Rethinking market forecasting

Slides for Ron Bewley interview
on Switzer TV 7/1/2014

Woodhall Investment Research Pty Ltd. (ABN 17 141 486 160); www.woodhall.com.au

Notes 1: The Objective

The aim of my current stream of research is to better mimic what I think investors are looking for when they ask what is an analyst's end of year (e-o-y) forecast for the ASX 200. There are many ways to come up with a capital gains forecast for the year. I choose to use broker forecasts of dividends and earnings as I discuss in my paper on my website (under the *Market Updates* tab).

Market volatility exists and it means that even a great forecast of the fundamentals can be very wrong on the day (e-o-y). Long-run volatility happens to be about 12.5% pa. That means (in loose terms as there are some academic niceties to take into account) a forecast of 10% capital gains means that there is 1 chance in 3 that the outcome will be outside (10% - 12.5%) and (10% + 12.5%) or -2.5% and 22.5% - and that is in good times! To wish to be correct 95% of the time, that range becomes -15% to 35% on the day for a 'true' 10% forecast return. That is one big range!

One major issue is that 'we' want our forecast to be correct on a very specific day – say Dec 31. Given the swings and roundabouts of markets that objective is far more difficult than, say, forecasting the average index value for December. To the investor, this distinction should be of no consequence. The real issue is whether the investor should be in or out of equities.

For example, in 2013, the index peaked at 5,441 in October, fell to 5,063 in December only to finish the year at 5,352. A great forecast would have been 'somewhere in the 5,000s' since an *Australian Financial Review* survey polled that analysts thought at the start of the year that the market would gain only 29 points during 2013 to close at 4,678 – and not the 15.1% it actually did return!. Actions and decisions should dominate simple forecasts.

A good old friend of mine, Peter Switzer, (we even ran together on numerous occasions around Centennial Park in the late 80's and early 90s) called the market at 5,500 on Jan 1, 2013 for e-o-y 2014. As he recently wrote in his website, he got close at 5,441 (in October). I predicted the close to be 5,150 on Jan 1 but my forecast gradually got revised upwards to 5,350 by late October. So was my 200 points under forecast on Jan 1 good; was my October forecast of 5,350 spot on (to 2 points), or is it just a game?

In the free time I had to think over Christmas, I decided (and I know I could be wrong) people actually are trying to predict the maximum, for the year and not the value of the very low volume, short trading day that is Dec 31!

Notes 2: The Analysis

For a statistician armed with growth and volatility forecasts, it is not difficult to try and predict the low and high for the year. Being ‘correct’ is another matter! This interview is about whether forecasting highs and lows is more useful than trying to predicting the e-o-y.

Turning to Chart 1 our forecast (the diagonal red line) arguably falls short but the did almost reaches the low (dotted line) in early 2012. It is important to realise that the high has a 50% chance of being exceeded and the low also has a 50% chance of being too high.

Although both the high and the low have a 50% chance of being too high (or too low), the chance of both being exceeded is small. About 10% or 1 in 10 in current conditions. The reason for this low probability is that once the index reaches a bound, the other bound is now further away that at the start of the year and there is even less time for the index to get there.

Flipping to Chart 2, a new forecast (for FY 13) has been introduced with its new high and low. As it turns out, the high is just breached near the end of the financial year before sliding into the close.

Rather than clutter up the chart with each new forecast, I have only added the new ‘binding’ limit in Chart 3 – Charts 3a to 3c – are included here (but not in the interview) for more detail.

As it turns out, the calendar 2014 high also turned out to be a very good forecast.. It is to early to tell how good are the FY 2014 and calendar 2014 highs.

In Chart 3d – one for the statisticians I am afraid – shows how well we can estimate each of the low, high and close. In short, because we do not have to specify the date at which the high or low occur, the distributions are tighter. That is, we can better estimate the high and the low than the e-o-y and perhaps that is what we want anyway!

