18 May 2019

Woodhall's Weekly

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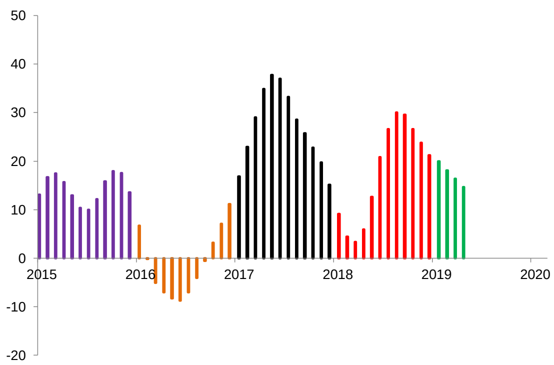
(Just) before the election

- **At home unemployment rises for the second month in a row**
- **Aussie wages' growth nicely above inflation**
- **Trump trade deal up and down**
- **China data misses**
- **NAB and WBC confidence indexes just about OK**
- **Temporary end to our gearing strategy!!**
- **Vale Bob Hawke**

Overview

The headline unemployment rate came in at 5.2% from 5.1% the pervious month and 4.9% the month before. Our favoured metric is the change in trend full-time employment shown in the chart of the week.

Chart of the week: Changes in Australian trend full-time employment



These changes are still falling but they are still nicely positive. With $7.5bn of tax cuts to kick in when people lodge their tax returns, all is far from lost. But we still want the RBA to cut soon. It will be line ball for the June board meeting. A double whammy of a tax sugar hit and a rate cut could get us off to the races in July.

Also, at home, wage growth came in at 2.3% for the year. Of course, this isn't great but it is well above CPI inflation and so workers (and the rest of us) are better off – on average. While we would all like big licks when it comes to pay rises, they can only come from one of two places. Either someone else in the production process gives up their share or there are productivity gains (or both).

Anyone who observes people in open-plan offices knows that the computer age has resulted in plenty of office time for on-line shopping, Facebook and tweets (and some for work).

At Woodhall, we are collaborating with a Wall Street/LA litigation company (PF2) and we are just about to release a paper on the appropriate use of models in court cases in Australia and elsewhere. Our colleague shared the following 'podcast' we think is an absolutely brilliant presentation on a beautiful topic – 'the Millennials'. We subscribe to much of this presentation which we, in part, think that this is why productivity in Australia, the US and the rest of the developed world is so low.

https://m.youtube.com/watch?v=hER0Qp6QJNU

WoodHall Investment Research

And then we have the hordes of cyclists delivering food as (reportedly) under-paid workers.

But while we were writing this newsletter 'Dr' John Edwards was being interviewed on TV. We recall John's forecast of two years ago:

On June 29, 2017, Dr John Edwards, former RBA board member, was reported to predict 8 hikes in the next two years!

Guess how many we got? So why was he ever on the Board and why is he not held to account?

We all make mistakes – but there is a limit. And he is not the only one. In the supermarket we have great info for products on contents, use-by dates, and storage recommendations. Commentators seem to arrive with no conditions.

The Trump-Xi deal fell apart over the weekend of May 10-12. Trump imposed increases in tariffs to 25% from 10% on squillions of dollars of goods from China. The Xi comes back with increasing tariffs on a mere $60bn worth of imports. Thankfully Trump then back-tracked and put a six-month layover on auto imports that could really have damaged Europe and Japan.

One of the few simple (sound) theories taught in first year economics (at least while we were academics) was that "it doesn't matter who collects the tax, the seller and the buyer share the tax burden."

For example, if a country has an absolute monopoly on a given good, an importer can charge a tariff that will largely be absorbed by the buyers – albeit with lesser volume owing to the higher prices. A country with lots of competition might have to absorb all of the tariff with a consequent loss of margin – so suppliers produce less. It is usually a mix between the two extremes.

Reports suggest that China can keep its export prices on hold so the US is indeed bearing the brunt. We know not yet what China tariffs will do.

Given that most people on TV do not seem to have studied first-year economics we can only surmise that there will be excess market volatility as people try to work out what is going on! Perhaps that's why the Sky Business channel (rebranded last year as Your Money) folded this week after 15 years on air.

China again released its triumvirate of monthly data: retail sales, industrial output and fixed asset investment. All three missed expectations by quite a bit but all that means is China will tip a bit more stimulus into the melting pot.

