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ACTIVE EDGE

Winning the zero-sum game

Matthew J. Piro, CFA Global Head of Oversight and Manager Search
Vanguard Portfolio Review Department

Andrew M. Shuman, CFA Investment Director
Vanguard Portfolio Review Department

Vanguard

Abstract

- Vanguard has a long and successful history of offering actively managed equity funds. On an asset-weighted basis, globally our active equity funds have outperformed their stated benchmarks over the 20 years through to December 2022.*
- Our approach to manager selection centres on what we believe to be the key drivers of success —firm, people, philosophy and process—and the resulting outcomes of portfolio and performance. In this paper, we delve into greater detail on what we look for and why within each of these drivers.
- In our view, active managers best positioned for success are those with client-aligned ownership structures, talented teams with diverse perspectives and long-term approaches focused on deep, differentiated research and true stock picking, not static factor bets.

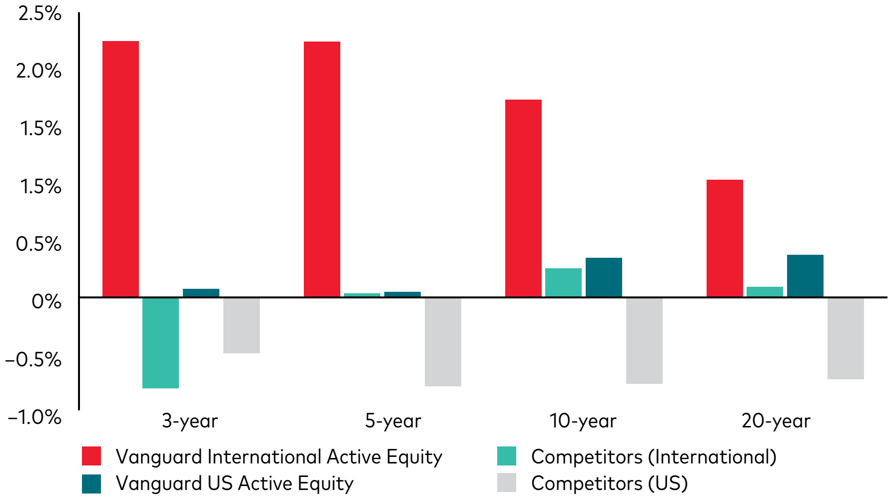
* Please refer to Figure 1 for more detailed information.

Vanguard active has delivered a track record of consistent outperformance for clients

Globally, Vanguard's actively managed equity funds have delivered substantial net outperformance on an asset-weighted basis over long time periods. In contrast, the broader industry has exhibited flat or negative net excess returns—consistent with the "zero-sum game" nature of the financial markets, where the average active manager may match their benchmark before fees but lag on a net basis because of operating and trading costs.

In the UK, Vanguard's active edge (Figure 1) stems from both our funds' cost advantage—roughly 40 basis points (bps) cheaper than the industry average in the UK[†]—and our manager selection process.

Figure 1. Vanguard US-domiciled actively managed equity strategies' asset-weighted excess returns: Vanguard versus competitors



Excess return is the difference between a fund's NAV total return and the total return of its benchmark index. Results for other time periods will vary. Note that the competitive performance data shown represent past performance, which is not a guarantee of future results, and that all investments are subject to risks. For the most recent performance, visit our website at *https://www.vanguard.co.uk/professional*. The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index.

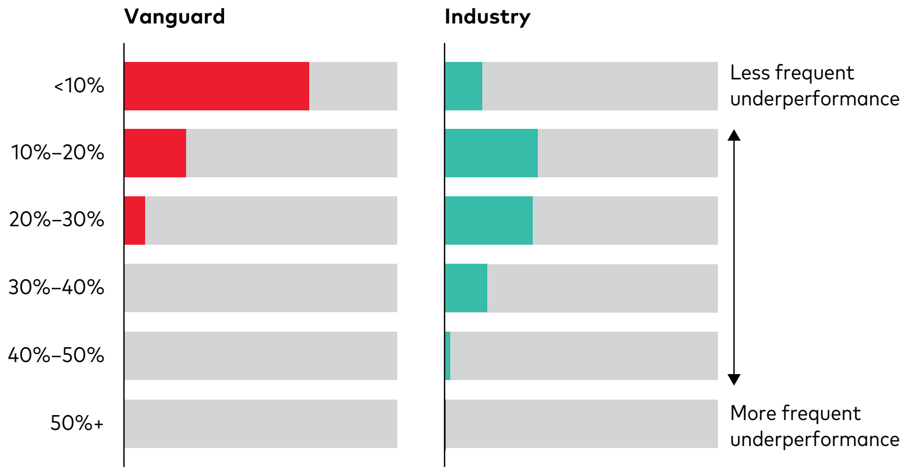
Past performance is not a reliable indicator of future results.

