



Where High Quality Goes, Active Management Flows

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Anyone who has talked to several portfolio managers who manage stock funds will tell you that there is one thing virtually all of the managers say is important to them when looking for the right stocks to include in their funds. They want to find “high quality” stocks. Different managers will have their own variations on how they define quality, but for the most part they are looking for stocks of companies with low debt levels and earnings growth that is both high and consistent. It should stand to reason then that when high quality stocks outperform low quality or “junk” stocks, active managers tend to outperform their benchmarks. When junk stocks outperform high quality stocks, active managers tend to underperform their benchmarks.



This framework is especially helpful in two ways. It helps in explaining past performance of active managers, and it helps in attempting to predict how well active managers will do in the future.

Explaining Past Performance

Figure 1 shows the relative total return index of high quality stocks to low quality stocks, using high and low quality indices from Ned Davis Research. Quite literally, this means the growth of a dollar (reinvesting dividends) invested in the high quality index divided by the growth of a dollar invested in the low quality index all multiplied by 100. When this line is moving higher, high quality stocks are outperforming low quality stocks and vice versa.

The quality indices are based on S&P Quality Rankings. Standard & Poor’s uses a Quality Ranking System to capture the growth and stability of a company’s earnings and dividends history over the last ten years. Basic scores are computed for earnings and dividends, and then adjusted as indicated by a set of predetermined modifiers for change in rate of growth, stability within long-term trend, and cyclicalities. Ned Davis Research creates its high and low quality indices by taking all rated stocks within the NDR Multi-Cap Institutional Equity Series and equal-weighting them with quarterly rebalancing. The high quality index is comprised of the highest rated stocks according to the S&P Quality Ranking System.

within that universe. The low quality index is comprised of the lowest rated stocks according to the S&P Quality Ranking System.¹

Figure 1



As we have already established, active managers prefer high quality stocks to low quality stocks, so when high quality stocks are outperforming low quality stocks (i.e. this line is moving higher), active managers should be outperforming their benchmarks because the benchmarks do not have the overweight position in high quality stocks that active managers have. To test this hypothesis, we will look at the performance of the managers White Oaks is currently using versus reasonable benchmarks over time periods of high quality rallies and periods of junk rallies.

To confirm that the current White Oaks managers do seek high quality companies, here are some quotes about their processes from their websites. According to Riverbridge, "The key fundamental we look for is sustainable high return on invested capital."² On Minneapolis Portfolio Management Group's (MPMG) website, there is a diagram in the Value Process portion of the site that indicates that a couple attractive qualities are "low debt/strong assets" and "excess cash flow."³ Here are a few highlights from Oakmark's philosophy and process part of its website, "We look for management teams that seek to maximize a company's long-term business value by running efficient operations that emphasize free cash flow generation and wise capital allocation. ... While some value investors may search only for stocks with low price-to-earnings or price-to-book value ratios, we focus on: ... companies with growing free cash flow

¹ Ned Davis Research

² Riverbridge

³ MPMG

and intelligent investment of that excess cash.”⁴ Columbia Management is the one exception out of the current White Oaks managers in that there is no reference to any high quality characteristics in its description of its strategy. In its Third Quarter 2014 Investment Commentary of the Columbia Value and Restructuring Fund, the fund strategy is described as such, “Distinct value strategy focuses on company restructuring and/or industry consolidations; Long-term, multi-cap investment strategy provides the opportunity for value companies to execute business plans and potential for fundamental improvement; Seeks diversification across industries and restructuring themes while maintaining a portfolio of 55-75 holdings.”⁵ Interestingly, this fund tended to perform better during the junk rallies than it did during the high quality rallies. Southeastern Management, the advisor to the Longleaf Partners Small-Cap Fund, says on its website, “We invest in strong businesses that are understandable, financially sound, competitively positioned, and have ample free cash flow that may grow over time.”⁶ In T. Rowe Price’s Quarterly Commentaries as of 9/30/2014 for its New Horizons Fund, the manager says, “We strive to select companies that are either early-stage innovators with the potential to grow from the small-capitalization category into large-caps, or that are firms that can durably grow over time as a result of the advantages of scale, a new technology, or an ability to increase efficiency in their markets.”⁷

Figure 2



Figure 2 shows five periods where high quality stocks outperformed low quality stocks, namely

⁴ Oakmark

⁵ Columbia Management

⁶ Longleaf

⁷ T. Rowe Price



6/30/1983 – 7/31/1986, 9/30/1987 – 8/31/1992, 9/30/1997 – 8/31/1998, 2/29/2000 – 9/30/2002, and 6/30/2008 – 11/30/2008. Table 1 shows the performance of the US stock managers that are currently in client portfolios and the performance of benchmarks with a good size and style match for each one. This benchmark selection should control for relative performance that is due to size or style biases reasonably well as compared to using the S&P 500 for every manager.