The NAB and Westpac both came out with their confidence indexes. Both were OK but not great. Consumer sentiment was up 0.6 pts to 101.3; business conditions were down 4 pts to 3.1; and business confidence was up 0.3 pts to -0.3.

Please note that we have been forced to reconsider one of our equity strategies detailed in the Weekly owing to the foreshadowed end to a certain financing scheme we employed. As a result, we chose to sell down sufficient equity to sell down the debt (against the principal residence) to zero. Please see the explanation later in this note for further details.

While we still believe there is room to run on this bull market in both Australia and the US, we sold down at appropriate time. That is, we believe the market is currently priced at about par but temporary corrections can come at any time.

Had we not sold, and a temporary correction (or worse) emerged before the end date, we could have lost some or all of the (paper) gains to date with possibly insufficient time to recover the current position. Indeed, we could have made a capital loss that could not be funded from inside the scheme.

If the financing scheme were not to end, we believe we could have managed the portfolio into the future without sales other than caused by the trigger signals.

We had been geared – usually substantially – in equities for about 15 years! It will be interesting to find out who will lend to someone of our age even though we have substantial resources – just no 'standard job'! It feels strange not having other people's money being put to work for us.

For the handful of people who apparently have not yet voted, they will cast their votes in long queues across the country today. It is reported over 4,000,000 people voted before election data. There are only about 16,000,000 voters on the roll.

Sadly, Bob Hawke passed away on Thursday. He was a true politician that led a nation into economic and social change. Unlike now, it wasn't us and them for Bob. He was a bigger man.

Markets did a great job of trying to wipe out the blues they had earlier in the week. All we need is a good result in parliament that doesn't give excess power to cross-benchers we hadn't heard of (or wish we hadn't)

Market expectations

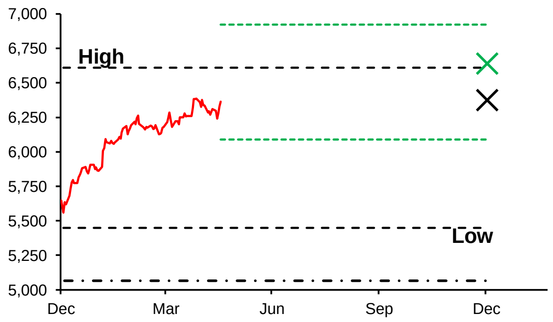
Our start-of-year 2019 eoy forecasts for the ASX 200 are given in Table 1 (left column) together with the latest calculations (right column) and last week's (middle column) for comparison. Chart 1 includes a trace of the index to compare with the forecast highs and lows.

Table 1: ASX 200 range forecasts 2018

Forecast	Forecast origin		
CY19	**31-Dec-2018**	**10-May-2019**	**17-May-2019**
Low	5,450	6,050	6,100
High	6,600	6,900	6,900
End	6,400	6,600	6,650
Fair value	6,100	6,250	6,300
Exuberance	-7.1%	0.6%	1.3%
ASX 200	5,646	6,311	6,365

Note: the latest forecasts in the right-hand column do not provide updates of the original forecasts in the left column of numbers. Rather the latest forecasts facilitate an assessment of the degree to which the original forecasts are on track, or not. Moreover, exuberance is assumed to be eroded over a 12-month period and so the 'latest' forecasts are less reliable the closer is the current date to the end-of-year and the greater is any mispricing.

Chart 1: Graphical representation of Table 1



Note: the low and high are based on 'normal' volatility levels. The 'high-volatility' low allows for well above normal volatility and a breach of which starts to suggest the base-line forecasts may no longer be relevant. The dashed black lines are derived from average volatility assumptions; the dot-dash line corresponds to high volatility.

The eoy forecast for 2019 (left-hand column in Table 1) was 6,400 with a forecast high of 6,600 and a forecast low under normal volatility of 5,450. The 'high-volatility' forecast low was 5,050. [See the IOZ:IVV:IHVV section for the decision rules surrounding these low and high forecasts. The updated eoy 2019 forecast (Table 1, last column) is 6,650. Fair value is 6,300.

It should be stressed that when markets are heavily mispriced, the speed with which mispricing is eroded is key to making a good forecast. In this table we assume that it takes 12 months to erode the mispricing which is possibly a very conservative assumption.