Source: Vanguard and Morningstar, Inc. as at 31 December 2022.

1) The performance of each Vanguard and non-Vanguard strategy in the Morningstar database was compared with that of its stated benchmark using monthly return data ended 31 December 2022. The monthly returns for all US-domiciled Vanguard active equity strategies, including those that were merged or liquidated during the period, were included in the performance calculations. The active equity portions of Vanguard balanced strategies were excluded. Annualised asset-weighted excess returns were generated by calculating the asset weighted cross-section monthly returns and then generating a time series set of returns. All strategy performance data are net of fees, in USD. All performance is total return and calculated NAV to NAV. Excess return is the difference between a strategy's NAV total return and the total return of its benchmark index. Results for other time periods will vary.

[†] Source: Morningstar, as at 11 November 2022.

Figure 2. Percentage of years outperforming US-domiciled actively managed equity strategies falling into bottom quartile vs. peers



We screened all actively managed US and international strategies with a minimum of 10 years of performance data during 1995 through to 2019 and identified all net outperforming strategies relative to their style benchmark. We calculated strategies' rolling one-year performance and measured it relative to their 25th percentile peer returns over the same time period. The data presented is the percentage of years over a 10-year period that strategies underperformed.

Note: US strategies are not available to UK investors.

Source: Vanguard and Morningstar, Inc. as at 31 December 2019.

Consistency has been a hallmark of our approach. Our outperforming US strategies have rarely fallen into the bottom quartile in any given year relative to peers, while competing funds have tended to be more volatile, making clients more likely to exit the fund at the wrong time (Figure 2).

Learn more about our active offering

Key takeaways

Firm

We seek fund management firms whose incentives are clearly aligned with the long-term interests of their clients in generating excellent performance, not gathering assets. They should have the resources, brand and culture needed to attract and retain a deep pool of top talent.

People

The rise of indexing has coincided with the increased professionalisation of the active management industry, leaving behind only the best and brightest. In today's hypercompetitive markets, we strive to partner with the most impressive teams we can find in terms of not only academic credentials but also diversity of background and thought.

Philosophy

Research supports the efficacy of our lower-turnover, longer-term approaches, as well as the merits of strategies with a distinctly contrarian footprint or that are difficult to "factorise". This will only become more important with the proliferation of smart beta ETFs that offer low-cost, transparent exposure to systematic sources of excess return, such as value and quality.

Process

Increased competition and shifts in the nature of the economy have made it difficult to outperform using simple headline financial metrics such as book value or reported earnings per share (EPS). We believe that proprietary, in-depth research, whether focused on individual stock selection or unique factors for quantitative managers, can continue to add alpha.

Performance

While we have yet to find a single metric that will perfectly predict success, we aim to tip the odds in our favour by focusing on the long term, using the right benchmark, adjusting for risk and leveraging customised performance attribution approaches that better distinguish between luck and skill.

Firm

While investing is a people business, firms are the economic units that attract, motivate and retain talented investors.

Skin in the game

A range of ownership structures can be effective in this regard, though employee ownership tends to correlate with better firm profitability and growth[1]. What's most important to us is that our interests are aligned and that they have no loyalties that would conflict with clients. Just as we seek to evaluate our managers' results over longer time periods—and often structure their incentive fees on a three- or five-year basis—we prefer that firms do so internally as well.

Behemoth or boutique?

