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Financial leverage in real estate: friend or foe?

Adrian Harrington

When used prudently, financial leverage can enhance investment returns when investing in non-residential real estate. However, when leverage is deployed excessively or structured inappropriately, the investment results can be catastrophic.

Many articles have been written on excessive leverage in the system leading up to the GFC and the resultant fall-out for both borrowers and lenders when the music stopped and real estate asset prices tumbled. However, it is important some six years later, that as Australia's interest rates head lower and competition amongst lenders intensifies, we don't forget the impact that aggressive leverage levels and poor capital management strategies can have on investment returns.

Sensitivity to gearing levels (leverage)

Before discussing where we are today, it is worth highlighting how sensitive investment returns are to rising and falling real estate prices at various leverage (gearing) levels.

The following table shows the impact of leverage using 30%, 50% and 65% gearing on a real estate asset that has been acquired for \$1 million.

Price Change	Asset Value	30% Geared			50% Geared			65% Geared		
		Equity Value (\$)	Change in Equity Value (%)	Leverage (times)	Equity Value (\$)	Change in Equity Value (%)	Leverage (times)	Equity Value (\$)	Change in Equity Value (%)	Leverage (times)
25%	1,250,000	950,000	35.7	1.32	750,000	50.0	1.67	600,000	71.4	2.08
10%	1,100,000	800,000	14.3	1.38	600,000	20.0	1.83	450,000	28.6	2.44
0	1,000,000	700,000	0.0	1.43	500,000	0.0	2.00	350,000	0.0	2.86
-10%	900,000	600,000	-14.3	1.50	400,000	-20.0	2.25	250,000	-28.6	3.60
-25%	750,000	450,000	-35.7	1.67	250,000	-50.0	3.00	100,000	-71.4	7.50
-35%	650,000	350,000	-50.0	1.86	150,000	-70.0	4.33	-	-100	
-50%	500,000	200,000	-71.4	2.50	-	-100.0				
-70%	300,000	-	-100							

As an example of how to calculate the leverage, a \$1 million property with 30% borrowed and 70% capital is leveraged at \$1,000,000/\$700,000 or 1.43. Transaction costs excluded for simplicity.

A 25% rise in the value of the asset shows that an investor's equity return with 30% leverage increases by 35.7%, 50% at 50% leverage and 71.4% for an investor leveraged at 65%.

The bottom rows in the table show the symmetry in equity values from a fall in the value of the asset. A 25% decline in value, (not unrealistic – according to the Property Council/IPD All Property Index, capital values fell by 36% in the 1991/1992 downturn and by 15% post the GFC) results in the leverage level increasing to 1.67 times at 30% leverage, 3.0 times at 50% and 7.5 times at 65% while the value of an investor's equity declines by 35.7%, 50% and 71.4% respectively.

For an investor to lose all of their equity using 30% leverage, the asset's value would need to decline by 70%. An investor using 65% leverage will see all of their equity wiped out if the asset value declined by 35%.

This simple example highlights two important principles of leverage:

1. leverage magnifies the creation or loss of value; and
2. the volatility of an investor's equity rises as leverage increases.

What level of leverage should be used in real estate?

There is no single leverage ratio that is universally appropriate. Firstly it depends on the risk tolerance of each investor. Once the decision to use leverage is made, an investor needs to consider a range of factors at the asset level and in structuring their debt.

Asset level factors include:

- the point in the cycle that the leverage is being used - what is the likelihood of the asset's price increasing or decreasing in the coming years
- location – how deep is the market if you want to exit, what are the supply and demand fundamentals of that location?
- quality of the tenant covenants – what is the likelihood of tenant default?
- lease expiry profile – are there any vacancies or upcoming lease expiries?
- quality of an asset's income streams – can the cashflow from the asset adequately cover the debt costs? What are the lease structures and rent review mechanisms in the leases?
- investment hold period – is the asset being held for short-term trading or long-term investment?

