LINDSELL TRAIN

June 2020

Quantifying Quality

"The race for quality has no finish line - so technically, it's more like a death march."

Peter Drucker

Quality is seductive. Few would complain if you labelled their business or strategy as 'quality'. But as Mr Drucker (the father of modern management theory) points out it's also elusive and ambiguous. You may know it when you see it, but only subjectively so. It resists objective accord and can always be improved upon, always be bettered.

These frustrations intensify when 'quality' joins 'investing' to deliver a new piece of financial jargon. Yet quality is now both an established investment style and a 'risk factor' - and a fairly popular one at that. This has particular relevance to us, as commentators regularly place Lindsell Train (LT) amongst the swelling ranks of quality investors, with more than a little of our historic outperformance assigned to a perceived rally in quality stocks. Much as we resist categorisation, we also understand that people classify for a reason. It helps to interpret and to impose order upon a complex world. And if we are to be pigeonholed then there are surely worse terms than 'quality' to evoke LT's investment style. We *do* want you to think we're investing in high quality businesses; but I would also caution that rigid adherence to any systemic approach brings the potential for over reduction.

My intention for this note then is to give you some background on how people have so far attempted to wrestle quality into its own neat little compartment, and then to question how well we really fit in alongside it.

Buying high-quality companies isn't a new idea - there have been quality investors as long as there have been investors. But the quest to crystallise quality into a tightly defined style has been a slow one - beginning with the advent of factor investing. If you're unfamiliar with this particular phenomenon, then think of it as an attempt to attribute historic investment performance to quantifiable metrics. It lies at the heart of the current shift towards categorisation and has an obvious appeal. If the movements of stocks can be explained by precisely prescribed style or risk factors, then perhaps they can also be predicted? Circumventing analogue interpretation, bias and human error, risk is (in theory) segmented and isolated - all at an attractively low cost of implementation. The approach has early origins (dating back at least to Fama & French's 1992 Journal of Finance paper *The cross section of expected stock returns*) and in the interval a great many things have been factorised (over 300 at last count!), with market cap, share price momentum and valuation some of the better known examples. But for a time, qualitative quality thwarted such efforts.

The challenge, of course was defining the thing. It wasn't until the early 2010s when academic back-testing (for example Novy-Marx's 2013 Journal of Financial Economics paper *The other side of value: The gross profitability premium*) started to unearth significant past-outperformance for stocks with recognisably 'quality-esque' characteristics. Things that could actually be measured; like high profitability, earnings variability, and solid balance sheets. The surrounding excitement led to a host of quality indices being assembled from these factors, with pretty much every major index provider taking part: The Dow Jones Thematic Quality Index launched in 2011, the MSCI Quality Index in 2012, the S&P 500 Quality Index in 2014 and the Russell 1000 Quality Factor Index in 2015. Quality it seemed had finally been quantified.

Jump forwards to today and factor-based indices now sit behind almost two trillion dollars of assets. Of these, the quality flavours have been notable successes, with real money performance continuing to excel. This hasn't gone unnoticed with even the mainstream media heralding the ongoing triumph of quality; for example last August the UK Telegraph ran a headline that simply stated *Why Quality Stocks are the Best*.

But it has also encouraged analysts within our industry to scrutinise their 'quality' managers and ask some obvious questions. Have they simply benefited from exposure to quality stocks? Can the approach be automated or replicated with quality factors? And if so and (given the now wide availability of cheap factor ETFs) are their fee-paying, quality-seeking clients really getting the best value for money? Given the quality taxon typically includes LT, we too have been asked these questions.

Can we answer them conclusively? Probably not, but they're certainly worthy of serious thought. Entire careers have been devoted to trying to decompose, explain and ultimately replicate risk and returns. I share this curiosity to see how much of what we view as an inherently partial process can be so tamed, so let's see if we *can* explain our own past performance by reference to some set of quantifiable quality factors.

