21 June 2018

The Secretary
Standing Committee on Agriculture and Water Resources
PO Box 6021
Parliament House
CANBERRA
ACT 2600

Dear Secretary,

Re: Inquiry into superannuation fund investment in agriculture

My name is Veronica Terry and I run a mixed cropping enterprise with my husband, Rob, in Tasmania. We are focused on improving our soil quality, keeping up with technology, improving yields through the use of direct drilling and minimum tillage and contributing to our industry through Rob's recent appointment as a Board member of Southern Farming Systems.

I am also a Financial Planner with 15 years industry experience. I have a Bachelor of Business and a Graduate Diploma in Financial Planning (Finsia). I am keen to see further improvements in the industry.

I am currently completing a Grain Growers Leadership Scholarship. As part of my scholarship I instigated, in early 2018, a project that investigates the "Barriers to everyday Australians having easy access to Australian agricultural investments". I have made contact with two leading economists and superannuation companies including Australian Super, First State Super, Vic Super and Colonial First State to gain a better understanding of these barriers and how they might be overcome. I appreciate that these economists and funds have responded to my requests for information. I was pleased to learn of the new Government inquiry investigating the regulatory aspects of this issue. Due to my own research on this matter, I feel there are a couple of simple measures that can be put in place to enhance communication, allowing Australian agriculture to thrive in conjunction with Australian investors through their superannuation investments.

I have two key findings and four recommendations. My aim with this letter is to be clear and concise. Please contact me should you require additional details.

Terms of Reference

The terms of reference are met by addressing the regulatory requirements imposed on superannuation funds and how they may be *defined and clarified* to combat barriers to Australian agricultural investment.

Terms of reference are also met through addressing a *practical barrier,* being Australian agricultural investments are apparently not meeting the 'investment criteria' set by superannuation funds.

My recommendations focus on research conducted with information publicly available to consumers and therefore I would expect that additional consultation with APRA and ASIC will be required.

Key Finding 1 – APRA currently omits superannuation agricultural investment when releasing data.

For example, when the Australian Superannuation Fund Association (ASFA) report on how Australian super funds are investing money, agriculture does not appear, at all (Appendix 1). I have contacted the ASFA for clarification on this matter and have been informed that this information is provided to them by APRA. I have also contacted APRA. APRA required clarification of my question and I await an answer. At this stage is seems agriculture does not exist as a reported category.

This is an issue as agricultural investment vehicles automatically start off on a back foot when pitching their benefits to superannuation funds. Agriculture doesn't fit neatly into a box, or even have a box to fit into.

VicSuper puts agriculture in the same box as infrastructure and property through use of the term 'Real Assets' (Appendix 2). This term has value when summarising assets for consumers as it paints a picture. This term is not so useful when agriculture is required to compete against property and infrastructure assets when superannuation funds are looking to invest funds. Is this sensible?

Is it in the best interests of agriculture and consumers for agriculture to be compared to infrastructure and property? The Global Financial Crisis, while not the same 'kettle of fish' as this issue, is a heightened example what can happen if assets are mislabelled and repackaged for the market.

Key Finding 2 - Transparent disclosure of what criteria each Australian superannuation fund has in place for screening agricultural investments for their members.

You will most likely be aware that Dr Stephen Anthony has published a valuable report called 'Driving super fund investment in Australian agriculture'. Dr Anthony noted in his report that *"...it may be better for superannuation funds to partner with experienced family or corporate operators with established track records running successful operations"* (Appendix 3, page 5). This highlights an area where Australian farmers have an opportunity to partner up with superannuation funds to accelerate production and keep pace with technologies and practices that have positive environmental benefits, as well as providing solid returns for consumers.

As you would be aware, there are a number of superannuation funds that invest in agriculture, but our largest superannuation fund Australian Super does not even mention agriculture as a possible asset to invest in when explaining asset classes to their members (please see Appendix 4).

I contacted Australian Super to ask about their investment in Australian agriculture. I was informed that they were not currently invested in agriculture outside of some listed stocks and they, "continue to review and assess existing and new investment opportunities against our investment criteria and our outlook for markets". While I was unable to discover the actual criteria that agricultural investments are being measured against, it useful information for Australian agricultural investment providers and farmers if they are to structure products that meet market needs. Australian agricultural investment vehicles and farmers are missing out on the opportunity to produce great outcomes for Australian investors.

Superannuation is designed for Australians, so what is important to them?

As a financial planner I have met with many Australian's over the last 15 years who are overwhelmed by superannuation. Superannuation funds promote themselves as being low cost and high return investments. What is the greatest fear of an investor? Granted, low cost and high returns are important and heavily promoted, but what really makes Australians uncomfortable is the fear of losing their nest egg. Agriculture is not a low-cost investment to run and it is not the highest returning investment on the pie chart. However, when market volatility peaks, agriculture can offer Australians peace of mind with greater diversification due to its low correlation with other growth assets and it is tangible. In this respect, superannuation funds are missing the mark by overlooking agriculture.

Recommendations

Based on the key findings, these are my recommendations:

1. APRA to provide clear definitions of each asset class, making it clear so that property and infrastructure are not mixed with agriculture.
2. APRA to create uniform definitions of growth and defensive asset definitions and perhaps coin a term for assets that display a combination of growth and defensive qualities.
3. APRA to report on the level of investment Australian superannuation funds have in agriculture.
4. Australian superannuation funds to publicly report their criteria for agricultural investment.

Conclusion and Benefits

By separating agriculture as an individual asset class, Australian superannuation fund members will have peace of mind with greater diversification and an asset that will still, physically exist, during times of severe market turbulence.

Australian superannuation fund members will benefit from only having to learn one 'financial language' when comparing products and financial planners. This will give all Australians more confidence and hopefully contribute to more Australians taking their superannuation investments more seriously.

Australian superannuation funds will benefit from understanding how their agricultural investment assessments compare to the wider market.

The Australian agricultural investment landscape will understand the expectations of superannuation funds, promoting more open discussion and assist in directing effective symbiotic investments in rural Australia.

I look forward to more Australians being able to experience great outcomes from agricultural investments.

Kind Regards,

Veronica Terry.

Superannuation Statistics

April 2018

asfa
the voice of super

Overview

Type of fund	Tota assets ($b on)	No of funds	No of accts (June 17)
Corporate	55	24	0 3 m on
ndustry	590	40	11 3 m on
Pub c sector	578	37	3 6 m on
Reta	613	125	12 3 m on
Funds w th ess than 5 members	721	594,737	1 1 m on
Ba ance of statutory funds	57		
Total	**2,615**		**28.6 million**

Source: APRA Statistics – Dec quarter 2017 and APRA annual statistics for no. of accounts

Manner of investment (funds with more than four members)

Manner of nvestment	$ b on
D rect y nvested	611
P aced w th nvestment Managers	887
Invested in Life Office Statutory Funds	136
Total assets	**1,634**

Source: APRA Statistics, Dec 2017.

Funds with more than four members

Dec quarter 2017	$ m on
Emp oyer DB contr but ons	3,952
SG contr but ons	15,412
Salary sacrifice	1,861
Persona contr but ons	3,917
Net ro overs to SMSFs	1,653
Lump sum benefits	8,262
Pens ons	8,335
Contributions taxes	2,672
Earnings tax	2,555
Operating expenses	1,720
Net earn ngs	64,227
Net growth	67,843

Source: APRA Statistics – Dec quarter 2017.

Asset allocation (funds with more than four members)

Asset c ass	Amount ($b on)	%
Cash	180	11
Australian fixed interest	207	13
International fixed interest	127	8
Austra an sted shares	383	23
sted property	52	3
Un sted property	83	5
nternat ona shares	391	24
nfrastructure	81	5
Hedge funds	28	2
Un sted equ ty	67	4
Other	31	2
Total	**1,634**	**100**

Source: APRA Dec quarter 2017.

MySuper funds

Character st cs	Amount ($b on)	%
Cash	47	8
Australian fixed interest	74	12
International fixed interest	43	7
Austra an sted shares	136	22
sted property	14	2
Un sted property	43	7
nternat ona shares	178	28
nfrastructure	44	7
Hedge funds	0	0
Un sted equ ty	32	5
Other	19	3
	632	**100**

Source: APRA Dec quarter 2017.
*Number of MySuper produc s , 3 lifecycle

Aggregate contributions

	2016-17 ($b)
Emp oyer	92 3
Member & other	55 8
Total	**148.2**

Source: APRA Annual Statistics, June 2017

Funding of retirement, retirees aged 45+

ncome	%
Fu y se f funded	21
Part a y se f funded	27
Government pens on on y	52

Source: ABS Cat 6238.0, 2016-17.

Mean balance and coverage (2015-2016)

Character st cs	Age	$	% w th super
Ma es	15+	111,853	73
Fema es	15+	68,499	67
Ma es	30 34	43,580	89
Fema es	30 34	33,750	83
Ma es	60 64	270,710	79
Fema es	60 64	157,050	66

Source: ABS.
Around 14 .8 million Australians currently have a super account.

Projected superannuation assets

Year	Consensus pr vate sector forecast ($b on)	Treasury 2008 asset forecasts ($b on)	Treasury 2010 asset forecasts ($b on)	Treasury 2010 forecasts tota assets % of GDP and (% of ASX)
2020	3,100 3,500	2,815		
2025	3,500 5,000	3,830	3,200	120% (73%)
2030		5,075		
2035	6,100 9,500	6,650		
2040	10,500	8,645		130%

Source: Assorted forecasts, Treasury RIM Group and Cooper Review.

Benefit structure (funds with more than four members)

	Accumu at on	Defined Benefit	Hybr d	Tota
Member accounts (000s)	26,233	910	310	27,484
Assets ($b)	1,327	305	95	1,727

Source: APRA Annual Statistics, June 2017.

Persons receiving regular superannuation income 2015-16

	Account based	Defined Benefit	Term Annu ty
Number	1,027,000	339,000	61,000
Average week y ncome ($)	496	616	328

Source: ABS 6523.0

Investment returns to 30 June 2017

Per od (% pa)	Fund returns	Rea returns	
		vs AWE	vs CP
1 year	10 1	7 7	8 0
5 years	10 4	7 4	8 2
10 years	4 7	1 0	2 3
15 years	6 9	2 8	4 3
20 years	6 7	2 5	4 1
25 years	7 6	3 5	5 0
30 years	7 8	3 4	4 7
35 years	10 1	5 1	6 2
40 years	10 7	4 8	6 0
50 years	10 3	3 3	4 8

Super fund re urns published in he Sep 20 7 issue of *Superfunds* magazine

uper.com.au/sonataweb/ria/employee/register)

Understanding asset classes

What is an asset class?

An asset class refers to a group of assets that are considered to have similar risk and return expectations.

VicSuper invests in five different asset classes:

- Equities
- Alternatives
- Real assets
- Fixed interest
- Cash

Equities

Equities are often called company shares or stocks. This asset class usually provides the highest average long-term returns but may also be subject to a higher risk of low or negative returns (high volatility) in the short to medium term.

Equities are classified as growth assets because they primarily provide returns in the form of capital gain (or loss) as well as a dividend or income yield.

VicSuper's investments in this asset class are shares in public companies listed on stock exchanges, which can be bought and sold by the public. The asset class is made up of three sub-asset classes, being Australian equities, International developed market equities and international emerging market equities.

Returns are made when the market price increases and dividends are paid. On the other hand, investment losses are made when the market price of these shares decreases.

Alternatives

Investments in this growth asset class currently consist of, but is not limited to:

uper.com.au/sonataweb/ria/employee/register)

Over time other sub-asset classes may be added to alternatives. The alternatives asset class will hold investments that do not fall under any of the other four asset classes.

Real assets

These are investments in property, infrastructure, agriculture and timber. In line with industry, VicSuper has defined the 'real assets' asset class as exhibiting the attributes of both growth and defensive assets.

1. Property

These are assets such as office buildings, shopping centres and industrial buildings. These investments are usually structured for capital growth and rental income. Returns are made from rental income and increases in property market value.

2. Infrastructure

These are assets that deliver services necessary for daily life and economic activity such as airports, seaports, railways, power and water utilities (including renewables), toll roads and pipelines. Returns are made from fees, patronage, rental income and the revaluation of assets.

3. Agriculture

VicSuper's investments in agriculture include land and water assets primarily located in northern Victoria. Returns are currently derived from traditional broad-acre agriculture, water revenue streams and the movement in asset market value.

4. Timber

These are timber assets (mainly plantation timber or managed forests) managed for production of pulp, chip, sawn timber and higher-value wood products. Returns are currently derived from traditional broad-acre agriculture, water revenue streams and the movement in asset market value.

Fixed interest

These are investments in debt securities issued by governments, semi-

the movement in capital value.

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Cash

These are investments held in bank bills and short-term deposits (for periods of 12 months or less) with banks and other financial institutions. Interest earned provides returns which are generally reliable and consistent but may be lower than other asset classes.

Cash and fixed interest are considered defensive asset classes, as they are not subject to the level of volatility experienced by some other asset classes such as equities.

Investment quick links

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DISCUSSION PAPER

DRIVING SUPER FUND INVESTMENT IN AGRICULTURE

June 2017

Industry Super Australia

ABOUT INDUSTRY SUPER AUSTRALIA

Industry Super Australia is a research and advocacy body for Industry SuperFunds. ISA manages collective projects on behalf of a number of industry super funds with the objective of maximising the retirement savings of over five million industry super members. Please direct questions and comments to:

Stephen Anthony
Chief Economist

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Executive Summary

Over the past decade, industry superannuation funds have closely examined the case for greater investment in Australian agriculture. This effort is motivated in part by the desire to enhance portfolio diversification, but also the need to evaluate approaches from promoters. Federal politicians have regularly called for superannuation funds to invest more in Australian agriculture. Those calls are often accompanied by a lament that foreign interests, including state owned investors, are buying up significant farm land and other strategic assets.

Why agriculture is important for Australia

Agriculture spans a diverse range of food producing activities from annual and permanent crops, livestock and various animal and insect products. It includes everything from mushroom growing to beekeeping.

Australia has a natural comparative advantage across a diversified mix of farm commodities due to scale, fertile arable land and soil variety across climatic zones – particularly in the northern regions. This ability to diversify commodities across multiple regions allows operations at a geographic scale that far exceeds those of competitors in Western Europe and North America.

Technology and better modes of operation can further enhance Australia's comparative advantage. For example, plant genetics, drones, mechanised vehicles, big data analytics, and livestock wearables all help boost yield and productivity.

Australia's comparative advantage can only be unlocked if farm businesses are able to undergo a process of intensification (by employing more capital, technology and better modes of operation). But this process requires significant and patient financial backing. Superannuation funds and other long term institutional investors are potential backers in this process as suppliers of finance.

For Australian superannuation funds, agricultural 'real' assets have the potential to provide bond-like current income streams from the annual earnings of farm businesses, and long-term capital appreciation from rising land values. Unlike other 'real' commodities assets – such as mining assets – income cash flows are renewable and capital gains are sustainable in the sense that they are not depleted from operation, so they are longed-lived assets. There are also social, and governance benefits associated with these assets, due to the use of precision farming which reduces wastage and environmental impacts.

Track record of institutional investors

Passive institutional investors such as Australian superannuation funds, hold only a very small portion of farm assets in Australia valued at around $330 billion.[1] Australian based managed funds (Laguna Bay, Macquarie Infrastructure and Real Assets (MIRA), Warrakirri Agricultural Trusts and Queensland Investment Corporation) have invested or committed over $2.3 billion dollars in agriculture projects – some of which include investments in the sector by industry super funds which total in excess of $1.6 billion. There is little or no investment in Australian agriculture by retail super funds.

Passive institutional investors worldwide typically hold only a very small portion of global farm assets. Managed funds hold a very small proportion of the $31 trillion[2] in farm assets worldwide. Traditionally the bulk of rural land assets have been owned by high wealth families or by the state. However, this situation is changing. New Zealand Super has invested heavily in domestic dairy and wants to move into the beef cattle supply chain. Big North American pension funds are increasing agricultural allocations in their home countries and overseas. Australia is benefitting from some of these fund flows. For example, the major Canadian pension funds, and the United States-based Teachers Insurance and Annuity Association, TIAA, (and its subsidiary Westchester Group of Australia) have invested in excess of $1 billion in Australian agricultural assets since 2007-08 out of total North American acquisitions in the sector of $10.3 billion.

[1] Atchison Consultants, *'Duxton Asset Management Agricultural Property Investment 2014'*, December 2016
[2] Ibid

Character and performance of the asset class

Agriculture is a wide grouping of disparate activities best thought of as a hybrid. It could be termed 'Property Plus'. It combines the attributes of pure rural property investments - which offer capital appreciation - with a yield component that is activated through a farm business. This business can be leased to tenants or operated directly. It may be capital intensive depending on the business model of the asset owner. Where the investment is directly operated and more capital intensive, it will behave more like an unlisted infrastructure asset. Where the investment is leased to externals, it will behave more like a pure property asset. Perhaps the key distinguisher between these farm assets and other unlisted property or infrastructure assets is that they are an inflation hedge as the cost of producing basic food usually tracks consumer prices and so will tend to outperform in the face of rising nominal interest rates.

Historically, institutional players have not fared well from investments in Australian agriculture. Significant past failures still haunt superannuation fund trustees. Certainly, some previous projects were poorly executed or short sighted. But there were some mitigating factors, if not a silver lining, in each episode of sub-optimal performance.

Historically, "average" broadacre farms' returns to Australian agriculture have also been quite poor at around one to three per cent, although averages may distort the true picture. On the one hand, while different data tells different stories and existing data series are not robust, it seems that Australia's overall agricultural long-term returns have tended to be low relative to other asset classes, but with volatility comparable to fixed interest. On the other hand, it is certainly not true that all types of farm businesses, across all commodities' groups and regions, have been low performers. The official data suggests that larger broadacre (excluding dairy) farms have performed far better over time achieving returns of 5 to 10 per cent. In addition, it seems that many larger family farming operations are achieving even better returns, but there is no comparable publicly available data on these operations. Also the period in question (since the late 1970s) has been a particularly unfavorable investment climate for agriculture as nominal bond yields have been falling, on average. So the asset class has performed well in light of this headwind.

In theory, rural land should earn a reliable capital return in excess of nominal GDP growth through time (minimum five or even six per cent). In terms of operating the 'farm business', a basic leasing arrangement should earn a simple yield of three or four per cent through time. Direct operation of farm assets should earn this amount plus there is scope to capture productivity and organisational efficiencies. Depending on the business strategy, scale and commodity choices of the operator – as well as the quality of execution – it may be possible to generate total nominal returns in excess of 10 per cent, on average, through time. These returns are certainly typical of the United States experience, as reflected in past farm investments made by the 'Oracle of Omaha' - Warrant Buffett - whose purchase of a 400-acre farm in 1986 "has tripled its earnings and was worth five times its purchase price by 2014".[3]

Barriers to domestic fund investment

The prospect of high theoretical returns has not spurred great interest in agriculture investment in Australian superannuation funds outside the industry funds sector. Why have superannuation funds placed agriculture into the too hard basket? There are a number of issues:

1. **General farming conditions in Australia are tougher and less predictable**, relative to North America and some other global locales, and so farm businesses are riskier. Land fertility is more variable in Australia when compared to the United States, driven in large part by climatic conditions (frost, drought, flooding and cyclones) but also the prevalence of pests, disease, fires etc. United States producers can also access government subsidies and farm income insurance. Of course these differences should be reflected in lower Australian land values relative to the United States which should help equate risk adjusted returns.

[3] Buffett, W., *'Why I Like to Think of Stocks Like Farms'*, Fortune, March 2014

2. **Funds trustees and their asset advisers cannot readily identify the top quintile of producers** in terms of their risk-return profile. Indeed, most have little understanding of the sector at all. It doesn't help that there are just no statistically meaningful and independent data series publicly available that allow experts to compare the performance of agricultural and other investments on a like-for-like basis.
3. **The structure of farm industries is typically fragmented, with the vast majority of farm businesses held in either small 'family sized' blocks or locked away in private hands.** Typical family holdings are small or debt laden and so cannot achieve significant expansion without the assistance of patient equity partners. Raising farm productivity and returns demands aggregation, innovation and/or the deployment of further capital, along with securing water rights where possible.
4. **Institutional investors in Australia have tended to adopt a very hands-on, direct approach to farm investing.** This has inherent agency and execution risks. It is also very difficult for institutional investors to time property purchases so they can achieve the necessary scale (by commodity and across regions) required by diversification models. As such it may be better for superannuation funds to partner with experienced family or corporate operators with established track records running successful operations.
5. **Australian agricultural policy since the mid to late 1980s has handed the relatively small local food and grocery markets to monopolists and foreign investors.** Once producers faced 'more or less' competitive wholesale markets - or were subject to pragmatic domestic and international marketing arrangements.[4] Now producers are forced to choose between supplying the domestic market (a two-player local monopsony) or export markets dominated by foreign-owned distributors. Meanwhile, producers are beset by major competiveness issues due to chronic labour shortages, uncertain water pricing, and the high cost of foreign-built mechanical horsepower.

Emergence of global players

In contrast, global pension funds are allocating in excess of 1 per cent of total assets to agriculture, in their home country and internationally. This is why big global investors have rapidly accumulated strategic stakes in Australian agricultural assets, as they have so many more dollars they need to allocate each year to these types of opportunities. The fact that global investors with big reputations think they can make a go of farming in Australia is encouraging, as is the fact they are prepared to invest significant amounts for the long haul. The big upside for the Australian economy and producers is ready access to foreign capital and knowhow which expands capacity exponentially. The downside risk is that the agricultural supply chain is being 'cherry picked' with quality assets falling into the hands of long term institutional or 'state' investors.

It also seems that global investors sometimes have significant advantages over local investors, via:

- established expert agribusiness models and experience;
- lower hurdle rates, as investment committees with longer time horizons;
- access to existing foreign owned on-shore farm processing assets;
- access to existing offshore distribution networks;
- an ability to benefit from periodic falls in the Australian dollar; and
- access to patented technology.

Expanding superannuation fund involvement

At the microeconomic level, the reality for farm businesses in Australia today is that to achieve significant productivity gains, they must engage in a process of intensification requiring provision of significant long term equity and debt capital - like that provided by superannuation funds.

At the macroeconomic level, significant investments will be required across a range of export commodities to meet burgeoning global demands. Investments of the size needed to dramatically improve irrigation and production systems, for example, are unlikely to come from smaller businesses and certainly not from debt

[4] Ignoring the efficiency burden associated with high and variable trade protection.

constrained operators or governments. Eventually large scale institutional investors like superannuation funds will be required to 'fill' the funding deficit. They also have the wherewithal to fundamentally and simultaneously improve both financial and environmental outcomes through time. For example, investing in water conservation can help drive up crop yields whilst reducing water usage.

Australian superannuation funds should consider the case for raising their asset allocation to farm assets in line with the global diversified benchmark. Industry super funds currently hold around one-third of one per cent of their funds under management in Australian agriculture. They have few overseas agricultural investments. As mentioned previously, for-profit super funds hold very few or no farm investments.

Australian superannuation funds that have no previous experience with agriculture could build up their understanding by investing in expert institutional players and/or top tier producers directly. Australian superannuation funds could also roll-out more obvious equity and/or debt products targeting successful large to mid-tier operators and up-and-coming rural producers. This could include appropriately priced short term livestock, and seed finance targeting large and medium sized producers (following the long established Elders & old Westfund model) and the leaseback of farmland to choice producers as applied by First State Super (mainly almond production). The broad strategy would be to unlock value while de-risking investments, especially over time.

The prize for producers and the overall living standards of Australians for bringing superannuation and agriculture together are enormous. Perhaps more than any other nation on earth, Australia is well placed to capture the benefits stemming from agricultural investment. On the demand side, an emerging Asian middle class is - according to the OECD - likely to grow by around 9 per cent each year. The 2015 China-Australia Free Trade Agreement (ChAFTA), builds on this opportunity for agribusinesses. On the supply side, only a handful of producers such as Africa, Brazil, Russia and the Ukraine offer similar potential for efficient broadacre farm sizes as Australia. The supply of agricultural land is becoming scarcer and climate change is potentially exacerbating this.

Prioritising regional development

A vibrant and expanding agriculture sector is crucial for prosperity in regional Australia, and superannuation funds have a role to play here via the supply of capital to efficient producers. To underpin Australia's international competitiveness in these activities, the sector must become increasingly technologically sophisticated and capital intensive. At the same time, major social indicators demonstrate that a rural postcode is a major predictor of disadvantage in Australia. As such, there is material dividend to promoting efficient rural businesses in terms of expanding employment opportunities for high paying jobs in regional centers and generating spillovers across farm-related and broader business.

A prime example of how financial institutions can lever social advantage is provided by MIRA Funds under the leadership of Elizabeth O'Leary. MIRA's well-executed pastoral and cropping business lines are paying off for local communities around Orange and Albury in New South Wales - via conscious fund-level decision making to decentralise the asset management and procurement functions from the Sydney head office. MIRA are seeking to redirect many of their functions and decision-making through the local communities in which they operate. This deliberate approach to prioritising local supply chains contrasts with years and years of federal agricultural policy which, under the banner of free trade, has disadvantaged local producers, hollowing out regional communities with dire social consequences.

Federal industry policy has also failed to incentivise the formation of Australian owned international agribusinesses over time. Obvious production, processing, logistics and distribution supply chains exist within the Australian economy dedicated to high growth markets in commodities such as wheat, wool, milk and beef, which other nations would have fused together under the control of internationally competitive conglomerates. No Australian operator has been able to achieve this 'off-their-own-bat'.

Will control of larger scale conglomerate producers be vested solely in the hands of disengaged foreign agri-giants who have no stake in developing Australia's bush communities?

Policy suggestions

To overcome past mistakes, the federal government could move agricultural policy settings onto a more competitive basis for domestic producers. Much can be done to facilitate greater agriculture investment by Australian and global institutional investors and, as such, facilitate regional development. This includes:

1. Establishing a statistically robust survey of farm performance to independently measure rates of return across various crop and livestock producers building upon the existing ABARES farm survey.[5] Overtime the survey would help investors to allocate capital to highest value uses and so help raise productivity and probably rates of return in the sector. The survey could be funded by industry levies.
2. Undertaking an infrastructure audit of each of the major commodity supply chains to ensure the adequacy and competitive operation of transport, processing and storage facilities across regions to ensure high quality produce is able to get to local and export markets in a timely and cost effective fashion.
3. Establishing appropriate regulatory arrangements to help achieve effective price discovery and transparency in wholesale agricultural markets. For example, it may be desirable to compel large producers to sell their produce into centralised markets and or via other marketing arrangements, on a no disadvantage basis. The idea is to help neutralise the impact of duopsony buyers (Coles and Woolworths) in local markets and the distortionary impact of subsidies on the prices received by growers in international markets. It would be useful to have the Australian Competition and Consumer Commission (ACCC) investigate these issues.
4. Employing targeted industry and trade policies to incentivise domestic operators to form consortia with local and foreign processors and distribution networks to reduce offtake (agricultural sales) risk.
5. Requiring a more strategic approach to foreign investment from the Commonwealth Treasury to ensure core assets are not being dealt away to foreign investors. This entails more effective monitoring, oversight, public reporting and evaluation of foreign investment in agricultural land holdings, farm businesses and agribusiness.
6. Establishing a rural and regional development bank to provide advisory services to rural producers and arrange long term finance to more efficiently intensify their operations, extending on the concept of a publicly owned and operated rural investment corporation, announced as part of the 2017-18 Budget.[6] A development bank may be a means of delivering government support for fencing, irrigation, renewables, etc. while acting as a counterweight to the Big Four Banks' market influence and short term perspective. A panel of suitably qualified independent experts would assess the proposal's feasibility which, ideally, would operate independently of executive government (to avoid politicisation) and mainly draw on institutional funds.

Overview of this Discussion paper

The first section of this paper provides the basic technical, economic and historical background to think through the economic contribution made by agriculture to the Australian economy and regional communities. It then examines how well agricultural policy is serving regional communities and looks at the future of agriculture in Australia.

In Section 2, we outline Australia's agricultural operations and its comparative advantage. We then then consider the prospects for developing deeper Australian owned and operated supply chains and strategic foreign owner partnerships. The idea is for institutional investors to assist local producers to partner with

[5] There is a vital need to improve upon the existing ABARES farm survey by increasing the sample size, ensuring greater panel consistency and capturing information across the different agriculture subsectors, for example, irrigated cropping, horticulture, etc.

[6] https://www.liberal.org.au/latest-news/2017/05/09/4-billion-regional-investment-corporation-back-strong-rural-and-regional

infrastructure owners and distribution networks in Australia and overseas. We then considers the level of foreign ownership of Australian agriculture.

Section 3, tells the Australia's institutional investor story. The performance of agriculture assets in Australia and overseas, past and future is considered, highlighting key lessons learnt over time.

The final section catalogues the industry funds asset holdings - listed and unlisted - across rural and regional Australia. It examines industry funds with major infrastructure and property assets which impact rural communities. Finally it considers how institutional investments spill over to impact regional economies and local bush communities.

The study concludes with policy recommendations (Section 5), not simply to stimulate discussion but to provide practical public policy direction for Australia's maturing superannuation system.

1. Agriculture and the Australian economy

This section provides necessary background to allow the reader to appreciate the economic contribution made by agriculture to the Australian economy and regional communities. It begins by defining what we mean by agriculture and agribusiness. It then examines the economic contribution made by agriculture and agribusiness to the Australian economy. It then examines why agriculture will be strategically important for the Australian economy in coming decades given our comparative advantage, proximity to the emerging Asian middle class and based on our current understanding of likely technological change. It then examines how agriculture impacts regional communities.

