Confounding Compounding

February 2017

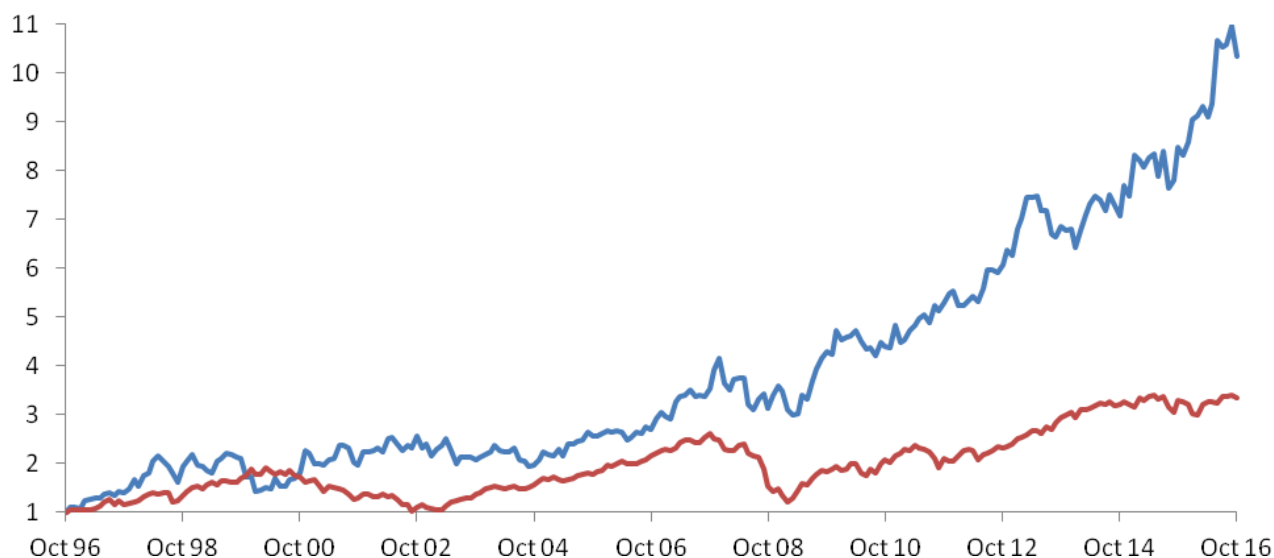
“Optimism is normal, but some fortunate people are more optimistic than the rest of us. If you were allowed one wish for your child, seriously consider wishing him or her optimism” - Daniel Kahneman.

All long-term investors need optimism, even to achieve their most basic aim, to preserve and grow the real value of their assets. This is a high hurdle (and inflation a fearsome foe), but the attempt must be made as the alternative - eschewing long-term investment altogether - is almost certainly the poorer choice. History has by and large been kind to the optimists and for those intrepid enough to embrace a buy-and-hold equity investment approach the rewards have been great. For example, over the course of the 20th century (as detailed in Dimson, Marsh and Staunton’s book Triumph of the Optimists) the US market delivered positive real total returns of 70,950%. Bonds also beat inflation though only by a comparatively modest 400% real total return. Those too fearful to invest at all however met a very different fate, with each dollar held in cash seeing a steady decline in real purchasing power, leaving the owner with an equivalent of just 4.2 cents. With a �96% loss, a riskier strategy is hard to envisage! History may not repeat itself precisely (and maybe 100 years is too short a time horizon to draw any definitive conclusions anyway) but we will always favour the real earnings streams delivered by ownership of a collection of businesses to the inflation-vulnerable alternatives. At Lindsell Train therefore, we remain optimists, and remain optimistic about the prospect for real long-term equity returns.