To begin, we'll try sector exposure. We are after all very selective about the sectors and industries to which we'll allocate. If you look at the constituents of our Global Equity Representative Portfolio ("Global portfolio") through the prism of the GICS sector classifications, you'll see that just six industry groups (Food, Beverages & Tobacco, Media & Entertainment, Household & Personal Products, Diversified Financials, Software & Services, and Commercial & Professional Services) account for over 90% of the Global portfolio's weighting. This is no coincidence. We invest here because based on past experience we think these are the most interesting segments of the MSCI World index. They're groups that have in the past proven themselves as good homes for good companies. This is an empirical approach that seems pretty consistent with our back-testing factor-finding mission. If these industry groups turn out to be key quality indicators, then perhaps this could begin to explain our past results.

Well, with a look at the performance for each of the six MSCI World sub-indices from the 2011 inception of our Global portfolio onwards (the white lines on Figure 1) it would seem we're already on to something. All but one - shame on you Diversified Financials - have beaten the parent MSCI World index (the black line on each chart). Perhaps not to a breathtaking degree in every case, but there's an implied reliability to this benchmark besting that's not without appeal. So as a first stab at deconstructing our process, can we argue for industry group allocation as a route to replicating our performance?

Well, actually this is a pretty easy one to counter given the concentrated nature of our approach - and we can do so simply by overlaying the stock specific performance of our biggest holding at launch from each industry group (plotted as the green lines on Figure 1). Glance again at the charts and you'll quickly see that whilst sector performance might have helped a bit, it does a pretty mediocre job (for better or for worse) of explaining the individual moves of the stocks we actually own. Our biggest winner so far, the London Stock Exchange, comes from the one industry group that didn't manage to beat the World index, whilst Pearson, our least successful allocation, hails from the second best performing group. Arguably it's only Unilever that's done a good job of tightly tracking its peers.