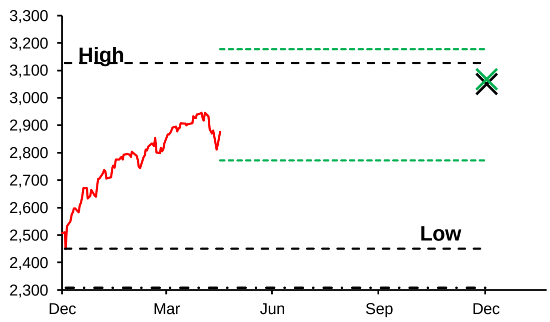
Table 2: S&P 500 range forecasts 2018

Forecast	Forecast origin		
CY19	**31-Dec-2018**	**9-May-2019**	**16-May-2019**
Low	2,450	2,770	2,770
High	3,130	3,180	3,180
End	3,050	3,070	3,070
Fair value	2,900	2,880	2,880
Exuberance	-13.3%	-0.5%	-0.3%
S&P 500	2,507	2,871	2,876

Note: see notes for Table 1.

Our eoy 2019 forecasts for the S&P 500 are given in Table 2. Because overnight data are not available to us until the afternoon, the latest data for Wall Street will usually be presented for the day before the ASX 200 in this *Weekly* that we try to post at around 10am on a Saturday.

Chart 2: Graphical representation of Table 2



Note: see notes to Chart 1.

Our original forecast for eoy 2019 was 3,050 with a high of 3,130 and a low of 2,450. The 'high-volatility' low was 2,300.

The updated eoy forecast for the S&P 500 is 3,070. Fair value is 2,880

Market stats

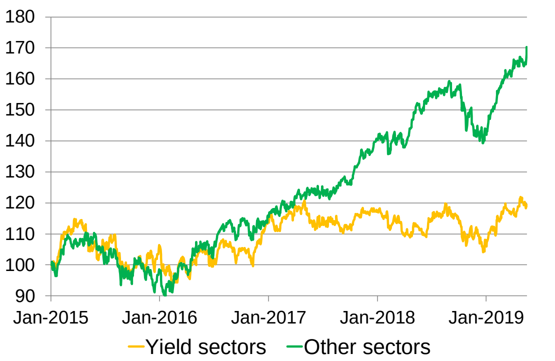
Our market volatility index (Chart A-1 to be found in the Chart Appendix) is about average at 11.5%. Our Fear Index (Chart A-2) is in the zone at 10.3%. The VIX stands at 16.0%. Our Disorder index (Chart A-3) is in the zone at 0.7%.

Our updated 12-month capital gains forecast (Chart A-4) is +8.4%. The market is slightly expensive at +1.3% (Chart A-5). So that leaves the adjusted rolling 12-month capital gains' forecast at +7.0%. The comparable 12-month adjusted capital gains forecast for the S&P 500 stands at about +11.5%.

Sector pricing (Chart A-6) is such that IT (+7.9%) and Telcos (+7.4%) are significantly overpriced sectors. All other sectors except Energy, Financials and Discretionary are, perhaps, too expensive to buy.

Chart 3 shows an interesting angle on the yield play. Our composite yield sector (Financials-x-REITS, REITS, Telcos and Utilities) and the 'other' (seven) sector moved roughly together for 2015, 2016 and the first half of 2017. Since then the yield play went nowhere and slipped since mid-2018. The 'other index' performed very strongly until October 2018. Since then the other sector fell strongly – then rallied in 2019.

Chart 3: Total returns indexes for 'yield' and 'other' aggregated sectors



SMSF Share Portfolio

We last rebalanced our share portfolio in our SMSF on 1st February 2019. We kept the style at 100% High Conviction. There are again 23 stocks in the portfolio. No adjustments were made to the new model portfolio.

Table 3: Total returns from SMSF portfolio

Period	Portfolio	ASX 200	Alpha
Since inception	12.0%	8.1%	3.9%
4 years	10.2%	7.6%	2.6%
3 years	14.0%	10.3%	3.7%
2 years	14.4%	9.6%	4.8%
1 year	17.1%	9.0%	8.0%
6 months	20.8%	13.4%	7.4%
3 months	9.5%	6.6%	2.9%

Note: Since June 25th 2014. Returns include dividends. For periods above one year, the returns are annualised.

