Firstlinks
Connecting investors with ideas

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The demographics of a growing (and ageing) Australia

David James

Australia's population grew by 1.6% p.a. over the last 10 years, reaching over 25 million people in 2018. This rapid growth has been concentrated in our major cities with Melbourne, Sydney and Brisbane absorbing 2.2 million of the total 3.7 million population growth over the period. Immigration has been the largest contributor to our population growth, supplying around 60%.

There is currently a lack of effective policies on our future population to address the mix of growth (natural versus immigration), pace of increase and a geopolitical strategy of dispersing population out of the south-eastern corner of the country.

Understanding demographics is vital to successfully planning for the future, including:

1. **Population growth:** what it has been and where it is going
2. **Ageing population:** who is going to pay for all the retirees
3. **Natural increase:** can we encourage copulation
4. **Immigration:** the benefits and opportunities migrants bring
5. **Australia in Asia:** a small fish in a big, opportunity-laden pond

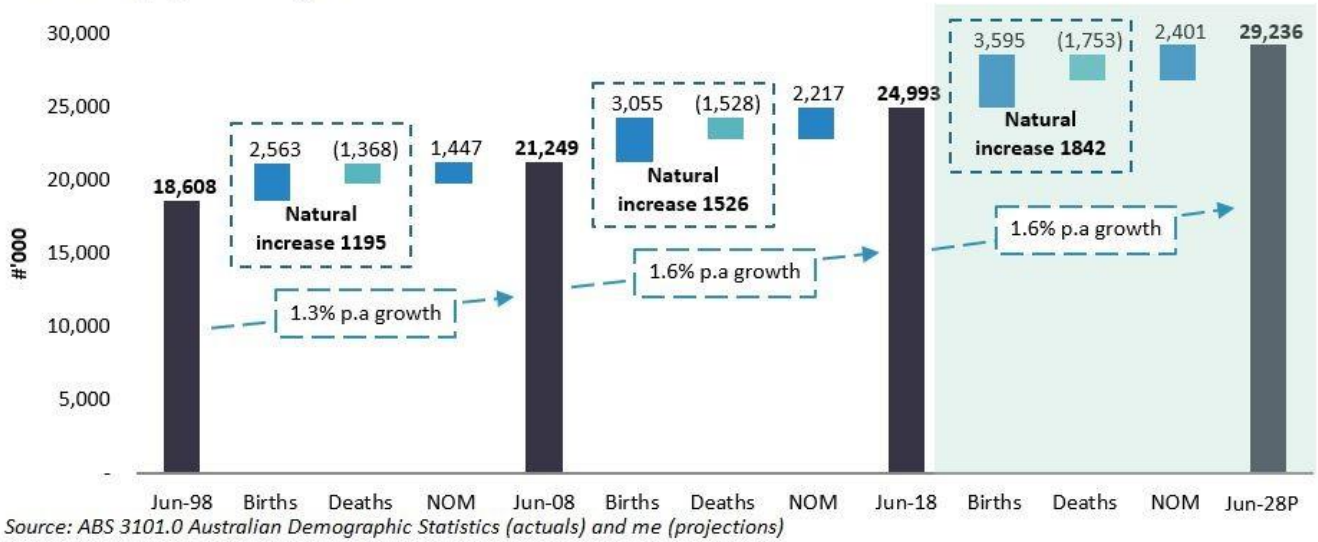
The beauty of demographics is that the future has already been written.

1. Historical and forecast population growth

Australia has experienced phenomenal population growth over the last 20 years. Since 2008, our population has increased by **an average of 375,000 people a year!** This has been underpinned by Net Overseas Migration (NOM) which contributed 2.2 million people over the last 10 years. Our 1.6% p.a. growth rate ranks us in the top half of global population growth rates and has supported our record 28 years of unbroken economic growth.

Notably, big advanced nations such as the US, France, United Kingdom and Germany all recorded population growth below 1% over the same period. Some of our big neighbours' populations are stabilising (China's population is forecast to peak in 2029 and thereafter decline) and others are already experiencing declines (Japan's population declined by around 450,000 people in 2018).

Australian population growth



Source: ABS 3101.0 Australian Demographic Statistics (actuals) and me (projections)

Extrapolating our current growth rate into the future projects a population of 29.2 million in 2028. This assumes a comparable rate of annual natural increase of 0.7% (variations will be driven by fertility rates and life expectancy) and NOM remaining at the 2018 level of around 240,000 people per year.

Where is the growth going? Into the bigger states and predominantly into the capital cities.