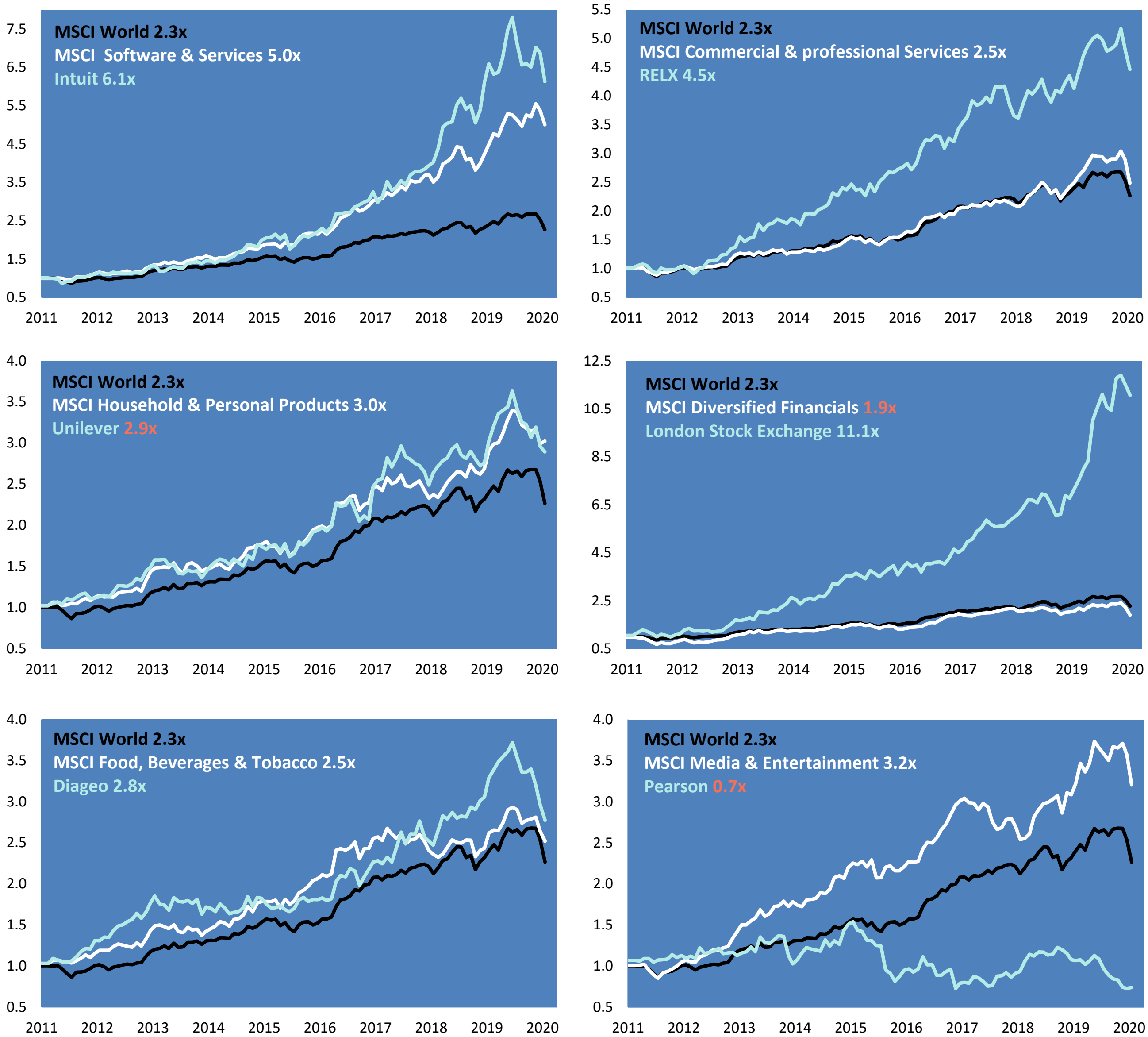

Figure 1: Plots showing total GBP returns for the MSCI World in black, six MSCI industry groups (Software & Services, Commercial & Professional Services, Household & Personal Products, Diversified Financials, Food, Beverages & Tobacco and Media & Entertainment) in white and six Lindsell Train Global portfolio holdings (the largest from each industry group at the outset: Intuit, RELX, Unilever, LSE, Diageo and Pearson) in green from the Global portfolio's inception in March 2011 to end-March 2020. Figures in red denote relative underperformance. Past performance is not a guide or guarantee to future performance. Source Lindsell Train, MSCI and Bloomberg March 2020.

But these industry level classifications are broad. Diversified Financials are, by definition, diversified. As a second step, let's hone our quality metrics. In fact why not go straight to the aforementioned quality indices? We already know they've done well - for example the MSCI's World Quality index has in the nine years to March 2020 delivered a 3.0-fold total return vs. the vanilla MSCI World's 2.3x. That's an additional cumulative return of 70%. So does the industry consensus definition of quality do a better job of matching our investment results?

Well, before we go on we should point out that there isn't really an industry consensus. MSCI have constructed their quality index according to a ranked z-score for candidate companies. This combines ROE, debt/equity and earnings variability into a single number (with academic evidence pinpointing these as the factors worth screening for). Whilst at first glance the other quality indices have followed a similar approach, each has points of differentiation (e.g. S&P uses changes to operating assets in place of MSCI's earnings variation). Interestingly these minor edits have resulted in quite different performance. This is illustrated on Figure 2 which shows long-term annualised returns for three of the US quality indices, with a notable 1.1% pa performance difference between the offerings.

