Investing for a world of change

There's more to active risk than concentration

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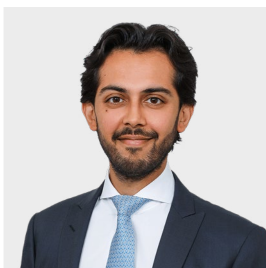

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The fast view

- Concentrated equity portfolios have gained popularity in recent years as investors have associated these with higher levels of active management, and/or in order to target specific style exposures or themes.
- Our research concludes that concentrated portfolios are not the only game in town when it comes to taking sufficient levels of active risk, in an appropriately diversified manner, to generate attractive returns.
- Furthermore, we have observed that concentrated portfolios, while aiming to provide exposure to a balance of style characteristics, can be at risk of exhibiting style biases without appropriate portfolio construction considerations. This leaves them susceptible to market rotations and reduces the degree to which security selection drives active risk, introducing unintended risks for clients that associate these portfolios with 'core' exposures.
- We believe there is a clear role in portfolios for approaches that invest in a diversified number of holdings which express a balance of investment styles over the course of a market cycle, while maintaining material active exposures primarily driven by idiosyncratic, stock-specific risk.

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"How many stocks do you hold"?

A question asked in every meeting, with no right or wrong answer. It's clear, however, that in recent years investor attention has increasingly turned towards concentrated portfolios. A subset of investors, in a world of fee pressures and inconsistent alpha generation from active approaches, has shifted to a 'barbell' approach, combining passive investments with concentrated portfolios to seek more 'bang-for-buck' in their active allocation. Other investors have looked to balance their aggregate equity exposures by segmenting allocations to different styles, which are typically accessed through the concentrated route. Finally, while thematic investing is not a new phenomenon, money has recently followed areas such as artificial intelligence, again often through concentrated allocations.

This paper firstly challenges the notion that concentrated portfolios alone are the only way to take sufficient levels of active risk, in an appropriately diversified manner. We then uncover some surprising results when delving deeper into the concept of concentrated core portfolios. Finally, we expand on why we believe our unbiased approach merits a place in any investor's portfolio.

What's the magic number?

No paper on equity investing is complete without at least one reference to Warren Buffett, probably the world's most famous investor. He told audiences at Berkshire Hathaway's 1996 annual meeting "...we think diversification, as practiced generally, makes very little sense for anyone that knows what they're doing"[1]. There have been a number of other academic papers and opinions over the past 50+ years supporting the notion that either, like Buffett suggests, diversification shouldn't matter, or that adding too many investments into a portfolio actually weakens the outcome for investors[2], or that a large part of a diversification benefit can be achieved through a 30-odd stock portfolio[3]. These examples and arguments, as well as the perceived attraction of an approach focused on stock picking and high active risk, lend support to the case for concentrated portfolios.

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1. Warren Buffett, Berkshire Hathaway 1996 Annual Meeting.
2. Quest Investment Management, 'In depth..', November 2015.
3. Fisher and Lorie, "Some Studies of Variability of Returns on Investments in Common Stock", 1970.

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Our analysis shares the findings of other academic research[4] that achieving ample levels of active risk, and therefore providing the opportunity for alpha, is not only within the gift of concentrated portfolios. To do this, we have utilised a portfolio optimisation tool that allows us to create hypothetical portfolios where we have maximised the expected return for a given set of 'real world' risk and rule parameters. It incorporates better scoring companies as identified by our proprietary quantitative alpha model[5] as well as traditional constraints such as liquidity and maximum position sizes. Using this tool, we have tested the optimal number of stocks, rebalanced quarterly over the last five years, for a specified level of targeted tracking error, a measure of active risk in equity portfolios.

Figure 1: Targeting a specified tracking error

Specified tracking error	Average stocks	Maximum stocks	Minimum stocks
3%	95	108	76
4%	76	91	59
5%	60	72	46

Source: Ninety One. As at 31 December 2023.

The simulations found that, on average over a five-year period to 31 December 2023, around 60 stocks would be considered optimal to achieve a tracking error of 5%. For a tracking error of 4% and 3% we found that the optimal numbers of stocks in these simulations averaged 76 and 95 respectively. While these averages are insightful, they also only tell part of the story and can offer up quite a wide range of holdings. For example, targeting a 5% tracking error, the number of stocks ranged from the mid-40s through to the low-70s.

