

### A Tale of a Bubble's Tail

Much has been written about why bubbles form. But for those going long or short securities day in and day out, a larger question begs itself: How do valuations play out in such an environment? In shorting stocks, being off by a few days or weeks in guessing the peak can erase a quarter; being wrong by a few months can damage a portfolio.

Starting with the assumption that one has a valuation model that helps understand 95% of a market's stocks reasonably well, the question arises - What makes stocks in a sector which is in the midst of a bubble differently priced? Let's take the example of AVB. In the bullish environment April 2010, if one looked at its beta from Yahoo, it was 1.54. In April 2009, it was noted as .96 from the same source. This implies that the stock's volatility as a function of market moves rose over that period of time. Realize that the measure is captured over several months (Yahoo does not state its precise look back period) so AVB's real-time beta was potentially above 2 at the time of measurement. In a market that is rising, and bubbles rarely form in bear markets, this acceleration in beta leads to outperformance vs. the index, which can seem like alpha, and can lead valuations to rise to the point where expected returns fall below those of riskless securities. Of course, this is not the immediate experience of stockholders; their gains are incredible.

However, market forces eventually create supply in the form of new issuance and sellers, and as the market slows down, a high beta leaves the stock vulnerable to any downturn. A decelerating beta also leaves the stock open to disappointment on its own, because at that point perceived risk is quite low, and any 'miss' of rising expectations can lead to very significant reassessment of risk and hence downward re-pricing. If both were to occur together, as in 2000 for tech stocks, the result can be a washout that lasts a decade.

In REITs, such beta acceleration can be observed across the board between 2009 and 2010. Many consumer discretionary stocks and emerging markets displayed similar changes to beta in the same timeframe.

These observations explain the skew in returns that builds up in the last stages of a rally. The skew is also generally more prevalent in small caps - it would be hard to make a 'momentum play' out of Exxon Mobil. In 2008, XLE (an energy sector ETF) peaked by mid May, yet small caps kept spiking for a few more weeks as the overall market began pulling back. This small difference in timing complicates portfolio construction.

When to sell? In a fashion, when the slope of the beta vs. time flattens, the sector has had its run. In more rigorous terms, when a firm's valuation is such that expected returns fall below the 10 year Treasury yield, it is a reasonable point, even in a bubble, to sell the stock. When the equity is 25% or so overpriced at that level of expectations, it becomes worthwhile shorting, because the option value of growth has become unrealistic, and will fail to be realized systematically. So the sell discipline is the same as the short discipline but for the valuation

spread. An accelerating beta teaches us not to sell when finding the stock fully priced at what would otherwise be a reasonable spread to Treasury e.g. 5%. The irony is that this phenomenon occurs in highly levered entities, whether financially levered such as REIT's, or small caps levered to growth in a commodity price or operationally i.e. with high fixed and low marginal costs, all of which would suffer the most in the slowdown of the usual suspect behind the outcome - cheap credit.

### Impact on Portfolio Construction

A wise man stated that the Gods of the market allow you to catch the top once, the bottom once, and be wrong as often as you like. OK, one is going to be wrong for a few days, so what? The problem runs deeper. If one shorts the most expensive stocks perfectly at the top of a rally, or even after the top has not been breached again for a few weeks, the positions have high betas and the beta of a cash neutral portfolio becomes quite negative. If the offsetting longs in the portfolio are cheap stocks that are playing catch up or at least have a low risk of falling apart in a downturn, those betas are going to be low, exacerbating the problem. The exact opposite would happen at a market bottom - it pays to buy the highest betas because they fell the furthest.

Hence portfolio beta needs to be highly countercyclical once it is believed the top or bottom has been reached; this requires some faith in valuation measures and a gradual ramp of exposure so that any temporary heartburn is minimized. This can lead to counterintuitive cash net exposure, i.e. one could be cash long when trying to short the market in beta terms and vice versa. This conclusion risks sounding cute to experience managers, because in practice, this is incredibly hard to do. A necessary ingredient to pull this off is occasionally having to throw up one's lunch. This explains why these cycles persist, and also why getting the process right has a tremendous ongoing payoff.

Examples of tickers with wildly different same-source beta's at different times are given below. Please contact us for a discussion of specific valuations or other implementation issues.

Ticker	Beta	
	Summer 2010	Summer 2009
<i>Brazil, India</i>		
ABV	1.07	0.78
WIT	2.01	0.67
<i>REIT's</i>		
AVB	1.46	0.96
SPG	1.81	1.21
<i>Consumer Discretionary</i>		
ANN	1.93	1.19
EXPE	2.24	0.73