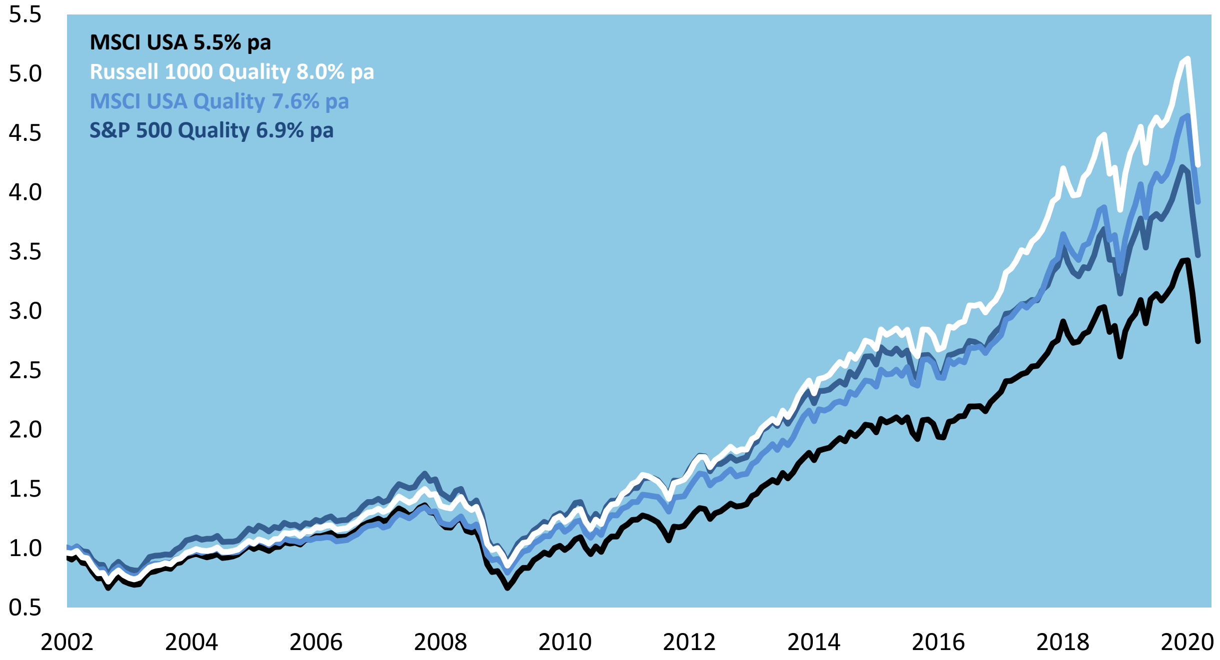

Figure 2: Plots showing annualised total USD returns for the MSCI USA (in black), MSCI USA Quality (in light blue), Russell 1000 Quality (in white) and S&P 500 Quality (in dark blue) US indices from end-June 2001 to end-March 2020. MSCI factorise quality via a blended z-score combining each candidate's trailing 12-month ROE, debt-to-equity ratio and five year standard deviation on earnings. **Note that in order to provide a longer-term perspective; in each case performance data is included for a period prior to the index's actual launch. This is possible thanks to back-tested figures computed by the respective index providers.** Past performance is not a guide or guarantee to future performance. Source Lindsell Train, MSCI, S&P Global, FTSE Russell and Bloomberg March 2020.

So if there is no true consensus as to what constitutes quality, then why stop our race/death march there? Why not see if we can't improve on the criteria chosen by the big index providers (MSCI for example) and data-mine a new LT-inspired quality formula of our own?

Where (from a LT perspective) could we do better? Well first off, we might argue that the screens are a tad broad, given there's 300 holdings in MSCI's Quality list. Are there really that many high-quality companies? Of course this is subjective but for comparison we have roughly half this number in our total global universe and our portfolio is an order of magnitude smaller. Secondly, MSCI's metrics are a bit short-term for us. At most, they look back to just a handful of years of company data whilst we think in decades. After all it's *sustainable* quality that's really valuable. Finally, the MSCI World Quality index has ended up concentrating on just a few, tech-heavy sectors; with more than half its weighting in IT (35%) and Health Care (21%). FANGed companies take half the top 10 spots which comprise; *Microsoft*, *Apple*, J&J, *Facebook*, Visa, Roche, both share classes of *Alphabet*, MasterCard and P&G. This isn't necessarily a bad thing, but they're not the sectors we've focused on. Alleged quality investors that we are, we don't actually own a single one of these top 10 stocks in our Global portfolio.