Australian population - by region

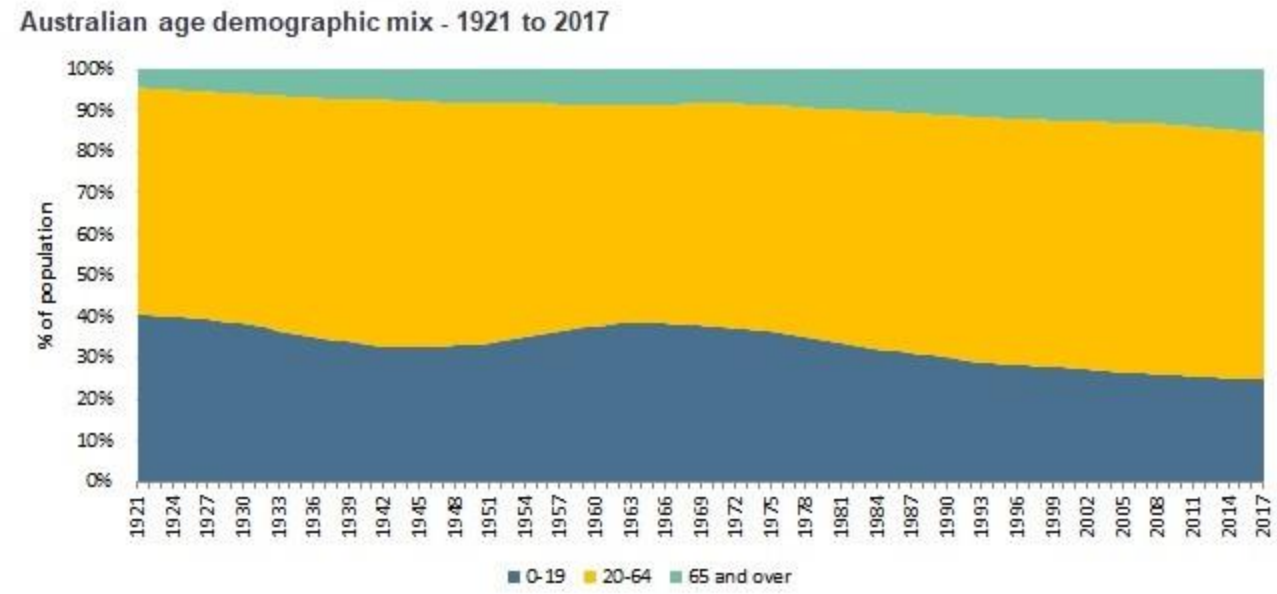
				2008 to 2018			
	2008	2018	2028		Growth	% of	2018-28
# in thousands	Act.	Act.	Proj.	Change #	p.a	growth	change #
Regional NSW	2,813	3,072	3,315	259	0.9%	6.9%	243
Sydney	4,053	4,835	5,729	782	1.8%	20.9%	893
Regional Vic	1,434	1,647	1,852	213	1.4%	5.7%	205
Melbourne	3,799	4,785	5,986	985	2.3%	26.3%	1,201
Regional QLD	2,340	2,708	3,095	368	1.5%	9.8%	387
Brisbane	1,946	2,380	2,870	433	2.0%	11.6%	490
Regional WA	515	575	642	60	1.1%	1.6%	67
Perth	1,656	2,020	2,464	364	2.0%	9.7%	444
Regional SA	387	409	433	22	0.6%	0.6%	23
Adelaide	1,201	1,327	1,466	126	1.0%	3.4%	139
Tasmania	499	528	560	30	0.6%	0.8%	31
ACT	385	459	548	74	1.8%	2.0%	89
NT	220	247	278	27	1.2%	0.7%	31
Total	**21,249**	**24,993**	**29,236**	**3,744**	**1.6%**	**100.0%**	**4,243**

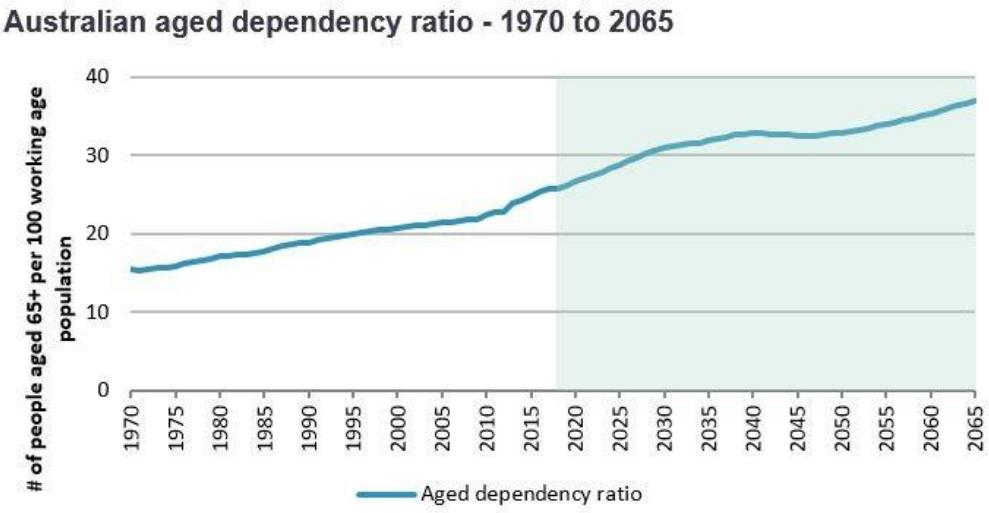
Source: ABS 3218.0 Regional Population (actuals) and me (projections)
Note: all populations as at 30-Jun

The high rates of growth in our major cities are not being matched with appropriate infrastructure which is resulting in increasing congestion, lower livability standards and worsening pollution. **Can Sydney and Melbourne really accommodate another 0.9 million and 1.2 million people**, respectively, over the next 10 years without impacting the livelihoods of current residents?

2. Ageing population

Added to a growing population we have, like many countries, an ageing population. This will cause imbalances in the fiscal demands on governments (pensions, health, aged care) and infrastructure (schools, hospitals, caravan parks, nursing homes).





Source: ABS 3105.0 Australian Historical Population (historical) and 3222.0 Population Projections

Australia's aged dependency ratio (defined here as the number of people over 65 / working age population (20-64) * 100) has been steadily increasing. An increasing dependency ratio indicates more retirees for each worker thus putting an increasing fiscal burden on the current working age population.

In 1970, there were 15.5 people aged over 65 for every 100 working adults (aged 20-64). In 2017, there were 25.8 over 65 for every 100 workers. The ABS has forecast that this trend will continue and the aged dependency ratio will rise to 30.9 by 2030, placing further pressure on government budgets and exacerbating intergenerational inequality.

Part of the rising ratio is simply due to higher life expectancy which has risen from around 70 years in 1970 to 83 today, which is one of the highest in the world. However, a big driver is our fertility rate (births per female) which has declined from around 2.96 in 1970 (the end of the baby boomer period) to 1.79 today. The rate required for a stable population in Australia (ignoring net immigration) is 2.1 births per female.

Without immigration, our population is in decline.

There have been a few positive policies to counter the inevitable impacts our ageing demographics, such as:

1) the introduction of superannuation by the Hawke Government in 1986 to help retirees become financially self-sufficient, and

2) the formation of the Future Fund by Peter Costello in 2006 to cover certain superannuation contributions of public servants.

Understanding the rise in the dependency ratio, governments should be creating surpluses now to mitigate the future impact of lower taxes from a relatively-shrinking workforce. Continued budget deficits only increase the cash crunch for future generations. The government needs to reconsider the tax breaks that currently benefit older generations in the context of the need to lower the national debt or fund infrastructure.

3. Natural increase

We predominantly rely on immigration to boost our population. If we want to change the mix, we need policies that encourage a higher birth rate.

Millennials (now aged 23-39) are the current baby-producing generation. As 62% of the population live in our five largest cities, Millennials face uncomfortable choices between children and lifestyle. I don't mean missing out on smashed avocado on the weekend, but between living in cities where opportunities exist (which entails high mortgages) and having bigger families.