In structuring and managing the debt, factors to consider include:

- cost of debt - the higher the leverage, typically the higher the cost of the debt that the lender requires to compensate for the increased leverage risk
- debt covenants – the maximum loan to value ratio and minimum interest cover ratios that the lender will require
- type of debt – interest only or principal and interest?
- source of debt – traditional bank lending or capital markets medium term notes, CMBS etc?
- capital stack – is the debt just senior “first ranking” or has the capital stack been layered to allow a combination of senior and mezzanine debt)
- duration of the debt - short or long-term?
- hedging profile - how much of the debt is at fixed or variable interest rates?

Where are we today?

Real estate asset prices are rising. According to the PCA/IPD Property Index, industrial assets generated a capital return of 4.4% in the year to December 2014 followed by retail at 3.8% and office at 2.8% (and total returns including income were 13%, 10.7% and 10% respectively). We expect a similar story to unfold this year. Investors are continuing to chase real estate assets and bid up prices driven by the high yields relative to cash (in the case of domestic investors) and the high yield relative to other global real estate markets and falling Australian dollar (in the case of international investors).

At the same time, competition amongst lenders to deploy capital is increasing and lending margins are contracting. By way of example, in December 2012 Folkestone secured a margin of 2.15% plus the Bank Bill Rate on a new building with a 10-year lease to a major global tenant. Fast forward just over 2 years, and the margin would now be circa 1.30% – a 0.85% decline. Over the same period, the Bank Bill Rate has fallen from 3.1% to 2.35% – a decline of 0.75%. The result, the all-in-cost of debt, has fallen from 5.26% to 3.65%.

In such an environment, the risk is investors (obviously with the support of their lenders) start to push leverage levels higher. Firstly, because the cost of debt is cheaper and secondly, in an environment where yield is king and asset yields are falling as prices rise, higher leverage reduces the amount of equity required and therefore increases the potential return on equity.

The gearing level of the A-REIT sector is currently around 31%, up from 28% a few years ago but well below the high 30%’s recorded in the lead up to the GFC. Whilst leverage levels have ticked up, most A-REIT’s appear to have learnt their lesson and have stated they will not gear up to pre-GFC levels. A-REITs have also put in place more prudent capital management strategies around interest rate hedging and diversifying their source and duration of debt.

Likewise, most managers who offer unlisted real estate funds and syndicates are also acting more prudently. Gearing in these funds now ranges between 40% and 50% with reasonable headroom given a typical 60% to 65% loan to value ratio covenant. However, in recent months, a few managers have started to take leverage levels back towards 65%, leaving little or no headroom. Leveraging up in a market when asset prices are rising and debt costs are low, as the table above shows, can generate supersized returns. However, the risk in those funds is significantly heightened when the cost of debt goes up and/or the real estate cycle turns and prices fall as it inevitably will at some point down the track.

Given the power of leverage to magnify investment returns, both positive and negative (whether investing in listed A-REITs, unlisted funds or buying real estate directly), investors need to understand that prudent use of leverage, with appropriate capital management strategies can be an effective financial instrument. However, as Warren Buffet said “... **when you combine leverage and ignorance, you get some pretty interesting results**”.

Adrian Harrington is Head of Funds Management, Folkestone Limited (ASX code FLK). This article in general information and does not consider the personal circumstances of any investor.

