

## Re-evaluating Valuations: Exceptional Companies Deserve Exceptional Multiples



Those familiar with Lindsell Train's approach will recognise a key tenet of our philosophy; that other investors undervalue the best companies. Regular readers may even remember our attempt last year to quantitatively demonstrate this phenomenon<sup>1</sup>. The argument ran that companies with long histories of sustainable value creation (we used 20 year average Return on Equity - "ROE" - as a proxy for this) deserve to trade on much higher valuations (e.g. price earnings multiples - "PEs") vs. lesser concerns earning lower returns. However we've long suspected that other market participants were failing to differentiate between levels of quality in this way. Our research went some way towards confirming this. By looking at stocks across the entire MSCI World index we showed that there really was no correlation between a record of high historic returns and a company's market valuation. Now this isn't *necessarily* wrong – investors are unlikely to be successful simply by assigning valuations based purely on past performance or events. However, we think a long history of high returns is on average a strong indication of an exceptional, durable business model - a factor to which we don't think other investors give a high enough weighting. If this already demonstrable competitive advantage can endure, then it should warrant a higher valuation. Naturally therefore, LT believes a positive relationship *should* in general exist between a company's valuation multiple and its historic returns. However in our previous discussion this is as far as we got. Better companies ought to trade at higher multiples - but *how much higher* should this valuation be? What is a fair price to pay for a company capable of sustainably earning above average returns? This note attempts to answer these questions.

### Sustainable long-term ROEs should be a good indicator of future share price returns

Here we must revert to a mathematical argument to address what is an inherently quantitative problem. There's a big, but powerful, assumption we must make here: to predict that the level of returns sustained for the past 20 years might also continue for the *next* 20 years. This is a significant ask - a high percentage of companies might not even survive the next 20 years let alone protect their returns from competitors. However by generalising to the MSCI World index as a whole, we think it's plausible that its current weighted average ROE of 11% (consistent with its 20 year average of 11.7%) might remain at this level for the next two decades.

Consider this index then, with a long-term ROE of 11% and valued at its current weighted average PE of 19x. If this ROE does indeed hold for the next 20 years, then assuming 100% of the index's constituent earnings are reinvested at this same rate (another big assumption), the total equity of the index will also grow at a rate of 11% per annum; in line with its ROE. If the PE ratio remains at 19x at the end of the 20 year period, the share price will likewise have appreciated at a rate of 11% per annum<sup>2</sup>. This 11% figure is somewhat higher than the long-term nominal returns historically observed in quoted equity markets - which tend to approach around 9% per annum (at least in the US where sufficient past data is available for analysis e.g. see Jeremy Siegel's 'Stocks for the Long Run', which analyses US equities over a 204 year period from 1802-2006).

Complicating matters is the above assumption that 100% of any company's earnings be reinvested at these sustained rates of return. This will rarely, if ever, be the case. The vast majority of quoted companies are not able to maintain consistent returns by reinvesting all their

earnings and most solve the issue by returning this cash to shareholders, for example in the form of dividends. Fortunately, this can be accounted for in our model by assuming a fixed percentage (say 50%) of earnings are redistributed - giving instead an annualised return of 8.4%<sup>3</sup>. This brings us conveniently close to the c.9% actual long-term returns of equities referred to above.

Clearly an above average company with a higher ROE will, given these conditions, compound its equity at a higher rate, and assuming the PE multiple remains constant, will deliver correspondingly higher returns.

### **Sustainably higher ROE companies should deliver higher returns even with decreasing ratings**

Take then the companies in our Global Equity representative portfolio which currently have a long-term weighted average ROE of 18% and trade on a PE of 25x. Does this mean we'd expect returns of 18% pa? Perhaps, but only if the premium valuations can be sustained. To be more conservative, let's suppose that over this 20 year time horizon the portfolio's PE of 25x might instead fall to match the market's average of 19x. Under such a scenario, the predicted return of the companies in the portfolio can be calculated as before - reaching 16.4% on an annualised basis<sup>4</sup>. Even with the contracting multiple, the power of this compounding would imply a 1,982% price return over a 20 year period vs. just 706% for our theoretical index. Under the 50% payout conditions this drops to 10.0% pa, or a 572% increase vs. 397% for the index. Our portfolio is made up of higher quality companies than the index and we're being asked to pay a premium price for this (25x vs. 19x PE) - but if the ROEs hold, it appears this premium may be justified.

