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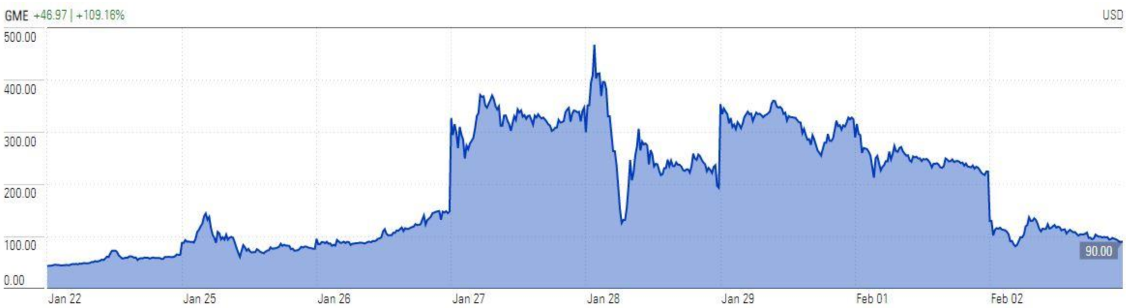
Editorial

Regardless of the many theories floating around about the impact of the extraordinary events around **GameStop (GME)** trading, there is one market fact: you never know who is on the other side of your trade. The **Reddit** tribe is portraying a victory against a few hedge funds as the little guy gaining revenge over **Wall Street**, but many of the 'suits' are enjoying the ride.

It's conjecture whether there are enough individuals with '**diamond hands'** to hold out against hedge funds and other professionals in concerted attacks. In the parlance of subreddit group **r/wallstreetbets**, diamond hands are where investors are hard and committed enough to sustain a position despite the potential risks and losses. The opposite are '**paper hands**', where holders are weaker and fold early. GameStop shares have already fallen from US$500 to below US$100. The memes come out as the Reddit group implores members to be diamonds.

Regardless, many large players on Wall Street are winners anyway. For example, **Fidelity** and **BlackRock** each own more than 10% of GameStop shares. The owners of Reddit and **Robinhood** (which undertook a multi-billion dollar equity raising) have seen the value of their businesses rise as millions of new users subscribe to their services. The r/wallstreetbets group had 2.8 million members at the start of this saga and it is now close to 10 million.

Many fund managers, both longs and shorts, jumped aboard the trading when GameStop pushed towards US$500, and the share price is now about US$90, as shown below in a **Morningstar** chart. And the likes of **Goldman Sachs** are mandated to lead a public offer of Robinhood with spectacular fees attached. While we can categorise the Reddit members as a sub-group of renegades fighting the system, and some hedge funds were indeed caught out, Wall Street in general is far from defeated.



Reading the Reddit posts, a lot of individual users seem to think this is a game, with people saying GME is going to US$1,000. Apparently, holding the stock of a struggling retailer is a way to finance their education or buy their parents a car. Well, investing is not that easy and this was always going to end badly for many.

The popular view that Robinhood is democratising investing by making trading free overlooks the fact that someone has to pay for it. Robinhood makes most of its revenue on 'payment for order flow' (PFOF) where trades are directed to market makers not immediately to exchanges. These professionals traders make money from knowing the order flow, so the Robinhood users are helping the very people on Wall Street they think they are punishing. **Citadel Securities**, **Wolverine Securities** and **Two Sigma** hedge funds exploit the retail trades while Reddit users jump on social media claiming they just fooled the big guys.

In fact, many fund managers on Wall Street don't even like hedge funds, especially those who have been victims of short selling attacks on shares they own. While there's a strong case that selling a stock that is overvalued is as legitimate a way to make money as buying an undervalued stock, some tactics used by hedge funds are less defensible, such as when they write reports specifically to drive prices down. Hedge funds certainly have their enemies, and there's little sympathy evident in our interview today with a prominent CIO.

And finally, many pension funds globally, including super funds in Australia, are themselves investors in hedge funds. Our own Future Fund is a major allocator. It is possible that the Reddit conspirators caused losses in hedge funds managing the retirement savings of their parents.

So yes, it was a clever attack at a vulnerable part of the market, where closing short positions involved buying shares which exacerbated the price rise, and forced index funds to buy shares. But the media characterising it as the revenge of the 99% on the 1% or akin to '**Occupy Wall Street**' are not thinking about who is on the other side of the trade. And let's face it, the motivation of most Reddit users is to make money, not campaign for equality. They are not parents struggling to put food on the table and pay the rent, and cheap access to call options is not what the 99% was crusading for.

The **Peridot Capital Management** newsletter quotes another example of a stock targetted by the Reddit army, **AMC**, a struggling movie theatre chain, and how the rise in share price benefitted a large holder:

"Silver Lake Partners, a large, well known private equity firm held $600 million of AMC convertible debt due in 2024, which was in a dicey spot with the convert price well into the double digits. Well, they acted fast last week, converting the debt into 44 million shares of equity as the stock surged into the high teens, and selling every single share the same day the stock peaked. That's right, they go from being one of the largest AMC worrying creditors to being completely out at nice profit in a matter of days. Note to Redditers: that's how you ring the register!"

Yes, there are legitimate comparisons to the disenfranchised who voted for **Donald Trump**, as nobody was punished for the excesses of the GFC and central bank liquidity has pushed the stockmarket to record levels while others suffer from slow economic growth and unemployment. Those with assets have increased their wealth while wages have stagnated. It is inequitable. Cheap money, free trading apps and social media have opened the door for a coordinated attack which has surprised professionals, and many are enjoying seeing parts of Wall Street suffer.

Either way, let's record this moment in financial history where the shares in a struggling video retailer rose from US$3 to over US$500 in a year without any improvement in the fundamentals of the company. Here's a five-day screenshot from Robinhood on GameStop prices to mark the occasion.

In other articles in this packed edition ...

Active fund managers are looking for the long-term winners from the pandemic, especially if they are marked down now. In this exclusive interview, the CIO of **MFS Investment Management, Ted Maloney**, asks whether it's possible for 10 years growth to be compressed into one.

There has been an extraordinary turnaround in six months in economists' expectations on residential property prices, and **Tim Lawless** charts the change and show prices reaching new records.

For example, NAB's Chief Economist, **Alan Oster**, said in the middle of 2020:

"We're basically expecting peak-to-trough to fall somewhere about 15%. Think about another year of 1% falls a month."

Then this week, he told **Domain** he expected an increase of 10% over the year in most capitals, with Sydney at 7% and Melbourne 7.5%.

Many retirees are finding the income they need when they are no longer working is elusive without taking on extra market risk. **Richard Dinham**'s survey show much more than the pandemic is worrying investors pre- and post-retirement.

It seems everyone has a view on the merits on WFH versus returning to the office, but as **Steve Bennett** explains, employers want to see their staff in the office for a range of reasons from culture to training to building team morale. Post-COVID, a balance will be needed but employees should not expect WFH to dominate as it did in 2020.

Investing markets are offering stretched equity values but negligible fixed interest returns, and **Shane Oliver** highlights seven charts worth watching in 2021 to navigate these difficult waters.

Thomas Rice manages an innovation fund but he is fascinated by the amazing ways the world in changing, as tech drives AI, health, mobility and almost everything we do in life. Here is his update of latest trends.

And finally, **James Posnett** runs his ruler over the IPOs of 2020, where the first half of the year looked like a struggle before business owners started cashing in big time and most backers benefitted from a surging market.

This week's White Paper is timely as investors struggle for yield. **AMP Capital** has provided an outlook for real assets, such as infrastructure and real estate, both listed and unlisted. Worth considering as an alternative to equities with hopefully better defensive characteristics.

Global search for short-term losers and long-term winners

Graham Hand

Interview with Ted Maloney, Chief Investment Officer, Global Director of Research and Equity Portfolio Manager at MFS Investment Management. He has been with MFS since 2005.

GH: We've seen COVID accelerate global trends, with some companies compressing 10 years of growth into one year. What challenges and opportunities does this throw up for you as an active manager?

TM: The first thing most fund managers had to do is make sure they have their teams in place remotely and are able to do their jobs. It was fairly seamless for us given we are a global firm and we're used to spending time on video conferences working with our colleagues around the world.

On the investing side, there are industries that are advantaged or disadvantaged, and what is most interesting is where there is a mispricing. We have developed a 2x2 matrix with long-term COVID winners and losers on one axis and short-term COVID winners and losers on the other, and the best opportunities are in short-term losers and long-term winners. That's where we can uncover value. We know some are overvalued but others really will be worth what they're trading at today. It's our job to sift through knowing there are factors at work that are distorting asset prices.

GH: But there must be disagreement about which box different companies belong in.

TM: Well, our views will show up in our investments but, yes, we couldn't publish a document on the matrix because there's inherent disagreement in the team. A critical part of our process is making sure that we have a culture that allows for genuine disagreement. As we collaborate and debate to get to the right answer, one person's long-term winner might be another's long-term loser.

GH: We've seen some extraordinary rises in stock prices, particularly in tech and in growth versus value. We seem to publish a new chart each week which shows how elevated the market looks and then a month later, it's even higher. Where does MFS stand on whether the market's got ahead of itself, or is it justifiable that the Microsofts and Teslas of the world are gaining from the way the world is changing?

