



Melbourne
Casselden
Level 39, 2 Lonsdale Street
Melbourne VIC 3000

P: 03 9657 4321
F: 03 9657 4322

Sydney
Level 2,
50 Pitt Street
Sydney, NSW 2000

P: 02 9423 2160
F: 02 9262 5388

Canberra
Level 3,
39 Brisbane Ave
Barton, ACT 2600

P: 02 6173 1825
F: 02 6273 2738

5th December 2013

Head of Secretariat
Financial System Inquiry
The Treasury
Langton Crescent
PARKES ACT 2600

By email: fsi@treasury.gov.au

Re: Submission of Industry Super Australia on draft terms of reference

Dear Sir:

Australia's financial system performs critical economic functions, and the Financial System Inquiry is a welcome opportunity to take stock of the many changes in finance and their effects on the transformation of savings into investment that fuels Australia's growth, the sector's competitiveness, and the cost and quality of financial services and capital allocation.

Industry super funds, as stewards of the retirement savings of over five million Australians, have a significant interest in the efficiency and effectiveness of Australia's financial system. Industry super funds not only rely on investments to provide strong net returns to members, but also to support productivity growth and employment in Australia, which in turn can support the high and stable levels of retirement savings necessary to support members' dignity in retirement. Although industry super funds avoided the products and practices implicated in the global financial crisis, our funds and members, along with the broader public, were harmed.

ISA is pleased that the broad terms of reference will afford the Inquiry considerable flexibility to pursue matters of importance in the public interest. Our comments on the draft terms of reference seek to (1) provide the Inquiry with our views about the key areas that deserve prioritisation as the breadth of the terms of reference are brought into focus by the panel, as well as (2) suggest ways to clarify the scope of the terms of reference and the inclusion of certain important matters.

Areas deserving prioritisation

The role of finance in supporting productivity and sustainable growth deserves priority, particularly in light of Australia's demographic challenges, industrial recalibration as the mining investment boom tapers, and the country's regional aspirations. Australia will be best positioned for success if the policy settings around the finance sector result in a clear focus on the transformation of Australia's strong private savings pool into long term capital investment. Recent research by ISA (attached), and additional research that will be issued in the first quarter of 2014, suggest that the sector has grown in ways that appear to be remote from capital formation.

Recommendation 1: Prioritise the analysis of the ability of the financial sector to mobilise savings into investment in long term, productivity-enhancing projects and fixed capital. Prioritise policy recommendations that improve the capacity of the sector to perform this critical economic function.

In addition to devoting attention to how public policy in respect of finance can encourage the sector to mobilise savings into productive investment at a low economic cost, we believe that it would be beneficial for the panel to consider how finance can better serve capital users and those areas of the real economy that are known to drive productivity growth (e.g., infrastructure, innovation and R&D at companies).¹

Recommendation 2: Prioritise the capital allocation function of finance in respect of economic areas that are known to drive productivity growth.

ISA supports the focus in the existing draft terms of reference on the costs and fees of financial services. These matters are critical to customer and consumer wellbeing.

We also believe attention to costs should include not just individual or customer costs, but broader economic costs. The economic functions of financial services are typically of an intermediation nature, and accordingly generally do not directly result in end-user consumption or savings. It is well-established that (up to a point) financial system development and sophistication is growth-enhancing because the end-user consumption and production functions of the economy are more efficient and better able to be supported by strong investment through intermediation. It is equally clear that, beyond a certain point, there are diminishing efficiency gains in the real economy from finance, and in fact a crowding out or drain on real economic resources occurs due to excessive intermediation. In addition, financial activity is becoming increasingly costly for the public sector to regulate and police and for interested natural persons (and many organisations) to observe and interact with on a fully informed basis.

Recommendation 3: Assess the fees and costs of financial services on an individual consumer basis and on an aggregate economic basis. Consider ways in which fees and costs in all respects can be reduced.

A few items of the draft terms of reference imply a view of financial services that is very demand driven, particularly that the services provided and the terms and conditions thereof are primarily a response to the interests and demands of consumers and users of financial services more generally.

We believe a more complete view should reflect how the demands of consumers are created and influenced by the financial services sector itself. It has long been observed that financial products are “sold, not bought.” The purchases of consumers are intricately shaped by sales and advice personnel. For the Inquiry to truly encourage products that are in the interest of consumers, the incentives in the distribution and sales of finance would be a more fruitful area of emphasis than the responsiveness of the industry to apparent demand (after it has been shaped).

Recommendation 4: Revise the language of the draft terms of reference, including items 3.1 and 4.3, to focus on how consumer preferences can be developed free of conflicts of interest, and the incentives of financial firms and sales personnel can be aligned with the best interest of the consumer.

¹ We note that human capital development is important to productivity growth but that the capacity of the Financial System Inquiry to outline a well-considered role for the finance system in this area would be very challenging, and there are areas of greater need.

Areas where clarification would be beneficial

Competitive forces, in markets that are appropriately structured, can improve individual and broader economic outcomes. When firms have an incentive to compete on the right things, and do compete, welfare is enhanced. Some financial firms have competed in undesirable ways, such as on regulatory capital arbitrage (OECD 2011). While competition within the financial sector is a consideration under the draft terms of reference, the adequacy of competition policy and options for structural change are not expressly included.

Recommendation 5: Revise the draft terms of reference to specifically include consideration of the adequacy of competition policy, and options for structural change to the industry if it is determined to be necessary or appropriate.

During the global financial crisis, policy makers in Australia intervened in the financial sector (such as by guaranteeing many of the liabilities of banks) and intervened to support aggregate demand. However, policy decisions were required to be made without a clear and considered analysis of the actual vulnerabilities arising from offshore funding, and the risks and consequences of the default of a financial firm, particularly a major bank. It also is not clear that all policy options were able to be carefully explored, such as intervening to support the supply of funding to, and the creditworthiness of, households rather than financial institutions, particularly in light of financial institution moral hazard.

Recommendation 6: Consider whether the terms of reference should task the panel with mapping the actual vulnerabilities and consequences of offshore funding risks and government intervention options to address them (as well as ex ante structural changes to avoid intervention).

Under the draft terms of reference, superannuation is mentioned only in item 3.3, regarding changes in the way Australia sources and distributes capital.

We agree that the Inquiry's consideration of superannuation should be targeted and cautious, rather than expansive, given the significant review of superannuation published in 2010, the position by the Government regarding policy changes in superannuation, and recent or open consultations on superannuation matters. We also stress that, although superannuation is typically delivered through financial products, it is first and foremost a key component of the country's retirement security policy. Consideration by the panel should be respectful of superannuation's important social policy objectives. The superannuation system is generally recognised as a success and a source of strength in national savings, and is viewed by the public as a central component of this country's economic and social policy measures.

When focusing on superannuation, we believe the panel should be mindful of the capacity of superannuation to be a "second pillar" (separate from the banking sector) for funding sustainable economic growth by means of aggregating and investing workers' savings. Commingling superannuation and banking may be desirable to certain financial conglomerates, but it also necessarily commingles risk, increases institutional complexity and reduces the diversity of funding sources. Australia's banking sector is already among the most concentrated in the world, and it would be a mistake to fail to capitalise on the opportunity that superannuation presents to increase competition in the provision of business and project funding.

At the same time, the panel should remain flexible about how superannuation allocates savings and organises itself as a second pillar. In this regard, we see two challenging areas that particularly warrant a high level of care from the Inquiry. First, there is some risk that Australia may uncritically follow other jurisdictions and assume that deep and liquid secondary markets in financial instruments should be the way in which superannuation provides funding to businesses and projects. Markets can be expensive to operate

and for the public to regulate and police; the distribution of financial instruments can be expensive; and consumer and investor protection can be costly and challenging. Second, due regard should attach to the relationship between institutions and long term investment in capital. Large institutional super funds are a means of organising and aggregating savings, reducing collective action problems, managing liquidity, diversifying investments, and achieving economies of scale, including in evaluating economic, financial, and business information to make investment decisions. As a result of these features, large institutions would appear to be – and empirically have been – better placed to make long term capital investments than retail investors or Self-Managed Super Funds.²

Direct investment in firms and projects through primary markets by superannuation funds using a hold and manage approach, with limited intermediation and secondary markets, could be an alternative. It has been a successful model for industry super funds, particularly in respect of infrastructure.

Recommendation 7: Consider tasking the panel with an approach to superannuation that focuses on its capacity to serve as a second pillar for funding businesses and productivity-enhancing projects, including through direct investment in firms and projects, whilst remaining mindful of superannuation’s important social policy objectives.

The draft terms of reference request that the panel “refresh” the philosophy and objectives underpinning finance and financial regulation. We believe such a refresh is important for the Inquiry, particularly in light of developments in finance and economic theory and practice, such as behavioural economics, and the recognition that a number of finance theories that have directly and indirectly informed public policy in the past are no longer considered to be accurate.

Recommendation 8: That the panel’s efforts to refresh the philosophy, principles and objectives of public policy in respect of finance expressly incorporate developments in theory and practice, and recognise that there are significant uncertainties regarding the future of theories relating to how markets operate, assets are priced, and portfolio construction is performed, among other things.

Recommendation 9: The panel should develop non-financial measures of financial system efficiency and quality against the refreshed objectives, including real economic measures and individual wellbeing measures.

Additional considerations

Item 3.5 relates to corporate governance. In our view, governance is an internal affair of a corporation and generally best left to private ordering, rather than government intervention, in the absence of clear evidence of a pattern of public harm arising therefrom. Consistent with this, public policy is typically focused on the outcomes of organisations rather than their internal affairs. With respect to the governance of superannuation fund trustees in particular, we note that the Government is currently considering this topic and would not expect the Inquiry to also focus on it.

Whilst the breadth of the terms of reference is welcome, the timing by which final recommendations are sought is ambitious. An additional six to 12 months may better enable the panel to carefully consider the many important topics.

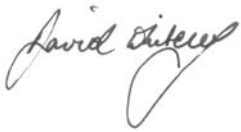
² SMSFs also are a challenge to regulate and police, particularly from a prudential point of view.

Conclusion

ISA welcomes the broad terms of reference and looks forward to supporting the panel's consideration of the many important issues that will be raised. With the headwinds facing Australia's economy, including the ageing of the population and adjustment from the mining boom, the Inquiry has an historic opportunity to reshape the finance sector to be better positioned to help the country meet these challenges and improve the wellbeing of all Australians.

If ISA may answer any questions about this submission or otherwise be of any assistance, please do not hesitate to contact Zak May at zmay@industriysuper.com or on (03) 9657 4369.

Kind regards,



David Whiteley
Chief Executive

Attachment: Finance and capital formation in Australia (ISA 2013)

Attachment

Finance and Capital Formation in Australia

ISA RESEARCH

November 2013

Industry
Super
Australia 

About Industry Super Australia

Industry Super Australia (ISA) is an umbrella organisation for the industry super movement. ISA manages collective projects on behalf of a number of industry super funds with the objective of maximising the retirement savings of five million industry super members.

Please direct questions and comments to:

Zachary May

Director of Policy

Level 39, 2 Lonsdale St,

Melbourne, VIC 3000

zmay@industriysuper.com

OR

Matt Saunders

Policy Analyst – Economics & Markets

Level 39, 2 Lonsdale St,

Melbourne, VIC 3000

msaunders@industriysuper.com

Table of Contents

EXECUTIVE SUMMARY	2
1. INTRODUCTION	8
2. WHAT IS THE FINANCIAL SYSTEM AND WHAT DOES IT DO	8
2.1 What does it mean for a financial system to be efficient?	10
3. THE AUSTRALIAN FINANCIAL SYSTEM	11
3.1 The finance sector in the context of the broader economy	11
3.2 Economic structure of finance	12
3.3 Industry dynamics	14
4. PERFORMANCE OF THE AUSTRALIAN FINANCIAL SYSTEM	18
4.1 Efficiency of the financial system	19
4.2 Australian demographics and the importance of capital formation	23
4.3 Existing literature on productivity of the Australian financial system	24
5. WHY IS FINANCE BECOMING LESS EFFICIENT AT CAPITAL FORMATION?	26
6. ABS DATA AND ONGOING ASSESSMENT OF FINANCIAL SYSTEM EFFICIENCY	27
7. CONCLUSION	28
8. METHODOLOGY	28
9. REFERENCES	29

| EXECUTIVE SUMMARY

The financial system has a vital role to play in support of Australia's economic activity, including the allocation of Australia's pool of savings into investments that are productive and promote sustainable growth, good jobs, and shared prosperity.

