Firstlinks
a Morningstar company

Edition 402, 9 April 2021

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Editorial

There was an important moment on ABC TV's 7.30 programme last week in its 'The Future of Retirement' series hosted by **Alan Kohler**. As well as interviewing Superannuation Minister **Jane Hume**, Kohler asked former Treasurer and Prime Minister **Paul Keating** about the origins and purpose of super:

***PK**: I designed the system. I used to say to the caucus of the Labor Party, what superannuation is about is personal empowerment. That is you can cut the shape of your life, particularly at the end of your life, without reference to a government agency ... I think people in retirement think in family terms.*

***AK**: Let's be clear about what you intended back in 1992. Did you intend that some of the superannuation would be retained and passed on to the kids or not?*

***PK**: Yes, basically, yes, for people to do ... that's the empowerment point, to do what they like with it. I'm not opposed to using some of the capital, but I'm opposed to the state telling you you've got to burn it all.*

This is an important debate, as earlier in the programme, Jane Hume said:

"We want to make sure that people have the options available to them to spend their retirement income as efficiently, as effectively as possible so that they have a higher standard of living in retirement, which of course is the aim of the system."

In 2015, I wrote an article called '*My purpose of super is probably not yours*' where I quoted evidence that using super as a bequest was a legitimate purpose, and Keating confirms again that it was always his intention. So we are republishing this article because government policy is heading in the direction of reducing the ability to pass superannuation to the next generation.

Jon Kalkman adds a powerful article to the debate, showing how long your money will last based on differences in spending and earning rates. For example, 1% more in spending each year could reduce the time your money lasts by five years. In the context of long lives, more people will end up on a pension than expected at the time of their retirement.

Continuing our powerhouse of experts on superannuation and retirement changes (in the last two weeks, **Bernard Salt, Deborah Ralston and David Knox**), **David Bell** presented this week to the **Senate Economics Committee** on the proposed Your Future, Your Super legislation. David summarises his findings on the performance test which he believes will drive unwelcome changes, such as super funds hugging the average. The worry is the commencement date of 1 July 2021 is only three months away and the bill has not been drafted, never mind passed.

This week, the ATO issued a final report on the early access to super scheme which permitted withdrawal of up to $20,000 per person. It shows that many people will drain their super if they can, with 4.8 million applications for $39 billion received. The ATO approved 4.6 million applications for 3 million people citing the following reasons (see table).

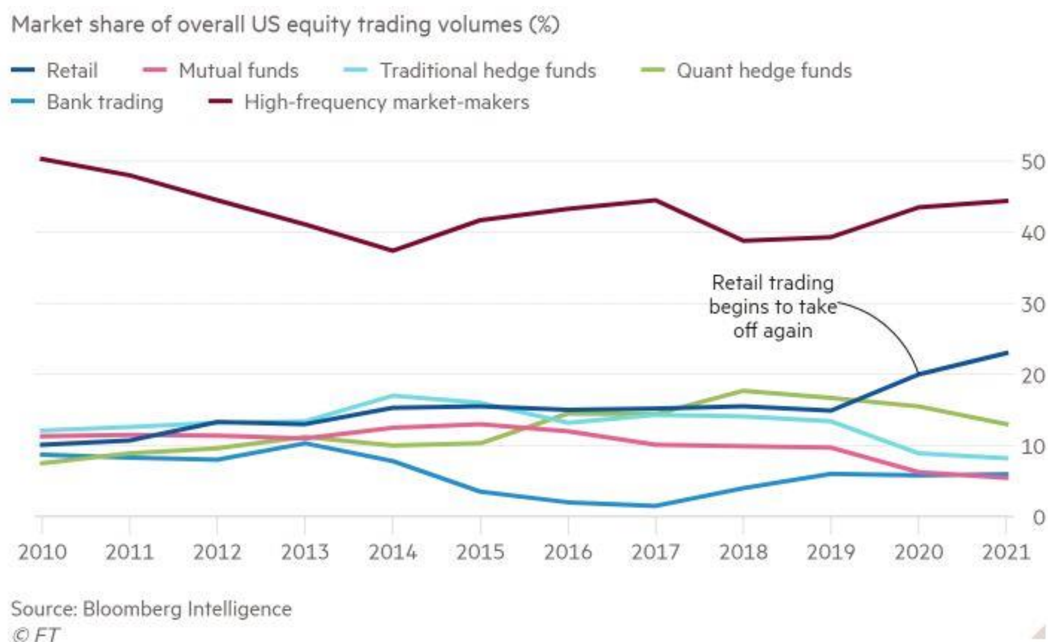
Demonstrating how SMSFs hold larger balances with members who do not want to withdraw early, only 40,000 of the applications worth $395 million came from SMSFs. This is 10.4% of the total amount withdrawn although SMSFs hold over 25% of super balances.

Approved applicants by request category

Resident	%	$m
Had a reduction in working hours	44	18.135
Unemployed	19	6,880
Eligible for government benefit	18	6,645
Sole trader – significant reduction in turnover	7	2,980
Been made redundant	3	1,025
Sole trader – suspended operation	1	455
Eligible for youth allowance	1	150
Eligible for farm household allowance	0	60
Non-resident	**%**	**$m**
Other temporary resident visa holders who cannot meet immediate living expenses	3	665
Held a student visa for 12 months or more	3	505
Temporary skilled work visa holder	1	320

Moving on from superannuation and retirement ...

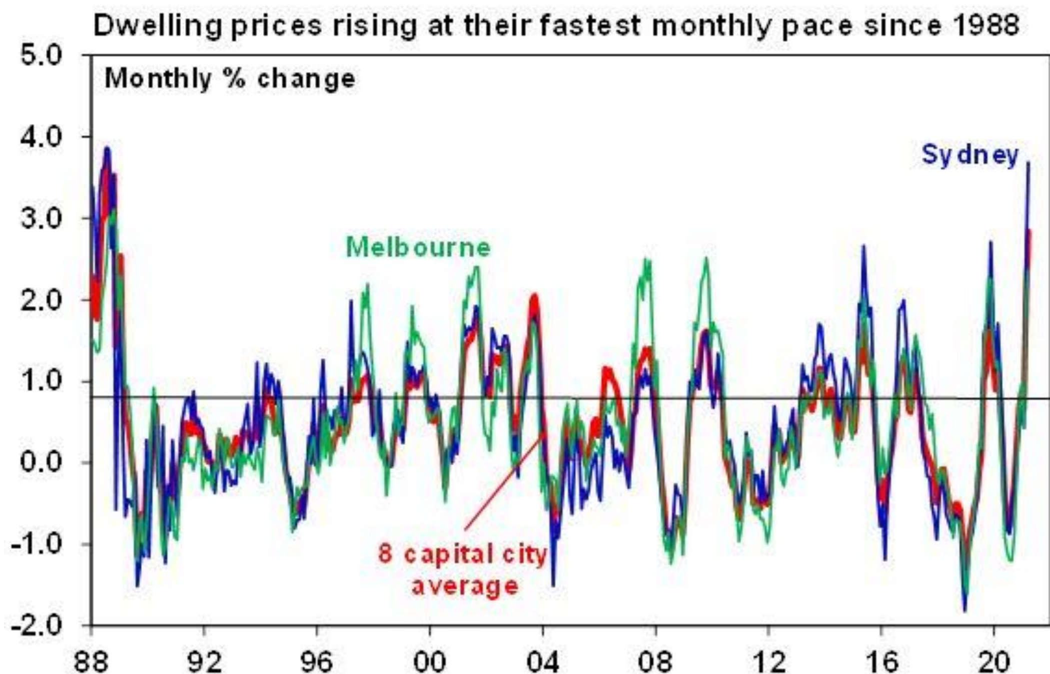
A major new trend of 2020 which is kicking on in 2021 is retail investors investing directly in the share market. It is difficult to obtain good data on the Australian market, although charts like the one below from the US show retail is now trading more than hedge funds and mutual funds (unit trusts) combined, with all dwarfed by high-frequency traders. US research suggests new retail demand is driving up stock prices, but the big question is whether it will continue if the market falls.



Source: Bloomberg Intelligence
© FT

So it's pleasing to receive solid Australian data from **Dr Shane Miller and Howie Zhang of Chi-X**, including how much of our exchange activity is retail and the types of brokers dominating trades.