TM: I'd say both. There are pockets of excessive exuberance and perhaps bubbles, but you tend to not be able to declare something is a bubble until after it's burst. While you can identify where you think a bubble might be expanding, there are also real businesses doing well.

The overarching reality is that monetary policy, particularly in the last year, is causing market distortions. Free money will find a home in assets, especially where the DCF (Discounted Cash Flow) will tell you that most of the value is in the outer years. So companies that have a story that they're going to grow until the end of time have done well. We know some are overvalued but others really will be worth what they're trading at today. It's our job to sift through knowing there are factors at work that are distorting asset prices. As long-term investors, it is a positive for our ability to deliver for our clients.

GH: You take a global perspective in your investing. Are you seeing pockets of success and a wide variance between different countries around the world?

TM: The home country of the big trends we were talking about is the US but there are certainly examples in every market around the world. In Australia, there are companies that have behaved exactly like some of the US companies. When we're talking about overall indices, it's the US that has been most impacted by the easy monetary policy and the resulting high valuations, but we do look for relative value comparing businesses in the same industry to others around the world.

GH: How much has the different impact of the pandemic around the world influenced your investing?

TM: Given that we are long-term investors, we're not sitting around watching the daily infection rates for each country for investing purposes. We do watch it closely for managing our own business and looking out for our colleagues in different countries. But we are watching the implications for specific companies, such as where they are paying extra to their employees and spending more on safety measures that will hurt near-term but will deliver for customers and for employees over the long term.

That's where sustainability investing is crucial in any market and COVID is a great test. Companies always like to say that they care about their employees and they care about their customers and they care about everyone. But when they're put into stress, you can see what they really care about.

GH: We know many sectors, such as online shopping, have done well in the last 12 months but do you think there are some sectors that are doing better than the market recognises and they look fundamentally cheap at the moment?

TM: The market tends to be good at pricing in what's happening right now. But one example is live entertainment, which is non-existent now but we think it will come back bigger than ever. While it's important in investing not to over-emphasise one's own perspective, I know that my price elasticity for the next concert where I feel safe will be extremely inelastic.

Another example that we debate is business travel versus personal travel. Most of us agree that personal travel experiences will come back stronger than ever, but business travel probably will not come back to its full strength.

What's overlooked in this discussion is the strength of a company's balance sheet. A company might be well-positioned for a COVID recovery in five years, but that's not much good if they're insolvent between now and then. We have the advantage of equity, fixed income and quant teams that are completely integrated and in moments of stress, for example, the credit analyst can give the equity analyst a different perspective.

GH: Do you have examples of themes where prices might have gone ahead of value?

TM: Well, obviously anything that you can consume from the comfort of your home has benefited greatly from COVID and many of those companies have executed well. Our job is to decide how much of 10 years of growth has been pulled forward as part of a permanent paradigm shift and how much will evaporate in a return to normal.

GH: We've seen an extraordinary week or two on the Reddit platform, with 'Robinhood' traders and a stock like GameStop. How strong are you seeing the influence of this new retail movement on the market, such as the ability of the combined impact of thousands of smaller investors taking on the might of Wall Street and the hedge funds in particular?

TM: If there was any doubt about their influence in the last year, it's undeniable over the last week. I think the root cause goes back to monetary policy and free money trying to find a home. At the same time, lots of people are sitting in their homes and figuring out what to do with their free money, and it's a dangerous cocktail. But we worry about what happens when the tide goes out and individual investors will be harmed.

We do not worry about imprudent risk managers, professional risk managers who are in a lot of trouble by being short excessively some stocks. They have exposed themselves to a coordinated attack by individual investors and there's some poetry to that, to be honest. We don't necessarily root for it but our job is to identify market inefficiencies and understand what short-term market actors are doing, and that gives us opportunity to invest for the long term.

What's a bit more subtle is that due to the short squeezes, full hedge fund books have been liquidated, including long positions, without regard for prices or their views on the stock. Our investment managers and traders are paid to understand the technicals of the market and when a company we like is now 5% cheaper due to a forced seller driven by short-term incentives, we can go in and buy that that stock because 5% has just been handed to us. We realise it could be down 5% tomorrow and another 5% the next day but if we understand the real value of the company, in the long term we will deliver for our clients.

GH: A platform like Robinhood publishes its turnover each day. Would a professional house like MFS watch that as an input to your own process?

TM: We examine all data that may be of use and available. If we're trying to understand why a company is, say, trading off sharply and we can't explain it for fundamental reasons, then we look for other market factors. In the last couple of weeks, we've paid more attention to the retail turnover data but I wouldn't expect that in six months' time various Twitter feeds will be included in our models. But we do need to adapt our process on the margin. Our job is to come up with creative approaches to discover value in the marketplace.

GH: It's hard to ignore the five big tech companies, the FAANGs, as they make up a quarter of the S&P500 and affect almost everyone. Do you have a view whether the tech titans are overvalued or are they just such great businesses that current values are justified?

TM: It's a company by company judgement. They are certainly highly valued and they are all excellent companies, so that's where the job gets hard. We ask how much growth do we need out of a given company to justify the valuation? In many cases, the answer is more than could possibly be justified by the current valuation.

We try to bring original insights to the analysis and regulation is something that we worry a lot about in this space. Regulators don't care much that a few hedge fund managers have been harmed but when it reverses, regulators do care deeply about the harm to individuals. There are platforms putting individual investors at harm and that will probably draw some regulatory scrutiny. The same is true across the tech and social media landscape as regulators increasingly become concerned about the potential harm in one form or another.

GH: With 300 MFS investment professionals around the world, what are some key principles to manage the culture and coordinate so many people?

TM: In this environment, everyone in our firm understands that if you're taking care of your colleagues not only from an investment perspective but also from an operational and personal perspective, then you can make sure you're also taking care of your clients. The main job of the leadership team is to set the tone and culture.

A big part of our process is making sure that we have an environment where people can strongly disagree with each other and bring different viewpoints in order to get to better insights. There's lots of different ways to create and debate different viewpoints, but a good foundation is having people with diverse backgrounds. Diversity is key to success and we work hard to get better at it and then importantly, we think that the companies that we invest in should do the same. They'll benefit their own clients and our clients as shareholders. And it's all part of being a sustainable investor to drive true long-term value.

Graham Hand is Managing Editor of Firstlinks. This article is general information and does not consider the circumstances of any investor. [MFS International Australia](#) is a sponsor of Firstlinks.

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Australian housing values reach a new record high

Tim Lawless

Housing values continued to rise through the first month of 2021 with CoreLogic's national home value index up 0.9% over the month. The January movement takes Australian home values to a fresh record high. Housing values have surpassed pre-COVID levels by 1.0%, and the index is 0.7% higher than the previous September 2017 peak.

Every capital city and broad rest-of-state region recorded a rise in housing values over the month, ranging from a 2.3% surge across Darwin to a relatively mild 0.4% rise in Sydney and Melbourne.

Index results as at January 31, 2021

	Change in dwelling values				
	Month	Quarter	Annual	Total return	Median value
Sydney	0.4%	1.6%	2.0%	4.6%	$879,299
Melbourne	0.4%	2.1%	-2.1%	1.1%	$692,162
Brisbane	0.9%	2.5%	4.0%	8.3%	$527,826
Adelaide	0.9%	3.3%	6.5%	10.8%	$473,170
Perth	1.6%	3.8%	3.4%	8.0%	$484,280
Hobart	1.6%	3.7%	6.8%	12.1%	$523,932
Darwin	2.3%	6.6%	11.4%	17.3%	$426,215
Canberra	1.2%	3.7%	8.5%	13.5%	$686,524
Combined capitals	0.7%	2.2%	1.7%	5.1%	$659,731
Combined regional	1.6%	4.7%	7.9%	12.8%	$428,919
National	0.9%	2.8%	3.0%	6.6%	$583,157

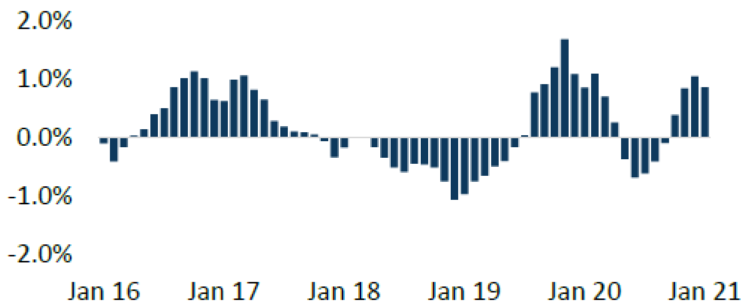
Regional doing well

Continuing a trend that became evident early in the pandemic, regional housing values rose at more than twice the pace of the capital city markets. CoreLogic's combined regionals index was up 1.6% over the month, while capital city values were 0.7% higher. Since the onset of COVID-19 in March last year, regional housing values have surged 6.5% higher while capital city housing values are down -0.2% over the same time frame.

The largest states are seeing regional home values rising at more than three times the pace of their capital city counterparts. Home values across Regional Victoria and Regional New South Wales rose 1.6% and 1.5% respectively in January compared with a 0.4% increase in home values across Melbourne and Sydney.