The performance of domestic equities in our SMSF portfolio – including various rebalances – against the ASX 200 since late June 2014 is shown in Table 3. That corresponds to an outperformance of +3.9% p.a. (annualised) since inception. The portfolio has been returning +12.0% p.a.

In Table 4, we show the performance (including dividends) of the individual stocks since the last rebalance.

We have three stocks (MFG, RMD and XRO) beating the index by more than 10% since February 1st 2019 and one stock (SCG) trailing by more than -10%.

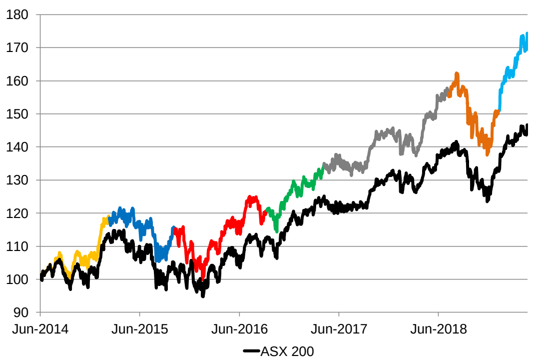
Table 4: Individual stock total returns

	ALL	ALQ	BHP	BXB	CIM	CSL	CWN	GMG
Return	11.6%	10.9%	11.3%	18.3%	5.2%	6.6%	10.7%	18.8%
Alpha	1.0%	0.3%	0.7%	7.7%	-5.4%	-4.0%	0.1%	8.1%
	LLC	**MFG**	**MQG**	**NCM**	**RIO**	**RMD**	**SCG**	**SGP**
Return	18.3%	60.0%	4.3%	8.7%	17.1%	26.4%	-0.7%	6.7%
Alpha	7.7%	49.4%	-6.3%	-1.9%	6.5%	15.8%	-11.3%	-3.9%
	SHL	**SUN**	**TAH**	**TCL**	**TWE**	**WBC**	**XRO**	**ASX200I**
Return	15.0%	8.2%	1.6%	15.7%	1.3%	5.5%	41.6%	10.6%
Alpha	4.4%	-2.4%	-9.1%	5.1%	-9.3%	-5.1%	31.0%	0.0%

Note: Since February 1st 2019. Returns include dividends.

The returns chart (Chart 4) shows the recent performance using colours to denote rebalanced portfolios.

Chart 4: SMSF and ASX 200 total returns



Note: the different coloured sections show the impact of rebalancing.

The IOZ:IVV:IHVV Update

Decision rules: *given the data in Tables 1 and 2, I use the following decision rules – until new rules are formed, expected to be January 1 2020. These rules are based on calendar year forecasts for new money:*

Buy IOZ at 5,450 from Table 1 (up to maximum levels determined by risk assessments) and start to sell at 6,600 for new investments. If the ASX 200 falls to 5,050 (high-volatility low) it might be prudent to exit the strategy until clarity emerges and then buy back in at (well) above 5,050 but below 5,450.

Buy IVV:IHVV at 2,450 (up to maximum levels determined by risk assessments from Table 2a) and sell at 3,130 for new investments. If the S&P 500 falls to 2,300 (high-volatility low) it might be prudent to exit the strategy until clarity emerges and then buy back in at (well) above 2,300 but below 2,450.

For older investments, some regard is taken of the trigger points set when the investments were made.

Important: The home equity loan that we used to underpin this strategy for nearly five years is to be withdrawn within twelve months. Given that there is now a near-term finite end to the strategy it was decided to sell out of the loan so that the mortgage could be discharged.

As it happened, the notification arrived at the weekend and so Monday 13th May was the first day at which the portfolio could be sold down. Since the China-US trade talks just came to an abrupt end at that weekend, and we had both markets priced at about par, we sold all of the Australian exposure (IOZ) and all of the currency-hedged S&P 500 (IHVV). Due consideration was given to capital gains tax implications. Interestingly, the S&P 500 had the biggest loss this year (-2.4%) that night. While the market did bounce back the next day, a sale a day later could have resulted in an effective 10% loss on equity in the geared portfolio!!

The remaining (ungeared) holding is in the unhedged IVV on Wall Street. This 'portfolio' is not ideal but it is defensible while we explore other avenues for financing taking the exposure back to where it was. There is no point in taking all equity to cash while future gains are anticipated.