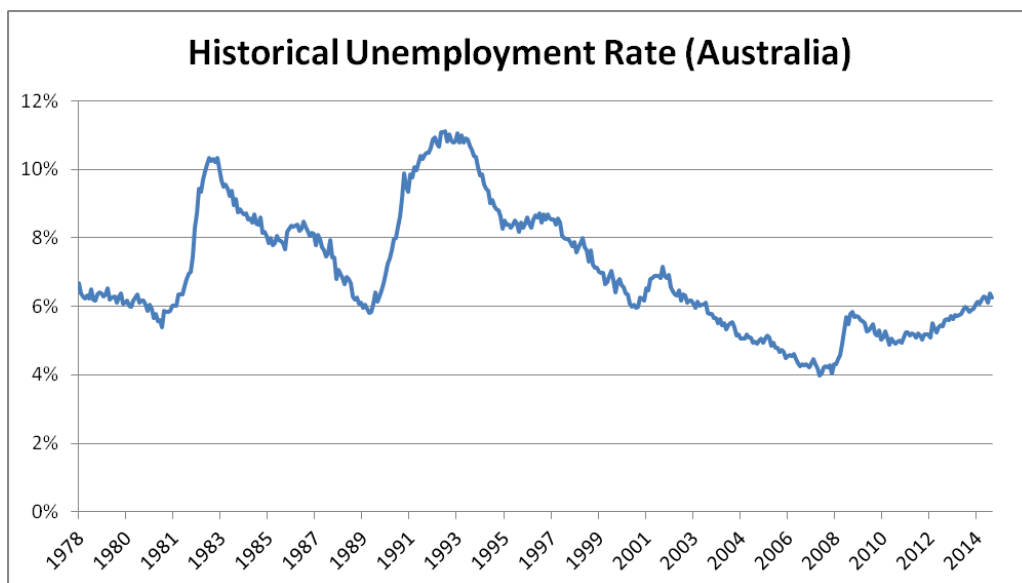
Soft labour market's impact on retirement outcomes

David Bell

The 'economics of retirement outcomes' is a concept that explores how economic developments can affect retirement outcomes. Not everything in retirement is subject to market returns or the decisions of individuals, financial planners or super funds. The current soft labour market is a case in point.

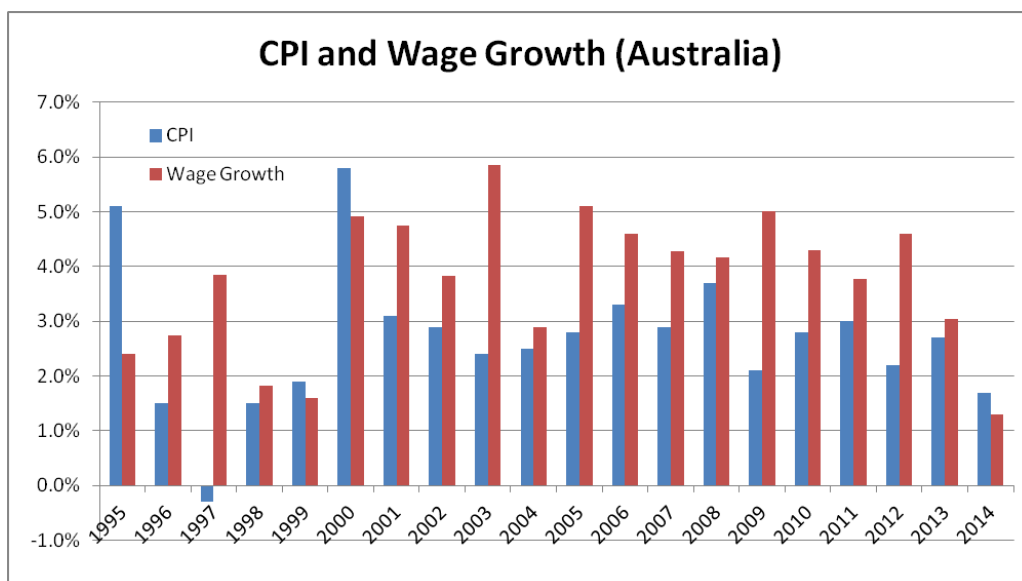
Soft labour markets: unemployment increasing and negative wage growth

Currently labour market conditions in Australia are soft. It is one of the more significant challenges faced by the Australian economy. Our unemployment rate recently touched 6.4% (the highest level in 12 years) before dropping back marginally to 6.3%. Just 18 months ago the unemployment rate was 4.9%.