1.1 What is agriculture and agribusiness

Agricultural production spans a diverse range of food producing activities ranging from annual and permanent crops, to livestock and various animal and insect products. It includes everything from mushroom growing to beekeeping. The major commodity groups included in agriculture are outlined in **Attachment 1** below. Primary production activities - a broader category - also include aquaculture, fishing, hunting and trapping.

Figure 1 – Agriculture supply chain

Source: Industry Super Australia

Agribusiness production takes the basic farm gate product or commodity and delivers it to end users. It includes value added activities such as food product manufacturing, beverage and tobacco manufacturing, specialised machinery and equipment manufacturing, rental and hiring services and agriculture, forestry and fishing support services. It does not include all the other upstream business and transport services required to 'deliver' agricultural outputs to consumers. For a list of Australia's largest agribusiness processors see **Attachment 2.**

1.2 The economic contribution of agriculture

According to the Department of Industry, Agriculture accounts for more than 250,000 jobs in the Australian economy out of a total workforce of around 11.5 million workers. However, if you add to this figure the total agribusiness related employment the figure rises to over 520,000 jobs. Most of these jobs exist outside of capital cities and are the mainstay of less diversified regional economies and bush communities. Employment prospects in agriculture have continued to decline in recent years. This reflects in part a failure by producers, financiers and governments to realise the full potential of the sector for the local economy. It also reflects in part how increasingly technologically sophisticated and capital intensive the sector is becoming which is necessary to underpin Australia's international competitiveness.

Table 1 - Food and agribusiness employment, 2015

Industry sub-division	Employment 2015 ('000)	1 year change (%)	5 year annual average change (%)
Agriculture	251.2	-3.8	-2.7
Aquaculture	4.9*	*	*
Fishing, Hunting and Trapping	6.2*	*	*
Agriculture, Forestry and Fishing Support Services	15.0	-6.0	0.3
Food Product Manufacturing	206.7	2.4	-0.2
Beverage and Tobacco Product Manufacturing	33.0	1.9	5.2
Machinery and Equipment Manufacturing	5.0*	*	*
Total Food and Agribusiness	**522.1**	**-1.1**	**-1.2**

Source: ABS Bureau of Statistics, cat. no. 6291.0.55.003, Labour Force, Australia, Detailed, Quarterly, Feb 2016, table EQ06

Note: Department of Industry Office of the Chief Economist calculations based on four-digit ANZSIC definition of Food and Agribusiness (see Attachment 1).

Only the Food and Agribusiness four-digit industries within each subdivision are shown in this table. Employment data is four-quarter averaged. Employment data is obtained from the ABS Labour Force Survey.

The published data is subject to sampling and non-sampling error, particularly for industries with low employment. This is because the entire population is not surveyed and sample sizes for lower employing industries can be very small. The ABS calculates Relative Standard Errors (RSEs) to indicate the reliability of survey estimates. When the RSEs are less than 25 per cent, the ABS considers the estimates reliable enough for general use. Estimates with an asterisk (*) have an RSE greater than 25 per cent and should be used with caution. For this reason employment growth cannot be estimated reliably for these industries.

Table 2 and 3 show the number of businesses in the Food and Agribusiness sectors by employment and turnover, respectively. As of June 2015, there were approximately 178,500 businesses trading in the Food and Agribusiness sector. This represents an average fall of 1.6 per cent per annum over the past five years.[7]

Table 2 - Business counts for Food & Agribusiness sectors, by employment, 2014-15

	Non Employing	1-19 Employees	20-199 Employees	200+ Employees	Total
Agriculture sector	116,123	46,451	1,635	45	164,254
Manufacturing sector	5,167	7,348	1,558	128	14,201
Total Food and Agribusiness sector*	**121,341**	**53,810**	**3,193**	**173**	**178,517**

Source: ABS Bureau of Statistics, cat. no. 8165.0, Counts of Australian Businesses, including Entries and Exits, Jun 2011 to Jun 2015

*Note: *Differences between business counts by employment and business counts by turnover are due to non-sampling error and the cyclical administrative workflows of the ATO which may impact on data interpretability.*
Based on four-digit ANZSIC definition of Food and Agribusiness (see Attachment 1).

The only class of firms in the sector that has grown in number since June 2014 are firms with an annual turnover of more than $200,000.

[7] Chaustowski, R. and Dolman, S. (2016). *'Australia's Food and Agribusiness sector – Data profile'*, Canberra: Department of Industry, Innovation and Science, page 3.

Table 3 - Business counts for food and agribusiness sectors, by turnover, 2014-15

	Zero to less than $50k	$50k to less than $200k	$200k to less than $2m	$2m or more	Total
Agriculture sector	54,743	48,445	54,406	6,689	164,283
Manufacturing sector	2,648	3,015	6,478	2,075	14,216
Total Food and Agribusiness sector*	**57,418**	**51,479**	**60,897**	**8,767**	**178,561**

Source: ABS Bureau of Statistics, cat. no. 8165.0, Counts of Australian Businesses, including Entries and Exits, Jun 2011 to Jun 2015

*Note: *Differences between business counts by employment and business counts by turnover are due to non-sampling error and the cyclical administrative workflows of the ATO which may impact on data interpretability.*
Based on four-digit ANZSIC definition of Food and Agribusiness (see Attachment 1).

Table 4 shows the industry gross value added (IGVA) and labour productivity for the Food and Agribusiness sector. The sector's gross value added has increased by one per cent per annum on average over the past five years. Labour productivity in the sector is around $54 an hour and has risen by 2.4 per cent over the past five years.

Table 4 - Food and agribusiness industry gross value added, 2014-15

	Gross value added 2014-15 ($billions)	5 year annual average change (per cent)	Labour Productivity ($ per hour worked)	5 year annual average change (per cent)
Agriculture, forestry and fishing	27.5	1.4	48.3	4.0
Food, beverage and tobacco products	26.0	0.6	62.2	0.6
Machinery and equipment	0.4	-5.6	49.0	-8.6
Food and Agribusiness Total	**53.9**	**1.0**	**54.1**	**2.4**

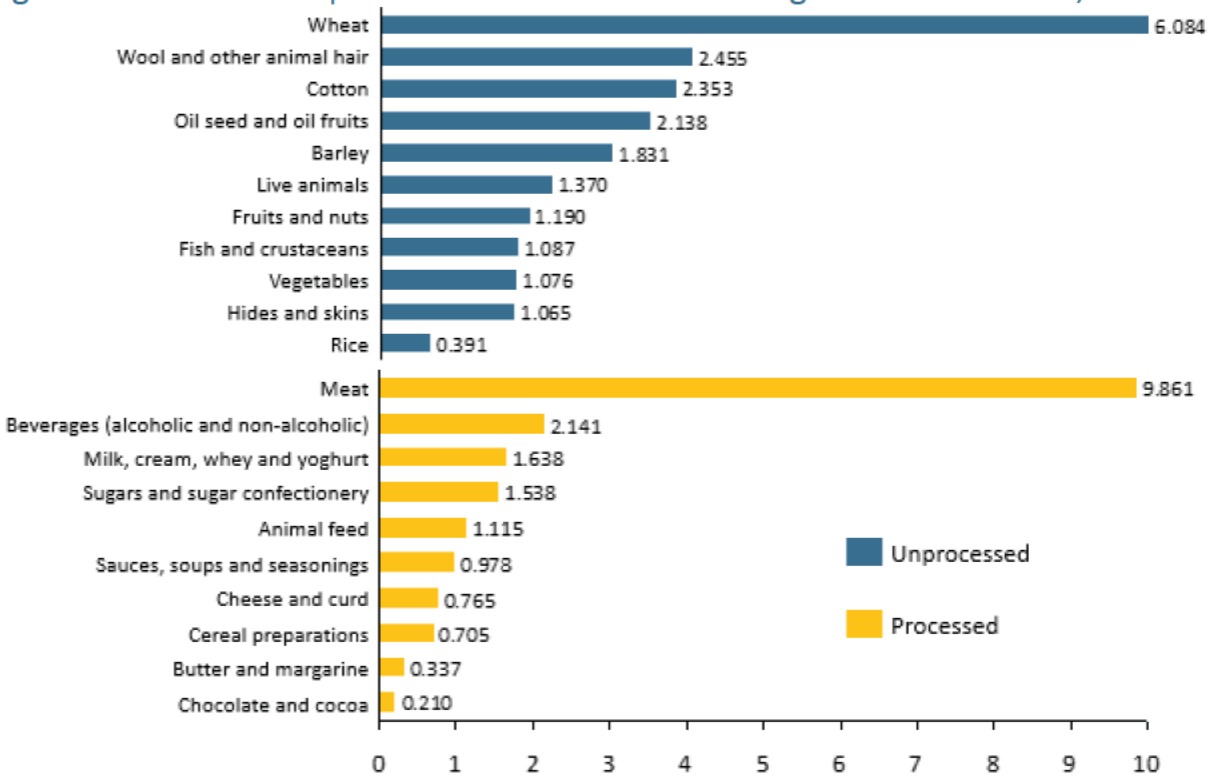
Source: ABS Bureau of Statistics, cat. no. 5204, Australian System of National Accounts, 2014-15, table 5

Note: Department of Industry Office of the Chief Economist calculations based on four-digit ANZSIC definition of Food and Agribusiness (see Attachment 1)

While labour productivity growth of 4 per cent in agriculture and 2.4 per cent in food and agribusiness as a whole is significant relative to the broader economy, the slow rate of industry output expansion is further illustrative of the lack of momentum across the sector. This is particularly troubling given the size and growth of export markets in Australia's north. Indeed, agriculture must have experienced significant long term headwinds via foreign competition and policy settings. It has since the 1970s achieved among the highest rates of productivity growth of all sectors of the Australian economy with so little to show for it.

In terms of Australia's major agricultural and agribusiness exports in 2014-15, the main unprocessed commodities were wheat, wool, cotton, cooking oils and barley, the main processed commodity is meat (by a great margin), then beverages, milk and sugar products.

Figure 2 – The Main Exports of Australian Food and Agribusiness sectors, 2014-15



Source: Based on DFAT publication, Trade in Primary and Manufactured Products, Australia 2013-14

1.3 Agriculture is strategically important for Australia

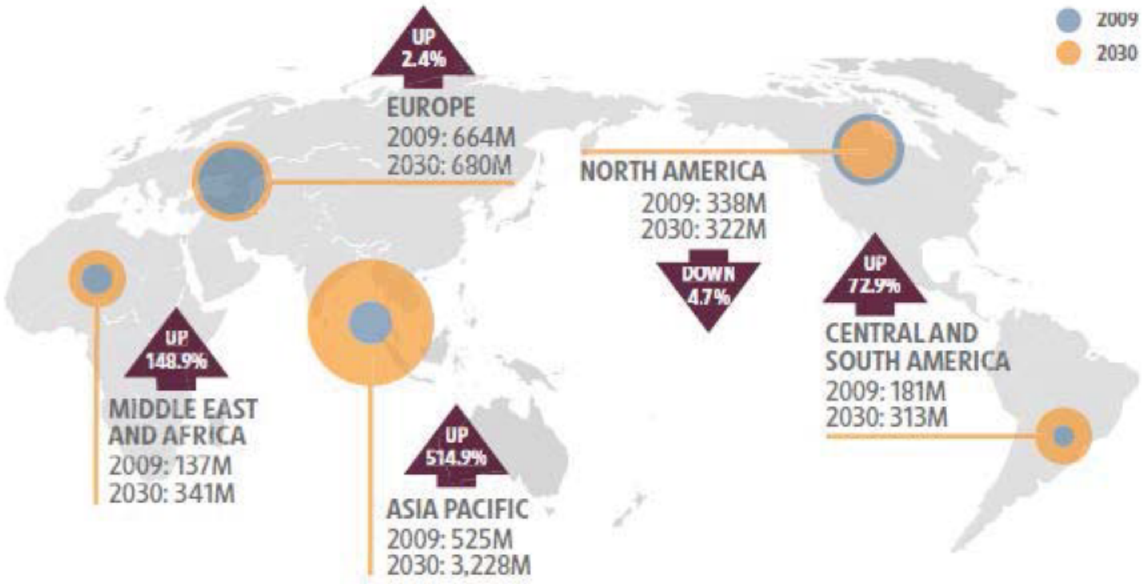
Australia has a natural comparative advantage across a diversified mix of farm commodities due to the scale and fertility of available arable land and variety of soil types across climatic zones – particularly in the northern regions. Diversification across commodity types and regions is possible on a scale of operation that far exceeds competitors in Western Europe and North America by hectares, if not by capital intensity.

Another element of Australia's comparative advantage is our proximity to Asia. Asia will be the center of global population growth and increases in food consumption (inelastic demand and low price sensitivity) over the balance of the 21st Century. OECD research has estimated annual growth in the size of the middle class in Asia at more than 9 per cent, per annum up to 2030 (Figure 3). Historically as incomes rise people consume more protein, something that increases demand for land through multiple channels. Asian economies cannot be fully self-sufficient due to geography and pollution. At the same time the supply of arable land is declining at least on a per capita basis, if not overall, due to pressure from competing uses in growing regions of the world. This may be exacerbated by climate change in coming years. Over the long term these two inexorable trends – either directly or indirectly through rising commodity prices – will drive productivity improvements, which in turn increases the value of farmland.

Technology can solidify and extend our natural comparative advantage. For example the application of plant genetics, drones, mechanised vehicles, big data analytics, and livestock wearables all help deliver better yield and productivity.

So Australia with its endowment of arable land is well placed to become the food bowl of Asia as rising real living standards afford higher value food consumption (especially meat, dairy) and increasing urbanisation, and changing consumer taste shift market sentiment towards 'clean and green' producers offering a higher value product. Australia cannot feed all the demand from Asia, but it can specialise by focusing on the premium market.

Figure 3 – Growth of the Middle Class (2009 versus 2030 Forecast)



Source: Kharas, H. 2010, Working Paper No 285: 'The emerging middle class in developing countries', OECD Development Centre.

1.4 Competing policy visions of the future of agriculture

Formal agriculture policy in Australia has played a role in the consolidation of the industry thereby curbing the rate of growth in output and employment across the sector, for better or for worse. Policy since the mid-1980s has tended to focus exclusively on the opening up to competition of 'protected' sectors, deregulation of production and the abolition of collective marketing arrangements. The adoption of a range of policy reforms has shifted the farm sector towards a larger scale of commercial operation and away from smaller family or cooperative/mutual operations, bringing an ongoing decline in the GDP share of agricultural production, reducing producers' ability to set or impact price in some markets, and bringing a far higher level of foreign ownership of agribusiness.

Policy changes included:

- deregulation of production via 'National Competition Policy';
- deregulation of key production inputs, especially water in the Murray Darling Basin;
- the progressive and significant de-investment in public infrastructure investment outside the inner 'metro' area;
- opening up of the strategic supply chain to foreign ownership; and
- lowering agricultural subsidies (trade and non-trade subsidies) at the expense of local producers *unilaterally* without reference to 'protection' applying in major competitor markets such as the United States and European Union.

These policy reforms are discussed in more detail in **Attachment 3.**

The theoretical rationale for restructuring the agricultural industry may have been sound enough, in especially given the prevalence of high and variable tariff and non-tariff protection across commodities. But the problem became undertaking this *laisse fair* deregulation without the safety net or coordinating principle of a national industry policy to provide strategic anchor for decision making. This has resulted in a compete vacuum of outcomes measurement and evaluation to determine whether the national interest is being advanced. After thirty years of deregulation, it seems that:

- the farm sector and related downstream activity are in a low growth phase;
- many farming regions are in dire shape and facing significant social problems[8];
- key elements of the supply chain have been sold to foreign investors and it took a public outcry to see the Federal Government authorise the Australian Taxation Office to establish the Register of Foreign Ownership of Agricultural Land in 2015;
- much of rural economic and social infrastructure is probably inadequate to maximise the gains to be had from rural business opportunities; and
- there is an absence of formal policy processes in place to channel proposals for high valued greenfield rural projects to potential institutional investors.

Deregulation of agriculture has not resulted in the formation of diversified 'scale' food and/or livestock producers in Australia, or produced a truly global agribusiness conglomerate – true national champions. This might have been expected and presumably would have helped to spur other larger and mid-tier firms.[9]

In New Zealand, which followed a similar policy path, there was a veritable avalanche of overseas interests in strategic assets. However, in that country various dairy co-operatives were amalgamated into the Fonterra conglomerate in the late 1970s. Australia's farming co-operatives were too dispersed and too state-based to concede sovereignty to a single national business.

From the early 1990s, local cooperatives sold off many of Australia's secondary food production assets to global interests, often with a nod from federal and state bureaucrats. These assets included dairy companies, meat-processing works, fish and canneries, sugar mills and grain businesses. [10] This is reflected in the ownership of Australia's largest 25 agri-food businesses as listed in **Attachment 2**. Unfortunately, over the same time period, a domestic retail – grocery duo-opsony (Coles and Woolworths) emerged and systematically drove down the margins of producers through by-passing spot markets (such as fruit and vegetable markets in each capital city) then progressively imposing production standards on their captured 'farmer' sub-contractors.[11]

In one sense this is merely the globalisation of Australian businesses. It is also certainly a consequence of being a net importer of capital from overseas to build the nation. Overseas agribusiness conglomerates and pension funds are always on the hunt for strategic assets and have accessed these relatively cheaply in Australia. Their next step will be to control key infrastructure up the supply chain for example, the leasing of the Port of Darwin. Expect further key-infrastructure and landholdings purchases as the globalisation of agribusiness continues.

1.5 Agricultural can underpin regional communities

So what is the future for Australian agribusiness? The sector is shedding jobs because of mechanisation which reverberates through rural communities. This makes Australian agribusiness brutally efficient, but it has done very little to assist struggling regions to develop into diversified production centers.

Surely there is a still a role for boutique, small to middle tier producers in major producing regions to operate alongside bigger corporate operations, perhaps focusing on 'clean and green' organics and supplying directly into local communities as tastes dictate. This vision of the future would cater to a myriad of business strategies and farm types all founded on commercial rates of return.

[8] Rural Health Alliance (2013), *'A Snapshot of Poverty in Rural and Regional Australia'*, Canberra, page 4.
[9] Salt B., *'Australia sells off farm to feed the world'*, The Australian, March 2017.
[10] *Ibid.*
[11] Monopsony and monopsonist are descriptive terms often used to describe a market where a single buyer substantially controls the market as the major purchaser of goods and services. We use the term duo-opsonist to describe a market where two buyers substantially control the grocery market.

Along networks of smaller producers, many family farms transition to larger corporate-run (and perhaps institutionally owned) enterprises. This is a reminder of a very different world for farmers today compared to the soldier settlement farming that invigorated and transformed the Australian interior. [12]

The question for bush communities is: Will control of these producers be vested solely in the hands of disengaged foreign agri-giants who have no stake in developing those communities? Alternatively, control of these producers could be vested in the hands of Australian owned and operated institutional investors with a track record of developing assets community development.

[12] *Ibid.*

2. Economics of agriculture

The next section begins with an Economics 101 of farm operation and then considers the nature of Australia's comparative in agriculture and how it can be better exploited by building vertically integrated supply chains including distribution networks into key markets in Australia and overseas. The end of this chapter details the extent of foreign ownership of Australian agricultural assets.

2.1 Agricultural economics 101

A farm business is just like any other business, but it tends to be more intensive in the use of land. Therefore to measure the efficiency of a farm business in economic terms, it is best to reduce things to land equivalents, or the per unit comparison of returns per hectare (revenues less cost) based on consistent accounting principles. This provides a financial basis for the comparison of efficiency of different operators across commodity types and regions.

2.1.1 Supply side economics

Raising farm output relies on expanding factor inputs (arable land, skilled labour, capital etc.) and adopting improved farming methods or new technologies and genetics which enhance the fertility crops and livestock, while achieving sustainable production by deliberately managing soil capacity.[13]

While the business and economics of farming is reasonably straightforward, translating a business model into a specific set of regional conditions to generate reasonable rates of return over time can be more or less problematic. Critical considerations for farm managers include: (i) climate; (ii) finite fresh water resources; (iii) productivity per hectare; (iv) soil quality; (v) cost of land; vi) the cost and availability of skilled labor; (vii) other production costs including managing disease and pest incidence. The other critical consideration for farm managers is the scale of operation. Larger size operations tend to be more profitable because they lower fixed and sometimes variable costs, while enhancing bargaining power, the ability to use and develop advanced technology, and the profitability of marketing channels.

Unfortunately, in most regions of Australia today, significant increases in 'new' factor inputs into agriculture such as land and labour are simply not possible:

- The supply of quality farm land is in fixed supply (except perhaps in Northern Australia) and has certainly fallen with the expansion of the urban fringe around major Australian cities since WWII, as successive Australian governments have pursued aggressive population policy. The key characteristics of Australia's major agricultural zones are summarised in Table 5 below.
- Australian input costs are significantly higher than those in the rest of the developed world. Fuel and energy costs are higher, as are labour costs and capital costs associated with plant and equipment, especially mechanical plant and equipment. The price of diesel for United States farmers is generally about half of the price for Australian farmers even allowing for the diesel fuel rebates. In some areas this price difference is much greater. Similarly, the cost of horsepower for mechanical plant such as tractors is typically 30 per cent higher in Australia than it is in the United States.
  - The supply of farm labour is relatively inelastic. Australia is a high wage economy with significant on-costs. Farm businesses usually cannot attract significant pools of reliable labour, especially for what can be highly seasonal work, even where surrounding regions are experiencing high unemployment rates. Although the cost of labour can be an issue, the more significant concern for

[13] Globally it true to say that the supply of arable land is declining on a per capita basis. To compensate for this trend it will be necessary to raise farm fertility by applying better methods, and deeper capital and improved technology. This will require ongoing investment to offset the tendency towards declining supply growth rates. Sustainable production techniques are vital here.

farmers is the chronic shortage of labour especially during peak periods that require significant seasonal labour, for example, harvesting, picking, packing.[14]

- As a result of input costs and labour shortages, Australian farms are some of the most capital intensive in the world. In Australia even small operations tend to be highly mechanised and there is significant duplication of core facilities within small and discreet growing regions. This contrasts with the United States especially, where small regional "facilities" hubs often service all farmers within a growing district or region; for example, centralised pack houses and cooler shippers responsible for logistics.

These cost disadvantages and Australia's small domestic market result in a very difficult operating environment for producers. This helps to enable duopsony players (Coles and Woolworths) to consistently compress producer margins in the local market. In fact, producers may be required to sell at or less than cost to support buyer market initiatives and strategies. A recent example is the recent milk and bread wars in grocery chains. This has been exacerbated over the last 15-20 years by the gradual erosion, and ultimately the virtual elimination, of centralised markets. These markets provided excellent price discovery and significant transparency. Today, the major supermarkets' direct access to the farm gate allows them extraordinary control over basic farm operations.

The reality for farm businesses in Australia today is that to achieve significant output gains they need to undergo a process of intensification (by employing more capital, technology and better modes of operation). This process requires significant and patient financial backing. Superannuation funds and other long term institutional investors are potential suppliers of finance in this process.

2.1.2 Demand side economics

The Australian market for agricultural produce is small and fragmented. The domestic markets for dairy, eggs, rice, sugar, meat, wool and wheat were all administered prior to the early 1990s and so provided small local producers with greater certainty. Australian policy makers began to experiment with deregulation in the 1980s, and this process stepped up in the 1990s, with the 'reform' of 14 agricultural areas under National Competition Policy, the introduction of free trade in irrigation water and the abolition of trade protection (see **Attachment 3**). Sectoral marketing arrangements were abolished in wheat, dairy, barley, sugar and other smaller sectors including – oats (state arrangements), sorghum, maize, and oil seeds (canola/rape seed, safflower, sunflower, linseed).

In horticulture, fruit and vegetables prices had always been determined in fresh food markets in major cities around the country (Table 5). Following deregulation, the duopsonist buyers Coles and Woolworths started to use their massive buying power to contract suppliers directly outside of spot markets and hence reduced producer margins, either by direct contract negotiation, or by imposing unnecessary certification and capital costs on their choice suppliers.

[14] Many operations are dependent upon itinerant labour or labour imported from Pacific Islands. Government policy settings (including nonsensical interventions) is a constant problem. Farmers often deal with policy implementation by immigration officials who see themselves as policemen rather than implementers. Even worse, policy is often implemented in a way that fails to meet the objectives of original policy settings.

Table 5 – The institutional environment of the agriculture sector

	Marketing	Price formation (1980)	Price formation (2017)
Wool	There are numerous categories and qualities of wool, which vary considerably among different national suppliers, and the homogeneous commodity model is inappropriate.	The market-clearing price is established by an auction system with price control and support practiced by the Australian Wool Corporation. The desired price is set on two criteria: a minimum floor price plus a stable short-run price that will balance long-run supply and demand. Thus inventory, not price adjustment establishes short-run market equilibrium.	The Reserve Price Scheme collapses in 1991 and has not recovered.
Wheat	Monopoly control is held by the Australian Wheat Board (AWB), which acquires growers' supplies and sells domestically and overseas, the latter sales are usually by direct contract to public or private agencies. The other major suppliers – Canada and the US – operate with a small number of large grain traders. Total production has been controlled by quotas in the past.		Monopoly control was abolished. AWB short history and ownership.
Meat	Homogeneity does not exist across all markets - domestic and exported meat differs in type and quality. In world markets, the quality varies - typically US demands low quality and Japan, high quality. Import quotas destroy perfect product mobility internationally.	Export and home price equalisation occurs in homogeneous categories. Trade barriers and differences in quality and type permit divergence in the average domestic price, the average Australian export price and the average world price, and in these three prices for each type of meat.	
Tobacco	Market quotas control output.		Tobacco production ended/banned in 2006.

	Marketing	Price formation (1980)	Price formation (2017)
Sugar	Market quotas control output. Major world suppliers control world trade. Australian domestic and world trade are under monopoly control, with an embargo on sugar imports.	The home price is administered and the producer receives the average of home and export prices.	No quotas any more. Deregulated significantly in 2004 with ending of mandatory final offer arbitration, then the ending of the single selling desk of export sugar. Together, these got best price on world markets and equal bargaining for price to farmers. Most sugar exported. Queensland Sugar Ltd still sells export sugar, but no longer has a monopoly. Foreign companies own many mills, sell offshore and probably transfer price, costing farmers.
Rice	A single board controls marketing arrangements and regulates production by controlling land allotments and water allocation.	Home prices are administered and protected by import tariffs.	SunRice is the monopoly licenced exporter of rice out of Australia. Approximately 85 per cent is exported onto a huge market.
Dairy and egg products	State boards regulate milk production, and egg production is controlled by hen quotas. World trade is inhibited by trade barriers such as quotas, tariffs, voluntary agreements on market access and other bilateral and *ad hoc* agreements.	The home price is administered.	Dairy was completely deregulated in 2000. Formerly state pricing arrangements and production regarded as an essential service, so farmers could not strike and refuse to supply.
Fruit and Vegetables	The domestic market for dried vine and canned fruits is protected by government authorities by means of quantity or price controls on exports. Free trade in other commodities.	The prices of unregulated commodities are market determined.	

Source: Watson and Parish, and Lloyd in Williams (1982)

Note: Data apply to the mid-1970s period. (a) Most of the unused area is unusable because of the lack of vegetation

For export markets, Australia will always produce much more at the farm gate than we can consume in the domestic market, at least in terms of basic farm gate commodities. There are two issues.

- The domestic farm sector should be doing more value added food manufacturing. For example, in 2015-16, Australia exported 77 per cent of barley, 69 per cent of wheat, 74 per cent of canola, 93 per cent of cotton, 74 per cent of mutton, 50 per cent of beef, 49 per cent of cheese, 90 per cent of tuna and 81 per cent of lobster production. Australian producers are price takers in most agricultural markets

with contracts set in foreign dollars. Fortunately demand is fairly inelastic for many basic food commodities which experience less price sensitivity because of this.[15]

- The domestic farm sector in Australia (and New Zealand) now have the lowest assistance levels for farmers in the developed world, while the price for their products are set by the world market prices that are deflated by subsidies and other supports provided by foreign governments.

Longer term market prospects for agriculture look quite strong with global population growth likely to increase food consumption overall and the rising proportion of middle class in Asian economies (and trends towards urbanisation and changing consumer tastes) likely to raise sales of meat and dairy as well. Offsetting this, to some extent, is the fragmentation that has resulted from the deregulated market for agricultural commodities where many Australian farm owners are more reluctant to invest and expand production to take advantage of either growing domestic or global demand.

Table 6 - The characteristics of Australian agricultural zones

	Area used m ha	Average farm size '000 ha	Growing season months	Improved pastures %	Commodities produced	Remarks
Pastoral (608m ha)[a] Northern	116	See remarks	under 5	neg.	Beef	Most of the area north of the Tropic Capricorn. Average size of holding: over 0.5m ha. in Barkly Tableland and Victoria R. areas; 0.24m ha. in the Kimberleys; 20,500 ha. in Qld.
Southern	265	24	Under 5	2	Wool, sheep: 66%; wheat: 16%; balance mostly beef	Most of Qld, NSW, SA and WA. Produces 20% and 15% respectively of total Australian sheep and beef production.
Wheat and sheep (71m ha)	53	1.1	5-9	60	Wool, sheep: 35%; wheat 39%; beef 8%; balance mostly other crops	Narrow ribbons of land running parallel to western side of coastal range from sth. Qld to SA in sth-west of WA. Produces most of total wheat crop, supports half of the sheep flock and 20% of the beef herd. About 10m ha of unused land is suitable for wheat production.