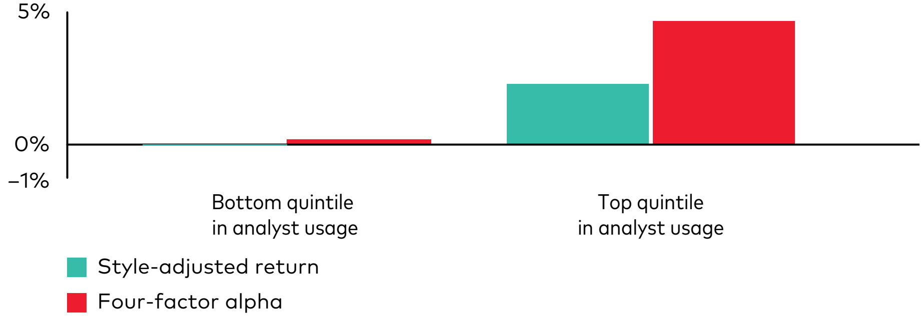
We're often asked, which are superior—larger firms, with a broader range of capabilities across asset classes and geographies, or smaller boutique firms, with a specialised focus on a narrower range of strategies?

Our answer is both. We have mandates with large institutional firms, such as Wellington, Baillie Gifford and Schroders, as well as smaller boutiques, such as Pzena.

For large firms, the quality of their central research resources is a key distinguishing factor. It's also important that portfolio managers actually utilise these resources effectively; those who do tend to fare better (Figure 3)[2]. The breadth and depth of firm analyst coverage can also be an advantage. A range of studies have found that local analysts have an information edge, particularly in more opaque markets or smaller-cap companies[3,4]. Similarly, large firms might have substantial trading infrastructure that both reduces costs and allows portfolio managers to hold less liquid positions (Figure 4)[5].

Smaller boutiques may lack the resources of large institutional peers, but they have advantages as well. The boutique's investment team may have substantial direct equity in the firm, streamlined decision-making with less bureaucracy and distraction and entrepreneurial culture.

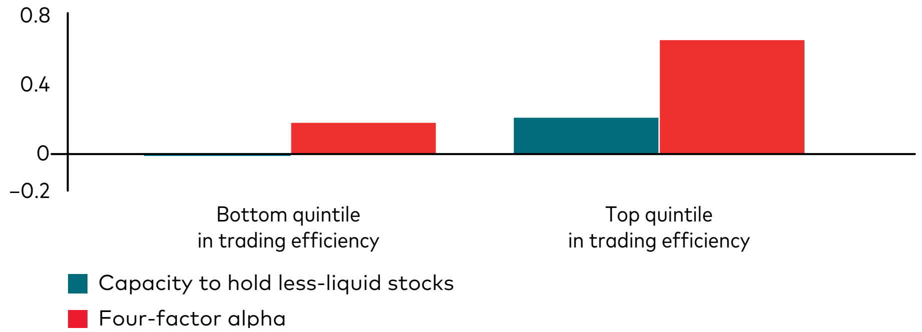
Figure 3. Higher reliance on analysts' ideas correlated with higher style-adjusted excess return and higher four-factor alpha



Figures are expressed as percentage per year.

Source: Vanguard illustration using data from Cici et al, 2016 [2].

Figure 4. Trading efficiency translates to higher alpha and better ability to hold less-liquid stocks



Source: Vanguard illustration using data from Cici et al, 2015 [5].

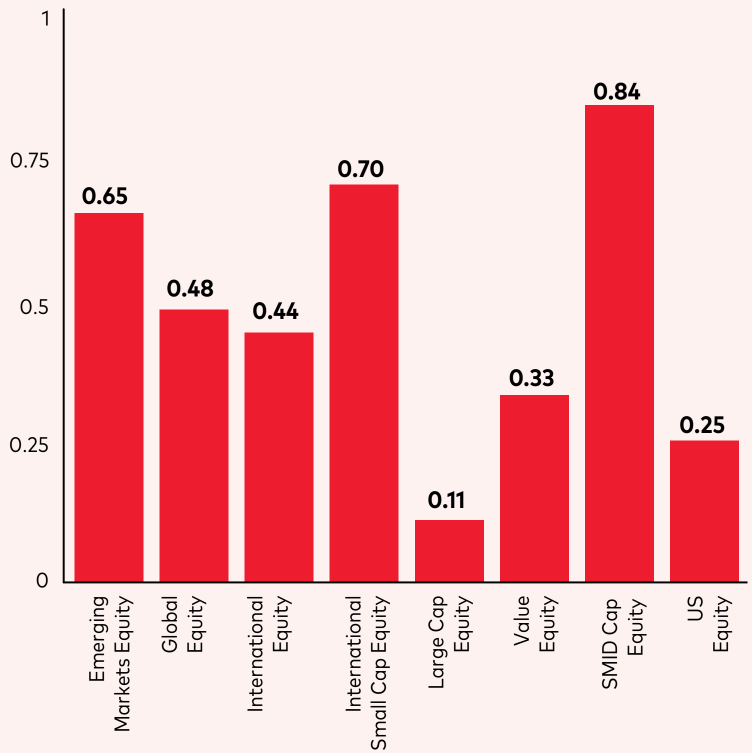
Who's next at bat?