We all know how high the cost of living is in our major cities. How many under 40's can afford a four-bedroom house in a major city to support a three-child family? It should be obvious to governments that the stretching of family budgets impacts the options of family size and consequently the birth rate.

The Federal Government claims that natural increases (births over deaths) is largely out of its control. This is not true. If we want higher natural increases, we need policies that encourage Australians to have larger families, such as effective parental leave, affordable and accessible childcare and housing, family financial support, parental return to work schemes, quality state education and flexible career options. Simple policy changes such as replacing stamp duty on property transactions (which disincentivise potential downsizers from selling their family home) with a comprehensive annual land tax could make a difference. Governments and companies should be collaborating on this together.

4. Immigration

Australia is a successful multicultural society. Around 7 million of our current residents were born overseas. However, immigration has become unpopular amongst many people in the West.

It shouldn't be. We need debate, not demonisation. Governments are not spending enough money on infrastructure (schools, hospitals, transport etc) in high growth areas. We must review how immigration impacts the social construct of existing communities. Both issues are under-addressed in high immigration countries. The left and right of politics both have a role to play in fixing how immigration impacts everyone.

The simplest economic impact of immigration is the incremental GDP a new arrival brings to the country and the additional tax they pay. IMF estimates show that Australia's current migration programme will add between 0.5% – 1% to annual GDP growth from 2020-2050. Non-humanitarian immigration (which accounts for around 70% of migrants) should focus on bringing positive outcomes to Australia:

- greater population (a given)
- positive fiscal impact (highly likely with skilled migration)
- improved productivity and innovation (highly likely with skilled migration)
- improved diversity and social cohesiveness (more likely with targeted policies).

Immigrants often play an outsized contribution to business development and enrich cultural diversity which should be celebrated. Successful Australians who are immigrants or children of immigrants include Frank Lowy, Dr Karl Kruszelnicki, Harry Triguboff, Tan Le, Majak Daw, Anthony Pratt, Justin Hemmes and Huy Truong ... the list is endless. There is a positive correlation between migration and lower government spending per capita as migrants are predominantly of working age and therefore are more likely to contribute towards tax revenue than be dependent on social services.

The US is renowned for the number and size of successful businesses that have been developed by immigrants or their first-generation children. Here is a table of some companies and their famous founders. This analysis

suggests **216 of current Fortune 500 companies have been started by immigrants** or their children. That is a phenomenal economic contribution!

Selected US businesses started by immigrants or their children

Founder	Company	Country of origin	Status
Steve Jobs	Apple	Syria	Child
Sergey Brin	Alphabet / Google	Russia	Immigrant
Alexander Graham Bell	AT&T	Scotland	Immigrant
Henry Ford	Ford	Ireland	Child
Jeff Bezos	Amazon	Cuba	Child
Herman Hollerith	IBM	Germany	Child
Charles Pfizer, Charles Erhart	Pfizer	Germany	Immigrant
Herbert Henry Dow	Dow Chemical	Canada	Immigrant
E.I. du Pont	DuPont	France	Immigrant
Marc Randolph	Netflix	Austria	Child
Richard & Maurice McDonald	McDonald's	Ireland	Child
William E. Boeing	Boeing	Austria	Child
William Procter, James Gamble	Procter & Gamble	England, Ireland	Immigrant

We are *the lucky country* as foreigners want to live in our modern, democratic, liberal society. With such significant levels of immigration, we need to ensure that it does not adversely impact the social cohesion of the country and the people we attract add to the brain gain.

Policies such as continuing to attract skilled migrants, providing a path to residency, sensible infrastructure and showcasing Australia as innovative to attract the most ambitious should be pursued.

5. Australia in Asia

Australia's place in rising Asia again reinforces our lucky country status and the opportunities that it presents. However, it also brings into focus the planning we need in order to secure our prosperity and future. Geopolitical shifts are forcing us to consider strategic and economic partnerships. Regardless of the population growth Australia achieves, we are a blip in the Asian region which is currently estimated at 4.6 billion people.

China's and other Asian countries' middle class continues to expand rapidly. The Brookings Institute estimates that the global middle class will rise from 3.2 billion (2016) to 4.2 billion (2022) to 5.2 billion (2028). About 80% of this increase is forecast to come from Asian nations, meaning around 1.6 billion additional higher-spending middle-class consumers on Australia's doorstep by 2028.

These customers offer us a tremendous opportunity. Australia can provide high value goods, services and experiences not available within their economies.

Conclusion

What is a sensible population for Australia? I don't know. However, I do believe if we continue a 'business as usual' approach (increasingly, a two-city nation), our population ceiling is close. Our sustainable population could be significantly higher if we consider some radical new approaches to infrastructure, environmental impact and immigration. If we want to rely more on natural increases to underpin population growth, we will need to re-imagine how our big cities operate and the support we provide families.

Most importantly, we need our politicians to start publicly discussing our future demographics.

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Three leading Aussie stocks dependent on China

Glenn Freeman

The signing of the phase one agreement by US President Donald Trump and Chinese Vice Premier Liu marks a thaw in the 18-month row between the world's two largest economies.

But scepticism remains because the deal doesn't fully eliminate the tariffs that have slowed the global economy. It also sets hard-to-achieve purchase targets.

Companies dependent on China

Looking some of the large Australian companies with the greatest China exposure – outside of mining conglomerates – three companies stand out. Each of these companies count sales into China as a considerable driver of revenue.

- Winemaker and distributor Treasury Wine Estates (ASX:TWE)
- Milk and infant formula company A2 Milk (ASX:A2M)
- Vitamins company Blackmores (ASX:BKL)

At the height of the trade tensions last year, Morningstar Australia's Director of Equity Research Adam Fleck didn't anticipate any long-term negative effects.

He conceded that any company deriving a lot of money from Chinese consumers was likely to be hurt by a slowdown in China's economy.

Conversely, Fleck said that if tariffs applied to goods from the US it would be good news for Australian companies.

China's economy is expected to have grown 6% in October-December from a year earlier, according to analysts polled by Reuters, unchanged from the previous quarter's pace, which was the slowest since 1992 - the earliest quarterly data on record.

Let's take a brief look at the three companies.