Chart 1: Rolling Forecasts of ASX 200

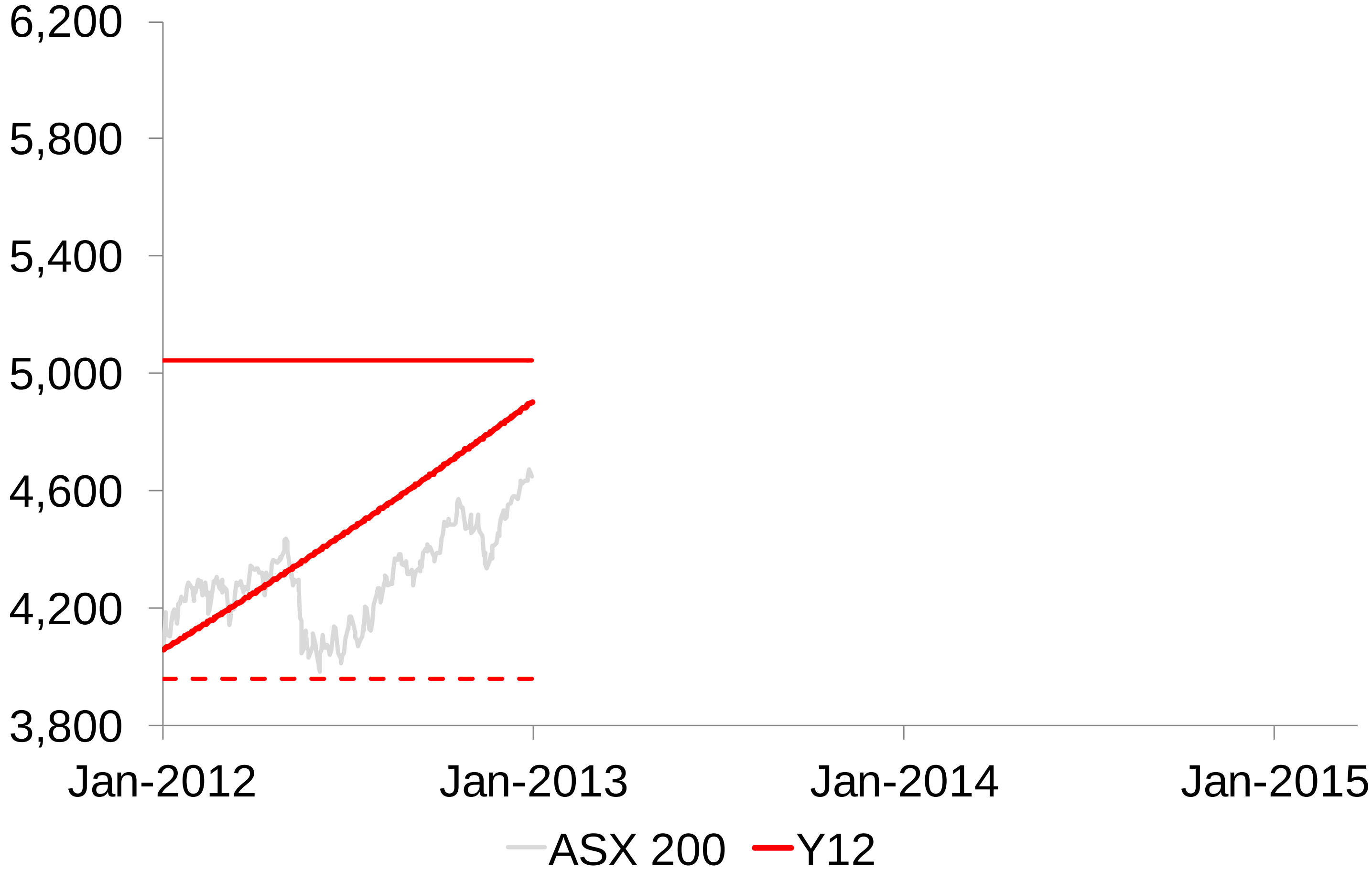