On the other hand, succession planning is a key risk for small boutique firms and is often the main reason we've terminated managers over the years. In our experience, it's something managers have to think about early on—not when a firm founder or lead portfolio manager is nearing retirement. By then, it's too late to properly groom the next generation of talent or to seamlessly transfer ownership stakes.

CASE STUDY Wellington Management Company

Wellington Management Company is one of our largest external advisory partners, both by total assets under advice and number of mandates. A major factor in our partnership is the breadth and depth of the firm's equity research resources, with over 50 global industry analysts (GIAs) who are experts in their respective domains. Unlike at other firms, being a GIA is a career, and many are partners—a distinct aspect of Wellington's ownership structure and strong succession planning. Every morning, hundreds of portfolio managers, the GIAs, and other investment professionals — connecting remotely from Wellington offices around the world — gather together to discuss timely investment ideas, many of which end up in Vanguard active funds. Wellington fosters healthy debate, diversity of thought and the free exchange of ideas — conditions that company management believes are essential for informed investment decision-making.

Figure 5. Wellington Management Company active equity approaches: average information ratio over 10 years or since inception*



Wellington's long-only strategies are compared with the relevant benchmark index (USD).

* International Small Cap Research Equity since inception in July 2013.

Source: Vanguard/Wellington, as at 31 December 2022. Gross of fees.

> “To discover the best investment ideas, it’s important to find people who aren’t the same as you and don’t think like you.”
>
> **Will Sutcliffe,**
> Partner and Head of Emerging Markets Team, Baillie Gifford

People

Investing is a people business. In a zero-sum game, the "smart money" should outperform. It's also, usually, a "team sport". Our process for evaluating the calibre of the teams we encounter follows a simple equation:

Collective ability = individual ability + diversity

Background as preliminary screen

The simplest way to quantify ability, in the absence of running managers through a battery of IQ tests, is by educational background. A few academic studies have shown this to be a reasonable starting point, as fund managers who attended better schools tend to perform better[6,7].

We emphasise that this should be no more than a starting point for evaluating an investment team on paper. First, the world is hardly a meritocracy; nepotism and structural barriers surely result in many unworthy students at top universities and brilliant ones elsewhere. Second, the professionalisation of the industry has rendered everyone’s credentials impressive; it is common for investment professionals to have the CFA® designation or a top-tier MBA.

Diversity of thought

Our process, therefore, aims to go a level deeper, encompassing multiple engagements over time, with not just the named portfolio managers or firm leadership but also key members of the supporting analyst team. This gives us a better sense of team dynamics, the decision-making process and culture.

Team diversity is a critical dimension. Our view, supported by the academic literature[8], is that diversity leads to better decision-making, helps avoid group-think, drives creativity and helps break down language barriers and develop a better understanding of cultural nuances.

We take a holistic view of what constitutes diversity, incorporating both identity (gender, ethnic) and experience (background, education), which together should drive diversity of thought. Both are lacking in the broader industry.

For example, according to Citywire's database of more than 17,500 portfolio managers globally, just 12% are women[9], and finance tends to attract certain personality types.

Measuring both aspects of diversity can be challenging but is nevertheless worth attempting. For diversity of experience, we find that educational background is a useful and easy-to-obtain dimension that research directly correlates with better team performance[10 11]. Prior industry experience also has positive correlation with improved stock picking within that industry[12], particularly in health care (Figure 6)[13].

