

DO STOCK PICKERS BENEFIT FROM A STOCK PICKER'S MARKET?

April 2017

The efficient markets hypothesis (EMH) states that prices fully reflect all available information. One implication of EMH is that investors cannot earn non-random, risk-adjusted excess return (alpha). As we have examined in our prior research articles, “Detecting True Alpha in Highly Competitive Markets” and “Municipal Risk Factors and Competitive Markets,” the prevalence of alpha across stock and municipal bond managers is surprisingly scarce and largely consistent with EMH. At the very least, capital markets are highly competitive pricing engines.

Active management is based on the premise that capital markets are inefficient, despite the fact that most active managers underperform the market. A view promoted by some stock pickers is that market environments characterized by more differentiation in the return behaviors of individual stocks are more favorable for stock picking. The notion is that skillful stock pickers can generate more alpha in these market environments because stock returns are more driven by idiosyncratic, firm-level risks and less driven by systematic market risk (a risk common to all stocks).

To test this hypothesis, we use two indicators to identify a stock picker's market: low intra-stock correlation and high dispersion. Then we test the prevalence of alpha in a stock picker's market.

STEVEN GERMANI, CFA, CFP

Senior Analyst, Wealth Management
Portfolio Research

DAVID MOORE, CFA, CAIA

Senior Analyst, Wealth Management
Portfolio Research

PETER MLADINA

Director of Portfolio Research,
Wealth Management

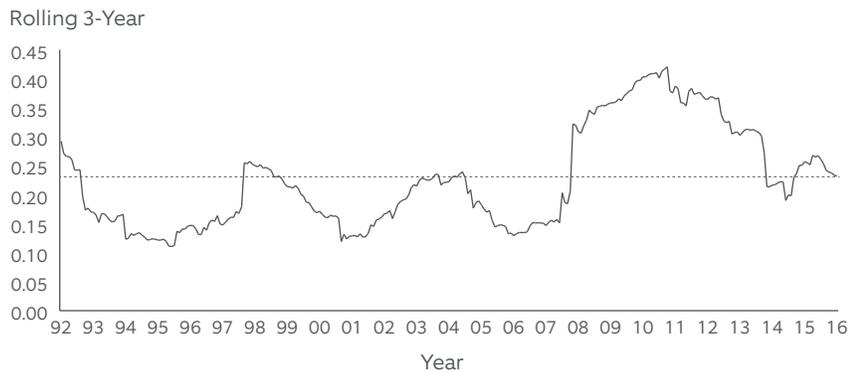
INTRA-STOCK CORRELATION

Correlation is a measure of how closely asset returns move with each other from their respective averages. Intra-stock correlation is the average of all pair-wise correlations of individual stocks. When intra-stock correlations are high, the return variation of individual stocks is more driven by common market risk (market beta). When correlations are low, firm-level idiosyncratic risks play a larger role, potentially creating an environment benefitting selective stock pickers with information advantages. We calculate intra-stock correlations over rolling 36-month periods from January 1990 to December 2016 using stocks currently in the S&P 500.

The dashed line in Exhibit 1 shows that the intra-stock correlation is 0.23 over the full time period. But of more interest to stock pickers is the spike we observe with materially higher and consistently above average intra-stock correlations that coincides with the news of crisis events, TARP and quantitative easing at the onset of the global financial crisis. Although the intra-stock correlation has fallen more recently, it is close to its historical average.

Of more interest to stock pickers is the spike in intra-stock correlations that coincides with the news of crisis events, TARP and quantitative easing at the onset of the global financial crisis.

EXHIBIT 1 – INTRA-STOCK CORRELATION



Sources: Northern Trust Research, Morningstar

DISPERSION

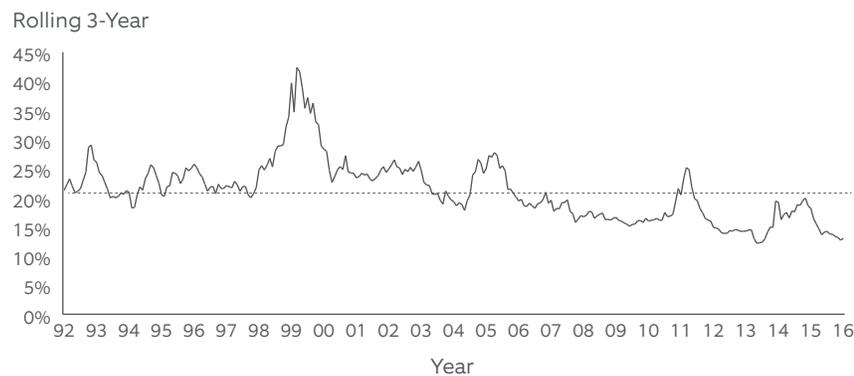
Increased intra-stock correlation indicates that individual stocks have increasingly moved in the same direction since the global financial crisis. But intra-stock correlation does not capture differing magnitudes of directional movement. Dispersion measures the magnitude of return variation – the degree to which returns are spread out. The magnitude is a potential indicator of the size of the opportunity, with higher dispersion presenting more opportunity for selective stock pickers. The dispersion indicator we use is the standard deviation of individual stock returns relative to the equal-weighted returns of stocks currently in the S&P 500.

DO STOCK PICKERS BENEFIT FROM A STOCK PICKER'S MARKET?