But these issues are all fixable. So let's do just that and (somewhat light heartedly) construct a set of new rules for an LT-inspired quality index of our own. For simplicity I propose using return on equity as the key ranking statistic, but unlike MSCI we'll insist on a *10-year average* figure to screen for sustainability. I'll then slice just the *top 10* names to ensure really serious concentration. Lastly, if we are going to have a sector slant, why not draw on our existing industry bias? To do so we'll as a final step limit our selectable universe and source our top ten, ten year average ROE companies from just the six industry groups discussed earlier.

The result then, back-tested and presented below as the pink line on Figure 3, is the memorably named 'Lindsell Train Concentrated Long-Term High Quality Industry Tilt Index', or LTCLTHQITI for short. As you can see it's delivered a scorching 3.3-fold total return, nicely above even MSCI World Quality. (If anyone reading this wants to discuss licensing for a corresponding factor-ETF then you know where to reach me.)

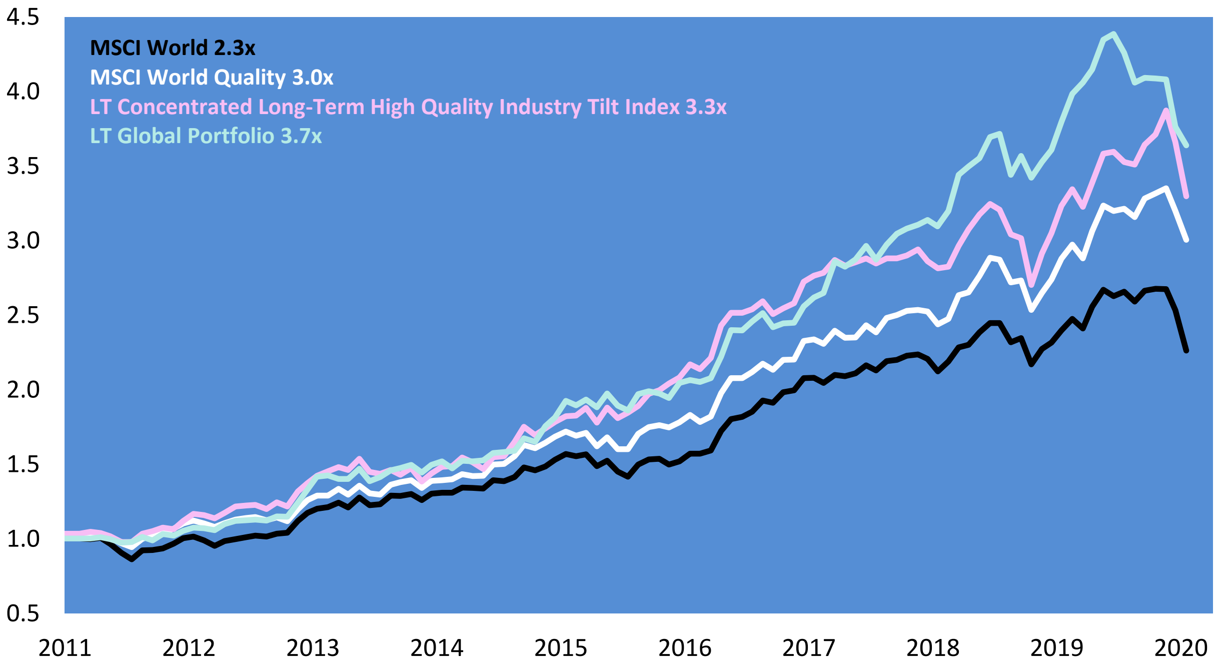

Figure 3: Plots showing total GBP returns for the MSCI World (in black), MSCI World Quality (in white) and LTCLTHQITI (in pink) indices, as well as for the Lindsell Train Global portfolio (in green), from March 2011 to end-March 2020. The home-made LTCLTHQITI confection represents an equally weighted, buy-and-hold ten-stock index combining the top-ten companies from the six MSCI World industry group indices referenced in Figure 1, ranked according to their 10-year average return on equity. Past performance is not a guide or guarantee to future performance. Source Lindsell Train, MSCI and Bloomberg March 2020.