Higher educational diversity among mutual fund management team associated with higher monthly alpha

+44 bps

with diversity of degree levels

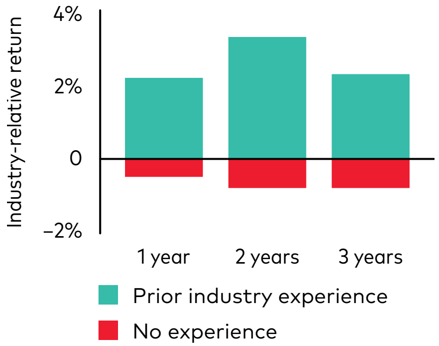
+35 bps

with diversity of undergraduate degree subject

The study quantified educational diversity based on degree level and field of study using the Gibbs entropy method and then ran a regression of Carhart four-factor alpha against team diversity measures and other control variables (fund size, fund family size, turnover rate, expense ratio, etc.). The results suggest the amount of alpha that is associated with each "unit" increase in diversity. See cited source for more details.

Source: Tan et al, 2016[10].

Figure 6. Fund managers showed superior stock picking in industries where they previously worked

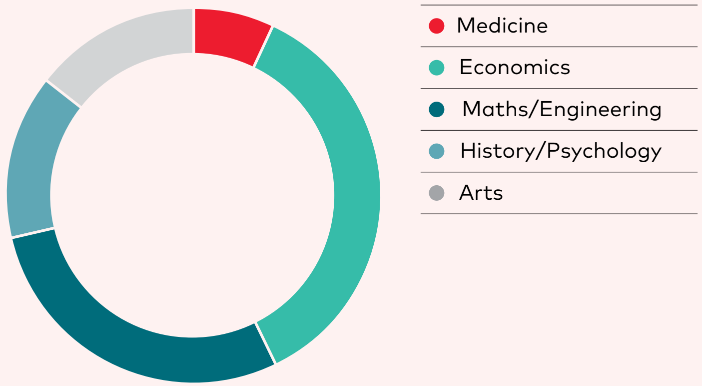


Source: Vanguard illustration using data from Cici et al, 2014[12].

CASE STUDY
Baillie Gifford

Baillie Gifford is our third-largest external advisor partner globally, managing portions of three funds in the UK for Vanguard. We believe that the firm has made a deliberate effort to recruit from a diverse set of backgrounds rather than simply the traditional finance areas. This has led to investment teams that have impressive credentials and are cognitively diverse.

Baillie Gifford team which works on the products available for UK investors.



Source: Baillie Gifford, as at 8 February 2023.

Philosophy

One consequence of the explosion in computing power and democratisation of financial data is the difficulty of outperforming based upon predicting short-term data points such as quarterly earnings and analyst revisions.

Long-term focus

Both our own experience in selecting managers over decades and numerous academic studies suggest that fundamental active managers are better served by taking a long-term, low-turnover approach (Figure 7)[14,15].

There are two reasons for the superior performance of lower-turnover strategies: first and most directly, the lower trading costs, particularly for larger funds, and second, an ability to focus on factors that have very little bearing on near-term results but may be the main drivers of the future success of a company. These factors include industry dynamics, competitive advantages, environmental, social and governance (ESG) considerations, culture and intangible assets. When everyone else is hyperfocused on the near term, extrapolating recent trends or assuming mean reversion, skilled stock pickers can add alpha by getting the long-term trajectory right.

Going against the grain

Doing so requires truly proprietary research, not following the crowd or Wall Street. Research has shown that fund managers who "herd" with their peers or follow sell-side ratings underperform those with a contrarian streak who buy when others are selling (Figure 8)[15,16]. We believe this concept applies equally to both value and growth managers. Those who bet on Amazon a decade ago were very much cutting against the grain.

Figure 7. High active share and low turnover correlated with higher alpha
(average factor-adjusted alpha in percentages)

Small-cap

Turnover	Active share: Low	Active share: High
High	0.10	–1.15
Low	–0.04	1.94

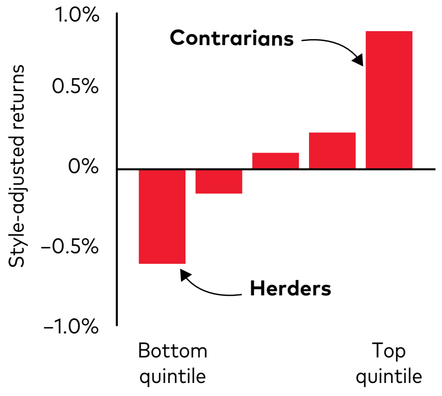
Large-cap

Turnover	Active share: Low	Active share: High
High	–1.28	–0.50
Low	–1.51	1.37

Highest and lowest quartiles for turnover and active share were used. See cited source for more details.