According to CoreLogic's research director, Tim Lawless, the divergence between metro and regional housing demand in New South Wales and Victoria is more substantial than in other states.

Month-on-month change in national dwelling values



"Internal migration data shows more people are leaving Sydney and Melbourne for regional areas, resulting in a transition of activity from the metro regions to the outer fringe and regional markets. This demographic trend is further compounded by the demand shock of stalled overseas migration. As Melbourne and Sydney historically receive the vast majority of overseas migrants, these metro areas have been the hardest hit by this demand shock."

"Better housing affordability, an opportunity for a lifestyle upgrade and lower density housing options are other factors that might be contributing to this trend, along with the new found popularity of remote working arrangements."

Houses over units

Another broad trend that is becoming increasingly evident is the outperformance of houses over units. At a national level, house values have risen by 3.5% over the past six months while unit values are unchanged. More recently, the past three months has seen every capital city record a stronger result for houses over units. Mr Lawless said:

"Demand for units has diminished through COVID-19 amidst record low levels of investor participation and changing living preferences. At the same time supply levels are heightened in some precincts. While demand and supply remain imbalanced we are likely to see units continue to underperform relative to detached housing markets."

The rise in housing values is occurring against a backdrop of low advertised supply and rising buyer activity. Inventory levels started 2021 in a tight position. The number of fresh listings added to the market nationally over the four weeks ending January 24th was 3.3% lower than the same period a year ago and 13.3% below the five-year average.

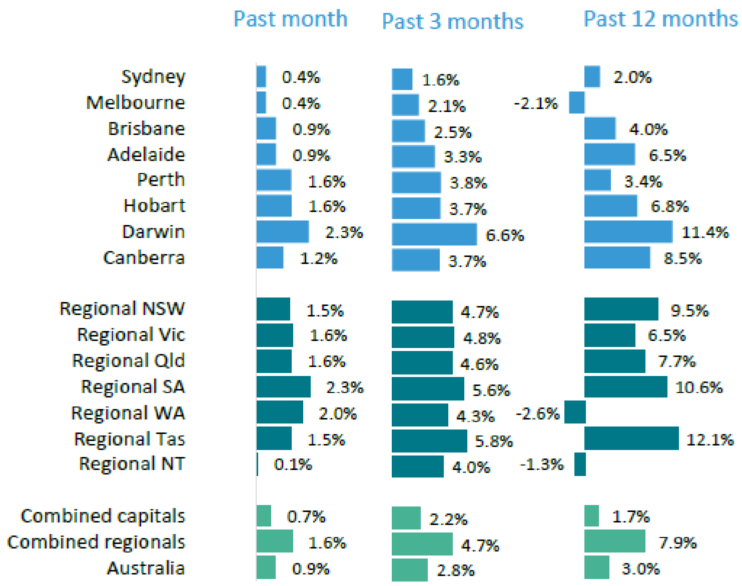
Melbourne and Perth were the only capital city markets to buck the trend, with new listings 20.8% higher than a year ago in Melbourne and 2.2% higher across Perth. *"Melbourne vendors may still be playing catch-up from the earlier lockdown period, while in Perth vendors seem to be relishing the best selling conditions seen in many years,"* Mr Lawless said.

Although fresh stock being added to the market is close to the same levels a year ago, total advertised inventory started the year around record lows. Nationally, total listing numbers, which include new listings plus re-listed properties, were 27.8% lower than this time last year, tracking 29.3% below the five-year average. Melbourne was the only city to record total listing numbers that were higher than last year, up 7.7%.

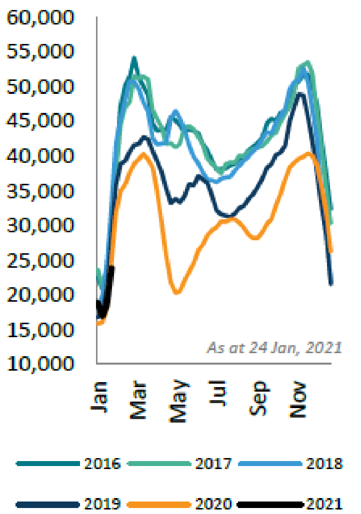
Another factor impacting available housing supply has been a strong rate of absorption from rising home buyer activity, especially in the detached housing space. CoreLogic estimates the number of national home sales over the past three months was 23.9% higher than the equivalent three-month period from a year ago. The volume of regional home sales was estimated to be 26.8% higher than a year ago while capital city sales were up 22.1%.

On the latest estimates, the volume of capital city house sales were 11.8% above the decade

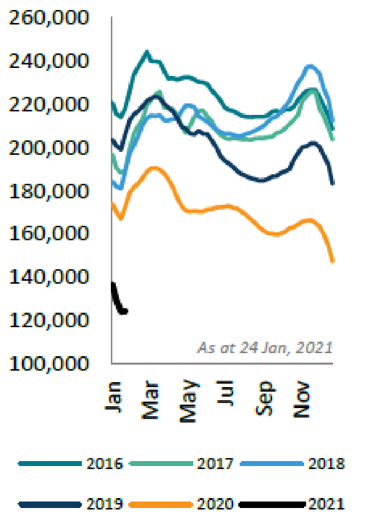
Change in dwelling values



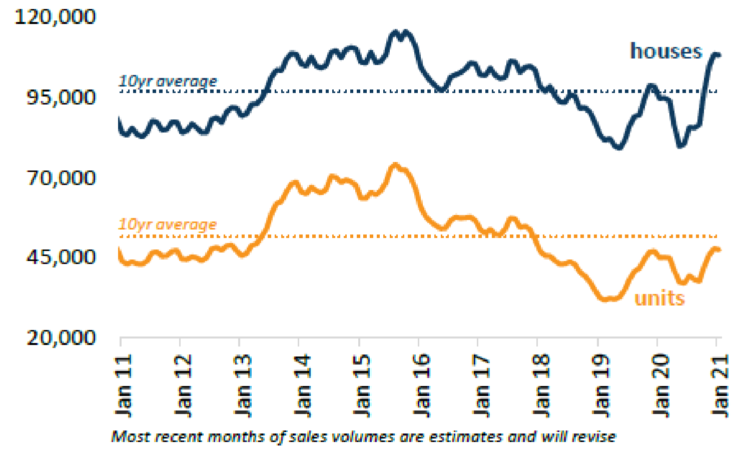
New listings, rolling 28 day count, national



Total listings, rolling 28 day count, national



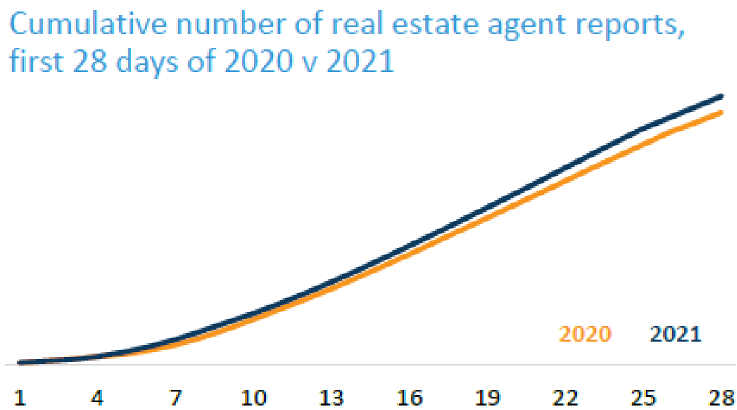
Rolling six month sales volume, combined capitals



average over the past six months while the volume of capital city unit sales were rising but remained 8.1% below the decade average. Advertised supply levels are low while demand is strong.

New listings and buyer numbers growing

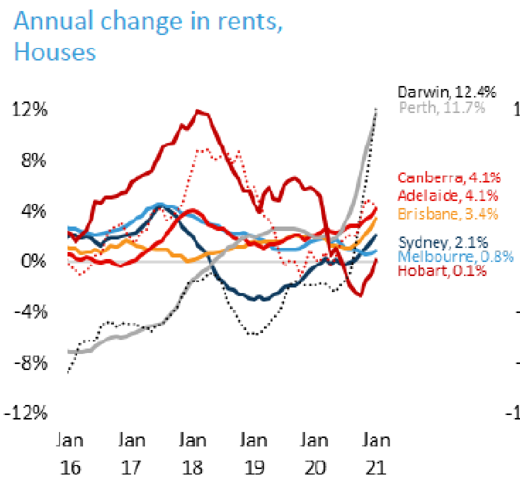
Some early indicators suggest that new listing numbers are set to outpace levels from a year ago. Real estate agent activity across CoreLogic's RP Data platform is up 6.5% over the first 28 days of January compared with the same period in 2020.