[15] Macroeconomics, 'Food Security and Australia's Farm Commodities Report', for private client, 2016. (It seems strange that marketing arrangements are not exploited to take advantage of the insensitivity of foreign demand to price in particular to export commodities.)

	Area used m ha	Average farm size '000 ha	Growing season months	Improved pastures %	Commodities produced	Remarks
Beef and sheep (51m ha)	30	0.7	Over 9	70	Wool, sheep: 60%; beef:20%; wheat and other crops: 10%	High rainfall, non-dairy areas; including coastal strips in NSW, the western district of VIC., the sth-east corner of WA. Supports 35% of the beef herd. Could be more heavily stocked. With soil improvements, most of the unused area could be sown to pasture.
Dairy (40m ha)	13	0.3	high	Over 60	Dairy produce: over 2/3 total revenue; balance is beef	Coastal range areas in sth. Qld, NSW, Vic, and sth-west WA. Expensive to clear unused land.
Sugar (0.5m ha)	0.4	0.06		high	Sugar	Mostly in central coastal fringe of Qld.
Irrigation (0.5m ha)	1.5			high	Sugar	Mostly in central coastal fringe of Qld.

Source: Williams, D. B., (ed.), 'Agriculture in the Australian Economy.' 2nd edn 1982, Sydney University Press, Sydney.

Note: This table includes amendments to update

2.2 Building vertically integrated supply chains

One key goal of major domestic agricultural producers should be to build large scale vertically integrated operations that process and distribute their own farm gate products within Australia and overseas.[16] This requires building supply chains where domestic agricultural producers *buy into* or *partner with* key logistic and distribution networks in Australia and overseas.

Casual observers often wonder why Australians don't do more value adding to our own farm production. Presumably the explanation is that most processors are foreign owned. Presumably this is why Italian processors can now buy most of Australia's superfine wool clip and Durham wheat crop and process the product themselves in Milan or Palermo. Foreign owned processors have secured high quality Australian raw inputs for their global supply chains. These suppliers achieve their margin from the wholesaling, further processing, or even retailing of Australian agriculture product rather than from farming. Given that farm gate products may sell for less than 10 per cent of the final consumer prices, it is worth domestic agricultural producers rethinking their approach to value added production.

[16] DAFF (Department of Agriculture, Fisheries and Forestry) (2005). *Australian Agriculture and food Sector Stocktake.* DAFF, Canberra

Unfortunately there are very few examples of Australian producers that have managed to construct a large vertically integrated supply chain.[17] While Australia has no conglomerate agribusiness corporation, there are some major Australian-owned agribusiness processing assets. For example, there are ASX listed dairy producers Murray Goulburn and Bega Cheese, as well as Perth based grain-handling co-operative CBH. But these are smaller players. Australia has no global player of scale in agribusiness, which makes it difficult to take significant positions in other countries agricultural sectors. In contrast, corporations from Brazil, New Zealand, Switzerland, Japan, Canada and United States have taken key stakes in Australian food processing.[18]

The progressive sale to foreign investors of processors such as dairy companies, meat-processing works, fish canneries, sugar mills and grain businesses is reflected in the ownership of Australia's largest 25 agribusiness as listed in **Attachment 2**.

Consider the ownership of agribusinesses in Australia today.

- In meat processing, JBS and Teys, have connections to agribusinesses based in Brazil and the United States.
- In dairy, global players such as New Zealand's Fonterra, the Belgian Parmalat group, Canada's Saputo and Japan's Lion (owned by Kirin) have purchased local co-operatives.
- In grain wholesaling, the US's Cargill Group, Japan's Sumitomo Corporation and The Netherlands' Louis Dreyfus are all present in the domestic market, along with the Swiss based Glencore which controls almost one-fifth of the Australian market.[19]

2.3 Drivers of foreign investment in agriculture

Foreign investors who hold significant agribusiness processing capacity in Australia are now looking to take the next step and establish supply chains, by buying up land holdings, and also acquiring key logistic infrastructure.

Perhaps a good example is the recent sale of the iconic Van Diemen's Land company which is a cluster of 25 dairy farms in northwest Tasmania that was sold to Chinese interests for $280 million in 2016. The company is now leasing two Qantas flights a week and flying fresh milk into China. It will be interesting to see whether the 2016 purchase is complemented by future acquisitions.

2.3.1 The stock of foreign ownership of agricultural assets

The largest foreign owners of Australian agricultural land are by far the British (which is a historical artifact of British Empire-northern Australian cattle operations) followed by Americans, Dutch, Singaporeans and Chinese. The Top 10 foreign owners of agricultural land by hectare is detailed in Table 7.

[17] The Australian Agricultural Company is in the process of building a vertically integrated beef business and are listed on the Australian Stock Exchange.
[18] Salt B., *'Australia sells off farm to feed the world'*, The Australian, March 2017.
[19] *Ibid.*

Table 7 - Top 10 Foreign owners of agriculture land in Australia

Rank	Country	Ownership (,000 ha)
1	UK	27,504
2	US	7,727
3	Netherlands	2,976
4	Singapore	1,862
5	China	1,463
6	Philippines	1,119
7	Switzerland	1,069
8	Jersey	944
9	Indonesia	774
10	Japan	685
	Total	**46,123**

Source: ABS; ATO Register of Foreign Ownership of Agricultural Land: Report of registrations as of June 2016

The total agricultural land in each state that is foreign owned is identified in Table 8. The Northern Territory has by far the largest share of land that is foreign owned, again a reflecting foreign ownership of cattle stations.

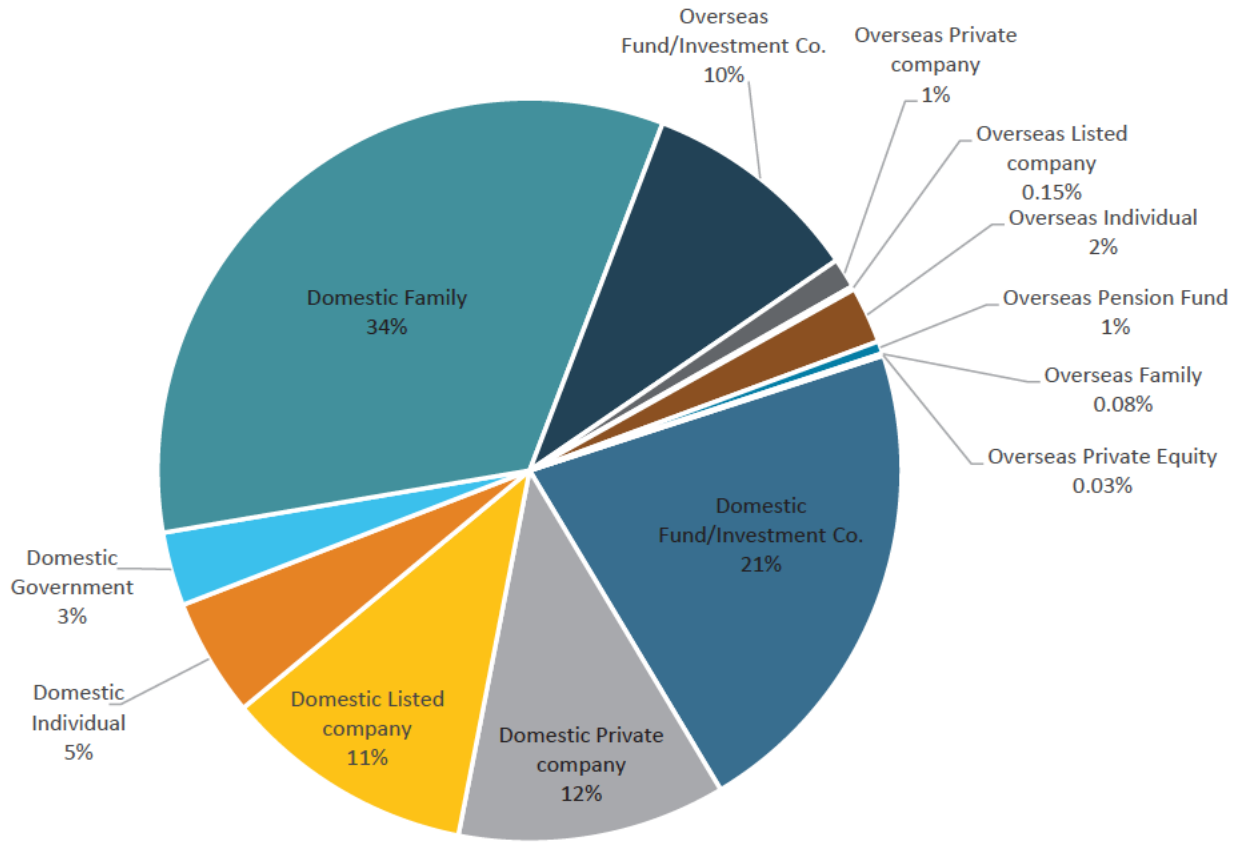
Table 8 - Foreign ownership of agricultural land by state

	Total Australian Agricultural Land	Foreign Interests	
	('000 ha)	('000 ha)	%
NSW/ACT	57,434	2,375	4.1
VIC	12,009	607	5.1
QLD	135,918	17,658	13.0
WA	81,399	8,841	10.9
SA	45,837	7,156	15.6
TAS	1,569	342	21.8
NT	50,392	15,169	30.1
Total	**384,558**	**52,147**	**13.6**

Source: Australian Taxation Office Register of Foreign Ownership of Agricultural Land: Report of registrations as at 30th June 2016.
Note: Foreign interests refer to freehold and/or leasehold interests in the land. Foreign persons' hold higher proportion of leasehold in Queensland, Western Australia, South Australia and Northern Territory. The opposite is the case for New South Wales, Victoria and Tasmania.

There is no publicly available resource which classifies the stock of agricultural land or the value of farm businesses according to the type of ownership, for example institutional (fund managers), non-financial corporations, family, listed company, private company etc. and whether the assets are locally or foreign owned. Fortunately, the Weekly Times now researches Australia's largest rural properties by sales value and land holding size. They have found that by far the largest owners of agricultural land are high-wealth Australian families who hold 34 per cent of their sample total, followed by domestic investment funds at 21 per cent. However, the survey only covers about 18 per cent of all Australian agricultural land and probably does not include properties that have not sold recently and so likely overstates the asset holdings of the institutional sector among other landholders relative to government. The 2016 Survey results are presented in Figure 4.

Figure 4 – Partial survey of agricultural land ownership by domestic and foreign entities



Source: Wagstaff J., 'Who owns Australia's farms? Nation's biggest landholders revealed', The Weekly Times, May 2016
Note: The total land covered in the survey represents approximately 18 per cent of all Australian Agricultural land.

The proportion of Australian and foreign owned businesses and water entitlements detailed by agricultural sector are outlined in Table 9. The level of Australian ownership of agricultural business is highest for dairy cattle farming (at 99.5 per cent) and lowest for beef cattle feedlots (at 94.2 per cent) – but also note this data is from June 2013 and there have been significant sales to foreign investors in both industries in recent years. Nursery and floriculture production had the highest proportion of foreign majority owned businesses compared to other categories. Like business ownership, the majority of water entitlements belong to Australian entities.

Table 9 - Foreign ownership of agricultural business / water entitlements

	Australian owned businesses		Number of foreign majority owned businesses		Australian owned water entitlements		Foreign majority* owned water entitlements	
	(no.)	(%)	(no.)	(%)	(,000 ML)	(%)	(,000 ML)	(%)
Nursery and Floriculture Production	1,408	97.5	19	1.3	61	95.4	n/a	n/a
Mushroom and Vegetable Growing	3,817	97.5	5	0.1	551	93.2	n/a	n/a
Fruit and Tree Nut Growing	10,446	97.3	68	0.6	1,250	82.2	193	13%
Grape Growing	4,451	95.7	57	1.2	486	84.6	42	7%
Sheep Beef Cattle and Grain Farming	80,464	99.1	158	0.2	4,568	91.8	236	5%
Beef Cattle Feedlots (Specialised)	142	94.2	0	0.0	22	61.2	n/a	n/a
Other Crop Growing	6,586	98.8	26	0.4	2,550	71.2	827	23%
Dairy Cattle Farming	7,736	99.5	23	0.3	1,341	96.1	n/a	n/a
Poultry Farming	972	97.5	4	0.4	44	98.9	n/a	n/a
Deer and Other Livestock	3,861	99.0	15	0.4	164	89.4	19	10%
All Other Industries	15,570	98.8	78	0.5	814	94.3	47	5%
Total All Industries	130,859	98.9	396	0.3	11,343	85.8	1,364	10%

Source: ABS Agricultural Land and Water Ownership Survey (71270DO001_201306), June 2013, Table 3 Count of agricultural business by level of foreign ownership, by ANZSIC-2013; Table 4 Percentage of agricultural business by level of foreign ownership, by ANZSIC-2013; Table 10 Water entitlements for agricultural purposes by level of foreign ownership, by ANZSIC-2013.

*Note: Foreign ownership figures in above table are estimates. Please refer to relevant explanatory notes from the Australian Bureau of Statistics (ABS). *Majority ownership refers to those with more than 50 per cent of assets owned by foreign entities.*

2.3.2 The flow of foreign investment into agriculture

Offshore investor interest in Australian agriculture has been very strong in recent years especially from mainland China and the United States. In particular, the level of Chinese investment surged during the 2014-15 period, accounting for 47 per cent of all foreign investment in Australian agriculture, followed by the United States with 19 per cent. In 2015-16 however, the United States resumed its position as largest investor with a 28 per cent share, followed by China with a 22 per cent share. Other major investors in the years after the GFC were from Canada, Hong Kong and Singapore. Much of these flows were institutional.[20] Aggregating all investments made in this nine year period by country, the United States led the pack with approximately $5.3 billion in total spending, followed by Canada with $5.1 billion (Table 10).

[20] We assume that institutional investors are not using third party intermediaries domiciled in foreign countries to disguise their nationality.

Table 10 - Foreign investment in Australian agriculture by country

	2007-08 ($m)	2008-09 ($m)	2009-10 ($m)	2010-11 ($m)	2011-12 ($m)	2012-13 ($m)	2013-14 ($m)	2014-15 ($m)	2015-16 ($m)	Total period ($m)	Total period (%)
China	-	-	-	4	27	328	32	2,494	996	3,881	14%
Hong Kong	-	-	35	13	-	14	600	-	184	846	3%
Singapore	-	-	228	1	65	380	197	619	264	1,754	6%
United States	189	100	659	38	500	880	584	1,005	1,297	5,252	18%
United Kingdom	1,252	402	322	189	550	-	-	175	338	3,228	11%
Canada	-	1,600	-	104	1,420	553	602	597	240	5,116	18%
United Arab Emirates	441	127	45	-	-	-	150	-	-	763	3%
Others	606	554	1,038	1,031	1,035	677	1,260	386	1,292	7,879	27%
Total	**2,488**	**2,783**	**2,326**	**1,381**	**3,596**	**2,858**	**3,433**	**5,288**	**4,611**	**28,764**	**100%**

Source: Foreign Investment Review Board Annual Report(s) 2008 – 2016 – Approvals by country of investor by industry sector. Totals may not add due to rounding.

Note: Total period percentages are defined by the sum of investments made throughout the periods for countries listed above and divided by the sum of total foreign investments.

There has been significant interest in Australian agriculture assets from offshore pension funds. Notable investments include: TIAA Westchester's $1 billion land holdings, Canadian Public Sector Pension Investment Board's $90 million holding of cattle stations, Danish pension fund Pensionskassernes Administration (PKA)'s $60 million purchase of Queensland cattle stations through the Sustainable Land Management Partners and Macquarie's Dutch (APG pension fund) backed Paraway Pastoral. In addition, QIC's acquisition of an 80 per cent stake in The Northern Australian Pastoral Company (NAPCo) was done in partnership with the UK Pension Protection Fund.[21] These investments are a strong demonstration of confidence of offshore institutional investors in the prospects of these large Australian agricultural assets. It is also worth noting that there are large gaps between the value of transactions reported in the media and annual foreign investment figures reported by the Foreign Investment Review Board, suggesting significant transactions have taken place that are not visible to the public.

[21] Cranston, M., *'QIC's NAPCo delivers $72m profit as super funds miss the farm boom'*, The Australian Financial Review, May 2017

3. Rationale for institutional investment in agriculture

This section tells the story of agriculture from the perspective of institutional investors. It begins with an Australian history of institutional investment in agriculture spanning from the early 1960s through to the present day. It then looks at the track record and performance of Australian agriculture assets relative to other asset classes over the past twenty five plus years, and examines the *theoretical* characteristics of the agriculture asset class, in terms of pointers to future performance and portfolio allocation.

3.1 History of Australian institutional investment

There have been at least seven major attempts by Australian superannuation funds to operationalise large scale agricultural investments. None of them have been major success stories (not at least so far). But there are common lessons running through most of these episodes.

3.1.1 Stanbroke

Stanbroke was wholly owned by AMP Life's No.1 statutory fund in the early 1960s. It became the biggest landholder and beef producer in Australia, holding 27 properties across Queensland and the Northern Territory, owning 500,000 head of cattle. Reconstructed financials over a 20-year period indicate a rate of return of 15-16 per cent, per annum, based on analysis by their former CEO.[22] However, the assets fell out of favour with AMP's general management as the pastoral company didn't pay dividends. Rather, all of its profits were reinvested in the business.

After AMP demutualised and listed on the Australian Stock Exchange in 1998, management took a more proactive stance in terms of the beef producer. Stanbroke was first offered internally as a management buy-out. However, the value of this decision was queried and it was later decided that a formal tender process should take place to solicit maximum value from the sale. In 2003, Stanbroke was sold for $490 million through a competitive bidding process to a consortium-the Nebo Group, formed by Peter Menegazzo, Jack Cowin (the founder of Hungry Jacks) and former Stanbroke director Peter Hughes.

Eight months later, the three directors of the Nebo group went separate ways and Peter Menegazzo bought the remaining 50 per cent stake (owned by Cowin and Hughes) for $340 million. Menegazzo then split Stanbroke's properties and sold them individually for a combined cash return of more than $500 million.

Stanbroke still operates eight cattle stations in northern Queensland which combined encompass more than 1.6 million hectares of prime grazing country. They also manage 46 properties in southern Queensland which are used to background cattle and prepare them for entry into the feedlot.

3.1.2 Prudential Agricultural Fund

Prudential Agricultural Fund (also known as Colonial Agricultural Fund) was a major investor in cattle stations across Queensland and the Northern Territory. It was owned mainly by Prudential Life Insurance and the Transport Workers Union Superannuation Fund.

The Prudential Agricultural Fund's performance varied historically and the fund was liquidated in the early 2000s. Colonial First State Investments took over the management rights as part of demutualisation post 1997. The fund continued to underperform until it was split up and sold around 2006, where it achieved a good sale price for its owner.

Reconstructed financials over a 10-year period indicate a rate of return of 10-11 per cent per annum according to contacts previously at Colonial.[23]

[22] Arthur Apted from Cramenton P/L.
[23] *Ibid.*

3.1.3 National Mutual

National Mutual built a $200 million diversified portfolio consisting of cropping (cotton, wheat) and livestock in Southern Queensland, New South Wales and the Southwest of Western Australia from the 1980s in its statutory funds. After National Mutual was demutualised in 1996, the farms were sold. While the head of property at National Mutual was supportive of the farm investment and believed the farms offered a good return, his CIO and some other staff questioned the farms' financial performance. It was known at the time that the ownership and operating structure of the farming properties were held separately and that organisational structural improvements could be made to improve the underlying business and make performance assessment more straightforward.

3.1.4 DIRT & Warrakiri Asset Management

Direct Investment Rural Trust (DIRT) managed farming properties on behalf of Warrakiri Asset Management. Its main operation was dryland cropping – aggregating cropping, broadacre and dryland farms from older farmers who were transitioning off the land. The original operation spanned between 1996-2006, and major investors included Australian Retirement Fund (ARF) and Retail Employees Superannuation Trust (REST) with combined investments of $50 - $60 million. The fund is currently still operating with REST's backing, despite ARF divesting. DIRT Management has not been involved since 2007 and Warakirri has managed the business since that time. The Warakirri Cropping business has developed scale and delivered strong returns in recent times (i.e. averaging more than 8 per cent, per annum, net of tax and fees over the past three years to December 2016). The development of scale and the focus on productivity gains in a focused sub-sector of agriculture (i.e. the production of grain from rain-fed farms) has been important in achieving desired returns.

3.1.5 Warrakirri Dairy

From their inception in 2006 until 2011, Cowbank managed dairy farming properties on behalf of investors. Cowbank's involvement ceased in 2011 and Warakirri has operated the business directly since that time. Dairy property prices remain below 2006-07 levels and have been a drag on returns. Operating conditions have been mixed, and there have been well publicised challenges in the dairy industry over the past 24 months. The operating return has averaged approximately 6 per cent per annum (before livestock trading and revaluation, tax and fees) for the past three years.

3.1.6 Macquarie Agriculture

MIRA currently manages two agricultural funds, Macquarie Pastoral Fund (MPF) and Macquarie Crop Partners (MCP). MPF was launched in 2007 and now has more than $700 million in equity under management. Through its operating company, Paraway Pastoral Limited, it owns and operates 23 farm aggregations (4.4 million hectares) across three production regions (Northern Australia, Northern New South Wales and Southern New South Wales) with capacity for around 200,000 head of cattle, 230,000 head of sheep, and 50,000 tonne of crops. After a 2015 restructure,[24] Paraway acquired 13 new properties focussed on producing and finishing premium quality (MSA grade) beef which complemented an existing portfolio exposed exclusively to breeding and growing. Paraway is investing in premium cattle genetics across its portfolio, increasing exposure to Wagyu and Angus breeds in both New South Wales and in Northern Australia where climatic conditions permit.

- As part of the restructure, Paraway established a standalone head office in Orange whereby the services previously provided by Macquarie were decentralised. The Orange office has a headcount of around 16 people providing head office services, including operations analysis, finance, human

[24] At the end of its initial Fund terms in 2015, MPF was restructured with the approval of its investors into an open ended fund (i.e. no defined end date) with a revised business strategy that enabled it to grow its assets and participate further along the supply chain. MPF had a dual fee structure in place which was removed in June 2015 as part of the restructure.

resources, environmental, social and governance, marketing, mergers and acquisitions, strategy, legal, and procurement. This restructure has delivered significant cost savings to investors.

- Performance prior to the restructure was mixed partly due to industry wide headwinds including unfavorable climatic conditions in Northern Australia, an inflated Australian dollar, subdued growth in cattle prices, and stagnant land values.[25]
- MPF seeks to achieve a premium price by being a consistent, reliable and large scale supplier of quality livestock. That is in addition to providing premium genetics (e.g. Wagyu F1's, Angus etc.) MPF seeks to leverage all of these attributes to achieve margin expansion.
- MPF consists primarily of foreign investors, however owners include two industry super funds (BussQ and My Life MySuper (formerly Catholic Super)).
- Paraway has achieved consecutive operating returns of 7-8 per cent in 2015 and 2016 (pre land price appreciation) in a strong commodity price environment for beef, sheep and wool.

MCP was launched in 2009 and has a mandate for investment into diversified cropping assets in both Australia and Brazil. The majority of investments are in Australia, where the operating company, Lawson Grains, has around $280 million in committed equity, mostly to foreign investors. It now holds 10 aggregations, around 89,000 hectares of arable land – producing 200,000 tonne of dryland crops (wheat, barley and canola). Lawson Grains head office is located in Albury, New South Wales. Lawson Grains are focussed on the benefits of scale, and both climatic and commodity diversification. Similar to Paraway, Lawson Grains established a standalone head office in Albury as a result of a restructure. While only fully deployed in 2016, Lawson has achieved an operating return of 3-7 per cent over the past three years (pre land price appreciation), at a low point in the commodity price cycle.

3.1.7 Sustainable Agricultural Fund

Sustainable Agricultural Fund (SAF) is a diversified agricultural investment fund. It owns 23,000 hectares over 17 farms in Australia with properties from Moree in New South Wales, down through a substantial western Victorian cropping aggregation, to King Island and Tasmania (including dairy farming in Blythe Vale, Ashburton, Midlothian and Springvale). Its involvement in the agriculture sector includes broadacre cropping, irrigated cropping, beef and dairy enterprises. The fund was until recently backed by domestic superannuation funds such as AustralianSuper, Catholic Super, AMP Capital, Christian Super and Mine Wealth and Wellbeing Super. Other investors include Melbourne University Endowment and a private investor (Mike Fitzpatrick).

The idea behind the fund was diversified agriculture based on ABARE modelling, with cropping consisting of 60 to 70 per cent of the fund, and livestock, beef and dairy making up the remainder. SAF raised $145 million in its first close in September 2009.

In March 2017 it was reported[26] that the owners of SAF have decided to sell the fund, eight years after its establishment. Reportedly, the sale is expected to fetch more than $180 million for the owners. An agent will be appointed to sell the assets collectively or individually depending on investor interests.

[25] It should be noted that Paraway over the period 2010-2015 outperformed the ABARES industry benchmark for both profitability and land price appreciation).

[26] Hemphill, P., *'Where's the fund in that?'* The Weekly Times, March 2017, pg 11

3.2 The performance of agricultural investments

To establish a baseline of performance for agricultural producers it is necessary to measure their rates of return on a comparable basis from:

(i) the return on farm gate commodities incorporating any cost savings from operational efficiencies or productivity improvements through farm management, and

(ii) the capital appreciation of property.

Returns series should be measured for each type of farming activity (as summarised in **Attachment 1**) on a comparable basis to farm assets overseas and all other asset classes. In other words, data must be audit quality and derived using appropriate accounting standards.

Unfortunately, the only sectoral level agricultural performance data on returns available in Australia is compiled by ABARE and based on a voluntary survey of farmers engaged in producing only certain commodities. This survey has some limitations:

- Many farm sectors are not surveyed – so overall farm return measures represent only partial coverage;[27]
- There is no guarantee that each firm within the survey sample responds each year and, as participation is purely voluntary, there is no panel consistency;[28]
- Volunteered performance data is not audit quality and there is no independent oversight of sample responses.[29] This raises questions regarding the consistency and accuracy of such responses.
- Panel consistency is not guaranteed as the survey is based on voluntary participation. While ABARES seeks to maintain a high portion of the same farms in the annual survey, this is not guaranteed.[30]

The lack of an independent official data series establishing the risk and return profiles across commodity producers in the entire agricultural sector on a comparable basis is a major problem for institutional investors. This makes it difficult for fund trustees and asset advisers to establish a reliable benchmark for normal operating conditions through time. Nor does it allow them to identify the top tier of performers across each segment of Australian agriculture through time. Faced with the scarcity of data, superannuation fund trustees find it difficult to justify investing member savings in agriculture, especially when it is so much easier to benchmark more conventional investment options in terms of their risk/return characteristics.

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[27] ABARES has conducted annual surveys of the broadacre sector (which accounts for around 70 per cent of Australian farm businesses) since 1978 and the dairy sector since 1979, using a consistent methodology. Annual surveys are also conducted of vegetable industry farms and irrigation farms in the Murray Darling Basin since 2005-06. In addition, many other sectors have been surveyed in the past 20 years subject to the availability of funding and the requirement by industry and government for information in that sector on the economic performance of farm businesses, management practices and other farm operator characteristics. In recent years, sectors surveyed have included the sugar industry and the honeybee industry.

[28] ABARES says it maintains a high proportion of farms in the annual survey collections from one year to the next to ensure accurate measures of change. While participation in ABARES surveys is voluntary, ABARES states that it has over 70 years of experience in gaining the co-operation of farmers in surveys. Farms are selected from industry by region by farm size strata with reserve sample selections draw from the same strata to cover non-response. All surveys are conducted on-farm by face-to-face interview with experienced field staff and with detailed financial records provided for all farm businesses.

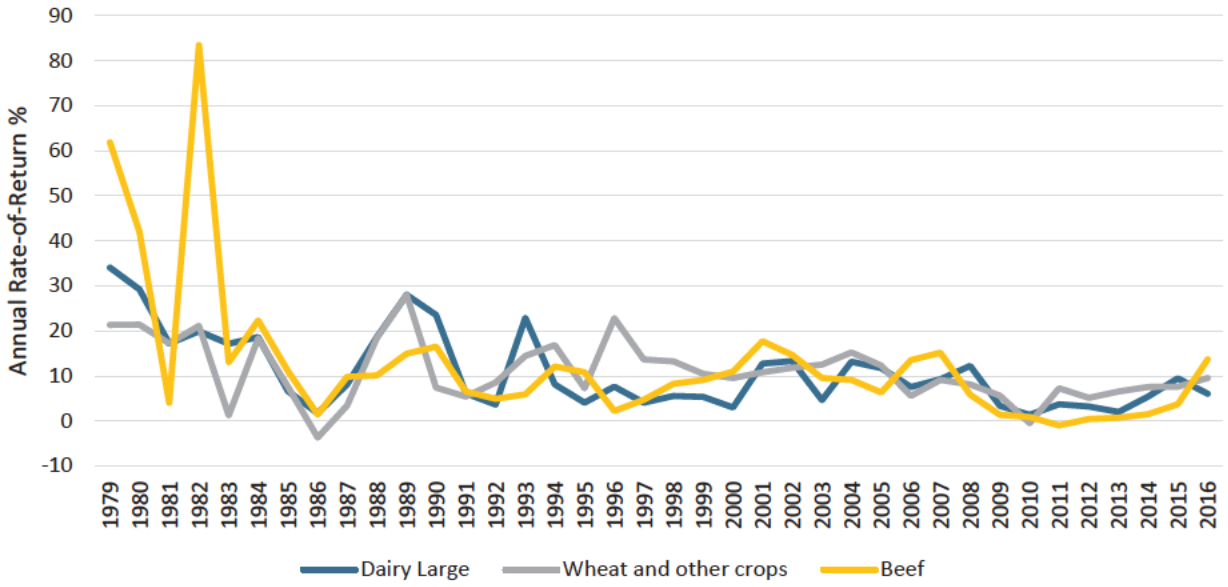
[29] ABARES says farm surveys are approved each year by the Commonwealth Survey Clearing House established within the Australian Bureau of Statistics (ABS) and conform to ABS methodology and statistical standards. ABARES uses the ABS Business Register frame for survey design and sample selection. Sample weighting and benchmarking is undertaken to recorded ABS data for agricultural businesses.

