

# Evaluating “Active Share”

Polen Capital Research

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Stephen Atkins, CFA, Research Analyst

## Executive Summary

The topic of active share has been of increasing interest within the investment management industry over the past several years as the proliferation of ETFs and index funds places increasing pressure on active fund managers to defend their higher fees and, in many cases, still sub-par returns. Much of the academic research surrounding active share substantiates what we here at Polen Capital have known intuitively for many years: in order to outperform a benchmark and justify higher fees to clients, an active manager must be willing to deviate significantly from that benchmark. We believe that when this willingness to diverge from a benchmark is combined with the skill of strong stock selection and risk management, the result can be superior long-term returns for investors.

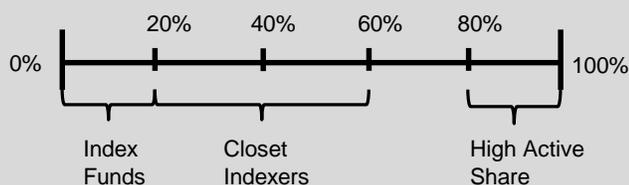
In this paper we will provide some background on the concept of active share, an analysis of why we believe it is a valuable metric for the average investor as well as a discussion of some of its limitations. We will also review active share in relation to Polen Capital and why we feel that our proven philosophy and process, which emphasizes principal protection, differentiates us from other active managers.

## Background

The concept of active share was first introduced in a 2009 academic paper by Yale professors K.J. Martijn Cremers and Antti Petajisto.<sup>1</sup> One of the purposes of the paper was to create a statistic that could be used alongside tracking error to identify managers that were truly “active” and that added value through stock selection. The definition of active share was surprisingly simple and intuitive, which is perhaps part of its appeal: the percentage of a portfolio that is different from the benchmark index. The reasoning behind the statistic was equally straightforward: in order to outperform a benchmark index on a net of fee basis, it would seem reasonable that a manager would need to be substantially different than that benchmark. Mathematically speaking, active share is calculated by summing the absolute value of the differences in weights between a manager’s portfolio holdings and its corresponding benchmark and then dividing that total by two.

For traditional long only managers, active share will range between 0% and 100% with a higher active share score ascribed to managers who are more differentiated from their benchmark. While no technical definition exists, high active share managers are generally those with scores above 80% while managers with active share between 20-60% are typically considered “closet indexers” (see Exhibit 1).

