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8<sup>th</sup> July 2011

# Wall Street connection No. 1, 2011

## Key points

- We have applied the investment methodology that we developed for the ASX 200 to the US market and found that, without any adjustments, the same technology seems to work equally well in both markets.
- Our forecast for capital growth on the S&P 500 is about 13% for the Australian financial year 2011/12 which is a little lower than the near 15% we have for the ASX 200.
- Our market is about 6% underpriced at the time of writing while the S&P 500 is a little over-priced.

Amended 15 July 2011

**Woodhall Investment Research Pty Ltd** (ABN 17 141 486 160)

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### The experiment

In this first issue of 'Wall Street connection', I describe how we have transported the IP we developed for the ASX 200 to the S&P 500. The idea of this series of papers is to produce occasional issues when the results of the analysis warrant it.

Most would agree that our market is influenced by movements in the S&P 500 but that the relationship changes over time. Our insights are designed to add colour and substance to this evolving relationship.

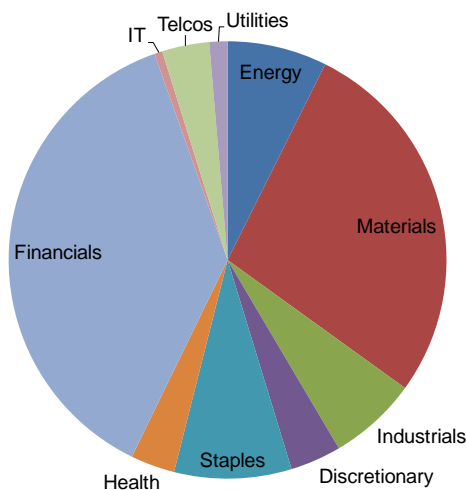
Our investment methodology at Woodhall has broker forecasts of dividends and earnings at the centre-piece of our analysis of the ASX 200. We take the Thomson Reuters Datastream consensus forecasts of earnings and dividends and turn these into our own forecasts of total returns (including dividends) and capital gains for the ASX 200 and its 11 major sectors for the next 12 months - which we usually updated each month. We combine these total return forecasts with our highly technical method of forecasting volatility for the same sectors to produce optimised portfolio sector weights.<sup>1</sup> We use these capital gains forecasts with the sector and broader index price series to produce an estimate of under- or over-pricing - which we call exuberance.

In a separate line of inquiry, we developed other measures of volatility - which we refer to as our fear index, disorder index and cross-sectional volatility index. We use these measures to gain additional insights into market behaviour to the extent that we believe the concepts these statistics measure interact with market direction and market-timing opportunities. However, I will focus on returns forecasts and exuberance in this issue.

We have applied this same methodology to the S&P 500 from the same data source. Obviously there are many more companies in the S&P 500 and that should benefit our averaging techniques. The S&P 500 does not appear to disaggregate Financials into Financials-x-REITS and REITS (or Property) as does the ASX 200 and which we use in our Quant Quarterly publication.

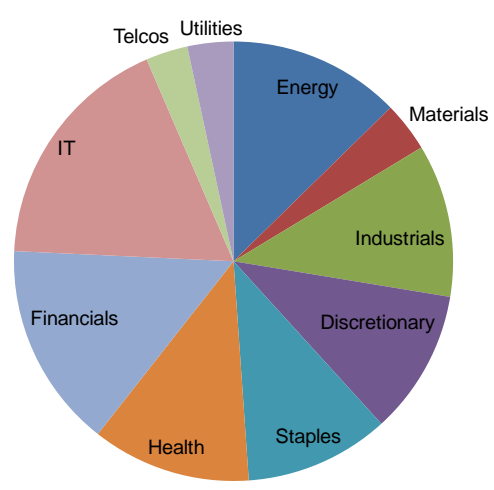
There are two fundamental differences between the two markets. First the sector weights are very different across markets and, second, the nature of the companies within the sectors are, in many cases, markedly different. I show the sector weights in Charts 1 and 2. The IT sector is the largest in the S&P 500 and tiny by comparison in the S&P 200. The converse is true for Materials. Financials, including REITS, has more than double the comparable weight in the ASX 200.

