

Looking Inside the Trash Can

BY STEPHEN ARNOLD

Investment legend Peter Lynch, who ran Fidelity's Magellan Fund from 1977 to 1990 with extraordinary success, coined the term "ten-bagger" to describe his really big winners. Finding investment ten-baggers, or even ones that merely double or triple in value, is certainly a tantalising prospect and most investors are behaviorally hardwired to look for such outsized gains. Our approach is different. Whilst we have no aversion to highly positive payoffs our focus is rather on avoiding large losses – let's call it the bottom 20% of the market.

Avoiding the bottom 20%

Over the ten years to 2016 had you avoided the worst quintile of the market (MSCI All Country World Index ex-Australia) your investment outcome in AUD would have been 13.6%, a hefty 8.5% uplift compared to the outcome of the total market. In no year was the performance improvement from avoiding the bottom 20% less than 6%. Of course, we only know with hindsight which stocks were in the bottom 20% for a particular year. Can we identify characteristics that are, on average, more prevalent in the "disaster zone" than in the rest of the market, and can we use these characteristics to reduce the likelihood of large investment losses in the future? If so, we have an edge.

Below we examine the makeup of companies in the bottom 20% relative to the top 80% in terms of quality and valuation. Note that in our analysis we exclude banks and insurance companies as their financial characteristics, as measured by profitability ratios and leverage, are quite distinct from the rest of the market.

1. Quality

Let's start with quality. Quality is another way of thinking about risk. Is there a material difference in the quality, or riskiness of businesses in the bottom 20% of the market compared to the rest? We consider this across three dimensions – the quality of the business itself, how it is financed, and how it is managed.

(a) Business quality – profitability

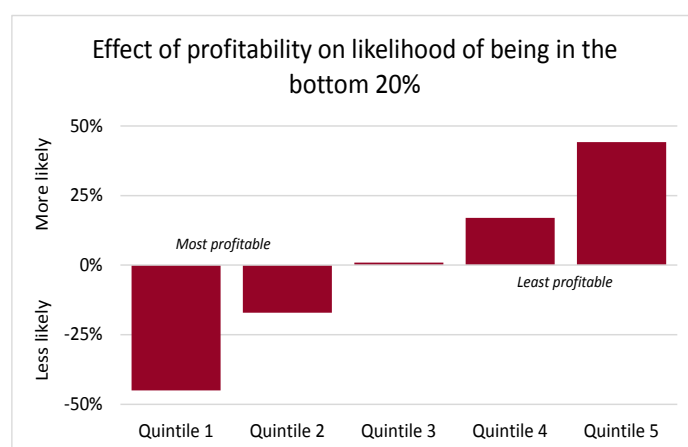
The quality of a business will ultimately be reflected in the economics it generates, and we use return on operating assets (ROOA) as the best single measure to capture this. The ROOA ratio excludes goodwill from the capital base so as not to co-mingle the profitability of an asset with the price paid to acquire it. Is there a significant difference in the profitability of the bottom quintile of the market relative to the rest? If so, does reflecting profitability in stock selection reduce the probability of our investments ending up in the bottom 20% and improve our overall investment outcome?

Profitability of the bottom 20% vs the top 80%

The median ROOA of the worst 20% of the market over the decade to 2016 was 6.8%, significantly below the 9.9% earned by the top 80%. The bottom 20% cohort of the market was less profitable than the other 80% in nine of the last ten years. Clearly, the bottom 20% of the market is made up of companies of below-average quality.

Using profitability to reduce the probability of being in the bottom 20%

Businesses in the lowest quintile by profitability were 44% more likely to be in the bottom 20% in terms of performance, while the 20% most profitable businesses were 45% less likely to be in the "red zone". So, profitability is a powerful determinant of the prospects of a business being in the worst performing quintile of the market.



Source: Bloomberg, EAP Analysis

Impact of selection based on profitability on 10 year investment returns

Avoiding the least profitable businesses will significantly improve our chances of staying out of the bottom 20% of the market. But how does it impact our total investment outcome? If we had simply excluded the least profitable quintile each year our annualized investment returns over the last decade would have been 7.2% pa, a material improvement compared to 5.9% from the total world market excluding financials.

(b) Balance sheet quality – financial leverage

Whatever problem befalls a business will be more troublesome in the presence of significant financial leverage. Let's examine whether there is a material difference in the capital structure of the bottom 20% relative to the top 80%. If so, can we use this measure to reduce the probability of investing in stocks that end up in the worst performing cohort?

Financial leverage of the bottom 20% vs the top 80%

Over the last decade the leverage of the bottom 20% of the market, as measured by the ratio of net debt to EBITDA was 156%, which compares to 133% for the top 80%. The bottom 20% was more leveraged than the rest of the market in eight of the last ten years. So the worst performing quintile of the market is made up of businesses with, on average, greater financial leverage.

