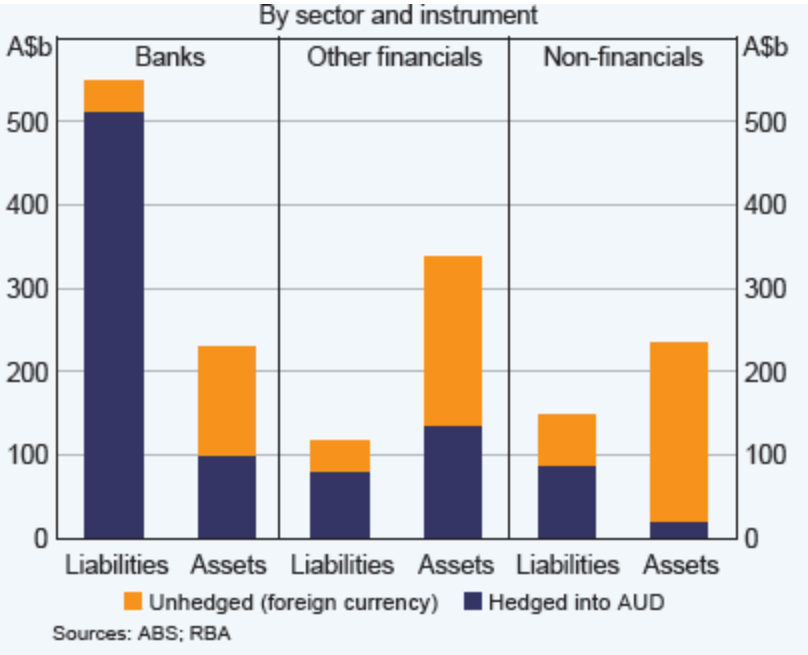
Figure 32 Net Stock of Inward FDI (USD mill): 2011

Largest net recipients		G7 (& 7 of 10 largest net providers)	
China	1440000	Canada	-75415
Brazil	467084	Italy	-179528
Mexico	190221	Germany	-504464
Australia	**172790**	United Kingdom	-532216
Indonesia	152427	France	-628203
Poland	147494	Japan	-737005
Turkey	112354	United States	-1772778
Czech Republic	109776		
Russian Federation	95373		
India	90475		
Chile	89128		

Source: OECD Statistics 2011

One consequence of the significant build-up of net international liabilities is that there is significant foreign exchange exposure which must be shared between Australian entities and foreigners. In this regard, Figure 33, showing hedging positions of Australian entities, is particularly relevant. The size of the net unhedged positions (around $0.3 trillion) relative to net external liabilities of around $0.9 trillion (see Table 2) suggests that a large part of the forex exposure is being borne by foreigners.

Figure 33



Source: RBA Statement on Monetary Policy, February 2010, Box C

3-6 Interrelationships

Households are significant net providers of funds in aggregate to financial corporations (banks, superannuation funds etc) and thereby indirectly to other end users – particularly

business (non-financial corporations). Households also are significant providers of direct finance to business, primarily through investments in shares and other equity. Households are also significant providers of funds to government. (This is primarily through unfunded superannuation liabilities of public sector super funds, which were $353 billion as at September 2012).

The overall net position of households as providers of funds to financial corporations disguises a significant leverage and a marked compositional effect. The total net claims on other sectors of $1.58 trillion can be decomposed into financial asset holdings of $3.26 trillion, primarily in bank deposits of around $0.7 trillion, $1.85 trillion in super etc., and $0.5 trillion in shares, offset by around $1.7 trillion in loans primarily from banks and securitisers. Thus the net liabilities of the household sector to banks were just under $1 trillion in 2012, having increased from around $0.4 trillion in 2002 and around $0.8 trillion in 2007. Assets held in equities and super increased from around $1 trillion in 2002 to around $2.2 trillion in 2007 and were around $2.4 trillion in 2012. *Households are net borrowers from banks (primarily for physical residential property investments) and their holding of other financial assets involve exposure to market risk.*

Reflecting a longstanding deficit position on the current account of the Balance of Payments, and consequent need for capital inflow, the Rest of the World (ROW) has significant net financial claims on, primarily, the private sector (although its holdings of Government bonds issued in Australia has increased in the last few years). Much of that net position constitutes equity in, and loans to non-financial corporations. The smaller net position vis a vis financial corporations hides significant offshore borrowings by banks which are offset by overseas equity and debt investments of superannuation funds. Also missing from that picture is the extent of ROW investments in physical assets (property) which is another substantial source of capital inflow.