The key takeaways here are that holding fewer stocks tends to lead to a higher tracking error – all else equal – but also that there is simply no magic number. We simply cannot consider active risk by stock count alone. The focus should instead be on understanding what stocks are actually owned, how they interact with one another and, in particular, the extent to which they provide stock specific diversification, which brings us to the next section.

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4. Surz and Price, "The Truth About Diversification by the Numbers", 2000.
5. Our proprietary machine learning alpha model systematically and objectively evaluates companies in our investable universe to signal to the investment team the potentially attractive investment opportunities that may be worthy of further research.

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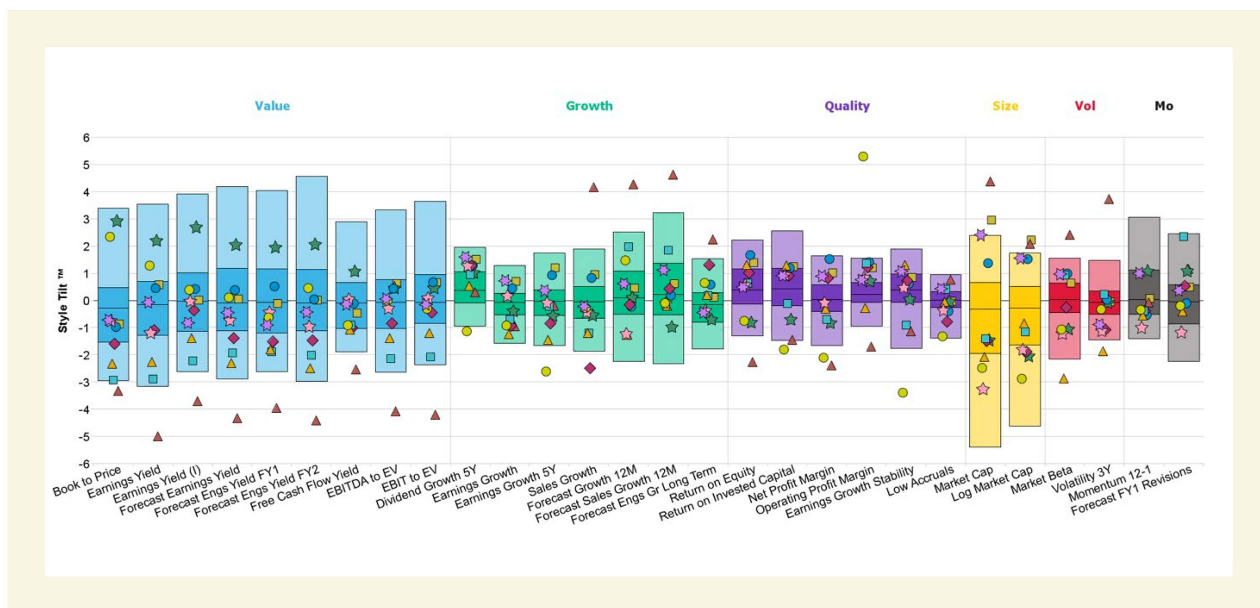
When core is not core

As noted above, a key motivation of investors in selecting a highly concentrated portfolio is to explicitly target a style or theme. These investors may seek to balance risks across their holdings by blending allocations with different styles, potentially with the aim of factor timing (more on this later).

'Core' strategies, in contrast, purport to offer investors an alternative to this approach. As defined by Morningstar, a core strategy/fund, "...represents the blend style (a mixture of growth and value equities or mostly core equities)". In our 24 years of experience in managing these types of portfolios, investors have allocated to us on the basis that they want to balance styles with the aim of delivering a smoother alpha signature over time, primarily through stock selection.

In practice though, investors should be aware that a core label does not always fit this description, particularly for more concentrated portfolios. Using the eVestment platform, we identified the 10 largest non-Ninety One equity funds by assets under management (AUM) with full uploaded positions in Morningstar, that were classified as 'core' or without style bias and owned fewer than 30 holdings. Using the Morningstar positions, we ran these portfolios through Style Analytics, allowing us to investigate the style picture in these 'concentrated core' strategies over the last three years. For illustrative purposes, we will refer to this group of 10 non-Ninety One equity funds by AUM as the 'EM core peer group' in several subsequent charts.