Exhibit 1  
Active Share Spectrum



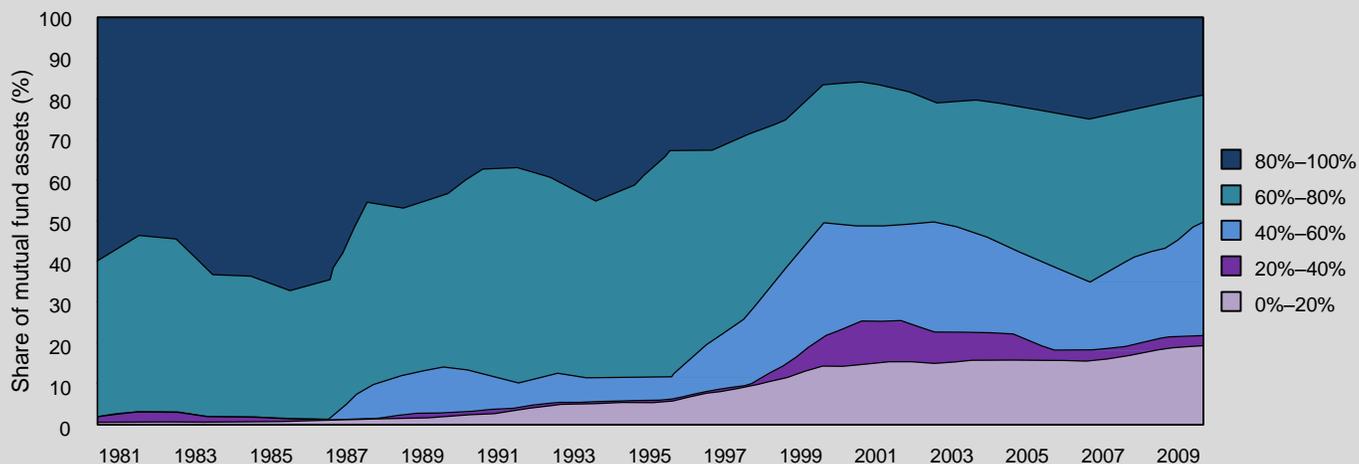
Source: Polen Capital

Cremers and Petajisto’s research on active share had two findings with important implications for investors in the management evaluation process. The first was that mutual funds with high active share demonstrated superior returns compared to lower active share managers.<sup>2</sup> Furthermore, active share was shown to be a predictive criterion for performance in that as the level of a manager’s active share increased so too did the manager’s future relative returns.<sup>3</sup> Subsequent research by Cremers, Ferreira, Matos and Starks confirmed that this relationship also held true with equity funds outside the U.S.<sup>4</sup> While that clearly does not mean active share should be the only determinant when evaluating a manager’s future performance, it does support a simple premise that we at Polen Capital have operated under since our founding 25 years ago: to consistently outperform a benchmark index, a manager must be willing to meaningfully deviate from that index.

The second important finding from Cremers and Petajisto was that the percentage of U.S. equity mutual fund assets that were being managed by high active share managers appears to have significantly declined over the past 30+ years (see Exhibit 2). While some of this decline can be attributed to the rising popularity of index funds, even the closet indexing cohort saw a notable increase in share of assets. Thus, investors paying higher fees for “active” management have increasingly been receiving the exact opposite.

1 Cremers and Petajisto 2009  
2 Ibid  
3 Ibid  
4 Cremers, Ferreira, Matos and Starks 2014

Exhibit 2  
Active Share Scores for Mutual Fund Assets 1980-2009



Source: Petajisto 2013

## Considerations

As with any single statistic, active share should not be utilized in a vacuum. It provides a snapshot in time of the degree of difference between an active portfolio and its corresponding benchmark but consideration should also be given to the *changes* in a manager's active share over time as well as whether or not the manager's chosen benchmark is the most appropriate one. Additionally, other metrics such as tracking error, standard deviation and downside capture ratio can be used in conjunction with active share to provide a more complete picture of a manager's active strategy. We'll address each of these points in turn.

More important than the level of active share of a portfolio at any particular instance is the change in active share for that portfolio over long time periods. Significant shifts in active share can indicate a possible alteration in management style. Perhaps the most famous example of this process could be seen at Fidelity's flagship mutual fund, Magellan, over the past three decades. The chart in Exhibit 3 illustrates how the