The business (non-financial corporate) sector is a net user of funds provided ultimately from the other sectors. Around 60 per cent of net financial claims on the business sector are held directly by households and the ROW and 40 percent by financial corporations. This includes bank loans and equity investments by superannuation funds (and although offset by business deposits etc seems low, particularly given the small size of the corporate debt market).

Net financial claims on Government have increased substantially since 2007, but are still relatively low by international standards.

The difference in 2012 between net financial claims on ($1055 billion) and net financial claims of ($735 billion) the financial sector of around $320 billion corresponds, in principle, to the physical assets of the sector (such as direct property investments).

While private sector bond markets have grown over the past decade, little of this reflects business debt issuance, rather than issues by banks, securitisers and overseas (Kangaroo) issuers. Particularly noticeable is the fact that unlisted shares and equity are a larger source of finance for Australian businesses than listed equity. This is even more striking if equity in listed financial corporations (banks, insurance companies etc) is excluded, and can be attributed in large part to the significant role of subsidiaries of foreign businesses operating in the Australian economy.

4. An Assessment

It was suggested in section 1 that there are four fundamental influences which will influence the future of financing arrangements in Australia in the light of recent trends (Section 2) and current financial system structure (Section 3). These are:

- The need for the financial sector to catch up with the implications of the long term shift of household savings flows into superannuation.
- The impact of post GFC regulatory changes and private sector reassessments of risk of particular financing arrangements.
- Technological change and innovation changing the prior competitive advantage of particular forms of financing and risk management
- Changes in the pattern of demand and supply of finance associated with possible structural changes in the real sector of the economy (including demographic trends).

At a broad level, it seems apparent that the Australian financial system has not fully adapted to the interaction of demographic trends and the growth of the superannuation system. Population growth and technological change are driving a need for significant infrastructure investment which governments are unwilling to fund on-budget, while bank lending is heavily focused on households and, arguably, constrained by deposit supply.[28] Superannuation funds appear averse to the risk and illiquidity of large positions in individual infrastructure projects, and taking on project risk of "greenfields projects".

More generally while it is one of the functions of the financial sector to provide liquidity by transforming short term savings into long term investments, another consequence of the growth of superannuation has been the development of a large and growing pool of long term savings. In these circumstances, it can be asked whether the current and historical structure of financing patterns remains appropriate. In particular, Australian banks finance long term housing mortgage loans with much shorter term deposit and debt financing, rather than there being a perhaps better "matching" of illiquid savings and investments (also applicable in the case of infrastructure).

The impact of household savings flowing primarily into super funds on potential bank deposit growth and need for banks to adjust their activities may be relevant to the resolution of these issues. Increased wealth from the flow of household savings appears to be largely accounted for by superannuation contributions and increases in household equity

[28] "Arguably" because general expansion of credit by banks leads to some accommodating increase in aggregate bank deposits due to the role of bank deposits as money.

in dwellings – although this is a topic deserving of much closer analysis.[29] In the short term, increased bank lending funded by, for example, bank equity issues, which enables increased leverage of the non-bank sector can cause aggregate bank deposits to grow due to the role of bank deposits as money. In the longer term, the consequences of household portfolio allocation away from bank deposits into superannuation means that banks must attract funds in forms other than household deposits (such as from super funds or overseas) or tend to shrink in relative size.