[30] ABARES states that it employs a sophisticated sample design and weighting methodology designed to provide population representative, statistically reliable estimates at published levels of output.

3.2.1 Returns

Bearing in mind the qualifications placed on the ABARES data series, this data suggests that returns from larger farms have been satisfactory over the full period but not improved since the deregulation of the late 1980s (Figure 5 below). According to this data series, while returns achieved by large farms were generally quite respectable in the 2000s before the GFC in 2008, since then they have declined to below long-term averages achieved for the major commodities. However, we do see a late pick up for the beef sector with rate-of-return including capital and income rising to 13.6 per cent in 2016.

Figure 5 – A comparison of historical rates-of-return across large-scale agricultural industries (1979-2016)

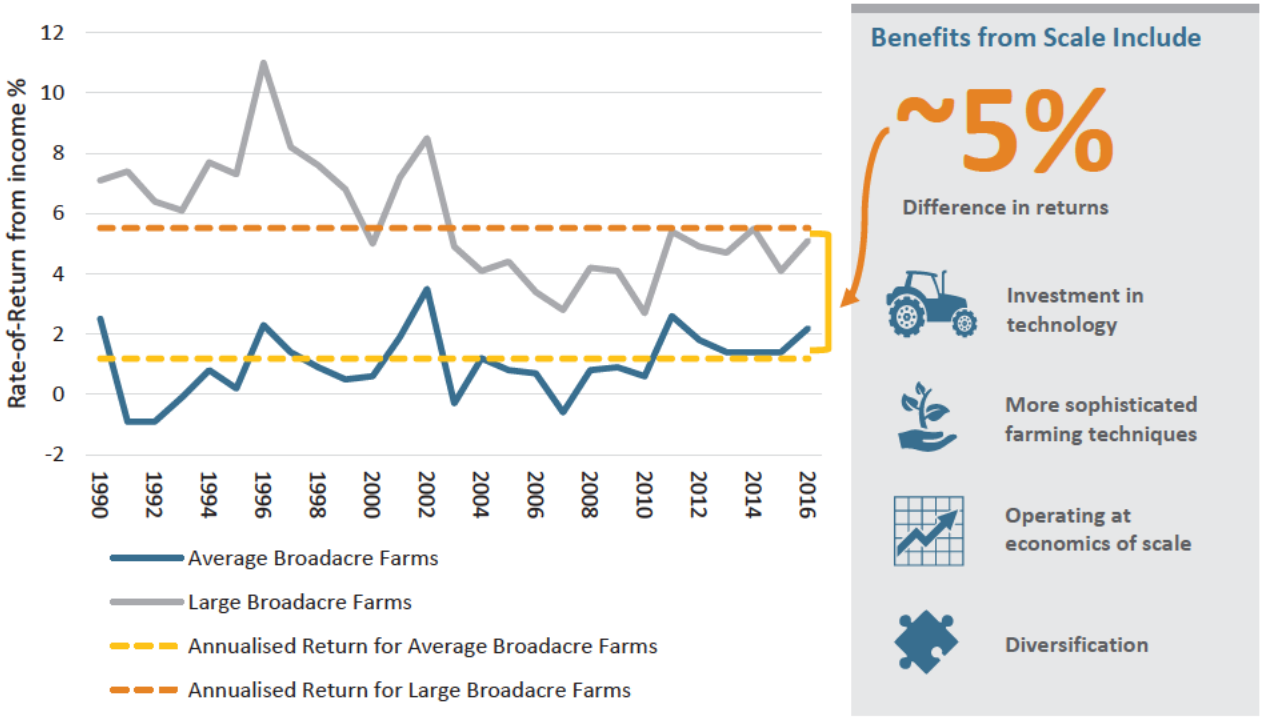


Source: Australian Bureau of Agricultural and Resource Economics - Rates of return to total farm capital (including capital appreciation).

Note: All years refer to financial years. Returns data refers to farms with revenue over $1 million and includes both income and capital appreciation, obtained from ABARES AGSURF Database.

Large scale farms historically have achieved higher rates-of-return from income (ignoring any gains from land and capital appreciation). In Figure 6 and Figure 7 below, since 1990, annual rates-of-return from income for large scale farms have consistently outperformed average farms by 4 to 5 per cent. The outperformance gap has narrowed somewhat since the early 2000s but is still significant.

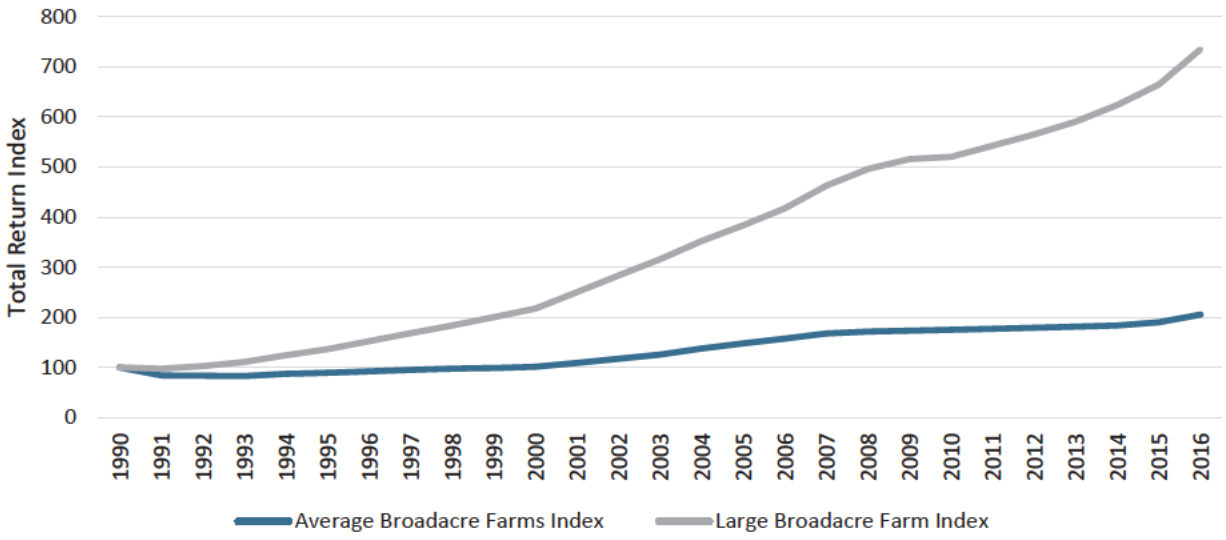
Figure 6 – Annual rate-of-return from income for large and average broadacre farms (1990-2016)



Source: Australian Bureau of Agricultural and Resource Economics - Rates of return to all broadacre farms excluding capital appreciation.

Note: All years refer to financial years. Returns data refers to large broadacre farms with revenue over $1 million, obtained from ABARES AGSURF Database. Broadacre farms include wheat & other crop, mixed livestock, sheep and beef farms (excluding dairy).

Figure 7 – Total returns index for large and average broadacre farms (1990-2016)



Source: ISA Analysis using ABARE data - Rates of return to all broadacre farms excluding capital appreciation.

Note: All years refer to financial years. Returns data refers to large broadacre farms with revenue over $1 million, obtained from ABARES AGSURF Database. Broadacre farms include wheat & other crop, mixed livestock, sheep and beef farms (excluding dairy).

The data presented in Table 11 are across sub-periods from 1980 to 2016 with returns split by income source and commodity. Returns for all broadacre industries are moderate (with the exception during 1980-89 break out for income and capital), and especially for returns generated by income alone. The total returns over the 1980 to 2016 period was a respectable 9.7 per cent for all broadacre industries of which 5.7 per cent is driven by income. Table 11 shows for large scale farm sectors listed below, the average long-term returns are quite attractive, even though returns since the GFC have somewhat declined.

Table 11 - Investment rate-of-returns on large-scale agricultural industries (1980-2016)

	Wheat & other crops		Dairy		Beef		All Industries*	
	Income & Capital	Income	Income & Capital	Income	Income & Capital	Income	Income & Capital	Income
1980-1989	12.8%	7.1%	16.2%	5.7%	19.3%	4.3%	14.6%	5.5%
1990-1999	11.9%	10.2%	8.8%	4.6%	8.0%	7.8%	8.0%	7.6%
2000-2009	10.0%	6.1%	9.0%	4.5%	10.3%	4.4%	9.9%	4.8%
2010-2016	4.2%	3.8%	3.1%	3.0%	1.9%	2.2%	3.6%	3.2%
Long-term (1980-2016)	10.5%	7.3%	9.9%	4.8%	10.5%	5.0%	9.7%	5.7%

Source: Australian Bureau of Agricultural and Resource Economics

*Note: Profit (including or excluding capital appreciation) at full equity expressed as a percentage of total opening capital. All returns data in this table are from large scale farms with revenue over $1 million. *All industries (broadacre) include wheat & other crop, mixed livestock, sheep and beef farms (excluding dairy) with revenue over $1million.*

As shown in Table 11, wheat and beef sectors have experienced the most solid and consistent long-term rates of return (from income and capital appreciation) with an annualised growth rate of 10.5 per cent from 1980 to 2016, and this is slightly higher than the 9.9 per cent average return for dairy.

3.2.2 Volatility

The long-term volatility for the beef sector (large-scale) on average is the highest out of all sectors, and this appears to be mainly influenced by heightened volatility during the 1980s. Overall, for all broadacre industries, volatility for returns on income and capital has declined over the period analysed and it has been hovering around 3 per cent since 2000.

Table 12 - Investment returns volatility for large-scale agricultural industries 1980-2016

	Wheat & other crop		Dairy		Beef		All Industries*	
	Income & Capital	Income	Income & Capital	Income	Income & Capital	Income	Income & Capital	Income
1980-1989	10.4%	3.3%	8.8%	2.1%	24.6%	3.5%	11.5%	1.9%
1990-1999	5.3%	3.9%	7.6%	1.3%	4.2%	1.8%	4.2%	1.4%
2000-2009	3.1%	2.0%	4.2%	2.5%	5.0%	2.3%	3.2%	1.7%
2010-2016	3.2%	1.5%	2.8%	1.4%	5.0%	0.9%	2.9%	1.0%
Long-term (1980-2016)	6.7%	3.4%	7.6%	1.9%	14.5%	2.9%	7.4%	1.9%

Source: Australian Bureau of Agricultural and Resource Economics

*Note: Profit (including or excluding capital appreciation) at full equity expressed as a percentage of total opening capital. Volatility refers to standard deviation of annual rate-of-returns. All returns data in this table are from large scale farms with revenue over $1million.*All industries (broadacre) include wheat & other crop, mixed livestock, sheep and beef farms (excluding dairy) with revenue over $1million.*

Looking at Australian agricultural asset correlations to key investment classes from 1990 to 2016, it is pretty clear that annual returns for most categories of Australian farm types are either more (beef) or less (dairy) correlated to global property movements – suggesting that these ABARE return series are reflecting property drivers more than agricultural business aspects. The main exception to this is wheat and other crops which is positively correlated to infrastructure. The correlations are mostly comparable to similar data compiled by MIRA (December 2016).[31]

Figure 8 – Correlation matrix for large-scale Australian agriculture 1990 to 2016

	Australian Equity	U.S. Equity	Private Equity	Infrastructure	Direct Property	Australian Fixed Interest	International Fixed Interest	Dairy*	Wheat & Other Crop*	Beef*	All Broadacre Farm Industries*
Australian Equity	1	0.63	0.62	0.54	0.30	-0.21	-0.38	0.05	0.22	0.09	0.18
U.S. Equity	0.63	1	0.48	0.57	0.20	0.08	-0.05	-0.29	0.13	-0.24	-0.08
Private Equity	0.62	0.48	1	0.29	0.33	-0.22	-0.38	0.02	0.25	0.08	0.17
Infrastructure	0.54	0.57	0.29	1	0.14	0.07	0.02	0.08	0.37	-0.03	0.15
Direct Property	0.30	0.20	0.33	0.14	1	-0.64	-0.56	0.20	0.05	0.42	0.52
Australian Fixed Interest	-0.21	0.08	-0.22	0.07	-0.64	1	0.88	-0.34	-0.19	-0.14	-0.40
International Fixed Interest	-0.38	-0.05	-0.38	0.02	-0.56	0.88	1	-0.15	-0.06	-0.15	-0.25
Dairy*	0.05	-0.29	0.02	0.08	0.20	-0.34	-0.15	1	0.50	0.22	0.47
Wheat & Other Crop*	0.22	0.13	0.25	0.37	0.05	-0.19	-0.06	0.50	1	0.09	0.65
Beef*	0.09	-0.24	0.08	-0.03	0.42	-0.14	-0.15	0.22	0.09	1	0.64
All Broadacre Farm Industries*	0.18	-0.08	0.17	0.15	0.52	-0.40	-0.25	0.47	0.65	0.64	1

Source: ISA Analysis using data from Australian Bureau of Agricultural and Resource Economics, and Frontier Capital.

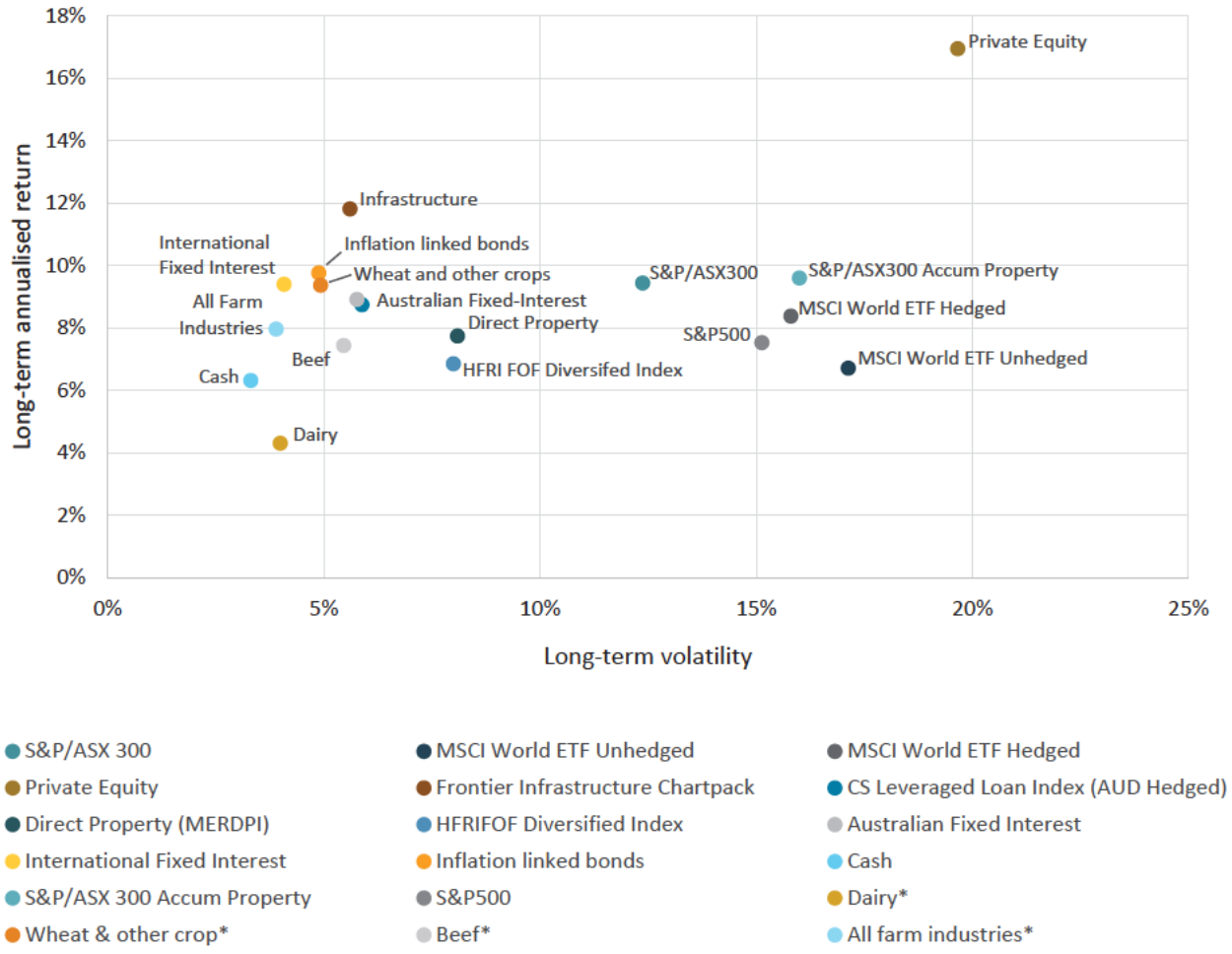
*Note: Correlation coefficient calculated from annual returns data from financial year 1990 to 2016. *Farm industry returns data include both income and capital appreciation; beef, wheat and other crops and all farm industries returns are from large-scale farms with revenue greater than $1million, obtained from ABARES' database. All farm industries (broadacre) include wheat & other crop, mixed livestock, sheep and beef farms and exclude dairy.*

3.2.3 Risk – return and duration premia

The risk-return performance over the period 1990 to 2016 is outlined in Figure 9. It shows most large-scale Australian farm sectors - wheat and other crops, and beef, as well as overall returns (with capital appreciation included) - achieved performance comparable to most global and local equity and property indexes, but had far lower volatility. The exception was dairy which underperformed over the period.

[31] Macquarie Infrastructure and Real Assets (MIRA) Pathways, '*The Real Asset Opportunity - Issue 2*', December 2016

Figure 9 – A comparison of investment risk-returns across asset classes 1990 to 2016



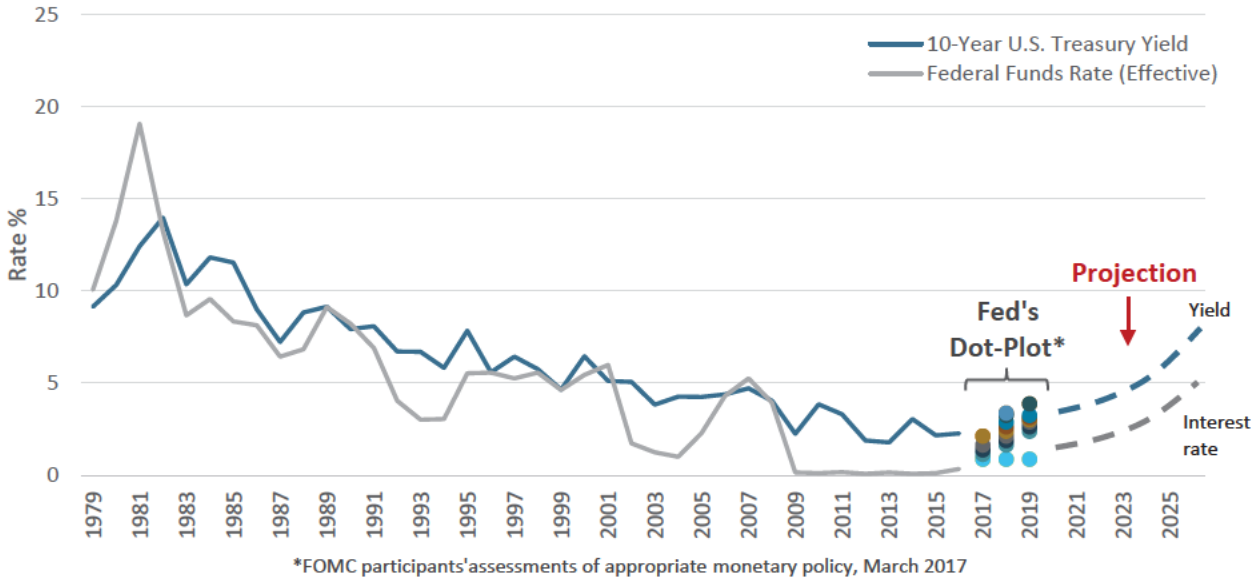
Source: Australian Bureau of Agricultural and Resource Economics. Frontier Capital data.

*Note: Historical time-series from financial years 1990 to 2016. Standard-deviation of annual returns used to calculate long-term volatility.*Farm industry returns data include both income and capital appreciation; beef, wheat and other crops and all (broadacre) farm industries returns are from large-scale farms with revenue greater than $1million, obtained from ABARE database. All (broadacre) farm industries include wheat & other crop, mixed livestock, sheep and beef farms and excludes dairy.*

Of the agriculture sectors, wheat and other crops performed the best with an annualised return of 9.4 per cent since 1990 - comparable to Australian equity indices and exceeding international equity indices, but doing so at significantly lower volatility levels (4.9 per cent compared with 12.8 per cent and 15.8 per cent). Australian infrastructure investments performed the best over time for comparable levels of risk to agriculture. While other investments may have generated similar high levels of returns, this comes at the expense of higher volatility through time.

Overall, the performance of large-scale Australian agriculture operators has been quite respectable over the long-term. It has declined somewhat from the heights reached in the early 1980s, although it should be remembered that interest rates have been falling over this entire period, as illustrated in Figure 10 (using the United States as a proxy for the global long term cost of capital). Agricultural returns have been artificially lowered by the disinflation, while returns to other asset classes have experienced a duration benefit.

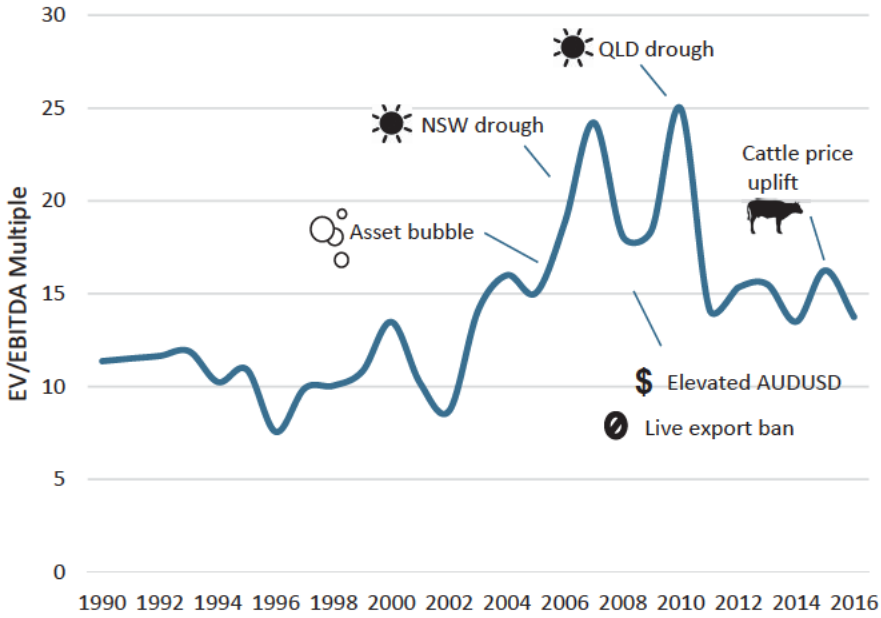
Figure 10 – 10-Year U.S. Treasury yield, Federal funds rate (effective) & projections



Source: S&P Capital IQ, Federal Reserve Bank of St. Louis, Economic Projections – Board of Governors of the Federal Reserve
Note: Fed's dot-plot shown describes the range of target levels for federal funds rate but omits frequency.

Aside from the hedging benefits associated with agricultural assets regarding inflation, the timing of acquisition of agricultural assets is also important when considering the potential for future growth. Figure 11 below shows valuation in relation to earnings (Enterprise Value (EV)/Earnings Before Interest, Tax and Depreciation & Amortisation (EBITDA)) peaked in the early 2010s and has since declined to approximately 15. The average multiple since 1990 is approximately 14, which is close to the latest reading of 13.7 for 2016.

Figure 11 – Australian large broadacre farms EV/EBITDA multiple



Findings

Land values appreciated significantly between 2002 – 2009 with relatively limited growth between 2010 and 2014

Given earnings growth and relatively limited capital appreciation since 2009, EV / EBITDA multiples have contracted

Note: Given the relatively stable underlying farmland appreciation, the different risk profiles should be considered when comparing multiples across asset classes

Source: MIRA Agriculture analysis of ABARES Farm Survey – extracted April 2017
Note: EV is defined as total capital at 1st of July. EBITDA is profit at full equity, add depreciation and imputed labour cost, and less any land rent cost and lease charge. All data used refer to large broadacre farms with revenue over $1 million.

Table 13 – Long-term historical annualised returns of asset classes

	Cash	Bonds	Equities	Equity risk premium	Bond maturity premium
1900 – 2016	0.8%	1.8%	5.0%	4.2%	1.0%
1980 – 2016	1.3%	5.9%	6.5%	5.2%	4.6%

Source: Credit Suisse Global Investment Returns Yearbook 2016 as presented by Alan McFarlan, ASI 2016 Plenary 5 Investing in a Low Returns World by Alan McFarlane from Dundas Global.

Note: The definitive global database. Stocks, bonds, bills and inflation for 23 countries, >90% of global market cap but 98% of those in 1900.

The risk in thinking about future asset prices and portfolio composition is that real interest rates will neither stop falling, nor remain close to zero, but may begin to normalise over the medium-term. This process would favour certain asset classes such as agriculture and punish others such as bond-like assets.

A potential tightening in global interest rates, due for example to resurgent global inflation (as key central banks unwind their GFC related balance sheet expansions, the supply of low-wage rural labourers exhausts in China and/or the United States undertakes a fiscal expansion while reinstating trade protection) would be significantly adverse to global bond prices and to the prices of bond proxies likely property, infrastructure and yield shares.

Table 13 explores the potential sensitivity of existing asset prices to a 100 basis point permanent increase in interest rates. It shows equity assets are likely to be the most sensitive to a permanent increase in interest rates, followed by commercial real estate and bond assets. For a balanced portfolio that holds yield shares, bonds, real-estate assets and any other long duration investments, a permanent 2 percentage point increase in long rates would reduce the value of those assets by 10 to 20 per cent. Returns to agriculture assets are actually likely to benefit from an equivalent 100 basis point interest rate increase far more significantly due to a once-and-for-all reduction in the duration premium.

Table 14 - Duration risks associated with global asset allocations

Value	Asset Type	Effect on asset price when key interest rates are expected to rise		Estimated effect on asset value from a 100-bps permanent change in key interest rate
$201 trillion	Bonds	↓	Variable	0% to -11%
$162 trillion	Residential property	↓	Less inelastic	0% to -5.9%
$21 trillion	Infrastructure	↓	Less inelastic	0% to -6.8%
$67 trillion	Equities	↑ ↓	If rate rise is small If rate rise is large	0 % to -14%
$27 trillion	Commercial real estate	↓	Most impacted	0% to 11.9%
$31 trillion	Agriculture property	↑	Most likely	0% to 15%*

Source: Duxton Asset Management, GMO LLC, IFM Investors.

*Note: Rate rise assumes no change in CPI. We use Cambridge Associates Private Real Estate index, MSCI US REIT, S&P 500 index and MSCI Emerging Market index as proxies for residential property, commercial real estate, US equities and total agriculture respectively.*Expected change in value for agriculture is based on permanent rate increase and expectation of future rise in inflation.*

3.3 Opportunities stemming from agriculture investment

Well executed investments in agriculture should *in theory* be able to provide diversification benefits to portfolios by generating relatively stable returns. These are standalone benefits and can accrue to any managed fund. But there are many pitfalls. From the fund managers perspective the basic considerations for and against investing in agriculture are examined below.

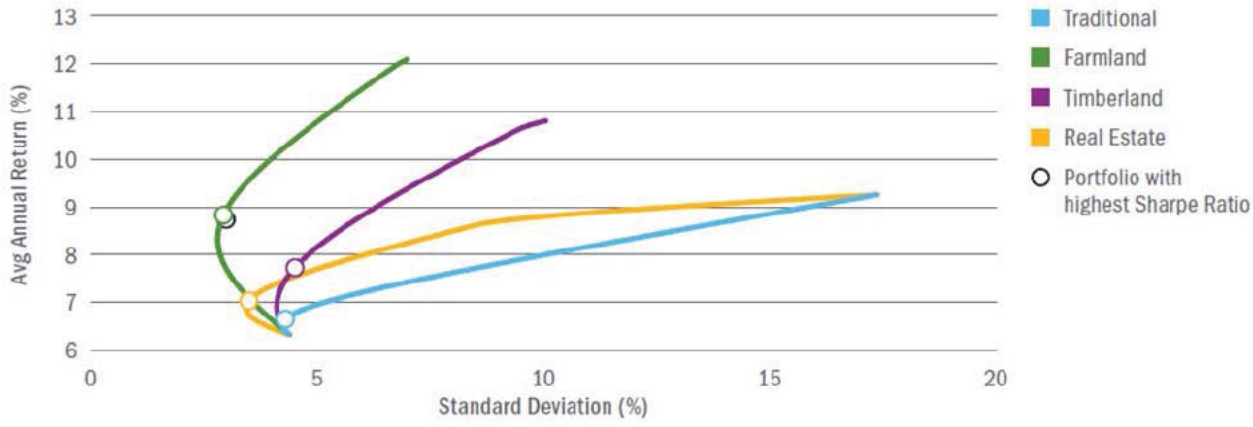
3.3.1 Diversification

Private investments in relatively illiquid categories of real assets— agriculture, commercial real estate and infrastructure —have historically exhibited low or negative correlations to stocks and bonds, and so can help to diversify portfolio risk.