The importance of the financial system to Australia's economic performance is heightened because:

- (i) *Australia's savings pool is large relative to the economy, and the efficiency of the allocation of those savings into investment is of commensurate importance.* Australia's pool of savings, with compulsory superannuation as the cornerstone, is the highest in the world on a per capita basis. Australia's savings pool is so large, relative to the economy as a whole, that efficient capital formation by the financial system, and efficient transformation of savings into investment, not only will drive retirement outcomes for many people, but also materially affect the prosperity of the country.
- (ii) *The population is ageing, such that productivity gains must arise from capital formation and capital intensity.* Perhaps the clearest demographic trend in Australia is that the population is ageing, meaning that the number of people working, and who are producing goods and services, will decline relative to the number of people in retirement. To maintain the improvements in living standards to which Australians have become accustomed, the country must sustainably produce more with relatively less labour. To achieve these productivity gains will depend largely on capital formation and capital intensity: production will need to transition to a more capital intensive, and less labour intensive, form, on average.
- (iii) *Australia is transitioning from a resources investment boom, requiring new and efficient capital formation in areas other than mining.* The mining boom has been characterised by substantial investment. As that investment tapers, production made possible by that investment will increase, but net economic activity will decline unless other parts of the economy step forward. To maintain economic growth even at trend will require expansion in – and investment in – areas of economic activity other than mining. Directing investment into those new areas is a capital allocation function and the financial system has an important role to play.

If Australia is to meet the challenges of an ageing population, to meet the challenges of the Asian Century, and to navigate an increasingly competitive global economic environment, it is essential that Australia's financial system perform efficiently and effectively. It must facilitate capital formation from Australia's savings pool.

But is finance performing this role well, and at a reasonable cost?

Industry super funds, as stewards of the retirement savings of over five million Australians, have a significant interest in the efficiency and effectiveness of Australia's financial system. Industry super funds not only rely on investments to provide strong net returns to members, but also to support productivity growth and employment in Australia, which in turn can support the high and stable levels of retirement savings necessary to support members' dignity in retirement.

For these reasons, ISA has evaluated the efficiency of the Australian financial system's capital formation function over time.

Key findings

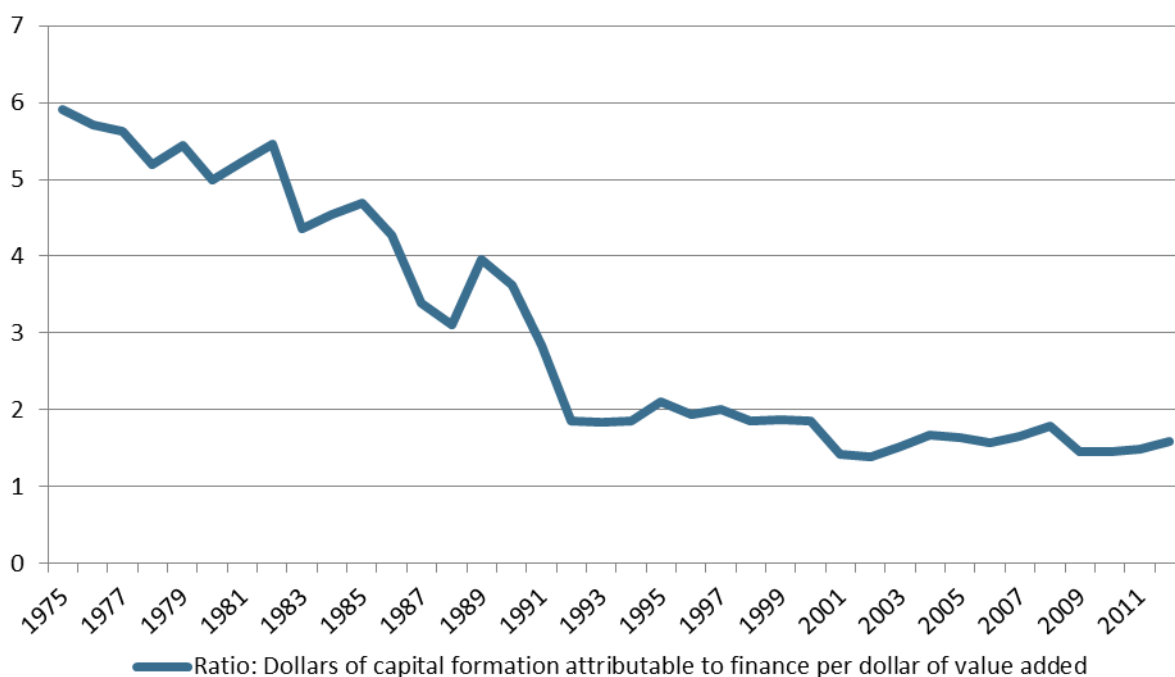
1. Declining overall efficiency in capital formation by finance

The financial system performs important economic functions, including the mobilisation of savings into investment in capital, or facilitating capital formation. The Australian financial system has become relatively less efficient at capital formation over recent decades. In the early 1990s, for every \$1 of economic resources allocated to the financial services sector there was about \$3.50 of capital formation. By 2012, that same dollar of resources allocated to finance yielded about \$1.50 of capital formation, as shown in Figure A.

The decline in the efficiency ratio has not been smooth – the ratio has stepped down during periods of economic dislocation notably the recession in the early 1990s, the tech wreck and Asian crisis of the early 2000s, and the global financial crisis (GFC).

See Section 4 for more details.

Figure A: Capital formation attributable to finance per dollar of financial services



Source: National Accounts, ABS 5204.0 and ISA calculations

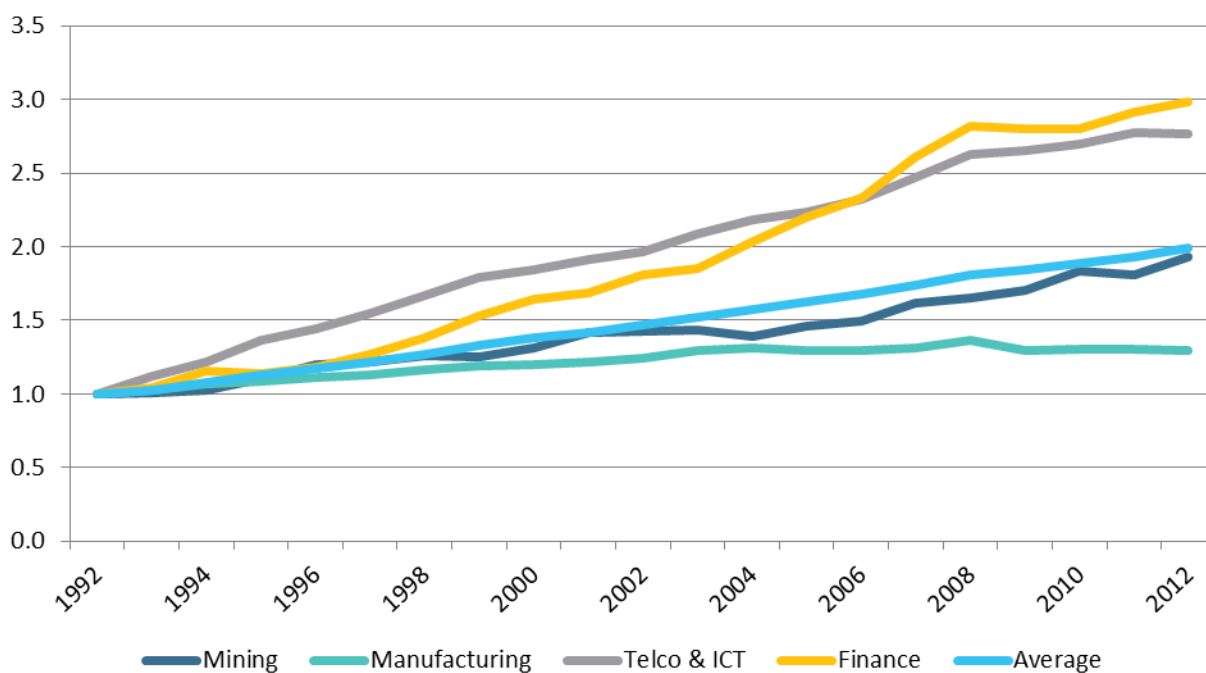
Note: The efficiency ratio before 1990 is an estimate using reflatd real data for gross fixed capital formation. (cf. Figure 10)

2. Finance is large and has grown faster than any other industry in Australia

The finance industry is similar in size to the mining industry and greater in scale than the manufacturing and agriculture industries.

Finance has grown faster than any other industry in Australia over the past 20 years, as shown in Figure B.

Figure B: Growth in Australian economy by sector, index, 1992=1



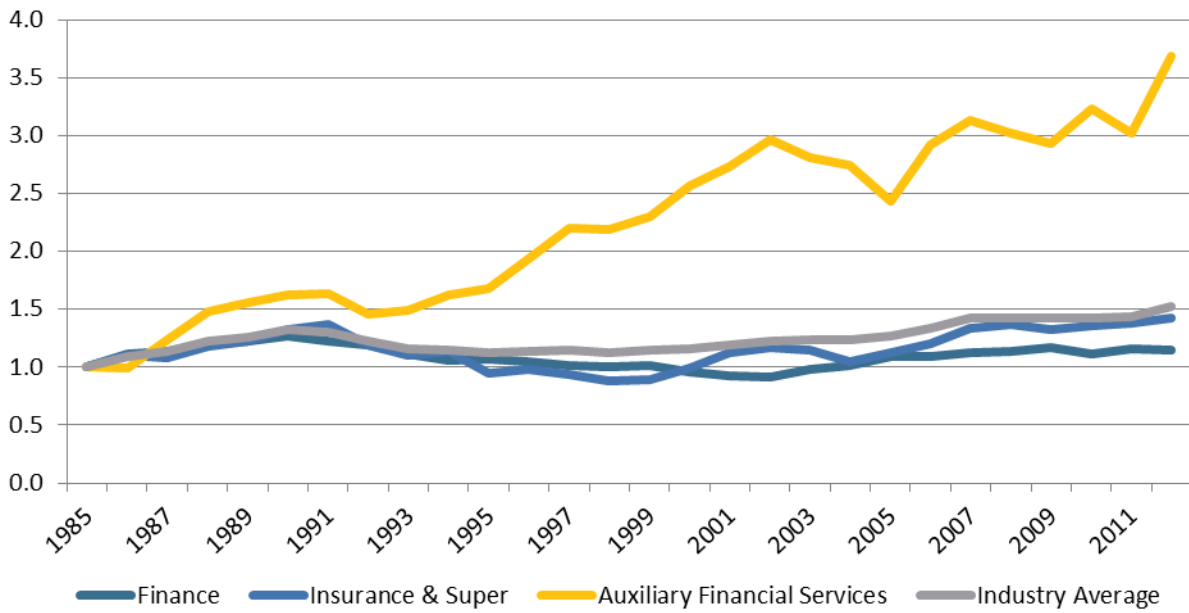
Source: National Accounts, ABS 5204.0

3. *Two drivers of the growth of finance are the expansion of “auxiliary” financial services, such as wealth management and securities trading, and the profit growth of the banking sector*

Finely detailed data regarding the contribution to the growth of the finance sector on a segment-by-segment basis are not publicly available from the Australian Bureau of Statistics (ABS), even upon request. From the data that are available, there appear to be at least two areas of the financial sector primarily underlying its growth.

One is the “auxiliary” financial services sector, which includes areas such as financial advice, funds management, and the trading of financial instruments. As shown in Figure C, auxiliary financial services have experienced striking growth, more than tripling in size since the mid-1980s.

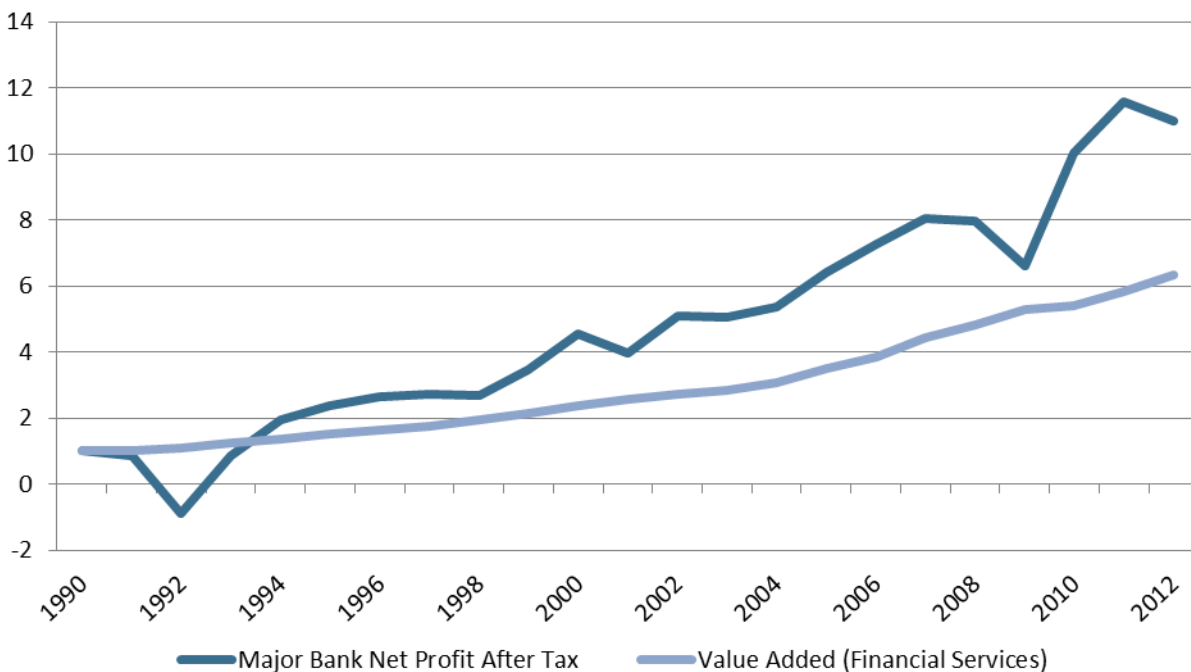
Figure C: Employment by finance industry subsector, index, 1985=1



Source: Labour Force, Australia, Detailed, Quarterly, ABS 6291.0.55.003

Another driver of the growth in the financial system is the profit growth of the major banks, which has outpaced the growth in value added of the financial sector as a whole, as shown in Figure D. This indicates that major bank profit is one of the factors uplifting finance sector value added.