1. Treasury's China sales on track

Treasury Wine Estates, a global wine company that increasingly targets high-end consumers, benefited from a drop in the tariffs China imposed on Australian winemakers in the first half of 2019 – at the same time as US wine exports to the country fell sharply.

Fleck sees continued growth in Treasury's Asian business, which comprises 26% of sales and 31% of operating income. This is largely because of the company's "premiumisation" drive in boosting its high-end brands and reducing sales of lower-end wine.

His outlook for double-digit average annual volume gains in Treasury's sales in China remains on track, forecasting 14% annual volume growth over the next several years.

"Chinese wine consumption has climbed off a low base, averaging 16% annual volume gains since 2011, as the region's climbing consumer wealth has driven demand for upmarket brands," says Fleck.

He expects volume gains will remain "tough to come by" but believes Treasury's focus on the premium end of the market and continued growth in China and other Asian countries positions it favourably.

Treasury Wine's fair value estimate of $12.80 was lifted from $12.30 in August, on an expectation of higher margins over the long term.

But Fleck also sounds a note of caution, given the company currently trades at $17.24, some 35% above what Morningstar thinks it is worth.

2. A2 Milk's premium pricing

New Zealand-based milk and infant formula company A2 Milk has long been linked with Chinese consumers, especially in connection with professional "daigou" shoppers who legally buy the milk powder to sell overseas.

But Fleck viewed A2 as largely immune to fallout from the trade tariffs, even while highlighting sales of infant formula into China as the company's key medium-term growth avenue.

"We forecast rising prices, new products, and a continued consumer shift toward foreign brands to drive higher revenue per volume, and high-single-digit growth for overall value in the market," Fleck said in late 2019.

"We see A2 increasing revenue in this geography at a 16% annual clip through fiscal 2029, with Chinese infant formula climbing to about 90% of the company's consolidated earnings before interest, tax, depreciation and amortisation."

He notes that A2's premium pricing gives it an advantage over other dairy producers, which has seen its operating margins top 30% from less than 1% in fiscal 2015.

"We see a ceiling to A2's profitability upside but the company's business strategy supports sky-high returns on invested capital," Fleck says.

He believes ROIC will average more than 230% over the next five years. This, combined with a debt-free balance sheet and strong free cash flow, underpins the narrow moat of competitive advantage attributed to A2 Milk.

The company's fair value estimate of $14.50 as of August last year was lifted from $13.60, on the back of solid financial results for fiscal 2019. A2 shares closed at $14.23 on Thursday and are considered fairly valued.

3. Blackmores hits some regulations

Vitamin maker Blackmores, which relies on Asia for around 40% of total group revenue, is also trading in line with Morningstar's fair value estimate.

Equity analyst Nicolette Quinn highlights China as a large opportunity for narrow-moat Blackmores, anticipating around 10% annual growth in the market from fiscal 2021.

She notes China is the second-largest global market for vitamins and dietary supplements, behind the US.

"However, the company has struggled to get across the regulatory environment, and changes in distribution channels has caused volatility," Quinn says.

Alongside the daigou channel, two key distribution methods for Blackmores are cross-border online sales and shopfront sales from supermarkets and pharmacies.

The lack of formal Chinese regulatory approval to sell from these physical storefronts continues to elude Blackmores, despite having been in the application process for more than five years.

"We understand this is a key point of focus for the new management team," Quinn says. She lifted the company's fair value estimate to $81 a share in October, following the appointment of CEO Alastair Symington and management's outline of a sustainable growth framework at its annual general meeting.

"We attribute recent disappointing performance to execution and regulatory issues, and not a changed regard for the Blackmores brand by the customer.

"Blackmores commands a price premium and its reputation for quality is its source of competitive advantage."

Glenn Freeman is Senior Editor at Morningstar Australia. This article is general information and does not consider the circumstances of any investor.

Where do Australian share returns come from?

Ashley Owen

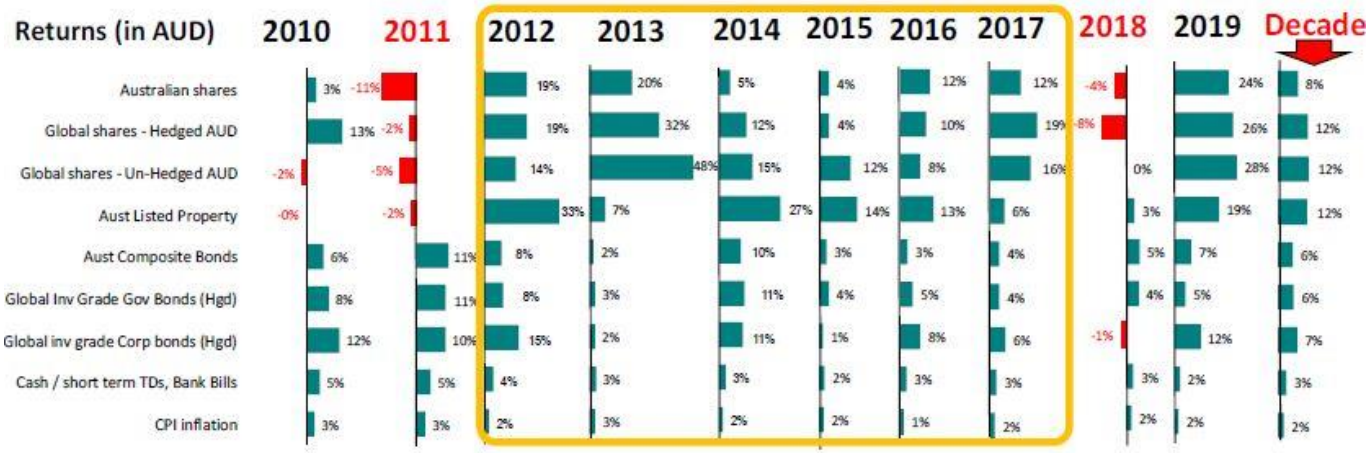
Last month, we looked at how Australian shares performed in the last decade in terms of the winners (healthcare, tech, utilities) and losers (miners, oil/gas, telcos, banks). This time we look at how Australian shares fared in relation to other asset classes in diversified portfolios.

Then we break down the underlying components of the performance of Australian shares, and see what they suggest for the future.