TIAA (2016) have found that including farmland, timberland and real assets within normal balanced portfolios over the past two decades would have generated higher returns than traditional investments alone, with significantly lower volatility. Their portfolio optimisation algorithm suggests that including private real assets raises risk adjusted return above those achieved in portfolios consisting of shares and bonds alone. They also found a further diversification benefit beyond that provided by the inclusion of publicly traded commodities and REITs.[32] Their analysis spans 24 years, or 96 quarters, from Q4 1991 to Q3 2015. These results based on United States data are presented in Figure 12. Historical returns in excess of 11 per cent have been achieved in the United States farm sector since the mid-1920s when measurement began. The TIAA study results are broadly consistent with the Australian large farm correlation coefficient data reported in the previous section.

Figure 12 – Real assets' performance impact – individually and combined

Real assets increased risk-adjusted returns of traditional portfolios



Source: TIAA (2016)

Atchison Consultants has also undertaken analysis on the impact of including global agriculture in a diversified portfolio, creating the Duxton Global Agriculture Index. The Index uses data from 10 countries including Australia and the United States over 24 years to December 2014. Adding this index into a diversified portfolio improved historic Sharpe ratios, with higher expected returns and reduced volatility.[33]

[32] The analysis used traditional mean-variance portfolio optimisation, based on historical performance, standard deviation, and correlations of returns by asset class. Returns and standard deviation data represent six indexes: three representing private real assets, and three representing publicly traded commodities and REITs (see Attachment A for the list of indexes). Mean-variance optimisation is a technique for determining the set of asset allocations designed to provide the maximum return for a given level of risk. This set of portfolio allocations forms a curve known as the "efficient frontier." Quarterly returns measures are calculated using end-of-period rolling annual total returns and standard deviations.

[33] Atchison Consultants 'Duxton Asset Management Agricultural Property Investment 2014' December 2016.

Investing in quality agricultural assets is also a way to invest in emerging Asia (indirectly) with its rising population and income growth prospects. Looking forward forty years, the fundamentals of globally scarce arable land in response to increasing food demand will be a major driver of agricultural asset prices in the future.

3.3.2 Return expectations

Quality agricultural assets should offer predictable returns as summarised in Figure 13. Institutional investors should expect to earn 6 to 9 per cent from the buy-lease option and perhaps 8 to 12 per cent from the buy-operate option (but there are more risks here) over the long-term. Those returns are comprised of the following components:

- **Capital returns (on rural land)** over time should equal nominal GDP growth (akin to consumer prices plus the growth of the labour force and productivity) or 3 to 5 per cent over the medium term.
- **Leaseback returns** which should average around 3 to 4 per cent through time for reliable third party operators.
- **Direct operating returns** should reach 3 to 4 per cent through time where the investor adopts a hands on management approach and is guided by a consistent business strategy.
- **Productivity and organisational** measures could potentially add another 2 to 3 per cent, or more, over the medium-term. This might be achieved in business plans, by targeting improvement in product quality, improving yields, converting land to higher value use (e.g. pastoral to cropping), improving the productivity of land by investing in fences/watering points to increase carrying capacity. At the same time operators could look at other business elements such as bypassing spot markets and producing high quality, differentiated products at scale, mastering genetics, logistics and marketing arrangements. There may also be additional value capture achievable from vertical integration.

The fact that the measured returns to large scale broadacre production in Australia have ranged from 5 to 10 per cent between 1980 and 2016 suggests that agricultural performance may not have always been optimised. This may be for a variety of operational and policy reasons.

3.3.3 Liability-matching characteristics

Agricultural 'real' assets have the potential to provide bond-like current income streams from the annual earnings of farm businesses, and long-term capital appreciation from rising land values. Unlike other 'real' commodities assets – such as mining assets – income cash flows are renewable and capital gains are sustainable in the sense that they are not depleted from operation, so they are very longed lived assets. There are also environmental, social, and governance benefits associated with these assets, due to the use of precision farming which reduces wastage and supports environmental outcomes.

3.3.4 Inflation hedging

Real assets have provided a strong hedge against inflation over time. Many commodities such as foodstuffs and raw materials are components of inflation measures like consumer price indexes (CPIs). So when measured inflation is rising, commodity prices are usually rising. Driven by global demand and supply trends, rising commodity prices help to improve the profitability of agricultural operations causing land values to rise and so providing a long-term hedge against inflation. For these reasons, long-term returns have outpaced inflation rates and generated reasonable rates of return where they are consistently measured. Historical returns to United States agricultural assets are illustrative. Between 1970 and 2014, agricultural returns averaged 10.54 per cent, more than twice the CPI at a 4 per cent average. Agricultural assets had a higher positive correlation (0.65) with inflation than government bonds, gold or shares, some of which are negatively correlated with inflation.[34]

[34] TIAA Global Asset Management, 'Private real assets: Improving portfolio diversification with uncorrelated market exposure', December 2016

3.3.5 Effective use of leverage

It is also important to compare returns across asset classes based on comparable balance sheet characteristics. It is a worth bearing in mind that levels of leverage for companies in the space vary significantly based on where they are in their business cycle and recent operational conditions in each sector, but on average, leverage based on debt relative to net assets runs at around 30 per cent. In relation to leverage, private sector banks will typically be comfortable lending to a farmer up to 50 per cent of the value of their secured assets, which generally represents farmland and livestock, plus working capital financing.

Agricultural business models work best when leverage levels are below 30 per cent, given variability around trading conditions. Often the difference in investment returns between agriculture and other projects is the difference in leverage levels between projects.

Figure 13 – A ballpark guide for returns to investments in agriculture

Note: The capital returns to rural land above (3 to 5 per cent) assume that 75 per cent of invested capital is land with the rest of the farm balance sheet tied up in plant and equipment, biological assets, etc.

3.3.6 Alternative exposure to agriculture

A water portfolio is an alternate way to gain exposure to Australian agriculture where the portfolio can be fully invested in the real, non-depreciating assets of perpetual water entitlements that can be leased to third parties. Australia is a world leader in water markets with over $11 billion in size and a relatively liquid market. The increasing scarcity of water coupled with rising demand (including from a growing agricultural sector) will be the key economic driver underpinning the water asset market. Water entitlements have historically generated a gross yield of 6-7 per cent per annum, and capital appreciation. They also demonstrate the same low correlation to shares and bonds that agriculture as a whole does.

3.4 Challenges for institutional investment in agriculture

Agriculture remains the last big sector of the economy that superannuation funds haven't entered on mass. Agricultural investment certainly poses significant challenges for investment committees in managed funds. We have already seen the sector is not friendly to institutional investors in terms of ease of investing. The barriers include:

- Lack of detailed knowledge of the sector by fund trustees, executives, let alone their asset managers.
- Few asset managers with good long term record in the sector.
- Performance data either does not exist or is not comparable through time for decision makers. There are no performance data published on finer sectors – there is no ability to ascertain who is a top quintile performer.[35]
- Difficulty achieving meaningful investment scale ($100 million plus) and operational size for 'corporate' farms; many farming operations are too fragmented and too small.
- Asset allocation issues – what asset category is agriculture (property, water, timber, infrastructure, PE; or new class)?
- Returns – can vary considerably by sector; capital appreciation can form a material component of overall returns.

History suggests that from a fund manager's perspective the success or failure of agricultural investments turns on choices of business strategy and farm management model. In making these decisions institutional investors need to be cognizant of their own limitations to adequately operate or oversight agricultural investments, including lessons learned from previous failures.

3.4.1 Lessons learned

Previous episodes examined earlier in this chapter identify some obvious lessons to guide future decision making by fund managers.

- Funds need to apply an investment time horizon in excess of a decade to invest in this asset class. This is because it takes time to deploy invested capital to purchase farms and to fit-out holdings to make best use of prevailing capital and technology.

[35] There is a market for benchmarking services conducted by agricultural consultants. For example, in order to understand how MIRA farms and companies are performing on a like for like basis, they engage parties including "Agripath" and "Holmes and Sackett" who conduct regional independent benchmarking – which MIRA participate in on a voluntarily basis in order to produce relevant data and understanding of top producers. Only the top-tier of producers pay to participate in these type of programs. The beef industry body, Meat and Livestock Australia, also support benchmarking to an extent. https://www.mla.com.au/. MIRA participate in a Northern Producers benchmarking program alongside other major corporates, however the results are not publically available.

- Farms need to be operated with normal reporting procedures, be cost conscious, and early adopters of technology and encouraged to pursue productivity enhancements.
- Information problems abound in the sector. Most investors see the sector in terms of old-style struggling family farms. Institutional investors are often biased against this asset class as misinformation feeds biased decision making. Professional valuers tend to assign these assets more value than Australian institutional investors do. This is not necessarily true of foreign investors. Australian institutional investors have sometimes been wary of horticulture, although some recent high profile investments in citrus and almonds contradict this.
- Agriculture is not a sector well suited to massive off-farm overheads – direct ownership is a good model – providing a solid alignment of interests.
- Investments need to be treated as 'whole' businesses with returns measured inclusive of a farm property's capital appreciation and operating income.

3.4.2 Investment model

There are many ways to invest in agriculture, including:

1. Buying farmland and leasing to third party operators - this best suits highly capital intensive farming (land, equipment) by sale and leaseback.
2. Buying and operating productive farmland directly - this suits crown jewels type assets where premium returns can be achieved by executing business strategy.
3. Partnering with top tier producers or up-and-comers - this allows for capital injection for succession, modernisation, and aggregation of smaller family operated farms.
4. Buying and selling agricultural commodity futures.
5. Exposure to a water entitlements portfolio.
6. Investing in agribusiness (public stocks or private companies).
7. Targeting ancillary businesses: infrastructure, storage, fertiliser, farm machinery etc.

3.4.3 Business models

Translating the business of farming to Australian conditions is problematic. Lifting farm productivity and returns in most of Australia (except the North West) cannot be achieved via adding new acreage (as high value arable farmland competes with alternate uses). Expansion requires innovation and/or densification via the deployment of additional capital along with securing water rights where possible. Land fertility is highly variable, driven in large part by climatic conditions and also the prevalence of pests, disease etc. Typically, small family holdings and/or debt laden operators cannot achieve this densification without partners.[36] Also, there are times when agricultural commodities, including water, experience strong prices or significant volumes and so are particularly abundant, and times when the reverse is true.

There is a long list of idiosyncratic 'risks' in agriculture which must be managed to ensure a given business strategy is properly executed. The risks include:

[36] Translating the business of farming to North American conditions is quite straightforward. Producers benefit from a virtually infinite water supply (not California) and climate stability. This has encouraged large agri-corporates to directly operate farmland assets across a large range of annual and permanent crops. They have achieved a track record of high returns and low volatility. In this environment the same agribusiness conglomerates have managed to buy up large tracks of land and lease to tenant operators and achieve predictable rental rates. That said United States agriculture is overwhelmingly dominated by large family operators.

- Expertise – having wise heads to guide investment decisions.
- Scale and diversification – picking an appropriate size of operation, commodity mix (permanent and annual crops, livestock and products) and operating regions.
- Timing of purchase – the timing of entry and exit into farm property (an illiquid asset class) is vital to avoid paying too much for properties up front and so forcing low returns onto projects.
- Climatic variability, water availability, pests, etc.
- Global market conditions, currency risks and government policy changes, especially around trade agreements and ESG risks.
- Business conditions including credit default/lease collection and agency issues with farm managers or lessees etc.

3.4.4 Business strategy

Agriculture should be a defensive play. It requires patience and scale. It calls for a combination of wise advisers and appropriately motivated tenants or farm managers operating carefully selected farmland. It requires minimising exposures to low margin crops, with high labour input components. It requires finding farm managers who can drive down costs while possessing a preparedness to trial new processes and invest time in improving soil fertility. It also requires an understanding of the different soft commodity cycles and hence when to time an entrance or exist into a specific commodity exposure.

3.4.5 Evaluating new projects

Project promoters can help superannuation funds' investment committees to support their offerings by establishing:

- The degree to which their proposal would be market facing and so have sufficient control over their products or value chain (from paddock to customer/final distributor).
- The extent to which their proposal would have existing distribution links into world markets.
- The extent to which products are free of environmental, social and corporate governance (ESG) risks (such as live animal exports or genetically modified crops, etc.).
- The degree of volatility in price and export volumes from year to year which tends to reduce revenue realisation overall.
- The partnerships which have been formed with existing established operators to minimise execution risks.
- The strength of the project' balance sheet.
- The potential for the project to have multiple revenue streams or multiple aspects for risk minimisation.

In the absence of largely favorable ratings on most of these structural considerations, it is unlikely that institutional investors will be widely enthusiastic about a given agricultural venture.

4. Industry super fund investments in regional Australia

The next section catalogues Australian not-for-profit superannuation fund asset holdings across rural and regional Australia, focussing on the industry super fund approach in particular. It begins with a detailed catalogue of major industry super fund investments in listed and unlisted assets. It then examines major industry super fund infrastructure and property assets which impact rural communities.

4.1 Agriculture

Industry super funds are actively looking for opportunities to invest in agriculture and agribusiness based on sound, commercial business cases. As detailed in Table 15, we conservatively estimate that at the beginning of 2017, industry funds held around $1.56 billion dollars in these assets in Australia, or around 0.2 per cent of their funds under management (FUM). Some funds have invested much more than this as a proportion of FUM.

A previous study found that Australian superannuation funds had allocated around 0.3 per cent of holdings to Australian and *international* investments.[37] While there is a general consensus that Australian super funds (both for-profit and not-for-profit funds) have tended to under invest in agriculture in Australia generally, this is less true of not-for-profit super funds, especially industry super funds, which have been among the vanguard of investors in this asset class. For example:

- VicSuper is one of the few funds openly committed to agriculture, after investing $180 million over the past decade to buy and develop 9000 ha of degraded and salinity-affected small farms between Swan Hill and Kerang along the Murray River. Today the farms, run by manager Kilter Rural and its farm boss Mike Neville, are growing a mixture of high-value irrigated cotton, tomatoes and organic wheat, while also actively trading irrigation water. An orchard of a promising new superfood, Queen Garnet plums, has just been planted, while the most-degraded soils have been sown with native trees, shrubs and pasture for sheep production, diversity protection and potential carbon offsets.

  VicSuper chief executive Michael Dundon says the food and fibre produce from the Swan Hill farms are now returning his $16 billion fund a 7-8 per cent annual return on investment - better than bank interest rates - without accounting for capital gains in farmland.[38]

- First State Super has invested more than $150 million via a sale and leaseback arrangement with Select Harvest, the ASX listed operator of three almond plantations in Euston in the Sunraysia district of NSW, near Paringa in South Australia and near Cullulleraine in Victoria.
- UniSuper holds timber plantation assets with valuation in excess of $600 million as well as minor exposures to listed companies with agriculture connections. In addition, it holds stake in airports, toll-roads, mobile communication towers and hospitals. Interestingly, it also invests in a US technology fund.
- BUSSQ and MyLife MySuper (formerly Catholic Super) have a joint investment in the Macquarie owned Paraway Pastoral Fund estimated to be worth over $150 million.
- Retail Employees Superannuation Trust (REST) also has major investments in Warakirri agricultural trusts worth approximately $200 million.

[37] BDO Australia, *'Australian superannuation fund investment in agriculture 2014/15.'* 27 April 2015.

[38] Sue Neales, *'Super funds finally get a taste for agriculture'*, AFR, 29 March 2017.

Table 15 - Industry super funds agricultural investment holdings

Fund List	Asset Size ($B)	10 Year Average Return	Agriculture investment					Comments
			Direct/Unlisted	Listed	Agribusiness	Property & infrastructure investment	Alternative investments in high-tech sectors	
AustralianSuper	103.7	5.5%	✓	×	✓	✓	✓	Direct investments in WA meat and dairy operations. Recently acquired a stake in Agrimin. Holdings in Sustainable Agriculture Fund (SAF).
First State Super	57.1	4.9%	✓	×	×	✓	×	Direct investment in large scale domestic almond grower based in Victoria, South Australia and New South Wales.
UniSuper	56.6	6.5%	✓	✓	×	✓	✓	Investments in timber assets in excess of $600m. Small exposure to listed agri-related equity.
Retail Employees Superannuation Trust	41.5	5.9%	✓	×	×	✓	×	Investments in agriculture through Warakirri Agricultural Dairy and Crop with a combined value approximately $300m.
Vic Super	16.6	4.8%	✓	×	×	✓	×	Direct investments in VicSuper Future Farming Landscapes Trust worth approximately less than $200m. It also holds significant farmland, forestry and water interests in north-western Victoria.
CareSuper	14.3	5.9%	×	✓	✓	✓	×	Invested in a variety of domestic and internationally listed agriculture/food manufacturing companies worth more than $100m.
Mine Wealth and Wellbeing Superannuation Fund	10.0	5.2%	✓	×	×	✓	×	Exposure to unlisted agriculture businesses (King Island and Moree) as part of its holding in Sustainable Agricultural Fund.
MyLifeMySuper (formerly Catholic Super)	9.3	6.1%	✓	×	×	✓	✓	Holds stake in Macquarie Pastoral Fund which owns Paraway Pastoral.
Australian Catholic Superannuation and Retirement Fund	7.4	4.0%	✓	×	✓	✓	✓	Invested in Sustainable Agriculture Fund covering grain, livestock and dairy. A variety of indirect holdings of regional infrastructure and energy assets including Flinders Ports, gas pipelines and wind farms.
NGS Super	7.3	5.2%	×	✓	×	✓	✓	Direct holdings in domestic listed agribusinesses .
Labour Union Co-Operative Retirement Fund	5.2	4.3%	×	×	✓	✓	×	Indirect investments in agribusiness through Palisade fund management.
BUSSQ	3.8	6.0%	✓	×	×	✓	×	Significant stake in Paraway Pastoral Fund.

Fund List	Asset Size ($B)	10 Year Average Return	Agriculture investment					Comments
			Direct/Unlisted	Listed	Agribusiness	Property & infrastructure investment	Alternative investments in high-tech sectors	
Tasplan Superannuation Fund	3.6	4.9%	×	✓	×	✓	×	Investments in a variety of listed agriculture companies with export capabilities and based in Tasmania. Direct stake in Hobart Airport along with investment in unlisted infrastructure via IFM.
Christian Super	1.2	3.9%	✓	×	×	✓	×	Investments in Sustainable Agricultural Fund (SAF).
IFM Investors	-	-	✓	×	✓	✓	✓	Direct investments in dairy operations in WA, and R.M. Williams.
Total agricultural investments								**$1,556 million**

Source: APRA Annual Fund Level Statistics 2016. Survey of major industry fund and public information on funds' websites.

Note: IFM Investors is an infrastructure focused fund manager owned by 28 major Australian industry superannuation funds. There is strong interest in agricultural and rural investments among industry super funds. Investments are made typically via managed agricultural funds or direct holding in shares of agricultural companies. Of those industry funds that have exposure to this sector, most of these are direct investments under $30 million. All superannuation funds listed are exposed to infrastructure investments via either direct holdings or managed on-their-behalf by fund managers such as IFM Investors and/or Industry Super Property Trust (ISPT).

Some not-for-profit public sector super schemes also hold significant assets in domestic agriculture. For example, Queensland Investment Corporation (QIC) last year paid $256 million for 80 per cent of North Australian Pastoral Company (NAPCO) the country's third largest beef farmer, with 13 properties covering 5.8 million ha and 180,000 cattle. The plan is to turn NAPCO from a cattle producer to a vertically-integrated beef company co-ordinating the supply chain from paddock to plate.

4.2 Infrastructure

This section examines industry super funds with major holdings of infrastructure assets which impact rural communities.

Table 16 outlines major direct equity investment by industry super fund in infrastructure assets valued at around $17 billion in major airport, seaport, utility and community infrastructure which directly benefit rural living standards.

Table 16 - Major Regional Infrastructure Holdings of Industry Super Funds

Asset Title	Sector	Postcode	Asset Value ($M)	Manager Share (%)	Manager Holding ($M)	Manager	Total ISF value ($M)
Ausgrid	Electricity distribution	Various NSW	$16,200	25%	$4,082	IFM	$8,165
Melbourne Airport	Airport	3043	$6,329	24%	$1,500	IFM	$1,500
Brisbane Airport	Airport	4008	$4,286	14%	$591	Various	$865
Port of Brisbane	Seaport	4178	$4,682	27%	$1,250	IFM	$1,250
NSW Ports	Seaport	2036/2505	$3,561	35%	$1,250	IFM	$1,962
NSW Ports	Seaport	2222	$3,561	20%	$712	Direct	$1,962
Perth Airport	Airport	6105	$3,125	44%	1,363	Hastings	$427
Iona Gas Storage	Other Public	3269	$1,800	100%	$1,800	QIC	$101
AquaSure - Vic Desal	Water	3995	$1,538	26%	$400	Direct	$400
Eastern Distributor (M1)	Toll Road	2011	$1,389	14%	$200	IFM	$200
Interlink Roads (M5)	Toll roads	2170	$1,299	15%	$200	IFM	$200
Adelaide Airport	Airport	5000	$1,020	49%	$500	Direct	$500
Flinders Ports	Seaport	5015	$671	29%	195	Direct	$195
NT Airports	Airport	0820/0860/ 0870	$646	77%	$500	IFM	$500
North Queensland Gas Pipeline	Pipelines	4744 to 4818	$300	100%	$300	Palisade	$162
Port of Portland	Seaport	3305	$199	50%	$100	Hastings	$31
Ecogen Energy - Partial (Jeeralang Power Station)	Electricity generation	3015/3840	$150	100%	$150	IFM	$150
Wyuna Water	Water	2508/2526	$71	70%	$50	IFM	$50
Defence HQ	Other Public	2621	$50	100%	$50	IFM	$50
Axiom Education	Other Public	Various NSW	$50	100%	$50	IFM	$50
MHAC Colac	Aged Care - Residential	3250	$50	100%	$50	IFM	$50

Source: ISA survey of major industry super funds.

Major infrastructure assets held by industry funds are geographically diverse as represented in Figure 11 below.

Figure 14 – Regional Infrastructure holdings of industry super funds

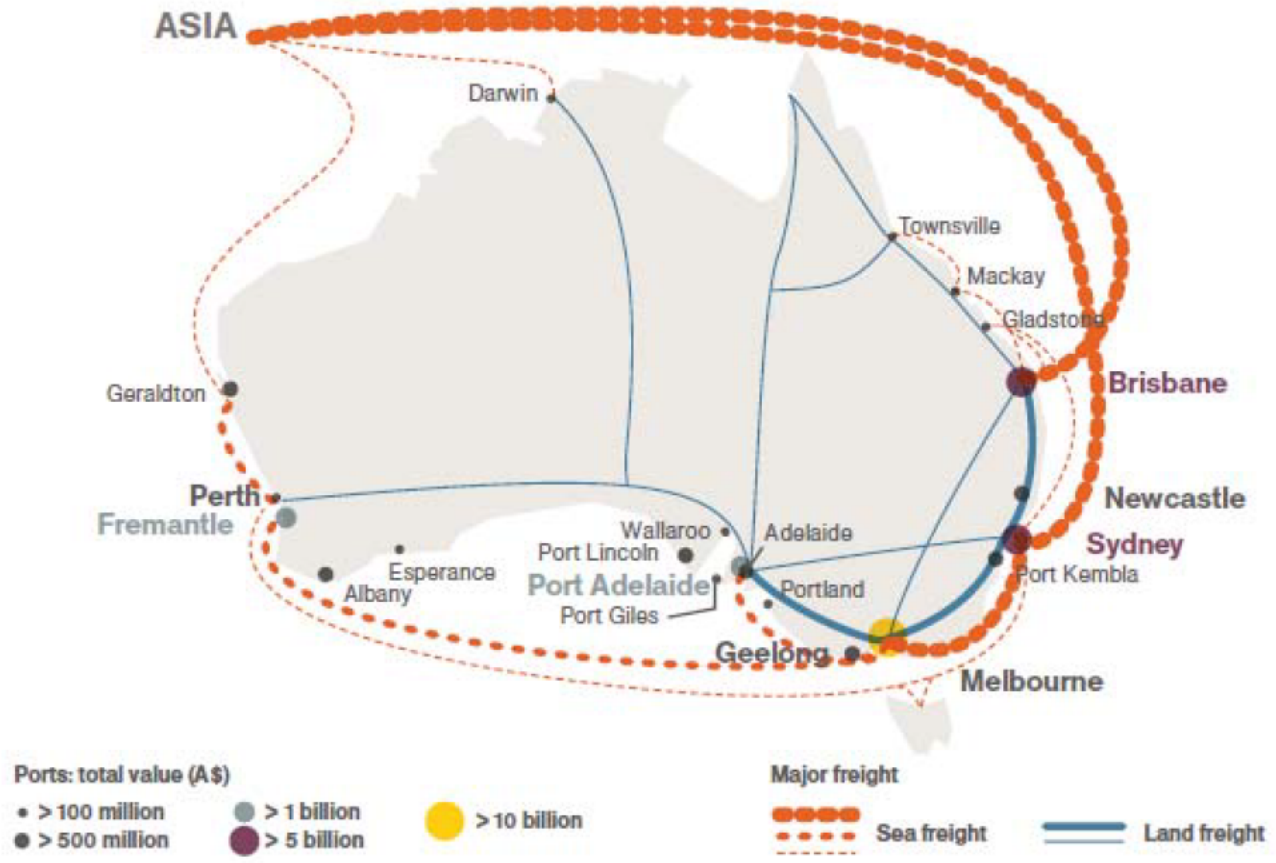
Source: IFM Investors

Australia's major food and agribusiness sea and land freight networks into the high growth Asian markets are presented in Figure 12.

From an investment perspective it makes sense to link existing freight transport infrastructure and water supply initiatives to agricultural asset holdings. There are large economic gains to be captured from holding an interconnected portfolio of assets within the same region and between regions which share borders. These gains accrue to so-called network effects (also called network externalities or demand-side economies of scale). They increase usage of assets and/or enable the production of increasingly valuable complementary goods, and this results in an increase in the value of the original 'network' of asset holdings.

We have seen that industry super funds already have significant investment in infrastructure assets within and outside metropolitan areas. Over time these will be further expanded and could be combined with new agricultural business holdings to generate further significant network spillover benefits.

Figure 15 – Australia's Food and Agribusiness Sea and Land Freight Network



Source: Australian Trade Commission, Australian Government, 'Investment opportunities in Australian agribusiness and food', October 2016. Top 25 agribusiness and food companies in Australia table.

4.3 Property

This section examines industry funds with major holdings in property assets which impact rural communities.

Table 17 outlines the major investment by industry super fund in commercial property assets including in regional areas.

Table 17 - Major regional property holdings of industry super funds

Asset Title	Sector	Postcode	Asset Value ($M)	Manager Share (%)	Manager Holding ($M)	Manager	Total ISF value ($M)
Robina (Gold Coast)	Retail	4230	$1,450	100%	$1,450	QIC	$423
Westfield Carindale, QLD	Retail	4567	$1,450	50%	$725	Lendlease	$140
Erina Fair, NSW	Retail	2250	$850	50%	$425	Lendlease	$82
Cairns Central, QLD	Retail	4000	$525	100%	$525	Lendlease	$101
Willows and adjacent properties	Retail	4817	$266	100%	$266	DEXUS	$26

Asset Title	Sector	Postcode	Asset Value	Manager Share	Manager Holding	Manager	Total ISF value
Noosa Civic	Retail	4566	$250	100%	$250	QIC	$73
Pacific Fair	Retail	4218	$210	100%	$210	AMP	$25
Bendigo Marketplace	Retail	3550	$175	100%	$175	ISPT	$165
Wagga Wagga Marketplace, Forsyth Street	Retail	2650	$125	100%	$125	ISPT	$118
Settlement City, NSW	Retail	2444	$125	100%	$125	Lendlease	$45

Source: ISA survey of major industry super funds.

4.4 Spillover benefits for regional communities

Spending and employment multipliers associated with superannuation fund investments in agriculture are likely to be some of the highest achievable, as they typically involve major upgrades which extend farm capacity. Part of the reason for this is a conscious choice by fund managers to spend locally and the more dollars they spend in a given region the more that stay there. Motivations for this are partly altruistic to help develop the bush and partly mercenary, to ensure that local dealer networks support the farm business at peak periods. The other part of the reason why dollars are retained within regions may just be due to remoteness and the absence of close competition.

The example of MIRA funds under the leadership of Elizabeth O'Leary highlights how a well-executed business strategy can pay off for local communities through conscious decisions to decentralise fund administration and via procurement choices. For example, Macquarie have established operating companies which employ around 30 people in head offices in Orange and Albury in New South Wales and more than 150 farm staff across Australia. They have chosen to buy vehicles and farm equipment from local distributors to keep spending regionally and also to garner assistance during peak harvest periods when susceptibility to breakdown is greatest. Every dollar spent in regional communities by farm businesses, spurs significant upstream purchases of raw materials, trades and specialist services and assists downstream consumers' purchases out of income flows from workers' wages and suppliers' profits.