Figure D: Major bank profit growth and value added, index, 1990=1



Source: National Accounts, ABS 5204.0 and individual company reports

Future research in this series

This paper is the first in a series that explores the relationship between Australia's financial services sector and capital formation. The disconnect between the level and value of resources allocated to the financial system, on the one hand, and capital formation, on the other hand, is no doubt influenced by the relative growth in trading or exchanging existing assets compared to creating new ones. For example:

- The composition of loans for housing has shifted away from financing new housing stock and is now dominated by the refinancing of existing housing stock.
- Secondary market trading in shares has increased significantly (and trading in derivatives has surged) compared to capital raisings.

Forthcoming research papers in the series will expand on these observations in analysing Australia's banking and capital markets sectors (the two main channels through which the financial system facilitates the allocation of savings to productive uses), as well as consider the effects on productivity of greater efficiency in capital formation.

What should we do about the declining capital formation efficiency of finance?

The finance sector is not as efficient as it could be. Notwithstanding that the finance sector has grown faster than any other over recent decades, and the sector is among the largest in Australia, the formation of capital attributable to financial intermediation is weak by historical standards.

The good news is that even modest reforms could have a significant impact. Reforms to encourage capital raising, and to create incentives for long-term investment in productivity-enhancing projects should be considered. Consideration should also be given to reforms to ensure excessive secondary market trading does not run counter to these important objectives. Some of these reforms undoubtedly will require changes to public policy, and others no more (and no less) than changes to the way institutions in the financial services sector go about things.

Australia has devoted about 10 per cent of our country's productive capacity to financial services, and we look forward to working with the finance sector, the business sector, policy makers, and the broader community, on ways to increase the efficiency of finance. Achieving a more efficient financial system is an important objective, and good ideas will be needed from across the community. ISA will seek to do its part by:

- (i) regularly reporting on the capital formation efficiency of the financial sector, and
- (ii) participating constructively in public consideration of potential reforms.

About our analysis

The financial system performs a number of important *economic functions*. These functions have been characterised in a variety of ways, but typically include:

- the facilitation of transactions by providing mechanisms and networks of payments;
- the pooling of risks and their allocation to those most able and willing to bear them,
- a generalised insurance function, i.e., the ability for parties to insure for themselves deliveries of goods and services in future contingencies, either by surrendering some of their own resources now or by contracting to deliver them in specified future contingencies; and
- the mobilisation of saving for investments in physical and human capital, and the allocation of savings to their more socially productive uses.¹

¹ Tobin (1984). This functional approach to analysing finance has been followed by others, Cf. Merton (1995), Stevens (2010), and Mulino (2013)

Our analysis of Australia's financial system evaluates it in terms of its efficiency in capital formation, or the mobilisation of savings into investments that expand the capital stock and productive capacity of the economy.

We have a number of reasons for adopting this approach:

- (i) capital formation is a critical economic function of finance in its own right, particularly in light of the demographic challenges facing Australia and the rest of the world;
- (ii) the other economic functions of finance, such as risk allocation and the provision of insurance, are likely to be captured in the analysis insofar as they are likely to be reflected in increased capital formation (for example, efficient insurance provision should free up savings for investments of greater duration);
- (iii) capital formation is a real economic variable, not a financial variable, providing some insight into the real economic outcomes of finance; and
- (iv) opinion leaders and the community typically prioritise the capital formation role of the finance sector.

An example of this prioritisation is the view expressed recently by the Group of 30:

Growth and job creation require long-term investment in the assets that expand the productive capacity of a modern economy, such as infrastructure, factories and equipment, new housing and commercial buildings, education, and research and development (R&D). Efficiently and seamlessly matching global savings with long-term investment opportunities is a core function of the financial system.²

The European Commission's recent work on the Long-Term Financing of the European Economy was similarly focussed:

The long-term growth prospects of any economy depend inter alia on the financial sector's ability to channel ... savings into **productive investment**.³

Our analysis assesses the efficiency of the Australian financial system in performing that role and asks whether the financial system that we have today is as efficient at forming capital as it was in years past.

We do this by comparing, over time, the level of economic resources allocated to financial services against the level of capital formation attributable to financial intermediation. Value added is the combined wages and profits (plus certain taxes less subsidies on production)⁴ of an industry. It "represents the contribution of labour and capital to the production process" of an industry.⁵ In this way, value added is a reflection of the economic resources – namely, labour and capital – allocated to a sector.

We find that the resources allocated to finance (expressed as value added) have increased far more than the level of capital formation attributable to finance, indicating that efficiency in this respect has declined.

Our analysis does not seek to address allocative efficiency, or the quality of the capital formation attributable to finance.

Our analysis does not seek to substitute for productivity analyses of finance such as those performed by the ABS. As discussed below in section 4.3, productivity measures incorporate different outputs and have different objectives. We are aware of the significant difficulties acknowledged in the productivity literature regarding the measurement of inputs and outputs in finance, and believe our analysis is a useful

² Group of 30, Long term finance and economic growth (2013)

³ European Commission, Green Paper: Long-Term Financing of the European Economy (2013) (emphasis original)

⁴ These taxes and subsidies are negligible, totalling about 2.6 per cent of value added in the most recent ABS input/output tables (issued by ABS in 2012 for the financial year 2008-2009)

⁵ European Commission, International Monetary Fund, Organisation for Economic Co-Operation and Development, United Nations, and World Bank, System of National Accounts (2008)

contribution for the reasons explained above, particularly for policy makers interested in the real economic effects of finance and the capital formation function of finance.

1. Introduction

The financial system has a vital role to play in support of Australia's economic activity. A critical function of the financial system is facilitating the formation of capital, especially the allocation of Australia's pool of savings into investments that are productive and promote sustainable growth, good jobs, and shared prosperity. In an increasingly competitive global environment, it is essential that Australia's financial system perform its role efficiently and effectively.

But is finance performing this role well, and at a low cost?

Industry super funds, as stewards of the retirement savings of over five million Australians, have a significant interest in the efficiency and effectiveness of Australia's financial system. Industry super funds not only rely on investments to provide strong net returns to members, but also to support productivity growth and employment in Australia, which in turn can support the high and stable levels of retirement savings necessary to support our members' dignity in retirement.

This report evaluates the capital formation efficiency of the Australian financial system over time analysing macroeconomic and financial data.

2. What is the financial system and what does it do?

The financial system performs a number of important economic functions. These functions have been characterised in a variety of ways, but typically include:

- the facilitation of transactions by providing mechanisms and networks of payments;
- the pooling of risks and their allocation to those most able and willing to bear them,
- a generalised insurance function, i.e., the ability for parties to insure for themselves deliveries of goods and services in future contingencies, either by surrendering some of their own resources now or by contracting to deliver them in specified future contingencies; and
- the mobilisation of savings for investments in physical and human capital, and the allocation of savings to their more socially productive uses.⁶

Each of these functions is important, but the mobilisation of savings into investments to generate capital formation is critical. As observed by the Group of 30, "efficiently and seamlessly matching global savings with long-term investment opportunities is a core function of the financial system."⁷

As noted above, the demographic trends of Australia – and the world as a whole⁸ – are inexorably moving toward a declining number of workers relative to persons in retirement. Economies will need to produce more with relatively less labour, and that requires greater capital intensity in production.

What about the things that finance does other than facilitate capital formation?

Our analysis does not seek to measure the efficiency of finance at economic functions other than capital formation. With that said, we note that efficiency in the various economic functions of finance other than capital formation are, to some extent, likely to be observable in terms of capital formation. For example, it is likely that the efficient pooling of risks and an efficient insurance function reduces the degree to which

⁶ Tobin (1984). This functional approach to analysing finance has been followed by others, Cf. Merton 1995, Stevens (2010), and Mulino (2013)

⁷ Group of 30, Long term finance and economic growth (2013)

⁸ Karam, Muir, Pereira, and Tuladhar (2011) ("Globally, the number of people over 65 relative to the working-age population (the old-age dependency ratio) is projected to double between 2009 and 2050.")

households must self-insure, which frees up savings for investment, which in turn should support an uptick in capital formation. In addition, an efficient system for payments and transactions should reduce the need for households to hold savings in the form of cash, further enabling investment and capital formation.

It is no doubt the case, consistent with Figure C, that more of the resources allocated to finance are engaged in facilitating the transfer of second-hand assets and risk. It is perhaps a surprise that these efforts do not appear to support the capital formation function of the finance sector and instead may be neutral or undermining it.

Insofar as a core purpose of the financial system is to facilitate the allocation of savings to productive uses, particularly capital formation via investment, this occurs primarily through two channels:

- *Bank-based funding* – In this channel, investments are substantively intermediated by financial enterprises, such as the intermediation provided by banks in their lending activities; and
- *Market-based funding* – In this channel, there is a more direct exchange of funds from investors to operating firms through financial markets, such as the listed equity market, often intermediated by underwriters or dealers.⁹

Capital formation – the actual construction of plants, property, equipment, IT systems, R&D, and the development and training of employees, among other things¹⁰ – is often performed by or on behalf of operating companies, not financial firms. But the determination of which companies and which projects receive financing, and on what terms, (and even which management groups or business strategies control the operating company) is influenced by the financial system. This key economic role of finance is often used to justify the substantial level of compensation paid in certain segments of financial services.

Box 1: What is capital and capital formation?

Under the neoclassical framework of economic analysis, capital and labour, together with other inputs, are combined to produce goods and services. “Capital” is that part of output that is not consumed in the current period, or exported, but instead set aside to help produce goods and services in the future.

“Fixed Capital” is that portion of capital that is comprised of fixed assets that are used over periods of time longer than one year. It includes buildings, machinery and equipment, infrastructure, some livestock, plants and trees, and improvements and alterations that increase the production capacity of the asset (including improving land through clearing trees and draining marshes).

Importantly, Fixed Capital also includes many intangible assets. It includes intellectual property, R&D costs where the R&D is financially beneficial for the owner, computer software and databases, and mineral and petroleum exploration even if they are not successful.

The construction of dwellings is considered capital formation (because the consumption is considered to be of the shelter provided, consistent with longstanding practice in the framework of national accounting).

Equipment that is complete but not transferred to producers and R&D that is done on a non-commercial basis do not contribute to Fixed Capital. Cars, kitchen appliances, etc. purchased by households are considered final consumption and also not included.

The Australian Bureau of Statistics measures the level of “Gross Fixed Capital Formation” in the national economy.

Gross Fixed Capital Formation is gross of disposals.

See, ABS Australian System of National Accounts, 3rd ed. (2012), Chapter 10, p.246.

⁹ See e.g., OECD (2013). See also, Demirguc-Kunt and Maksimovic (2000)

¹⁰ ABS (2012)

2.1 What does it mean for a financial system to be efficient?

It is possible for the financial services industry, like any industry, to be productive, but to be slow and costly in doing so, or to produce goods and services of poor quality.

Efficiency in the sense used in this report compares the level and price of economic resources (measured by value added) allocated to financial services against the level of capital formation attributable to financial intermediation. Value added is the combined wages and profits (plus certain taxes less subsidies on production)¹¹ of an industry. Value added “represents the contribution of labour and capital to the production process” of an industry.¹² In this way, value added is a reflection of the economic resources of labour and capital allocated to a sector. In this respect, more of the country’s economic resources are allocated to financial services than to any other industry.

An increasing amount of Australia’s economic activity is devoted to providing financial services. This report explores whether capital formation has grown accordingly. As discussed below, the per-unit cost of capital formation is actually rising. The capital formation efficiency of financial intermediation is below levels achieved decades ago, notwithstanding improvements in technology and other productivity enhancements. This is in contrast to most other areas of industrial activity in Australia, which have seen the unit cost of output decline.

¹¹ These taxes and subsidies are negligible, totalling about 2.6 per cent of value added in the most recent ABS input/output tables (issued by ABS in 2012 for the financial year 2008-2009)

¹² European Commission, International Monetary Fund, Organisation for Economic Co-Operation and Development, United Nations, and World Bank, System of National Accounts (2008)

3. The Australian financial system

The Australian financial system is a major part of the country's economy and has changed significantly over time.