Figure 2: Style analysis across across our concentrated 'EM core peer group'



Source: Style Analytics as at 31 March 2024. Exposure relative to MSCI Emerging Markets Index. Shapes in each category represent each of the 10-company EM peer group. Bars behind represent the breadth of range within the associated universe from 1st - 4th quartiles (top to bottom).

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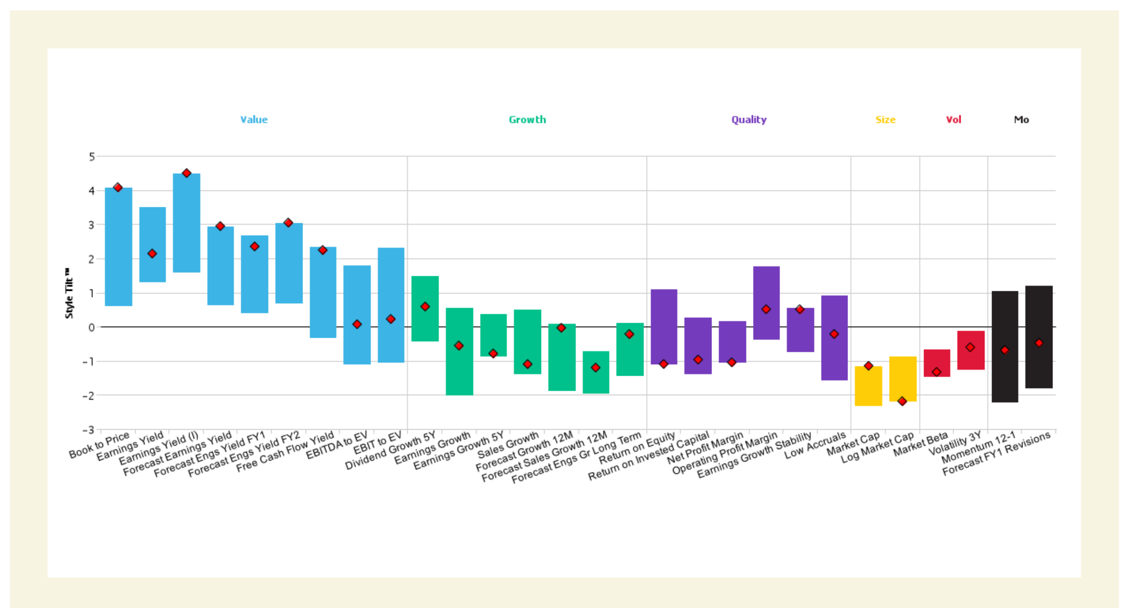
Surprisingly, many of the funds displayed persistent biases deemed as significant (+/- 1 on figure 1) or very significant (+/- 2) by Style Analytics. It is also notable that value was the most 'out of fashion' factor with eight out of the ten funds displaying a persistently significant underweight to the value factor.

While these funds showed some level of balance, there were standout biases. Below, we show one such strategy. Of the 10-company EM peer group, we have selected one that tilts strongly to Value as an example of the degree of variation that exists within the objectively selected peer group.

Figure 3: Example of a concentrated 'EM core peer' style skyline – tilted strongly to Value



Source: Style Analytics. As at 31 March 2024. Exposure relative to MSCI Emerging Markets Index. Based on a related EM core peer portfolio. Diamonds represent current exposure. Bars represent the minimum to maximum range using three years of data.

Managing a strategy with balanced style exposures through time can be difficult to achieve. Running highly concentrated portfolios, with appropriate portfolio construction considerations, exacerbates this issue and will always be vulnerable to sharp stylistic swings as single positions, given their sheer size and influence within the portfolio.