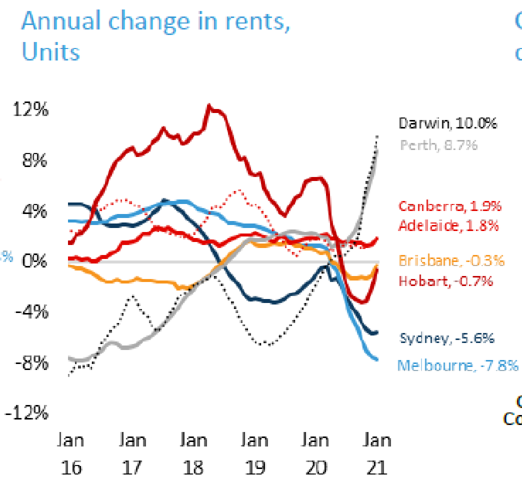


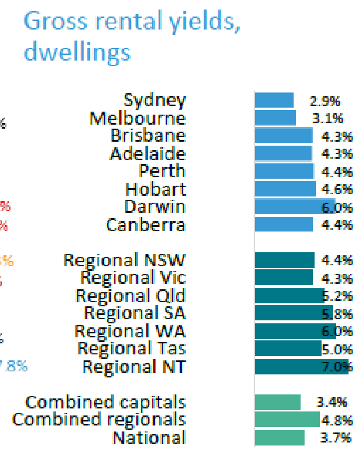
However buying activity is also ramping up, with the number of mortgage related valuations already 27% higher than a year ago across CoreLogic's Valex valuation platform. *"At the moment, despite our expectation of a lift in new listing numbers, buyer demand is still outpacing new stock additions. If this trend persists, the rapid rate of absorption is likely to keep overall stock levels low resulting in further upwards pressure on housing prices,"* said Mr Lawless.

Recovery in apartment rents, especially Perth and Darwin

The rental market dynamic has changed substantially through COVID but there are some early signs that weakness across the unit sector is starting to level out, if not turn around.







Rental demand has transitioned towards detached and lower density housing markets since the pandemic, partly reflecting the disruption to rental demand from overseas migration, but also the stress of changed working conditions, caused by COVID restrictions, in industry sectors that are traditionally more aligned with rental demand. Additionally, with more people working from home, demand for larger housing options has lifted.

Unit rents in Melbourne and Sydney are down 7.8% and 5.6% respectively over the past year, but in some positive news for landlords, the rate of decline is easing across these markets; in fact Sydney unit rents posted the first month-on-month rise in January (+0.8%) since March last year and Melbourne unit rents held firm over the month.

Part time job numbers have now fully recovered back to pre-COVID levels and more businesses are embarking on a return to work program which could be helping to support renewed demand towards inner city rental accommodation. Additionally, with rental rates now lower for inner city units, improved rental affordability could be attracting more people back to inner city renting.

Geographically, Perth and Darwin stand out with the largest rental increases. The annual lift in house rents is well into double digit territory while unit rents are also posting strong gains. The strong rental conditions in these regions comes after a long run of falling rents and low levels of investment activity. The result is extremely tight rental supply at a time of rising demand, while affordability is relatively healthy due to the sustained fall in rents between 2013 and 2018. Despite the substantial lift in Perth and Darwin rents over the past year, the median rental rate in Perth is still $90/week lower than the 2013 peak, and Darwin rents remain $145/week below their previous record high in 2014.

Summary of the good start to 2021

Overall, the January results from CoreLogic show the housing market has started the year on a firm footing, setting the scene for further price rises throughout the year.

Low interest rates have been a key factor in supporting the housing market recovery. Mortgage rates are likely to remain at record lows for the foreseeable future, with little chance interest rates could rise this year. This is because inflation and unemployment are still a long way from reaching the RBA's objectives of full employment and returning the annual inflation rate to the target range of between 2 and 3%.

New headwinds for the housing market could be seen in the form of tighter lending policies, however a trigger for another round of macroprudential intervention is not apparent. A rise in lending activity regarded as 'riskier', such as higher proportions of interest only lending, loans with high debt or loan value to income ratios and loans to borrowers with small deposits, could be the catalyst for a tightening in credit rules.

The most significant risk to housing markets remains further outbreaks of the virus. The recent series of outbreaks, and subsequent border closures and restrictions through late December and January, had an immediate negative impact on consumer sentiment.

Tim Lawless is Executive, Research Director Asia Pacific at [CoreLogic](). Read or download the [full report here]().
This article is general information and does not consider the circumstances of any investor.

A close look at retiree fears and expectations

Richard Dinham

For many, the word 'retirement' is associated with extended holidays to far-flung locations or spending quality time with grandchildren. And while the new-found status of 'retiree' sits well with some, for others it's a different story. It depends on how smoothly the transition into retirement progresses. There are, in fact, a range of financial, emotional and psychological fears that are often linked to retirement – for good reason.

Australians spend most of their working lives saving for their retirement so that when the time comes to retire, they can lead a comfortable life. However, many people are uncertain about what to expect in retirement, and the issues they may face are not always just financial. For many investors, financial planners play a pivotal role in providing technical advice, guidance and peace of mind before, during and after the retirement process. But there are also the emotional and psychological impacts of transitioning to retirement to be considered.

Despite the best laid plans and the most strongly-held expectations, research from CoreData found that around 50% of Australians retire early due to unexpected circumstances and within timeframes they did not choose. The reasons range from health issues to unemployment to providing care to loved ones. This can result in retirees feeling out of control and impacted not only financially, but emotionally as well.

Retirement planning is not a 'one size fits all' approach.

Common fears and expectations associated with retirement

While it is not surprising that pre-retirees with no superannuation savings are worried about funding their retirement, they are not the only cohort concerned. Despite healthy superannuation balances, CoreData's research shows that close to two-thirds of pre-retirees are worried about being able to fund their retirement, with only a small percentage feeling very optimistic that they will have adequate financial resources to do everything they want in retirement.

In fact, more than half of those with retirement balances of between $750,000-$1 million say they worry about funding their retirement. These concerns only recede once an individual has accumulated more than $1 million in savings.

Encouragingly though, 44% of pre-retirees expect to live a reasonable retirement life, understanding that not all of their desires will be fulfilled. Only four in 10 retirees say that their actual retirement lifestyle is aligned with what they expected, and three in 10 say their retirement lifestyle exceeds their expectations.

Successful retirement factors

A successful retirement involves more than just money. Other important factors in a successful retirement include, mental and physical health, having realistic expectations and owning a home.

Retirement satisfaction occurs when a retirement lifestyle matches the retiree's expectations. Not every retiree has expectations of a luxurious retirement lifestyle but all of them expect basic needs to be addressed.

Once a person is retired, the concern turns to whether they will run out of savings later in life. Around one in eight say their greatest worry is they will outlive their savings, and close to 10% are worried about affording the costs of high-quality aged care facilities. While the welfare system allows for a basic level of income, budgeting for discretionary expenditure can cause stress.

Having adequate savings in place allows for a degree of flexibility when it comes to discretionary spending and provides a stronger sense of control.

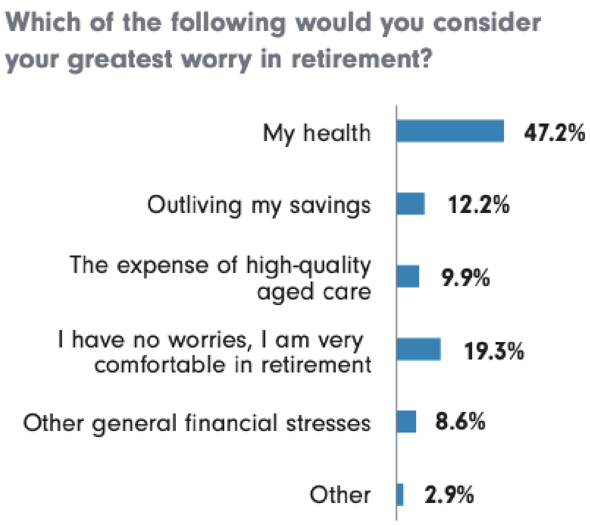
When planning for retirement there are two core factors that determine the amount of savings a retiree needs - life expectancy and projected expenses. Other factors including marital status, health and home ownership when determining how much in savings a retiree needs in order to enjoy their desired lifestyle.

Staying healthy

Early retirement is often seen in a favourable light and is eagerly planned for, however 28% of Australians retire early and unexpectedly due to health-related issues. Almost half of all retirees consider their health as their greatest worry in retirement.

Research from the Australian Centre of Financial Studies found those who retire early due to health issues are likely to have lower incomes and are more likely to have lower superannuation balances. By default, they are also most likely to incur additional health-related expenses in retirement.

Maintaining a healthy lifestyle and addressing potential health issues early are therefore important factors to consider when planning for retirement.



Owning a home

Unsurprisingly, owning a mortgage-free home provides a greater sense of security and retirement satisfaction. Research from the Australian Housing and Urban Research Institute found older people with secure long-term accommodation tend to have better physical and mental health too.

Home ownership is also intrinsically linked to retirement readiness and satisfaction. Those who own more than one property with no mortgage typically experience retirement success. Single property owners also enjoy a high level of retirement satisfaction. In contrast, individuals who own no property score the lowest in terms of retirement satisfaction.

Retirement is one of the larger changes in an individual's life and it comes with a host of financial, emotional and psychological fears. A sound financial plan can help manage associated fears and expectations and most importantly, ensure the transition into retirement is as seamless as possible.