3.1 The finance sector in the context of the broader economy

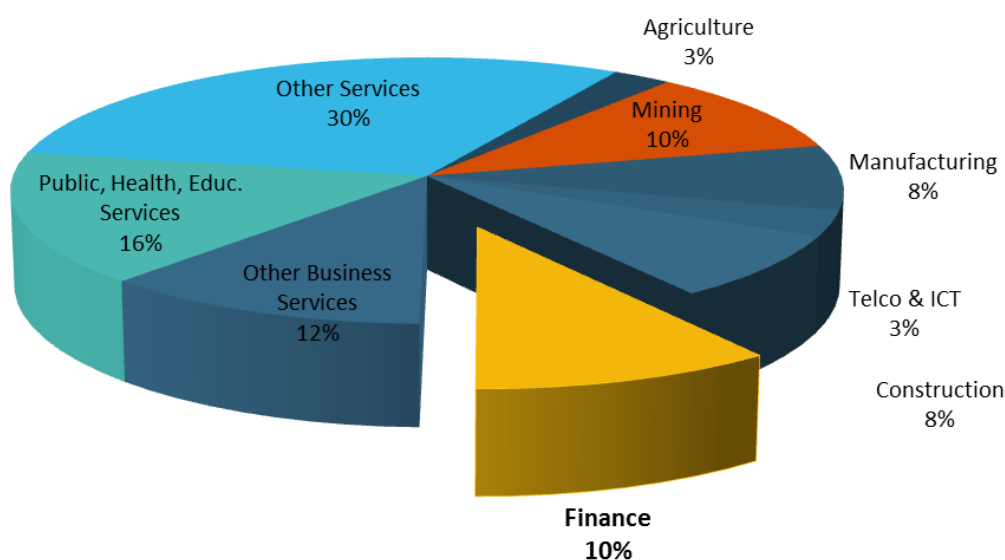
The Australian financial system is an important part of the economy and a significant contributor to Gross Domestic Product (GDP).

In 2012, the Australian financial system employed around 385,000 (FTE) workers, recorded about \$144 billion of value added and contributed over \$5.5 billion in taxation to the wider Australian economy. In addition, the financial system used over \$60 billion of intermediate inputs purchased from other local industries which in turn contributes further to Australia's total employment and GDP.¹³

On the production and consumption side, the Australian financial system in 2012 is estimated to have produced over \$200 billion of services that were mainly used by households (40 per cent) and other businesses (46 per cent) with a small share being exported (1 per cent).¹⁴ The Construction, Professional Services and Public and Health Services industries were the most prominent business consumers of finance-related products and services.

As a share of the wider economy, the Australian financial system in 2012 generated 3.9 per cent of total employment (FTE basis) and contributed 9.5 per cent of GDP, representing a significant share of all business-related services produced by the Australian economy. The finance sector is a significant industry in Australia, similar in size to the mining industry and greater in scale than the manufacturing and agriculture industries (Figure 1).

Figure 1: Industrial composition of the Australian economy, 2012



Source: National Accounts, ABS 5204.0

¹³ National Accounts: Input Output Tables, ABS5209.0.55.001 and ISA estimates. See methodology section for more details

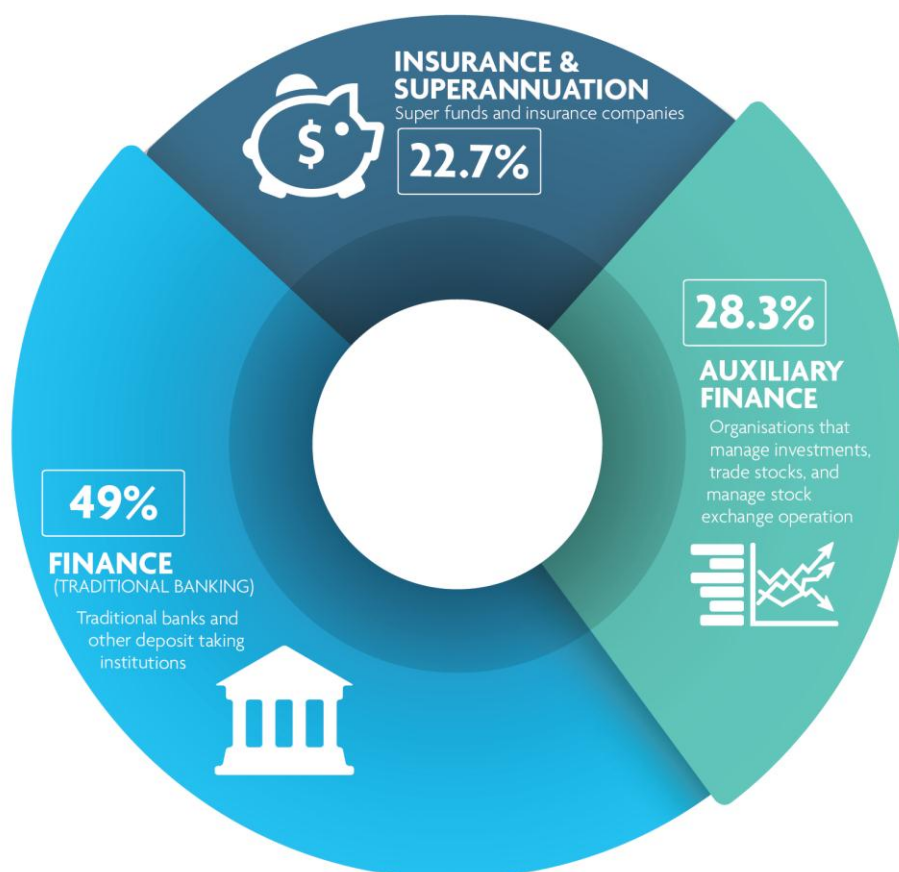
¹⁴ The remainder is intra-industry sales

3.2 Economic structure of finance

The ABS subdivides the financial sector into three categories:

1. Finance (which includes traditional banking, other depositary institutions like credit unions, credit card companies, and charitable trusts and foundations);
2. Insurance and Superannuation (operating the institutions, not the investment activity that often underlies the ability to pay benefits); and
3. Auxiliary Finance and Insurance Services (which includes investment management services, stock broking or trading, underwriting, and stock exchange operation).¹⁵

Figure 2: Sub-sectors of the finance sector



Source: ABS Census data 2011 and ANZIC 2006, ABS 1292.0

Employment data for an industry generally gives some indication of its centre of gravity and context for its structure. Table 1 shows financial sector employment at the finest level of detail. The 'Banking' and 'General Insurance' categories account for just over 55 per cent of total finance industry employment. The level of employment in the 'Other Auxiliary Finance and Investment Services' classification is perhaps unexpectedly high.

Also of note is the relative stability of the employment shares across industry subdivisions between 2006 and 2011 (the two most recent ABS Census years), suggesting no major structural changes have occurred over this timeframe. Some subtle differences are evident, however, such as the declining employment

¹⁵ ABS (2006)

shares for 'Financial Asset Investing' and 'Financial Asset Broking Services' that may be the result of the GFC; also notable is the rise in 'Superannuation' perhaps driven by the continual growth in the economy-wide savings delivered through the compulsory Super Guarantee.

Table 1: Employment in the finance industry 2006 and 2011

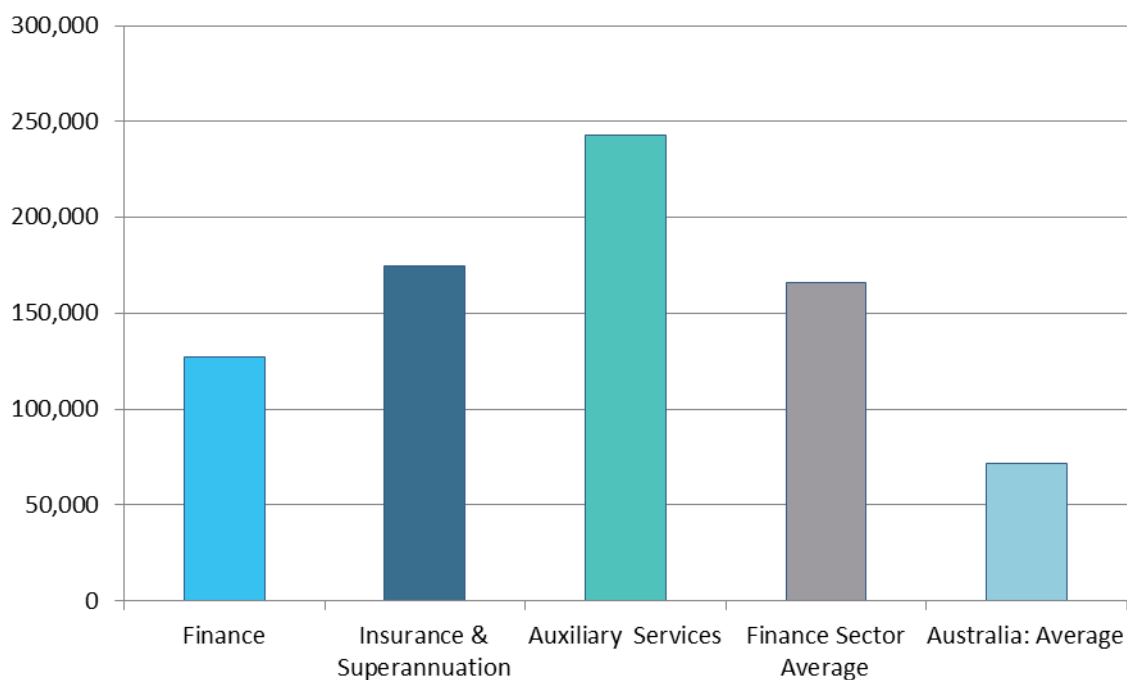
Sub-Sector	2006	2011
FINANCE (TRADITIONAL BANKING)		
Central Banking	1,535	1,640
Banking	137,942	150,482
Building Society Operation	3,473	3,586
Credit Union Operation	9,586	8,080
Other Depository Financial Intermediation	2,126	2,536
Non-Depository Financing	7,642	7,635
Financial Asset Investing	12,149	10,831
INSURANCE AND SUPERANNUATION		
Life Insurance	5,347	6,009
Health Insurance	8,537	10,756
General Insurance	50,123	57,647
Superannuation Funds	6,422	11,335
AUXILIARY FINANCE		
Financial Asset Broking Services	14,816	11,419
Other Auxiliary Finance and Investment Services	74,276	80,507
Auxiliary Insurance Services	14,609	14,907
Total	348,583	377,371

Source: ABS Census data, 2006 and 2011

The finance sector enjoys relatively high wages as a whole, and particularly in the Auxiliary Financial Services subsector, which includes securities dealing, brokerage, stock exchanges, and investment management, including most trading of financial instruments.¹⁶ It is estimated that wages and salaries in this subsector are 90 per cent higher than in the finance subsector and 46 per cent higher than the industry average (Figure 3).

¹⁶ lb

Figure 3: Estimated employee compensation, average 2009



Source: National Accounts: Input Output Tables, ABS5209.0.55.001

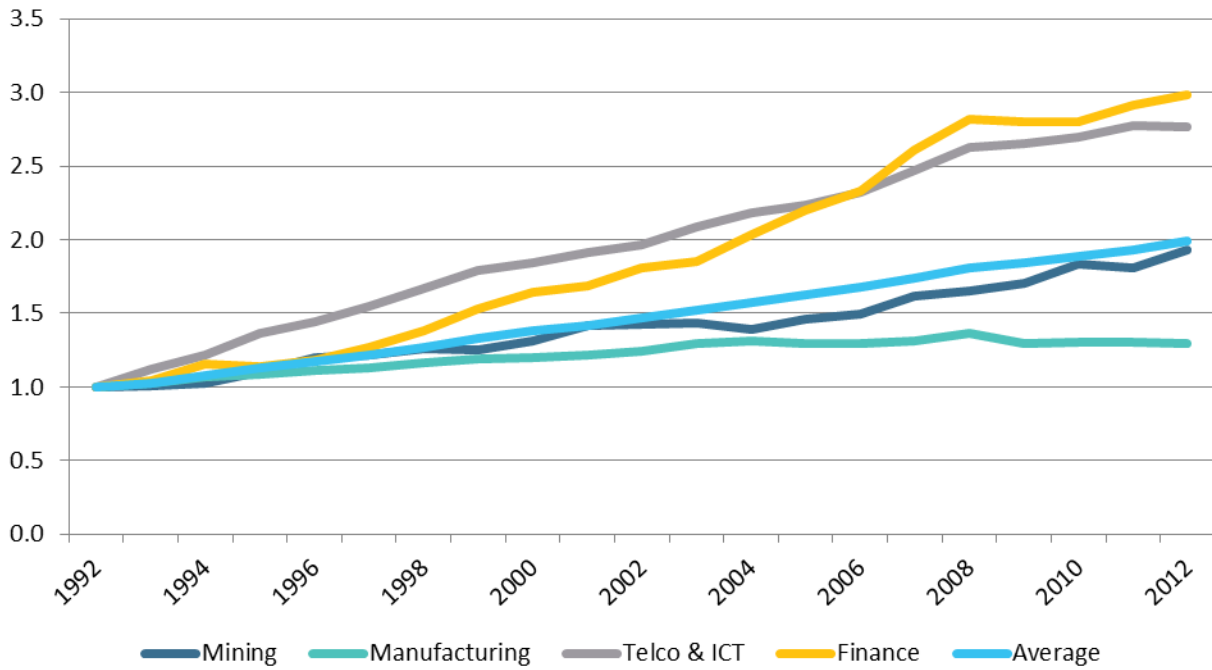
3.3 Industry dynamics

Although employment shares suggest the finance sector has not seen major structural change since 2006, a review of the industry dynamics of the sector over decades reveals that significant changes have occurred.