Australian equities versus other assets

Australian shares had a relatively poor decade in the 2010s, with total returns (share price gains plus dividends) of 8% per year. This is below the long-term average of around 11% per year. The 8% was lower than 12% per year from international shares and Australian listed property trusts. Coming in at 6% per year were Australian and international bonds, but with much lower volatility than shares.

Here are the total returns from the major asset classes (in Australian dollars) for each of the past 10 years, and the decade averages at right.



It would have been reasonable to expect that returns from shares would be relatively good in the 2010s because the decade started out from a low base after the share price crash in 2008 and the partial rebound in 2009, but it was not to be. 2010 was a continuation of the 2009 rebound, but Australian shares were hurt by four rate hikes by the RBA due to rising inflation in the China-led commodities surge.

Then came the great 'QE' boom (quantitative easing: central banks buying assets with newly printed money to force down interest rates in order to entice people to buy shares – which they did!). The result was a **six-year run** of positive real (after inflation) returns from all main asset classes.

This had never happened before and will probably never happen again.

But in 2017, we saw three Fed rate hikes and the European Central Bank talked about closing its QE programme. It was the end of the great six-year golden era for returns. In 2018 share prices fell everywhere and bonds also posted low returns - an unusual combination. The triggers included rate hikes from the US plus slowdown fears in China, stagnation in Europe and Japan, fears of slowing growth in the US and Trump started his trade wars. As these worries eased, market strength returned in 2019.

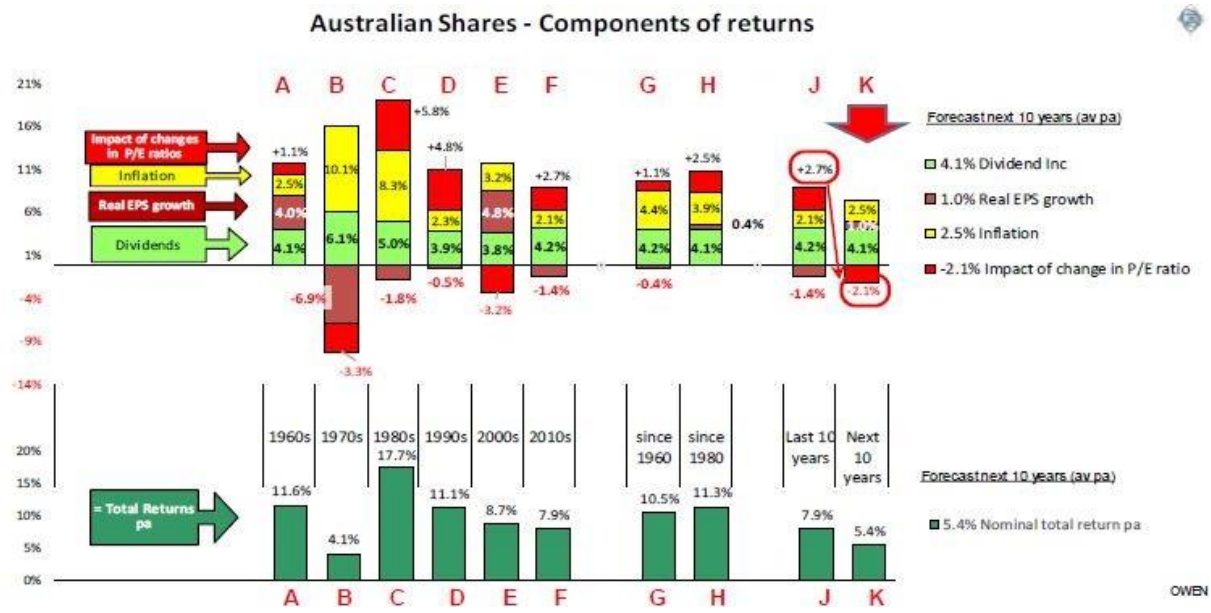
There are also useful lessons in seeing where the returns from Australian shares actually come from.

Where do share returns come from?

The broad Australian share market has generated total returns (share price gains plus dividends, but before tax and franking credits) averaging 11.3% per year since 1980. It is tempting to simply assume that because the market has generated these good returns for such a long period, then it would be reasonable to expect this to continue over the next 10 years or so.

This is too simplistic. We need to understand the different sources of returns, and then to assess whether each of the components is likely to continue in future at the same rate, or higher, or lower, or maybe even reverse direction.

The chart below shows the sources of returns by decade since 1960 (columns A to F). Column G shows the average since 1960. H is since 1980, which breaks up the 11.3% from the prior chart. Column J shows the most recent 10 years (which in this edition is the same as the 2010s decade, column F), and K shows a forecast for the next 10 years. The bottom section shows average annual total returns in each period.



The first observation is that not only do the total returns to shareholders vary significantly in each decade, the sources differ even more.

Total shareholder returns over the past 10 years averaged 7.9% pa (column J), which is lower than post-1980 average of 11.3% (H). The main reason was that inflation (yellow bars) was lower over the past decade than it was since 1980.

These returns came from the following four sources:

1. **Dividends** contributed **4.1%** pa since 1980 and 4.2% pa over the past decade. This is the only component of returns that is likely to be sustainable at similar levels in the next 10 years (and is the only component that has been reasonably consistent over the prior century as well).

2. **Inflation** contributed **3.9% pa** since 1980 but only 2.1% over the past decade. Inflation over the next decade will probably average say 2.5%.

3. **Growth in real (ie excluding inflation) earnings** (profits) per share contributed only **+0.4%** pa since 1980 and a negative -1.4% per year for the past decade. This is a very poor indictment of management of Australian companies over the past 40 years – to consistently fail to grow real profits per share even though the total economic pie in Australia has been growing by more than 3% per year (real GDP growth).

4. **Changes in price/earnings ratios** are changes in the amount of money investors are willing to pay per dollar of profits. This contributed another **+2.5%** per year since 1980 and +2.7% per year over the past decade. Price/earnings ratios were 7.5 at the start of 1980, and 15.2 at the start of the last decade, but the ratio is 19.8 now. This means that investors paid $15.20 per dollar of company profits at the start of 2010 but they are willing to pay $19.80 per dollar now, which pushed share prices up by 30% (or 2.7% pa) for the same level of profits. People feel richer when they look at their share prices, but it is an illusion. They simply paid 30% more for the same profits than they did 10 years ago.