Of course the question to ask at this point is whether our collection of companies really can sustain these extraordinary rates for the next two decades. We're no longer just asking a collection of average companies to stay average. However, for the stocks we invest in e.g. sustainable, branded consumer goods that have been generating above average returns for decades if not centuries, we don't see this requirement for future longevity as wholly implausible.

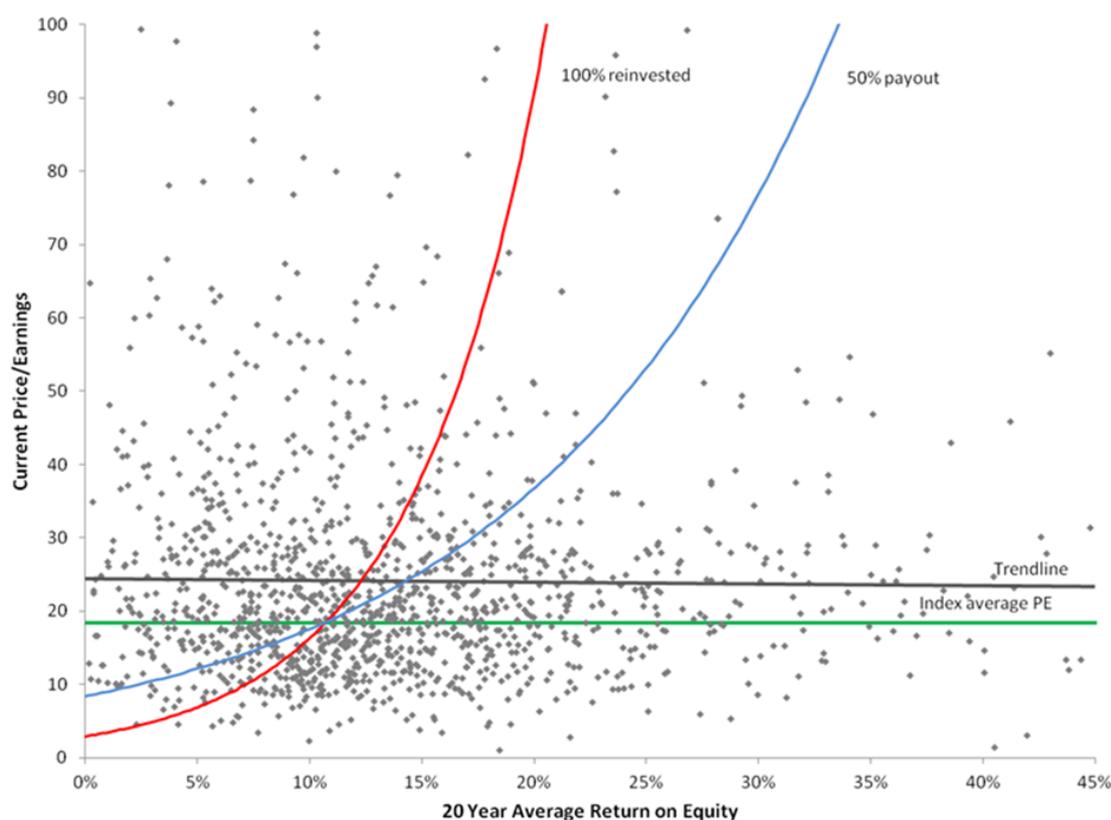
### **How much extra should you pay for a higher ROE company?**