Chart 2: Rolling Forecasts of ASX 200

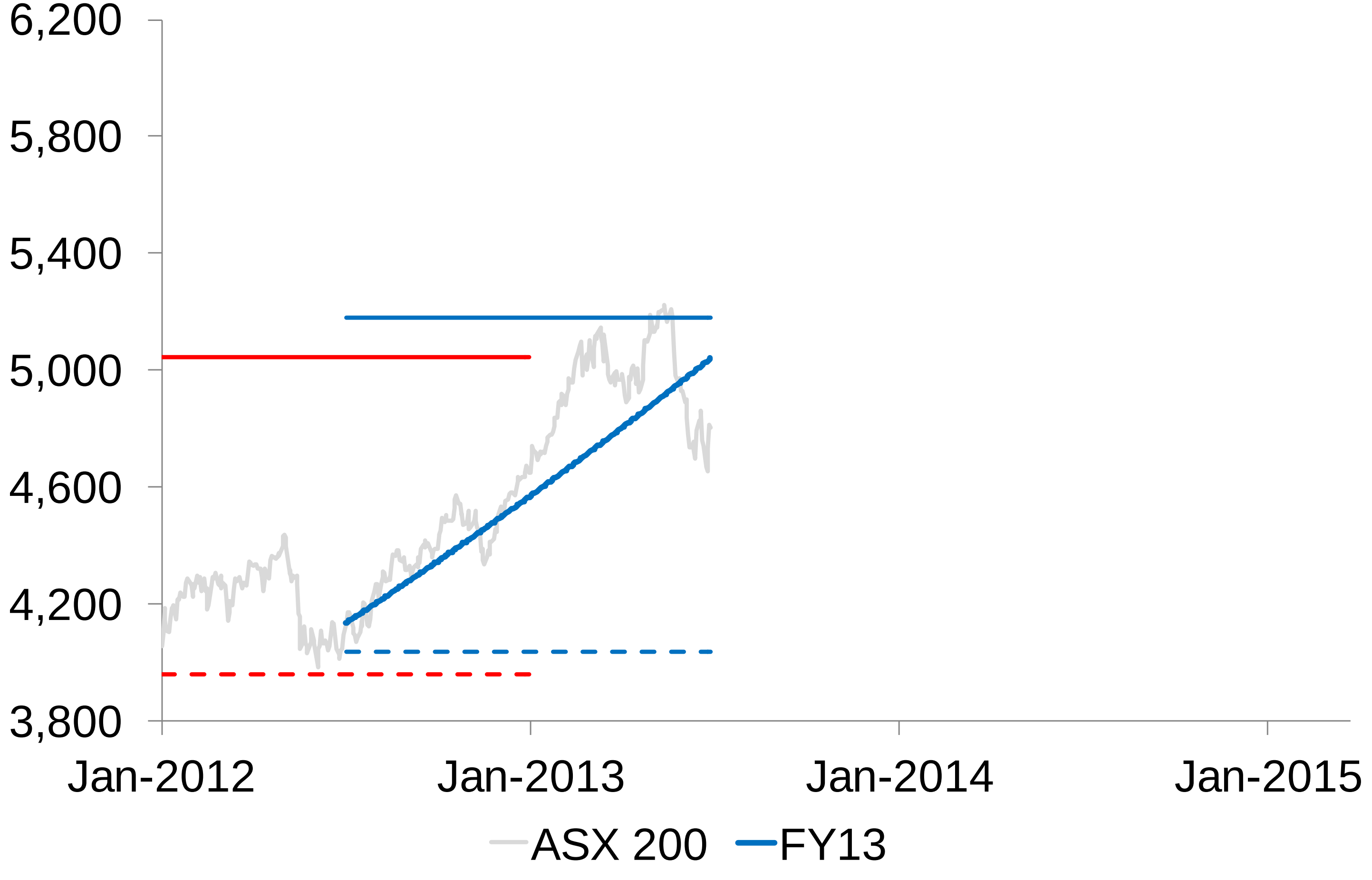


Chart 3: Rolling