With residential property prices booming, as shown below, it's as much an anguish for those left behind as it might be pleasure for those who have borrowed heavily. In many asset classes, there is a listed version which facilitates easier access to the asset in smaller amounts but **Hugh Dive** explains why this is not the case in residential property. Hugh shows why the only real way to gain exposure is to buy a residence, but it's competitive out there ...



Source: CoreLogic, AMP Capital

In casting the net wider for investment opportunities, **Victor Kohn** and his colleagues focus on emerging market equities, which were left behind in the tech-driven frenzy of the 2020 rise in US markets. He gives five reasons why EM is worth another look for 2021.

Finally, a lighter note with **Thomas Rice**, who gives his regular run through of exciting disruptions and new technologies. Anyone who thinks we are near a peak in innovation does not realise the billions flowing into new ideas on a scale that capitalism has never produced before. This week, **Canva founders Melanie Perkins and Cliff Obrecht,** entered the list of the 10 wealthiest Australians at $3.4 billion each after their software company reached a valuation of almost $20 billion. Yes, billion with a 'B'.

For the final time before the offer closes on 12 April, don't forget the great price offered by Morningstar to celebrate the Firstlinks 400th Edition published just before Easter. At only $1 a day for **Morningstar Premium**'s research on thousands of companies and funds, plus the portfolio software of **Sharesight**, it's a good way to stay on top of your investing. Click here for details.

This week's White Paper by **Shane Oliver of AMP Capital** is a Q&A on the big issues of global recovery, vaccines, the end of JobKeeper, inflation, the risk of a share crash and house prices.

How long will my retirement savings last?

Jon Kalkman

The Retirement Income Review (RIR) noted that many retirees leave large bequests and they would have enjoyed a higher standard of living in retirement if only they had spent some of their capital, not just the income from their investments. Planning cash flow in retirement is extremely difficult because of the uncertainties about expenditure, doubts about investment returns and unpredictability about how long we are going to live.

How long before the tank is empty?

For some retirees, investment returns exceed withdrawals, their savings nest egg continues to accumulate, and they need never fear outliving their savings.

For many others, retirement savings can be compared with a rainwater tank. Cash flows in from investment income and the sale of assets and cash flows out to pay a regular income stream as well as lump sums. Just

like a rainwater tank, if the cash outflow is greater than the cash inflow, sooner or later the tank is empty. The critical question then is; "How long before the retirement savings are exhausted?" The advice is typically; "It depends…" It depends on so many uncertainties that many retirees become extremely cautious.

Rather than simply hoping for the best, the table below provides some guidance for that planning. It shows the number of years it takes for a starting amount of savings to reduce to zero if the percentage withdrawn is greater than the percentage income earned.

To make the spending percentages meaningful, I have included a nominal capital value of retirement savings. **Please note** the starting capital amount is irrelevant in determining how long it will last; what matters, as always, is the earning rate and the withdrawal rate.

Spending more than you earn

Assume Sue has $800,000 in savings and she needs an annual income of $64,000 (8%). Assume also these retirement savings are invested and earning 6%. Therefore, Sue needs to liquidate $16,000 of capital in the first year to pay the shortfall in income and her savings balance progressively declines. According to this table, reading across the rows and down the columns, it will take **23.79** years until those retirements savings are reduced to zero.

If Sue could reduce her spending to 7%, her savings will last for 33.4 years.

The table clearly shows that if I spend 8% of my savings annually and earn only 1% per year, from a term deposit for example, my savings will be exhausted in only 13.42 years. It begs the question why term deposits remain so popular with retirees.

This table assumes constant withdrawal and earning rates over the whole time period, and it assumes no fees, taxes or inflation. The table is not a prediction, but it can be very instructive.

	Retirement Savings		**EARNING**									
	$800,000		**1%**	**2%**	**3%**	**4%**	**5%**	**6%**	**7%**	**8%**	**9%**	**10%**
SPENDING	$32,000	**4%**	28.91	35.00	46.90							
	$40,000	**5%**	22.43	25.80	31.00	41.04						
	$48,000	**6%**	18.32	20.48	23.45	28.01	36.72					
	$56,000	**7%**	15.49	16.99	18.93	21.60	25.68	33.40				
	$64,000	**8%**	13.42	14.53	15.90	17.67	20.10	23.79	30.73			
	$72,000	**9%**	11.84	12.69	13.72	14.99	16.62	18.85	22.23	28.55		
	$80,000	**10%**	10.59	11.27	12.07	13.02	14.21	15.73	17.79	20.91	26.72	
	$88,000	**11%**	9.58	10.13	10.77	11.52	12.42	13.53	14.95	16.88	19.78	25.16
	$96,000	**12%**	8.74	9.21	9.73	10.34	11.05	11.90	12.94	14.27	16.09	18.80
	$104,000	**13%**	8.04	8.44	8.88	9.38	9.95	10.62	11.43	12.42	13.68	15.38
	$112,000	**14%**	7.45	7.78	8.16	8.58	9.06	9.60	10.24	11.01	11.95	13.14
	$120,000	**15%**	6.93	7.23	7.55	7.91	8.31	8.77	9.29	9.90	10.63	11.53
	$128,000	**16%**	6.49	6.74	7.02	7.33	7.68	8.07	8.50	9.01	9.59	10.29
	$136,000	**17%**	6.09	6.32	6.57	6.84	7.14	7.47	7.84	8.26	8.75	9.31
	$144,000	**18%**	5.74	5.95	6.17	6.41	6.67	6.96	7.28	7.64	8.04	8.51
	$152,000	**19%**	5.43	5.62	5.81	6.03	6.26	6.51	6.79	7.10	7.45	7.84
	$160,000	**20%**	5.15	5.32	5.50	5.69	5.90	6.12	6.37	6.64	6.94	7.27

Years to Zero

The real world has fees, taxes and inflation

The table can also illustrate the effects of fees. Using the example above, if the adviser fee is 1%, the actual spending is 9% annually. According to the table, the savings are then exhausted after only **18.85** years, not 23.79 years. The fee of 1% has truncated the income stream by almost five years. That is the true cost of an annual fee of just 1%. Any tax imposed has the same effect.

With inflation, withdrawals need to progressively increase to maintain spending power. Modelling inflation is not possible because the table assumes uniform withdrawals, but if inflation is a constant 3% (which is near the RBA's preferred rate) prices will double in 24 years. In that scenario, the example savings will be depleted long before that time.

It is clear that retirees must minimise fees and taxes and retirement income must at least keep pace with inflation.

It is important to note that superannuation pensions mandate minimum withdrawals that increase with age regardless of inflation. For example, at age 80 the minimum withdrawal is 7%. As the table shows, larger withdrawals including lump sums accelerate the rate at which the retirement savings reach zero. Superannuation pensions have been designed to be exhausted by progressively removing assets from this tax concessional area.

Age pension as a safety net

In reality, the balance of capital is unlikely to reach zero because in Australia we have the safety net of the age pension. A couple who own their home with $800,000 in financial assets would actually be entitled to an annual part-pension of $6,258. Their combined income (investments plus age pension) is $54,258. If this couple were to decrease their capital by $100,000, under the current assets test, their combined pension would increase by $7,800 to $14,058. The taxpayer has replaced the $6,000 (6%) formerly earned from that $100,000 with an increased pension of $7,800 (7.8%). Their combined income is now $56,058.

When their assets fall to $401,500 this couple gain the full age pension of $37,340 so their combined income is $61,430. The age pension places a safety net under all retirees, thereby reducing the need to liquidate capital.

Independence may mean outliving savings

For retirees who aspire to financial independence, the task is complex. Without careful planning, retirees are likely to outlive their savings. We know that 50% of males currently aged 65 will survive beyond age 84, but around 5% of that group will survive beyond age 97. Similarly, 50% of females currently aged 65, will survive beyond age 88, but around 5% of that group will survive beyond age 100. Some individuals will survive even longer.

Therefore, if independent retirees wish to plan their retirement with a 95% certainty that they will not outlive their money, they need to plan for a retirement of at least 30 years.

That means, according to the table, they cannot spend much more than their investment earnings – ever! For them that is a different message to that offered by the RIR and their standard of living in retirement is a function of the investment returns they achieve.

There is a direct relationship between risk and investment return, but independent retirees also need to balance market risk against the longevity risk that they will outlive their savings. Therefore, those who adopt low-risk, low-return investments may be sacrificing their long-term financial security due to their short-term concern about market volatility. Yet, such conservative investment portfolios are typically considered normal and appropriate and may explain why so many retirees exhaust their own resources prematurely.