Better still however, is to invest not just in a basket of all available companies (good, bad and ugly), but to select from the best. As stock pickers we are free to buy stakes in the world’s highest quality businesses. What’s more, we generally find these exceptional companies listed on equity markets at prices we judge to be far below their true intrinsic values. We have observed a persistence to this anomaly - the best businesses, now as in the past simply do not trade at prices representative of their ability to continually generate high returns over long periods of time. Our core investment approach is based on exploiting this inefficiency, which we think is responsible for total return track records for the best companies that are even more impressive than that noted above for US equities as a whole. We believe this inefficiency still exists today and expect it to endure in the future. A good example of such a company is Unilever, one of our biggest and most archetypal global holdings.

Unilever has had a pretty good recent run, with the shares returning 34% (total return) over the last two years. It has also chalked up a very satisfactory long-term performance (Chart 1). Sadly the availability of Bloomberg data won’t allow us to analyse the company’s 100-year returns (Unilever in its original incarnation as Lever Brothers was founded in 1885), but we can look at the last 20 as plotted on the chart below. Evidently Unilever’s recent showing is not out of character - the company has been generating exceptional returns, outperforming the market for many years. This has delivered impressive cumulative results with the shares producing a 10.7-fold nominal total return vs. just 3.3-fold for the market as a whole. Over the same period the company also racked up an inflation-busting 8.8% per annum dividend per share growth. Clearly, for the long-term investor with perfect foresight, Unilever was a considerably undervalued asset 20 years ago relative to the overall market - either that or today it is overvalued. Hence as continuing owners, the relevant question must be whether there is cause for future optimism, i.e. is there still further upside? Given the above claim of persistence for these pricing anomalies; can Unilever’s shares really still be undervalued after this exceptional 20-year streak? Surely investors have noticed the strength of the underlying business by now and priced the stock accordingly? As the 13th biggest company in the FTSE 100, Unilever is after all hardly an obscure stock.

These are topical concerns. Unilever at the time of writing trades on a premium price to earnings (PE) ratio of 22 times - still lower than some of its competitors but significantly higher than the MSCI World index’s current 18x (which itself is somewhat elevated above its very long term average of c.15x). A PE ratio of 22x also markedly exceeds the valuation of 17x earnings asked of Unilever shares 20 years ago when the above chart and performance record begins. This multiple expansion has undoubtedly contributed to the return. So perhaps this is a sign that other investors have noticed? We all know that defensive, so-called ‘bond-proxy’ companies like Unilever have been in demand, with investors looking for safety and yield in a low interest rate world. Unilever, purportedly a boring consumer staple, is trading on a PE 22% higher than the market - can we still claim to be investing in a fundamentally undervalued company?



Total nominal returns generated by Unilever's shares (blue line) over the past 20 years, plotted against those of the MSCI World index (red line), both rebased to 1. Source Bloomberg & Lindsell Train.

I'll Iattempt to address this by asking a number of questions: Firstly, how important has the multiple rerating been in generating Unilever's return (i.e. vs. the shares simply keeping up with the underlying cash generation)? Secondly, is Unilever now overvalued and to what extent should we worry about a contracting multiple turning instead into a headwind? Finally, if Unilever really is still undervalued at current levels, what then is the highest price it might be reasonable to pay for such a company?

To answer these questions, we need to separate out the different components that have contributed to Unilever's 20-year return. The aforementioned 10.7-fold appreciation equates, when annualised to a compounding of 12.6% per annum vs. a considerably more modest 6.2% for the MSCI World index. How much of this is explained by the increased PE multiple? Well, in fact surprisingly little - the 17x to 22x change over this 20 year period, when annualised actually accounts for just 1.3% pa. The bulk of the return is instead attributable to Unilever's underlying business performance; i.e. the cashflows produced, and ultimately the dividends paid out to shareholders. As noted above, Unilever's dividends have compound at 8.8% pa. If you add this to the 2.5% dividend yield that Unilever was trading at 20 years ago you get the missing 11.3% (i.e. 12.6%-1.3%)[1]. It's this that has driven the vast majority (90%) of the annualised returns - and the outperformance. In other words, as one of our key investment principles states: dividends matter more than you might think. The boost from the rerating of Unilever's shares has been modest and even without it they would have outperformed thanks to the growth and cash generation of the underlying business. This implies that Unilever's business was indeed undervalued 20 years ago - the market simply didn't anticipate the power and consistency of Unilever's compounding dividends.