Exhibit 2 shows rolling 36-month dispersions calculated over the 1990 to 2016 time period, with the dashed line representing the average of rolling 36-month dispersions. Overall, we find materially lower and consistently below average dispersion in the period since the global financial crisis; and higher and consistently above average dispersion in the earlier time period. Taking the information from our two indicators together, we can identify two major sub-periods. The relatively high intra-stock correlation and low dispersion suggest that October 2008 to January 2016 was not a stock picker's market. In contrast, the relatively low intra-stock correlation and high dispersion prior to October 2008 is representative of a stock picker's market.

If stock pickers benefit from a stock picker's market, we would expect to find statistically significant alphas along with a higher prevalence of alphas in the earlier sub-period.

EXHIBIT 2 – DISPERSION



Sources: Northern Trust Research, Morningstar

ALPHA

We next compare the robustness and prevalence of alphas over these two sub-periods. If stock pickers benefit from a stock picker's market, we would expect to find statistically significant alphas along with a higher prevalence of alphas in the earlier sub-period.

Our sample is drawn from the Morningstar universe of actively managed U.S. equity funds with at least a two-year performance history between January 1990 and December 2016. We include both live and dead funds to mitigate survivorship bias. And we only include the lowest expense share class of those funds with multiple share classes. This better represents the opportunity set for high-net-worth and institutional investors, though it does inject some bias into our sample. We regress the returns of each fund against the Fama French Carhart four-factor model, which adjusts performance for exposures (betas) to four common risk factors: market, size, value and momentum. The four-factor model is the standard model of performance attribution among academic researchers and sophisticated investors.

DO STOCK PICKERS BENEFIT FROM A STOCK PICKER'S MARKET?

We first summarize performance across the full period, from January 1990 to December 2016. Over this period, the average alpha across 4,233 funds was -1.33%, which is similar in magnitude to the 1.04% average expense ratio. A standard two-tailed significance test with a 95% confidence level predicts that 106 funds should produce statistically significant positive alpha just by random chance (i.e. by luck). An observation of more than 106 funds would be evidence of true alpha. However, we only observe 99 funds with statistically significant alpha over the full period. These results are consistent with EMH, at least net of expenses.

We turn to the October 2008 to December 2016 sub-period, which our two indicators suggest was not a stock picker's market. Over this period, the average alpha across 2,622 funds was -1.59%, which compares to an average expense ratio of 0.97%. We should expect 66 funds to produce statistically significant positive alpha by chance, but we only observe 27 funds. The alpha results confirm that the October 2008 to December 2016 sub-period was not a stock picker's market.

The sub-period from January 1990 to September 2008 shows relatively low intra-stock correlation and high dispersion, indicative of a stock picker's market. Over this sub-period, the average alpha across 3,484 funds was -1.14%, which is similar in magnitude to the average expense ratio of 1.04%. We should expect 87 funds to produce statistically significant positive alpha just by chance and we observe 95 – materially the same. Over the sub-period most conducive to stock picking, the average alpha was negative, 66% of funds produced negative alpha, and only 2.7% of funds produced statistically significant positive alpha when 2.5% is predicted merely by chance. Apparently, stock pickers did not benefit from a stock picker's market.

Over the sub-period most conducive to stock picking, the average alpha was negative, 66% of funds produced negative alpha, and only 2.7% of funds produced statistically significant positive alpha when 2.5% is predicted merely by chance.

EXHIBIT 3 – ALPHA PREVALENCE

PERIOD	FUNDS	AVERAGE EXPENSE RATIO	AVERAGE ALPHA	SIGNIFICANT ALPHA (5%)	
				PREDICTED	OBSERVED
Jan '90 - Dec '16	4,233	1.04	-1.33	106	99
Jan '90 - Sep '08	3,484	1.04	-1.14	87	95
Oct '08 - Dec '16	2,622	0.97	-1.59	66	27

Source: Northern Trust Research, Morningstar, Ken French Data Library

The overall results suggest there is little validity to the notion of a stock picker's market. True alpha is exceedingly rare in all market environments, whether characterized as a stock picker's market or not. If there is such a thing as a stock picker's market, it is hard to identify, extremely rare and short-lived. This research shows that although it can be tempting to believe in well-told stories, a higher standard relies on the weight of empirical evidence to inform an investment strategy. The results support the use of passive and engineered beta (factor-based) equity solutions, which can offer good value for the expenses paid. For those who continue to seek alpha from active managers, recognize that it is exceedingly rare and requires high selectivity aided by the best tools and methods to improve the odds of success.

northerntrust.com

© 2017 Northern Trust Corporation. Head Office: 50 South La Salle Street, Chicago, Illinois 60603 U.S.A. Incorporated with limited liability in the U.S. Products and services provided by subsidiaries of Northern Trust Corporation may vary in different markets and are offered in accordance with local regulation.

IMPORTANT INFORMATION. IMPORTANT INFORMATION. This material is provided for informational purposes only. Information is not intended to be and should not be construed as an offer solicitation or recommendation with respect to any transaction and should not be treated as legal advice investment advice or tax advice. Information is confidential and may not be duplicated in any form or disseminated without the prior consent of Northern Trust.

There are risks involved in investing including possible loss of principal. There is no guarantee that the investment objectives of any fund or strategy will be met. Risk controls and models do not promise any level of performance or guarantee against loss of principal. The opinions expressed herein are those of the author and do not necessarily represent the views of Northern Trust. Northern Trust does not warrant the accuracy or completeness of information contained herein. All material has been obtained from sources believed to be reliable, but the accuracy, completeness and interpretation cannot be guaranteed. Information contained herein is current as of the date appearing in this material only and is subject to change without notice.

Q221500 (4/17)