The role of bank deposits as money is also relevant in understanding the effect of bank competition for funds on market interest rates. An individual bank offering higher deposit interest rates can expect an increase in deposits – but that will generally be at the expense of deposits in other banks.[30] If all banks attempt to increase deposits as part of competition for funds, the net effect will be primarily an increase in the interest rate paid on such deposits with little if any increase in the total stock of bank deposits.[31] This is essentially what happened following the onset of the GFC as Australian banks attempted to replace wholesale market funding (particularly from overseas) with initially cheaper retail domestic deposits, and pushed their cost closer to wholesale market rates (Figure 34). With households increasingly having access to wholesale market interest rates through other means such as mutual funds, the longstanding competitive advantage of banks of large scale, low cost, retail deposit funding is in decline. Whether banks retain a funding advantage depends on how much depositors value the liquidity features, payment facilities, and low risk characteristics of bank deposits – and on the costs to banks of providing these characteristics relative to those of potential competitors. For example, cash management trusts (money market mutual funds) can provide liquidity, payments services and relatively low risk, but their growth in Australia has been hampered by a relative lack of short term high quality money market instruments available for investment.[32]

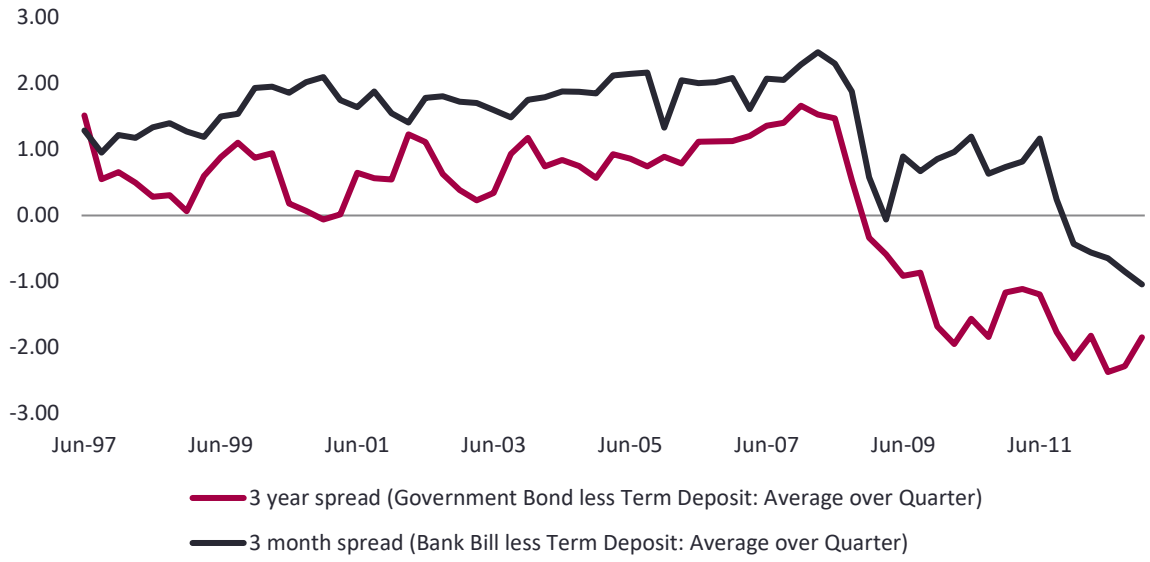
Figure 34 Wholesale Retail Deposit Spreads: 1997-2011

[29] It seems likely that superannuation contributions and building up of home equity account for most of new savings of lower income groups, whereas there is scope for greater discretion in wealth allocation for higher income groups.

[30] As well as the potential direct effect of transfer of deposits from one bank to another, an individual's decision to sell other assets (eg shares) to increase deposits leads to a reduction in bank deposits of the purchaser. Leakages from this process occur if, for example, the purchaser reduces holdings of currency or funds the purchase by way of a bank loan.

[31] The actual outcome depends in part on the reaction of the Reserve Bank – if it does not wish to see upward pressure on loan interest rates, it will provide additional liquidity to the market, enabling some expansion of bank deposits.