Let me try though to actually address our originally posed questions. Has our performance simply tracked that of quality stocks? Can it be automated? And should you just buy an ETF to get the quality exposure you desire?

Well, if finally we overlay our Global portfolio's track record (the green line on Figure 3) above our various quality indices (actual and otherwise) you'll see that as a Lindsell Train investor you would - so far at least - have achieved something quite different. You really are accessing a different interpretation of quality and as a result the performance delta has to date added another 70% to your cumulative total return. The Global portfolio hasn't just tracked quality; and anyway it really depends on what sort of quality you were after to begin with. There's no recipe of mechanical factors I could think of that would replicate exactly our results. Other 'quality' investors will likewise have performed differently - some better, some worse. Of course there's also no guarantee that our outperformance continues, but the message to impart is that whatever does happen next, don't expect us to necessarily mimic other people's definition of quality. As a recent example; the end of 2019 provided the Global portfolio with some difficult months, during which the MSCI World Quality index actually nudged up.

I want to conclude then by suggesting that our performance is the result of a qualitative process that seemingly can't easily be factorised. To steer you in this direction, I'll provide one final set of examples to show that a strict attachment to even intricately constructed screens could, and in practice would, have caused us to miss out on some of our biggest drivers to date.

Look at the top-five leading contributors to performance since inception - LSE, Shiseido, Nintendo, Intuit and Kao. Three of these (all Japanese as it happens); Shiseido, Nintendo and Kao, were not obviously textbook quality companies when we first bought them. The business vitals were *ok* with mid-single digit returns and margins, but certainly nothing that would jump out at you from a screen. All though have improved dramatically in the eight or nine years that we've held them (see Figure 4 for the full breakdown) and missing out on any would have made a noticeable difference to our performance. Then of course there's our new holding Prada, which starts from a similar point today and we hope will follow the same pattern in the years to come.

Shiseido	2012	2019
OPM	5.7%	10.1%
ROE	4.8%	15.5%
ROIC	4.1%	12.5%

Nintendo	2011	2019
OPM	16.9%	20.1%
ROE	5.9%	14.2%
ROIC	8.1%	13.2%

Kao	2011	2019
OPM	8.8%	14.1%
ROE	8.5%	17.6%
ROIC	7.8%	15.5%

Prada	2019	2027
OPM	9.5%	?
ROE	8.8%	?
ROIC	5.0%	?

Figure 4: Historic (reflecting the year of addition to the Lindsell Train Global portfolio) and current FY financial data (operating margin, return on equity and return on invested capital) for four of our present holdings. Shiseido (first purchased in 2012), Nintendo and Kao are drawn from the top five contributors to performance from inception to end-March 2020, whilst Prada is the most recently added name (first purchased in 2019). Note the performance contribution is influenced not only by the initial price but also ongoing transactions over the holding period. The investment in Nintendo in particular has benefited from later purchases at lower prices. Past performance is not a guide or guarantee to future performance. Source Lindsell Train and Bloomberg March 2020.

Could our approach ever be automated? For sure it can be refined, and perhaps with the right algorithm it can be both replicated and bettered. There are certainly plenty of successful hedge funds making very good money following purely quantitative techniques. Ultimately I don't have a definitive answer. So I'll defer here and instead bookend you with another quote, this time from the analyst/author Michael Mauboussin, to make the case for the qualitative:

"An undue focus on financial metrics, including return on invested capital, has led to underinvestment in growth and innovation. Slavishly beholden to financial metrics that measure value creation, business leaders fail to create value."

Michael Mauboussin

James Bullock, Portfolio Manager
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