So, to answer our second question; what would have happened if Unilever's PE had, instead of expanding, contracted by the same proportion from 17 down to just 13 times[2]? Removing the 1.3% pa boost that that shares received and applying instead a -1.3% pa headwind, Unilever's return would still have compounded at a very respectable 10% pa over the 20 year period. A meaningful moderation certainly, but this would nevertheless have left investors with a far superior return to the market's 6.2% pa. So, looking ahead to the next 20 years, if we make the big assumption that Unilever's dividend growth can be sustained, then even with its PE falling back to 17x (as many people fear it could) we might still enjoy another two decades of double digit returns[3]. This is why with our long-term investment horizon we don't worry as much as others about today's 'high' valuation multiples. If Unilever's shares were undervalued 20 years ago, then assuming its business continues to prosper, they are still undervalued today. Despite the rerating, other investors (as aggregated by the market) haven't sufficiently changed their view on the quality of Unilever's business.

Critically however this future gazing only has any relevance if Unilever's dividend growth does continue at these very high rates. Sustainably high dividend growth is underpinned by business performance and hence driven by sustainably high returns on equity (ROE). This is why heritage and past evidence of success is so important to us. For most companies, high ROEs and dividend growth rates will quickly be competed away. That is not the case for the very few like Unilever that have true defensive moats. Unilever's moat is its intellectual property - its collection of brands - that rank amongst the best in the world and have delivered returns to match. Unilever's ROE has averaged 37% for the past 20 years, and has done so with remarkable consistency, dropping below 30% in just four years out of the 20. This is the foundation of its dividend growth.

So the key criterion for predicting Unilever's future returns is an assessment of the strength of its brands. For Unilever to remain a good investment, we have to believe that they will stay as relevant for the next 130 years as they have done up until

now. As investors, this is what we worry about, not modest fluctuations to the PE multiple. This of course becomes a qualitative assessment. Perhaps no one really can predict whether Knorr seasonings, Dove soap and Wall's ice cream will retain their relevance to Unilever's two and a half billion global consumers. If so then the market inefficiency detailed above wouldn't really be exploitable as it would only be identifiable in hindsight. The past provides no guarantees but with its ROE performance to-date, global distribution and collection of brands dating back over 200 years (Colman's mustard is Unilever's oldest brand, founded in 1814) we feel that we at least have history on our side. Unilever's dividends (and consequently total returns) have compounded relentlessly for decades. However, despite this evidence other market participants don't seem to have recognised the value created by this consistency. This is why we think we're still able to buy companies like Unilever at persistently undervalued prices.

Can we make a more general point from the above discussion on the relevance of changes to companies' PE multiples? Using the comprehensive data set collected by Robert Shiller for his book Irrational Exuberance we can track the cyclically adjusted PE history of US equities going all the way back to 1871[4]. Looking at the data (Chart 2), it's clear that adjusted PE ratios have varied a lot in 145 years - having gyrated from a record low of just under five times earnings in 1920 (post-WW1) to a giddy dotcom boom high of 44 times in 1999. Unsurprisingly, to many people's minds, it's these sorts of changes that are the crucial predictors of equity returns. In the short term, swings in market sentiment will undoubtedly make an impact, but what has this really meant for the long-term investor? Actually it's not been as important as one might think.