After probable CGT, dividends, interest, franking credits and income tax are taken into account we believe we ball-park made about 40% of the value of the property equity in less than five years – 'putting otherwise idle capital to work'. We will do proper calculations when the tax returns are prepared and then report back.

Had we not sold out to this extent and the portfolio had fallen by 23%, all of the equity capital gains would have been wiped out. Given market behaviour in the last 12 months and in 2015/16 such a potential loss could not have been ruled out. Had the termination of the loan not been flagged, <u>we would not have sold any stock (or ETFs)</u> unless the sell trigger was activated or some other special event occurred. We sold nothing in the ungeared SMSF portfolio that week reported above.

One can reasonably view the recent event and our response as due to regulatory risk – which must be added to the list including market risk etc when assessing the risks of equity strategies.

If we do not find a cost-effective way of refinancing this strategy in the near term, we will cease to report on our involvement in this section. In our opinion, that does not affect investors with loan facilities or otherwise from viewing this strategy as viable. We plan to continue reporting Tables and Charts 1 and 2 regardless.

Charts 5 and 6 are based on the price indexes as this is the metric where the signals are being made.

The strategy has been returning +11.9% pa since inception (Table 5) (including dividends). The IVV+IHVV leg is up +13.9% pa. The IOZ part of the strategy is up +10.1% pa. The table below shows that we are 55% hedged in the Wall Street component. The domestic share of the portfolio is 55%.

Table 5: Total returns on IOZ:IVV strategy

17-May-2019	Inc divs.	Current allocation	
ETF	**IRR pa**	**Total**	**USA**
IOZ	10.0%	0%	
IVV+IHVV	14.1%	100%	100%
IVV	13.4%		100%
IHVV	15.0%		0%
Total	11.9%	100%	
Indexes		**Alpha pa**	
ASX 200	8.2%	1.8%	
S&P 500	10.3%	3.1%	
S&P 500 ($A)	14.2%	0.7%	

NB: IRR is the internal rate of return (p.a.) that compensates for the different buy and sell points and include dividends on the day they were paid and not the ex-div date. See notes in the Strategy Section for further explanation and charts. The index returns are based on a start date of 1/7/2014 for the ASX 200 and S&P 500 when the strategy was launched. The S&P 500 ($A) return starts from 22/12/2014 when IHVV first became available.

We have also included the benchmarks for each ETF in Table 5 so we can calculate any outperformance from the buying low – selling high strategy. Annualised outperformance is eroded in the long-run to zero unless fresh buys are made or a sell signal arrives.

The Charts 5 and 6 in the strategy section now include a yellow square to show where the hedging trades were made. The red diamonds denote the buy points. The green boxes denote the sell points.

There is nothing in recent behaviour to suggest to us that the underlying forecasts for the ASX 200 or the S&P 500 have been proven to be invalid. We plan to flag any perceived weaknesses if and as they eventuate.

The IOZ:IVV:IHVV Strategy

(Except for the charts, this section does not usually change week to week)

We plan to use the Table in the 'IOZ:IVV:IHVV Update' section to keep readers informed about the performance of my geared portfolio [an approximate equal mix of two ETFs: IOZ for the ASX 200 and IVV:IHVV for a partially hedged exposure to the S&P 500]. I will await the sell signals in times to come. **Please note the regulatory changes discussed in the previous sections.**

The basis of the strategy is to buy when the indexes (using ETFs) get very close to or cross the beginning of the year predicted low – and to sell when the indexes reach the predicted highs – as indicated in the 'Market Expectations' section. We do not use the weekly updated lows and highs for this purpose. These update statistics help me consider whether or not the strategy is going awry.

Since the IVV ETF is unhedged it benefits from $A depreciations and vice versa. we switch to IHVV – the hedged version of the S&P 500 ETF – when we think the currency is more likely to appreciate – or at least insure against it. When we am unsure, we blend IVV and IHVV.

Note that the irr is a single annualised return to summarise all of the buys of the three ETFs and the current value including dividends when paid and not when the ETF went ex-div.

The following charts show where we bought. Since the 'buy' signals are based on the S&P 500 (as we do not have credible exchange rate predictions – hence an implicit no-change assumption).