Using financial leverage differences to reduce the probability of being in the bottom 20%

Over the ten years to 2016 businesses in the 20% most geared group were 39% more likely to be in the bottom 20% of the market than the average non-financial company.

Impact of selection based on leverage on 10 year returns

If we had avoided the most geared 20% of the market over the last ten years our investment returns would have been 6.5% pa, a modest improvement compared to the 5.9% for the world market excluding financials.

(c) Management quality - balance sheet growth

We think of a company's management as having two primary roles – stewards of the business and its competitive advantages and stewards of the capital the business generates. These two roles overlap – management can deploy capital in ways that protect and reinforce the company's competitive "moat", or it can make acquisitions to expand into new areas where the company is competitively weak, diluting what is special about the business and distracting the company from protecting its core franchise. One measure that captures these two roles is balance sheet growth. Aggressive balance sheet expansion is often a function of large acquisitions that stretch a company's internal resources and take a company into new territory (*"diworsification"* in the words of Peter Lynch). Typically, the larger the acquisition the higher the price paid relative to the target's earnings and the poorer the long term economics for the acquirer. We can measure both balance sheet expansion and the willingness of management to dilute the ownership of existing shareholders by equity-funded growth through the change in the number of issued shares over the preceding five years.

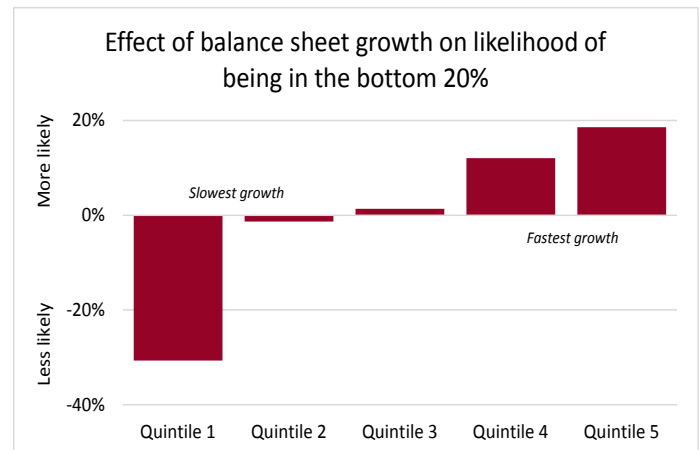
Balance sheet growth - difference of the bottom 20% vs the top 80%

Over the last decade the growth in issued shares for the bottom 20% was 1.6% pa, more than double the 0.7% pa growth rate for the top 80%. In eight of the last ten years the bottom 20% of the market was made up of companies that had grown the number of issued shares over the prior five years at a greater rate than the rest of the market.

Using balance sheet growth to reduce the probability of being in the bottom 20%

Companies whose balance sheet growth was in the fastest

quintile of the overall market were 19% more likely to be in the bottom 20%. Those whose balance sheet growth was slowest were 31% less likely to be in that "disaster zone". So, the rate of balance sheet growth, as a proxy for management quality, is a powerful predictor of a company's likelihood of being in the worst performing part of the market.



Source: Bloomberg, EAP Analysis

Impact of selection based on balance sheet growth on 10 year returns

If we had avoided companies in the fastest quintile of balance sheet growth over the preceding five years, our ten year annualized investment return would have improved from 5.9% to 6.5%. In a 2007 paper titled *Asset Growth and the Cross-Section of Stock Returns*, Michael Cooper of the University of Utah examined US data over the 35 years to 2003. He found that asset growth had a stronger correlation with stock price returns than any other single variable.

2. Valuation

It is commonsensical that the price we pay for an asset will have a bearing on our chances of a very poor investment outcome, but how much does it matter?

Valuation difference of the bottom 20% vs the top 80%

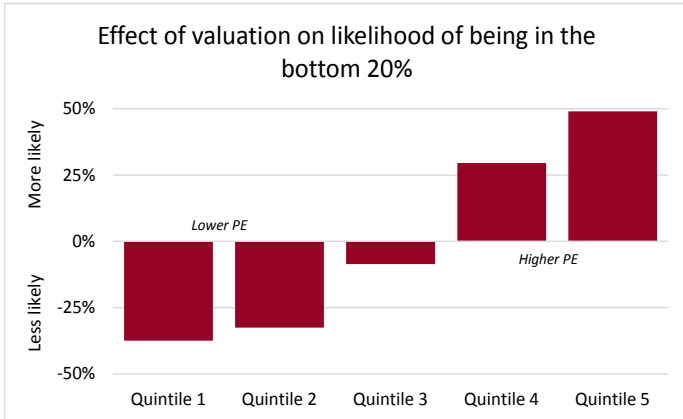
Over the ten years to 2016 stocks in the bottom 20% of the market traded on an average multiple of trailing earnings of 31.7x, significantly more expensive than the top 80%, which traded on an average PE of 17.8x. In every one of the last ten years the bottom 20% of the market traded on a higher than average PE multiple at the start of the year. Clearly, the bottom 20% of the market is made up of significantly more expensively valued businesses than the rest of the market.