[32] The sector has declined significantly in size recently due to the decision of Macquarie Group to convert its cash management trust into a bank deposit account facility.



Source: RBA Bulletin Table F2

Some of the potential implications of these influences are as follows.

1. Banks will need to find alternative ways to fund the origination of loans and other financial assets where they possess competitive advantages in risk assessment (and subsequent monitoring).

With reduced deposit flows, less reliance on international wholesale borrowings, and regulatory pressures to reduce liquidity creation and balance sheet leverage, several scenarios can be envisaged. Greater use of securitisation can enable the creation of capital market assets based on housing (and other) loans suitable for investment by superannuation funds where their ability to bear the liquidity risk of long term investments can reduce costs of such loans. Removal of the funding role can also be achieved via bank provision of guarantees to entities seeking to raise funds (such as through bank accepted bills), although the credit risk exposure (and liquidity risk of bill facilities) remains in this case, such that the attractiveness of this process is reduced by capital and liquidity regulation.

A second potential change (already in progress) is the development of mechanisms enabling savings flows into superannuation to flow on as longer term investments in other institutions (such as banks) involved in assessment and financing of new real investment opportunities. Innovations in deposit types and bank bond (including covered bonds) or hybrid securities issuance aimed at such investors are such mechanisms already appearing. A third possibility is the greater use of (and role of banks in managing) primary capital market financing of new real investments (either directly via equity and debt issues) to create securities which absorb the flow of super savings.

Whether other structures such as mortgage trusts can provide an alternative vehicle for dealing with the changed pattern of fund flows remains an open question – albeit one suffering from the failures of such funds in recent years due to poor loan decisions and other governance and investment failures. Similarly, the extent to which other ways of removing assets from bank balance sheets, such as direct loan sales to investors, or placing bank loans into a mutual fund structure have not been widely explored. For example, unlike some overseas countries, a secondary market in domestic syndicated loan participations has not developed with banks instead retaining such assets on balance sheet.

2. The implied lengthening of the financial intermediation chain if funds flow through super funds and then through banks raises the possibility of increased overall cost of intermediation.

Together with increased deposit funding costs induced by competition, this suggests that the competitive advantage of banks in originating loans and securities may be threatened. This raises the possibility of the expansion of super fund activities directly into assessment and financing of real investment opportunities (beyond the limited current scope of investments in construction of commercial property and infrastructure). This could occur through development of in-house credit risk assessment expertise or through partnerships with other specialist entities.

3. The development of financial products for the retirement (drawdown) phase which is becoming increasingly important with an ageing population has also lagged.

Banks and other lenders have been slow to develop attractive, low risk, products such as reverse mortgages to enable retirees to access the equity in their homes. Similarly, a wide range of pension products has failed to develop or be taken up in the face of the ability of retirees to maintain managed account (allocated) pensions or take lump sum payouts. While banks could, in principle, offer longer-term annuity style deposit products for retirees based on their diversified loan portfolios (and partially offset the effect of household super contributions on deposit inflow), other potential providers are handicapped by the absence of long term fixed interest securities available in the market.

4. Another potential implication is for the future structure of the largest asset market in Australia – that of residential mortgages.

Australian banks are outliers, by international standards, in terms of the very high proportion of assets created and held in the form of residential (and commercial)

mortgages. Residential mortgage lending has traditionally been an important business area for banks, and its appeal is enhanced by low associated regulatory capital requirements.

However there is little reason to think that banks will, in the future, have a competitive advantage in creating and funding these illiquid assets. Competition for deposits has largely removed any funding cost advantages over other potential funding arrangements (although the Financial Claims Scheme may provide some potential advantage). Regulatory liquidity requirements (the Net Stable Funding Ratio of Basel 3) also reduce the opportunity for banks to fund such illiquid, long term, assets by use of (arguably cheaper) short term deposits.