For this illusory price gain to continue, we would have to pay another 30% more per dollar of profits in the next 10 years, which would push the ratio up to an even more expensive 26 times profits. Even if the ratio stayed flat at the current expensive 19.8, it would mean returns will be 2.7% lower than last decade.

A more realistic assumption would be that the current 19.6 price/earnings ratio is unsustainably high and would probably fall back to say 16 (still above the historical average of 14). This would reduce returns by another 2% per year.

And so to the forecast

If we assume dividends at around 4%, plus inflation of around 2% to 2.5%, plus real earnings per share growth of say 1% or perhaps 2% pa (since we are now in a profit slump), we get 7-8% total returns IF price earnings ratios remain flat, which is highly unlikely.

If price earnings ratios reduce back to 16, that knocks 2% off returns, to say 5-6% pa. This is a sobering prospect, but it forces us to look at how returns are generated rather than simply relying on history to repeat. It rarely does.

Ashley Owen is Chief Investment Officer at advisory firm Stanford Brown and The Lunar Group. He is also a Director of Third Link Investment Managers, a fund that supports Australian charities. This article is for general information purposes only and does not consider the circumstances of any individual.

Natural disasters and access to superannuation

Olivia Long

The impact of Australia's ongoing bushfire crisis is devastating. Not only are Australians losing their homes and entire belongings, but many are also hit by the loss of their business or means to generate an income. They may be in urgent need of cash as a result, and charitable and government support will be limited.

In the first instance, people impacted may be entitled to a disaster recovery payment and should contact Centrelink.

The disaster recovery allowance is a short-term payment to help anybody if a declared disaster directly affects their income. You can access it for a maximum of 13 weeks and is payable from the date you lose income as a direct result of the bushfires.

How does early access work?

Whilst the Australian Taxation Office (ATO) does allow for early access to superannuation under compassionate grounds or for those suffering 'severe financial hardship', it is recommended access to super remains a last resort to those in need. This is due to the nature of superannuation and its intended use to 'provide an income upon retirement'. It may also be difficult to put money back into super after it is taken out.

Members of SMSFs and large super funds, however, may try to access their superannuation due to severe financial hardship in addition to the disaster recovery payment.

A super withdrawal due to severe financial hardship is paid and taxed as a super lump sum. The minimum amount is $1,000 (unless a super balance is less than $1,000) and the maximum amount is $10,000.

Superannuation members can only make one withdrawal because of severe financial hardship in any 12-month period.

Another option available to those eligible is to commence a transition to retirement pension, called a TRIS. It allows access to super without having to retire or leave a job. A TRIS permits super members to draw down a maximum of 10% of their super account balance during a financial year which can be used to fund expenses. In an SMSF, funds are accessible immediately.

To be eligible, a member must have reached their preservation age (if another condition of release has not been attained). For those born before 1 July 1960, the preservation age is 55, but the age increases for those born after that date. For more details, see the ATO website.

Sympathetic judgement needed

Given the magnitude of the devastation caused by the bushfires, the Federal Government should allow early access to super to assist those impacted during these horrific times.

Anybody considering an application for early release can contact the ATO on 13 11 42 to discuss their situation. Eligible Australians impacted by bushfires can make a claim by calling 1800 806 218.

Olivia Long is Managing Director, Strategy & Operations at Prime Financial Group and ExpertSuper. This article is general information and does not consider your personal objectives, financial situation or needs.

Three overlooked points on the LIC/LIT fee battle

Jonathan Rochford

The articles have been flying back and forth over whether financial advisers can accept commissions for selling LICs/LITs to their clients. If you haven't been following this so far, Graham Hand wrote a well-rounded article recently, with Jonathan Shapiro and Christopher Joye also leading the charge in *The Australian Financial Review*. I'm not going to rehash the main points here but want to bring three additional points to the discussion.

1. Financial advisers shouldn't be keeping any commissions

Whilst some are arguing that LIC/LIT commissions must go, they are supporting the continuance of commissions for other listed product types. There's no decent argument for this. If any commission is viewed as biasing an adviser's decision, they must pass the commission to their client or refuse it outright. Saying that an adviser has a conflict if the commission relates to a LIC/LIT but doesn't if it relates to a hybrid or equity investment is nonsensical.

For those struggling with the concept of selling hybrids or equities on their merits and without an adviser commission, look to the institutional debt markets. These have long functioned without the need for commissions. If the bond is considered poor value it receives little interest, but if it is good value, it is many times oversubscribed. There's no reason that hybrids and equities can't be distributed in the same fashion.

2. Brokers can keep commissions, subject to disclosure

Those dealing with clients need to choose whether they are sales people (brokers) or financial advisers. Whilst a financial adviser needs to adopt a best interest/fiduciary duty position and consider the wider client position, I don't see that a broker should be subject to the same restrictions. A broker should however, be clearly disclosing that they are a broker being paid for the sales they make. This could be as simple as a verbal statement such as;

"I am a salesperson not a financial adviser which means that I earn commissions by selling products and services to you. The products and services I am selling may not be in your best interest and you may want to seek independent financial advice before agreeing to purchase."

Some might argue that this is overkill and retail investors are smart enough to know who is a broker and who is an independent adviser. I think the Royal Commission showed that not only were clients confused about the distinction but many so called 'advisers' were as well.

3. LICs/LITs are an appropriate structure for illiquid investments

Some of the arguments against LICs/LITs come from a viewpoint that open-ended managed funds are the best solution for retail investors as they always offer a quick exit at close to the net tangible asset (NTA) calculation. This is fair for the most liquid sectors such as large cap equities or vanilla investment grade bonds.

However, for more illiquid assets such as sub-investment grade debt, private equity, some hedge funds and direct property, history is littered with examples of funds that ran out of cash and locked their investors in. If the assets take substantially longer to sell than the redemption period on the fund, investors and managers are playing with fire.

Given this, unlisted closed ended funds (e.g. direct property syndicates, private equity funds), individual mandates or LICs/LITs are the most appropriate vehicles for illiquid assets. As many retail investors insist on having some form of liquidity, a listed fund is likely to be their best avenue to access these sectors.