Postscript. You can generate the table yourself by using the (NPER) financial function of Microsoft Excel which calculates the number of periods for the final balance to reach zero by computing the interaction between the earning rate and the spending rate. Or you can just take my word for it.

Jon Kalkman is a former director of the Australian Investors Association. This article is for general information purposes only and does not consider the circumstances of any investor.

Why you can't invest in residential property in the listed market

Hugh Dive

In April 2020, many experts predicted that residential real estate was set for a significant correction over the coming year based on expectations of a deep recession and sharp increases in the unemployment rate. Westpac's economists forecasted an 8% fall in GDP in the coming year, unemployment to reach 10%, and a 20% fall in house prices and, based on this, took a $2 billion provision for expected loan losses.

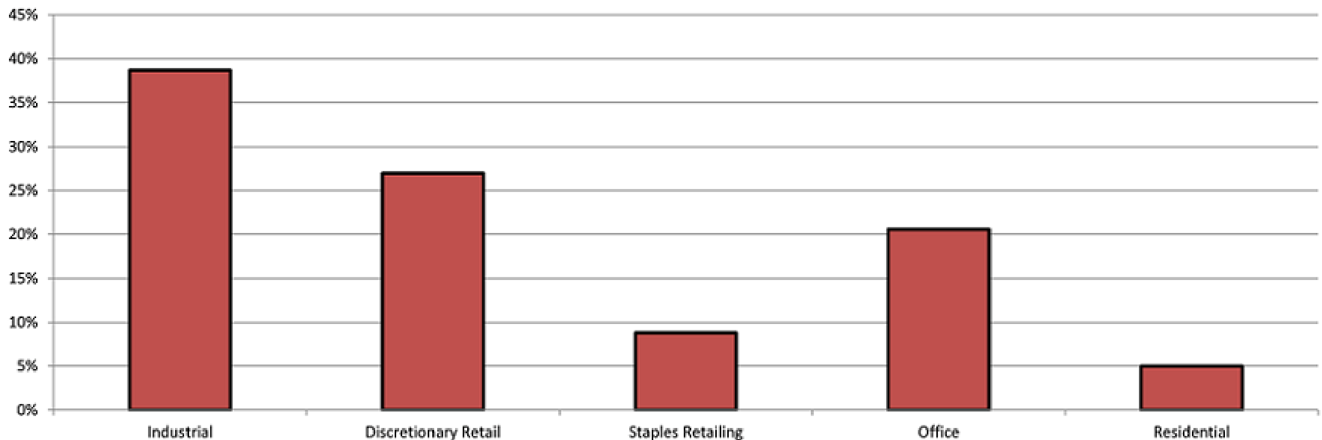
Instead of falling, house prices accelerated over the past year with the latest CoreLogic RP Data Daily Home Value Index for March 2021 showing a +5.7% increase in national house prices led by Sydney and Brisbane.

As the manager of a listed property fund, Atlas has recently received questions about gaining exposure to rising residential real estate prices without buying a house or apartment. However, as residential real estate is only a tiny portion of the overall listed property index on the ASX, this is an asset class that institutional investors largely ignore. Why?

Listed real estate is not houses

Unlike the US or UK, where residential is a significant component of the listed property index (US residential REIT exposure 18%), the Australian index's residential real estate exposure is relatively small at only 5% (see below table).

Further, the residual real estate exposure on the ASX consists of the development arms of diversified property trusts such as Stockland (mainly house and land packages) and Mirvac (predominantly apartments). Moreover, neither of these two trusts intends to hold residential property on their balance sheets over the medium term. Greater returns are available from developing and selling residential real estate rather than collecting rents. However, Mirvac has one build-to-rent project located in Sydney's Olympic Park, assisted by some tax concessions, namely a 50% discount on land tax for the next 20 years.



Source: Atlas FM & iress

Residential property has attracted little interest from institutional investors as retail investors have an investment edge. In the above chart, residential real estate comprised 5% of the S&P/ASX 200 A-REIT index in April 2021 or $6 billion. This is dwarfed by the value of the currently 'beaten-up' discretionary retail ($34 billion), industrial ($49 billion), and office ($26 billion) real estate assets listed on the ASX.

In our view, there are three structural reasons why retail investors rather than institutional investors are the primary buyers of residential real estate in Australia.

1. Capital gains tax breaks for homeowners 'crowds out' corporates

Firstly, in Australia, the tax-free status of capital gains for owner-occupiers selling their primary dwelling bids up the purchase prices of residential real estate. For example, when a company generates a $500,000 capital gain from selling an apartment, they would approximately be liable to pay $108,000 in capital gains tax. In contrast, the owner-occupier pays no tax on the capital gains made on a similar investment.

This discrepancy in the tax treatment allows the owner-occupier to pay more for the same home, anticipating tax-free capital gains not available to institutional investors such as property trusts.

2. Negative gearing

Similarly, individual retail investors benefit from the generous tax treatment in Australia that allows them to negatively gear properties. There are three types of gearing depending on the income earned from an investment property: positive, neutral and negative. A positively geared asset generates income above

maintenance and interest costs, and obviously, neutral gearing generates no income after expenses and interest.

A property is negatively geared when the rental return is less than the interest repayments and outgoings, placing the investor in a position of losing income annually, generally an unattractive position. However, under Australian tax law, individual investors can offset the cost of owning the property (including the interest paid on a loan) against other assessable income. This incentivises individual high-taxpaying investors to buy a property at a price where cash flow is negative to maximise their near-term after-tax income and bet on capital gains.

Whilst companies and property trusts can also access taxation benefits from borrowing to buy real estate assets, a wealthy doctor on a top marginal tax rate of 47% has a stronger incentive to raise their paddle at an auction.

3. Yields on residential property too low

At current prices, the yield that residential property is not attractive for listed vehicles. At the moment, the ASX 200 A-REIT index offers an average yield of 4%. This compares favourably with the yields from investing in residential property. SQM Research reported that the implied gross rental yield for a 3-bedroom house in Sydney is only 2.7%, with a 2-bedroom apartment yielding slightly higher at 3.4% in April 2021. After borrowing costs, council rates, insurance, and maintenance capex, the net yield is estimated to average around 1%. This low yield on residential real estate contrasts sharply with the average yield after costs on commercial real estate currently above 4.5%.

Our take

While housing comprises the most significant component of the overall stock of Australian real estate assets and talking about house prices is the one sport that unites all Australians, residential real estate holds little interest for institutional investors, especially for income-focused investors such as Atlas Funds Management.

Speculating on houses and apartments is one of the few areas of investment where retail investors have an advantage over well-resourced institutional investors.

In the future institutional investors could play a greater role in owning residential real estate as they do in the UK and the USA. However, this would require either the extension of further tax concessions to corporates or alternatively removing these concessions such as negative gearing from households, two politically very unpalatable courses of action.

Hugh Dive is Chief Investment Officer of Atlas Funds Management. This article is for general information only and does not consider the circumstances of any investor.

Three charts on the surprising rise of Australian retail investors

Dr. Shane Miller, Howie Zhang

Much has been made of the rise in retail participation in the stock market during 2020, and this trend is set to continue in 2021. The world was captured by the Gamestop (NYSE:GME) saga, where a now old-fashioned North American bricks-and-mortar videogame retailer saw an eight-fold increase in its stock price in less than a week, fuelled by a frenzy of activity from online communities and social media platforms, most notably from a Reddit user group called WallStreetBets.

The proliferation of zero-cost brokerage, fractional investing, finance social media, heightened volatility, and continued fiscal and monetary stimulus have created a perfect storm for larger than typical retail risk-appetite. In Australia, our market regulator, ASIC, issued a media release in May 2020 stating that retail investors were taking increased levels of risk in a volatile market.