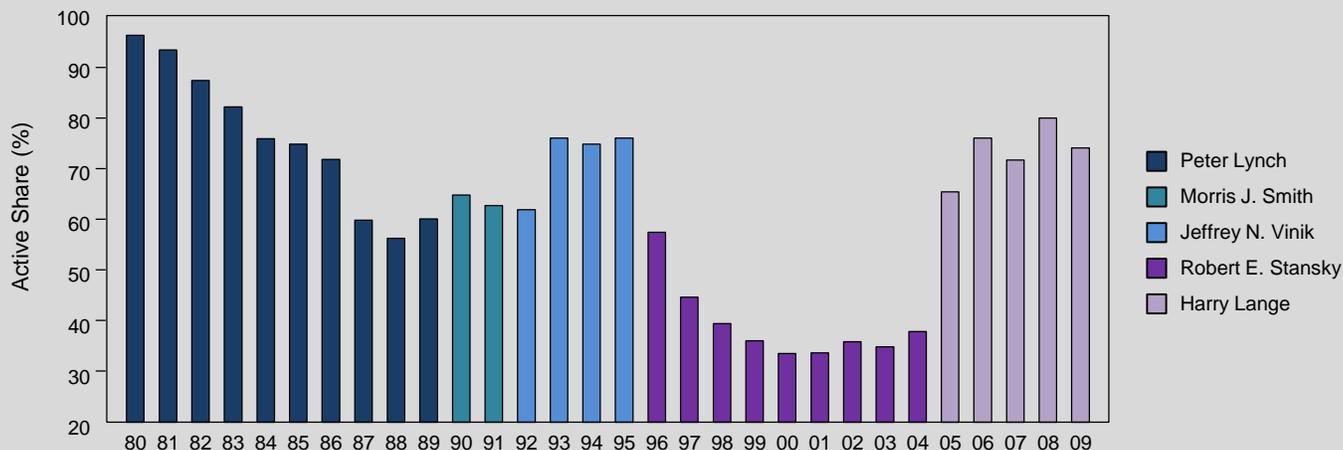
level of active share of Magellan changed as different managers took the helm at the fund behemoth. Most notable is the sizable decline in active share during the tenure of Robert Stansky. Also notable is Magellan's performance under Stansky's leadership: the fund underperformed its benchmark, the S&P 500, by slightly more than 1% annually.<sup>5</sup> This underperformance is noteworthy because it is precisely what you would expect from a closet indexer, that is, benchmark-like performance minus the fund's fees and expenses.<sup>6</sup>

Another critical factor when evaluating the active share of different managers is benchmark selection. The appropriate benchmark for any portfolio should be the one which produces the lowest active share relative to that benchmark. In many cases managers can benefit by comparing themselves to broad market indices with numerous constituents. Indices such as these typically have very low weightings for the vast majority of the holdings which can artificially inflate a manager's active share. Consider for example a portfolio benchmarked against the Russell 1000 Growth Index with 675 securities and an average position weight of 0.15% and

<sup>5</sup> Source: Morningstar

<sup>6</sup> In fairness to Stansky, his successor at the Magellan Fund, Harry Lange, didn't fare any better from a performance standpoint despite much higher active share during his tenure. Lange was replaced in 2011.

Exhibit 3  
Fidelity Magellan Fund Annual Active Share 1980-2009



Active Share is shown for each fund manager at year-end.  
Source: Petajisto 2013

a portfolio benchmarked against the Russell 3000 Index with over 2,300 additional securities and an average position weight of just 0.03%.<sup>7</sup> It will likely be much easier for the manager being compared to the Russell 3000 Index to achieve a high active share score because of the increased opportunity to create overweight positions relative to the index. A portfolio manager can also skew its active share score by concentrating its holdings in lower market cap ranges. For instance, a manager that is benchmarked against a large-cap index but concentrates a considerable portion of their portfolio towards mid-cap stocks can produce a high active share due to the fact that those mid-cap holdings will have a smaller weight in the index. Large cap indices also tend to be top heavy with a sizable portion of the index allocated to the biggest holdings. For instance the top twenty positions in the Russell 1000 Growth Index comprise nearly 33% of the total index compared to just 3% for the top twenty holdings of the Russell 2000 Small Cap Index.<sup>8</sup> Thus, an investment manager benchmarked against the Russell 1000 Growth would get a minimum 33% active share score by simply not owning the twenty largest weights

in that index.