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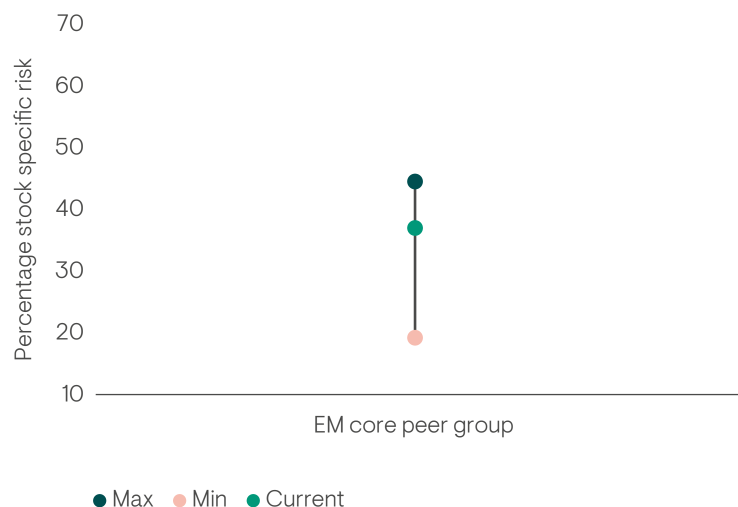
We have also decomposed the tracking error of this same sample set of 'concentrated EM core' peers over the last three years, as of 31 December 2023 in Figure 4. As concentration is often associated with conviction stock picking, we sought to investigate whether it is also empirically associated with portfolios driven by stock-specific risk. The results are again surprising and reinforce our view that concentration can actually impede the expression of pure stock-specific risk in a portfolio. The peers that we sampled displayed a wide range of outcomes relating to the proportion of tracking error attributable to stock specific risk but for the observations over the last three years, the median manager's active risk was mostly attributable to non-stock-specific factors such as industry or style factors.

Figure 4: Stock specific risk as a proportion percentage of total tracking error within EM core peer group



Source: Style Analytics. As at 31 March 2024.

For those seeking balanced style exposures combined with stock risk, it may be a case of buyer beware when it comes to highly concentrated offerings.

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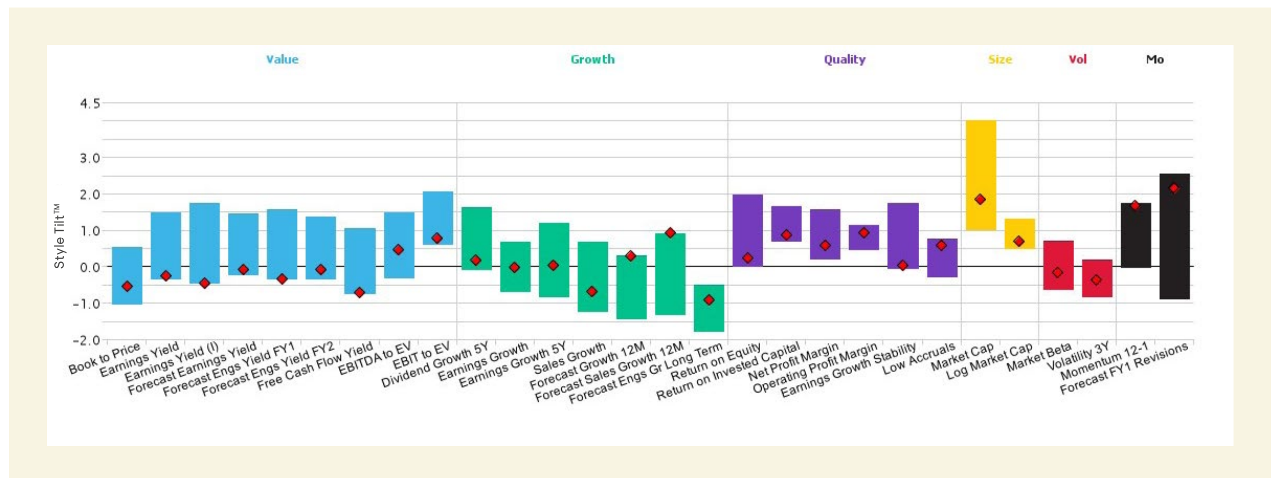
The 4Factor approach

Ninety One's 4Factor strategies offer balanced exposures to value, growth and quality with positive momentum, focused on delivering long-term risk-adjusted returns driven by idiosyncratic or stock-specific risk[6].

Earlier we demonstrated that 50-90 stock portfolios are considered optimally diversified through a quantitative lens to achieve 3-5% tracking error, although the number of holdings in a portfolio is only one of many variables that determines the level of active risk. We then illustrated that more concentrated 'EM core' portfolios can in fact harbour persistent and statistically significant style biases, in some cases not clearly recognised. In contrast, we observe that the 4Factor Emerging Markets Equity strategy, with an average of 79 holdings over the last three years[7], displays far less style bias through time, whilst maintaining sufficient tracking error risk (which has been evident in our long-term outcomes), to deliver outperformance for our investors.