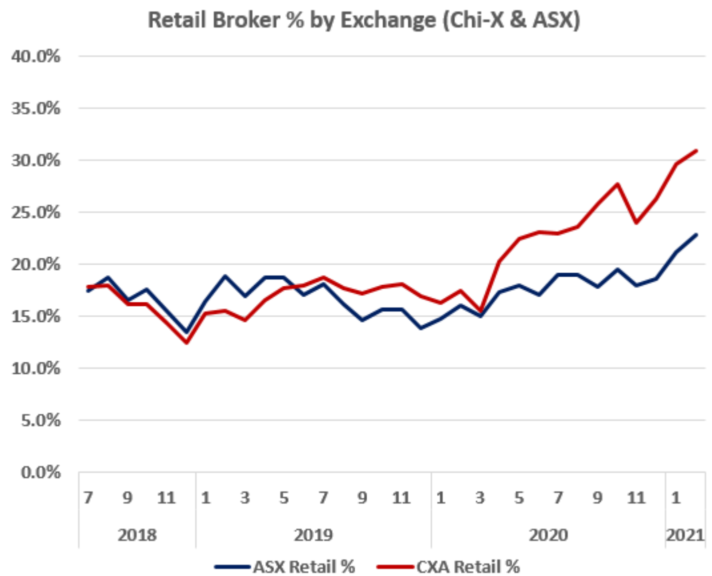
In July 2020, local academics Professor Carole Comerton-Forde (UNSW) and Dr Zhuo Zhang (University of Melbourne) showed that between March 2020 and May 2020 retail investors were net buyers of the dip, buttressing markets at a time when institutional investors were selling.

Towards the end of 2020, Gemma Dale of nabtrade explained within Firstlinks three ways that ‘retail’ is not dumb money.

Chart 1: Which Australian exchange has a higher percentage of retail trading?

Retail participation is an essential component to a vibrant, healthy and liquid stock market that attracts diverse participants and trading motivations. It is important for a stock exchange to keep track of the amount of trading by retail investors.

The first way that we examine retail participation in the stock market is via retail investor use of each stock exchange, both Chi-X and the ASX. This is shown in the chart below for the period from July 2018 to February 2021. The chart shows the value traded by all retail brokers as a percentage of all 'on-market' trading on Chi-X and then compares the same calculation on the ASX. In June 2019 for the first time, retail participation on Chi-X exceeded that on the ASX, and it has since grown much larger.



This chart best shows the increase of retail participation in the stock market during 2020, and it has continued in the first two months of 2021. To reinforce the point, in February 2021, over 30% of all trading on Chi-X came from retail brokers. It may be a surprise, even to some industry insiders, that as a proportion, retail investors trade more on an exchange that many of them don't even know exists.

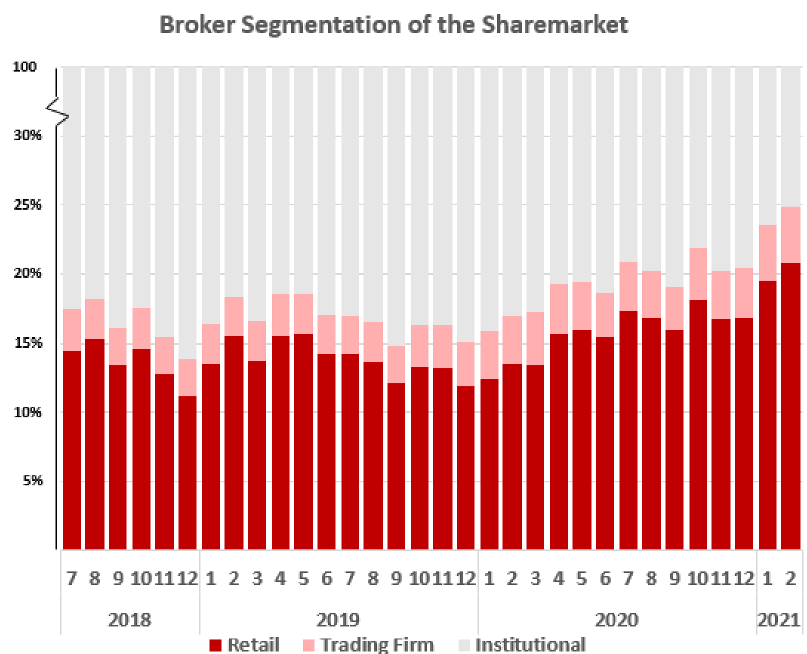
Over the last several years Chi-X Australia has launched a number of new markets for Australian investors, including depositary receipts on US stocks (TraCRs), Warrants, and most recently Funds, with 12 Active ETFs available so far and more to come. Each of these markets were specifically designed to appeal to retail investors.

Chart 2: What percentage of the stock market do retail brokers represent?

The second way that Chi-X monitors the contribution to trading by retail investors is by segmenting all trading member participants into the three broad categories:

1) Institutional brokers
2) Trading firms
3) Retail brokers.

The relative market share of value traded by each of these segments for the Australian market is shown in the chart from July 2018 to February 2021.



The vast majority of transactions in the Australian stock market are undertaken by institutional brokers, both in terms of number and value. These brokers are responsible for some 80-85% of all trading and are usually large international banks such as UBS, JP Morgan, Credit Suisse and Citi. Retail investors generally only use institutional brokers indirectly as advised customers, such as via investment platforms.

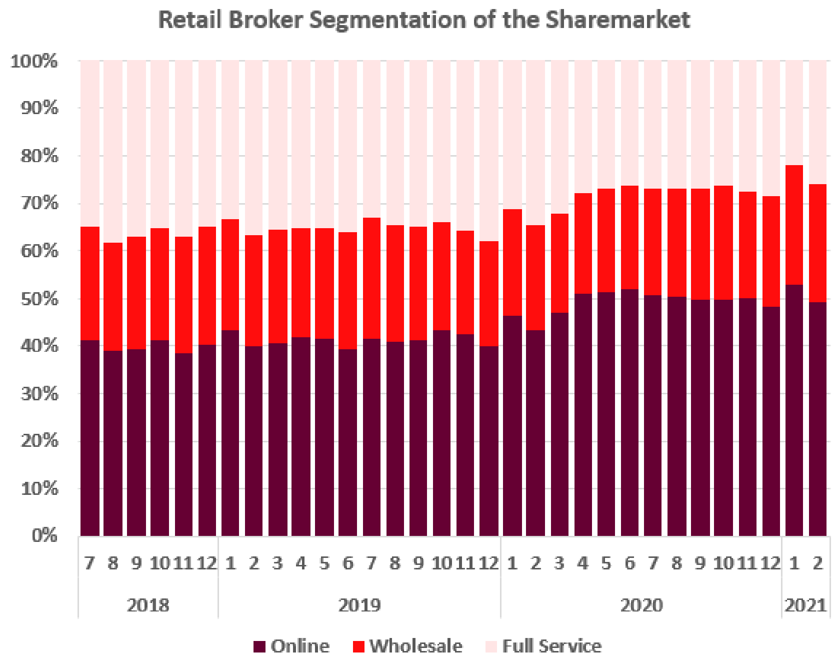
The least well understood segment are trading firms. Trading firms include global financial services companies such as Virtu Financial (NASDAQ: VIRTU) and Susquehanna International Group, but also local firms like Nine Mile Financial. Trading firms play an important role in price discovery and market making.

Retail investors often interact with trading firms in the ETF market because they act as liquidity providers by supplying units in ETFs to buy or sell at a fair market price. Trading firms are explicitly only responsible for less than 5% of share trading in Australia. This is the value traded by those trading firms that are direct member participants of Chi-X and the ASX.

However, there are many trading firms that transact in the market via institutional brokers, to such an extent that we estimate the implicit market share of trading firms in Australia to be at least 30%.

Chart 3: Which type of retail broker do you use?

The remaining group is retail brokers, who are responsible for the vast majority of transactions from retail investors, on average representing 15% of value traded across the Australian market over 2020.



However, retail brokers are the largest set of exchange participants by number at 32 across both Chi-X and the ASX. They are also the most diverse, so we divide these into three further sub-sectors:

1) Online brokers
2) Full-service brokers
3) Wholesale brokers.

Here are the relative sizes of these segments over the same period of July 2018 to January 2021.

What do these retail brokers do?

Full-service brokers broadly encompass traditional stockbroking firms such as Morgans Financial, Ord Minnett, Shaw & Partners, Wilsons and others. Although many full-service brokers also maintain institutional desks, much of the value traded originates from retail investors.

The retail users of full-service brokers are often considered to be advised rather than direct investors, although there is clearly a combination of both. Within the rise of retail investors, we observe that the market share of full-service brokers has declined from almost 37% in July 2018 down to 25% in February 2021.