Finally, as is true with virtually any financial measurement, investors should not view active share as a stand-alone statistic but rather use it as part of a mosaic, along with metrics such as tracking error, standard deviation and downside capture, to evaluate an investment manager's risk/reward profile. Tracking error, which measures the standard deviation of the difference in annual returns between a given portfolio and its corresponding benchmark, can be used in conjunction with active share to help better understand the elements that are driving a manager's performance. It's important that investors not confuse tracking error with standard deviation which measures the absolute volatility of a manager's returns over time. This nuance is significant in our opinion as managers with above average tracking error need not have above average standard deviation in their absolute returns.<sup>9</sup>

High active share managers often do have correspondingly high tracking errors which makes intuitive sense given their divergence from the

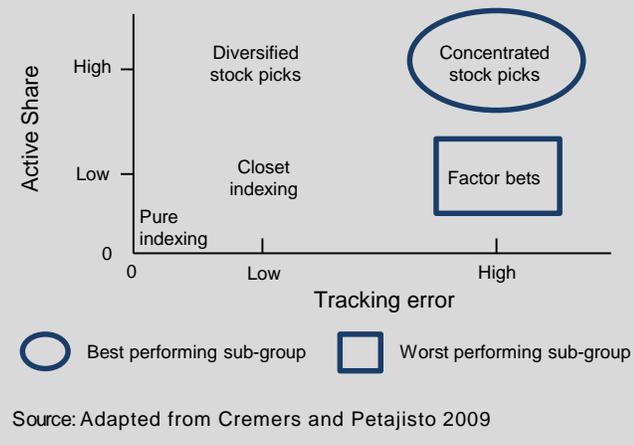
<sup>7</sup> Source: Factset

<sup>8</sup> Source: Factset. Of note, this fact also suggests that small cap managers should generally have higher active share compared to their large cap counterparts, a fact that has been proven out by a number of studies. Therefore one could make the argument that the threshold for defining a "high active share" manager should be higher, perhaps 90-95%, for small cap funds versus large cap funds.

<sup>9</sup> Polen Capital's 7 year (2007-2013) tracking error and standard deviation vs. the Russell 1000 Growth was 6.26 and 15.58, respectively. The peer group average tracking error and average standard deviation vs. the Russell 1000 Growth was 4.24 and 18.05, respectively for the 7 year (2007-2013). The peer group is derived from Morningstar Large Cap Growth universe and excludes funds where active share was not available for all annual time periods.

benchmark should logically result in relative performance returns that are equally divergent. But it need not always be the case that a high active share manager produce high tracking error and vice versa for low active share managers. For example, a manager that utilizes factor bets such as beta, size or style may be able to show relatively low active share while at the same time producing very high tracking error due to the timing of such bets. Likewise, a manager with high active share can still produce low tracking error by diversifying across all industries of a benchmark to reduce volatility. Cremers and Petajisto observed this dynamic in their study and divided their manager universe into four basic quadrants based on active share and tracking error (see Exhibit 4) with a fifth category reserved for pure index funds.

Exhibit 4  
Cremers and Petajisto Study: 1990-2003

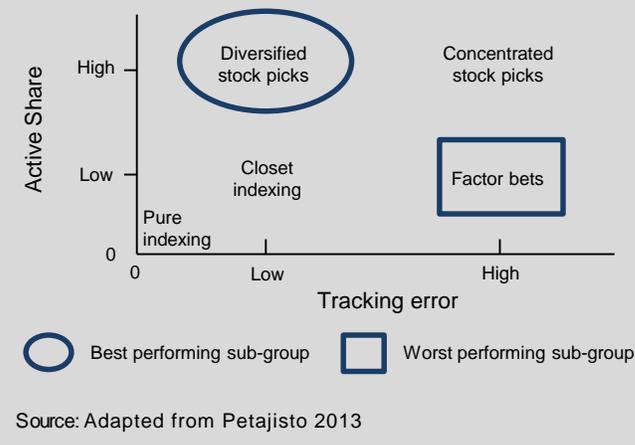


In addition to finding that higher active share managers generally delivered better net relative returns compared to lower active share managers, Cremers and Petajisto’s research (which covered the period from 1990-2003) showed that the “concentrated stock picks” cohort, those managers with both high active share and high tracking error, performed best.<sup>10</sup> Presumably this segment of managers would be the most reliant on pure

stock picking with a relative indifference for index composition, i.e. impartial to the benchmark, whereas “factor bets” managers, the poorest performing group, would be very cognizant of the index weightings but reliant on factor positioning instead of stock picking. Importantly, this is not meant as an indictment for any particular manager subset but rather to help provide a framework for investors when evaluating different funds and what drives their respective returns. Active share used together with tracking error can be useful in this regard but if we were to pick one measure to favor over the other it would be active share as research has also demonstrated that it, and not tracking error, is correlated with returns.<sup>11</sup>