Chart 1: Sector weights - ASX 200



Source: Thomson Reuters Datastream

Chart 2: Sector weights - S&P 500



Source: Thomson Reuters Datastream

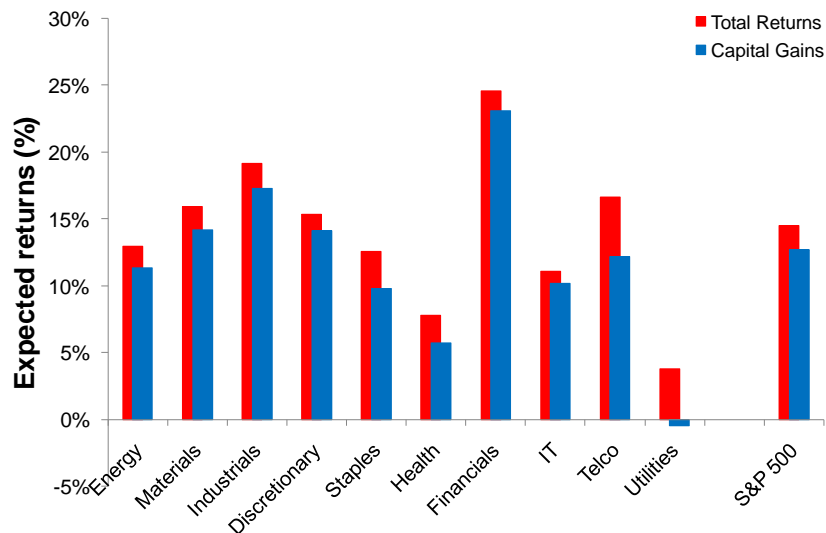
<sup>1</sup> Yang, M. and R. Bewley (2006), "A hybrid forecasting approach for piece-wise stationary time series ", *Journal of Forecasting*, 25, 513-527

Not only are the relative weights different but so are the component companies. Health in the S&P 500 includes many some global pharmaceutical companies but the ASX 200 counterpart is very much dominated by one company, CSL, which is widely known for its blood plasma. IT in the S&P 500 includes major manufacturing companies but the dominant player in the ASX 200, Computershare, is a major share registry company.

### Returns' forecasts

I show the forecasts for the S&P 500 and its 10 major sectors in Chart 3 as at 30 June 2011. The expected capital gains for the broader index implies a reading of 1,400 for the end of 2011 (assuming a constant growth rate over the financial year). Just before the year end - when the index was below 1,300, Goldman Sachs (Jim O'Neill) and Barclays (Barry Knapp) reiterated their common forecasts of 1,450 for the year end (Bloomberg TV). Given that these forecasters are highly respected, our interpretation of broker forecasts can be considered reasonably conservative - particularly since one third of that incremental forecast gain was made in the first week of 2011/12. The total return forecast for Financials jumped from 25% to 34% a week after these forecasts were constructed.

Chart 3: S&P 500 forecasts for 2011/12



Source: Woodhall Investment Research

If I compare these forecasts with those in our Quant Quarterly for the same period, the ASX 200 capital gains' forecast is a little stronger at 14.5%. Given the links between the two markets and our current lag behind their recent gains, I feel that our Australian forecast has gained more credibility from our US comparison.

### Mispricing

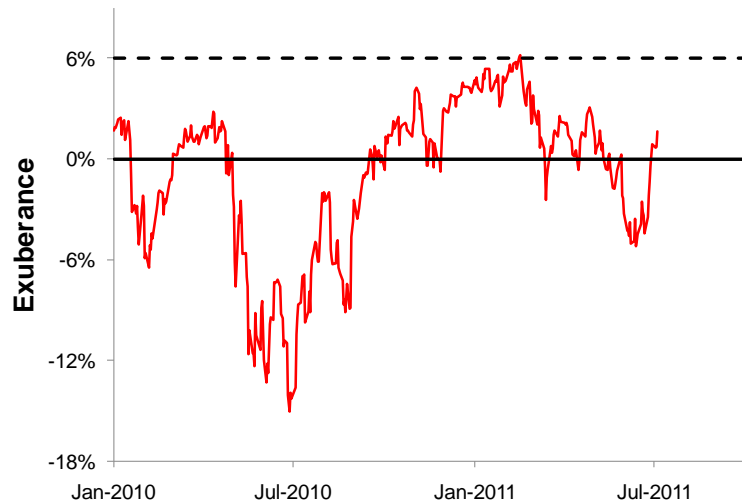
On a recent appearance on Switzer TV and the July 2011 issue of Professional Planner, I showed that our measure of exuberance for the US showed the same basic characteristic as that for the ASX 200. That is, when over-pricing reached +6%, the market often retreated into a correction - or traded sideways for an extended period. Of course, I do not believe in any exact response to the 'magic 6%' line but it does make me ratchet up my risk management procedures when it gets nudged!