Wholesale brokers include a mix of online and full-service capability. Overall, they have remained stable with about 25% of retail-executed values across the entire period. The mixed set of investors using wholesale brokers is best exemplified by Ausiex which was recently sold by the Commonwealth Bank to Nomura Research Institute (NRI). Ausiex provides trading services to online investors, financial advisers, brokers, accountants and some of Australia's largest investment platforms.

Lastly, **online brokers** include well-known retail brands such as Commsec, nabtrade, CMC Markets and Bell Direct. Users of online brokers select their investments themselves and hence are usually referred to as self-directed or direct investors. From the chart we observe that the market share of all retail value traded by online brokers grew from 40% in July 2018 to 50% by the end of February 2021.

The increased use of online brokers is part of a multi-decade trend that essentially started when Commsec entered the market in 1995. More recently, rapid growth in online shopping has been one of the major developments of the COVID-19 pandemic. That included online shopping for shares as online brokers were the main driver in the rise of the retail investor during 2020.

Shane Miller is the Chief Commercial Officer and Howie Zhang is a Quantitative Analyst at Chi-X Australia, a sponsor of Firstlinks. This article is general information and does not consider the circumstances of any person.

For more articles and papers from Chi-X, click here.

Five reasons why EM equities could power ahead in 2021

Victor Kohn

with Chapman Taylor and Kent Chan

Has the tide finally turned for emerging markets equities after a decade of trailing US markets? After two consecutive years of solid gains for the benchmark MSCI Emerging Markets Index, emerging markets appear well positioned for further growth. The US dollar has weakened, commodity prices have firmed, US-China trade tensions may simmer down and there are a number of investible opportunities that could allow investors to take advantage of a potential cyclical recovery in global markets.

Here are five reasons why emerging markets could power ahead in 2021.

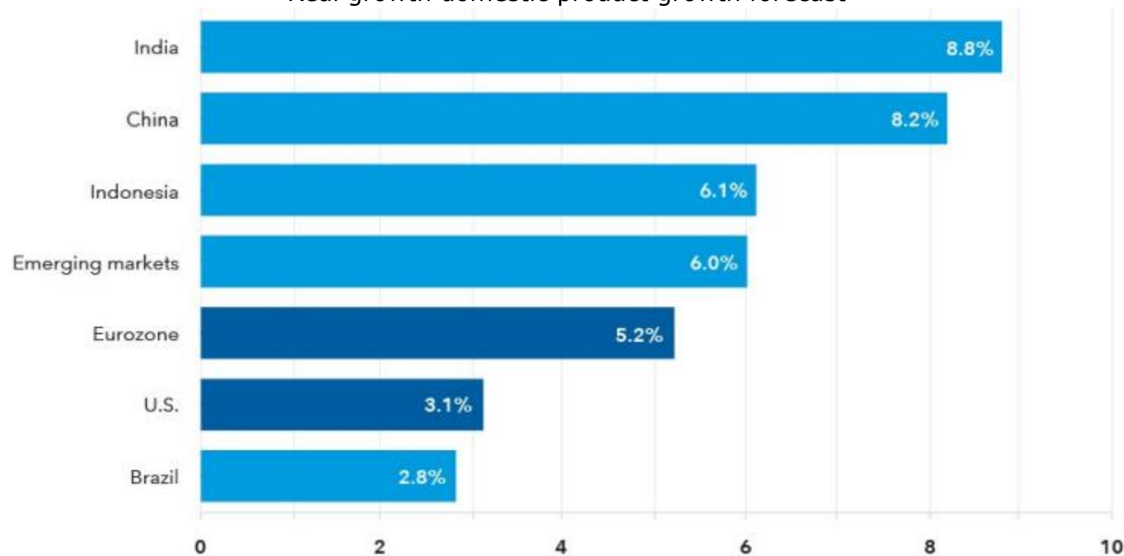
1. A swifter economic recovery

Emerging economies are coming out of their pandemic-induced slowdowns faster than many developed economies. We anticipate an accelerated recovery in emerging markets that spreads beyond China, Taiwan and South Korea to countries like India, Indonesia and Vietnam.

In early 2021, many developing countries were showing signs of containing COVID-19 and avoiding the resurgent outbreaks seen in the US and Europe. Large-scale vaccination programmes could be a catalyst for positive momentum. In our view, the market may be underestimating the speed at which vaccines are being rolled out in emerging markets. Indonesia, for example, has already secured vaccine supplies and as a first step plans to immunise its working-age population (ages 18 to 59) — an approach that contrasts with some developed countries.

Faster recoveries should limit the need for much larger fiscal stimulus, which can strain the budgets of many of these countries.

Growth is projected to snap back in emerging markets in 2021
Real growth domestic product growth forecast



Source: International Monetary Fund, World Economic Outlook, October 2020. GDP figures are projections.

2. Rally likely to broaden beyond a couple of sectors

As in the US, the rally in emerging markets has been supercharged and narrowly focused, benefiting companies in certain areas of technology and internet services, largely those in Greater China.

Because of COVID-19, differences among sectors and regions were exacerbated. Internet-related platforms saw their multiples expand considerably, while financial companies in most countries were depressed further and consumer companies landed in between.

As economies recover, we believe the market rally could broaden to other areas:

Financials: Sentiment for financial companies has improved across Asia. There are some banks that we think can benefit from a broader recovery in Indonesia and any asset quality improvements in the country's banking system. Private sector banks have already begun to report loan and profit growth. Asian-based insurers selling financial products in China could get a boost from being able to conduct in-person meetings.

Travel: We continue to be hopeful for an eventual recovery in the travel and entertainment industries, where we think there is a lot of pent-up demand. Casino operators in Macau could be among the first beneficiaries. Macau and China have controlled the virus successfully. With many Chinese reluctant to travel overseas, the recovery of Macau's gaming industry depends largely on the return of bilateral travel between the mainland and the autonomous region.

Property: Housing demand remains vibrant in China, especially from first-time homebuyers and those seeking to upgrade to nicer homes. While China's government has issued new guidelines aimed at preventing a housing bubble, we think industry concentration is going to be accelerated among the largest players with stronger balance sheets that mostly trade at very reasonable valuations.

Commodities: Rather than investing directly in materials or energy companies, there are ways to gain indirect exposure to the rebound in commodities demand. Our conviction has grown in certain Russian and Brazilian companies that may benefit from an economic rebound in their countries and higher consumer spending. These include companies operating in the financial, consumer and real estate industries.

A rally in a few areas of EM equities could broaden to other sectors

Sources: MSCI, RIMES. Returns reflect closing market prices from 31 December 2015 to 31 December 2020. Returns rebased to 0 as at 31 December 2015.

3. Stimulus, commodities demand and reform momentum

In our view, governments and central banks will likely err on the side of doing more, rather than less. As global growth rebounds in 2021 and developed countries look to restock their supply chains, this should help support commodity-rich countries that supply industrial metals and other raw materials used in basic infrastructure, as well as technological components and consumer goods.

Further, if emerging economies do indeed recover relatively quickly, it could be an impetus for political leaders to resume their reform agendas.

China: Reform efforts are already resuming in China. The government's focus is back on curbing debt excesses in the financial system and setting new industry guidelines, such as in real estate and technology, where regulators have targeted the country's largest internet-related companies for anticompetitive behaviour. Given US sanctions on semiconductor and technological equipment manufacturers and supply chain concerns, there is renewed emphasis on the Made in China 2025 programme.

India: Before COVID, several sweeping reforms to modernise the country had begun to gain traction within India's economy, including a bankruptcy law and a national sales tax. Recently, India has taken steps to attract investments in manufacturing as multinationals reassess their global supply chains and consider moving some production out of China. Mobile phone assembly has been one of the first areas targeted.

Indonesia: In October, President Joko Widodo passed an omnibus law with a number of measures to improve the business climate in the country. These include cutting the corporate tax rate, reducing red tape for businesses, attracting foreign investment and creating more free trade zones. Primary markets are also showing signs of life. Popular e-commerce platform Tokopedia is reportedly accelerating its plan to go public this year.

4. More effective virus containment and favourable geopolitics

We also see other factors at work that could support a rebound in emerging markets:

Virus containment: Some developing countries have implemented strict measures to mitigate the spread of the virus. So far, China, Taiwan, Thailand and Vietnam fit in this category. These countries have reported among the lowest number of COVID-19 cases and deaths per 100,000 according to Johns Hopkins data.