It’s also worth mentioning here that in Petajisto’s follow up study published in 2013, which covered an additional six years of data (1990-2009), the results were slightly different. Instead of the “concentrated stock picks” being the best performing subset of managers, it was the “diversified stock picks” that had the highest net relative returns (see Exhibit 5).

Exhibit 5  
Petajisto Follow-up Study: 1990-2009



In explaining the reason for the change in results Petajisto noted that part of the difference was because

10 Cremers and Petajisto 2009  
11 Ibid

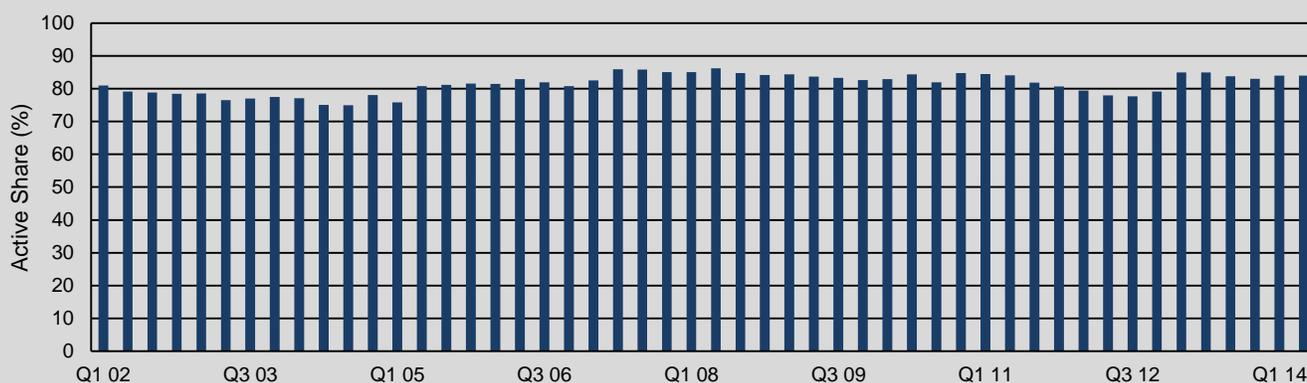
the concentrated stock picks sub-group “suffered in the 2004-2009 period and especially during the financial crisis.”<sup>12</sup> Ostensibly this is due to the investment performance of some portion of the concentrated managers segment not holding up well during the 2008 recession which, in turn, highlights the need for investors to also consider risk management ratios such as downside capture in their manager evaluation process. Downside capture, which measures the relative return of a fund during periods of negative benchmark performance, is a beneficial statistic when assessing which managers help protect capital in down markets. This is particularly true when examining concentrated managers with high active share and above average tracking error because one of the obvious concerns surrounding these types of funds would be the potential for significant underperformance in bear markets. Thus, combining downside capture with these other two metrics can assist investors in better understanding which managers can add value through stock picking but also preserve capital.

## Active Share at Polen Capital

Due to the concentrated nature of our fund (typically around 20 holdings), the U.S. Growth portfolio at Polen Capital has produced a consistently high active share score relative to its benchmark (see Exhibit 6). We believe this persistently high active share mark is indicative of the steady investment approach we have utilized since the inception of our product 25 years ago.