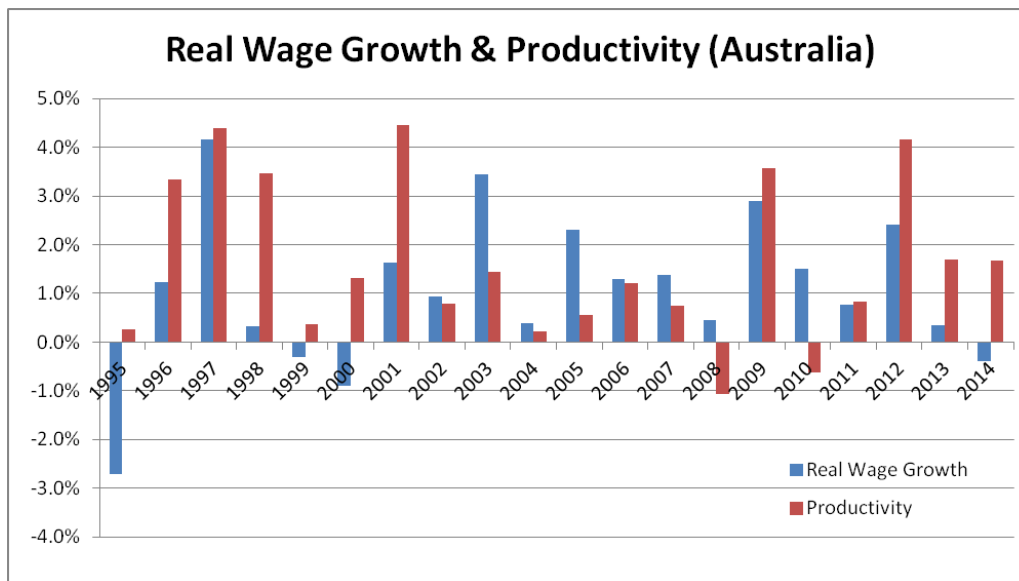


The unemployment rate is well-covered by mainstream media. What is less well-known is that real wage growth in Australia is negative. The purchasing power of Australian wages is heading backwards, and part-time workers are being squeezed particularly hard.

Negative real wage growth is reasonably rare in Australia. The chart below, which plots annual wage growth and inflation, shows that the last time that inflation exceeded wage growth was in 2000.



Also of note is that productivity remains at fair levels relative to history. It's reasonable to expect that workers would at least participate in some of the benefits of productivity via wage growth, although the relationship is pretty loose, as shown in the chart below. The last three years are a story of workers experiencing little participation in the productivity gains that have been derived, adding further detail to the story of labour market softness.



How do soft labour markets affect retirement outcomes?

To understand the impact of soft labour market conditions on retirement outcomes we need to consider both the micro and the macro effects.

Micro perspectives take account of the individual, including:

- Risk of unemployment resulting in no employer contributions, no voluntary contributions and a drawdown in savings and even an increase in debt to fund life's necessities
- Lower real wages which mean a reduced propensity to save
- Lower age pension payments than expected, as increases in the age pension are currently indexed to the maximum of inflation, wage growth and a measure of inflation of a pensioner's likely goods and services (wage growth would generally be expected to be the highest of these three in a normal environment). At the time of writing, the government's proposal to drop wage indexation looks like it will be rejected by the senate.

However we should also consider the macro perspectives as well. Here a longer term environment of soft labour market conditions could also have important impacts:

- Lower savings levels and so greater reliance on the age pension by the population
- A lower than forecast payment level (due to indexation being lower than expected)
- A weakened federal budget position (all else equal) due to lower income tax revenues and greater unemployment benefits.

Note that the first point above has a negative impact on the budget while the second point has a positive impact.

We have seen that the economic environment does not always align with the market environment (something [Ashley Owen's articles](#) make clear). However we can see that there is more to retirement outcomes than just market returns, with a range of economic variables affecting retirement outcomes. The soft labour market is one such factor, and in this case it has largely negative effects at both a micro and macro level. Let's hope that new sources of economic growth will soon emerge in Australia.

David Bell is Chief Investment Officer at AUSCOAL Super. He is working towards a PhD at University of New South Wales.