But perhaps the most important factor is the developments in technology and information available for credit risk assessment and underwriting of retail mortgage loans, reducing the benefits to banks arising from long standing customer relationships. Credit risk assessment of secured residential mortgage lending is not a highly complicated process (despite what the US sub-prime experience might suggest) and loan funders can outsource the loan servicing management (collections, monitoring) to specialist third parties. (Commercial property lending is a different story). It is perhaps only in the area of small business financing, where mortgages over the owner's residence are part of financing arrangements, that the role of banker-customer relationship provides a potential advantage.

Another factor relevant to determining whether residential mortgage funding becomes more of a "non-bank" activity is the fact that banks have had to rely on capital market funding, including from overseas, to maintain their level of mortgage lending. Contrary to typical textbook expositions, where household savers provide deposits to banks who then lend to businesses, Australian households are substantial net borrowers from banks - primarily for residential property investments.

5. Another major real investment category is infrastructure finance.

Government commitment to budget balance over the business cycle, reduces the scope for government budget debt financing for major infrastructure projects. Because both capital and current expenditures are included in budget outlays, government funded infrastructure spending has implications of requiring higher taxation revenue or reduction in other expenditures, rather than resulting deficit financing being seen as a mechanism for creating both assets and liabilities.

PPPs have had mixed success in raising funding from and transferring risk in infrastructure projects to the private sector. In the absence of political will to fund capital expenditures by

borrowings, there is scope to explore alternative mechanisms for private sector funding and risk sharing.

Among the potential class of long term illiquid assets which might be "matched" with long term illiquid pension fund savings are large scale infrastructure projects. However, such projects are typically characterised by significant project risks for investors in the "greenfield" stage before ultimately transitioning to lower risk investments once project maturity is reached.[33] While mature infrastructure investments appear to have risk and return characteristics suitable for super fund investments, there are currently impediments to them making such investments at the greenfield stage. These include lack of the specialist risk assessment expertise required in-house, together with the concentration risk arising from the required scale of investment.

While increased scale of super funds (in large part by mergers) should tend to reduce these impediments, they are likely to remain significant indicating a need for alternative mechanisms to be developed. Two are apparent. One is risk transfer to (absorption by) some other party. Whereas the PPP approach involved attempts to jointly transfer both funding and most risks of greenfield projects to the private sector on a project by project basis, it is worth examining whether separation of these functions is warranted and feasible. In particular, some (eg construction cost) risks could be transferred to private sector project participants, who are separate from private sector funders, and with government bearing and diversifying its project success/failure risk within a large portfolio of such projects (by, for example, providing guarantees over returns to providers of debt finance to individual projects).

The alternative possible approach also involves diversification and shifting away from an approach where the funding of each infrastructure project is treated as an independent event. Given a sufficiently large number of projects, some form of special purpose vehicle/mutual fund structure could be established to enable many suppliers of funds to obtain a diversified investment across that range of greenfields projects. Given the widespread concern over the need for increased infrastructure investments, and the potential ready "match" of mature infrastructure asset characteristics to super fund savings needs, finding ways to facilitate greenfields investments (and ultimate transition to brownfields assets), while ensuring good project selection, should be a high public policy priority.

[33] That generally applies even for projects which are failures from the perspective of initial investors, because decline in the market value of the mature asset (below construction cost) can provide subsequent purchasers an adequate risk adjusted rate of return.

6. There is considerable debate surrounding the question of whether Australian superannuation funds are overly exposed to risky investments such as equities.

Several issues need to be considered. First, ultimately, the aggregate risk associated with equity investments needs to be held by some-one. If superannuation funds have less equity risk, some other investors must have more. Unless more such risk is transferred to the overseas sector, ultimately households will be the principal bearers of such risk via direct investments or managed funds. Second, superannuation investors hold other assets including real estate and a contingent claim on the government provided age pension. Recognising these asset positions in household balance sheets suggests that the total (direct and indirect) exposure of households to equities is much less in aggregate than often assumed.[34] At the individual level, however, households have diverse circumstances such that average exposure implied by super fund equity holdings may be quite different to that suitable for particular households. With technology providing greater scope for information aggregation, increased tailoring of superannuation products to individual needs can be expected.