Additionally, as the chart in Exhibit 7 shows, our historical tracking error has generally been above average relative to our peer group which, when paired with our high active share score, suggests our portfolio belongs squarely in the “concentrated stock picks” camp referenced earlier in this paper.<sup>14</sup> Also noteworthy is the pronounced upward slope of the data points in the chart which confirms the positive correlation between active share and tracking error and while the majority of managers are clustered within a narrow range there is still considerable dispersion between the highest and lowest for each metric. This underscores the potential variety in investment approaches even among managers within the same style group.

Exhibit 6  
Polen Capital – Historical Active Share Active<sup>13</sup>



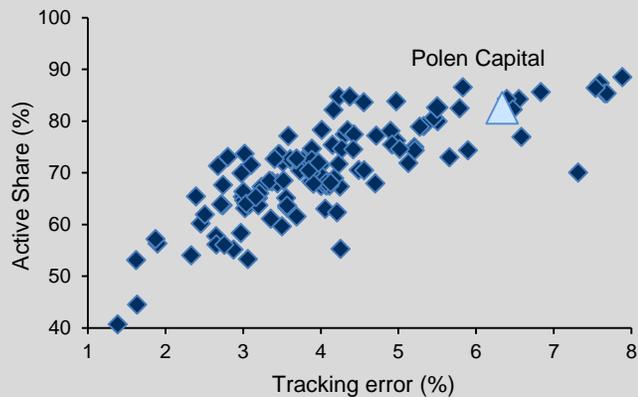
Source: Morningstar

<sup>12</sup> Petajisto 2013

<sup>13</sup> Active share is calculated versus the primary benchmark, Russell 1000 Growth Index

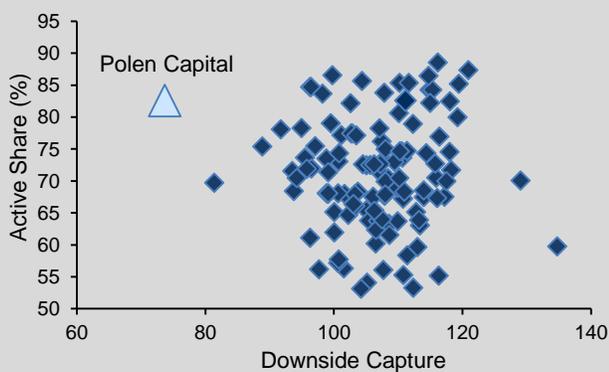
<sup>14</sup> Active share is calculated as a seven year annual average ending 12/31/2013. Tracking error is calculated as a seven year annualized number as of 12/31/2013. Peer group is derived from Morningstar Large Cap Growth universe and excludes funds where active share was not available for all annual time periods.

Exhibit 7  
Active Share vs. Tracking Error for LCG Universe (7-year)



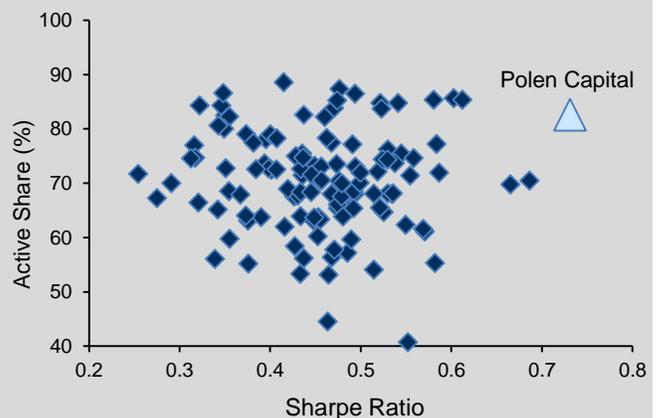
Polen Capital's ability to protect capital is very evident in the chart in Exhibit 8 which plots active share versus downside capture for the large cap growth peer group.<sup>15</sup> The chart is presented on a seven-year basis so as to include the 2008 recession which was a period with significantly negative returns. Also, unlike the chart plotting active share versus tracking error, there appears to be no obvious correlation between active share and downside capture. This suggests that the ability to protect capital in down markets is much more a function of the types of investments a manager owns rather than their degree of deviation from a given benchmark.