I show an updated version of the US measure (to the close on 7 July 2011) in Chart 4. Our philosophy includes the notion that markets are irrational - at least a little - so that sentiment pushes and pulls the market out of line with fair pricing. Of course no one knows what fair pricing is. The sentiment swings are how the market works out - sadly after the event - approximately where fair pricing was.

Investors bid up - or down - market prices until it becomes 'so obvious' that the market is mispriced, the direction of price discovery reverses. Cheap markets can get cheaper, particularly if the level of

fear (using our fear index) is high, and disorder (another of our indexes) is also high. On the flip side, the market rarely seems to get much more than 6% over-priced - but it usually falls more quickly when fear and disorder are high when the correction begins. It so happens that the mid-February correction occurred just after exuberance hit the 6% dotted line. A coincidence? Possibly. Data were not readily available to go back further to best test this hypothesis. Our ASX 200 estimates go back to 2002. However, I have included 10 charts, one for each sector of the S&P 500, at the end of this paper in an Appendix. I find the patterns startling. Perhaps you will too? I now feel confident that the same technology works as well for the S&P 500 and its components as for the ASX 200.

**Chart 4: S&P 500 exuberance to 7 July 2011**



Source: Woodhall Investment Research

What I believe happened in February is that the S&P 500 was over-heated and so corrected - bringing the ASX 200 down with it - even though the latter was not mispriced at the time. Around 30 June 2011, the S&P 500 reversed its under-pricing and is now a 'little warm' being about 2% *over-priced* (as at 7 July 2011). At the same point in time, we estimate that the ASX 200 was more than 6% *under-priced*. The problem for our market is now how it gets back to fair pricing without the S&P 500 again getting hot and correcting. Elsewhere I have expressed my view that catch-up might require a fall in our dollar. We express no view on short-term fluctuations of the dollar.

The same mispricing can be shown in a three-dimensional 'heat map' chart of the S&P 500 - in Chart 5 - use a sequence of dots rather than a line. I use different coloured dots to show different degrees of mispricing. In the big QE 2 (loose monetary policy in the US) run from October 2010 to February 2011 the colours changed - but slowly - because the forecasts at the time were stronger than they are now. The single red dot in February 2011 marks the turning point and 6% over-pricing. Importantly, the US market is now higher - but by only a handful of points - yet the latest dot is only black for 'warm'. Elsewhere I have written that I think of our changes in our colour coding as marking evolving resistance levels.

So for those who choose to read our research, the modification to our philosophy is as follows. We still think of ASX 200 exuberance as a tool that might be used in judging market mispricing. We still think a correction of 6% - 10% is more likely after the magic 6% line is breached - or that there might be sideways movement of the market for an extended period. However, we now add to our armoury that a correction is also possible if our market is not over-priced but the US market breaches its 6% line. Our market could then correct with the US.

Again, using the dashboard analogy to understand how we use our 'dials', consider the following proposition. If you were driving in your car in the city and you found yourself overtaking everyone else and the other drivers were honking their horns and gesticulating at you, would you:

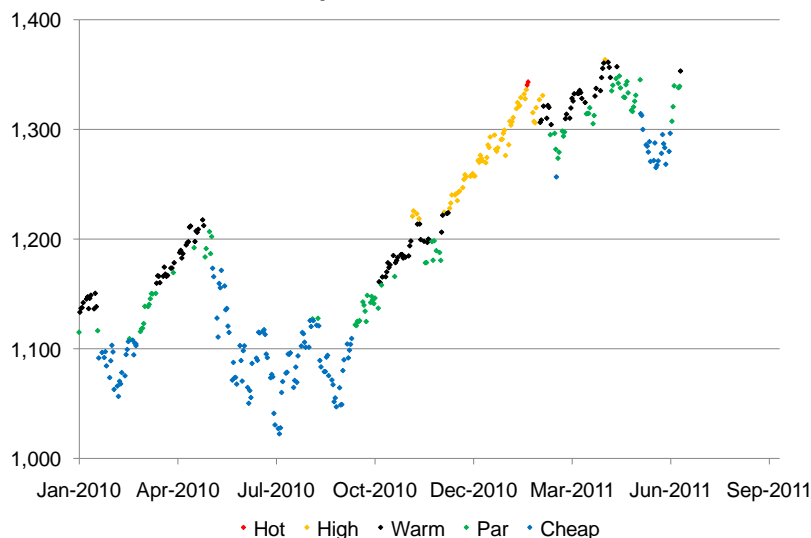
a) keep going at the same speed and wave back?

b) assume your speedometer was broken and slow down with the traffic or stop and call a road service?

c) assume your speedometer was correct but road conditions had changed - so slow down anyway until you get more information?