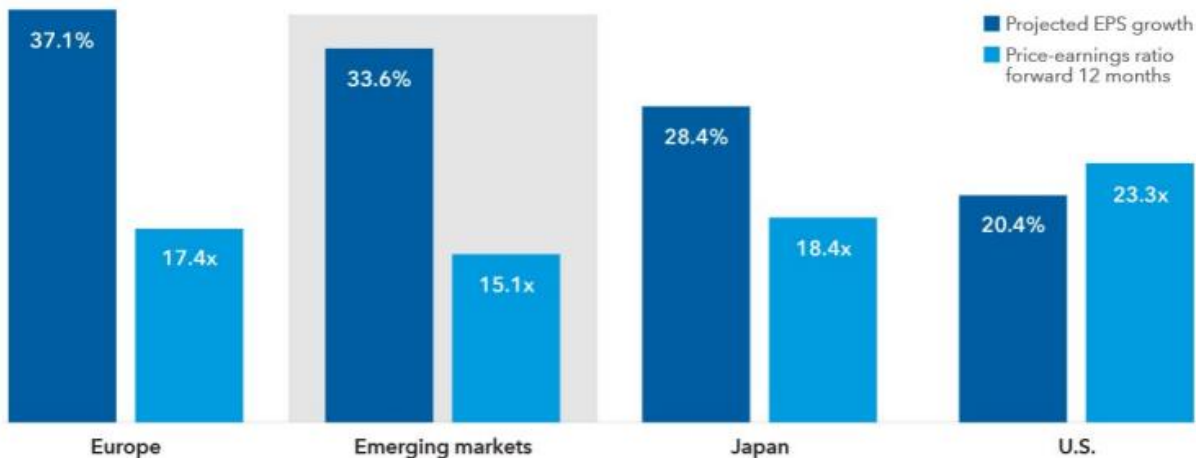
Other countries, including Indonesia, Brazil and India, have been less restrictive, seeming to accept a higher level of infections and deaths as the price of avoiding draconian lockdowns.

More favourable geopolitics: While trade tensions and geopolitical conflicts between China and the US are likely to continue to generate headline risk for China-related investments, we expect a more predictable evolution of policies under the Biden administration compared with the volatile relationship of the past four years. This is more conducive to long-term planning and market stability.

We do think it's likely that the Biden administration will maintain previous trade tariffs and recent bars on certain Chinese companies from being listed on US stock exchanges. We continue to calibrate ongoing risks and potential actions that may be taken by government authorities in the US and China.

Attractive valuations: This could help support emerging markets in 2021. On a forward-looking basis, emerging markets equities trade at a significant discount compared with other parts of the world, based on recent price-to-earnings data.

EM valuations look attractive given growth projections



Source: Refinitiv Datastream. As at 31 December 2020. Earnings-per-share (EPS) growth for 2021 is projected on a year-over-year basis.

5. Potential compression in risk premia

As an emerging market and the world's second-largest economy, China has its own dynamic. But even excluding China, in our view emerging markets are no longer a high-beta asset class.

While there are huge divergences from country to country, economic policies in many countries are quite orthodox, embracing independent central banks, moderate fiscal stimulus, floating exchange rates and business-friendly rules for corporate governance. Managements of many companies are on par with their developed-market counterparts and have experience in running companies through economic cycles.

Yet EM stock valuations reflect a much higher risk premium than developed markets. In our view, stock price-earnings multiples in many industries could rise as the investor base for emerging markets expands.

Investor interest in the fast-growing emerging markets economies is likely to increase. We have already seen this in emerging Asian technology stocks. We believe this can extend to other areas, including select private sector financials, fintech, health care and housing. Commodities are also experiencing a rebound, as mentioned earlier: management of commodities-related companies has improved over the past decade, and balance sheets have been restructured.

Finally, while it is impossible to time a currency cycle, emerging markets currencies are broadly viewed by our currency analysts as undervalued on a medium- to long-term basis. This should provide another tailwind for emerging markets equities. Overall, we believe it is a good time for investors to take a fresh look at the asset class.

PDF link to full paper here.

Victor Kohn is an equity portfolio manager, Chapman Taylor is a research director and portfolio manager, and Kent Chan is an equity investment director at Capital Group, a sponsor of Firstlinks. This article is neither an offer nor a solicitation to buy or sell any securities or to provide any investment service. The information is of a general nature and does not take into account your objectives, financial situation or needs. Before acting on any of the information you should consider its appropriateness, having regard to your own objectives, financial situation and needs. For more articles and papers from Capital Group, click here.

Consumers need an effective super performance test

David Bell

The Your Future, Your Super (YFYS) reforms are designed to improve outcomes for superannuants, which is nearly all of us. The reform package is undoubtedly well-intended. Therefore it is critical that it achieves its intended purpose. This has been our focus when we have reviewed one of the most important reform measures, an investment performance test.

Unfortunately, our research (open to anyone, available here) finds that the performance test will not effectively achieve its intentions and will generate some undesirable outcomes. Statistically, the performance test will struggle to distinguish 'good' funds from 'bad'. Further, the performance test will significantly constrain the investment strategies of super funds, to such a degree that the opportunity cost of the constraints may exceed the projected benefits of the YFYS reforms.

The YFYS performance test explained

The YFYS performance test assesses past investment performance. For background, super funds have two primary functions when managing portfolios:

1) They choose the mix of assets (we call this asset allocation); and
2) They implement their asset allocation (implementation), sometimes by investing directly and sometimes via external asset managers, who charge fees.

The YFYS performance test ignores asset allocation (which has a large impact on performance) and only assesses implementation performance. It does this by mapping portfolio exposures to a limited set of public market indices.

The example below places context around the total performance outcome. Fund A outperforms Fund B because it chose a better performing asset allocation, which more than offsets its weaker implementation performance. Yet Fund A will fail the YFYS performance test.

Performance component	Fund A	Fund B
Asset allocation	7.5%	6.5%
Implementation	-0.5% pa	0% pa
Total performance	7.0% pa	6.5% pa

Will the test be able to effectively distinguish between 'good' and 'bad' performers?

Performance varies over time. A fund may have strong capability and is expected to perform well over time, but variability exists and there is a chance they will fail the performance test at some point in time. Similarly there is a chance, again due to variability, that a fund with poor processes will pass a performance test. Greater variability takes the likelihood of failure towards 50%, akin to a coin toss. Longer timeframes smooth out the impact of variability.

The statistically-minded may recognise these scenarios as type I (identifying a 'good' fund as poor) and type II (identifying a 'poor' fund as good) errors. These essentially reflect the statistical effectiveness of the test. An effective test will have low likelihoods of both errors occurring.

We found that two design characteristics of the YFYS performance impair its effectiveness.

The **first**, as previously explained, is that the test ignores asset allocation performance, which can create large variability in fund performance.

The **second** is the benchmarking approach. There are many assets which are not benchmarked accurately, most notably private equity, unlisted property, unlisted infrastructure, all forms of credit, inflation-linked bonds, and the entire universe of alternative assets. This creates significant variability in the performance test results.

The good news is that for funds with extremely poor implementation performance the YFYS performance test will be quite effective. The bad news is that in less extreme situations, the ones more likely to be faced in the future, the test won't work well.

Calibrated to realistic future scenarios our research revealed that the likelihood of the YFYS performance test mistakenly identifying a 'good' fund as poor was 35%, and the likelihood of mistakenly identifying a 'poor' fund as good was 42% (full results here).

Consumers deserve an effective performance test and industry deserves a fair assessment. As it stands the YFYS performance test won't provide either.

Will the test constrain super funds from achieving best outcomes?

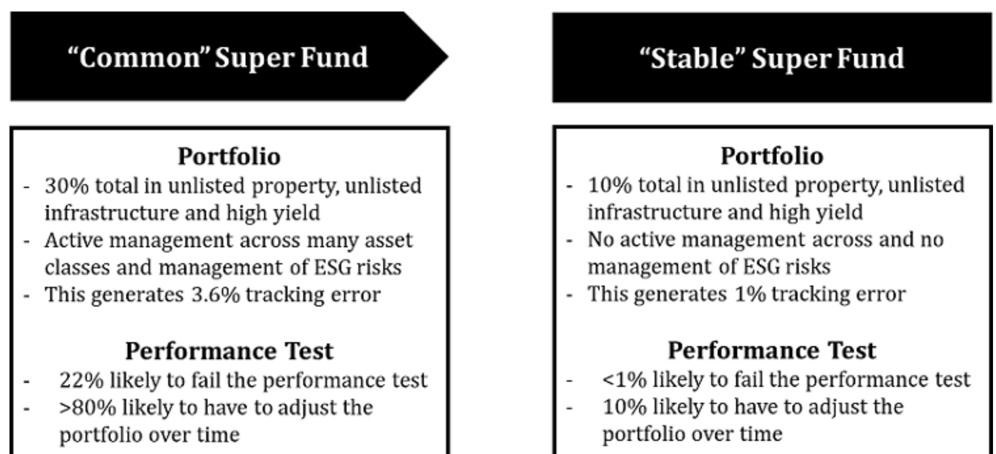
For super funds, the penalties of failing the performance test are severe. Accordingly, we expect them to actively manage their portfolios to ensure a high likelihood of passing the test.