Macquarie's far-sited deliberate approach contrasts with years and years of federal and state agricultural policy which has left many regional communities with dire social problems.

5. Policies to promote fund investment in agribusiness

The final section considers certain policy options or initiatives to help facilitate greater investment by superannuation funds in Australian agriculture. The Federal government itself can do much to facilitate greater agriculture investment by Australian and global institutional investors. There are six initiatives considered in turn, none of which require significant budget expenditure or subsidy, but each of which may help to raise living standards in bush communities and more broadly.

5.1 Establishing performance benchmarks for commodity producers

It is essential the Australian Government task the Australian Bureau of Statistics with establishing and operating a more robust survey of farm performance building on the existing ABARES release. The idea is through time to independently generate rate of return measures across statistically meaningful samples of crop and livestock producers. Measures would be produced for all four-digit ANZSIC food commodity producers, outlined in Attachment A, according to the size of producers in terms of farm revenues.

Tracking performance through time is probably the most profound single initiative that any government could do to normalise and standardise business activities in the bush. Over time this would allow investment advisers and fund executives to establish benchmarks for rate of return of top-tier agricultural producers to allow comparison against alternative investment options. This hopefully raises the confidence of fund trustees and helps to normalise fund allocations to the sector.

Establishing independent and robust performance benchmarks is also an important national microeconomic reform as the measures would assist investment to flow to the highest paid users of capital which helps to raise productivity and living standards for all.

5.2 Infrastructure supply chain audits

The government should task the Productivity Commission with undertaking a comprehensive audit of each of the major agricultural commodity supply chains to ensure their current and future infrastructure requirements are being met in terms of ensuring adequate transport, processing and storage facilities are in place to get product to key markets in a timely fashion. For example, it is estimated that up to $7 billion is needed to upgrade or rebuild eastern Australia's rail freight network. The nation’s biggest grain handlers have been battling with this deteriorating state-owned network for years. This investment is essential given that the cost of transport can absorb up to one-half of the farm gate price of each tonne of grain.

A supply chain review of each major Australian export commodity would help to target similar infrastructure bottlenecks where they are not already well known, and to establish priorities for policy responses. Perhaps industry levies and/or further privatisation of public infrastructure can be used to help fund these investments.

Restructuring the protected coastal shipping industry is another obvious target for reform which would benefit farm producers enormously, especially in Tasmania.

Looking longer term the Australian agriculture sector needs significant investment in technology and scale to meet growing global market demand and remain competitive. Investment of the size needed to dramatically improve irrigation and production systems for example are unlikely to come from the smaller businesses and certainly not from debt constrained governments. However, governments can identify the likely infrastructure shortfalls and provide clear priority lists to superannuation fund investors who can improve both financial and environmental outcomes, as we have seen for example with VicSuper's investments in northern Victoria.

5.3 Establish effective wholesale markets

Appropriate regulatory arrangements must be put in place to help achieve effective price discovery and transparency in wholesale agricultural markets.

Farmers seemingly have no bargaining power when selling in the domestic market to the increasingly concentrated processing sector or to the duopsony of two supermarkets that now controls 80 per cent of the Australian grocery market. Nor do farmers have bargaining power when selling to foreign commodity traders, single buying desks overseas or into world markets where prices are distorted by government subsidies.

One option that might help raise competition and welfare overall is to compel large producers to sell their produce into centralised markets and or via other marketing arrangements, on a no disadvantage basis. The idea is to help neutralise the impact of duopsonic buyers (Coles and Woolworths) in local markets and the distortionary impact of subsidies in international markets on the prices received by growers.

Another approach would be to task an independent tribunal operating within the ACCC with more stringent oversight of the processing sector and the grocery sector - in terms of contract prices, product certification and mandated equipment purchases - in the interests of price discovery and ensuring margins are not being squeezed by anti-competitive pricing or processes (mandating unnecessary equipment purchases). A watchdog could act as a 'tough cop on the beat' ensuring that farm producers are not disadvantaged by their reliance on a few large buyers.

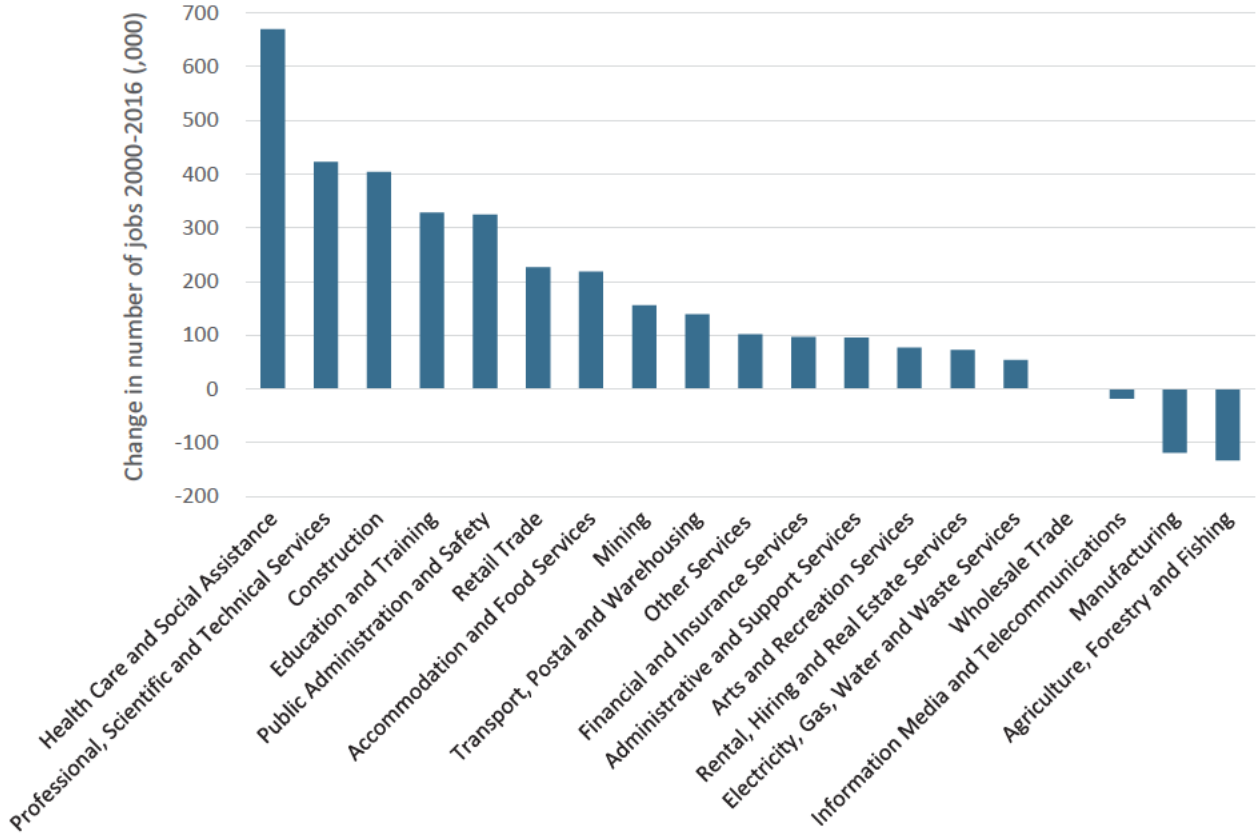
It would be useful to have the ACCC report on these or other approaches in addressing the underlying issues and consider a way forward.

5.4 Agricultural industry policy

The government could deploy the appropriate mix of industry, trade policies and direct government-to-government dialogue to incentivise domestic operators to form consortia with local and foreign processors and distribution networks to reduce off-take (agricultural sales) risk. This would raise the attractiveness of these assets to local superannuation funds. There is a massive social dividend to raising investment flows to efficient rural businesses producing highly valued goods for local and international markets. They help to raise national productivity and living standards overall, as well as bring highly skilled jobs back to regional centers and generate spillovers across farm related business and broader business.

There has also certainly been a failure of federal industry policy to incentivise the formation of Australian owned international agribusinesses over time. There are some very obvious production, processing, logistics and distribution supply chains within the Australian economy which could and possibly should have been dedicated to high growth markets in commodities such as wheat, wool, milk and beef which other nations would have fused together under the control of internationally competitive conglomerates. Certainly no Australian operator has been able to achieve this 'off-their-own-bat'. For example, why didn't a bigger Elders or S Kidman & Co leave Adelaide in the 1980s, build up a local base of wheat and grazing, move into cotton, and then acquire agribusinesses in South Africa and Argentina? Is it a lack of imagination, entrepreneurship or policy barriers that is continuing to drive down employment prospects in agriculture and manufacturing in processing food and fibre (Figure 13)?

Figure 16 – Jobs Up, Job Down 2000 - 2016



Source: ABS (catalogue no. 6291.0.55.003 - Labour Force, Australia, Detailed, Quarterly, Feb 2017)

Note: Between November 2000 and 2016, +3.34 million in job growth, -0.27 million in job loss, net change +3.07.

Government policy efforts should target combining domestic producers to achieve scale, seek partnerships with world leading processors and distributors, and develop our clean and green reputation. Large-scale Australian fund managers could then provide capital for expansion in the sector.

5.5 Adopting a more strategic approach to foreign investment

There is a real need to adopt a more strategic approach to foreign investment in Australia to ensure that prime strategic agricultural assets are not being gifted to foreign investors, without recognition of the broader economic and strategic ramifications.

There is insufficient understanding of the national agricultural balance sheet, its composition, and who owns it. The Commonwealth Treasury, through the Foreign Investment Review Board, needs to ensure more effective monitoring, oversight, public reporting and evaluation of foreign investment in agricultural land holdings, farm and agribusiness, including learning the lessons from past episodes.

One option would be to task the Australian Taxation Office to undertake an exhaustive annual stock take of land ownership including the share of all farmland that is owned or leased by foreign investors. The stock take should publicly identify the largest 50 foreign property owners and what assets they hold.

In terms of foreign investment in Australian farm and agribusiness, Government could consider applying a 'rent-but not buy' rule to participants from nations that do not allow reciprocal investment by Australian companies or individuals in their nations. In other words, Australian governments need to do more to make foreign investment work for the national economy.

- Core farmland assets – once identified by Treasury – should never be sold to foreign investors. A better approach is to encourage mutually beneficial partnerships or leasing agreements with foreign investors – especially to capture distribution networks.
- Non-core farm assets or certain Northern Australian development projects must be readily available and even promoted to foreign investors to develop on a 'first-come-first-serve' basis.[39]

5.6 Establishing a rural and regional development bank

There is a case for establishing a rural and regional development bank tasked with providing advisory services to rural producers and arranging long-term finance to allow operators to more efficiently intensify their operations. Ideally the bank would operate independently of government (to avoid politicisation) and mainly draw on institutional funds rather than government.

There are some obvious investor roles that are not currently being adequately filled in the market place for agricultural capital.

- **Infrastructure deepening across properties and regions.** There is a role for a rural financier that can operate across entire regions with sufficient expertise to manage projects within and between farms to improve infrastructure overall and provide the right interface to Canberra. This institution may be a very effective means to deliver and implement government policy support for fencing, irrigation, renewables, etc.
- **Backing the most capable operators.** It may be that fund managers simply don't have the expertise to be partners, even junior partners, with farmers. The TIAA response to these agency issues is to identify capable, even small, operators and provide them with capital and infrastructure (for example, developed land to support walk-up farming) to deliver the appropriate outcomes. They believe this is a far better model than direct investment in farm businesses.
- **Technical advice.** Some smaller to medium sized farming operations have significant debt levels. [40] Often the use of significant debt has been encouraged by the Big Four Banks for reasons that would not pass external scrutiny. Given that these risks are mainly related to smaller farm operations, a specialist advisory capacity could be established to provide these operators with a 'sounding board' to test business decision making. The services would be provided on a cost recovery basis but would be entirely independent, motivated only by the interests of the farm operator. Such a service would be intended to act as a counterweight to the predatory practices of some existing financial services providers operating in the sector.

5.6.1 Background

On 21 March 2015, a senate committee report rejected a Bill introduced by Senator Nick Xenophon and co-sponsored by Victorian Senator John Madigan to establish a Rural Reconstruction and Development Board within the Reserve Bank to address spiraling rural debt and market failure in rural lending. A similar Bill was introduced in the House of Representatives by North Queensland MP Bob Katter. [41]

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[39] For information: Austrade organised a Northern Australia Investment Forum run by Andrew Robb in November 2015 which presented some interesting information relating to Agri investment opportunities, which were presented to foreign parties, without incentives. https://www.austrade.gov.au/International/Invest/Opportunities/northern-australia
http://minister.industry.gov.au/ministers/frydenberg/speeches/trade-and-investment-australias-north-1

[40] Farms in primary production (including cropping and pastoral activities) are typically less leveraged than other asset classes, at between 20 to 30 per cent of net asset values. As such they have a lessor requirement for debt instruments provided by banks and other financial intermediaries. Primarily farms use debt to manage cash flow timing (for example, seasonality and variability of the production cycle of various commodities).

[41] http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/RBA_Amendment_2013/Report

The proposed development bank to be established as a statutory authority providing:

- Long-term capital needs of small to medium enterprises and farming.
- Lower cost housing mortgages.
- Government and statutory authority infrastructure development (the latter keeps infrastructure financing outside the government budget).

The Xenophon - Madigan proposed development bank was intended to allow tailored funding and financial arrangements to meet the needs of nationally-important industries operating in particularly uncertain or risky environments.

5.6.2 Precedents for a development bank

The concept of a rural development bank is not new in Australia. The Commonwealth Development Bank (CDB) provided finance to primary production and small industry undertakings where funding was desirable but not obtainable through other means on suitable or reasonable terms. The CDB was abolished with the sale of the Commonwealth Bank. Yet in its 30 year history, it was credited for helping to establish over 400,000 small to medium sized business enterprises.

In its early years, the CDB was heavily involved in financing farmers who took up holdings in the Ord River Project, the Esperance Land Settlements Scheme in Western Australia, the Coleambally and the Heytesbury Scheme in Victoria, to name a few.

It originated from the findings of a 1935 Royal Commission which found that there was a distinct lack of facilities for fixed and long-term borrowing, let alone patient co-investment by 'equity' partners such as superannuation funds. This was of particular importance for rural borrowers. Often it was considered difficult for a small farmer to obtain long-term credit on reasonable terms.

This led to the formation of the Mortgage Bank Department of the CDB in 1943, lending primarily to farmers at an interest rate of only 4 per cent for up to 20 years and 4.125 per cent for 21-40 years. The CDB evolved into the Commonwealth Bank in 1959. The bank's lending was based on the prospects of success, not the value of security.

Risk was not the primary consideration in the CDB's lending. The basic criteria upon which the Bank worked were:

- The applicant – their integrity and managerial capacity.
- Their financial position – assets, liabilities (with their repayment implications) and equity in the venture.

The CDB was staffed by experienced lenders capable of assessing the long-term viability of proposals. The staff included specialists in agricultural science, economics, management, accounting and engineering. They spent much of their time in the field undertaking assessment and investigation work.

5.6.3 Operations of the proposed development bank

The proposed Xenophon - Madigan development bank would receive proposals for new rural business ventures, assess each project on their merits and agree to fund proposals that exceed a set of minimum eligibility criteria, such as some benchmark hurdle rate and benefit to cost ratio.

The types of projects that would reach the development bank might typically be rejected by the Big Four Banks due to their scale, long timeframe to recoup costs, and/or lack of clear cut financial benefits (despite positive social benefits) meaning potential investors cannot recoup an adequate return using existing pricing models.

The development bank might instead attempt to establish a business case for a project based on a break even range of assumptions including a below market discount rate. That rate would be based on the Commonwealth's long-term bond rate, plus some margin for cost recovery. If a project's projected benefit to cost ratio was positive, then the development bank could perhaps proceed to the loan stage.

If the development bank was requested to provide debt funding to nation building investment projects, then it would need to make the feasibility assessment in the context of the issues inherent with greenfield infrastructure projects, which are often not suitable for superannuation fund investment. Bidding processes, construction risk, investment lags, patronage risk and/or the lack of suitable user charge or availability payment mechanisms can make new projects difficult to price.

5.6.4 Prospects for the proposed development bank

It would be appropriate to have a panel of suitably qualified experts to assess the feasibility of alternate models for the establishment of a development bank. The relevant issues for the superannuation sector given the possible mandate of the development bank, would be, what complementary role could be played, if any, to support the bank, and under what circumstances would it be advantageous to superannuation funds to invest, and how might that work?

If over time the development bank became an originator of medium-sized and large-sized private equity, infrastructure and property investments, industry super funds would likely be eager to take equity stakes in these assets, especially once they had a track record of performance. It may also be that super funds would be prepared to take up front ownership stakes in such projects, in circumstances where investment risks in ventures were shared with other project partners, or were otherwise underwritten by the development bank.

ATTACHMENT 1: FOOD AND AGRIBUSINESS FOUR-DIGIT ANZSIC DEFINITION

Four-Digit ANZSIC Code	Specific Activity
Industry Sub-Division - Agriculture	
0121	Mushroom Growing
0122	Vegetable Growing (Under Cover)
0123	Vegetable Growing (Outdoors)
0131	Grape Growing
0132	Kiwifruit Growing
0133	Berry Fruit Growing
0134	Apple and Pear Growing
0135	Stone Fruit Growing
0136	Citrus Fruit Growing
0137	Olive Growing
0139	Other Fruit and Tree Nut Growing
0141	Sheep Farming (Specialised)
0142	Beef Cattle Farming (Specialised)
0143	Beef Cattle Feedlots (Specialised)
0144	Sheep-Beef Cattle Farming
0145	Grain-Sheep or Grain-Beef Cattle Farming
0146	Rice Growing
0149	Other Grain Growing
0151	Sugar Cane Growing
0159	Other Crop Growing (not elsewhere classified)
0160	Dairy Cattle Farming
0171	Poultry Farming (Meat)
0172	Poultry Farming (Eggs)
0180	Deer Farming
0192	Pig Farming
0193	Beekeeping
0199	Other Livestock Farming (not elsewhere classified)
Industry Sub-Division - Aquaculture	
0201	Offshore Longline and Rack Aquaculture
0202	Offshore Caged Aquaculture
0203	Onshore Aquaculture
0411	Rock Lobster and Crab Potting
0412	Prawn Fishing

Four-Digit ANZSIC Code	Specific Activity
Industry Sub-Division - Fishing, Hunting and Trapping	
0413	Line Fishing
0414	Fish Trawling, Seining and Netting
0419	Other Fishing
Industry Sub-Division - Food Product Manufacturing	
1111	Meat Processing
1112	Poultry Processing
1113	Cured Meat and Smallgoods Manufacturing
1120	Seafood Processing
1131	Milk and Cream Processing
1132	Ice Cream Manufacturing
1133	Cheese and Other Dairy Product Manufacturing
1140	Fruit and Vegetable Processing
1150	Oil and Fat Manufacturing
1161	Grain Mill Product Manufacturing
1162	Cereal, Pasta and Baking Mix Manufacturing
1171	Bread Manufacturing (Factory based)
1172	Cake and Pastry Manufacturing (Factory based)
1173	Biscuit Manufacturing (Factory based)
1174	Bakery Product Manufacturing (Non-factory based)
1181	Sugar Manufacturing
1182	Confectionery Manufacturing
1191	Potato, Corn and Other Crisp Manufacturing
1192	Prepared Animal and Bird Feed Manufacturing
1199	Other Food Product Manufacturing (not elsewhere classified)
Industry Sub-Division - Beverage and Tobacco Product Manufacturing	
1211	Soft Drink, Cordial and Syrup Manufacturing
1212	Beer Manufacturing
1213	Spirit Manufacturing
1214	Wine and Other Alcoholic Beverage Manufacturing
Industry Sub-Division - Specialised Machinery and Equipment Manufacturing	
2461	Agricultural Machinery and Equipment Manufacturing
Industry Sub-Division - Rental and Hiring Services	
6620	Farm Animal and Bloodstock Leasing
Industry Sub-Division - Agriculture, Forestry and Fishing Support Services	
0529	Other Agriculture and Fishing Support Services

Source: ABS (Cat. No. 8170.0, Characteristics of Businesses in Selected Growth Sectors, Australia, 2013-14)

ATTACHMENT 2: TOP 25 AGRIBUSINESS AND FOOD COMPANIES IN AUSTRALIA

Company name	Annual revenue (A$b)	Ownership	Details
1. Lion	5.1	Japan	Kirin-owned Lion employs almost 6,750 people in Australia and New Zealand and operates in the beer, spirits, wine, milk, fresh dairy, juice and soy beverages segments.
2. Coca-Cola Amatil	5	Australia	Coca-Cola Amatil is one of the largest bottlers of soft drinks in the Asia-Pacific region and one of the world's top five Coca-Cola bottlers. It also produces packaged fruit and vegetable snacks and related products.
3. GrainCorp	4.1	Australia	GrainCorp provides services to the grain industry, including bulk commodity storage and handling, marketing, merchandising and logistics across operations in Australia, New Zealand, Asia, Europe and North America. The company is part owned by US food processing and commodities trader Archer Daniels Midland.
4. CBH Group	4.1	Australia	CBH Group is a cooperative deriving revenue from grain storage, handling and marketing for its members. The company has also invested in flour processing facilities and bulk shipping operations.
5. JBS Australia	3.6	Brazil	JBS Australia is a division of JBS, Brazil's largest food multinational, and the world's largest meat company. In Australia, it has 10 meat processing plants and five feedlots. It acquired Primo smallgoods in 2014.
6. Olam Investments Australia	3.6	Singapore	Olam is the local subsidiary of Singapore-based trader Olam International. The company operates integrated supply chains for five key products in Australia (cotton, almonds, pulses, grains and wool) to deliver these worldwide.
7. Glencore Grain	3.6	Switzerland	Glencore Grain, a subsidiary of Swiss-based Glencore AG, operates in all Australian states and originates, handles, stores, transports and markets wheat, barley, oilseeds, pulses, meals, and cotton. It owns Viterra Australia's storage and handling services.
8. Incitec Pivot	3.4	Australia	Incitec Pivot manufactures, distributes and sells fertilisers, explosives and chemicals throughout Australia, Asia and North and South America.
9. Devondale Murray Goulburn	3	Australia	Devondale Murray Goulburn processes, manufactures and distributes whole milk and dairy products from processing sites in Victoria, New South Wales and Tasmania. It is investing A$200 million over three years to almost double its dairy processing capacity.

Company name	Annual revenue (A$b)	Ownership	Details
10. Teys Australia	2.9	Australia	Teys Australia is Australia's second largest meat processor and exporter, operating three feedlots and six beef processing plants across Queensland, New South Wales, Victoria and South Australia. Teys Australia is 50 per cent owned by US-based Cargill Inc, a global producer and marketer of food and farm commodities and services.
11. Cargill Australia	2.8	United States	Cargill Australia is the local subsidiary of the US-based food and agricultural product supplier, operating in oilseed processing, flour milling and beef processing, and grain and oilseed storage.
12. Nufarm	2.8	Australia	Nufarm is the largest manufacturer of crop protection products in Australia and supplies domestic and international markets. Nufarm also has a growing seeds platform encompassing canola, sorghum and sunflower seeds.
13. Inghams	2.4	United States	Inghams, owned by investment firm TPG, is the largest poultry processor in Australia. Its operations extend across fully integrated farming, primary and further processing operations.
14. Agrium SP	2.3	Canada	Agrium SP is the local subsidiary of Canada's Agrium, providing rural services and commodity management.
15. Food Investments	2.2	United Kingdom	Food Investments is part of the UK-based Associated British Foods and generates the majority of its Australian revenue through subsidiary George Weston Foods. Its products include bread, baking products, small goods, cakes and ingredients.
16. Nestlé	2.1	Switzerland	Nestlé Australia is a wholly owned subsidiary of the Swiss-based giant Nestlé S.A. It employs more than 6,000 people in 70 offices, with factories and distribution centres located across the region.
17. Goodman Fielder	2.1	Singapore	Goodman Fielder produces packaged food ingredients, consumer branded food, beverages and related products. Its five core divisions are bakery, dairy, flour and cake mix, spreads and dressings, and mayonnaise. Goodman Fielder was acquired by Singapore's Wilmar International and Hong Kong's First Pacific in March 2015.
18. Carlton & United Breweries	2	United Kingdom	Carlton & United Breweries is Australia's second largest brewer and is owned by SABMiller, the world's largest brewer.
19. Treasury Wine Estates	2	Australia	Treasury Wine Estates has over 11,000 hectares of vineyards, sales totalling over 30 million cases of wine annually and over 3,000 employees.
20. Queensland Sugar	1.9	Australia	Queensland Sugar is involved in the marketing, export and supply of bulk raw sugar. The Brisbane-based company is joint-owned by the state's sugar growers and millers.
21. Wilmar Sugar	1.8	Singapore	Wilmar Sugar Australia, owned by Singaporean agribusiness Wilmar International, operates sugar refineries to produce cane products, sweeteners and bioethanol. It is the largest raw sugar producer and refiner in Australia and eighth largest producer globally.

Company name	Annual revenue (A$b)	Ownership	Details
22. Asahi Holdings	1.8	Japan	Asahi, the Australian subsidiary of Japan's largest brewer, encompasses Schweppes Australia and water bottler Mountain H2O.
23. Mondelez Australia	1.7	United States	Mondelez Australia, formerly Kraft Australia, is a subsidiary of the world's second largest food company, Mondelez International. Mondelez opened the first stage of Australia's largest food R&D facility in 2013. It will invest A$20 million to transform its chocolate factory in Claremont, Tasmania in 2015.
24. Unilever Australia	1.6	England	Unilever Australia's portfolio of brands includes Flora, Continental, Bertolli, Streets, Lipton and Bushells, as well as a number of personal care and homecare brands. It acquired T2, an Australian tea retailer in 2013.
25. Parmalat Australia	1.5	France	Parmalat Australia, a subsidiary of the global Parmalat Group with majority shareholding by French multinational Lactalis, processes and distributes milk, cream, dairy products and fruit juices for the domestic and export markets. Headquartered in south Brisbane, Parmalat Australia employs approximately 1,800 people.

Source: Australian Trade Commission, Australian Government, 'Investment opportunities in Australian agribusiness and food', October 2016. Top 25 agribusiness and food companies in Australia table, pg. 34-35

Notes: IBISWorld Top 2,000 Companies Database, accessed October 2015.

ATTACHMENT 3: MAJOR POLICY CHANGES IMPACTING FOOD AND AGRIBUSINESS

In many rural sectors, domestic policy settings discriminate against domestic production or undermine certainty.

National competition policy – the big change

From 1994 to 2007, the Federal government paid the states $5.4 billion to deregulate many areas of the economy across 15 primary industries (Table 18).

Table 18 - 15 primary industries

15 primary industries	
AgVet chemicals	Bulk handling – the single selling desks for wheat, barley and sugar were abolished
Dairy – doing away with states setting an annual price for fresh milk, which was enforced by banning the trade of milk across state borders	Fisheries
Food regulation	Forestry
Grains	Horticulture
Mining	Potatoes
Poultry	Quarantine
Rice	Sugar – abolition of mandatory final offer arbitration for the price of sugar cane
Veterinary services.	

Source: National Competition Council website, www.ncc.gov.au

Some of the most important sectors where deregulation was most destructive have been described below:

- **Sheep** numbers have plummeted from 170 million, in 1990,[42] to 74.7 million today.[43]
- **Cattle** numbers have not grown in 38 years. In fact, they dipped from 29.8 million head in 1976[44] to 28.5 million today.[45]
- **Dairy.** Since deregulation, the number of registered dairy farms has fallen from 12,896 producing 10.8 billion litres (1999–2000), to 6,128 producing 9.7 billion litres (2014–15), according to Dairy Australia.[46]
- **Sugar cane** production has dropped, following deregulation and the loss of its single selling-desk,

[42] "Australia's declining sheep flock", Sheep CRC, published by the Commonwealth Department of Industry's Cooperative Research Centre for Sheep Industry Innovation (Sheep CRC). http://archive.sheepcrc.org.au/information/publications/australias-declining-sheep-flock.php

[43] "Australia's sheep meat industry", Sheep: Meat & Livestock Australia (MLA). https://www.mla.com.au/about-mla/cattle-sheep-goat-industries/industry-overview

[44] "Australia's beef cattle industry", Australian Bureau of Statistics (ABS), 1301.0 — Year Book Australia, 2005 www.abs.gov.au/ausstats/abs@.nsf/previousproducts/1301.0feature%20article232005?opendocument&tabname=summary&prodno=1301.0&issue=2005&num=&view=

[45] "Australia's beef industry", Cattle: Meat & Livestock Australia (MLA). https://www.mla.com.au/about-mla/cattle-sheep-goat-industries/industry-overview

[46] Dairy Australia "Cows and farms"; Dairy Australia, "Production and milk".

from 38 million tonnes in 2005 to 31 million tonnes to 2013.[47]

- **Horticulture** (worth $8.7 billion) used to be a net exporter; but imports of processed, frozen and other products mean that Australia now imports $863 million (2011-12) of horticulture more than it exports.[48]
- **Wheat.** Since the loss of the single selling-desk for wheat, a significant proportion of the Australian wheat exports have been downgraded to feed-stock quality. This is because of a big increase in reliance on plastic tube farm storages that are subject to attacks by animals, reducing the quality of wheat from premium grade to stock-feed at the port.

Table 19 outlines the full list of industries targeted under National Competition Policy (NCP) for deregulation. Apart from agriculture it includes most professional services including finance, as well as areas of traditional public infrastructure provision.