Remarkable growth in the financial sector notwithstanding the GFC

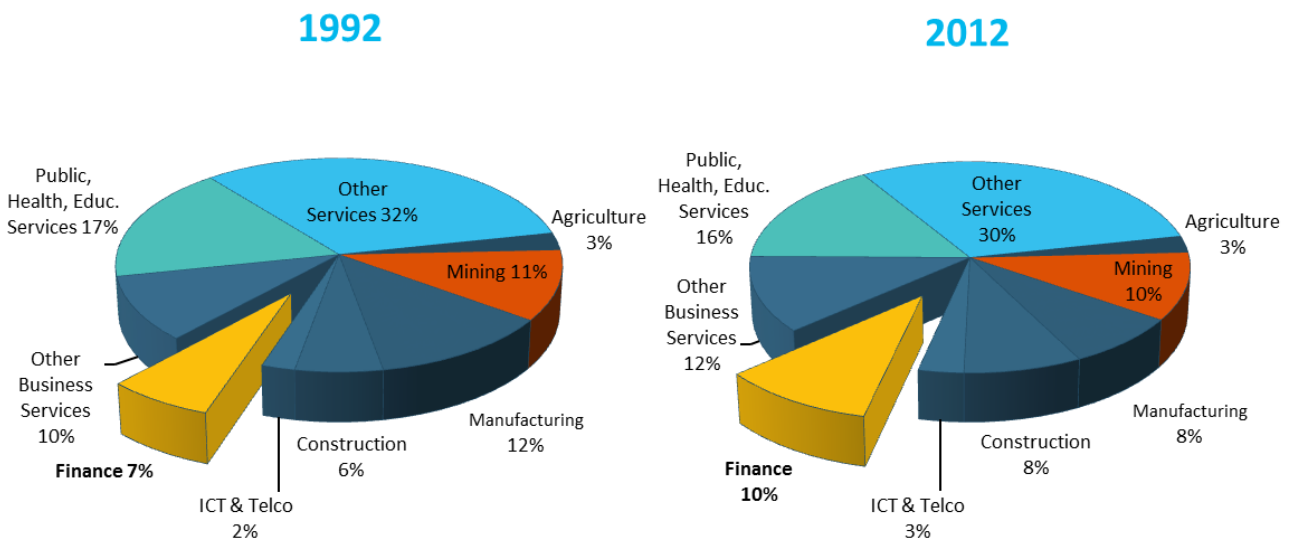
The most striking feature of the Australian finance sector over time is the sustained growth as measured by value added. It is the fastest growing sector of the Australian economy over the last 30 years, and this is particularly pronounced in the last 20 years (Figure 4). This extraordinary growth rate has been achieved on an already large base (Figure 5). Over the previous 10 years, in the midst of the mining boom and the GFC, the financial services sector has sustained strong growth at 5.1 per cent per year, outpacing the 3.1 per cent growth rate of the mining industry.

Figure 4: Growth in the Australian economy by sector, index, 1992=1



Source: National Accounts, ABS 5204.0

Figure 5: Industry shares of GDP, 1992 and 2012



Source: National Accounts, ABS 5204.0

A sector that generated few new jobs and favoured profit over wage growth

Over time, growth in the finance sector's valued added has leaned toward profit growth.

Over the period 1990 to 2012, profits in the sector have grown 10.3 per cent a year compared to 7.7 per cent for wages and salaries. Compared to the sustained growth in profits, and wages and salaries, on the

one hand, the growth in employment, on the other hand, is noticeably different: over the period 1990 to 2012, FTE employment in the financial services sector grew at a slow rate of 0.6 per cent a year. This pattern suggests strong and sustained growth in earnings in the financial services sector with relatively few new employment opportunities. For comparison, the average across all Australian industries was 1.7 per cent employment growth and 5.9 per cent wage and salary growth.

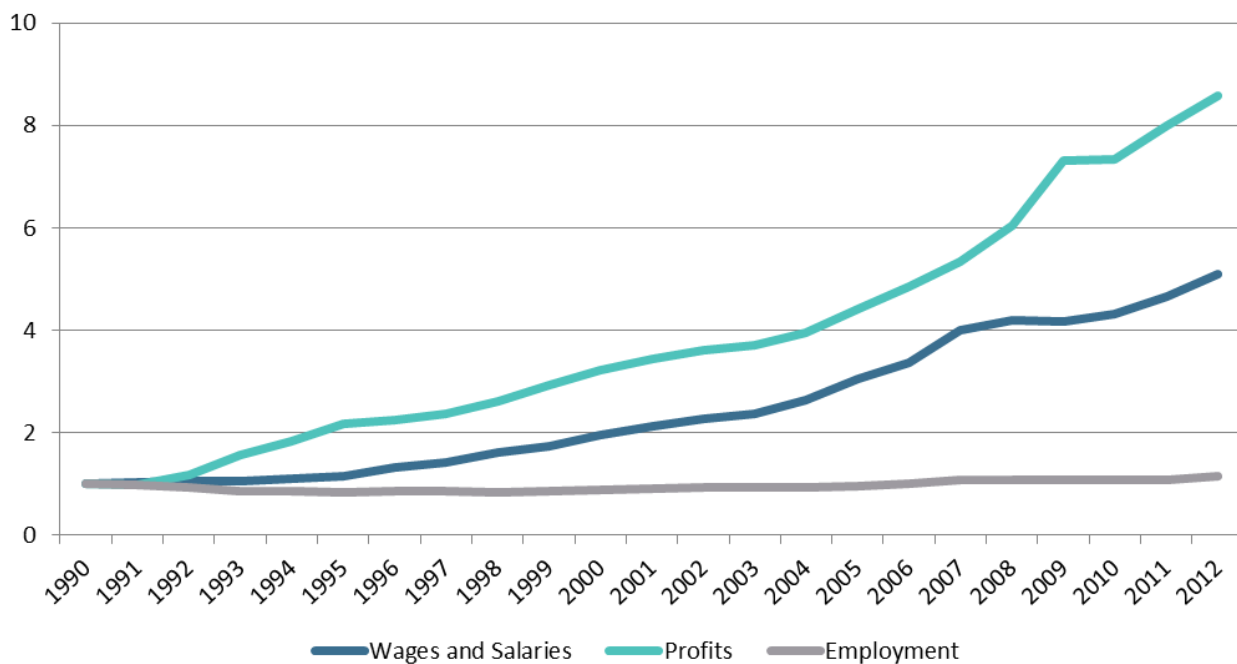
Government projections of employment growth by industry suggest this trend will continue. Projected finance sector employment growth to 2016-17 is just 0.8 per cent a year.¹⁷

The trend of favouring profit growth to wage growth, combined with weak employment growth, is even stronger post-GFC: from 2007 to 2012, nominal profits have grown 61 per cent compared to 28 per cent for wages and salaries.

Figure 6 shows the growth in profits, wages and employment for the finance sector since 1990. Figure 7 compares each of these factors to the average across all Australian industries.

These industry dynamics are remarkable. In a competitive market, growth in the payments to labour and capital (Figure 6) would be expected to coincide in growth in the number of employees entering into the industry. This is especially likely where wages and salaries exceed the national average (Figure 3), and the growth rates of wages and salaries exceed the national average (Figure 7).

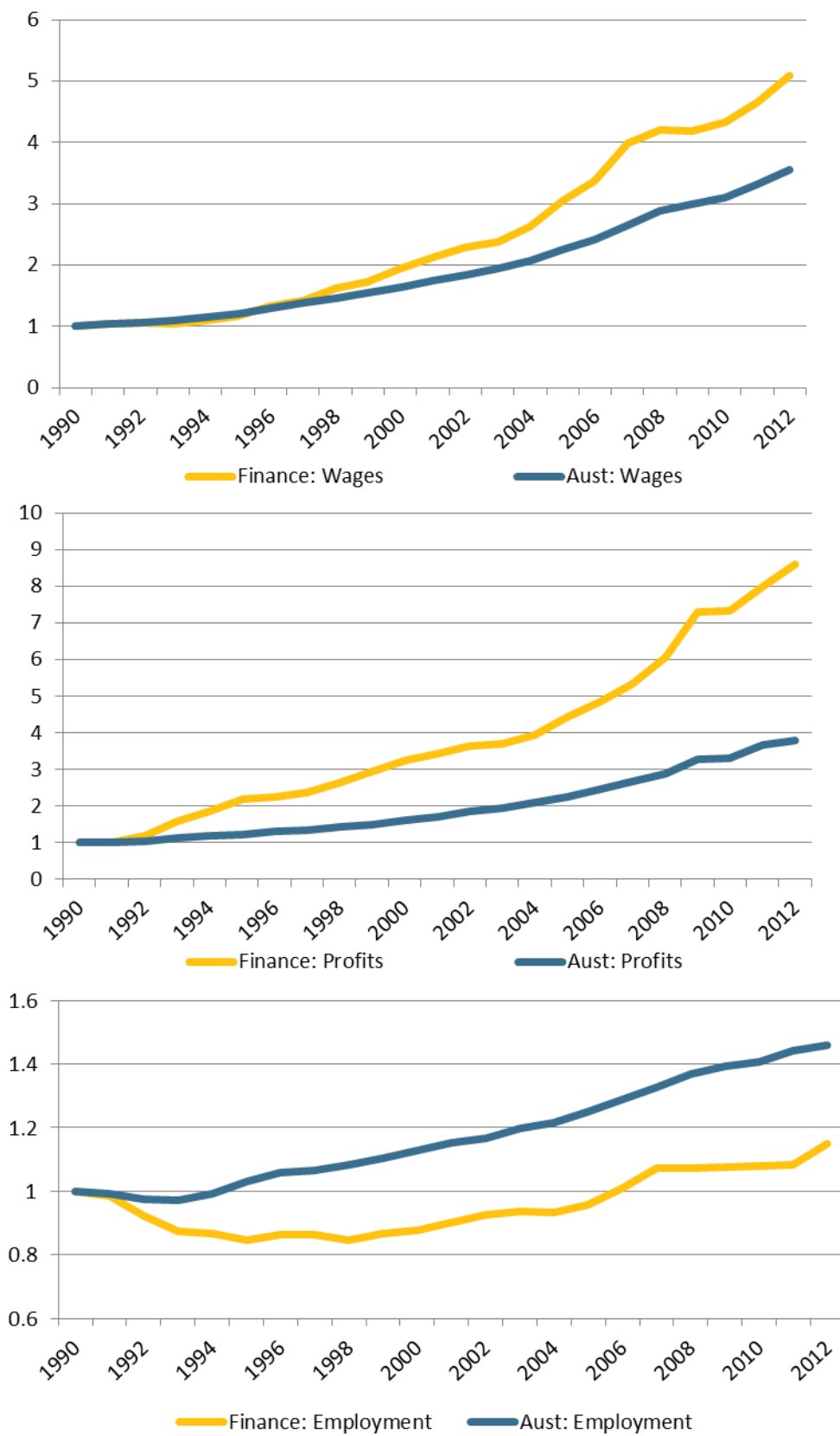
Figure 6: Growth in finance sector profits, wages and employment, index, 1990=1



Source: National Accounts, ABS 5204.0

¹⁷ Department of Education Employment & Workplace Relations (2012)

Figure 7: Growth in profits, wages and employment, all industries and finance sector, index, 1990=1



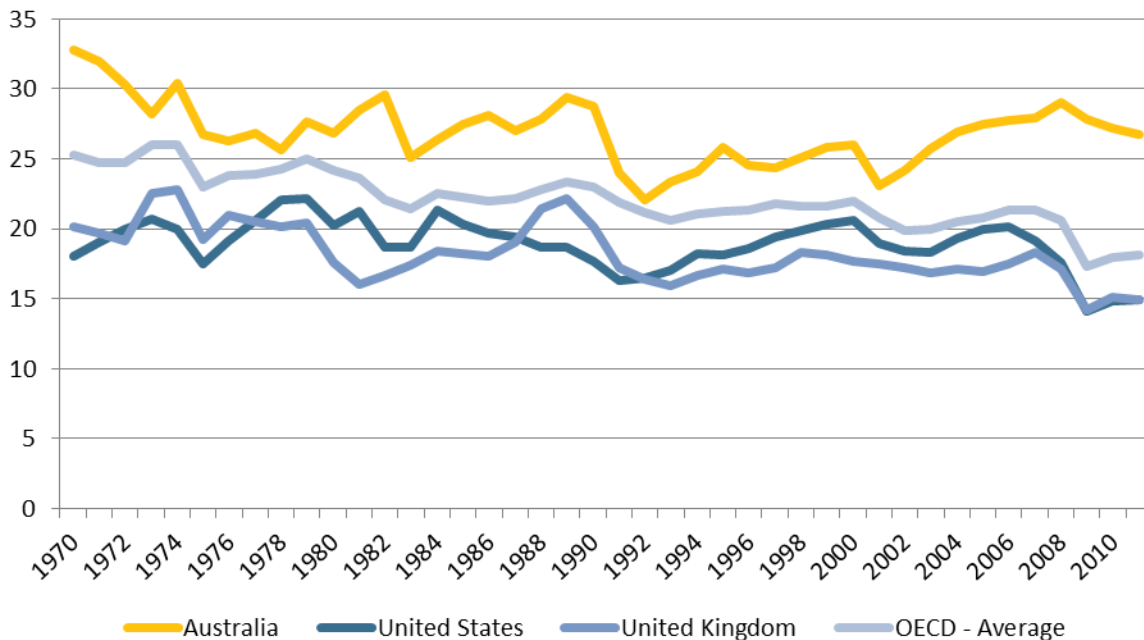
Source: National Accounts, ABS 5204.0

4. Performance of the Australian financial system

This section discusses the capital formation efficiency of the Australian financial system.