Investors are too relaxed about the risk of inflation

Don Stammer

In many years of involvement with investments, I've never known investors to be as unconcerned about the risk of inflation, both for the short term and in the longer haul, as they are at present, especially since:

- Even a small hint of prospective inflation in the US - where jobs are growing at the rate of more than a million each four months - would cause the Fed to raise its cash rate and bring about a likely sell-off in bonds around the world.
- There's too little thought being given to the next cyclical upswing in global inflation, which, when it comes, will likely do a fair bit of damage to longer-term investments and hurt many self-funded retirees.

In my view (shaped, no doubt, by having lived through a half-dozen or so cycles in inflation, some big and some small), investors should always keep a watch on prospects for inflation. They should be prepared for the changes in investment strategy that swings in inflation require.

Will near-zero inflation continue for several more years?

The record lows in bond yields in the US and most other countries reflect three main influences: bond purchases by major central banks under their programmes of quantitative easing financed by printing money; very low cash rates; and expectations on the part of many investors that inflation will remain non-existent for several more years at least.

A recent paper by members of the Deutsche Bank research team in New York entitled "Why do market views on inflation differ from the Fed's?" brings out the current extremely low expectations of inflation held by the Fed and - even more so - by investors in US bonds.

Each few months, the Fed carries out a survey of the individual forecasts its senior people have for inflation, economic growth and the cash rate. The results are released but names are not revealed. In the most recent survey, the median forecast for US inflation was running below the Fed's target rate (of 2% a year) in each of the next three years.

The report then looked at estimates for future inflation as implied in the pricing of bonds and as derived from surveys of investors. It finds that inflationary expectations in the US bond market "imply that the Fed will not be able to reach its 2% inflation goal in the next five to ten years".

The authors of the report see significant risks US inflation will return sooner than the Fed is forecasting and much earlier than the bond market anticipates. They conclude "While the overall economy may still be a year or more away from reaching full capacity and over-heating, wage inflation appears already to be on an upward trend". Even with the strong US dollar and low inflation in other countries, "a year from now, upward pressure on wages and prices should be noticeably more intense than they are today".

My worry is there could soon be a hint of inflation, most likely in figures for labour costs, that causes a cyclical sell-off in bonds and a noticeable wobble in share markets, in the US and around the world. Maybe, the 0.5% jump in February 2015 in yields on ten year US bonds (to a still-skinny 2.15%) is an early sign of what's coming up by year's end.

When there's a near-unanimous view that inflation will be close to zero, it doesn't take much to cause a swing in expectations and a rush to the exits.

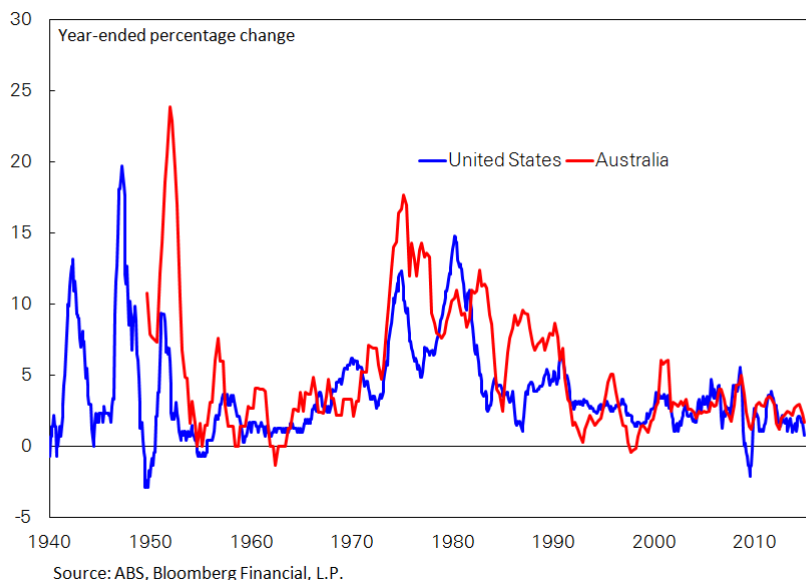
The risk of inflation in the medium term and long term

There's another way in which the risk of inflation - this time in the medium term and longer - isn't getting the attention it deserves. Sudden increases in inflation inflict pain on long-term investors - especially self-funded retirees.