Here is an illustration (again using Schiller's data) intended to show the relative insignificance of PE multiple changes across the US market for long-term equity returns. Imagine a very smart, very patient investor buying the US market at its lowest valuation of just 4.8x adjusted earnings in 1920. Imagine then our investor holding on through thick and thin and selling (with impeccable timing) only at the 145-year peak market valuation of 44.2x earnings in 1999. Forget Unilever's 17x to 22x change - here our investor is benefiting from a multiple expansion of over 39x earnings! Over this 79 year period, our brilliant (and by now, quite elderly) market timer would have received a total annualised return of 14.5% - not a bad result over nearly eight decades (remember this required no stock selection, just timing). So, breaking down these returns as we did for Unilever above, how much was attributable to changes to the valuation multiple which by then was nearly 10 times greater? The answer is just 2.8% per annum. Again, this isn't an insignificant difference when compounded for 79 years, but the bulk (81%) of the annualised return can still be ascribed to the dividend performance (yield and growth) even in these extreme circumstances[5]. Our investor's key skill was to own and hold all listed US businesses for the long run, not his ability to time their pricing by others. To credit Benjamin Graham with his famous phrase: "In the short run, the market is a voting machine but in the long run, it is a weighing machine." It's the underlying business performance; the dividends paid and grown over long periods of time that really counts. This is true even when we generalise across the average businesses that populate the market. If however you have the option to invest in exceptional companies like Unilever, then as we've shown with the first chart, even better things can happen.

The maths is simple - over long enough time periods, the compounding of cashflows and dividends is far more important than a linear rerating of the earnings multiple. Other investors seem reluctant to acknowledge this fact. One could even go as far as to offer this as an explanation for some of the 20th century outperformance of equities vs. bonds - the dividends paid by stocks have grown and compounded, whilst the flat coupons paid by bonds by and large have not. The differential in the starting yield (or PE) required to take this into account seems to be larger than most investors are prepared to accept. It could therefore be argued that for the long-term investor unconcerned by volatility the implicit 'equity risk premium' is (or at least was in 1900) too high. We certainly think this is the case for the individual companies like Unilever that have long histories of sustainable dividend growth and the ability to continue earning high returns on equity for many years to come. If anything we view them as less risky than the 'risk-free' bonds they are often likened to. Bonds after all offer no guaranteed inflation protection and harbour plenty of risk if rates change. It's for this reason that we use unusually low risk premiums when valuing unusually high quality companies. This allows us to quantify our assertion that the best companies are undervalued, even at today's elevated PEs.

Cyclically adjusted PE ratios for US equities dating from 1871 to 2016 (figures from 1871-1881 are plotted using the unadjusted PE ratio). Source Robert Shiller, Irrational Exuberance 3rd edition and Lindsell Train. Dashed lines show the max, min and mean values.

So, to our final question: what PE would have represented a fair price for Unilever 20 years ago (i.e. to discount its subsequent outperformance)? Well, given the observed 11.3% pa return attributable to Unilever's dividend yield and growth, we'd need a -5.1% hit from PE contraction (and consequently lower starting yield) to get us to the MSCI World's 6.2%. Hence for Unilever to have ended up at its current valuation of 22x earnings after the 20 years had elapsed, only a starting PE of 46x would have produced the required headwind. This isn't perhaps unheard of for a low earnings/high growth, speculative tech stock, but is for most investors an almost unthinkable valuation for a 'mature' consumer staples company. It tops even the 44x millennium bubble peak - the highest adjusted PE ratio observed for the US market as a whole in 145 years. So with Unilever's shares trading on a PE of 22x, can they continue to outperform over the long-term? We're optimistic.

James Bullock, Portfolio Manager

Lindsell Train Ltd

Note: Main Conclusions are presented overleaf

Footnotes:

1. This breakdown should make sense intuitively - the initial yield (assuming it is reinvested) is the base for the returns, with the dividend growth contributing to an equivalent capital appreciation on the rough assumption that the share price rises to maintain the yield at its starting level. The final adjustment on top of this is given by any subsequent change to the price to earnings ratio which (assuming a relatively constant payout) allows the market to raise or lower the resultant yield (e.g. in anticipation of lower or higher growth going forward).

2. This would in fact represent a close to record low. Over the 20 years of available Bloomberg data Unilever has only reached this level once - in 2008 at the depths of the global financial crisis when the PE ratio dipped to 9x.