7. One partial explanation for the high equity share of super fund portfolios is the paucity of domestic corporate bond issuance and consequent lack of availability of domestic fixed interest investments.

There has been particular legislative and regulatory attention on measures to develop such a market. However, there are a number of impediments – particularly in the case of developing a retail corporate bond market. These include (a) inability of retail investors to adequately assess and price credit risk and (b) the existence of deposit insurance for relatively large scale retail bank deposits (c) investor attraction to franked dividends on shares. Overcoming the first impediment seems likely to require the creation of retail corporate bond mutual funds – which in turn require adequate investment opportunities creating something of a chicken and egg problem.

More generally, with profitable Australian owned corporations having no (or little) tax-based incentives towards debt rather than equity financing, it should not be expected that a significant domestic corporate bond market will develop rapidly - particularly if major industrial companies can obtain bank loan funding or access international bond markets. However, given the structural change in flow of funds patterns due to superannuation, there is potential for such development – albeit one requiring greater spread of credit risk assessment skills outside of banks.

[34] Wood (2013) presents such an argument

8. One feature of the Australian financial system is its dominance by two types of financial institutions (banks and super funds) together with a large (by international standards) stock exchange. There are very few financial assets held by financial institutions which are not part of the prudentially regulated sector – although SMSFs are a rapidly growing savings/investment vehicle outside the prudential perimeter, while managed fund and direct investments in equities and debt instruments also escape prudential regulation.

The higher cost of "safe" intermediation due to ongoing regulatory changes suggests a likely increase in activity outside the prudentially regulated sector – including capital market innovations. This raises the question of investor protection in the non-prudentially regulated sector and in terms of direct issues of securities by firms to investors. Both disclosure issues and issuance requirements are important in this regard. We have seen both attempts at reducing costly disclosure requirements and ability of companies to have more discretion in issuance arrangements (such as placements) which reduce the transaction costs of issuance, but create greater risks for investors. The net effect on the availability and cost of such finance is thus unclear.

Herein lies one of the most pressing issues facing government regulatory policy. Prudential regulation and supervision is designed to both protect investors in particular financial institutions making "strong" financial promises and increasing concerned with financial stability issues arising from potential failure of such institutions. While financial regulation has long ago eschewed direct controls over investment decisions of regulated entities, the application of capital and liquidity regulations indirectly influence the nature of such decisions. Arguably, not all of the activities of institutions within the prudential perimeter warrant such oversight, but are caught because they are undertaken by the regulatory focus on the institutions involved. There may be valid arguments, on the grounds of encouraging a greater degree of appropriate risk taking, for a smaller proportion of financial sector activities being undertaken within the prudential net and more outside.

But to achieve such an outcome involves two substantive problems. One is that it may require some structural separation of some prudentially regulated institutions – in particular banks. Developments overseas, such as proposals for "ring fencing" of retail banking in the UK and Europe, and the Volker rule in the USA Dodd Franks Act, appear to be heading in this direction. Whether there would be significant social costs in the form of efficiency losses from reduced scope, greater than hoped for social gains from enhanced financial stability, are unclear. The second problem is that while the concept of a significant, non-prudentially regulated, financial sector facilitating risk taking and investment is appealing, there is little evidence that participation in such a sector would involve only those who are able to appropriately assess, manage, and bear the risks involved.

Appropriately delineating the prudentially regulated sector and politically and socially managing the consequences of risk taking outside of that sector remain major unsolved regulatory and political challenges.

ATTACHMENT: Some Issues for Thought

1. The allocation of household wealth (and leverage) is distorted by compulsion and differences in taxation of (different types of) returns on various assets. The Henry Taxation review pointed out such distortions – how they impact upon patterns of ultimate physical investment and the optimal allocation of finance warrants further investigation.