Richard Dinham is Head of Client Solutions and Retirement at Fidelity International, a sponsor of Firstlinks. This document is issued by FIL Responsible Entity (Australia) Limited ABN 33 148 059 009, AFSL 409340 ('Fidelity Australia'), a member of the FIL Limited group of companies commonly known as Fidelity International. This document is intended as general information only. You should consider the relevant Product Disclosure Statement available on our website www.fidelity.com.au. For more articles and papers from Fidelity, please

Emerging from the pandemic and the future of workplaces

Steve Bennett

In mid-2020, we explored some of the potential impacts from the pandemic on the demand for office space. At the time, the pandemic had forced the world into lockdowns and every person that could work from home was doing so.

The rise of technology

Over the past two decades, the substitution between the traditional office and remote working or work from home (WFH) arrangements has been possible because of the steady progressive advancement of communicative technologies.

The global lockdown forced the accelerated adoption of these technologies, which prompted further advancement of platforms such as Microsoft Teams, Zoom, GoToMeeting, and Webex. It also simultaneously shifted perspectives on working away from the traditional office, as many people were forced to experience working from home firsthand.

With improved technology, shifting perspectives, and the prospect of a post-COVID world with the vaccine roll out, we can now explore the potential impact on the demand for office space.

Office work

The key benefits to functional offices are well understood. At its foundation, a quality office provides an environment which incubates, facilitates and promotes productivity, collaboration, culture and success. Corporations across most industries work in offices, including some of the fastest growing corporations – technology firms.

Technology firms and office strategies

Over the past year the world's largest technology companies recorded significant growth in revenue and the demand for their products. The pandemic advanced remote working technologies and accelerated other digital trends, such as payments to online retailing. Interestingly, over this period some of these global technology leaders also made decisions regarding their office workplace strategies.

- **Amazon** announced in excess of US$1 billion in office investment across six cities, including Dallas, Detroit and Denver. In Australia, Amazon also pre-committed to Charter Hall's development at 555 Collins Street, Melbourne.
- **Facebook's** total office leases in New York topped 2.2 million square feet occupying the office space available at the Farley Building.
- **Google** leased 1.3 million square feet of space as part of a new US$1 billion (1.7 million square foot) campus to be called Google Hudson Square in New York City and intends to double its current 7,000 staff in the city over the medium term. It also added another 42,000 square feet to its offices in San Francisco, adding to its Mountain View headquarters.
- One of Australia's most successful technology firms, **Atlassian**, announced a new Sydney headquarters worth approximately $1 billion to open in 2025 and located near Central station in the Sydney CBD.
- **Microsoft** executed a 523,000 square foot office lease in May at Atlantic Yards, an office development within Atlantic Station in Atlanta. It plans to invest $75 million as the sole tenant at the building. Microsoft also recently announced its intention to open new offices in the Washington D.C. area in 2022.

Microsoft in focus

Microsoft has been one of the largest beneficiaries from the shift to WFH routines. Amongst its suite of communication software like Outlook (email) and other technologies offered by the Office suite, the adoption of Microsoft Teams and Windows Virtual Desktop grew significantly.

Microsoft's cloud-computing service Azure, its gaming systems, and Windows have also recorded rapid growth amid the WFH shift.

With this rapid product growth, Microsoft has invested in research to better understand WFH technologies and their impact on workers.

Microsoft's latest [Work Index Trend study]() was centred around the finding: *Brainwaves reveal remote meeting fatigue is real*. The following sections are extracted from the report.

"More remote work can lead to elongated working hours, meeting fatigue, and missed in-person connections like spontaneous hallway conversations that can bond a team and make collaboration feel easier. And the lack of connected and comfortable home workspaces remains a productivity challenge for most of us.

The study found that remote collaboration is more mentally challenging than in-person collaboration. Specifically, brainwave patterns associated with stress and overwork were much higher when collaborating remotely than in-person. But they found something unexpected as well: If the pair first worked together remotely, their brainwaves suggested it was more difficult for them to work together in-person afterwards. It seems that the social connection and work strategies created when working in-person transfers to a remote setting, but the opposite is untrue.

A second study found that brainwave markers associated with overwork and stress are significantly higher in video meetings than non-meeting work like writing emails. Further, due to high levels of sustained concentration, fatigue begins to set in 30-40 minutes into a meeting. Looking at days filled with video meetings, stress begins to set in at about two hours into the day. The research suggests several factors lead to this sense of meeting fatigue: having to focus continuously on the screen to extract relevant information and stay engaged; reduced nonverbal cues that help you read the room or know whose turn it is to talk; and screen-sharing with very little view of the people you are interacting with."

Three other major findings were published, based on analysis of users of Microsoft's 'Teams' product, that many companies, including Charter Hall – use for online and virtual meetings.

"**1. The pandemic will have a lasting impact on work**

One of the most consistent themes was that this unique circumstance has accelerated the blending of work and life – which could soften dynamics of the workplace forever. Over half of the parents surveyed (54%) said it's been difficult balancing household demands while WFH. This burden was felt most heavily by millennials as well as new entrants to the workforce, Generation Z. This may be because this group is more likely tasked with caring for younger children or sharing workspaces with roommates while managing a full-time job.

2. The 9 to 5 workday may be fading away

The average time between Microsoft customer's first and last use of Teams had increased by over one hour. In this report, we explore this concept further – is the 9 to 5, five-day workweek still disappearing? The data suggests, yes. In Teams, people are working more frequently in the morning and evening hours, but also on the weekends. Teams chats outside of the typical workday, from 8-9 a.m. and 6-8 p.m., have increased more than any other time during the day – between 15% and 23%. Weekend work is spiking as well – Teams chats on Saturday and Sunday have increased over 200%.

3. Physical offices will not disappear in the future of work

Many workers around the world have spent the last four months working remotely at least part-time. As teams have adjusted to this new reality, many are wondering – will physical offices disappear in the future of work? Microsoft research indicates that work will likely be a fluid mix of in-person and remote collaboration.

Still, several pain points associated with working from home were uncovered. Nearly 60% of people surveyed feel less connected to their colleagues since working remotely more often. In China, this number spiked to 70%.

In addition, an ongoing study conducted by Microsoft found that 35.3% of full- time information workers work remotely in a dedicated home office. And only 5% of the people surveyed in the Harris Poll live alone. So it's no surprise that distractions, connection issues, and lack of ergonomic work environments were noted throughout the research as some of the top pain points of remote work. This indicates that while the future of work will be more remote than before, the physical office space – which brings benefits like connected, ergonomic workspaces and opportunities for social connecting and team bonding – will likely remain a core part of the future of work.

For instance, 82% of managers surveyed expect to have more flexible work from home policies post-pandemic."

Our view

These findings appear to be consistent with a vast majority of workplace studies that we have seen. Employees value WFH flexibility but they also enjoy – and benefit from – the office environment. Some organisations will need to adjust their workplace strategies to provide greater flexibility. However, many firms were already on this path.

Our tenants are telling us that office work will remain essential in stimulating productivity, growth, maintaining culture, managing risk and driving innovation.

The onus is on corporate landlords and occupiers to ensure that the workplace environment remains a compelling proposition through provision of a high level of amenity and facilities to ensure that the office is an enjoyable, meaningful and productive experience.

Steve Bennett is CEO of Charter Hall's Direct Property business. [Charter Hall] is a sponsor of Firstlinks. This article is for general information purposes only and does not consider the circumstances of any person, and investors should take professional investment advice before acting.

For more articles and papers from Charter Hall, please click [here].

Seven key charts on the global economy and investments

Shane Oliver

Overview

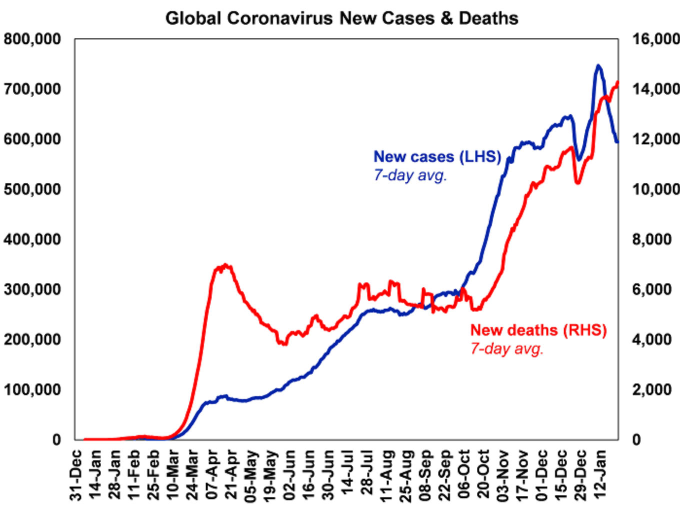
Our high-level investment view is that while shares are vulnerable to a short-term correction having run up hard since early November, overall investment returns will be solid this year on the back of economic recovery (driven by stimulus and the deployment of vaccines allowing a more sustained reopening) at the same time that interest rates remain low.

We are likely to see a further shift in relative returns to investments that benefit from recovery - resources, industrials, tourism stocks and financials. This note looks at seven charts we see as critical to the outlook.

Chart 1 – new coronavirus cases

The deployment of vaccines holds hope for a sustained global reopening and return to something more normal and our base case is that this will be successful over the next year or so. Key to watch will be the trend in new coronavirus cases and deaths.