This means reducing variability to the performance benchmark (this variability is known in industry as 'tracking error'). In turn this means limiting exposure to all those above-mentioned assets which the test doesn't benchmark accurately (we found it would take over 50 indices to create a reasonably effective implementation test).

If present investment strategies are maintained, funds may find they have to frequently adjust their portfolios in reaction to short-term underperformance, which could incur sizable transaction costs.

In future, super funds will seek a stable investment strategy which provides a high likelihood of passing the performance test and low likelihood of having to frequently alter their portfolios.

How much would portfolios have to be shifted from current state, which is focused on member best outcomes, to future state, where they need to account for the performance test? This effectively represents the constraints imposed by the performance test. The diagram below presents the conflict faced by super funds.



Using conservative estimates (here) we calculated the opportunity cost of the portfolio constraints implied by the YFYS

performance test. In aggregate we estimate these will exceed $3 billion per annum, greater than the projected benefits of the YFYS reforms in total ($17.9 billion over 10 years).

Can we design a better YFYS performance test?

A well-designed performance test can benefit consumers. Our research, which combined academic techniques with industry experience, has identified flaws in the performance test which will cost consumers. We believe the test can be modified in a simple manner by including an additional metric which focuses on risk-adjusted returns. This would remove many of the shortcomings and provide consumers the protection they need and deserve.

David Bell is Executive Director of The Conexus Institute, a not-for-profit research institution focused on improving retirement outcomes for Australians. This article does not constitute financial advice.

Unlimited potential: innovation wrap for March 2021

Thomas Rice

Thomas Rice is the Portfolio Manager for the Perpetual Global Innovation Share Fund, based in Sydney, Australia. Here's his latest innovation wrap of health, technology, innovation, and finance news.

Chips and Computing

The Wall Street Journal looks at the materials that could replace silicon in future tech.

Researchers on the bleeding edge of physics, chemistry and engineering are experimenting with exotic-sounding substances to be used in microchips. They include graphene, black phosphorus, transition metal dichalcogenides, and boron nitride nanosheets. Collectively, they're known as 2-D materials, since they are flat sheets only an atom or two thick. Largely unknown just 20 years ago, they are now regularly fabricated in labs, using methods as mundane as a blender and as tricky as high-temperature vapor deposition.

Intel's new CEO, Pat Gelsinger, delivered an excellent keynote outlining Intel's strategy going forward — it's 59 minutes long but worth the watch if you're interested in semiconductors or computing. Stratechery's breakdown is also worth a read.

Renewables

A report released by the National Academies of Sciences, Engineering and Medicine recommends more investment into solar geoengineering research, where sunlight is reflected back to space to artificially cool the planet. So far, it's a purely hypothetical idea — but scientists have proposed a number of ways it could be done.

The most common proposal suggests spraying reflective aerosols into the atmosphere, where they would beam sunlight away from the Earth. Other proposals involve making clouds brighter by injecting them with particles, or to help trap less heat beneath them.

They're contentious ideas. Experts have many concerns about the possibility of unintended consequences, such as unwanted effects on rainfall or other global weather patterns.

California scientists are looking into covering canals with solar panels.

Their feasibility study, published in the journal *Nature Sustainability,* finds that if applied statewide, the panels would save 63 billion gallons of water from evaporating each year. At the same time, solar panels across California's exposed canals would provide 13 gigawatts of renewable power annually, about half of the new capacity the state needs to meet its decarbonization goals by the year 2030.

Bloomberg looked at community solar (9-minute video).

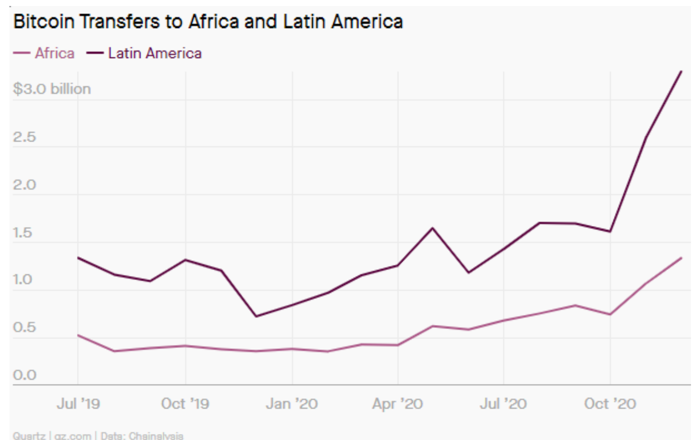
Blockchain and Crypto

The New York Times article Buy This Column on the Blockchain! was indeed bought on the blockchain for $560,000.

The NFT, a unique bit of digital code that is stored on the Ethereum blockchain and refers to a 14-megabyte graphic of the column hosted on a decentralized file hosting service, cannot be duplicated or counterfeited, making it potentially valuable for collectors. Some NFTs have sold for hundreds of thousands of dollars in recent weeks, with one such sale — a collection of art by the digital artist Beeple — bringing in more than $69 million at auction.

Chainalysis, a start-up that sells blockchain data analytics tools, has doubled its valuation to $2 billion in a new investment round.

Founded in 2014, Chainalysis helps governments and private sector companies detect and prevent the use of bitcoin and other cryptocurrencies in illicit activities like money laundering with its investigations and compliance software.



Bitcoin is being increasingly used for money remittance by the millions of workers who send their earnings abroad.

Nowhere is this clearer than in Nigeria, where the central bank is so worried about Nigerians choosing cryptocurrencies over the naira for overseas remittance payments that it is now paying them to use official channels for those transfers instead.

Cybersecurity

Google's top security team has thwarted a nine-month hacking operation, however, it's a counterterrorism hacking operation undertaken by a US ally, highlighting the complexity of balancing user security with national security concerns.

Instead of focusing on who was behind and targeted by a specific operation, Google decided to take broader action for everyone. The justification was that even if a Western government was the one exploiting those vulnerabilities today, it will eventually be used by others, and so the right choice is always to fix the flaw today.

Facebook says it blocked hackers in China who were trying to spy on Uyghur Muslims abroad.

Facebook said it found websites designed to look like third-party Android app stores "where they published Uyghur-themed applications, including a keyboard app, prayer app, and dictionary app." Any apps downloaded from these sites contained malicious software to infect devices.

A Florida student and her mother were arrested after hacking school records to steal the homecoming queen election.

Robotics

A New York lawmaker has proposed a law that will ban police use of armed robots in the future.

New York City councilmember Ben Kallos says he "watched in horror" last month when city police responded to a hostage situation in the Bronx using Boston Dynamics' Digidog, a remotely operated robotic dog equipped with surveillance cameras. Pictures of the Digidog went viral on Twitter, in part due to their uncanny resemblance with world-ending machines in the Netflix sci-fi series *Black Mirror*.

Researchers in Japan have trained a robot to tie knots using only two fingers on each hand, which in theory will allow them to perform tasks with wires and cables (see the paper).

Microscopic drug-carrying robots broke the blood-brain barrier to reach brain tumours in mice (see the study).

Tiny microbots are nothing new. The same goes for disguising a robot as a bacteria or using magnets to move them through the bloodstream. But what makes this microbot design stand apart from the crowd is that it can cross one of the body's toughest biological barriers: the blood-brain barrier (BBB.)

Mobility

VentureBeat looks at how Yandex plans to expand its autonomous robot delivery service.

Yandex's delivery fleet currently comprises about 35 robots, most of which are making deliveries from Yandex.Eats and Yandex.Lavka in four Moscow districts and the town of Innopolis. A few additional robots are being used for testing purposes and to map new delivery locations, Polishchuk says.