The current downplaying of prospective inflation is easily understood: here and overseas, there's not much inflation. It's always tempting, and generally dangerous, to project ahead a recent experience and call it a lasting trend.

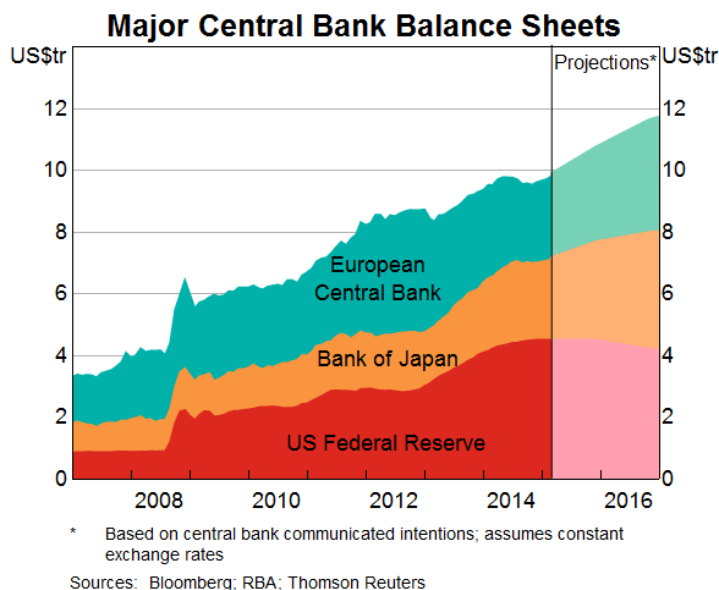
My chart shows inflation in the US and Australia over seven decades. The correlation between the inflation rates of the two countries is higher than is generally thought, despite many differences in wage-fixing arrangements in the timing of economic cycles, and despite big swings in the exchange rate. Correlation isn't necessarily causation, but US (and global) inflation seems to have a strong influence on Australian inflation.

Consumer Prices



The huge increases in inflation in the early post-war years and in the 1970s dominate the chart. Both outbursts of inflation followed (with lags) massive increases in the global money supply caused, in turn, by the monetisation of government bonds issued during the second world war, and the creation of US dollars as the US simultaneously engaged in the Vietnam War and spent on programmes for the 'Great Society'. Of course, there were also special factors, such as in Australia's case the boom in wool prices caused by the Korean War and the many goals the Whitlam government was pursuing.

The global money base is again surging as the major central banks create money to purchase assets from the private sector. The combined balance sheet of the central banks of the US, Japan and Europe has expanded from US\$3.5 trillion in early 2007 to US\$10 trillion today – and there's more to come.



Will inflation take off again?

After the last two bouts of rapid monetary expansion in the global monetary base, inflation took off. Will it happen again?

The Reserve Bank commented recently that "the current environment is one in which there has been a very large (global) monetary stimulus ... (but) economic activity does not appear to have responded to the stimulatory monetary conditions in the way that occurred in the past and inflation rates have been very low. (However) global equity markets have been strong; property prices are again recording solid gains in some countries; and bond prices have increased substantially."

The Bank offers two reasons why spending and inflation have responded so modestly to the global monetary stimulus: many households and businesses are keen to reduce levels of debt to finance spending; and "it seems probable that both workers and firms perceive that their pricing power has declined ... (and reflects) a combination of the scarring experience of the financial crisis and of the increasing globalisation of many markets."

In my view, the risks are the money creation by the major central banks will again bring about a cyclical rebound in global inflation, when world growth has picked up, memories of the debt overhang have faded, and banks are again lending money.

Anyone around in the 1970s and 1980s would recall the dislocation and losses the surge in inflation caused to investors. Bonds lost value as interest rates rose and inflation eroded the real value of interest payments and repayments of principal. Investors holding cash and term deposits also suffered in the inflation storm. Shares and property provided protection when inflation was low to moderate but investors lost out when inflation was rapid. Speculative and short-dated investments were favoured, and many long-term investments were sidelined.