3. Since we are discussing nominal rates of return another technical precondition for these numbers to hold would be the prevalence of similar rates of inflation for the next 20 years. This however wouldn't make much practical difference to an investor interested in real returns, in which case the real dividend growth and yield (which today is actually closer to 3.0%) should be the key determinants of returns. As mentioned, with this data we have only gone back 20 years, but Unilever we note has paid an uncut dividend since at least the 1960s (according to available company statistics).

4. This measure is known as the cyclically adjusted PE (CAPE) and was adopted by Shiller having been originally proposed by Benjamin Graham in his 1934 book Security Analysis. Adjusting this way - calculated by dividing the price by the prior 10 year average earnings - corrects for short term periods of abnormally high or low corporate performance. Interestingly whilst Schiller's data range from 1871 to 2016 is far longer than most comparable studies, it still falls a good 57 years short of the founding of Unilever's Coleman's brand, which as noted was first launched over 200 years ago.

5. In this case the dividend yield was actually a bigger component than dividend growth (in 1920 the market on average paid a generous 7.5% yield) and this is an important caveat to the above discussion. Clearly the yield is in itself is a measure of valuation (in some ways equivalent to the starting PE) and an important determinant of future returns (assuming dividends continue to be paid - i.e. implying a positive growth rate). It is not the intention of this article to argue against the importance of valuation per se, rather to note the rather modest impact that changes to earnings multiples have historically had on long-term returns. Our buy-and-hold investor accessing a low PE/high yield has benefited considerably more from the cashflows captured (and resultant post-hoc capital appreciation) than from the rerating of his holdings' future earnings. Another important qualification must be that even 'small' changes to rates of return can make big differences when compounded over long enough time horizons. This is a fact all long-term investors should well understand. However, these numbers can be used to make relative comparisons, the conclusion being that a boost from favourable valuation shifts are very nice to have, but have historically turned out to be far from the only (or even most) important factor when determining long-term returns.

Main Conclusions

Unilever was undervalued 20 years ago relative to the overall market. The material outperformance of the shares has largely been mirrored by the apparently unanticipated growth in the underlying business - i.e. the starting PE ratio was too low (and starting yield too high) to take the growth in dividends into account. The modest boost from multiple expansion wasn't required for them to outperform the market.

Given that the rerating wasn't a major contributor to returns it's hard to argue that the shares have been subject to subsequent irrational exuberance over this period. Hence if the business and dividend continues to compound in the future at similar historic rates then they are still undervalued today. Even a future derating back to near historic lows would fail to compensate for the return generated by the dividend yield and growth - in the same way that the boost was minimal in the other direction. The key caveat here is the assumed predictability of future business growth. If estimates of future dividend growth can't be informed by historical performance then outperformance will only be evident in hindsight - i.e. there would be no exploitable inefficiency.

After adjusting for the lower starting yield, the reverse engineered 'fair' price for Unilever (i.e. for it to have arrived at today's rating having performed in line with the market) would have been 46x.

In general (i.e. across the market averaged as a whole as well as for exceptional companies) linear changes to earnings multiples fade in relevance vs. the compounding of dividends over long enough periods of time. This has historically proven to be the case even when looking at some of the most extreme shifts in valuation on record (e.g. 5x in 1920 to 44x in 1999). This conclusion however only applies to long term (i.e. multi-decade) changes. Over short time horizons, valuations shifts may well dominate.

Arguably this supports the observation that historic equity risk premia for stocks vs. bonds may have been too high - at least for a long term investor unperturbed by short-term volatility. With reinvestment, bond returns do compound (allowing them to beat inflation), but in most cases the coupon doesn't grow - giving equities a commanding advantage. Again, the starting yield/PE for the market as a whole doesn't seem to have anticipated this.

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Lindsell Train Limited
66 Buckingham Gate
London
SW1E 6AU
UNITED KINGDOM

Tel. 020 7808 1210
Fax. 020 7808 1229
www.LindsellTrain.comInfo@lindselltrain.com

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