Global new cases have slowed again lately but this appears to owe more to the latest round of lockdowns as only around 5% of developed countries' populations and less in emerging countries have been vaccinated. Uncertainty remains around vaccine effectiveness in preventing infection and serious illness, their effectiveness against new mutations, how long protection lasts for, what portion of the population will need exposure or vaccination for herd immunity, etc. That said, there are some positive signs regarding vaccine efficacy beyond formal trials out of Israel where vaccination is above 30%.



Source: ourworldindata.org, AMP Capital

Chart 2 – global business conditions PMIs

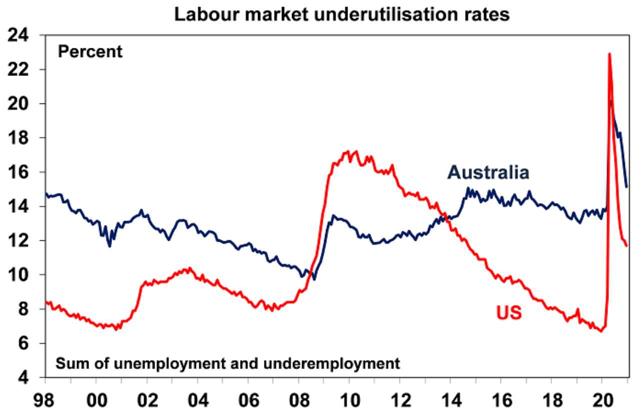
Global Purchasing Managers Indexes (PMIs) – surveys of purchasing managers at businesses in most major countries – are an excellent and timely guide to the state of the global economy. Since the initial lockdown lows early last year they have rebounded sharply, albeit with the services sector still lagging given distancing restrictions and remain consistent with strong growth this year. They will ideally need to improve further to see our expectation for global growth of over 5% this year and to underpin a strong rebound in profits.

Source: Bloomberg, AMP Capital

Chart 3 – unemployment and underemployment

At present, investors face the ideal backdrop of improving growth but low interest rates. Key to watch in terms of the latter is spare capacity. One of the best measures of this is unemployment and underemployment.

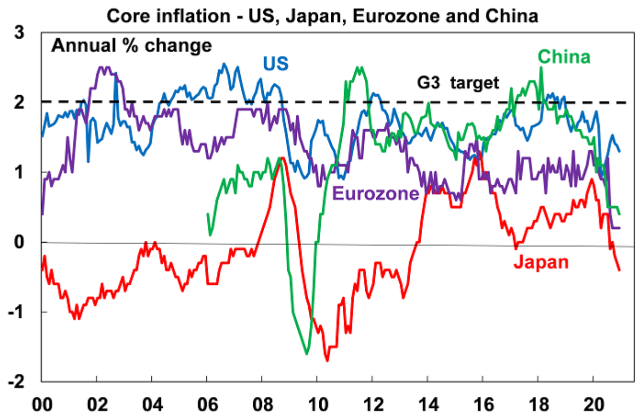
The combination of unemployment and underemployment has fallen sharply from last year's highs but remains relatively high in the US and Australia. A continuing sharp fall from here would bring forward the time when central banks move from easing to being primed for tightening. That said we have a long way to go to full employment as even pre-coronavirus levels did not generate much inflationary pressure.



Source: Bloomberg, AMP Capital

Chart 4 – global inflation

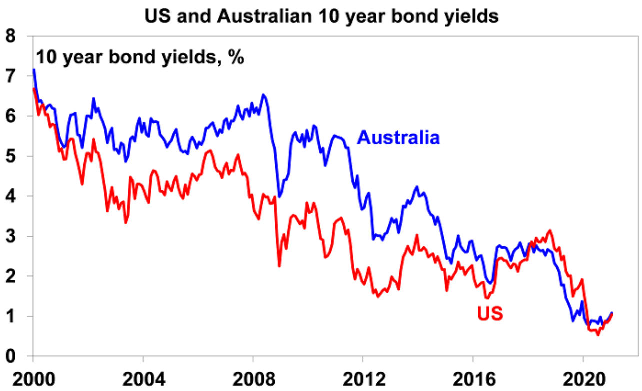
This year has started with a bit of an inflation scare and US and Australian headline CPI inflation measures look like rising to around 3.5-4% over the year to the June quarter as last year's June quarter price slump drops out of annual calculations and higher commodity prices feed through. Core and underlying inflation measures will remain the main focus of central banks and right now they are well below target in the US, Europe, Japan and China as is the RBA's preferred measure of underlying inflation in Australia at 1.2% year on year.



Source: Bloomberg, AMP Capital

Chart 5 – bond yields

Long-term bond yields plunged in the initial stages of the pandemic on safe haven demand and then as central banks bought bonds to inject cash into their economies. Higher long bond yields and steeper yield curves (i.e. the gap between long-term yields and short-term interest rates) are part and parcel of economic recovery as a result of less saving and more borrowing. If we don't see higher bond yields it would raise concerns that risk taking and investment – or borrowing short and lending long – may not occur. That said, we don't want bond yields to rise too far too fast lest they boost borrowing costs too quickly and so crimp the recovery and put pressure on share market valuations – as occurred in 1994. So

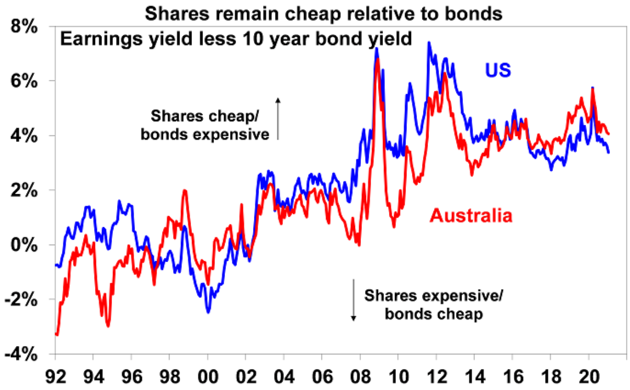


Source: NBER, Bloomberg, AMP Capital

far so good with bond yields up from last year's lows (by around 0.5% in the US and Australia and less elsewhere) but not dramatically so. More upside in yields is likely this year but too rapid a rise – perhaps as investors who are loaded up on bonds seek to offload them - would be a concern.

Chart 6 – the gap between earnings and bond yields

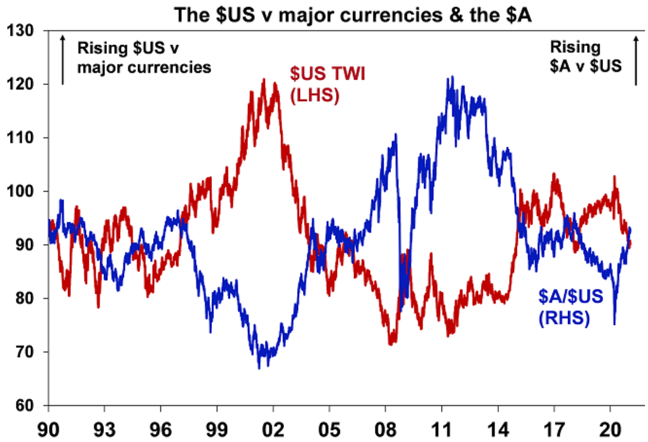
The rebound in shares since March has pushed traditional valuations like price to earnings multiples to extremes leading some to fret about overvaluation and a bubble. But shares should trade on higher PEs and hence lower earnings yields when interest rates and bond yields fall. Once this is allowed for, share valuations are not extreme. One way to look at this is to compare the earnings yield on shares (i.e. the inverse of the PE) to the 10-year bond yield. Despite the rally in shares and recent rise in bond yields, it indicates that shares still provide a decent risk premium over bonds. This gap is worth watching – rising bond yields would make shares less attractive, but this can be offset by rising company profits where we expect to see strong gains this year.



Source: Thomson Reuters, AMP Capital

Chart 7 – the US dollar

The US dollar is a counter-cyclical currency so cyclical moves in it against a range of currencies are of global significance and bear close watching. Because of the relatively low exposure of the US economy to cyclical sectors like manufacturing and materials, the US dollar tends to be a 'risk-off' currency, i.e. it goes up when there are worries about global growth and down when the outlook brightens. And a lot of global debt is denominated in US dollars particularly in emerging countries, so when the US dollar goes up it makes it tough for emerging countries. If we are right though, and the global economy continues to recover, then the US dollar is likely to decline further (i.e. the red line in the next chart will fall further) which would be positive for emerging countries. It would also mean more upside for the Australian dollar against the US dollar (i.e. the blue line will continue to trend up) – the big movements in which are primarily a US dollar story.



Source: Bloomberg, AMP Capital

Concluding comments

Share markets had a strong rebound in 2020 from their March lows. For further solid gains, beyond inevitable short-term setbacks, the indicators shown in these charts need to remain favourable or move in the right direction. They are worth keeping an eye on.

Dr Shane Oliver is Head of Investment Strategy and Chief Economist at AMP Capital, a sponsor of Firstlinks. This document has been prepared for the purpose of providing general information, without taking account of any particular investor's objectives, financial situation or needs.

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Innovation wrap: the amazing world of the latest tech trends

Thomas Rice

Thomas Rice is the Portfolio Manager for the Perpetual Global Innovation Share Fund, based in Sydney, Australia. He writes a regular report on the latest innovation trends and his personal website is www.thomasrice.com.