Chart 5: IOZ buy points - ASX 200

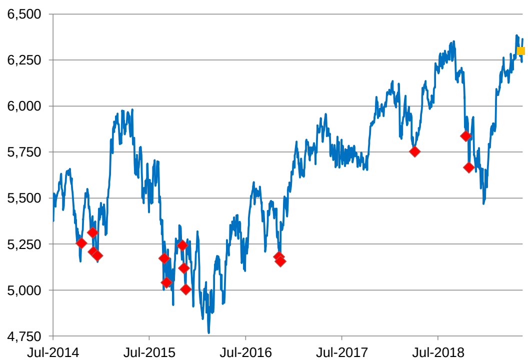
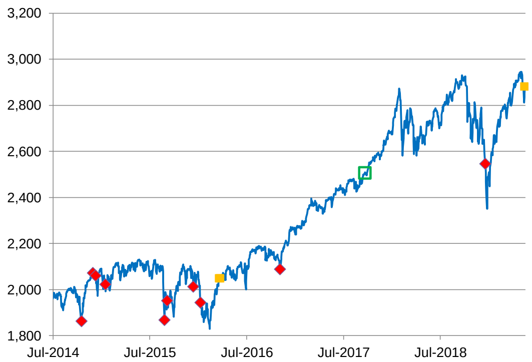


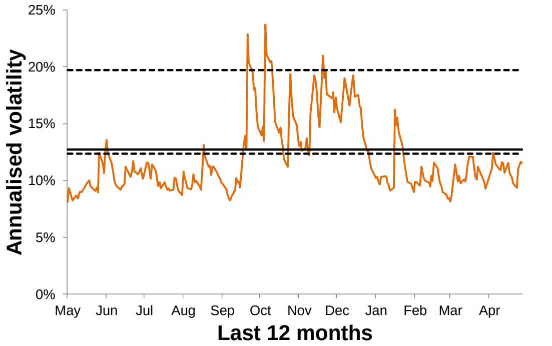
Chart 6: IVV/IHVV Buys - S&P 500



The charts in this strategy section include a green square to show where the hedging trades were made. The red diamonds are the buys. The yellow squares are the sells.

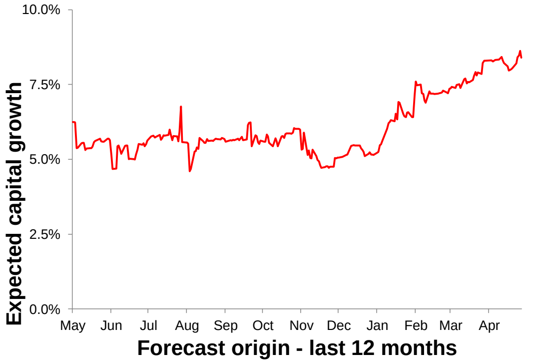
Chart Appendix

Chart A-1: Market volatility



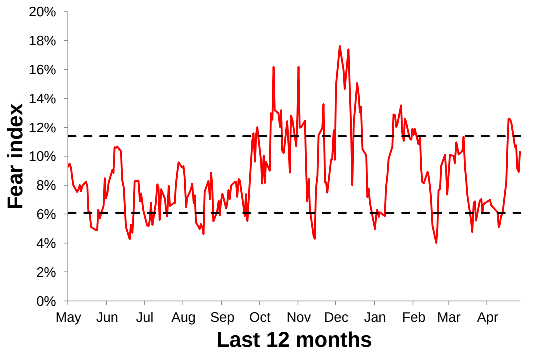
Notes: The solid black line depicts the average volatility since January 2010; the lower dotted line depicts the average volatility pre the GFC; the higher dotted line depicts the average level of volatility during the GFC - up to December 2009. The brown line is a daily estimate of the ASX 200 index volatility.

Chart A-4: 12-month capital gains forecasts



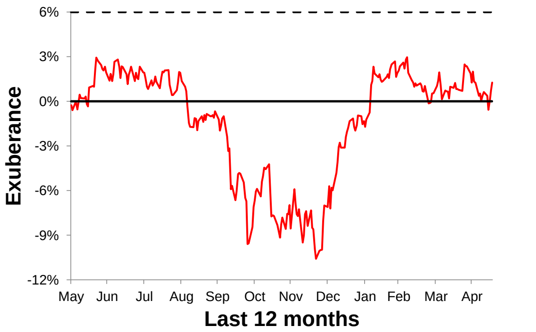
Notes: Each business day we update our estimates for capital gains on the ASX 200 for the following 12 months. For example, the left-most estimate on the vertical axis is a forecast for the 12 months concluding today. The right hand estimate is for the 12 months from today.