Table 19 - Targeted industries for deregulation

Targeted industries for deregulation		
Energy	**Financial Services**	**Water**
Gas	Finance	NCP Water Reforms
Electricity	Insurance	NCP Assessment of Water
	Superannuation	Part IIIA of the Trade Practices Act
Legal	**Health**	**Planning & Construction**
Legal Practitioners	Health Practitioners	Professions and Trades
	Pharmacy	
	Drugs and Poisons	
Government Business	**Retail**	**Transport**
Competitive Neutrality	Dealers and Agents	Airports
Local Government	Fair Trading	Ports
Community Service Obligations	Liquor Retailing	Rail
	Petrol Retailing	Road Transport
	Shop Trading	Taxis
Social Regulation	**Education**	**Communications**
Child Care	Child Care	Australia Post
Gambling	Teacher	Broadcasting
		Telstra
Primary Industries		
AgVet Chemicals, Bulk handling (single selling desks for wheat, barley and sugar), Dairy, Fisheries, Food regulation, Forestry, Grains, Horticulture, Mining, Potatoes, Poultry, Quarantine, Rice, Sugar, Veterinary services.		

Source: National Competition Council website, www.ncc.gov.au

[47] "Statistics fact and figures", Canegrowers (Australia), 2013.
www.canegrowers.com.au/page/Industry_Centre/About_Us/Statistics_facts_figures/

[48] Agriculture & Food Horticulture Fact Sheet, published by the Australian Government Department of Agriculture, 2014.
http://www.agriculture.gov.au/ag-farm-food/hort-policy/horticulture_fact_sheet#production-statistics

Deregulation of water, particularly in the Murray Darling Basin

Irrigation licenses were once attached to land title. Also, the massive dam and irrigation channel system in the Murray Darling Basin, the nation's food bowl, was geared so that 50 per cent of storage water was designated for irrigation farming. This guaranteed permanent plantings (fruit trees, vines, dairy farm pastures) full water entitlement for 95-97 years in 100. This was necessary as trees, vines and pastures take 5-7 years of intensive cultivation to produce a crop. Supply of water at this level was necessary for farmers to manage the production risk in a highly variable, arid region of Australia.

What's changed? Irrigation entitlement was separated from land title to make water (a mixed good) tradable like private goods. This was done under National Competition Policy. Then, the 2007 Water Act and subsequent Murray Darling Basin Plan (also written into law) left only 30 per cent of water storages for irrigation. The remaining 70 per cent was dedicated for environmental flows. Consequently, Basin permanent plantings can only be guaranteed water for between 75 to 90 years in 100. The reliability of supply has dropped substantially and, correspondingly, risks have increased.

Subsequently, in the Millennium drought (which ended in 2010), many desperate farmers sold their permanent water entitlement (once attached to their land title) to reduce debt. They sold either to governments or private non-water users (including superannuation funds). These waterless farmers expected to be able to buy back temporary water (water purchased for use *in one season only* on the market).

The price of temporary water is subject to supply and demand. In a drought, the price spikes. Permanent water is delivered to farmers for a fixed price by state/local water authorities. During the recent two year drought (just ended in the past few months), farmers across the Basin, were forced to buy water. Most affected were farmers with permanent plantings who had to buy water or spend the next 5-7 years re-growing their fruit trees or pastures. Demand was high. The price of temporary water spiked.

All else being equal, dairy farmers break even on the farm with a water price of $80 per megalitre (one Olympic swimming pool). The price during the recent drought varied from $200-$300 per megalitres.

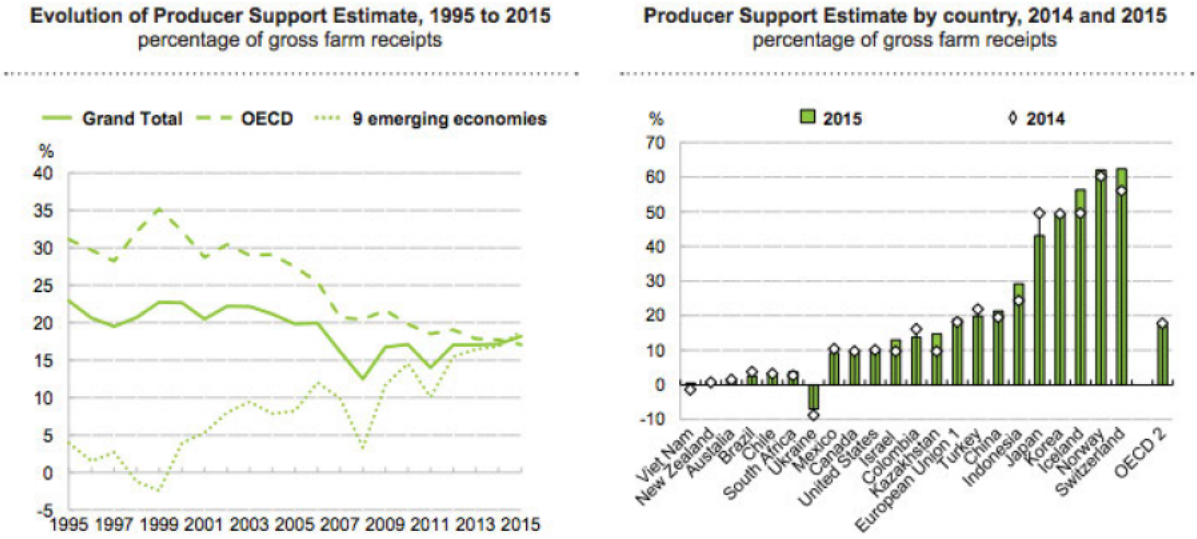
Smart farmers who did not have permanent plantings, but who still owned water (had not sold their permanent water entitlement), didn't plant any crops. They sold their water to desperate farmers with permanent plantings. Some sold their water and planted nothing, contributed nothing to the nation's food production and went on holidays. While many farmers needing water to keep their farms operational, paid the high price and became insolvent.

The lack of offsetting cuts in global agricultural subsidies

The OECD producer support estimates provide an indication of the subsidy distortions impacting world markets. They measure the share of gross farm receipts that comes from subsidies.[49]

[49] http://www.oecd.org/tad/agricultural-policies/agriculture-policy-monitoring-flyer-2016.pdf

Figure 17 – Evolution of Producer Support Estimate



Source: OECD (2016), Agricultural Policy Monitoring and Evaluation 2016, OECD Publishing, Paris

It is debatable whether subsides constitute 'corruption' of food commodity markets, because the European Union, Japan and United States openly declare their agricultural sector to be a strategic industry. Having either starved or had food restrictions in two world wars, protection of agriculture is a concept welded into the mindset of these nations.

Australia has one of the lowest levels of support for farmers in the OECD and emerging nations, except for New Zealand and Vietnam.

Australian farmers are losing out four ways:

- They sell onto global markets where their competitors have a 20 per cent on average advantage in state subsidies.
- They have to sell into their own domestic market, where they have to compete with subsidised imported products.
- The final price in the domestic market is typically set by the dominant market power of just two supermarkets.
- Arguably, quarantine levels have been lowered, being regarded as a trade barrier rather than a security measure to guard Australian farmers against imported pests and pathogens.

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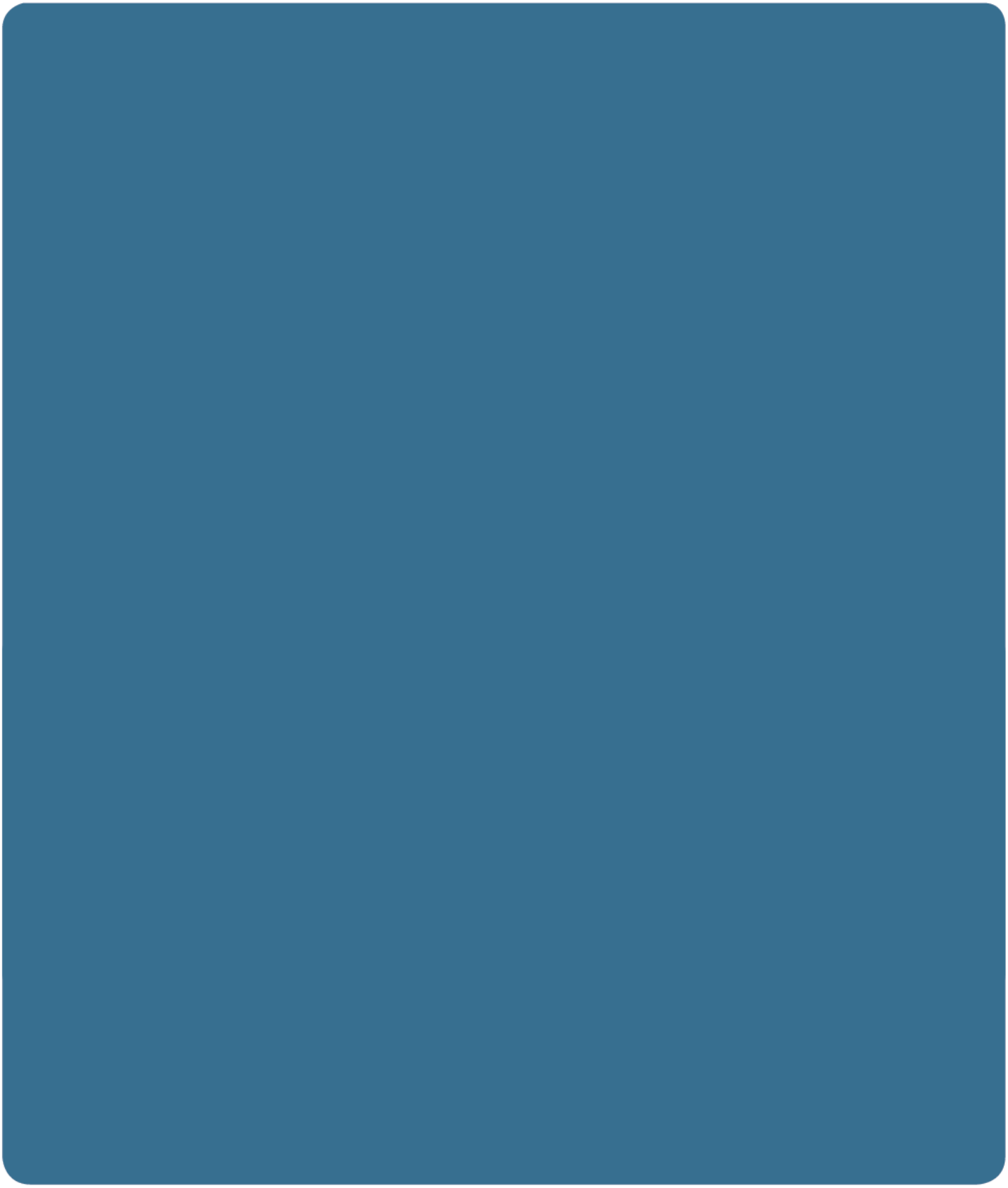


Industry Super Australia

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

Canberra
GF Dialogue
4 National Circuit
Canberra ACT 2600
P: (02) 6273 4333

AustralianSuper

INVESTMENT GUIDE

Investing for your future

February 2018

Contents

Everything we do at AustralianSuper is designed to help everyday Australians achieve their best retirement.

As the largest super fund in the country and one of the 50 biggest funds in the world, our size and scale mean you have access to some of the world's best investments.

Choosing how to invest your super is a big decision. This guide can help make it an easier one. You'll look at your investment needs and then go through your options in more detail.

Define what type of investor you are

Here you'll start to find out what type of investor you are and build an understanding about:

› how long you're investing for

› the types and levels of investment risk and how you feel about them

› how hands-on you want to be with your investments

› how to minimise risk.

What type of investor are you?

There are many different ways to invest money, which suit different people according to age, situation and personality. Use this section to work out what type of investor you are – how you feel about investment risk, what your investment timeframe is and how involved you want to be in managing your super.

How long you're investing for

Your investment timeframe is how long you plan to invest your super savings before you retire, as well as how long you want your savings to last once you do retire.

Take a look at the table alongside to see how long you might need to keep your savings invested in super based on how old you are now and your current life expectancy. Keep in mind the timeframes shown are averages so you may well live beyond these ages.

Investment risks and how you feel about them

All investments have risks, so it's important to understand how you feel about risk. This will help you in your investment option selection.

You'll also need to weigh this up with your investment timeframe and your retirement goals, including how you want to use your money when you retire.

Investment timeframe

Current age	Male	Female
20	61 years	65 years
30	51 years	55 years
40	42 years	45 years
50	32 years	36 years
60	24 years	27 years
65	19 years	22 years

Source: Australian Bureau of Statistics, Life Tables, Australia, 2012–2014, November 2015.

Only 9% of Australians feel very well prepared for retirement

Many people retire earlier than they think.

51%
Earlier than planned

37%
At the age expected

12%
Later than planned

Source: Investment Trends October 2016 Retirement Income Report.

Different types of investments perform differently over time

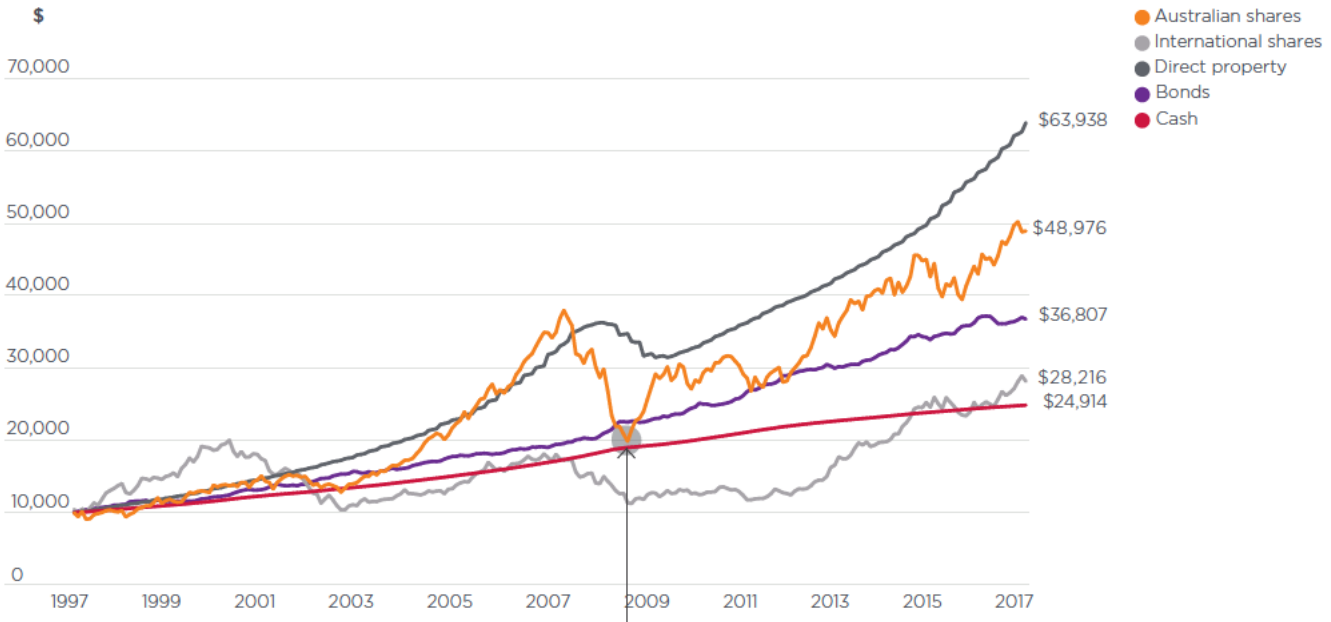
If 20 years ago you put $10,000 into different types of investments (we call these asset classes), your money would have grown in each asset class – some much more than others. What's also interesting to see are the different ways they grew.

The amounts shown are calculated to 30 June 2017.

Short-term risks are different to long-term risks

In the short term, the key risk is investment market volatility and the risk your super savings will be reduced by the market's ups and downs.

The long-term key risk is inflation and the risk that your super savings won't grow to meet it.



Notice Cash was steady over the 20 years – the downside is that it grew less than the more volatile assets like shares over the long term, which may mean it didn't keep up with rising costs of daily living.

Take a look at Australian shares – they had some of the strongest growth over time but if you just focused on one year such as 2009, they had a terrible year with more fluctuations.

The information in this graph has been prepared using data from the following market indices: Australian shares – S&P/ASX 300 (All Ordinaries before 1/4/2000); International shares - MSCI All Countries World ex Australia NET WHT (Unhedged) in AUD; Direct property – Mercer/IPD Australia Unlisted Wholesale Property Fund Index; Bonds – 50% Bloomberg Ausbond Composite (0+Y) + 50% Citigroup World Government Bond Index (Hedged) in AUD. Cash – Bloomberg AusBond Bank Bill Index.

Volatility and inflation are two of the key risks that can impact your investments. It's important to know about other risks which can also affect your super in different ways, including interest rate movements or changes to super rules and regulations. For more information about types of risk, visit **australiansuper.com/RiskTypes**

The risk of inflation over the long term

Inflation reduces the value of money over time. This means the money you have saved now will be worth less in the future. Inflation is something you need to think about when choosing your investment options, particularly if you've got a long-term investment timeframe.

30 years from now, you'll need more than double the money to buy what you can today.

2017

Loaf of bread

$3.00

Takeaway coffee

$4.00

Bottle of milk

$1.50

Daily fare on public transport

$8.00

2047

Loaf of bread

$6.30

Takeaway coffee

$8.40

Bottle of milk

$3.15

Daily fare on public transport

$16.80

The above examples assume an annual inflation rate of 2.5% each year.

Decide how hands-on you want to be with your investments

Choosing the right investment is important. It can affect how much your savings grow and how long they last. You can decide to either leave your investment choice to us or choose and manage your own.

Listed below are three options you can choose from. Otherwise, if you'd prefer us to choose for you, your super savings will go into our Balanced investment option.

Option 1:

PreMixed

Hands-on level: Low

PreMixed options are diversified options that invest across different combinations of asset classes such as shares, property, infrastructure, fixed interest and cash.

Your PreMixed choices are:

- High Growth
- Balanced (default investment option)
- Socially Aware
- Indexed Diversified
- Conservative Balanced
- Stable.

Option 2:

DIY Mix

Hands-on level: Medium

DIY Mix options are single asset class portfolios. You choose how much you want to invest in each in a mix that can also include one or more PreMixed options.

Your DIY Mix choices are:

- Australian Shares
- International Shares
- Property
- Diversified Fixed Interest
- Cash.

Option 3:

Member Direct

Hands-on level: High

The Member Direct investment option gives you the greatest control of all options.

You invest your own super in a range of listed securities, including:

- Shares in the S&P/ASX 300 Index
- Exchange Traded Funds (ETFs)
- Term deposits.

If you're a super member with us, you'll need $10,000 or more in your account to invest in Member Direct. If you're a retirement income member, it's $50,000.

If you're setting up a Choice Income account, you can set up with Smart Default which offers pre-selected investment and payment options.

Find out more at **australiansuper.com/SmartDefault**

How to minimise risk

So far, we've focused on helping you work out what type of investor you are, how comfortable you are with investment risks and the amount of control you want. Here are a few other things to consider when making your investment choice, as well as some ways to help manage your investment strategy and minimise risk.

Protect yourself by diversification

Diversification helps protect your investments against market ups and downs. By spreading your investments across a variety of companies, industries and regions in different asset classes you can get more consistent investment returns.

Diversification is particularly important to consider if you're planning to build your own strategy with our DIY Mix options or invest your own super using Member Direct. Our PreMixed options are already diversified and each option has a different mix of assets.

Focus on your long-term needs

Watching your super balance go up and down can be unsettling. While it can be tempting to change investment options when markets are down, often you're better off staying put. Investments that are volatile over short periods of time usually grow more over longer periods.

Stick to your strategy

It's normal for markets to change. You can ride out the ups and downs rather than reacting to every change. Market movements can mean the asset allocation of your portfolio moves away from its original strategy and changes your risk level.

In our PreMixed options, we actively adjust the asset allocation so it reflects our strategy. If you invest in our DIY Mix options or Member Direct, you'll have to manage this yourself.

Review your strategy

When your circumstances or objectives change, you should consider reviewing your investment option or options. For example, you might be nearing retirement and need to access some of your super in the short term.

Seek financial advice

The best option is the one that suits your investment timeframe, circumstances and goals. A professional financial adviser can help you develop an investment strategy to meet your needs, which could make a big difference to your retirement savings over the long term.

To find out more about your advice options and how to get the help you need, see page 35.

Look at your investment options

In this section you'll find details about your investment options, including the investment aims, asset allocations and risk levels for each one.

If you invest in our PreMixed options, we manage things for you. You can build your own mix of investment types by investing in our DIY Mix options. We also offer Member Direct which allows you more control over how your super savings are invested.

Risk levels of investment options

When choosing your investment options, the risks you need to consider will be different depending on how long you plan to invest for.

	Short-term	Medium-term	Long-term
Our investment options are split into short, medium and long-term risk levels.	**If you plan to invest for under 5 years** Investments may be reduced by market volatility and not have time to recover.	**If you plan to invest for 5–20 years** Investments may be reduced by market volatility and/or your savings might not keep up with inflation.	**If you plan to invest for over 20 years** Your savings may not keep up with inflation.
The way we work out the risk levels for each option is different depending on whether it's for the short, medium or long-term.	The short-term risk level is the same as the Standard Risk Measure, which is used across the super industry to help members compare the risk levels of investment options. The short-term risk level classifies investment options according to their likelihood of negative returns in a given year.	The medium-term risk level is a combination of the short-term and long-term risk levels.	The long-term risk levels are calculated by estimating how likely it is that the investments within each option will perform worse than inflation.

Read more about how we calculate risk levels at **australiansuper.com/RiskLevels**

Risks and your investment timeframe

The scenarios below highlight just some of the things you could consider when looking at options for investment timeframes.

Short-term (under 5 years)

You've already retired or are planning to soon and you want to use your savings in the next few years.

You may be more concerned with protecting your existing savings than taking chances to grow them. Consider an option with a lower risk level in the short term like Cash.

Medium-term (5-20 years)

You want your super savings to last as long as possible in your retirement.

Getting the balance right is the key: you may want to invest some money in lower-risk options, but you may need to look at how aggressively you invest the rest so your savings grow faster than inflation.

Long-term (over 20 years)

Retirement isn't really on your horizon yet, so growing your savings and maximising your returns is your priority.

For strong returns over the long term, consider a more aggressive strategy. Look at options that have a higher short-term risk level but a lower risk level over the long term like our Balanced, High Growth, Australian Shares or International Shares options.

Asset classes

Asset classes are the building blocks of your investment. Some investment options invest in one asset class, while others include a mix. We invest in the following asset classes:

Cash
Money market securities such as bank bills and short-term bonds that are held with banks, the Australian Government and some companies.

Credit
Debt securities issued by companies and other entities as well as loans. Returns are mainly driven by economic growth and quality of the underlying company which issued the debt. Credit is a subset of the fixed interest asset class and in our portfolios is predominately higher yielding.

Fixed interest (bonds)
Loans to governments, private companies and banks that are issued as securities and pay regular interest over a set term. The principal amount borrowed is repaid when the security matures. The bonds in our fixed interest asset sector are investment grade.

Infrastructure
Assets that provide essential public facilities and services such as roads, airports, seaports and power supply and generation in Australia and overseas.

Private equity
Investment in companies that aren't listed on a stock exchange. Can include Australian and international companies across a wide range of industries.

Other assets
From time to time, we may invest in other assets which represent a short or medium-term opportunity based on them being attractively priced. These include but are not limited to assets such as commodities, royalties or leases.

Shares (stocks, securities, equities)
Part of a company that you can buy and sell on a stock exchange. You can access large and small companies across a range of industries in Australia and overseas.

Direct Property
Direct holdings in residential, retail, industrial or commercial real estate.

Listed Property
Is a closed-end investment company that owns assets related to real estate such as buildings, land and real estate securities. They are listed on stock market exchanges and can be traded like common shares.

A snapshot of your investment options

Here's a high level overview of your investment options, including a brief description, their risk levels over different investment time periods and where you can find more detail on the pages following.

PreMixed

Risk levels of investment options

Short-term
Under 5 years

Medium-term
5–20 years

Long-term
Over 20 years

Description		Risk profile			
		Short-term	Medium-term	Long-term	See page
High Growth	Invests in a wide range of assets with a focus on Australian and international shares.	High	Medium	Low to medium	18
Balanced	Invests in a wide range of assets such as Australian and International shares, Infrastructure and Direct Property.	High	Medium	Low to medium	18
Socially Aware	Selects share investments using strict screening based on environmental, social and governance standards as well as investing in asset classes such as property, infrastructure and bonds.	High	Medium	Low to medium	18
Indexed Diversified	Invests in a wide range of assets using indexing strategies.	High	Medium	Low to medium	19
Conservative Balanced	Includes a higher allocation to fixed interest and cash than the Balanced option.	High	Medium	Low to medium	19
Stable	An emphasis on fixed interest and cash with a higher focus on stability than growth.	Medium to high	Medium	Low to medium	19

For our PreMixed options, we work out what the different mix of asset classes will be for each option. The asset allocation ranges are the minimum and maximum amounts we can invest in each asset class. Each year we set a percentage we might invest in each asset class as a guide – this is called the strategic asset allocation. During the year we can move towards or away from this percentage based on our outlook for the economy and investment markets.

When looking at the snapshots on these pages, think about:

1. how long you plan to invest for (under 5 years? 5–20 years? or over 20 years?)
2. the overall risks of that investment timeframe
3. what level of risk you're comfortable taking with your investments.

DIY Mix

Risk levels of investment options

Short-term
Under 5 years

Medium-term
5–20 years

Long-term
Over 20 years

Description		Risk profile			
		Short-term	Medium-term	Long-term	See page
Australian Shares	Invests in a wide range of companies listed on the Australian Securities Exchange.	Very high	Medium to high	Medium	21
International Shares	Invests in a wide range of companies listed on securities exchanges around the world.	Very high	Medium to high	Medium	21
Property	Invests in Australian and overseas properties, including shopping centres and office buildings.	Medium to high	Medium	Low to medium	21
Diversified Fixed Interest	Invests in a wide range of Australian and international bonds and loans.	Medium	Medium to high	Medium to high	22
Cash	Invests in short-term money market securities and some short-term bonds.	Very low	Medium to high	Very high	22

Member Direct

Self-managed option	You choose and manage your own investments. You can invest in a range of listed securities, including stocks in the S&P/ASX 300 index, exchange traded funds (ETFs) and term deposits.	24

Understanding your investment options

On the next few pages you'll find more detail about each investment option. To help you understand what makes up each investment option, we've put together the example below.

Balanced

Invests in a wide range of assets. Designed to have medium to long-term growth with possible short-term fluctuations.

A short summary about what the option's invested in and what it was designed to achieve.

Investment aims

- To beat CPI by more than 4% pa over the medium to longer term.
- To beat the median balanced fund over the medium to longer term.

The goals set up for each option, often comparing their performance to the CPI (Consumer Price index), which is the official measure of inflation.

If you can't keep your money invested for at least this long, this option probably isn't for you.

Minimum investment timeframe:
At least 10 years.

Risk level for the time invested

Short-term	Medium-term	Long-term
High	Medium	Low to medium

The risk profile of each option will vary depending on how long your money will stay in it. See page 14 for more.

How often this option is likely to go backwards in a 20-year period.

Risk of negative return:
About 5 in every 20 years.

The chart shows the combination of asset classes that typically make up each option.

- Australian shares 25% (10–45%)
- International shares 34% (10–45%)
- Direct property 7% (0–30%)
- Infrastructure 13% (0–30%)
- Private equity 3% (0–10%)
- Credit 6% (0–20%)
- Fixed interest 2% (0–25%)
- Cash 10% (0–15%)
- Other assets 0% (0–5%)

The percentages for each asset class are the strategic asset allocations with the range shown in brackets.

Check out how our investment options have done against industry and market benchmarks.
See page 28 for our past performance to 30 June 2017.

Your PreMixed investment options

Choose the mix that best suits you and leave the rest to us.

With our PreMixed options, we've done the diversification for you. These options are made up of more than one asset class and with different levels of risk and expected return.

PreMixed investment options

High Growth

Invests in a wide range of assets with a focus on Australian and international shares. Designed to have strong long-term returns with possible fluctuations in the short-term.

Investment aims

- To beat CPI by more than 4.5% pa over the medium to longer term.
- To beat the median growth fund over the medium to longer term.

Minimum investment timeframe:
At least 12 years.

Risk level for the time invested

Short-term	Medium-term	Long-term
High	Medium	Low to medium

Risk of negative return:
About 5 in every 20 years.

- Australian shares 32% (20–50%)
- International shares 43.5% (20–50%)
- Direct property 5% (0–30%)
- Infrastructure 9% (0–30%)
- Private equity 3.5% (0–10%)
- Credit 4% (0–20%)
- Fixed interest 0% (0–20%)
- Cash 3% (0–10%)
- Other assets 0% (0–5%)

Balanced

Invests in a wide range of assets. Designed to have medium to long-term growth with possible short-term fluctuations.

Investment aims

- To beat CPI by more than 4% pa over the medium to longer term.
- To beat the median balanced fund over the medium to longer term.

Minimum investment timeframe:
At least 10 years.

Risk level for the time invested

Short-term	Medium-term	Long-term
High	Medium	Low to medium

Risk of negative return:
About 5 in every 20 years.