Source: Vanguard illustration using data from Cremers, 2017[14].

Figure 8. Funds with contrarian trading patterns relative to peers did better than those who followed the herd

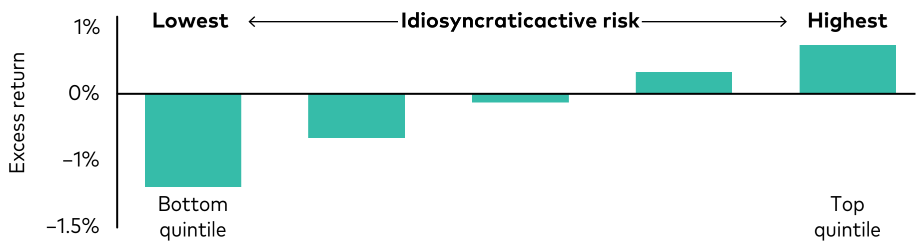


Source: Vanguard illustration using data from Wei et al, 2014[17].

True stock picking over factor bets

Active share and tracking error are commonly used as measures of a fund manager's "activeness"—how much they deviate from their benchmark. In isolation, we find that both metrics can be misleading and heavily influenced by the choice of benchmark[18].For instance, an easy way to create the impression of a highly active approach is to simply have a small-cap bias—not owning the largest constituents in the index will inflate active share and tracking error. This, however, is not true fundamental active management worth paying a premium fee for. Recent research has shown that it is not the level of tracking error that matters but rather the proportion of tracking error coming from stock-specific risk and not factor tilts (Figure 9)[19].

Figure 9. Funds with a higher proportion of tracking error coming from idiosyncratic risk (stock picking) did better than those that relied on timing or static factor tilts



Funds with a higher proportion of tracking error coming from idiosyncratic risk (i.e., stock picking) have generally outperformed those who relied more on timing or factor tilts.

Source: Vanguard illustration using data from Buffa et al, 2020[20].

Figure 10. Talent and low cost together can be quite successful

Annualised excess returns of Vanguard and non-Vanguard US-domiciled active equity strategies over the returns of their stated benchmarks, net of fees

	Over 10 years to 31 December 2022
Annualised excess return Vanguard funds	0.85%
Annualised excess return non-Vanguard funds	-0.43%

Past performance is not a reliable indicator of future results.

Source: Vanguard calculations using data from Morningstar Inc.

Notes: Monthly returns from Morningstar ended 31 December 2022.

Excess return is computed with respect to the fund's stated primary prospectus benchmark return.

All US-domiciled open-end active funds and ETFs that invest in US equity, international equity, energy sector and health sector are included in the calculation. This includes funds that are eventually merged or liquidated. If there are multiple share classes, they are aggregated using respective share class total net assets (TNAs).

A monthly portfolio return (of Vanguard or industry excluding Vanguard) is computed by asset-weighting all funds in existence in the beginning of the month. Fund returns are aggregated up to the style box level using asset weights first, and then aggregated up to the portfolio level using Vanguard portfolio's weights across the style boxes.

CASE STUDY

Low turnover and true stock picking across Vanguard funds

Many of our most successful active funds and managers employ long-term, low-turnover approaches. We constantly stress-test the long-term thesis our managers have for their holdings, ensuring that their research process was thorough and led to a differentiated view from other active managers or the consensus of sell-side analysts.

Additionally, we utilise sophisticated risk models to ensure that the tracking error our funds and managers take relative to their benchmarks stems from true bottom-up, idiosyncratic stock picking, not factor bets. Investors seeking static factor exposures—value, size and so on—are likely better off in a cheaper, more transparent passive factor or smart beta product.

Process

A compelling body of academic research suggests that the market tends to underappreciate information that is nuanced or complex and requires "looking under the hood" to properly calibrate. Active managers with the discipline and willingness to delve into the fine print and the details buried in company disclosures have a real opportunity to add alpha.

Rigorous research over simple metrics

Much of this opportunity stems from the growing disconnect between the accounting rules that govern reported financial metrics and true value-creating activities in today's modern economy. Under some accounting rules, intangible assets—such as research and development (R&D) or selling, general, and administrative (SG&A) expenses—are treated as a one-time expense, distorting book value, reported earnings and profitability.