2. Arguably, the Australian tax system induces clienteles for particular forms of financing of physical investment, as well as biasing types of investment. Possibly the most significant bias is that provided towards residential housing. Together with the absence of much, if any, tax incentive for debt financing by business (due to dividend imputation), it is perhaps not surprising that bank lending is significantly tilted towards housing mortgage loans. The question which warrants attention is whether this lower emphasis on business lending (vis a vis international peers) together with the absence of a significant corporate bond market indicates some impediments to corporate debt financing in Australia – or is simply a reflection of a preference for greater use of equity financing. While that is compatible with the relatively large size of the ASX, the question of whether unlisted businesses can access adequate equity capital warrants consideration.

3. It is worth also considering potentially different financing demands of different types of business and investments. For established profitable companies, the dividend imputation tax system gives no or little incentive to debt finance. For large infrastructure projects, where tax payments are deferred until well after construction, and large tax losses carried forward from initial years with resulting loss of time value, there may be scope to revisit some variant of tax free infrastructure bond arrangements. (Although how that would interact with the tax-preferred status of superannuation investors remains to be seen)

4. The tax system also influences corporate financing patterns in other ways. Dividend imputation induces high dividend pay-out rates (often accompanied by dividend reinvestment schemes). It has also meant that the overseas trend towards disappearing dividends and use of on-market share repurchase schemes to distribute cash to investors has been less utilised (although that trend has tended to disappear overseas recently). High payout rates and consequent requirement to raise external finance has market discipline advantages (even though transactions costs may be higher).

5. Increased investment in offshore assets by super funds, which may be needed as super savings grow relative to domestic investment opportunities,[35] means that for a given BOP

35 This depends on the relationship between real rates of return, real economic growth and contribution rates. Ignore the stochastic factor in rates of return, the ratio of super assets to GDP (at) can be written as at =

current account deficit, the gross level of foreign investment in Australian assets must increase, leading to increased inflows and outflows on the income account of the BOP. The gross level of external assets and liabilities, with corresponding exchange rate risk taken on by some agents raises the question of whether this increases the potential volatility of the exchange rate and risk level of the Australian economy?

6. With the Australian banks seeking to reduce overseas wholesale market funding of their balance sheets, there is a need for alternative sources of capital inflow (such as via direct and portfolio investment – including real estate) to finance balance of payments deficits.

7. What is the optimal structure of the national balance sheet? This needs to take into account intergenerational issues. To the extent that retirement income becomes increasingly funded by private savings rather than unfunded pension liabilities, there Is scope for increased deficit financing, noting that, in effect, compulsory super contribution are akin to a tax, linked to payment of future benefits. However, the extent to which the tax expenditures arising from concessions associated with super contributions and earnings offset that argument is unclear.

8. Foreign owned firms have greater incentives to use debt finance than Australian owned companies. Given the limited supply of debt finance via the banking sector and the emphasis on housing lending, does this create any problems for local companies in competing for debt finance? Does it have implications for how a domestic corporate bond market might develop?

9. Does the imputation tax system have any effect on the cost of capital for Australian firms? This is a widely argued point – with alternative positions based on different perspectives about whether domestic rates of return are set in international markets or can vary domestically because of tax differences. The interminable debates before access pricing regulators illustrate this issue. Does it affect incentives for Australian companies to invest offshore (since foreign tax paid does not get "washed out" by the imputation tax system).

10. While historical data for the equity risk premium suggests that it is high for Australia compared to other countries, can this be attributed to the structure of the economy and listed companies, such as resource stocks, or is there some other, less benign, explanation?

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at-1(1+r)/(1+g) +d where r is the real interest rate, g the growth rate of real GDP and d is contributions as a proportion of GDP. The size of super relative to GDP will approach an equilibrium if g > r.

11. Will the increased concentration of the financial sector post GFC be reversed, and if so by what means?

12. How will international integration of financial systems play out over the coming years? To what extent will the technological revolution enable international trade in finance services to occur via offshore provision of financial services and products rather than by establishment of local operations by foreign financial firms?

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