- Australian shares 25% (10–45%)
- International shares 34% (10–45%)
- Direct property 7% (0–30%)
- Infrastructure 13% (0–30%)
- Private equity 3% (0–10%)
- Credit 6% (0–20%)
- Fixed interest 2% (0–25%)
- Cash 10% (0–15%)
- Other assets 0% (0–5%)

Socially Aware*

Selects share investments using strict screening based on environmental, social and governance standards as well as investing in a wide range of other asset classes. Designed to have medium to long-term growth with possible short-term fluctuations.

Investment aims

- To beat CPI by more than 4% pa over the medium to longer term.
- To beat the median balanced fund over the medium to longer term.

Minimum investment timeframe:
At least 10 years.

Risk level for the time invested

Short-term	Medium-term	Long-term
High	Medium	Low to medium

Risk of negative return:
About 5 in every 20 years.

- Australian shares 25% (10–45%)
- International shares 34% (10–45%)
- Direct property 7% (0–30%)
- Infrastructure 13% (0–30%)
- Private equity 3% (0–10%)
- Credit 6% (0–20%)
- Fixed interest 2% (0–25%)
- Cash 10% (0–15%)

*This investment option may use Exchange Traded Index Futures (up to 5% of the total assets) to efficiently manage cash flows and ensure this option is invested within the targeted asset allocation. This may include economic exposure to companies that are normally excluded by the option's investment screens.

PreMixed investment options

Indexed Diversified

Invests in a wide range of assets using indexing strategies. Designed to have medium to long-term growth with possible short-term fluctuations.

Investment aims

› To beat CPI by 3.5% pa over the medium to longer term.

Minimum investment timeframe:
At least 10 years.

Risk level for the time invested

Short-term	Medium-term	Long-term
High	Medium	Low to medium

Risk of negative return:
About 5 in every 20 years.

- Australian shares 32% (20–50%)
- International shares 38% (20–50%)
- Listed property 0% (0–10%)
- Fixed interest 17% (0–30%)
- Cash 13% (0–30%)

Conservative Balanced

Includes a higher allocation to fixed interest and cash than the Balanced option. Designed to have medium-term growth with a balance between capital stability and capital growth. May also have some short-term fluctuations.

Investment aims

› To beat CPI by more than 2.5% pa over the medium term.

› To beat the median conservative balanced fund over the medium term.

Minimum investment timeframe:
At least 5 years.

Risk level for the time invested

Short-term	Medium-term	Long-term
High	Medium	Low to medium

Risk of negative return:
About 4 in every 20 years.

- Australian shares 17.5% (5–35%)
- International shares 23.5% (5–35%)
- Direct property 6% (0–25%)
- Infrastructure 11% (0–25%)
- Private equity 1.5% (0–5%)
- Credit 7% (0–25%)
- Fixed interest 20% (0–40%)
- Cash 13.5% (0–30%)
- Other assets 0% (0–5%)

Stable

An emphasis on fixed interest and cash with a higher focus on stability than growth.

Investment aims

› To beat CPI by more than 1.5% pa over the medium term.

› To beat the median capital stable fund over the medium term.

Minimum investment timeframe:
At least 3 years.

Risk level for the time invested

Short-term	Medium-term	Long-term
Medium to high	Medium	Low to medium

Risk of negative return:
About 3 in every 20 years.

- Australian shares 10% (0-20%)
- International shares 13.5% (0-20%)
- Direct property 6% (0-15%)
- Infrastructure 11% (0–20%)
- Private equity 0% (0–3%)
- Credit 7% (0–25%)
- Fixed interest 27.5% (0–45%)
- Cash 25% (0–50%)
- Other assets 0% (0–5%)

Ready to make your choice?
The easiest way to make your investment choice is to log into your online account at **australiansuper.com/login** If you can't make your choice online, call us on **1300 300 273**.

Strategic asset allocations and other information are current as at September 2017. We may change the Strategic Asset Allocation or the composition of individual asset classes from time to time to suit prevailing market conditions. Investment returns aren't guaranteed as all investments carry some risk. Past performance isn't a reliable indicator of future performance.

Your DIY Mix investment options

Build your own mix of investment types by investing in our DIY Mix options and we'll manage it for you.

DIY Mix investment options

Australian Shares

Invests in a wide range of companies listed on the Australian Securities Exchange. Designed to have strong long-term capital growth with possible short-term fluctuations in returns.

Investment aims

› To beat the S&P/ASX 300 Accumulation Index over the medium to long term.

Minimum investment timeframe:
At least 12 years.

Risk level for the time invested

Short-term	Medium-term	Long-term
Very high	Medium to high	Medium

Risk of negative return:
About 6 in every 20 years.

- Australian shares (90–100%)
- Cash (0–10%)

International Shares

Invests in a wide range of companies listed on securities exchanges around the world. Designed to have strong long-term capital growth with possible short-term fluctuations in returns.

Investment aims

› To beat the MSCI World All Countries (ex Australia) Unhedged Index over the medium to long term.

Minimum investment timeframe:
At least 12 years.

Risk level for the time invested

Short-term	Medium-term	Long-term
Very high	Medium to high	Medium

Risk of negative return:
About 6 in every 20 years.

- International shares (90–100%)
- Cash (0–10%)

Property

Invests in Australian and overseas properties, including shopping centres and office buildings. Designed to have strong medium to long-term capital growth with lower volatility than shares.

Investment aims

› To beat CPI by more than 3% pa and the Mercer/IPD Australia Unlisted Wholesale Property Fund Index over the medium term.

Minimum investment timeframe:
At least 5 years.

Risk level for the time invested

Short-term	Medium-term	Long-term
Medium to high	Medium	Low to medium

Risk of negative return:
About 4 in every 20 years.

- Property (90–100%)
- Cash (0–10%)

DIY Mix investment options

Diversified Fixed Interest

Invests in a wide range of Australian and international bonds and loans. Aims for capital stability and higher returns than cash over the short to medium term.

Investment aims

› To beat CPI by more than 0.5% pa over the short to medium term.

Minimum investment timeframe:
At least 3 years.

Risk level for the time invested

Short-term	Medium-term	Long-term
Medium	Medium to high	Medium to high

Risk of negative return:
About 2 in every 20 years.

Fixed Interest 100%

Cash

Invests in short-term money market securities and some short-term bonds. Designed to have stable returns above the official cash rate.

Investment aims

› To outperform the return of the Bloomberg Ausbond Bank Bill Index each year.

› To outperform the annual return of CPI.

Minimum investment timeframe:
At least 1 year.

Risk level for the time invested

Short-term	Medium-term	Long-term
Very low	Medium to high	Very high

Risk of negative return:
Not expected.

Cash 100%

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Strategic asset allocations and other information are current as at September 2017. We may change the Strategic Asset Allocation or the composition of individual asset classes from time to time to suit prevailing market conditions. Investment returns aren't guaranteed as all investments carry some risk. Past performance isn't a reliable indicator of future performance.

Member Direct

Take a hands-on approach to the way your money is invested with Member Direct, our member directed investment option.

Member Direct

You implement your own strategy by investing in shares in the S&P/ASX 300 Index, Exchange Traded Funds (ETFs) and term deposits – all from an easy-to-use online platform*.

Who can register?

- Super members with $10,000 or more in your account.
- Retirement income members with $50,000 or more in your account.

How it works

It all starts with your transaction account, which works like an online bank account and earns a competitive rate of interest. You transfer money from your other AustralianSuper investment options into this account to invest. You can also transfer funds from your Member Direct transaction account back into your other AustralianSuper options.

Features

- Access to real-time trading, extensive market information, independent research and investment tools to help you make informed investment decisions and manage your portfolio.
- Manage your investments online, in real time, through the Member Direct online platform.
- If you're a retirement income member with us, you can also check your income payment reserve† at any time by logging in to the Member Direct online platform.

* Super members using a TTR Income account can only invest with Member Direct in their super account.

† Your income payment reserve is the minimum amount you must keep in your AustralianSuper investment options, outside of Member Direct, to cover 13 months of income payments based on the government's minimum age-based payment limits. If your balance is below this amount, you can't transfer more money into Member Direct or invest in term deposits.

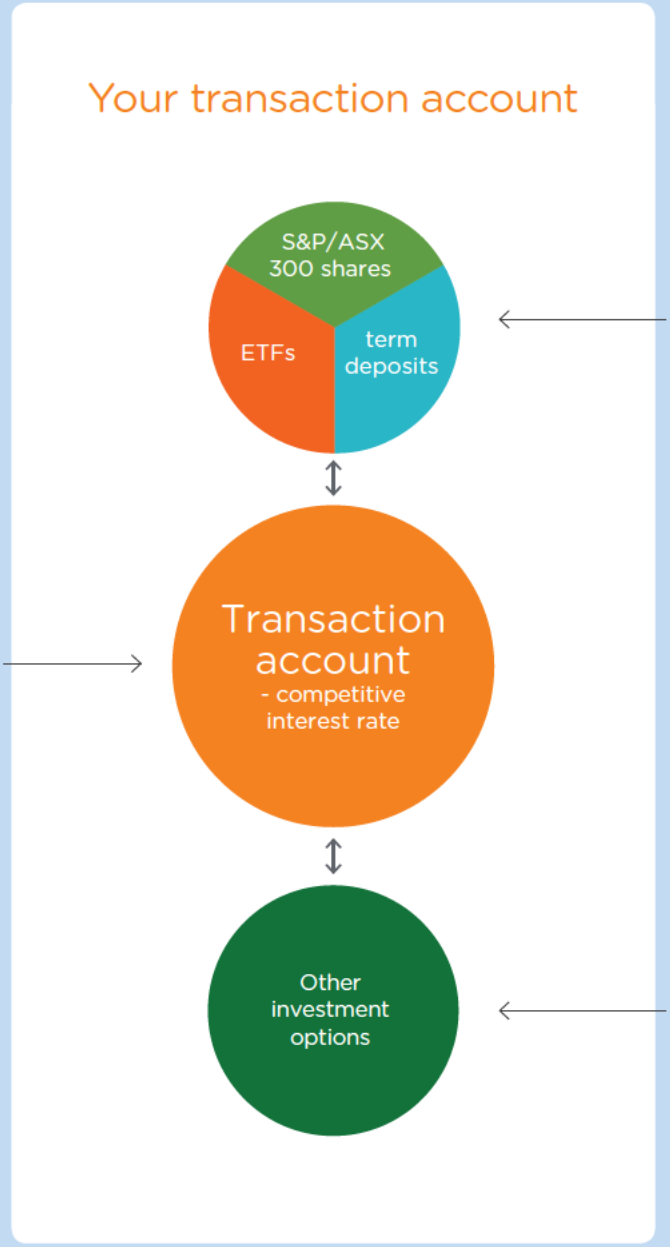
Before you decide

You should read the *Member Direct guide* and the *Member Direct terms and conditions* before making a decision. You'll find more information at **australiansuper.com/MemberDirect**

Member Direct isn't for everyone so double-check it's right for you. You'll be managing your own investments and will need to know a lot about investing and the markets. It's important that you're comfortable doing this. We strongly encourage you to seek advice from a licensed financial adviser before choosing this option. They can help you develop an investment strategy to meet your personal circumstances and needs. See page 35 for how to find an adviser.

How your account works

Your transaction account operates like an online bank account. It offers a competitive interest rate and you can you use the funds in it to invest in shares, ETFs and term deposits.



Other conditions

There are other conditions you must follow to keep your Member Direct investment option active. These include keeping a minimum amount of money in both your Member Direct transaction account and in our other investment options at all times as well as having limits to how much you can have invested in shares, ETFs or term deposits.

For a full list of rules that apply to this investment option, read the Member Direct terms and conditions at **australiansuper.com/MemberDirect**

Fees

There are fees that apply to the Member Direct investment option. Find out more at **australiansuper.com/MemberDirectFees**

How to register for the Member Direct investment option

Once you have an account with us, just follow these simple steps to register for Member Direct:

1. Log into your online account at **australiansuper.com/login**
2. Register for Member Direct through your online account.

To invest in Member Direct, you need a valid email address and secure access to the internet. We don't recommend using public or shared computers to access the online platform.

Once you register for the Member Direct option
You gain access to its online platform. This is where you invest in shares, ETFs, term deposits and cash and change your other AustralianSuper investment options.

Useful things you should know

Here you'll find some important information that you should also consider when choosing your investment options.

› Compare our past performance.

› Understand the investment fees and costs.

› Read how we aim to maximise returns and keep costs low.

Compare our past performance

We've been one of the better performing super funds over the past decade. You can keep an eye on how your investments are going by looking at our past performance.

We compare the performance of our investment options against industry and market benchmarks. Our PreMixed options are measured against other super funds in the SuperRatings Fund Crediting Rate Survey as well as the CPI. Our DIY Mix options are either measured against the relevant asset class market index or the CPI.

The following two tables show how we've done for both super and retirement income investment options to 30 June 2017.

You can also view our latest performance figures online:

› for super **australiansuper.com/SuperPerformance**

› for retirement income **australiansuper.com/RetirementPerformance**

Super investment options performance as at 30 June 2017

This table compares our super investment options against the performance benchmarks noted below. For a performance comparison of our options against their CPI-linked benchmarks visit **australiansuper.com/CPIperformance**

AS = AustralianSuper **BM** = Benchmark

PreMixed options	1 year		3 years (pa)		5 years (pa)		10 years (pa)	
	AS	BM	AS	BM	AS	BM	AS	BM
High Growth	13.76%	11.84%	9.95%	8.11%	12.62%	11.16%	5.22%	4.58%
Balanced	12.44%	10.53%	9.23%	7.58%	11.41%	9.97%	5.56%	4.78%
Socially Aware	13.10%	10.53%	8.53%	7.58%	11.45%	9.97%	5.86%	4.78%
Indexed Diversified	8.69%	5.43%	6.43%	5.15%	8.73%	5.77%	N/A	N/A
Conservative Balanced	9.26%	7.20%	7.65%	5.74%	9.46%	7.64%	N/A	N/A
Stable	7.20%	5.28%	6.46%	4.78%	7.39%	5.80%	5.78%	4.63%
DIY Mix options								
Australian Shares	12.65%	13.57%	7.65%	7.23%	12.25%	11.68%	4.54%	3.63%
International Shares	15.66%	13.60%	12.43%	11.12%	15.60%	15.32%	4.69%	4.24%
Property	9.51%	11.01%	9.86%	10.63%	8.56%	9.62%	5.02%	6.84%
Diversified Fixed Interest	4.76%	2.43%	4.82%	2.15%	5.33%	2.77%	6.47%	3.26%
Cash	1.93%	1.54%	2.19%	1.88%	2.47%	2.14%	3.63%	3.32%
Consumer Price Index	1.93%		1.49%		1.97%		2.36%	

AustralianSuper returns are net of fees and tax. The one, three, five and ten-year figures are rolling annual returns as at 30 June 2017. Investment returns aren't guaranteed. Past performance isn't a reliable indicator of future returns.

Benchmarks

High Growth: SR50 Growth (77–90) Index. Balanced: SR50 Balanced (60–76) Index. Socially Aware: SR50 Balanced (60–76) Index. Indexed Diversified: CPI + 3.5%. Conservative Balanced: SR25 Conservative Balanced (41–59) Index. Stable: SR50 Capital Stable (20–40) Index. Australian Shares: S&P/ASX300 Accumulation Index*. International Shares: MSCI AC World ex Australia (in $A) Index*. Property: Mercer/IPD Australia Unlisted Wholesale Property Fund Index*. Diversified Fixed Interest: CPI +0.5% (prior to 1 July 2015, the benchmark was CPI +1%). Cash: Bloomberg AusBond Bank Bill Index*.

* Adjusted for tax.

Retirement income investment options performance as at 30 June 2017

Here you can compare our retirement income investment options against the benchmarks noted below the table. You can compare our options' performance against their CPI-linked benchmarks at **australiansuper.com/RetirementCPI**

AS = AustralianSuper **BM** = Benchmark

PreMixed options	1 year		3 years (pa)		5 years (pa)	
	AS	BM	AS	BM	AS	BM
High Growth	14.95%	13.11%	11.06%	8.99%	14.07%	12.45%
Balanced	13.60%	11.23%	10.23%	7.86%	12.72%	10.91%
Socially Aware	14.57%	11.23%	9.69%	7.86%	12.87%	10.91%
Indexed Diversified	9.95%	5.43%	7.36%	5.15%	10.33%	5.77%
Conservative Balanced	10.67%	7.94%	8.79%	6.92%	10.75%	8.78%
Stable	8.19%	5.88%	7.39%	5.30%	8.39%	6.59%
DIY Mix options						
Australian Shares	13.64%	15.28%	8.44%	7.38%	13.80%	12.09%
International Shares	17.28%	15.31%	13.90%	12.49%	17.70%	17.29%
Property	10.85%	12.67%	11.14%	12.24%	9.79%	10.98%
Diversified Fixed Interest	5.58%	2.43%	5.48%	2.15%	6.08%	2.77%
Cash	2.29%	1.82%	2.58%	2.22%	2.90%	2.53%
Consumer Price Index	1.93%		1.49%		1.97%	

As our retirement income product, Choice Income (formerly AustralianSuper Pension), started on 1 January 2008, past performance isn't available prior to this date. If you are fully retired* investment returns in your Choice Income account are tax exempt. Investment earnings within a transition to retirement arrangement are subject to the same maximum 15% tax rate that applies to super accumulation funds. The one, three and five-year figures are rolling returns as at 30 June 2017. Investment returns aren't guaranteed. Past performance isn't a reliable indicator of future returns.

Benchmarks

High Growth: SRP50 Growth (77–90) Index. Balanced: SRP50 Balanced (60–76) Index. Socially Aware*: SRP50 Balanced (60–76) Index. Indexed Diversified: CPI + 3.5%. Conservative Balanced: SRP25 Conservative Balanced (41–59) Index. Stable: SRP50 Capital Stable (20–40) Index. Australian Shares: S&P/ASX300 Accumulation Index. International Shares: MSCI AC World ex Australia (in $A) Index. Property: Mercer/IPD Australian Unlisted Wholesale Property Fund Index. Diversified Fixed Interest: CPI +0.5% (prior to 1 July 2015, the benchmark was CPI +1%). Cash: Bloomberg AusBond Bank Bill Index.

* Fully retired means you've met a full condition of release under super law.

You can track the performance of your investments every day

We calculate returns for each investment option daily using crediting rates. A crediting rate is the rate of investment return paid to you on your account balance, after fees and tax. They can be positive or negative depending on investment markets. You can find out more at **australiansuper.com/HowWeInvest**

Understand the investment fees and costs

We're serious about making your money last longer, which is why we keep our fees low. We can keep them low because they're only set to cover the costs of running the fund, not to make a profit for shareholders or pay commissions to agents or advisers.

The cost to manage your investments

We work hard to keep fees down and our costs low. The overall Investment fee we charge covers the cost to us of managing your money. This fee is made of up three components:

- Investment management fees - amounts deducted from your investment that relate to core investment management functions, such as audit and administrative costs.
- Performance related fees - fees we pay to external investment managers for generating positive returns.
- Transactional and operational costs - a broad category of costs we incur that relate to the buying or selling of underlying investments. Examples of these include brokerage and commission.

The overall Investment fee is deducted from before-tax investment returns on 30 June – before the returns are applied to your account. This fee may change from year to year.

Investment costs for Pre-Mixed and DIY Mix investment options

Each PreMixed and DIY Mix option has its own investment costs. There may also be some differences between the costs depending on whether you've got your super or retirement income with us. See page 31 for these costs.

Other fees and costs

There are other annual fees and costs that may be deducted from your account. Other fees such as activity fees or advice fees for personal advice may also be charged.

You should read all the information about fees and other costs because it's important to understand their impact on your investment.

- Super members, visit **australiansuper.com/fees**
- Retirement income members, visit **australiansuper.com/RetirementFees**

Member Direct fees and costs are different
Different fees and costs apply to our Member Direct investment option.
You can find out more at **australiansuper.com/MemberDirectFees**

Super investment costs

Here are the 2016/17 investment costs for our PreMixed and DIY Mix super investment options.

Name of Investment options	1 Investment Management fees	2 Performance related fees	3 Transactional and Operational costs	Total
High Growth	0.55%	0.17%	0.09%	0.81%
Balanced	0.54%	0.13%	0.08%	0.75%
Socially Aware	0.55%	0.07%	0.12%	0.74%
Conservative Balanced	0.51%	0.08%	0.07%	0.66%
Stable	0.37%	0.03%	0.06%	0.46%
Capital Guaranteed	0.05%	0.00%	0.00%	0.05%
Indexed Diversified	0.17%	0.00%	0.05%	0.22%
Australian Shares	0.28%	0.01%	0.07%	0.36%
International Shares	0.48%	0.19%	0.12%	0.79%
Property	0.62%	0.01%	0.17%	0.80%
Diversified Fixed Interest	0.43%	0.01%	0.05%	0.49%
Cash	0.05%	0.00%	0.00%	0.05%

Retirement income investment costs

This table shows the 2016/17 investment costs for each retirement income option.

Name of Investment options	1 Investment Management fees	2 Performance related fees	3 Transactional and Operational costs	Total
High Growth	0.57%	0.17%	0.10%	0.84%
Balanced	0.54%	0.13%	0.08%	0.75%
Socially Aware	0.55%	0.07%	0.12%	0.74%
Conservative Balanced	0.51%	0.08%	0.07%	0.66%
Stable	0.37%	0.03%	0.07%	0.47%
Capital Guaranteed	0.05%	0.00%	0.00%	0.05%
Indexed Diversified	0.17%	0.00%	0.05%	0.22%
Australian Shares	0.28%	0.00%	0.08%	0.36%
International Shares	0.48%	0.19%	0.12%	0.79%
Property	0.62%	0.01%	0.16%	0.79%
Diversified Fixed Interest	0.43%	0.01%	0.05%	0.49%
Cash	0.05%	0.00%	0.00%	0.05%

For further information about investment fees, visit **australiansuper.com/InvestmentFees**

Maximising returns, keeping costs low

This is how we do it.

Our long-term vision

We work hard to maximise investment returns over the long term, so you can enjoy a better future. As long-term investors, we focus on investing in a mix of quality assets that can grow your savings over time.

Our core investment beliefs underpin this vision:

1. We are run only to benefit members
2. We use our scale to reduce costs and better structure investments
3. We actively manage investments where it can add value
4. We're aware of our responsibility to the broader community, consistent with our obligations to maximise benefits to members.

Investment approach

We believe an active management approach is the best way to invest. That's why we select specific sectors, assets and stocks that we believe will outperform the broader market. This is supported by quality research, experienced investment specialists and a disciplined investment process.

We also use index managers in some options to lower overall portfolio costs or where active management opportunities are smaller.

We manage a range of asset classes internally and our goal is to do more of this over time. This strategy aims to deliver significant cost savings, which go back to you in the form of better net returns.

Our investment people

We have a range of people and teams involved at different stages of the process. Our investment governance framework ensures the appropriate checks are in place when making and implementing investment decisions, and there are clear lines of responsibility and accountability.

The Investment Committee is accountable to the Board for our investment policy and strategy. They oversee investment decisions and review asset allocation recommendations put forward by the internal team.

The internal team advises the Investment Committee on all investment matters. The team is responsible for research and portfolio management, monitoring investment managers, managing and implementing our asset allocation process and work with our external asset consultants.

A mix of internal and external investment managers select and manage the investments within each asset class – supported by a range of professional operational staff.

Currency management

Returns for international assets can be affected by the ups and downs of the exchange rate as well as changes in investment values. To help protect options that include international assets from adverse currency movements, we set a target currency exposure for these options as part of setting our strategic asset allocations every year.

Read more about how we manage currency and our foreign currency targets for the 2017/18 financial year at **australiansuper.com/HowWeInvest**

Related party investments

We only make contracts and investment transactions with related parties when we believe you'll get the same or more benefits from those investments.

Related parties might be organisations that conduct business with us, where we or one of our representatives might be a shareholder, part owner or director of that organisation or have significant influence on it. To find out more, view our latest audited financial statements available at **australiansuper.com**

To view AustralianSuper's investment holdings in each option, visit **australiansuper.com/WhatWeInvestIn**

Environmental, social and governance management

Our priority is to achieve superior long-term investment returns for you. We believe companies with good environmental, social and governance (ESG) management are more likely to increase their value and provide better long-term returns for our members.

Active Owner Program

Being an active owner means that we make decisions and undertake a range of actions that integrate ESG considerations into our investment process. These fall into three areas:

Integration: consideration, integration and valuation of ESG issues when choosing and managing investments

Stewardship: actively engaging with companies to influence and improve ESG practices

Choice: considering our members' values in our our investment choices.

Engagement with companies we invest in

We regularly talk with companies we invest in and the fund managers we use to invest for us. The aim is to ensure that the companies we invest in understand who we are and what is in our members' investment interests.

Share voting

As part of making sure companies we invest in are well managed and focus on long-term value creation, we vote on matters relating to:

- S&P/ASX 200 companies
- any other Australian listed company that we're a large shareholder in
- major global companies
- all Australian companies held internally

You can view our quarterly voting history and read more about our Active Owner Program at **australiansuper.com/InvestmentGovernance**

Working with others

AustralianSuper is a signatory to the United Nation's Principles of Responsible Investment (UNPRI). We work collaboratively to address ESG issues with other industry participants including The Australian Council of Superannuation Investors (ACSI), the Investor Group on Climate Change and directly with other big investors.

AustralianSuper has decided to exclude companies that manufacture tobacco products from its investment options by the end of 2019. Tobacco is a unique investment, due to its particular characteristics and the damage it causes. There is no safe level of consumption; it's highly addictive and it's the largest preventable cause of death in the world. These factors make investing in tobacco inconsistent with our purpose of helping members achieve their best possible retirement outcomes.

We will prudently divest tobacco holdings and reinvest them elsewhere with the continued aim of achieving the best possible investment outcomes for members. This exclusion doesn't apply to the use of derivatives that have an indirect exposure to tobacco, or ETFs in Member Direct.

More choice

For members who want to invest in in a way that reflects their environmental and social values, we offer Socially Aware and Member Direct.

About Socially Aware

Socially Aware is a balanced investment option that doesn't invest in shares of Australian or international companies that:

- directly own reserves of coal, oil, gas or uranium*
- produce tobacco, cluster munitions and land mines
- have single gender (exclusively male or female) boards (ASX 200 companies only)
- have been flagged as having human rights, labour, environmental or governance controversies.

* Reserves, in this context, are coal, oil, gas or uranium that can be extracted from known fields at an economical cost.

Socially Aware removes investment in companies that own fossil fuel or uranium reserves regardless of the size of their ownership. We believe this is the simplest, most transparent way of removing these investments at their source while enabling the option to meet its investment return objectives.

It can still invest in companies that invest in, provide services to, or buy, process or sell products from the excluded companies. These might include companies that have shareholdings in or banks who lend money to a company, plus service providers like security, catering or office suppliers or petrol refiners and distributors.

This investment option may use Exchange Traded Index Futures (up to 5% of the total assets) to efficiently manage cash flows and ensure this option is invested within the targeted asset allocation. This may include economic exposure to companies that are normally excluded by the option's investment screens.

You can find out more about the asset allocation and risk profile of our Socially Aware option on page 18.

About Member Direct

If you invest with Member Direct, you can tailor your selection of individual companies in the S&P/ASX 300, ETFs and term deposits to suit your investment needs. See page 24 for more about Member Direct.

Making your investment choice

Whether you've already made up your mind about what investment options will suit you or you're still deciding, we can help you take the next steps, including:

› how to choose your investment options

› how to change your options

› where to get help and advice.

How to make your choice

The easiest way to make your investment choice is online.

1. Log into your online account at **australiansuper.com/login** and select 'Manage my account' and then 'Change my investments'.
2. If you can't make your choice online, that's fine, just call us on **1300 300 273** between 8am and 8pm AEST/AEDT weekdays.

When you join, if you don't make a choice at all, we invest your money in our Balanced option, which is our default option.

How to change your investment options

You can change how you invest your account up to once a day (except weekends and national public holidays*). Changing is free unless you invest in Member Direct.

If we receive your request before 4pm AEST/AEDT weekdays, we'll invest your account in your new choice the next business day and it will show in your account the following business day. If we receive your request on or after 4pm AEST/AEDT weekdays, or on weekends or public holidays, the change will take an extra business day.

Find out more about choosing or changing your investment options at **australiansuper.com/switching**

Find out more about choosing or changing your investment options in Member Direct at **australiansuper.com/memberdirect**

* Plus Queen's birthday (all states, except Queensland and Western Australia).

Where to get help and advice

With the right advice, you can change your financial future and shape your life the way you want it to be. That's why we believe it's always a good idea to get some advice before you choose your options.

We have a mix of advice to help you every step of the way:

Online
Our series of online calculators can help you plan better for your future.

Visit **australiansuper.com/calculators**

Over-the-phone†
Call us on **1300 300 273**, and we can help you with:

- Making an investment choice
- Adding extra to your super
- Transition to retirement options
- Sorting your insurance.

Face-to-face†
For more complex advice, meeting face-to-face with an accredited adviser can help when you want a detailed financial plan and have a number of financial matters to think about.

Seminars
Our free retirement and financial planning seminars are conducted Australia-wide and run for around an hour with time afterwards for questions.

Visit **australiansuper.com/seminars**

For more information about your advice options, visit **australiansuper.com/advice**

† The financial advice you receive will be provided under the Australian Financial Services Licence held by a third party and not by AustralianSuper Pty Ltd (AustralianSuper) and therefore is not the responsibility of AustralianSuper. With your approval a fee may be charged if a Statement of Advice is provided.

Start investing in your future.

Once you've decided which investment options best suit you, making your investment choice is easy.

Find out more

Call

1300 300 273

8am–8pm AEST/AEDT weekdays

Visit

australiansuper.com/login

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