A large R&D expenditure to develop new drugs, while crucial to the long-term cash flow of a pharmaceutical company, is expensed immediately, reducing earnings per share (EPS), and is not carried on the balance sheet at all, leading current earnings to be artificially depressed and the company to appear overvalued on a price-to-book basis[21,22].

This dynamic has led reported earnings and book values to have less and less relevance for firm market values over time as the balance of the economy has shifted away from physical asset-intensive businesses (e.g., railroads, energy). As Baillie Gifford writes,

> **"We invest in a world where companies can grow at unprecedented rates and at little marginal cost, where intangible assets such as intellectual property, networks and data are the main determinants of future cash flows."**

Firms with understated EPS outperformed those with overstated EPS

TOP DECILE IN CORE EPS MINUS STATED EPS	**16 bps** in monthly alpha
BOTTOM DECILE IN CORE EPS MINUS STATED EPS	**–50 bps** in monthly alpha

The study divided firms into deciles based on their core EPS versus stated or reported EPS. The core EPS metric removes transitory impacts in reported EPS. Decile 1 companies' reported EPS understates the sustainable EPS of the company, whereas Decile 10 overstated earnings. Forward returns of each decile were tracked and adjusted for factor loadings. See cited source for more details.

Source: Derived from Rouen et al, 2019[23].

In addition, market participants appear to anchor too much to reported earnings as a guide to the sustainable profitability of a company, ignoring the myriad of one-time adjustments, often buried in the footnotes, that distort the figure. Researchers found that companies with the highest level of EPS-increasing adjustments— those with artificially high reported EPS—significantly underperformed.

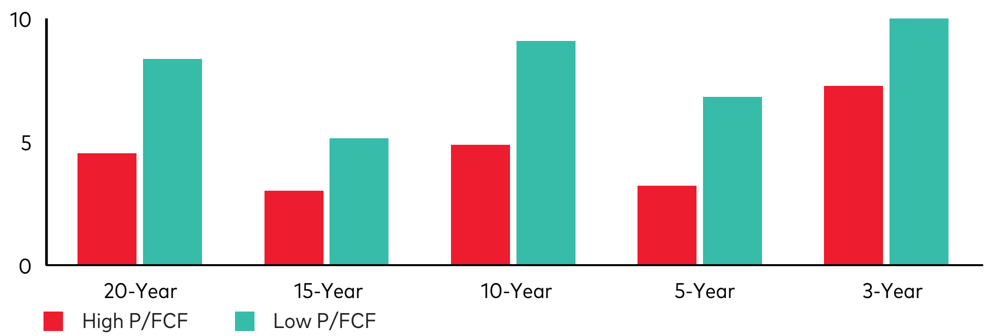
Depreciation assumptions can also distort a company's earnings. When companies make investments, such as building a factory, the costs are deducted from earnings each year over the useful life of the asset. If depreciation is understated relative to the true replacement cost—failing to take into account inflation or technological advances over time—earnings will be overstated. Free cash flow (FCF), which simply uses operating cash flows less capital expenditures, can help avoid these distortions, although it has pitfalls of its own. Companies can appear to maintain current FCF by deferring capital expenditures that are necessary to sustain their production or grow the business, or by relying upon stock-based rather than cash compensation to remunerate employees.

For example, companies with low price/earnings (P/E) ratios but high price/free cash flow (P/FCF) ratios have underperformed over time, as have companies that appear cheap on a book value basis (low P/B) but expensive in terms of earnings (high P/E) (Figure 11).

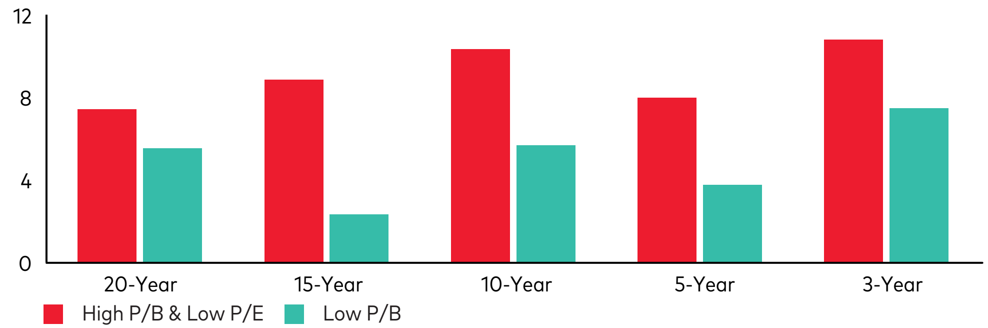
We look for active managers that understand the pitfalls of relying on off-the-shelf financial metrics and the distortions they might create in stock prices, which they can exploit by their deeper and more nuanced understanding of a company's business model and financials.