Nuro has added investors to its $500m Series C funding round it announced in November 0220, with Woven Capital and Chipotle Mexican Grill joining the round.

Australian Lidar company Baraja has raised a $31 million B round to continue the deployment and development of their unique imaging system. Investors in the round include previous backers Blackbird Ventures and Main Sequence Ventures, along with new investors HESTA, Regal Funds Management, Perennial Value Management, and InterValley Ventures.

Alternative foods

A study by Boston Consulting Group and Blue Horizon Corporation called Food for Thought suggests that meat consumption will be in decline by 2025 in Europe as protein alternatives reach parity on price and quality.

Bloomberg explored the world of cultured meat (10-minute video).

Finance

ViacomCBS, Discovery, and several Chinese internet ADRs tanked on Friday due to the forced liquidation of positions held by Archegos Capital. Ouch. ViacomCBS and Discovery closed down more than 27% on Friday, with Viacom off more than 50% for the week while Discovery slid 45%. The companies have been heavily shorted amid investor skepticism about their long-term prospects in a crowded media landscape.

For the week, Baidu was down more than 18%, Tencent more than 33% and Vipshop more than 31%

Robotic automation firm UiPath has filed to go public (see the S-1).

Venture capitalists are backing European ecommerce startups hoping to take on Amazon, with Turkish startup Getir, German startup Gorillas, and Finnish startup Wolt all announcing funding rounds into the hundreds of millions this year.

While Amazon is huge in the U.S. and many other countries, it isn't as well established in some corners of Europe and large swathes of Asia. In fact, the tech giant only has dedicated online stores for around 17 countries worldwide.

Other snippets

Microsoft is in discussions to acquire popular communications app Discord.

Discord offers Microsoft a big and engaged community. Primarily used by gamers, it has become a Gen Z hub for socializing with friends, particularly during the pandemic. It consists predominantly of private communities, and Discord has 6.7 million active servers every single day. It's a huge community, 75% of which are Discord users outside of North America. CNBC discussed why China is beating the US in electric vehicles (17-minute video).

Thomas Rice is the Portfolio Manager for the Perpetual Global Innovation Share Fund, based in Sydney, Australia. Perpetual Investments is a sponsor of Firstlinks. This article contains general information only and is not intended to provide you with financial advice or consider your objectives, financial situation or needs. For more articles and papers from Perpetual, please click here.

My 'purpose of super' is probably not yours

Graham Hand

Note: This article was originally published on 18 December 2015. With both the Government and the Retirement Income Review arguing superannuation should be used to fund retirement, even if it means running down capital, rather than leaving a bequest, a rerun is timely. In addition, Paul Keating said last week:

"I designed the system. I used to say to the caucus of the Labor Party, what superannuation is about is personal empowerment. That is you can cut the shape of your life, particularly at the end of your life, without reference to a government agency ... I think people in retirement think in family terms."

In October 2015, the Government announced that it would enshrine the objective of superannuation in legislation, as recommended by the Financial System Inquiry (FSI). This has never happened.

***

Have you ever been in a meeting where everyone in the room, except you, seems to agree on something? You wonder whether you should keep quiet or start asking a few probing questions. I sat through half a day of speeches before launching into my own special version of the truth, much to the dismay of other delegates.

It was in June 2015 at the inaugural conference of the newly-formed Committee for Sustainable Retirement Incomes (CSRI) where everyone else seemed in furious agreement that we not only need to define a 'purpose' or 'objective' for superannuation, but it was obvious what it was. As the Committee's Chairman, Michael Keating, wrote later:

*"The FSI [Financial System Inquiry] recommended that the objective of superannuation should be to provide 'income in retirement to supplement or substitute the age pension', and there is an **emerging consensus** that superannuation should be directed to providing a retirement income and not other benefits, including bequests." (my emphasis).*

Whatever the future, that was not the past

Is that right? It that the consensus? Not for me. I have been putting money into superannuation for 20 years without an expectation that I will need the majority of it 'to provide a retirement income'. It's a tax-effective place to save, entirely within the rules, and I have foregone current consumption to secure my future and avoid any likelihood of being a drag on the public purse.

For many people, superannuation is both funding a retirement and leaving a bequest. It's a piggy bank, a store of wealth, with a strong expectation there will be plenty left over beyond retirement income to give to their children or heirs. Why is it different to the favourable taxation rules around owner-occupied housing, or to a lesser extent, negative gearing, or family trusts? I could have bought a harbourside home and enjoyed tax-free capital gains, but instead I chose superannuation. If we are defining 'purposes', we should look at the entire package of different taxes and benefits, not only superannuation.

My view may even be part of the majority in the real world. At the recent 2015 CSIRO and Monash University Superannuation Research Cluster, a study reported that 90% of the amount an average retiree enters retirement with (including family home and non-super) remains unspent upon their death. On 23 May 2015, *The Australian Financial Review* quoted Treasury work which found that most people still have around half of their superannuation balances at the time of average life expectancy.

So the 'purpose of superannuation' is far from settled based on actual experience, and while it may fund part of a retirement, it is at least as likely to become a bequest.

What did David Murray say?

David Murray and the FSI identified a major deficiency of superannuation being the lack of a clearly articulated objective to guide policy. Recommendation 9 states:

"Seek broad political agreement for, and enshrine in legislation, the objectives of the superannuation system and report publicly on how policy proposals are consistent with achieving these objective over the long term."

That's a high bar for the 'objective' to jump over, and a major challenge for the government. It goes on to say, "Superannuation is a vehicle for individuals to fund consumption in retirement largely from working life income." Not much sympathy for bequesting there.

What does the Superannuation Complaints Tribunal say?

The government agency charged with adjudicating on superannuation disputes is the Superannuation Complaints Tribunal (SCT). In its Annual Report 2014-2015, it writes:

"There are some common misconceptions about superannuation death benefits that can result in unexpected outcomes for the beneficiaries of a death benefit, and may result in a complaint being made to the Tribunal. The most common misconception, arguably, relates to the purpose of superannuation. Broadly speaking, ***the purpose of superannuation is to provide income in retirement to members and their dependants****; it does not form part of a person's estate. Accordingly, a superannuation death benefit should be paid to dependants and those who had a legal or moral right to look to the deceased member for financial support had they not died." (My emphasis. Thanks to Robin Bowerman of Vanguard for this point).*

There it is … "**and their dependants**". Sounds like a bequest to me. The SCT is an independent government body that deals with complaints relating to the decisions trustees make in relation to superannuation, and of the 2,700 complaints processed in 2014/2015, 29% were about death payments. A large amount of its work, therefore, is sorting out who should benefit from a bequest.

Superannuation specifically acknowledges bequests

Superannuation legislation has specific features designed for appropriate bequeathing. For example, Binding Death Nominations (BDNs) ensure superannuation is distributed according to the wishes of the deceased member, not at the whim of a new trustee of the fund or executor of the estate. Superannuation is not an asset of the estate and a trustee is not obliged to follow directions in a will, even if super is specifically mentioned in the will. The instructions in the BDN define the money flow.

The main reason a superannuation death benefit is paid directly to a dependant rather than the estate is to ensure other people (creditors, claimants for bankruptcy, etc) cannot access the payment benefits provided to a dependant.

In fact, the superannuation rules themselves facilitate bequests to non-dependants. There is no restriction on withdrawing money from superannuation for anyone who has reached preservation age and satisfied a condition of release (including retiring). However, on death, if it is given to anyone other than a spouse or a dependent child, there is a tax (on the taxable component) of 15% plus the Medicare levy (currently 2% for most people). The obvious approach is to gift it before death, if possible. Continuing from the Treasury work quoted in the AFR as above:

"People typically don't die all of a sudden. They might know it is coming so they draw down at least some of their super in advance and gift it to others to avoid the 16% tax that is payable if you leave your super to independent children or people other than your wife or dependent children," one source said."

Conclusion

A potential benefit of this debate about the 'purpose of super' is to force each person to consider their own objectives, but we will be sorely disappointed if we think this will create consensus. I know what my purpose is, I know what David Murray's purpose is, and I know what Michael Keating's purpose is. But most importantly … what's yours?

Graham Hand is the Managing Editor of Firstlinks. This article is general information and does not consider the circumstances of any investor, and has not been edited since its first publication in 2015.

The Superannuation Complaints Tribunal mentioned in this article has ceased operations. New complaint need to go to the Australian Financial Complaints Authority.

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