Exhibit 8  
Active Share vs. Downside Capture for LCG Universe (7-year)



Finally, the chart shown in Exhibit 9 shows active share relative to the annualized Sharpe ratio for the LCG universe.<sup>16</sup> As evidenced by the chart, there does not appear to any correlation between managers with high active share and those with correspondingly high Sharpe ratios.<sup>17</sup> If nothing else, the chart in Exhibit 9 lends further weight to our belief at Polen Capital that high active share managers can deliver superior relative returns to investors without subjecting them to undue risk or volatility.

Exhibit 9  
Active Share vs. Sharpe Ratio for LCG Universe (7-year)



Source: Morningstar

## Conclusion

The metric of active share has become increasingly accepted in the investment marketplace over the past several years. We agree that it is a useful measure for investors permitted they understand its strengths and weaknesses. On the positive side, active share is a simple, straightforward concept and research indicates that it has real value in identifying investment managers who can potentially generate relative outperformance even after fees. However, active share, as with any other financial metric, should not be used in isolation and the statistic itself can be skewed by factors such as benchmark selection, fund size and portfolio allocation.

<sup>15</sup> Active share is calculated as a seven year annual average ending 12/31/2014. Downside capture is calculated as a seven year average ending 12/31/2014. Peer group is derived from Morningstar Large Cap Growth universe and excludes funds where active share was not available for all annual time periods.

<sup>16</sup> Active share is the seven year average active share of each manager ending 12/31/2014. Sharpe ratio is calculated by using standard deviation and excess return to determine reward per unit of risk ending 12/31/2014. Peer group is derived from Morningstar Large Cap Growth universe and excludes funds where active share was not available for all annual time periods.

<sup>17</sup> The data utilized for the 7-year period ending 12/31/2013 showed a potentially very modest correlation between these metrics but certainly not strong enough to warrant any conclusions.

Thus investors are always advised to do their homework. Certainly the analysis on active share by Cremers and Petajisto helps validate our long-held belief at Polen Capital that stock selection and a willingness to invest with conviction, even if it means diverging from the crowd, is ultimately rewarded by the market. When this philosophical approach is paired with a risk management strategy built around preservation of capital, the result in our view is an investment discipline well-suited to providing strong risk-adjusted long-term returns for investors.

## Biography



Mr. Atkins joined Polen Capital in 2012. Prior to joining Polen Capital, Mr. Atkins spent twelve years as a portfolio manager at Northern Trust Investments, including eight years as a mutual fund co-manager. Before joining Northern Trust, Mr. Atkins spent two years as a portfolio manager at Carl Domino Associates, LP. Mr. Atkins received his B.S. in Business Administration from Georgetown University and a General Course degree from the London School of Economics. Mr. Atkins is a CFA charterholder and a member of the CFA Institute and the CFA Society of South Florida.

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## About Polen Capital

Polen Capital is an independently-owned Growth equity boutique that is managed and run by an experienced and thoughtful group of financial professionals who are focused on our disciplined Investment Strategy.

At Polen Capital, we believe that consistent earnings growth is the primary driver of intrinsic value and long-term stock appreciation. Our efforts focus on identifying and investing in a concentrated portfolio of high quality companies that we believe are capable of delivering sustainable, above-average earnings growth. By thinking and investing like a business owner and taking a long-term investment approach, we believe we can preserve capital and provide stability in volatile markets.

Our Strategy is accessible through our Mutual Fund, Separately Managed Accounts (SMAs) and Undertakings for the Collective Investment of Transferable Securities (UCITS).

Institutional Relations

+ 1-800-358-1887

[Institutionalrelations@polencapital.com](mailto:Institutionalrelations@polencapital.com)

1825 NW Corporate Blvd. Suite 300, Boca Raton, FL 33431

[www.polencapital.com](http://www.polencapital.com)