Chart A-2: Fear index



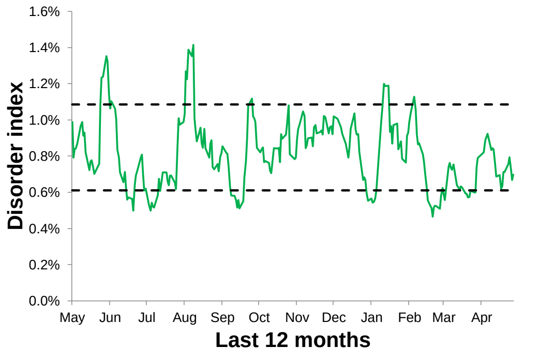
Notes: The fear index is a measure of 'excess' volatility denoting behaviour outside the open/close values each day. The two dotted lines depict the band in which the fear index resided before the GFC in two thirds of days. Extended periods below the lower dotted line might indicate complacency. Extended periods, or extreme values, of the index above the higher dotted line might indicate a propensity for the market to overreact in an irrational manner.

Chart A-5: Market exuberance



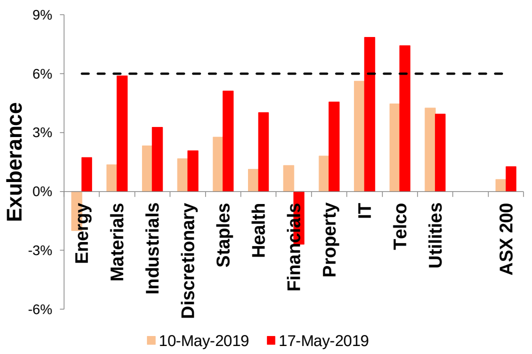
Notes: Exuberance is our measure of mispricing on the ASX 200. A value below the solid black line denotes the market is perceived to be cheap and above that line expensive. Experience suggests that exuberance above +6%, denoted by the dotted line, is an indicator of a potential correction of 6% to 10% - or for the market to move sideways for an extended period.

Chart A-3: Disorder index



Notes: The disorder index measures the degree to which the 11 sectors' daily returns move in harmony. The two dotted lines depict the band in which the disorder index resided before the GFC in two thirds of days. Extended periods below the lower dotted line might indicate belief that there is little information to have different impacts on different sectors. Extended periods, or extreme values, of the index above the higher dotted line might indicate investors and traders are lurching from sector to sector in search of a new trend.

Chart A-6: Sector exuberance



Notes: The estimates in this chart are based on the same notions as for Chart A-5. More detailed information on mispricing is contained in our companion weekly publication in the same section of our website

Glossary

Abenomics – Japan's Prime Minister Shinzo Abe came to power early in 2013 and has brought a new economic style to managing that economy.

ASX forecasts - We have further supplemented our forecasting process for the ASX 200 by including not just a forecast of the peak (at some unspecified time during the year) but also the low. Thus, we now have an end point (e-o-y forecast) and a range for the whole year. Naturally, on a rising market the low is more likely to occur earlier in the year and the high nearer the end. Since we publish our forecasts to the nearest 50 points to reduce the sense of false accuracy a change of just a couple of points can kick the forecast over by 50 points at around the 25 and 75 marks.

Australian debt ceiling – Labor brought in a debt ceiling in mid 2008 of $75bn to self-impose some fiscal discipline during the onset of the GFC. Within seven months that ceiling was almost trebled to $200bn and it has since been raised to $300bn during Labor's term in office. Since before 2008 we had no debt ceiling that is equivalent to an infinite ceiling!!!

Bad debt, good debt – Whether one is referring a household or national debt, the classification implies the following. Good debt is expected to produce income or other returns in the future – such as from infrastructure spending or buying a principal place of residence. Bad debt is used to finance 'recurrent' expenditure such as pensions or family holidays.

Black Friday – This term is used for the Friday after Thanksgiving in the US to denote the start of the shopping season for the holidays. Black refers to the accounts going back into the black from increased sales – it is certainly not a negative term!

Brexit – on 23rd July 2016 Britain voted to leave the European Union. The process is expected to take at least two years and negotiations must take place to engineer a smooth transition.