This more balanced approach can be seen in the style skyline below, with very few components with persistently significant (+/- 1) bias. Note, the red diamond signifies current exposure.

Figure 5: 4Factor Emerging Market Equity style skyline



Source: Style Analytics. As at 31 March 2024. Exposure relative to MSCI Emerging Markets Index. Based on a related portfolio with substantially similar objectives as those of the services being offered. Diamonds represent current exposure. Bars represent the minimum to maximum range using three years of data.

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6. For more information on the investment process, please see the Important information section.
7. Please note the portfolio may change significantly over time.

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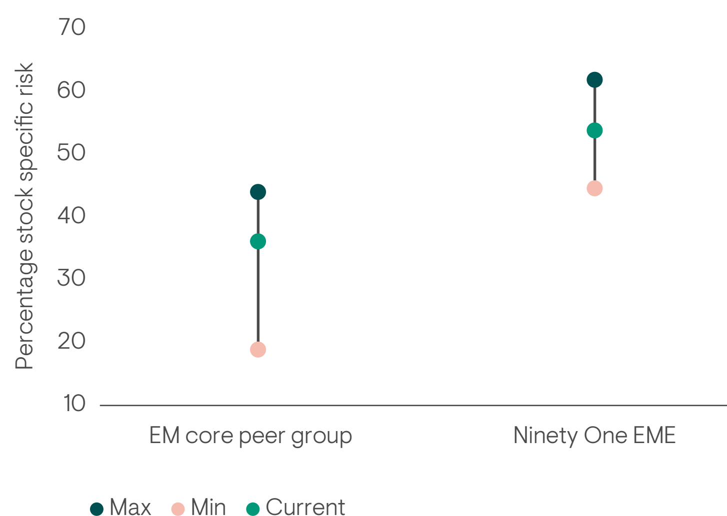
Looking below to Figure 6, our portfolios are also clearly differentiated by having a greater proportion of tracking error driven by stock-specific risk, with 15-25 percentage points greater in contribution than the median 'concentrated core' manager in our sample over the observation windows detailed above.

Figure 6: Stock specific risk as a proportion of total tracking error



Source: Style Analytics. As at 31 March 2024.

We believe that the focus on idiosyncratic risk combined with a strong, repeatable investment process will deliver the most consistent risk-adjusted returns over the long-run. This is observed in the strategy's outperformance relative to its benchmark around 95% of all rolling three- and five-year periods, gross of fees, since its inception in April 2010.

Figure 7: Strategy composite calendar year performance (USD)

Calendar (%)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024 (YTD)
Composite (gross)	-13.8	8.3	42.0	-15.2	21.6	16.8	0.4	-22.1	11.2	4.0
Benchmark	-14.9	11.2	37.3	-14.6	18.4	18.3	-2.5	-20.1	9.8	2.4
Active return	1.1	-2.9	4.7	-0.6	3.2	-1.5	2.9	-2.0	1.4	1.7

Past performance does not predict future returns; losses may be made.
Source: Ninety One, 31 March 2024. Performance is gross of fees (returns will be reduced by management fees and other expenses incurred), income is reinvested, in USD. Strategy: Emerging Markets Equity. Benchmark: MSCI Emerging Markets NDR. Indices are shown for illustrative purposes only.