Forecasts of ASX 200

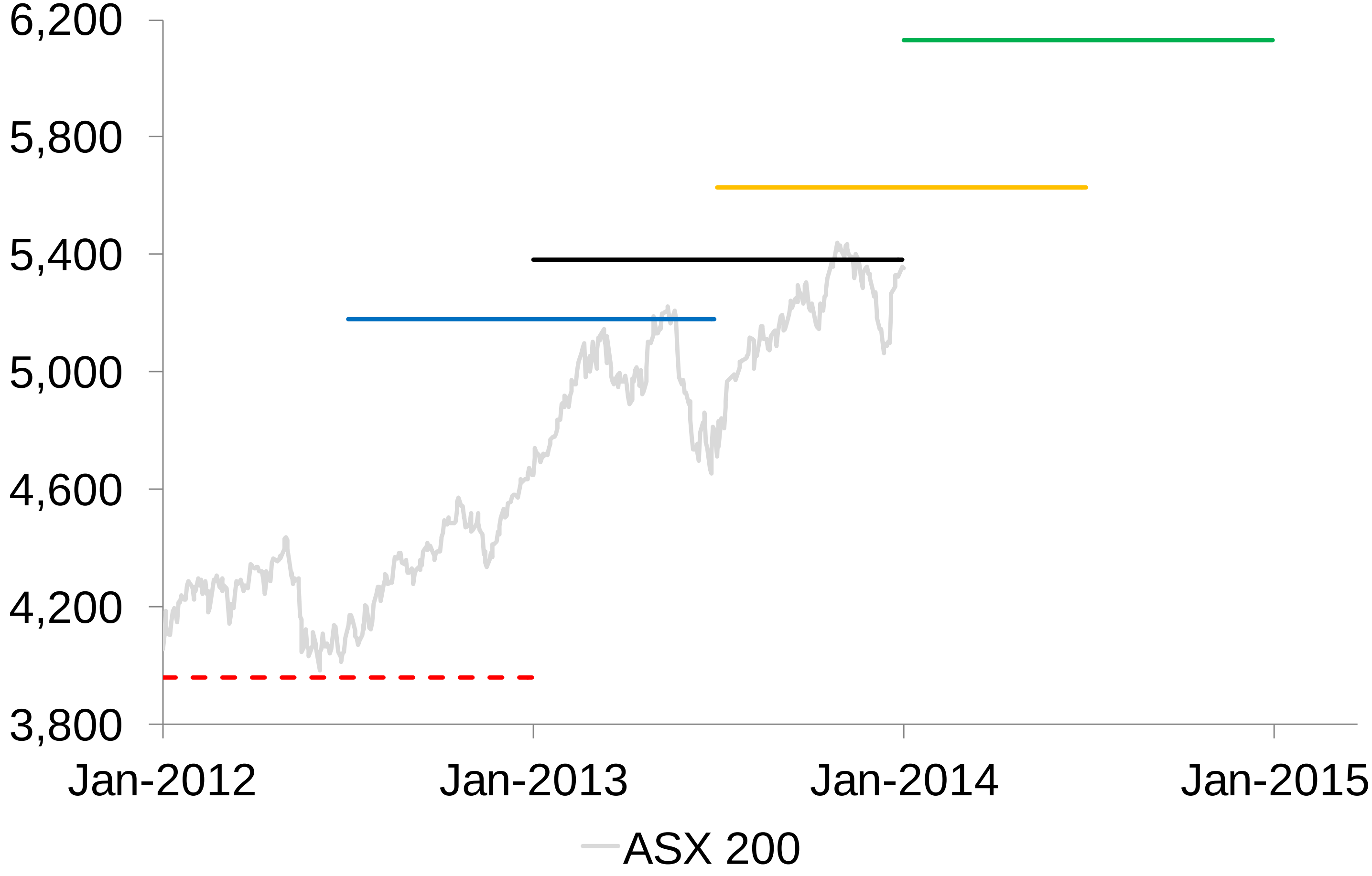


Chart 3a: Rolling