Clearly the answer is not a). Answers b) and c) seem like reasonable responses to me. Although we know this situation can happen, we typically do not dismantle our speedometer because sometimes it may not produce the information we need. We keep it and add judgement (and maybe get the speedometer fixed). In the same way, we think of exuberance like the speedometer in the question - it needs to be used with a modicum of common sense. It is not a strict trading rule. We have tried to find one but without success. Take, for example, late 2009 on the ASX 200. Exuberance was over 6% for months without a correction - it just traded sideways for about a year. Sometimes markets do not correct - they wait for the fair price to catch up with the market level!

**Chart 5: S&P 500 heat map**



Source: Woodhall Investment Research

### Take aways:

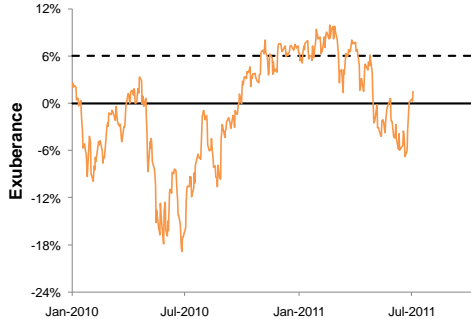
The take aways from this analysis for investors constructing and monitoring their own portfolios are:

- 1) The US market appears to behave similarly to the Australian market so we can transport our methodology and measures to the S&P 500.
- 2) We expect the S&P 500 price index to grow by about 13% over the Australian financial year 2011/12 but, of course, be subject to volatility and mispricing during and at the end of the year.
- 3) The S&P 500 was heading to be moderately over-priced at the time of writing.
- 4) The difficulty with our market is that we measure it to be about 6% under-priced. Therefore, if our market moves up with the US in lockstep, the S&P 500 might get to correct again before the ASX 200 is even fair-priced.

**Appendix: Sector exuberance on the S&P 500.**

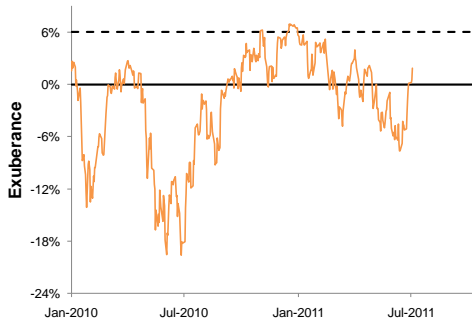
In all cases, the charts end on 7 July 2011.