The above reasoning can be taken further to answer the original question posed: what would then be a fair price to pay for a collection of companies with a given long-term ROE? Put another way, under the (arguably) conservative assumption that above average PEs fall back to the market average, what starting multiple would allow our representative portfolio to still perform in line with the market's annualised return? This can be iteratively calculated for each valuation point and for a portfolio with a defensible ROE of 18% gives a warranted starting PE of 65x. i.e., assuming ROEs can be sustained over the given time horizon - and even allowing for a drop in valuations down to the market norm, our portfolio as it stands today would be justified in trading at 65x its underlying earnings. If the 50% payout criterion is used this warranted starting PE falls to 32x (a lower percentage of earnings reinvested means less powerful compounding at the higher rates of return). This figure is, not coincidentally, close to the c.30x earnings multiple that we've elsewhere discussed as potentially indicating a company nearing full valuation.

This starting PE ratio can be calculated for each possible long-term ROE value, revealing an exponential relationship between a stock or fund's sustainable ROE and its required starting multiple (i.e. for it to do no more than perform in line with the average over the next 20 years).

These relationships are plotted below for both payout conditions; overlaid on our original plot of PE ratios vs. historic ROEs for every company in the MSCI World Index.

## An Exponential Relationship



Plot showing the PE ratios for the constituents of the MSCI World Index (using 31/03/15 market data), plotted against each company's 20 year average return on common equity. The constant line (green) shows the index average PE, the trend line (grey) is calculated as a linear least-squares regression, demonstrating the lack of any positive relationship between these variables. The red and blue exponential lines plot the warranted starting PE ratios (to perform in line with an 11% ROE index) for any given ROE - assuming the ROEs hold for the next 20 years, that the PE falls to match that of the market's and that 100% (red line) or 50% (blue line) of earnings are reinvested at the same rates of return with the rest paid out as dividends and used to buy more shares. All data Bloomberg/Lindsell Train.

### Other investors undervalue the best companies

It's no exaggeration to say that the underlying market data looks nothing like this trend line! So do these numbers make any sense? 65x is far above the current 25x PE of our Global Equity representative portfolio and well in excess of even the most bullish analyst's definition of an 'expensive' valuation for anything but the most aggressive growth stock. However, these sorts of numbers are not without precedent. We've talked in the past about Jeremy Siegel's classic 1995 study 'The Nifty-Fifty Revisited' (updated in 1997 for the 2<sup>nd</sup> edition of 'Stocks for the Long Run'), where he re-analyses the long-term performance of a group of stocks trading on high ratings in the early 1970s (indeed Siegel's work has inspired much of the above discussion). He showed retrospectively that a high quality, well-branded company such as Coca-Cola, with a steady earnings growth record could in fact support extremely high multiples - even higher than Coke's then PE of 46x. A year or two after the Nifty Fifty stocks had hit their peak valuations this multiple was criticised as having been a severe overvaluation, perhaps with some justification for those with shorter term time horizons. However subsequent price gains demonstrated the opposite as long term holders of Coke's shares, despite some poor performance from 1972-1985<sup>5</sup>, actually compounded returns at 17.2% per annum total return over the 25 years from 1972-1997. Siegel showed that for Coke to have performed no better than in line with the market between 1972 and 1997 it could in fact have started on a PE of 92x. The same was true of other high quality companies such as Philip Morris (78x warranted PE) or Merck (74x warranted PE), demonstrating that with decade long periods of compounding at high ROEs, even outrageously high PE multiples could be justified. Over the past 20 years Coke, Philip Morris (now Altria) and Merck have averaged spectacularly impressive ROEs of 38%, 55% and 30%<sup>6</sup>. On the flipside,

compounding at high ROEs, even outrageously high PE multiples could be justified. Over the past 20 years Coke, Philip Morris (now Altria) and Merck have averaged spectacularly impressive ROEs of 38%, 55% and 30%<sup>6</sup>. On the flipside, lower quality companies with thinner or unsustainable ROEs failed to justify even mediocre PEs. Unisys for example (another Nifty Fifty member from 1972, then named Burroughs) should have traded on a warranted PE of just 7x in 1972 in order to explain its mediocre performance up to 1998. Unisys has averaged an erratic - 17% ROE for the past 20 years.