To begin, it should be noted that Australia, relative to other countries, has higher levels of investment relative to the size of its economy (Figure 8).

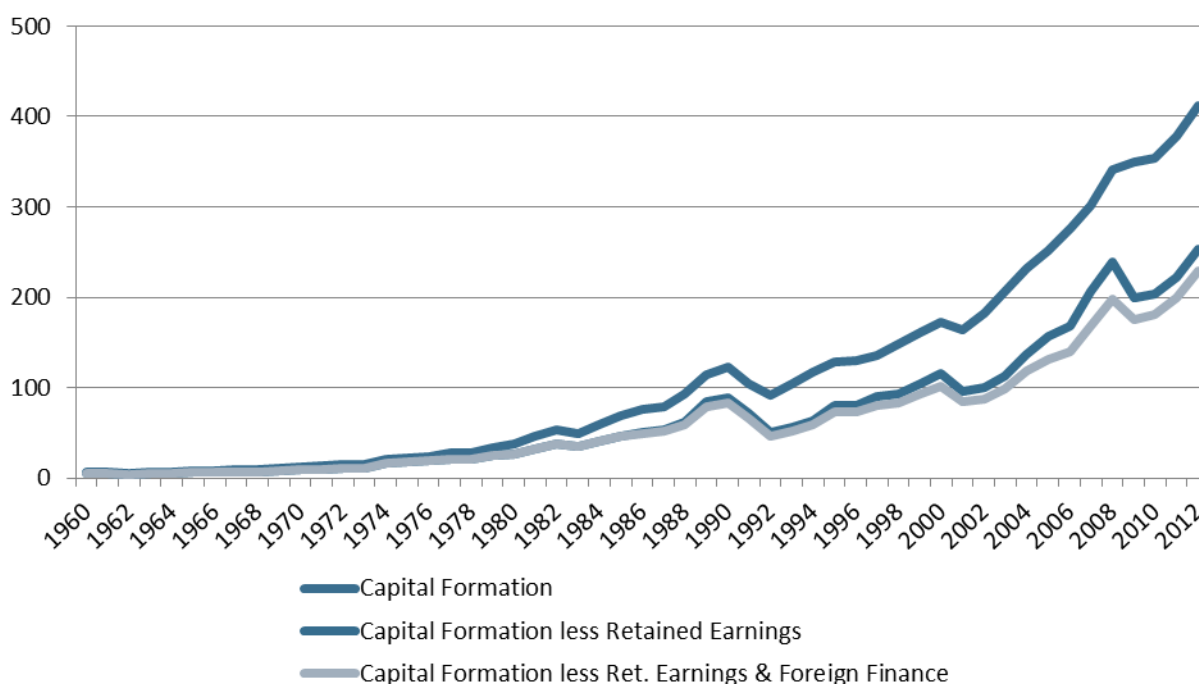
Figure 8: Capital formation to GDP ratios, %, selected countries



Source: OECD StatExtracts

However, a more careful look reveals a less rosy picture. The capital stock of Australia is funded not just by the financial system but also through capital expenditure funded by retained earnings of companies and through foreign intermediation (foreign financial services). After adjusting for these factors, the capital formation facilitated by Australia's financial system is much lower (Figure 9).

Figure 9: Capital formation less retained earnings and foreign financial intermediation, billions, current prices



Source: National Accounts, ABS 5204.0 and ISA calculations

4.1 Performance of the financial system

The Australian economy generated around \$380 billion in gross fixed capital formation, per year, on average over the last three years. Once capital stock produced by companies through retained earnings, and through foreign intermediation, is removed from this amount, \$203 billion in capital formation is attributable to the financial system on average over the last three years.

A key question is whether the capital formation by the financial system is efficient – is capital stock formed by finance at a low cost?

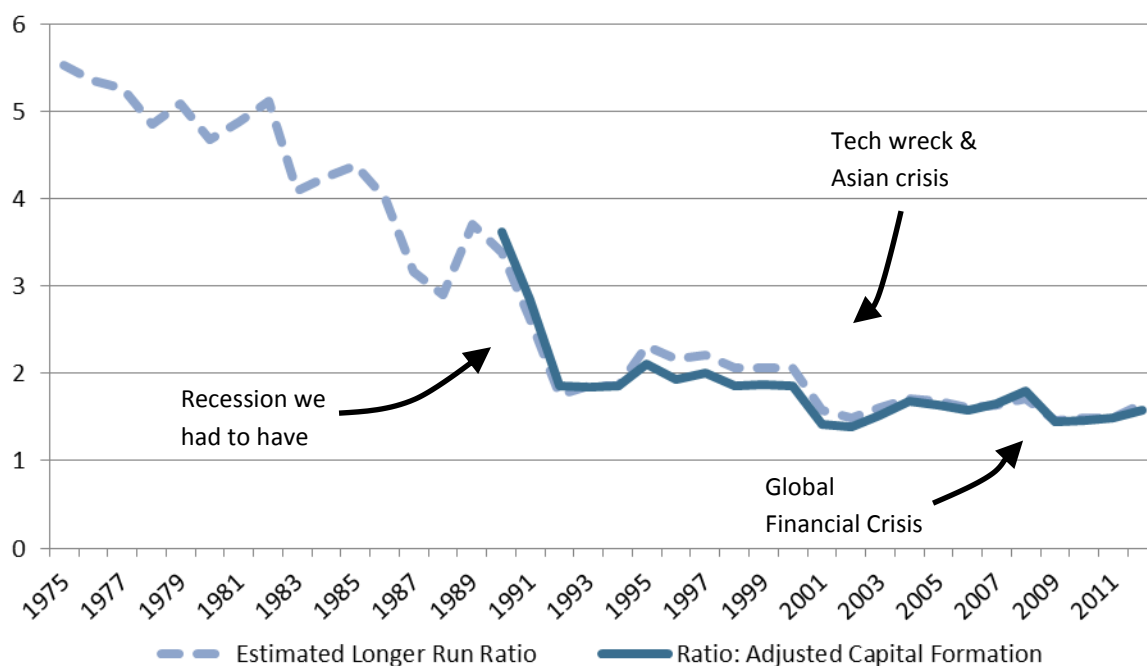
Efficiency would, at a high level, be revealed by considering the relative level of capital formation facilitated by the financial system against the value or amount of economic resources allocated to achieve it. Has the amount of capital formation arising from the financial system increased more or less than the increase in financial system size? Put another way, an efficient and well-functioning financial system will, like any well-functioning industry, tend to have an increasing ratio of output to per unit of input.

Indeed, an efficient financial system would not only have a relatively high level of capital formation per unit cost, but the per unit cost would decline over time due to productivity and efficiency gains, such as through the introduction of useful technologies.

Unfortunately, we do not find increasing capital formation efficiency in finance. Measuring the value of economic resources allocated to financial services, and comparing it to capital formation attributable to finance, shows that, over time, the efficiency of the financial system has declined.

In 1990, for every \$1 of economic resources — labour and capital — allocated to finance, there was about \$3.50 of capital formation. By 2012, efficiency in this respect had declined to just 50 per cent of 1990 levels, such that for every \$1 of economic resources allocated to finance, there was around \$1.50 of capital formation.

Figure 10: Gross Fixed Capital Formation attributable to finance per dollar of financial services



Source: National Accounts, ABS 5204.0 and ISA calculations

Note: The longer run ratio involves estimates using reflated real data for Gross Valued Added because the time series is not available in nominal terms prior to 1990. The correspondence with directly reported ABS data after 1990 is clear.

Overregulation or “sticky profits”?

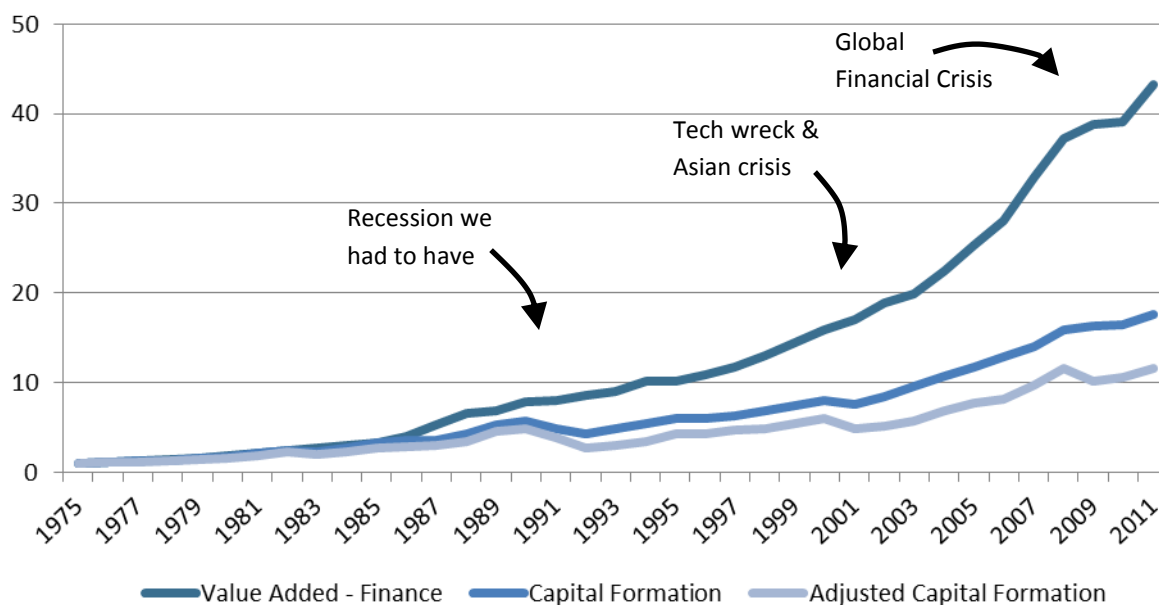
An interesting pattern in the capital formation efficiency ratio (Figure 10) is its tendency to drop quickly and significantly in times of economic recession or difficult financial conditions. In each case, the steep decline in the ratio is attributable to continued strong growth in the size of the finance sector notwithstanding that there has been a decline in investment and in capital formation, as shown in Figure 11. It is a puzzle that, during conditions when the demand for one of the core economic functions of finance is reduced and investment is subdued,¹⁸ the sector continues to expand.

One hypothesis for this outcome that might be suggested is that the sector is forced to comply with ever greater regulatory requirements imposed by public authorities in response to the financial or economic shocks. Greater regulatory intervention would presumably consume greater resources within the sector to comply, relative to the measured output. The strength of this hypothesis seems limited due to three key observations. First, the decline in the ratio does not appear to lag the shock even though it often takes many months or years for new regulatory requirements to be devised, legislated and implemented. Secondly, there is no compelling evidence that regulatory settings have progressively become more burdensome. For example, following the financial system reviews conducted in the 1980s and 1990s, reforms were deregulatory in nature, yet there is no evidence resources contracted or capital formation efficiency increased. Finally, such a hypothesis does not correlate to the historical trends in wages, profits and employment in the sector (Figure 6 and Figure 7, above).

Indeed, the resilience of finance sector profits (and less so wages) notwithstanding economic dislocations is striking. One could almost say the sector displays “sticky profits.”