Forecasts of ASX 200

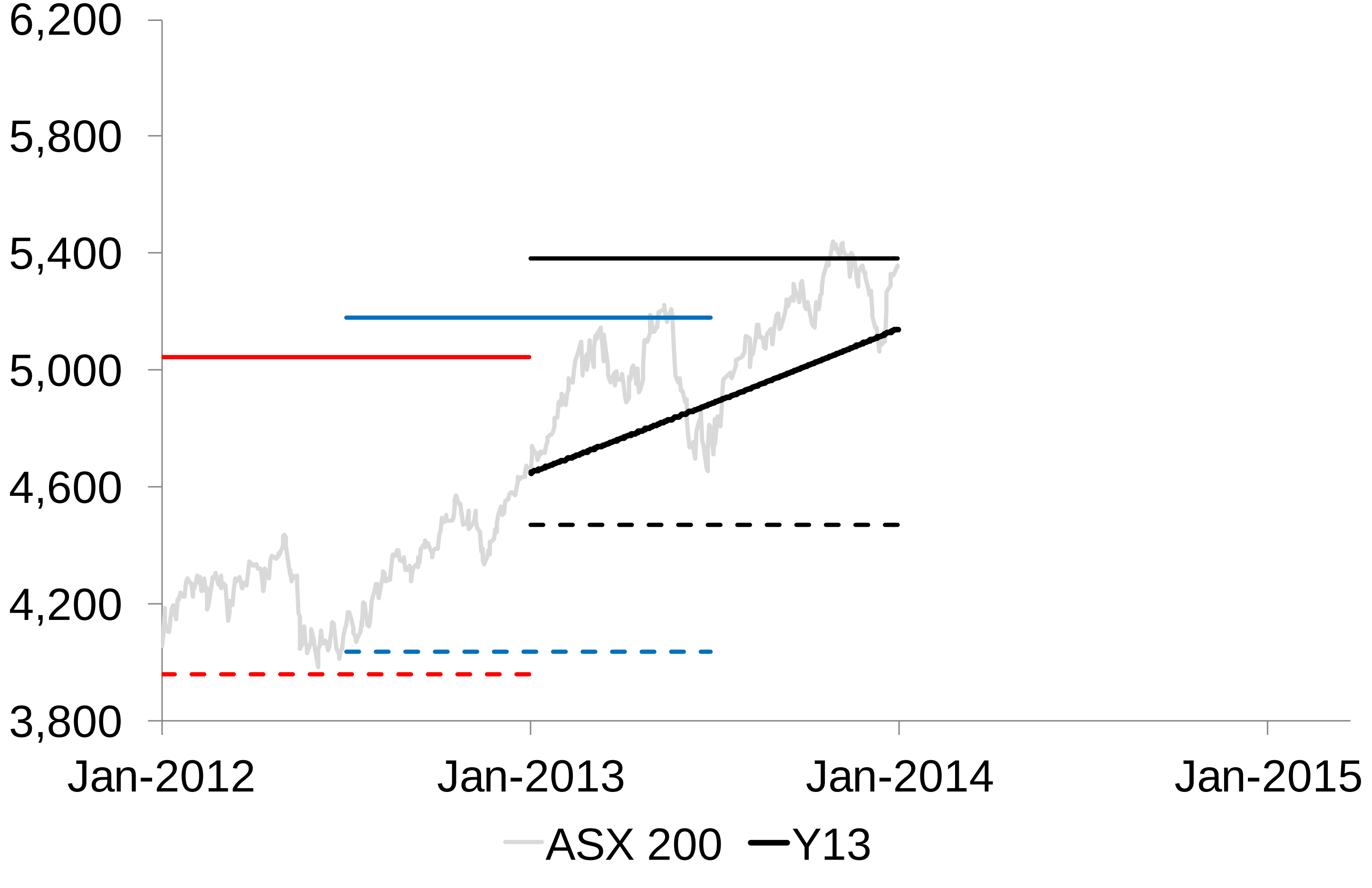


Chart 3b: Rolling Forecasts of ASX 200