The good news is that the next cyclical upswing in inflation is likely to be much milder than those of early post-war years and the 1970s, in part because central banks are more independent and wages are more attuned to economic conditions. Also, the range of investments has widened to include indexed bonds and infrastructure that offer inflation protection.

But we're also living longer, have higher expectations of what we want to do in retirement, and fewer retirees have defined-benefits superannuation (with pensions adjusted automatically for inflation). As a result, even a mild cyclical pick-up in inflation in coming years would be damaging for long-term investing and a serious complication in retirement planning.

Don Stammer chairs QV Equities, is a director of IPE, and is an adviser to the Third Link Growth Fund and Altius Asset Management. The views expressed are his alone. This article is general information and investors should seek professional advice on their personal circumstances.

Why the Apple watch is disruptive

Alex Pollak

A lot has been said about all the fun things the Apple watch can do for you (give you the gain on the your stock portfolio, let you know when your Uber car is close) and very little on the information you provide to it, like reading your vital signs and suggesting a movie or retail therapy when your biometric data says you are low. It's this trove of highly personalised data which has Apple and the app development community salivating: remember, you don't have to buy the internet (ie it's 'free') because it's the internet which is selling you. And think about how Facebook started as a personal communication tool, but is now very highly-prized as an advertising platform.

Apple has said that it won't sell your data, and that is true, to a point. Apple doesn't sell data on you, or your friends, family, location etc. But platforms like Google, when accessed on their devices, do.

Apps include more data about you

Few people have ever really turned their minds to the question of why so many companies push their apps rather than just their web experience, but the reason is that when the app is chosen, it just about always includes much more data about you than just the web version. You can confirm this is the case by reading the terms and conditions (you knew there was a reason you should read these, right?)

Which brings us back to the biometric data. It's early, obviously, to be making accurate predictions of what the Apple Watch means, disruption-wise, but the hard-heads in Apple have already made available the system developer kit to app designers so they can work out how to milk your biometric data.

And just like Instagram, Facebook, Google and the like, the real commercial value of the Apple watch will be in the new types of data which it makes available. What sort of data? How excited or tired you are (through the heart rate monitor), and how active you are. How would this be useful? Very active people could get a discount on their health insurance, with insurance companies using it as a marketing tool to pick up new customers.

Or how about this? Excitement levels during movies and television shows. What makes you sweat, and your heart race, and when do you feel sad during a movie or television programme. Who wants this? Well, obviously movie and television programme producers. The in-built microphone on the watch knows (through media recognition app Shazam) what programme you are watching, and when (replay, live etc), and your reactions to it. Or how about medical device companies which want to monitor your sleep patterns to provide better quality, more expensive sleep apnoea masks which work with the data the watch provides. And how about the medical research groups which require large scale, prolonged data to assess particular aspects of health?

The point is not to try and work out the different iterations of the applications themselves. Significant resources will almost certainly be devoted to this, with Apple helping to drive the process. The point is that the watch, strapped as it is to your skin, makes available a slew of data on you that has never really been available before. And it's this data which is likely to form part of the next wave of disruption.

Of course, to the consumer, it will just be a sexy new gadget, with functionality including a pay-wave through Apple Pay, talk and text, a buzz function to get you along to the next meeting, and all the rest of the interesting, convenient and fun stuff. And that's half the point. It has to be a must-have device in the first place to become meaningful in the installed-base sense, at which point it can become a mass marketing tool like a biometric version of Google or Facebook. And then the disruption starts.

The market will judge its success

What's it worth on the Apple stock price? The average predicted sales from Wall Street analysts is 23.25 million Apple watches sold. At around US\$1000 each (there are gold watches being sold too) that works out at \$23.3 billion in sales. Assuming a gross margin of 40%, this would be pre-tax earnings of US\$9.3 billion, which at the company's multiple of 9.9x (yes, it's less than Telstra, as we noted [here](#)) works out at US\$92 billion, or US\$15.80 per share – this is the value already built in to the stock price. If the watch fails, the Apple stock price will fall by at least that much. And the stock won't really move if there is a perception that 23 million units is the correct number for first year sales. But if it is ahead of that, the stock will pop, with each 23 million units worth an incremental US\$15.80 per share. A little over 10% a share. And that *could* get your heart racing ...