Figure 11. Valuation: The devil is in the detail

Annualised returns within bottom half of P/E



Stocks looking expensive on a P/B basis but cheap on a P/E basis did better



Notes: MSCI All Country World in USD, groupings are rebalanced annually.

Source: Vanguard and FactSet, as of 31 December 2022.

Performance

Performance is arguably the most difficult factor to assess for active managers. While most investors recognise that there is a substantial degree of luck involved, avoiding chasing short-term results is easier said than done.

Separating the signal from the noise

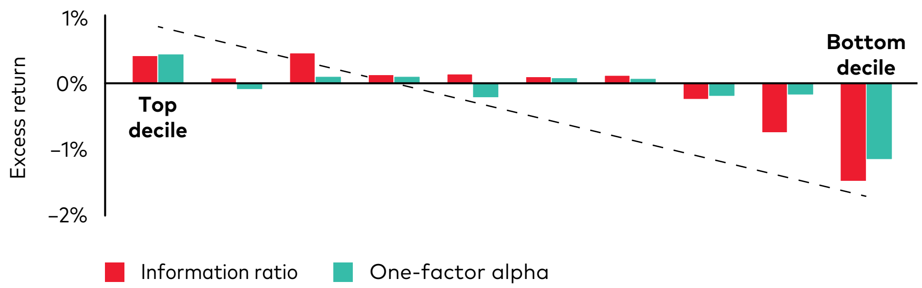
We approach this challenge culturally by constantly emphasising the long term. Even the best active managers will undergo stretches of poor relative results that could be 5 or even 10 years long. We do this structurally through our iterative search and oversight process and quantitatively by filtering out as much noise from the data as we can. We try to start with the right benchmark—a simple task in theory but one that many investors (and even managers) often get wrong. This allows us to adjust excess returns for the amount of relative risk a manager takes—the information ratio—which tends to be a bit less noisy as a predictor of future results (Figure 12)[24].

Thoughtfully constructed peer groups are also important. The key question we're seeking to answer is whether a manager delivered superior results to what an investor could have achieved in a comparable, lower-cost index fund or through a major competitor's offering.

Stock selection versus style biases

Managers can beat or lag their benchmarks considerably because of style or market-cap tilts that should not count as skill per se. Performance attribution aims to account for these biases. One approach is to use factor models, which some evidence suggests help predict future results, but these tend to be unintuitive "black boxes". We prefer to start with how a manager invests—what factors or characteristics they screen for or consistently focus on—and determine whether the manager has picked the winners from this pool of stocks or has simply been in the right place at the right time.

Figure 12. Information ratio was a better performance predictor than past excess return



Source: Vanguard illustration using data from Clare et al, 2019[24].

Factor-adjusted alpha was a better predictor of performance than relative returns alone.

SEVEN FACTOR ALPHA	RETURN VS. PEERS	RETURN VS. MARKET
1.08%	**–0.24%**	**–0.48%**

Regression analysis determined how predictive various trailing return metrics are at predicting peer relative return over the next three years. Figures above are the regression coefficient of the funds' forward three-year annualised performance relative to Morningstar peer group averages when parsed by the cited trailing three-year metric. The study used historical monthly total returns for all US open-ended, long-only active equity funds, including those that have liquidated or merged and have at least two years of return history during 1990 through to 2016. At least one of the A-share, no-load and institutional share classes were included; the oldest share class was selected for funds with multiple share classes.

Source: Derived from Arnot et al, 2017[25].

Conclusion

Vanguard has a long track record in selecting active managers. In this paper, we have outlined what we look for in evaluating a manager's "active edge". We hope that our process can provide a framework for future successes for you and your clients. If you need further support with any aspect of active investing, please contact your local business development manager.

Firm

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