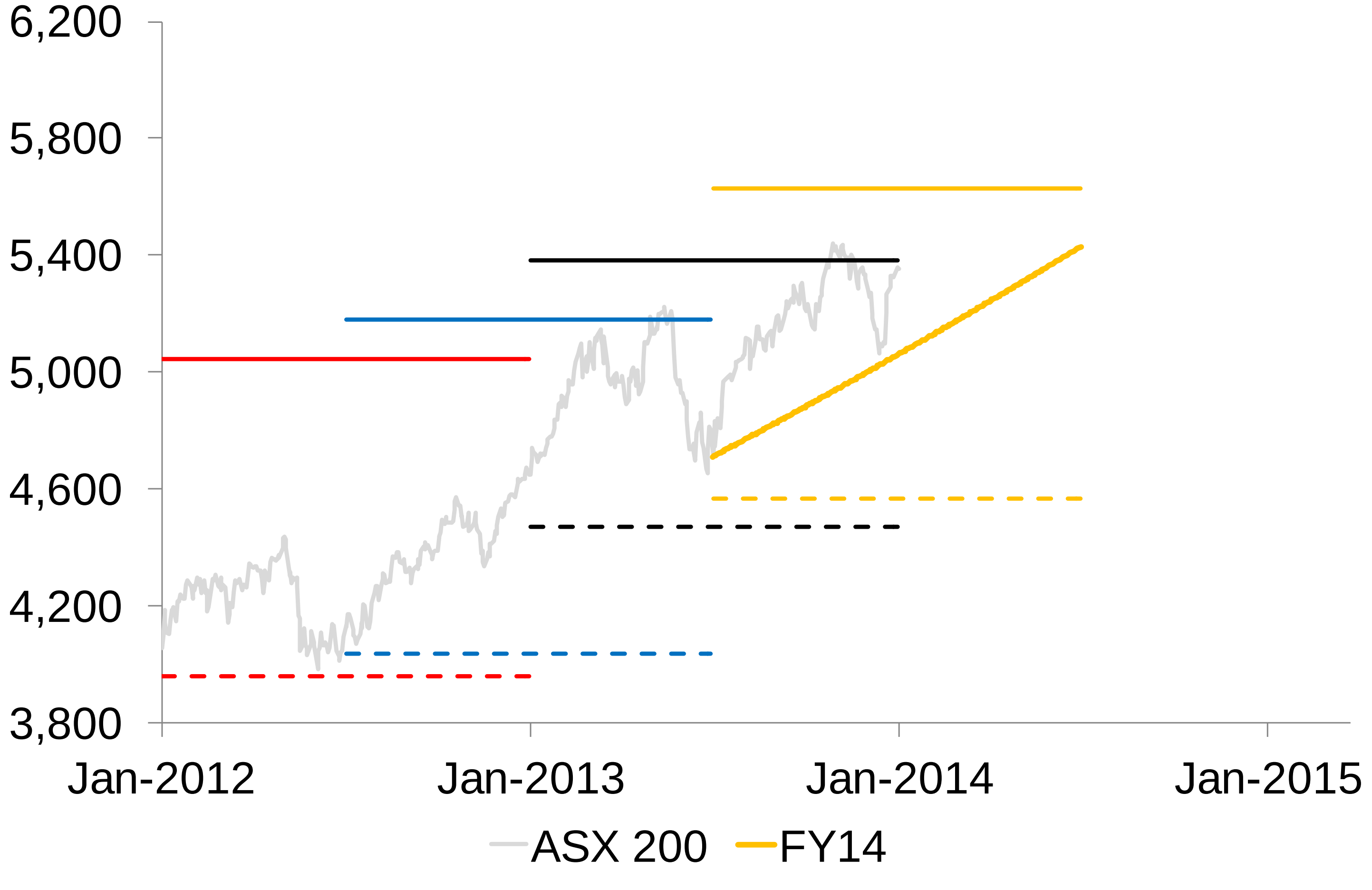


Chart 3c: Rolling Forecasts of ASX 200