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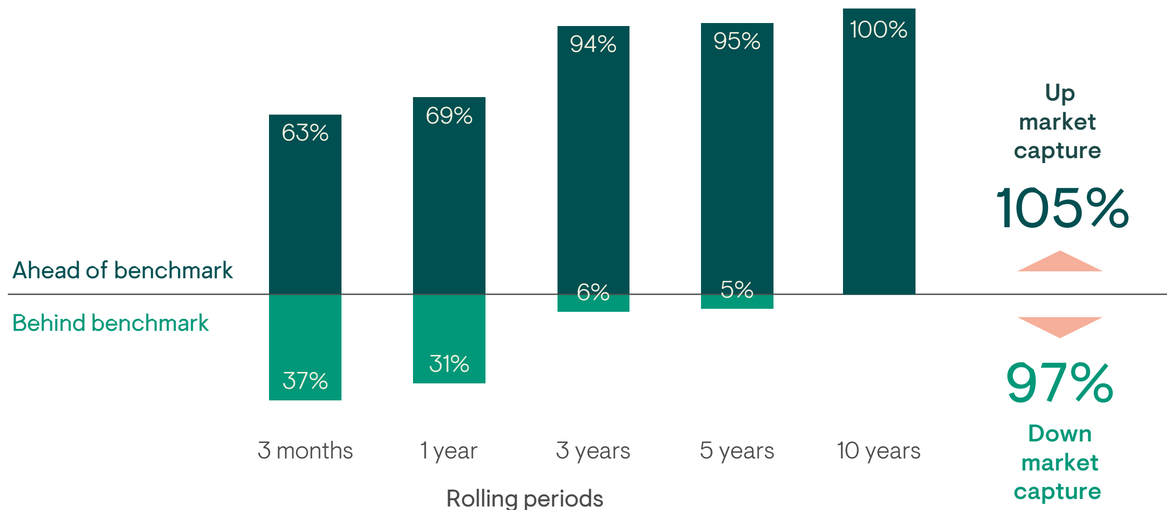
Figure 8: 4Factor Emerging Markets Equity batting averages and market captures since inception (gross)



Past performance is not a reliable indicator of future results, losses may be made.
Source: Ninety One, 31 May 2024. Performance is gross of fees (returns will be reduced by management fees and other expenses incurred), income reinvested, in USD.
4Factor Emerging Markets Equity inception date: 1 April 2010.
Benchmark: MSCI Emerging Markets NDR. For further information on indices please see the Important Information section.

A key reason as to why we believe this balanced approach can deliver more consistent alpha outcomes is the inherent difficulty of factor timing i.e. the switching between value, quality and growth at the 'right' moment. Asness et al. concluded in their 2017 paper "..actually implementing a successful contrarian timing strategy is harder in practice and against relevant alternatives (well-diversified portfolios). From a multi-style perspective, it is hard for contrarian style timing to meaningfully improve upon simple strategic diversification."

While we agree with that view, the 4Factor portfolios are by no means static in their style-or factor- exposures either. We aim to pick the best stocks across the value, growth and quality spectrum at any given point in time. Furthermore, we assess marginal changes in expectations on a forward-looking basis and the degree to which this has been priced in by the market. This means our style exposures tend to naturally shift in tandem with our fundamental, forward-looking assessment of under-priced marginal rates of change.

Finally, we are cognisant that factors have sensitivities to different macro regimes, which can influence how we construct portfolios. In both cases our focus on marginal change and its correlation with momentum acts as a stabilising factor in our portfolio construction.

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Conclusion

In this paper we have sought to challenge the popular assumption that concentrated portfolios are the only game in town when it comes to providing for sufficient active risk driven by stock-specific decisions in order to achieve attractive alpha. In practice, the number of holdings is only one of many factors influencing the level of active risk in a portfolio, as 50-90 stock portfolios are still able to deliver sufficient active risk driven by stock selection and achieve 3-5% tracking error outcomes. Applying a practitioner's perspective, we also show that concentration may have unforeseen consequences for investors seeking to invest in funds notionally offering a balanced approach to style exposures. Achieving a balanced approach to style exposures in more concentrated portfolios is not in of itself unattainable but the importance of disciplined portfolio construction (and an acute understanding of the influence of factor risk in overall portfolio risk) in achieving that objective increases as the number of stocks in a portfolio decreases.

The 4Factor team at Ninety One believes markets are inefficient due to behavourial biases. This creates diverse alpha opportunities in companies displaying value, growth and quality characteristics. We employ fundamental analytical insight that leverages data driven models to enhance the process of identifying and exploiting these opportunities.

A moderately diversified number of holdings allows 4Factor portfolios to express a balance of investment styles over the course of a market cycle, while maintaining material active exposure primarily driven by idiosyncratic, stock-specific risk. This robust, repeatable approach has delivered consistent risk-adjusted returns over the long term, since 2000, without being hostage to the short-term performance of any given investment style.

General risks. The value of investments, and any income generated from them, can fall as well as rise. Costs and charges will reduce the current and future value of investments. Past performance does not predict future returns. Investment objectives may not necessarily be achieved; losses may be made. Target returns are hypothetical returns and do not represent actual performance. Actual returns may differ significantly. Environmental, social or governance related risk events or factors, if they occur, could cause a negative impact on the value of investments.

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