¹⁸ And presumably some of the other economic functions of finance are subdued in recessions, such as transactions in the payment system

Figure 11: Growth in finance industry, growth in gross fixed capital formation, index, 1975=1



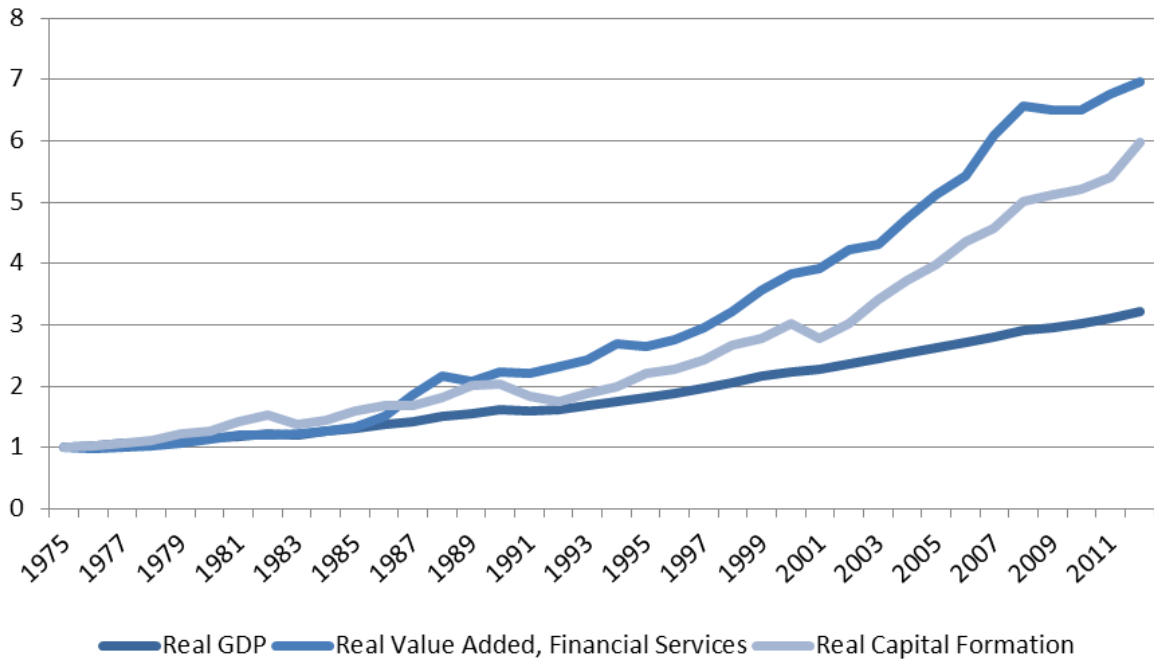
Source: National Accounts, ABS 5204.0 and ISA calculations

Figure 11 underscores the observation that the decline in capital formation efficiency is not primarily because capital formation has generally declined. Instead, it is because the level and value of the economic resources allocated to finance has grown at a rate in excess of the growth of capital formation, notwithstanding efficiencies arising from technology and other productivity gains.

Real versus nominal variables

Our analysis uses nominal variables for most calculations to avoid methodology issues around the appropriateness and availability of price deflators for various time series, especially in respect of retained earnings of non-financial corporations. Figure 12 presents similar variables to Figure 11 expressed in real terms. The trends and conclusion are the same: the finance sector is growing faster than the growth in a core economic function, capital formation. Figure 12 is a robustness check, indicating that the use of real instead of nominal variables demonstrates the same trends.

Figure 12: Real variables: value added, gross fixed capital formation and GDP, index, 1975=1



Source: National Accounts, ABS 5204.0

Box 2: Measuring financial system efficiency

The measurement of capital formation efficiency in this analysis is based on a comparison of the growth in the size of the financial system against the capital formation attributable to the financial system.

We use value added as the variable to measure the size of Australia's financial system since it is commonly used in economic analysis to measure the size of an industry in an economy, as it represents that industry's contribution to GDP.

In concept, value added reflects the payments to resources employed in the industry by means of wages (labour resources) profits (capital resources) (plus certain tax less subsidies on production) to a particular kind of activity.

A core function of the financial system in the real economy is to allocate savings into investments that expand real productive capacity. Finance plays an intermediating role between those in the economy who have excess savings and those wanting to invest in productive capacity.

We measure the growth in this core activity starting with the growth in "gross fixed capital formation" as recorded by the ABS. Growth in gross fixed capital formation reflects the growth in the productive capacity of the economy. We take the measurement a step further by subtracting from total gross fixed capital formation the amount of investment that is directly funded through the retained earnings of non-financial corporations. We also make a small adjustment to account for foreign financial firms who may intermediate Australian savings but generate no financial sector value added in Australia. (See Figure 9 for these adjustments).

We believe these adjustments better reflect the gross fixed capital formation attributable to Australia's financial system and hence allow for a more accurate measure of system performance in this area.

Algebraically, our measure of capital formation efficiency is defined as:

$$Efficiency = \frac{GFCF - RetainedEarnings - Foreign Finance}{Value Added (Financial Services)}$$

This measure of efficiency departs from the usual multi-factor productivity measures, but is essentially an inverted unit cost with the output measure being an estimate of the level of gross fixed capital formation intermediated by the financial system. See Section 4.3 for a discussion of multi-factor productivity measures.

The underlying concept bears some resemblance to other analyses. For example, the unit cost measures developed by Philippon (2012), which also seeks to compare the growth of finance with its output in terms of the economic functions performed by finance (however, Philippon's measure of output is weighted composite of financial intermediation services and financial assets).

4.2 Australian demographics and the importance of capital formation

Australia's population is becoming, on average, older. This means that the number of people working, and who are producing goods and services, will decline relative to the number of people in retirement. In 1970, there were five people working for every aged person. By 2050, that will nearly halve, to about 2.7 working people per aged person; about a quarter of the population is projected to be age 65 or older.¹⁹

In the face of these demographic challenges, and the potential decline in output growth, Australia can take one of two paths. On one path, Australia accepts the decline, resulting in a lower standard of living, reflected in lower consumption, than the historical trend would suggest. On the other path, Australia

¹⁹ Treasury (2010)

defies demographics and produces more per working person in a sustainable manner. One path leads to decline, and one path leads to greater prosperity.

If Australia is to take the path toward greater prosperity, in the context of demographic pressures, sustainably boosting productivity per hour of labour must be a central social and policy objective.

Box 3: The importance of productivity to an ageing population

“High productivity growth — producing more output with proportionately fewer workers — is the key to continued growth with an ageing population.” – Commonwealth Treasury, Australia to 2050: future challenges, 2010

“[I]mproving the productivity of the labor force through increased investment in human capital and technology emerges as a leading policy alternative to the possible negative impact of population aging on economic growth and social development.” – Asian Productivity Organisation, Population Aging and Productivity in Asian Countries: A Synopsis, 2011

With the ageing of the population reducing participation, productivity growth will be the major contributor to real GDP per person growth in Australia over the next 40 years.

The Commonwealth Treasury has estimated that, an increase in productivity growth of 2 per cent per year would increase the size of the economy by 15 per cent by 2049-2050, and GDP per person by \$16,000.

Capital formation and productivity

Broadly speaking, there are two sources of labour productivity growth: technical progress and increases in the average capital-labour ratio.²⁰

Capital formation and increasing the capital intensity of our economy is a critical component of any mix of solutions to an ageing population, particularly the problems arising from a declining number of workers relative to the population as a whole.

The link between capital formation and capital intensity, on the one hand, and productivity gains, on the other hand, is intuitive and has been widely acknowledged for decades.²¹ Capital intensity and productivity gains have been empirically related.²²

The relationship between capital formation and productivity growth will be explored in an upcoming ISA report, *Capital formation and productivity*.

4.3 Existing literature on the productivity of the Australian financial system

To the extent that productivity of the financial system is analysed in Australia, the focus is usually on the industry Multi-Factor Productivity (MFP) estimates published annually by the ABS.²³ In addition, the Productivity Commission publishes extensively on the topic of productivity; analysing and extending the data produced by the ABS.²⁴

The MFP performance of the financial services industry in Australia is strong. MFP has grown significantly over many years with a recent flattening since the GFC (Figure 13). Over the period 1990 to 2012, MFP has

²⁰ Guest (2011)

²¹ See, e.g., Edmunds (1950) at 33-41

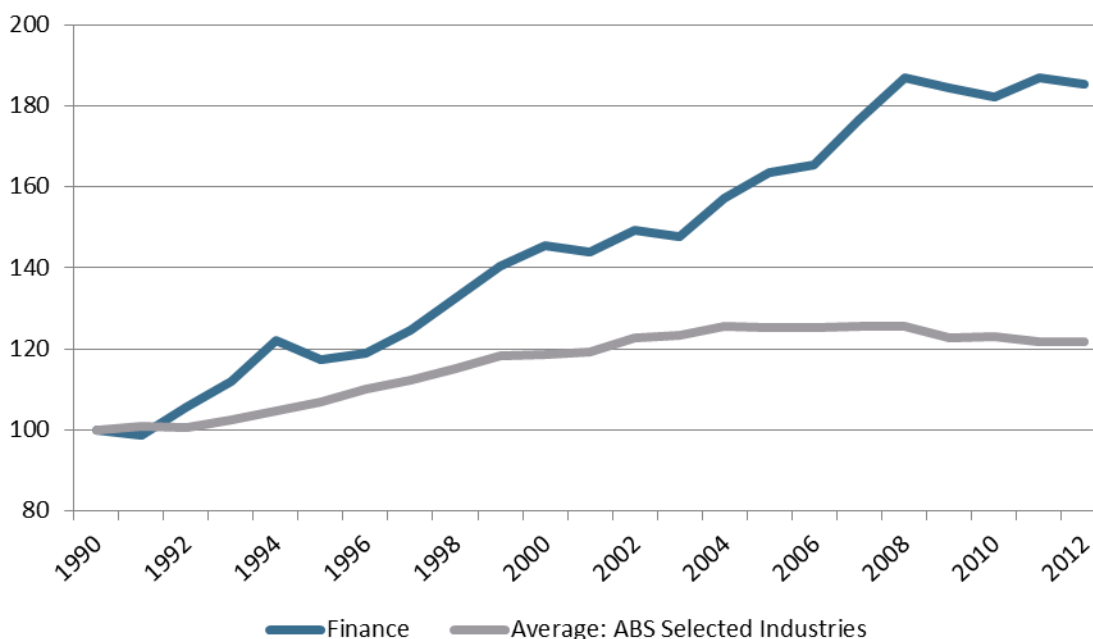
²² See, e.g., Rao, Tang, and Wang (2008)

²³ See, e.g., Li (2013) (noting that the “MFP measurement framework is not in its maturity.”)

²⁴ See, e.g., Barnes (2011) and Parham (2012)

grown, on average, 2.8 per cent a year. Since the GFC, growth has levelled off with a slight decline of -0.2 per cent, on average, a year.

Figure 13: Value added Multi-Factor Productivity, index, 1990=100



Source: ABS 5260.0.55.002

However, it is important to remember that the growth accounting framework used to estimate MFP measures much more than productivity. As the Productivity Commission points out:

Apart from technical progress and innovation, other influences on the annual rate of MFP growth may include:

- *economies of scale*
- *reallocation effects of capital and labour*
- *changes in the labour force and management practices*
- *variations in capacity utilisation*
- *climate and water availability.*²⁵

The first three points, in particular, are likely to have some influence on the estimation of MFP for finance.

More importantly, however, errors in the measurement of the inputs and outputs erode the quality of the MFP estimates.²⁶ This is particularly true for the finance sector where measurement of output is difficult and controversial. As Diewert, Fixler and Zieschang (2011) put it:

One of the most difficult to measure parts of the System of National Accounts and the Consumer and Producer Price Indexes is the measurement of the outputs (and the inputs) of the financial sector. The pricing of financial services is so controversial that there has not been general agreement on how to measure the value of various types of financial services like banking and insurance outputs and there is even less agreement on how to measure the quantity (or price) of financial services.²⁷

²⁵ Parham (2012)

²⁶ Parham (2012), see also Li (2013)

²⁷ Diewert, Fixler, and Zieschang (2011)

A large part of the challenge in measuring financial sector output is around the concept of Financial Intermediation Services Indirectly Measured (FISIM). Whilst the literature on the problems with FISIM is extensive²⁸ basically it measures the growth in financial assets and liabilities generated by the financial system, especially the growth in new loans. The manner in which financial services output is measured can significantly affect the result.²⁹

By relying heavily on FISIM, the MFP measure for finance is, indirectly, arguably more of an estimate of its productivity in generating financial assets³⁰ as opposed to the productivity of any of its economic functions, including the mobilisation of savings into investment in capital.

Insofar as the measurement of wages and profits in finance is more straightforward than FISIM or financial sector output more generally, our analysis may avoid some of the measurement difficulties outlined above.

5. Why is finance becoming less efficient at capital formation?

There are a variety of potential reasons why the financial system is getting bigger and consuming more resources while producing relatively less capital formation.

Our analysis of industry data suggests a number of potential causes. In upcoming ISA reports, we will discuss two:

- *Expansion of financial activity, particularly secondary market trading of financial instruments, that is remote from capital formation and services to real economy companies.*
- *Changes in banking, including concentration supported by government subsidies and increased emphasis on financing purchases of existing housing stock.*

It is possible that the demand for capital formation has declined, perhaps because the economy has become less capital intensive. We find no evidence of this. As shown in Figure 8 above, there does not appear to be a material change in the capital intensity of the economy. Moreover, if capital intensity had declined, it would remain a puzzle that the economic resources allocated to financial services have grown to the extent that they have, whilst a major economic function of finance, capital formation, was apparently in decline.