CAIXIN (formerly HSBC) flash PMI – CAIXIN publishes an alternative to the official PMI for China. It is based on a survey of predominantly small to medium sized firms – unlike the official version. The number on the 1st of the month gets much less attention than the official but the preliminary, or 'flash', reading gets attention as a read a week or two before the official numbers.

China's shadow banking – In essence, the China government dictates what all banks must lend at and pay for deposits. As a result, if a potential borrower is deemed too risky at the prevailing rate, the banks refuse to lend (rather than increase borrowing rates as may happen here). The 'failed' borrower may then seek funding from the shadow banking system that is not so regulated.

FOMC – The Federal Open Market Committee determines monetary policy in the United States. It can be thought of as being similar to our Reserve Bank board.

GOP – stands for Grand Old Party which is an alternative name for the US Republican Party.

High-Yield Sectors: by this, we mean Financials, Property, Telcos and Utilities.

International Monetary Fund (IMF) – Managing Director, Christine Lagarde (French), since 28th June 2011. The IMF is charged with fostering global monetary cooperation.

ISM - Institute of Supply Management produces a 'PMI-like' number for the US economy. Like the PMI, 50 is the cut off between improving and worsening expectations.

Long-run mispricing – Our measure is based on analysing trends over more than a century of data. The average period of over- or under-pricing is about 18 months. That is, we do not expect the market to rapidly approach its fair value.

MYEFO (Mid-year economic and fiscal outcome) is a mid-year update on the Australian Budget situation – usually in December.

PMI – This acronym stands for Purchasing Managers Index. There is one for most countries and separate statistics for manufacturing and services. Manufacturing typically gets more attention. The official statistics are published in the first few days of each month – with China on the 1st. A reading less than 50 means the sector is decreasing in its growth rate – so If China growth slows from 8% to 7%, its PMI should be below 50. If the US speeds up from 2% to 2.5%, its PMI should be above 50. Note also the existence of the CAIXIN measure and its 'flash' or preliminary estimate.

Savings ratio – In Australia, the ratio of net savings to household disposable income defines the savings ratio.

Short-run mispricing – Our exuberance measure is our mispricing statistic reported in Chart 5. It is based on 12-month-ahead forecasts of the ASX 200. Please see the notes under Chart 5.

Tapering – It was the name given to the exit strategy from QE3. It is not a tightening monetary policy – just an increasingly less accommodative stimulus.

US non-farm payrolls data – are usually published on the first Friday of each month. They are generally considered to be the most reliable indicators for employment and unemployment in the US. Roughly speaking, a 200,000 increase in jobs is considered strong. Of course less new jobs are needed when the economy is running at full employment.

Key people

Australia – Prime Minister, Scott Morrison, (Liberal) since 24th August 2018; Treasurer, Josh Frydenberg, since 24th August 2018; Governor of the Reserve Bank of Australia (**RBA**), Dr Philip Lowe, since 18th September 2016.

China – President Prime Minister, Xi Jinping, since 14th November 2013; Premier, Li Keqiang since 15th March 2013; Yi Gang, President of the People's Bank of China (**POBC**) since March 2018.

Europe – President of the European Central Bank (**ECB**), Mario Draghi (Italian), since 1st November 2011; Chancellor of Germany, Dr Angela Merkel, since 22nd November 2005; President of France, Emmanuel Macron, from May 2017; Prime Minister of Greece, Alexis Tsipras, since 21st September 2015.

Japan – Prime Minister, Shinzo Abe, since 26th December 2012; Emperor, Akihito, enthroned 12th November 1990; Governor of the Bank of Japan (**BoJ**), Haruhiko Kuroda, since 20th March 2013.

New Zealand – Prime Minister, Jacinda Arden, October 2017; Governor of the Reserve Bank of New Zealand (**RBNZ**), Adrian Orr, since 27th March 2018.

United Kingdom – Prime Minister, Theresa May, since 11th July 2016; Chancellor of the Exchequer, Philip Hammond, since 13th July 2016; Governor of the Bank of England (**BoE**), Mark Carney (Canadian), since 1st July 2013.

United States of America – President, Donald Trump, from January 20th 2017 (4 year term); Chair of the Federal Reserve Bank (**Fed**), Jerome "Jay" Powell, since 5th February 2018 (4 year term)