Here's is wrap of the latest health, technology, innovation, and finance news.

Health

Korean researchers have come up with a way to diagnose prostate cancer with just a urine test, 20 minutes, and a splash of AI. The new technique boasts an accuracy rate of almost 100% (see the paper).

A 78-year old blind man in Israel became the first recipient of a new type of synthetic cornea implant called the CorNet KPro, which restored his sight.

Developed by a company called CorNeat, the KPro is the first implant that can be integrated directly into the eye wall to replace scarred or deformed corneas with no donor tissue. Immediately after the surgery, the patient was able to recognize family members and read numbers on an eye chart.

The scientists who helped develop Pfizer's COVID-19 vaccine have used the same technology to develop a vaccine that they say cures multiple sclerosis in mice, taking us one step closer to a cure for humans.

BioNTech CEO Ugur Sahin led research showing that an mRNA vaccine might also work in multiple sclerosis, Fierce Biotech, a pharma news outlet, reported.

Sahin's team showed that an mRNA vaccine encoding a disease-related autoantigen successfully improved MS symptoms in sick animals and prevented disease progression in rodents showing early signs of MS.

Paralysed mice also regained the ability to walk after receiving a new gene therapy that stimulates nerve cells to regenerate developed by researchers at Ruhr University Bochum in Germany (see the paper).

The paralyzed rodents had lost mobility in both hind legs, but after receiving the treatment began walking in just two to three weeks.

Cognitive decline caused by aging was also reversed in mice via a tweak to their immune cells (see the paper).

"The most interesting thing that they were able to show is that the macrophages are causal in driving age-associated cognitive decline, and, in particular, that it's sufficient to reprogram the macrophages outside of the brain," says Jonas Neher, a neuroimmunologist at the German Center for Neurodegenerative Diseases and the University of Tübingen in Germany who authored an accompanying commentary.

Researchers developed a designer DNA therapeutic that wipes out cancer stem cells and treats multiple myeloma in mice (see the paper).

The team tested ION251 on these myeloma mouse avatars. Compared to untreated mice, the treated mice had significantly fewer myeloma cells after two to six weeks of treatment. What's more, 70-100% of the treated mice survived, whereas none of the untreated control mice did.

Artificial Intelligence

OpenAI showcased DALL-E, an impressive neutral network that creates images from text captions. Below are images generated from the text prompt "A snail made from a harp. A snail with the texture of a harp."

Virtual and augmented reality

Augmented reality has been used in knee-replacement surgery in the US for the first time.

“At many time points during the operation it’s actually providing me information, making sure that my cuts are degree for degree, millimeter for millimeter, accurate,” Dr. Vigdorchik said.

The better a knee-replacement fits, the better the odds for an operation’s long-term success, Dr. Vigdorchik said.

Unsolved murder cases are being recreated in virtual reality in an app called CrimeDoor. Recently the 2017 Delphi murder of teens Libby German and Abby Williams was added to the app; the family hopes this will help solve the case.

“This is an app that is going to help so many people and change the perspective of crime," Kelsi German, Libby's older sister, said, "and hopefully, solve cases and get arrests for many unsolved cases.”

Apple is expected to launch a VR headset in 2022.

As a mostly virtual reality device, it will display an all-encompassing 3-D digital environment for gaming, watching video and communicating. AR functionality, the ability to overlay images and information over a view of the real world, will be more limited.

The disinformation age

A new study shows that Twitter bots are a major source of climate disinformation (see the paper).

Marlow and the other researchers determined that nearly 9.5% of the users in their sample were likely bots. But those bots accounted for 25% of the total tweets about climate change on most days.

Mobility

Microsoft is teaming up with General Motors to help drive Cruise, their self-driving vehicle business.

As part of the partnership, the tech giant will join GM, Honda Motor and other institutional investors in a combined new equity investment of more than $2 billion in Cruise, bringing the post-money valuation of Cruise to $30 billion.

Chinese autonomous vehicle startup WeRide has raised $310 million in Series B funding.

WeRide launched a publicly accessible robo-taxi service in Guangzhou in November 2019, covering an area roughly 89 square miles in the Huangpu and Guangzhou Development districts. In June, WeRide’s robo-taxi service became available to the public through Amap, a popular ride-hailing mobile app in China.

Drone giant DJI is building a team to work on self-driving cars.

The FAA has approved its first fully automated commercial drone flights.

Space

Blue Origin, Jeff Bezos’s space company, aims to fly its first crewed flight on its space tourism rocket as early as April.

Virgin Orbit, the rocket company founded by Richard Branson, has successfully launched its first small satellites into space. Unlike traditional launchers, Virgin Orbit launches its satellites from the wing of a Boeing 747 jumbo jet.

This air-launch strategy — which Virgin Orbit's sister company Virgin Galactic also employs with its suborbital space plane, SpaceShipTwo — increases flexibility and responsiveness compared to traditional vertically launched rockets, Virgin Orbit representatives have said.

Environment

Elon Musk tweeted that he's offering $100 million to go towards a prize for the best carbon capture technology.

He added in a subsequent tweet that he'll provide more details next week, so it's not yet clear how such a contest will work or even what technologies might qualify. Carbon capture can refer to methods that prevent greenhouse gas pollution escaping from power plants and factories, or various ways of pulling it out of the atmosphere.

People buying SUVs are cancelling out climate gains from electric cars.

Globally, there are now more than 280 million SUVs on the roads, up from less than 50 million in 2010. On average, SUVs consume 20% more energy per kilometre than a medium-sized car.

The increase in SUVs in 2020 led to a rise in oil consumption that cancelled out the effect of electric cars, says Petropoulos.

Wood Mackenzie, an energy research and consultancy firm, believes that falling costs will secure solar's dominance in power.

Of the 27 countries modelled, we estimate that by 2030, solar will be the lowest-cost generation in 18 countries, up from 3 in 2020.

Most importantly, solar is becoming so competitive that not only is it a means of decarbonisation for corporate buyers, but also a way to lower the cost of energy for their businesses.

Batteries

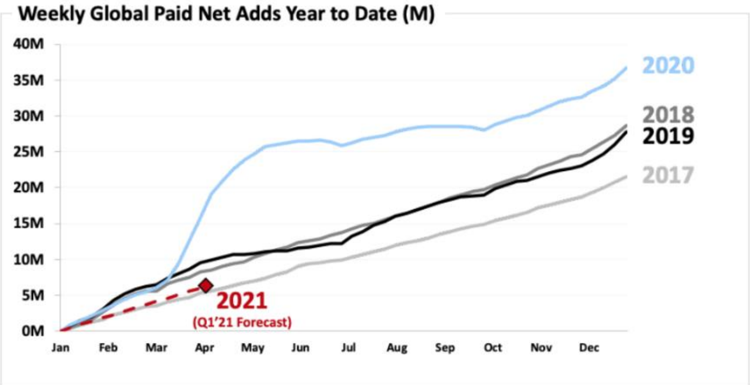
Batteries capable of fully charging in five minutes have been produced in a factory for the first time.

The new lithium-ion batteries were developed by the Israeli company StoreDot and manufactured by Eve Energy in China on standard production lines.

Other snippets

Gamers spent 31.3 billion hours playing games on Steam (a PC platform) in 2020, up 50.5% from 20.8 billion hours in 2019.

Netflix added 37 million subscribers in 2020 and has now topped 200 million total subscribers, leading to their shares jumping the most in four years.



Chinese TikTok rival Kuaishou could soon IPO at a value close to US$100 billion.

Kuaishou has 262 million users spending an average 86 minutes every day on the app. While Douyin was first known for goofy videos with music and dance that drew young people in, Kuaishou began as an app that documented daily lives of ordinary people outside of big cities.

Dropping WhatsApp? Nostalgia is driving some users back to ICQ. I didn't realise that still existed, albeit in a slightly different form.

ICQ was a pioneering, mid-1990s internet messaging service then used on bulky PCs on dial-up. It was a precursor to AOL Instant Messenger and was last in vogue when the TV show "Friends" was in its prime and PalmPilots were cutting edge.

It's been modernized over the years, and now is an app for smartphones. Lately it has skyrocketed up Hong Kong's app charts, with downloads jumping 35-fold in the week ending Jan. 12.

Jay-Z is starting a $10 million seed fund for minority-owned cannabis startups.

The rapper and entrepreneur says he is motivated by an imbalance in the marijuana business: People of color, who have been disproportionately punished for involvement in the drug where it is illegal, comprise only a small number of those making money from the multibillion-dollar market in legalized pot.

Scientists have sequenced dire wolf DNA (see the paper).

First off, yes, dire wolves are/were real. Unlike *Game of Thrones*' other famous creatures, dragons, they used to roam all over North America—more than 4,000 have been excavated from the La Brea tar pits in Los Angeles alone. Dire wolves became extinct some 13,000 years ago, and for a long time researchers believed that *Canis dirus* (translation: "fearsome dog") were a sister species to the gray wolf.

Thomas Rice is the portfolio manager for the Perpetual Global Innovation Share Fund, based in Sydney, Australia. His personal website is www.thomasrice.com. 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.