Critics of listed funds often point to the higher fees (from listing and governance costs) for these funds compared to their unlisted equivalents. This isn't always true, with fees running at over 1% per annum for retail investors on some open-ended unlisted funds. It also ignores that higher fees could be more than offset by higher returns as listed funds do not have to hold large cash positions to offset the risk of a run on the fund that open-ended unlisted funds face.

Jonathan Rochford, CFA, is Portfolio Manager for Narrow Road Capital. This article is for educational purposes and is not a substitute for professional and tailored financial advice. This article expresses the views of the author at a point in time, which may change in the future with no obligation on Narrow Road Capital or the author to publicly update these views.

Decumulation phase calls for retiree risk rethink

Richard Dinham

Australia's superannuation market is rapidly maturing, with 65% of Australia's $2.8 trillion super assets sitting in the hands of fund members aged 50 years and older.

Balances on average are also increasing and, with Australia having one of the longest life expectancies in the developed world, people will be spending a lot of time – 30 years or more – in retirement. The cash rate is also sitting at an unprecedented low, offering those approaching retirement little comfort.

It is obvious that a fundamental shift in the investment strategies offered to Australians will be required to meet the needs of future retirees.

Low rates increase need for sensible risk-taking

Investing in low-risk investments such as cash in today's low interest rate environment is likely to result in mediocre outcomes. Those approaching retirement and retirees themselves need to consider taking sensible investment risk but this also requires the ability to adequately manage these risks at a time when wealth preservation is vital.

When people are saving for retirement, the focus tends to be solely on performance. While that may be appropriate during the so-called 'accumulation phase', it fails to address the complex needs of those people approaching retirement or in retirement, the 'decumulation phase'.

When approaching retirement, an investor's risk appetite instinctively decreases. The tolerance for risk is much lower than in the many years of accumulation where workers, via their superannuation contributions and longer-term outlook, cultivate a pot of money to retire on comfortably.

So, how do retirees and those approaching retirement marry wealth preservation and a sufficient amount of investment risk together?

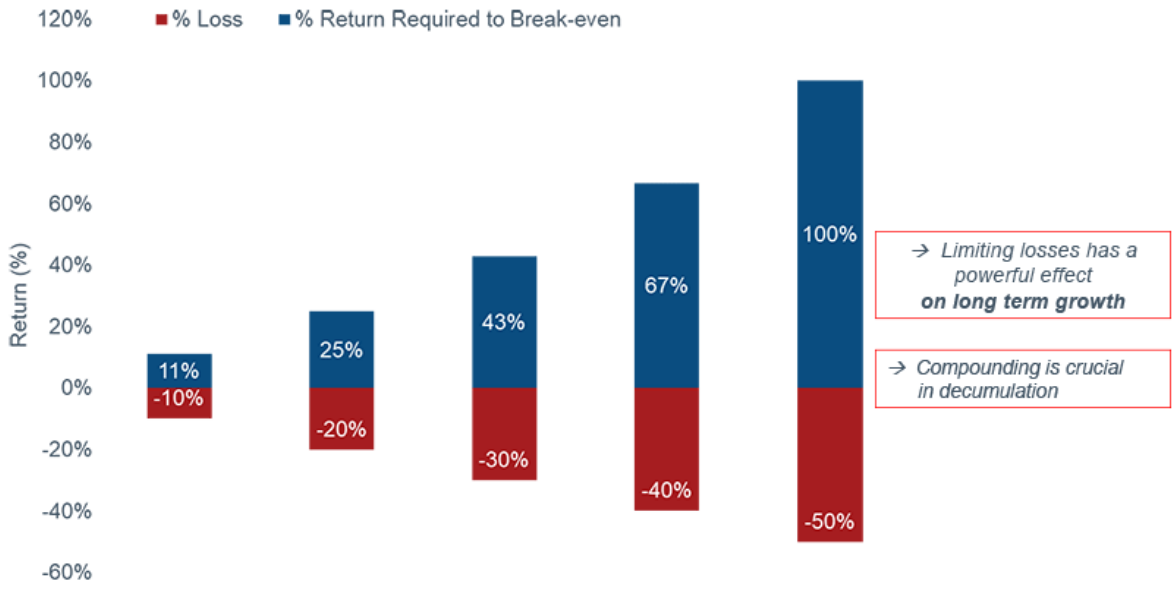
Common assumptions may not work in decumulation

Retirees still need to take appropriate investment risk to address inflation and longevity risk, but there also needs to be a focus on the impact of market volatility on retirement outcomes, known as sequencing risk.

While the effects of compounding and dollar cost averaging are positive for savings and accumulation, the opposite is true during decumulation. In fact, limiting losses in retirement has a more powerful effect on long-term growth than capturing the full upside of market gains

Compounding is not well understood

What positive returns are required to break-even after market losses?



For instance, a 10% investment loss requires an 11% gain to simply return to the original point before the loss occurred. A 20% investment loss requires a 25% gain, and so on, to the point where a 50% loss needs a 100% gain to return to the original balance.

The following examples provide a stark illustration of the impact of losses on a retiree's portfolio during drawdown (decumulation).

Assuming a starting balance of $500,000 and a drawdown of $3,000 per month, the corresponding performance of four different investing options over the 20 years between August 1999 and August 2019 (20 years) are as follows:

- An investment in the MSCI World Index would see the investor run out of money by May 2014.
- An investment in a fund capturing 80% downside and 100% upside has a final balance of $402,000 in August 2019.
- An investment in a fund capturing 80% of the downside and 110% of the upside has a balance of $1,102,000 in August 2019.
- But, an investment in a fund capturing 40% of the downside and only 80% of the upside, has a balance of $1,600,000 at the end of the 20 years.

Reduce risk during retirement

Clearly, while taking some risk in retirement is needed to avoid unpalatable outcomes, limiting downward movements in retirement portfolios is even more important than capturing the full upside in markets.

While products with a guarantee attached can offer comfort, the cost of that guarantee can be high. The challenge for retirees is to find an investment that provides high participation in equity up markets but consistently limits the downside impact of markets at a sensible overall cost.

One option is a low volatility equity fund which offers access to equity markets but aims to lower risk through careful stock selection. By choosing a diversified portfolio of high quality stocks that are expected to fall less than the market, the portfolio manager's focus is on limiting the impact of falls.

Another approach used by financial advisers and superannuation funds is the bucketing framework.