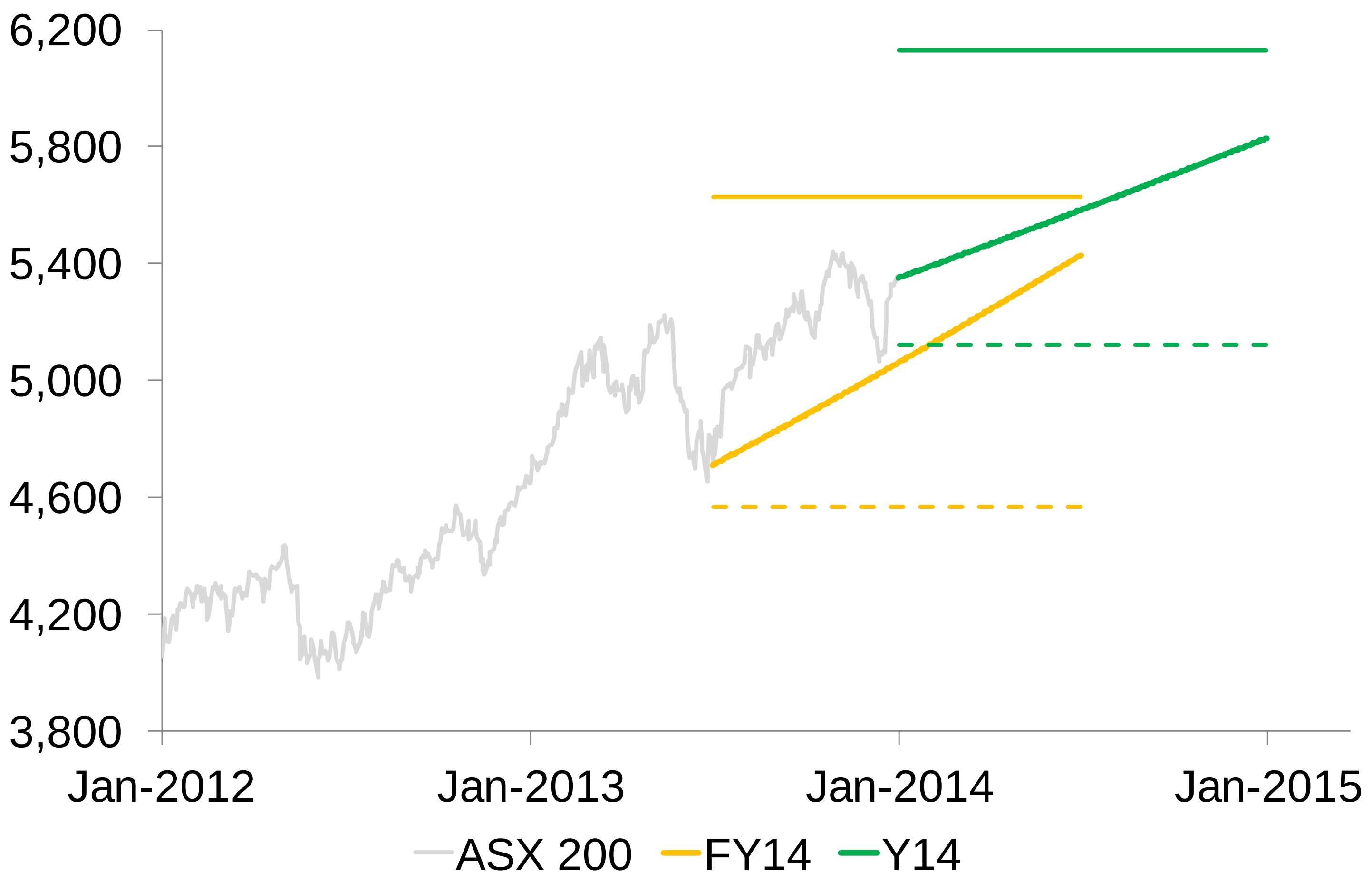
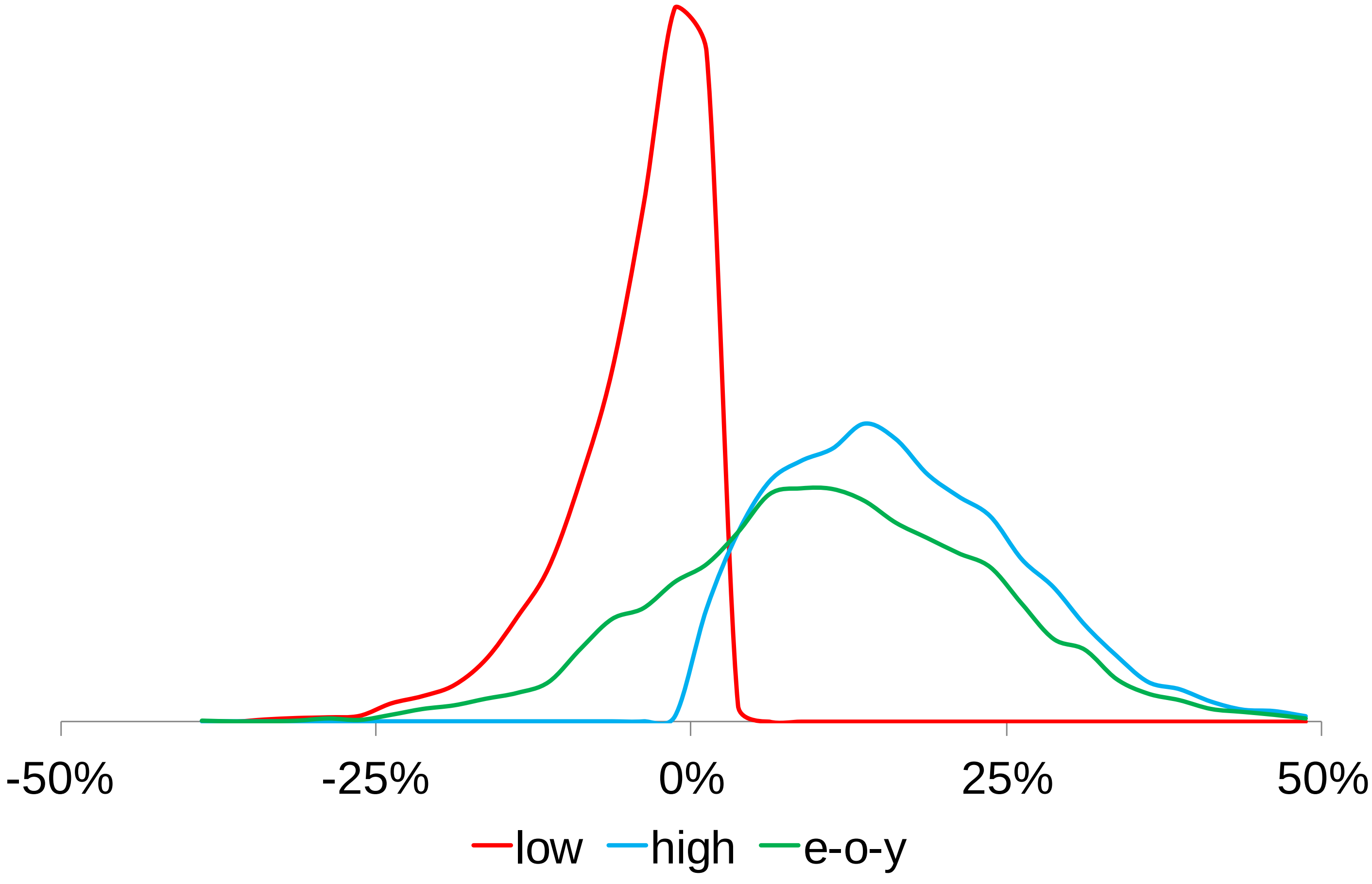