**Chart A-1: Energy mispricing S&P 500**



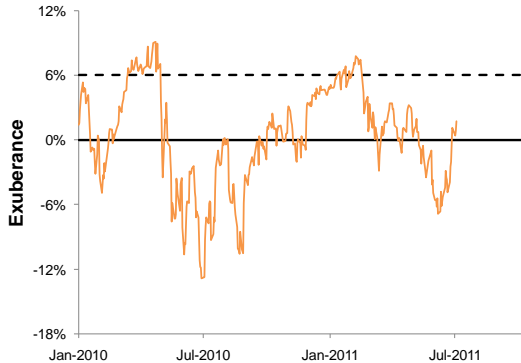
Source: Woodhall Investment Research

**A-Chart 2: Materials mispricing S&P 500**



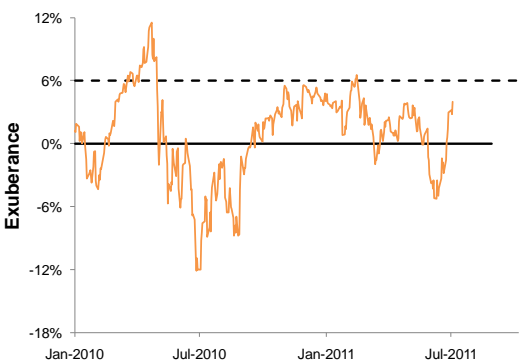
Source: Woodhall Investment Research

**Chart A-3: Industrials mispricing S&P 500**



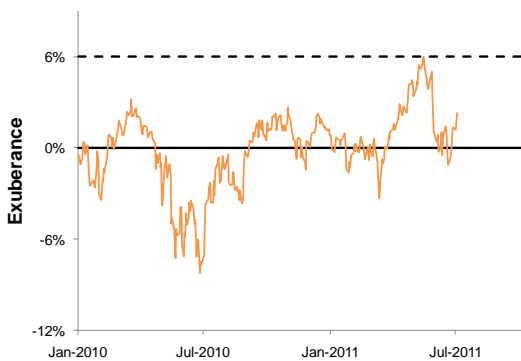
Source: Woodhall Investment Research

**A-Chart 2: Discretionary mispricing S&P 500**



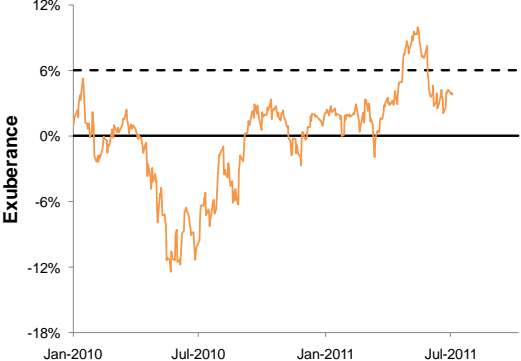
Source: Woodhall Investment Research

**Chart A-5: Staples mispricing S&P 500**



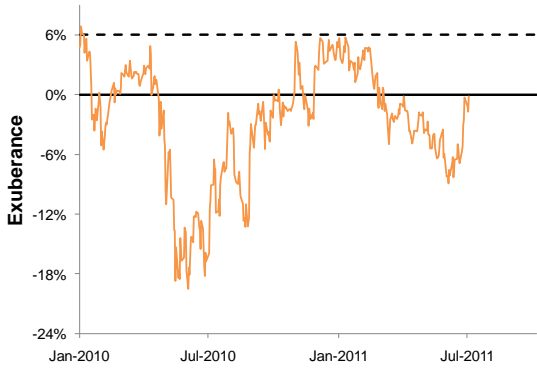
Source: Woodhall Investment Research

**A-Chart 6: Health mispricing S&P 500**



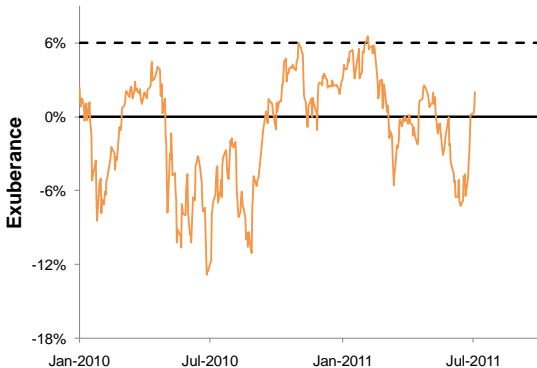
Source: Woodhall Investment Research

**Chart A-7: Financials mispricing S&P 500**



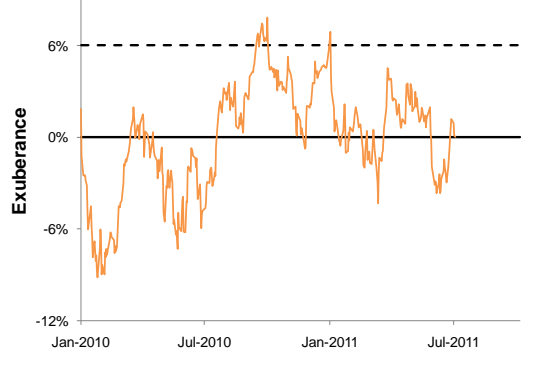
Source: Woodhall Investment Research

**A-Chart 8: IT mispricing S&P 500**



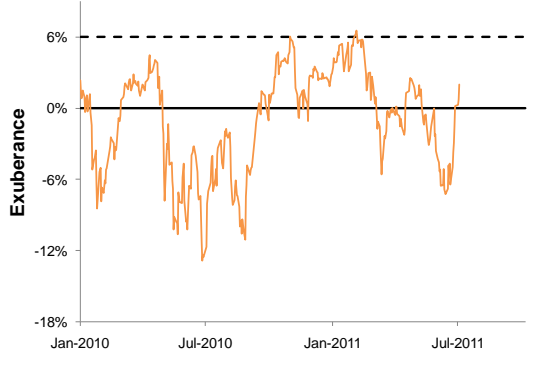
Source: Woodhall Investment Research

**Chart A-9: Telcos mispricing S&P 500**



Source: Woodhall Investment Research

**A-Chart 10: Utilities mispricing S&P 500**



Source: Woodhall Investment Research