Using valuation to reduce the probability of being in the bottom 20%

Over the last decade stocks in the most expensive quintile of the market were 49% more likely than an average stock to be in the bottom 20% of the market, whereas the cheapest quintile was 37% less likely. So, there is a strong and intuitive

Looking Inside the Trash Can

correlation between the valuation of a company and the probability that its returns are in the bottom 20% of the market.



Source: Bloomberg, EAP Analysis

Impact of selection based on valuation on 10 year returns

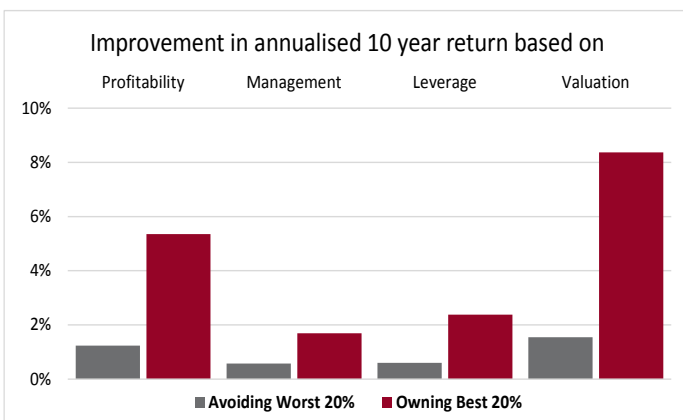
Purchasing stocks from outside of the most expensive quintile of the market over the last ten years would have improved your annualized return from 5.9% to 7.5% pa.

Performance uplift from aiming higher

We have seen that avoiding the worst quintile across each of profitability, financial leverage, management expansiveness and valuation materially reduces the chances of investing in businesses whose performance end up in the bottom 20% of the market. Our approach goes further than simply avoiding the worst businesses. As *quality-first value investors* we look to identify those businesses in the top cohort by quality, and from this group of outstanding companies we look to own the most attractively priced.

The chart below shows that while avoiding the worst 20% of each category provides a valuable reduction in the chances of investing in the “red zone”, owning the best 20% provides a dramatic reduction in these probabilities.

Similarly, the performance uplift from choosing the best 20% of stocks based on each variable is multiples of the uplift we get from simply avoiding the worst 20%.



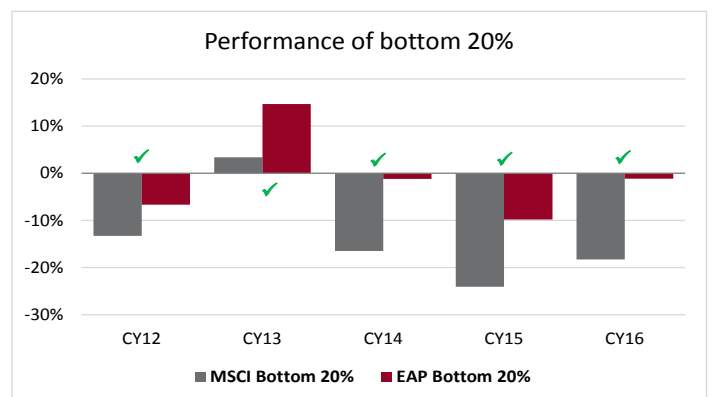
Source: Bloomberg, EAP Analysis

Conclusion

There is a powerful payoff that comes from avoiding large single stock losses, the sort that define the bottom 20% of the market. This payoff is not only financial but psychological as well – stocks that suffer dramatic falls in value consume an inordinate amount of time and mental energy for an investor. These situations often involve “unknowables”, such as the size of potential regulatory or legal penalties (Volkswagen; banks) or the merits of a “transformational” acquisition, but the analyst nevertheless feels compelled to research the situation with hypervigilance for fear of looking foolish by saying “I don’t know”. They put the investor on the defensive, depriving him or her of the equanimity and measured self-belief required to make the next successful investment.

Our approach is not to blithely assume that one in every five investments will be in the bottom 20%, and that by owning lots of stocks the pain and cost of each individual disaster will be mild (under such an approach there will of course be many such disasters). We strive to avoid large individual losses altogether. We have shown in this discussion that selecting highly profitable businesses, with sound balance sheets, run by conservative management at discounts to market valuations can not only dramatically lower the probability of being in the bottom 20% but provide a significant improvement to investment outcomes.

This has indeed been our experience. The chart below shows that the performance of the bottom 20% of our portfolio over the last five years compares very favourably to the worst quintile of the world market.



Source: Bloomberg, EAP Analysis