Chart 3d: Distribution Low, High, E-O-Y

Assumptions: growth = 10% pa; Volatility = 12.5%



Notes 3: The 2014 forecasts

Our specific forecasts are shown in Chart 4. The high and low forecasts also depend up our forecast of volatility. The e-o-y forecast does not. The reason is that in more volatile times, the index will meander further way from trend for longer making highs higher and lows, lower.

12.5% pa is the long-run average for ASX 200 volatility (please see our Weekly for details) . 10% is quite low and 20% is high – although it did get worse than that in the middle of the GFC.

Using 12.5% as or volatility estimate – and rounding forecasts to the nearest '50' so as not to give false sense of accuracy – our Jan 1 e-o-y for 2014 was 5,850 with a high of 6,150 and a low of 5,100. At this point we do not know which (if either) the low or the high (or both) will be breached. If the index gets to 6,150 before the end of the year - and we have no reason to change our underlying forecasts (of 5,850) it might be worth taking some profit off the table if gains need to be harvested or a rebalancing is about to take place. Conversely, if the market gets down to 5,100 (and with the same caveat) there is no strong reason to sell but buying in might be a good idea.

Of course we do have an exuberance measure in our Weekly which can be used in such decision making.

Chart 5: Forecasts for 2014 under different volatility assumptions

Volatility	Low	High	e-o-y
10.0%	5,200	6,050	5,850
12.5%	5,100	6,150	5,850
20.0%	4,900	6,450	5,850

Notes 5: The 2014 sector forecasts

Our sector forecast for the 11 major sectors are given in Chart 5 along with current exuberance (mispricing) and yield.

Energy, Property and Utilities.are currently cheap. Owing to mispricing, small capital losses are expected in Telcos (-1%)

Energy and Industrials have the best capital gains prospects – but the Weekly is the place to go for those who want up-to-date opinions.

We plan to write a longer paper on the new forecasting method over the next few weeks – when we hve a little more time and, perhaps, some feedback

Chart 5: Sector forecasts for 2014

	Sector	Exuber-ance	12 month forecasts	
			yield	cap gain
Resource-related	Energy	-6%	3.7%	29%
	Materials	-1%	3.3%	9%
	Industrials	-2%	4.1%	22%
High yield	Financials	1%	5.4%	5%
	Property	-4%	5.9%	8%
	Telco	4%	5.5%	-1%
	Utilities	-3%	5.9%	14%
Other	Discretionary	1%	3.4%	13%
	Staples	-1%	4.7%	10%
	Health	1%	2.3%	12%
	IT	0%	3.1%	12%
	ASX 200	-1%	4.6%	10%