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Bounce back delivers super second-half for IPOs

James Posnett

This time last year, it would have been brave to have predicted that 2020 would be the best year for the global Initial Public Offerings (IPO) market since 2007, as the World Health Organisation declared COVID-19 a pandemic in March and the negative economic impacts played out.

Yet global IPOs were up 62% year-on-year by capital raised – at US$333 billion – and up 21% by number of listings at 1,615 (Source: Dealogic).

However, it was a tale of two halves: the fiscal and monetary stimulus bolstered market sentiment in the second half of the year and many companies, particularly in the technology and healthcare sectors, benefited from a quickly transformed world.

This boosted IPOs globally, as market volatility reduced from extreme levels. Three quarters of the year's IPO proceeds were raised in the second half, equating to more than the total raised in all of 2019.

The world's two largest economies hosted the largest IPOs of the year with the top five companies raising around US$4 billion each:

- Beijing-Shanghai High Speed Railway and JD Health in China
- Snowflake, Airbnb, and Pershing Square Tontine in the US. The latter was the largest-ever listing of a special-purpose acquisition company (SPAC).

Strong year for new listings across multiple sectors

[Upcoming Floats and Listings has information on latest IPO and recently-listed companies.]

ASX experienced a similar pattern to the global trend. The number of new listings increased 23% year-on-year to 113, three quarters of which arrived in the second half.

IPO capital raised was down 23% at $5.3 billion, but the market value of new listings, including IPOs, spin-offs, direct and dual listings, was up 148% year-on-year at $35.7 billion.

Four of the largest new listings of 2020 were not IPOs, but important additions to the menu of investment opportunities available on ASX, including:

- TPG Telecom's (ASX:TPG) $16 billion merger with Vodafone Hutchison Australia and the listing of TPG Telecom as the combined group.
- Iluka Resources' (ASX:ILU) $2.3 billion demerger of its iron-ore royalties business, Deterra Royalties.

- Magellan Global Fund's (ASX:MGF) $2.3 billion listing of closed class units.
- GrainCorp's (ASX:GNC) billion-dollar spin-off of United Malt Group (ASX:UMG).

There were IPOs in a broad range of sectors; 10 out of 11 sectors in the Global Industry Classification Standard (GICS) were represented.

The top three by number were materials (31), technology (19) and healthcare (13).

Price performance of ASX IPOs (+33.4%) significantly outperformed the broader S&P/ASX 200 index (-1.45%) in 2020, with metals & mining IPOs achieving average gains of over 50%.

Top 10 IPOs in 2020 by capital raised

Ticker	Company	GICS Industry	Capital raised $m	Market cap at Listing $m
DBI	Dalrymple Bay Infrastructure Ltd	Transportation Infrastructure	1,286	1286
NXL	Nuix Ltd	Software	953	1685
LFG	Liberty Financial Group	Diversified Financial Services	321	1822
HDN	HomeCo Daily Needs REIT	Real Estate Investment Trusts	301	644
ABY	Adore Beauty Group Ltd	Internet & Direct Marketing Retail	269	635
UNI	Universal Store Holdings Ltd	Specialty Retail	148	278
MGH	MAAS Group Holdings Ltd	Construction & Engineering	146	530
CSX	CleanSpace Holdings Ltd	Health Care Equipment & Supplies	131	340
DOC	Doctor Care Anywhere Group Plc	Health Care Technology	102	255
HPG	Hipages Group Holdings Ltd	Interactive Media & Services	100	319

Source: ASX

Metals and mining

A strong upward price trend in several commodities led to a flurry of IPOs by mining explorers, including those with gold, silver and copper assets. Gold and silver prices were driven by demand from investors seeking a store of wealth and a hedge against inflation risk, with interest rates falling to record lows and a weakening US dollar.

Traditionally, copper prices move in the opposite direction to gold given 'Doctor Copper' is driven by industrial activity and economic growth, whereas gold tends to be a safe haven in times of uncertainty.

However, in 2020, copper prices also increased, driven by demand from China as economic activity normalised faster than expected, an anticipated increase in the production of electric vehicles and renewable energy, and supply disruptions.

In mergers and acquisitions activity, SSR Mining (ASX:SSR) – a TSX and Nasdaq listed Canadian gold, silver, zinc and tin producer – listed on ASX through its $470 million merger with Alacer Gold.

Australian Strategic Materials (ASX:ASM), a materials technology company focused on producing high-tech metals and oxides, listed following a demerger from Alkane Resources.

Technology

The technology sector benefited from, and adapted well to, a global population in lockdowns or working from home. The COVID-19 crisis brought forward years of change in the way consumers and businesses use technology, from accounting and e-commerce to online communications and entertainment.

It followed that investors backed business models with high scalability, compared to more traditional companies that generate profits from fixed assets, demonstrated by software, fintech, and e-commerce IPOs on ASX.

Investigative analytics and intelligence software company Nuix (ASX:NXL) was ASX's largest-ever software IPO, raising nearly $1 billion and trading up 55% following its December listing. Macquarie Group's venture-capital arm had backed the business since 2011.

PlaySide Studios (ASX:PLY) was the first Australian games developer to list on ASX; it achieved aftermarket price performance of 130% within two weeks of listing.

Three non-bank lenders came to market, the latest to challenge incumbent institutions, including Liberty Financial Group (ASX:LFG), Plenti Group (ASX:PLT) and NZ-based Harmoney (ASX:HMY)

Companies with variations on the BNPL (buy-now, pay-later) business model hit the boards, including Payright (ASX:PYR), NZ-based Laybuy (ASX:LBY), and US-based Zebit Inc. (ASX:ZBT).

Associated with these companies was the dramatic movement of consumers towards online channels, reflected in IPOs of e-commerce companies Adore Beauty Group (ASX:ABY), MyDeal.com.au (ASX:MYD), Cettire (ASX:CTT), Booktopia Group (ASX: BKG) and Cashrewards (ASX:CRW), as well as online tradie marketplace Hipages Group Holdings (ASX:HPG).

The S&P/ASX All Technology index, launched in 2020, was up 45.3% on a calendar-year basis. Now with a market capitalisation of over $170 billion and 69 constituents, expect the index to expand further as more technology IPOs come to market and existing listings grow in size to meet eligibility criteria.

Healthcare

The COVID-19 crisis broadly raised awareness of the importance of healthcare, benefiting the sector from an investment perspective, but also benefiting some healthcare companies directly.

This was borne out in the IPOs of CleanSpace Holdings (ASX:CSX) , a manufacturer of respiratory protection equipment; and Global Health Investment Fund-backed Atomo Diagnostics (ASX:AT1), which offers diagnostic test solutions including for COVID-19 screening. Both companies gained around 50% in the aftermarket (from their issue price).

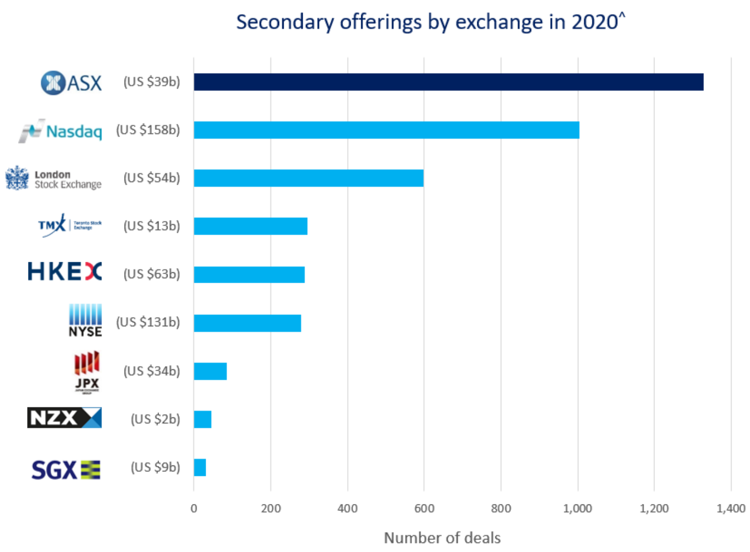
Other IPO highlights included: NZ-based soft-tissue regeneration business Aroa Biosurgery (ASX:ARX), backed by venture-capital firm Movac; and UK-based telehealth company Doctor Care Anywhere (ASX:DOC), with the telehealth industry expected to expand rapidly over the coming years.

Secondary offerings at highest level in a decade

In the five years prior to 2020, the ASX averaged around $40 billion a year in secondary offerings. That is, the sale of new shares by a company that has already had an IPO.

Incredibly, $66 billion was raised in 2020 – the largest amount in over a decade – as many companies shored up balance sheets during the crisis and companies in higher-growth sectors, like technology, raised capital to accelerate growth initiatives.

In global terms, ASX ranked fifth by secondary capital raised and first by number of deals out of over 90 exchanges (Dealogic).



Source: Dealogic, 1 January to 31 December 2020; values in brackets show capital raised in US dollars. ^Includes placements, SPPs, rights issues. Excludes block trades, convertibles, DRPs, employee share schemes; value apportioned by exchange where applicable.

James Posnett is Senior Manager, Listings, at the ASX. This article is general information and does not consider the circumstances of any investor. This article will also appear in the 'ASX Investor Update' on Friday.