### The very best companies justify higher valuations

So what do we conclude? Well, at the very least this is a simple demonstration of the power of compounding at high rates of return. Taken further however, the above chart might serve as a valuation tool for a stock or portfolio with a given 20 year ROE history - so long as one has the confidence to predict its continuation for the next two decades. Perhaps this is an unrealistic requirement, but hopefully it still provides a useful reference point, at least when assessing companies with the most predictable earnings streams (i.e. those Lindsell Train seeks to invest in). In the end though, this for us is further confirmation that for the very best companies, the supposedly extreme valuation multiples of 30 times earnings - and perhaps even higher - might not be so extreme after all.

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### Footnotes:

1. Lindsell Train Investment Insight “Evaluating Valuations”, May 2015.
2. This is a relatively simple calculation to perform. An ROE of 11% implies £11 of net profits generated from every £100 of equity. These retained earnings grow the equity to £111, which assuming this ROE can be sustained will next year earn the company £12.21, swelling the equity to £123.21. This will continue as long as the ROE holds, compounding earnings at +11% per annum. Each year the company’s market value is given by multiplying the PE ratio by the net earnings, hence if the PE stays constant, the share price will also compound at the above 11%. In actual fact an index or fund of differing companies with an *average* ROE will compound at a slightly different rate to a single entity with a single ROE (as higher returners start to dominate in importance), but for the sake of simplicity the above calculation assumes constant returns across constituents.
3. Unsurprisingly these adjustments complicate the calculations significantly. If dividends are to be paid then 50% of the earnings will leave the company, meaning the equity in the first year for an 11% ROE stock/index will only grow by £5.50. The other £5.50 can be used to buy more shares, but each year these purchases will come at a higher price as the share price compounds along with earnings. In this specific example, this reduces the annualised returns to 8.4% (which would further be diminished by any dividend tax - excluded here). The return is a lower 6.9% if dividends are simply collected and not used to buy more shares. 50% is used as the payout rate on the basis that from 1930-2010 the dividend payout ratio of a company in the S&P500 averaged around 54%. As a side point it should be noted that share buybacks (as opposed to dividend payments) have the additional effect of distorting the ROE figure by reducing the denominator in its calculation. In principle this would mean that the ROE might be expected to rise as the equity is reduced.
4. Here we overlay a linear decay of the PE multiple (in this case from 25 to 19x) to the above compounding of the equity. This allows us to each year calculate the relevant price and has the effect of moderating the otherwise exponential increase in returns.

## Footnotes continued:

5. Coke's share price peaked in December 1972 and then fell 58% to its low in October 1974. Having recovered a little, it traded sideways until 1982 when it began its ascent to exceed the 1972 high in November 1985.
6. It would be nice to cover Siegel's entire range, but sadly Bloomberg data doesn't go back that far, hence only the more recent 20 year period from 1994-2014 is presented here. Nevertheless, we do have access to data for Coke from 1982 to 1998 showing an average ROE of 41% - i.e. an extremely respectable value covering at least the latter half of Siegel's time horizon. For the sake of completeness, an ROE of 41% and a starting PE of 46x (as Coke's was in 1972) with all the above conditions (constant ROE, 50% reinvested dividend payout and a PE contracting to a market level 19x), would imply a 17.2% pa return - almost exactly in line with those actually delivered. There is of course an element of coincidence to this - Coke's PE in fact remained high in 1998 (c.46x) implying that the company wasn't quite able to sustain the extremely high ROE rates for all invested earnings - though compounding at +17% for 25 years hasn't done a bad job of delivering value creation for shareholders.

Sources: Lindsell Train, Bloomberg and International Source Index

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