It also is possible that finance may increasingly be mobilising savings to do other things, such as to:

- finance intangible assets that could be attenuated from measured capital formation, such as the accumulation of human capital through, e.g., student debt, and
- finance consumption through consumer debt.

Student debt does not appear to be a material factor. Student debt is not a significant asset class for banks, and for the Commonwealth was valued at just \$26.3 billion in 2012.³¹ More generally the accumulation of human capital happens, in Australia, mostly through government-funded education and training programs, and whilst some households may borrow through the financial system to fund education and training, the numbers are likely to be even smaller than the amount of total student debt.

Consumer debt is a more mixed picture. The stock of consumer debt was about \$480 billion in 2012, whereas the total stock of financial assets was about \$4.2 trillion, with home loan debt representing about

²⁸ See Yadon (2012) for a survey of the literature and a summary of the issues. See also, Haldane, Brennan and Maduros (2010)

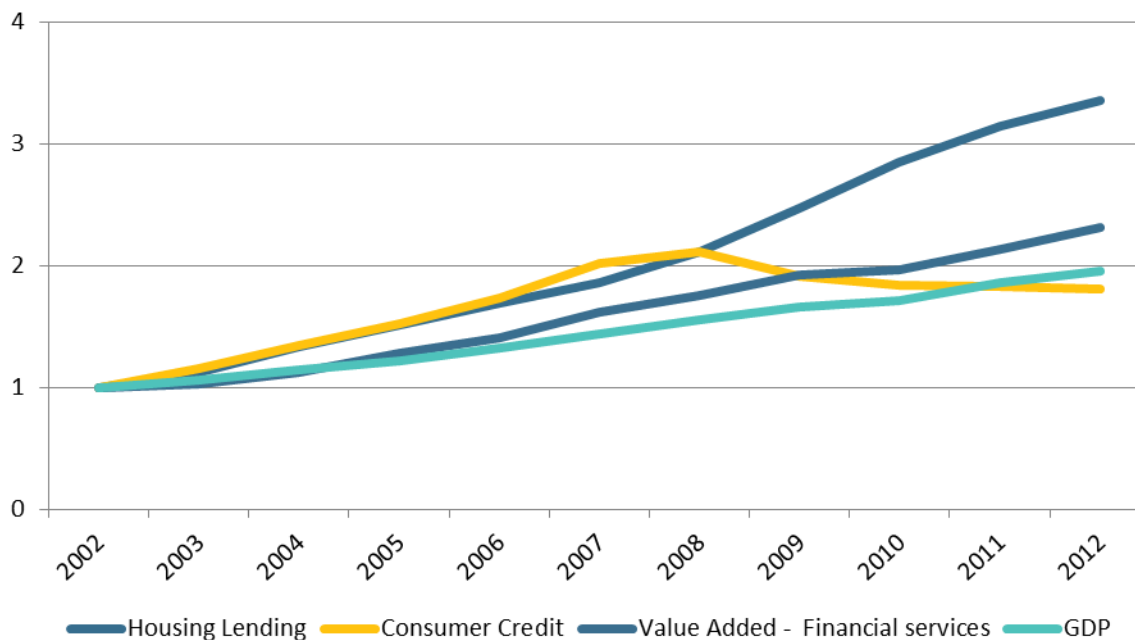
²⁹ See, e.g., Inklaar and Wang (2013)

³⁰ Burgess (2011)

³¹ Grattan Institute (2013)

\$1.2 trillion. While the volume of consumer debt has generally increased, since the GFC there has been a contraction. Over the period from 2002, consumer debt has grown less than GDP and below the growth in the finance sector, as shown in Figure 14. Moreover, if there were a material increase in consumer and student debt, such an increase might reasonably be expected to drive growth in aggregate demand, and meeting that expanded demand likely would involve additional capital formation.

Figure 14: Growth in consumer credit, finance sector and GDP, index, 2002=1



Source: National Accounts: Financial Accounts (ABS 5232.0), Housing Finance (ABS 5609.0), and ISA Estimates

It is possible that the level and value of labour and capital allocated to financial activity has shifted from non-financial corporates to financial firms. For example, finance activities may have previously been undertaken in-house by non-financial corporates, and therefore included in other sectors such as manufacturing, but are now outsourced and included in the finance sector. We suspect that this phenomenon may be part of the explanation, though very unlikely to be a driving factor. In particular, the growth of the financial sector has not been even, and in fact tilts heavily to auxiliary financial services as indicated in Figure 3 and Table 1, rather than an expansion in traditional banking. It is not clear that non-financial corporates would historically have had significant auxiliary financial services performed in house. The growth in auxiliary financial services in recent years has been more closely aligned in time with the expansion of secondary market trading in shares, derivatives turnover, and similar activities.

6. ABS data and ongoing assessment of financial system efficiency

The analysis in this paper is heavily reliant on data supplied by the Australian Bureau of Statistics. The availability of quality economic and social data to the public is extraordinarily important.

We commend the ABS and acknowledge that this analysis would not have been possible without the significant efforts of that institution.

There are, however, a few areas in which additional data from the ABS could facilitate useful analysis of finance.

In broad terms, greater data availability for the three subsectors of the finance industry (i.e., finance, superannuation and insurance, and auxiliary financial services) would be beneficial to analysis of the

finance sector. Currently, the majority of useful data for the three subsectors comes from employment data and various data points from the input-output tables. While the employment data is useful, the input-output data is not time series data and are published with a significant time lag. The most recent input-output table is for 2008-9.

Time series data for total valued added, compensation of employees and gross operating surplus for the three finance industry subsectors would facilitate extension of the analysis presented in this report.

Extended data on wages and salaries across industries would be useful. The ABS, in general, for all industries, supplies data for non-managerial employees. Additional data that tracked wages and salaries across all employee types (including managerial) would help better judge the performance of the finance industry compared to others.

Data relating to the concept of Financial Intermediation Services Indirectly Measured (FISIM) also would be useful. FISIM is an important statistical concept used to estimate the output of the financial services industry within the National Accounts. Statistical agencies in other jurisdictions commonly publish FISIM time series.

7. Conclusion

As Australia's superannuation savings grow, and demographic changes continue, it is important to ensure that the transformation of savings into investment in productive capital is as efficient as possible.

In 1990, the Australian financial system was nearly three times more efficient at facilitating capital formation than it has been in recent years. The apparent lagging efficiency in the capital formation function of finance may be contributing to suboptimal productivity gains. This reduces the relative welfare of society and undermines economic growth.

The financial system that we have today, a system seemingly characterised by reduced efficiency in capital formation notwithstanding the substantial increase in economic resources allocated to finance, did not happen overnight. It is the result of decades-long changes to business practices and public policy, based on a melange of ideas, many of them well-intentioned.

Similarly, increasing financial system efficiency will take time. But sensible reforms that encourage capital raising and that create incentives for long term investment in productivity-enhancing projects should be considered. Consideration should also be given to reforms to ensure excessive secondary market trading does not run counter to these important objectives.

With the country devoting about 10 per cent of its productive capacity to financial services, ISA looks forward to working with the finance sector, along with the business sector, policy makers, and the broader community, on ways to increase the efficiency of finance. Achieving greater financial system efficiency could be an important part of continuing to improve Australia's prosperity. Good ideas will be needed from across the community. ISA will seek to do its part, monitoring the capital formation efficiency of the sector from time to time and participating constructively in public discussions about potential reforms.

8. Methodology

A detailed discussion of the methodology and the assumptions underlying the various charts, tables and estimates presented in this report is available online at industrysuperaustralia.com

9. References

- ABS (Australian Bureau of Statistics) (2006). Australian and New Zealand Standard Industrial Classification (ANZSIC). Australian Bureau of Statistics
- Australian Bureau of Statistics (ABS) <http://www.abs.gov.au/>
- Barnes, Paula (2011). Multifactor Productivity Growth Cycles at the Industry Level. Productivity Commission
- Burgess, Stephen (2011). Measuring Financial Sector Output and its Contribution to the UK GDP. Bank of England, Quarterly Bulletin.
- Cliff, D., & Northrop, L. (2012). The global financial markets: an ultra-large-scale systems perspective Large-Scale Complex IT Systems. Development, Operation and Management (pp. 29-70): Springer
- Demirguc-Kunt, A., & Maksimovic, V. (2000). Funding growth in bank-based and market-based financial systems : evidence from firm level data. The World Bank Retrieved from <http://ideas.repec.org/p/wbk/wbrwps/2432.html>
- Department of Education Employment & Workplace Relations (2012). Financial and Insurance Services Employment Outlook
- Diewert, W. E., Fixler, D., & Zieschang, K. (2011). The measurement of banking services in the system of National Accounts. Ottawa Group. Chicago
- Edmunds, S. (1950). Financing Capital Formation. Harvard Business Review, 28 (January 1950)
- European Commission, International Monetary Fund, Organisation for Economic Co-Operation and Development, United Nations, and World Bank (2008). System of National Accounts
- European Commission, Green Paper: Long-Term Financing of the European Economy (2013)
- European Commission, Commission Staff Working Document: Long-Term Financing of the European Economy (2013)
- Gluyas, R. (2012, 25 February 2012). Bankers eat humble pie as the sumptuous bonus feast comes to an end, The Australian. Retrieved from <http://www.theaustralian.com.au/business/financial-services/bankers-eat-humble-pie-as-the-sumptuous-bonus-feast-comes-to-an-end/story-fn91wd6x-1226281049983>
- Grattan Institute, Mapping Australian higher education (2013)
- Greenwood, R., & Scharfstein, D. (2013). The Growth of Finance. The Journal of Economic Perspectives, 27(2), 3-28
- Guest, R. (2011). Population ageing, capital intensity and labour productivity. Pacific Economic Review, 16(3), 371-388

- Group of 30, Working Group on Long-term Finance (2013). Long term finance and economic growth
http://www.group30.org/images/PDF/Long-term_Finance_lo-res.pdf
- Haldane, A., Brennan, S. and Madouros, V. (2010). What is the contribution of the financial sector: miracle or mirage?, The future of finance: the LSE report
- Inklaar, Robert and Wang, Christina J. (2013). Real Output of Bank Services: What Counts is What Banks Do, Not What They Own, *Economica* (January 2013).
- Karam, P., Muir, D., Pereira, J., & Tuladhar, A. (2010). Macroeconomic effects of public pension reforms
IMF Working Papers, 1-63
- Kuznets, S. (1961). Capital in the American Economy: Its Formation and Financing. National Bureau of Economic Research
- Li, Jianke (2013). Introduction to Productivity Measurement Framework. Department of Industry, Innovation, Science, Research and Tertiary Education, Working Paper 02-13
- Merton, R. C. (1995). A functional perspective of financial intermediation. *Financial Management*, 23-41
- Mulino, Daniel (2013). Funding Australia's Future: Improving Australia's Financial Infrastructure. Australian Centre for Financial Studies
- OECD (2013). The Role of Banks, Equity Markets and Institutional Investors in Long-Term Financing for Growth and Development: Report for G-20 Leaders
- Philippon, T. (2012). Has the U.S. Finance Industry Become Less Efficient? On the Theory and Measurement of Financial Intermediation. National Bureau of Economic Research Working Paper 18077
- Parham, Dean (2012). Australia's Productivity Growth Slump: Signs of Crisis, Adjustment or Both? Productivity Commission
- Rajan, R. G. (2006). Has finance made the world riskier? *European Financial Management*, 12(4), 499-533
- Rao, S., Tang, J., & Wang, W. (2008). What Explains the Canada-US Labour Productivity Gap? *Canadian Public Policy*, 34(2), 163-192
- RBA (the Reserve Bank of Australia) (2011). Box B: The Mining Sector and the External Accounts' Statement on Monetary Policy, November 2011
- Steven, Glenn (2010). The Role of Finance. The Shann Memorial Lecture, University of Western Australia Perth - 17 August 2010
- Tobin, James (1984). On the Efficiency of the Financial System. *Lloyds Bank Review* 153 (July), 1-15
- Treasury (2010). Australia to 2050: future challenges . Commonwealth of Australia.

U.N. Conf. on Trade and Development, Macroeconomic Policies to Promote Growth and Job Creation (New York, March 12-13, 2012), p.3

http://www.un.org/esa/ffd/ecosoc/springmeetings/2012/Unctad_BGNote.pdf.

Yadon, J. A. (2012). Judging the contribution of the financial sector Issues with FISIM, ROE and Tail-end risk of US Commercial Banks



Melbourne
Casselden Place
Level 39, 2 Lonsdale Street
Melbourne VIC 3000
P: (03) 9657 4321

 [@IndustrySuper](https://twitter.com/IndustrySuper)
admin@industrysuper.com

Sydney
Level 2, 50 Pitt Street
Sydney NSW 2000
P: (02) 8076 5272

Industry Super Australia ABN 72 158 563 270 Corporate
Authorised Representative No. 426006 of Industry
Fund Services Ltd ABN 54 007 016 195 AFSL 232514

www.industrysuperaustralia.com

Canberra
Level 3, 39 Brisbane Ave
Barton ACT 2600
P: (02) 6273 4333

Consider a fund's PDS and your objectives, financial
situation and needs, which are not accounted for in
this information before making an investment decision.