Bucketing allocates part of the portfolio to cash and other income for the next two to three years of income needs, while taking market risk on other assets. If there is a period of volatility, retirees don't need to draw down on the growth assets and can better ride out the volatility. At the same time, if markets are prosperous, then they can top up the income bucket. This approach is becoming increasingly common, with most advisers having at least two buckets at their disposal, sometimes more.

In summary, investors in retirement still need to take on equity risk, but the compounding effect of investment losses can have a devastating effect on retirement portfolios. The right kind of equity exposure in retirement should come with downside protection and a capture spread that enables sufficient participation in the market upswings.

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When algorithms go rogue the havoc is all too human

Dubravka Cecez-Kecmanovic

From recommending a movie on Netflix to processing a job application, algorithms are increasingly part of the decision-making processes of our everyday lives.

But alongside this has come a growing awareness of the negative effects of algorithmic decision-making, with individuals denied access to social security or health insurance, or even spending longer in jail, all without any human intervention.

We have coined the term 'algorithmic pollution' to describe this phenomenon of unjustified, unfair, discriminatory or other harmful consequences of autonomous algorithmic decision-making.

Managers and politicians typically get excited about new technologies, especially artificial intelligence (AI). They believe that we are developing powerful algorithms that are non-biased, efficient and better decision-makers than humans, which is a myth. Algorithms learn from human beings, and they learn their biases.

Lack of understanding

Hiring algorithms, for example, draw on historical data to identify characteristics that predict job performance. As they learn from past decisions, algorithms reinforce historical biases, despite the best intentions of designers.

And algorithms often rely on unchecked and potentially inaccurate data sets, which increases the risk of wrong and unfair decisions.

Consider the case of a highly trained and experienced job candidate who was not short-listed. An investigation found that the algorithm rejected the candidate based on data from pharmacies where the candidate was once prescribed anti-depressants.

Perhaps most bizarre of all is predictive policing. Almost 400,000 Chicago residents now have an official police 'risk score' calculated by an algorithm. While still secret and publicly unaccountable, these risk scores are used for decision-making and shape policing strategy.

There's a worrying lack of understanding of the inherent limitations and dangers of algorithmic decision-making among politicians, managers and other professionals. While algorithms can be very useful in complex calculations and support decision-making, they cannot replace human judgment.

Unfair impacts

Naz Guler, a director at PwC who works in the area of transformation delivery, says:

"Increasingly, both in business and in government, I'm seeing that decisions are being entrusted to technology, and there's a growing belief that 'tech is always right'. I see increasing investment into AI systems and a growing reliance on AI models, without having a clear understanding of their capabilities, knowledge or training processes.

We need to slow down and think clearly about what we're doing, and the potential unfair impacts we will have. I would like to see businesses doing more to establish the foundations of trust in their algorithms and models."

Guler sees the drive towards algorithmic solutions as the result of the convergence of huge increases in technology (such as data storage and computer power) plus the exponential growth of the volume of available data.

AI has enormous potential to improve public policy and services, as Guler believes data analytics can enable governments to develop policies to create a more equitable society, with better personalisation and customisation of services. She says:

"There's also been a realisation that data itself is really valuable. When it's augmenting human efficiencies, it contributes in a positive way. The danger comes when we rely on data-driven decisions with no human intervention or consideration.

In my view, if there's a bias within the data, you will get inadvertent decisions. A good example here is facial recognition systems, where there are a lot of examples of racial bias. There's a lack of transparency about what data we're using and how that data is relevant in any given decision."

Perpetuating prejudice

Perhaps the most unsettling area where algorithms are increasingly taking over from human decision-making is in law enforcement. Predictive policing systems such as Predpol, which use past data on crimes in order to focus policing resources into certain geographical areas, are used widely in the US.

"*In a resource-limited world, the idea of reducing crime by spending less money is very attractive,"* says Lyria Bennett Moses, a Professor and Director of the Allens Hub for Technology, Law and Innovation at UNSW Law. "*And the words that get used to describe predictive policing – objective, scientific, data driven – all have a positive spin."*

But while Bennett Moses admits that these systems can be good at predicting location-based crime such as burglary, a predictive policing system inevitably focuses on where crime is reported, rather than where it happens.

These tools are less useful at predicting crimes with little location-based correlation, such as domestic violence (which are generally under-reported) or crimes policed in a racially based way, such as those connected with the use of offensive language. She says:

"Offensive language occurs a lot at, say, sporting events or in pubs. But where it actually gets reported is in areas like Sydney's Redfern, with its large Indigenous population. If you police a community a lot, then you notice more of the crime that happens there. And that's what goes into the database."

Other algorithmic systems, such as COMPAS, are now creating risk assessment scores that are used in decisions on criminal sentencing and parole. Pro Publica has found that this tool has a higher false positive rate (falsely flagging danger) for African Americans, but it goes beyond racial bias.

A typical question that a system will ask is, are your parents still married, and if not, how old were you when they divorced? Presently, if an offender provides the 'wrong' answer to this, they could get refused parole, because they fall into a group that's more likely to reoffend if released early. Bennett Moses says:

"The basic idea here is wrong. There are some kinds of decisions where these factors should be ignored, even if they are statistically relevant.

We're relying on systems that affect people's lives, so we need to take a step back. It's not just the machine – racial skewing is not the machine. If the past data suggests that black people commit crimes in certain places (and disproportionately so due to targeted policing) then that's where the machine will look. It becomes a perpetuator of prejudice."

Human responsibility

So, if the problem is clear, what then of the solution? Can businesses and governments police this themselves?

We need more regulation, and it needs to be well-evidenced and based on research. The new General Data Protection Regulation (GDPR) in the EU is a good model to follow. Google and Facebook are already worried about these laws, so the EU is on the right track. Guler says:

"'*Responsible AI' is a bit of a buzzword at the moment, AI that's designed to draw in human values. But the problem with this is – which values? Current business leaders in this sector are all North American, and for the most part, white men."*

Guler sees a good parallel here with recent discussions over bio-ethics.

"*There's an idea that we should be lining up AI in terms of human rights. We need to think about fairness, transparency, and integrity in decision making."*

For any decisions made by algorithms, there has to be a human responsibility identified. If algorithms are our future, then understanding, fighting against and preventing algorithmic pollution may save our collective dignity and humanity.

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