Alex Pollak is CEO of [Loftus Peak](#), a fund manager that specialises in listed global portfolios for SMSFs.

Disclosure: The author and Loftus Peak clients own Apple shares. This article in general information and does not consider the personal circumstances of any investor.

Opportunities in the 'Internet of Things'

Michael Birch

The tech boom renaissance which started in 2012 has seen the Nasdaq Composite Index move to new highs. The reason for this is not just the huge increase in Internet usage across both developed and emerging markets, but the exponentially growing number of devices connected to the Internet.

Citigroup believes that during 2008, the number of devices connected to the Internet exceeded the number of people in the world. Cisco goes further and estimates that in 2010 there were 12.5 billion devices connected to the Internet, by the end of 2015, it will be 25 billion and by 2020 there will be 50 billion devices connected to the Internet.

We believe that this will be the fastest growing thematic globally, regardless of economic growth. Companies which have tried to use Internet technology to replace old world processes have missed the point, which is the reason why so many corporates waste millions on IT spending. Now the smart companies are more client centric and solutions-driven reviewing customer needs and looking at ways that they can incorporate advancements in Internet technology and connectivity to innovate and better reach and service customers. Subtle, but getting this right will create a huge gulf between the haves and the have nots.

Cisco categorise these items as the 'Internet of Things'. Devices are managed by intelligent systems, which are secure electronic systems that run a high-level operator system (HLOS). They autonomously connect to the Internet, execute native or cloud-based applications, and analyse data collected. Citigroup cite some examples of things pervading our everyday life and connecting with the Internet as follows:

- Connected cars: can include emergency call systems with embedded sims as well as early diagnostic monitoring, telematics, and in-car entertainment systems including wifi.
- Remote healthcare monitoring: can perform continuous and real-time readings of vitals such as blood pressure, heart rate or sugar levels to notify caregivers and/or medical personnel in the event of elevated readings.
- Personal fitness: with wearable fitness devices (i.e., Fitbit, Nike+ fuelband), users can track steps taken, calories burned, and hours slept for example and monitor results on their smartphone or personal computer, as well as link to (or create) social networks.
- Public transit: local and municipal governments can use solutions to run, operate, and monitor public transit systems for fuel optimisation, fleet tracking as well as positive train and traffic control. Systems for monitoring and controlling train movement improve railway safety (train separation or collision avoidance).
- Transportation: use connectivity to leverage telematics and RFID devices to monitor and control shipping equipment and cargo on a worldwide basis. Producers are able to monitor and analyse asset safety and quality across the supply chain. For example, transporting food from farm to fork is a sensitive process to ensure that foods do not spoil while in transit.
- Smart utilities: use connectivity to monitor energy consumption by automatically measuring and monitoring home energy usage with adjustments when approaching severe energy shortage.
- Discrete manufacturing: use robotics to further automate production of automobiles and other equipment.
- Home security and monitoring: provides protection against home intrusion but also is capable of monitoring and controlling home environments, such as lighting and temperature.

The tech boom in 2000 was about 'eyeballs', revenue multiples and issuing essentially worthless shares to expand and grow, which is why it eventually crashed. The Internet of Things is about reaching clients through new channels, delivering products and services that make life easier and creating applications

that replace what people are doing today. This is actually what consumers want, that is why Apple, Google, Microsoft and Verizon are holding the largest cash balances of US corporates.

Unfortunately it is difficult to access investments in Australia to participate in this growth wave and as a result we expect to see more Australian investment dollars moving offshore to diversify from banks and resources into one of the most exciting growth opportunities seen in a long time.

Michael Birch is Head of Equities at Mason Stevens. This article is general information and does not consider the personal circumstances of any investor.

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