Table 1

High Quality Outperforms Low Quality

Cumulative Returns

	<u>6/30/1983 - 7/31/1986</u>	<u>9/30/1987 - 8/31/1992</u>	<u>9/30/1997 - 8/31/1998</u>	<u>2/29/2000 - 9/30/2002</u>	<u>6/30/2008 - 11/30/2008</u>
NDR High Quality Index	71.18%	56.81%	-7.16%	21.28%	-23.13%
NDR Low Quality Index	17.42%	30.12%	-24.75%	-28.09%	-38.36%
Riverbridge SMA		80.20%	10.54%	-28.99%	-26.55%
(Russell 2000 Growth)		11.93%	-31.75%	-62.60%	-35.99%
(Russell 1000 Growth)		58.33%	3.18%	-58.44%	-33.51%
MPMG SMA			-9.88%	6.17%	-40.80%
(Russell 2000 Value)			-17.45%	14.41%	-25.74%
(Russell 1000 Value)			-2.03%	-12.74%	-27.93%
Oakmark - OAKMX			-7.46%	30.27%	-27.47%
(Russell 1000)			0.58%	-38.86%	-30.83%
Columbia Value and Restructuring - UMBIX			-14.29%	-25.77%	-49.18%
(Russell 1000)			0.58%	-38.86%	-30.83%
Longleaf Partners Small Cap - LLSCX			2.80%	13.36%	-38.20%
(Russell 2000)			-24.90%	-35.06%	-30.95%
T. Rowe Price New Horizons - PRNHX	0.35%	33.09%	-25.03%	-47.09%	-35.31%
(Russell 2000 Growth)	0.26%	11.93%	-31.75%	-62.60%	-35.99%

Table 1 shows the performance of the Ned Davis High Quality Index and the performance of the Ned Davis Low Quality Index in the top section. By design the periods in this table were selected because high quality was outperforming low quality, so accordingly, in all five periods, the NDR High Quality Index outperformed the NDR Low Quality Index. My hypothesis was that in these periods, the active managers would outperform their benchmarks. Broadly speaking, this appeared to have happened.

Between the five time periods, the six managers, and the nine missing observations where a manager's track record was too short for performance to be viewed, there were a total of twenty-one observations. In fourteen of the twenty-one observations, the active manager outperformed the benchmark. In five of the twenty-one observations, the active manager underperformed. In two of the observations, the results were mixed. Specifically, Minneapolis Portfolio Management Group (MPMG) outperformed the Russell 2000 Value Index (small cap value stocks) from 9/30/1997 to 8/31/1998, but MPMG underperformed the Russell 1000 Value Index (large cap value stocks). From 2/29/2000 to 9/30/2002, MPMG underperformed the Russell 2000 Value Index (small cap value stocks) and outperformed the Russell 1000 Value (large cap value stocks). MPMG holds itself out to be an all cap value manager. White Oaks has tended to notice a bias towards small cap stocks, but not a complete dedication to them. For the purposes of this paper, I have compared MPMG to both the Russell 2000 Value (small cap value stocks) and the Russell 1000 Value (large cap value stocks).

Figure 3



Figure 3 shows the periods in which low quality stocks outperformed high quality stocks. These periods should be the more challenging ones for active managers to navigate. Table 2 shows the performance of

the same managers from Table 1 versus the same benchmarks, but Table 2 highlights the periods in which low quality stocks outperformed high quality stocks. Therefore, it should be no surprise that the active managers look less impressive in Table 2 than they do in Table 1. The periods highlighted in Figure 3 and Table 2 are 12/31/1981 – 6/30/1983, 8/31/1992 – 9/30/1997, 8/31/1998 – 2/29/2000, 9/30/2002 – 6/30/2008, and 11/30/2008 – 10/31/2014.

Table 2

High Quality Underperforms Low Quality

Cumulative Returns

	<u>12/31/1981 - 6/30/1983</u>	<u>8/31/1992 - 9/30/1997</u>	<u>8/31/1998 - 2/29/2000</u>	<u>9/30/2002 - 6/30/2008</u>	<u>11/30/2008 - 10/31/2014</u>
NDR High Quality Index	67.58%	136.72%	11.25%	69.15%	178.35%
NDR Low Quality Index	132.19%	208.54%	57.49%	134.00%	246.59%
Riverbridge SMA		101.33%	44.04%	70.33%	160.13%
(Russell 2000 Growth)		138.54%	137.95%	110.08%	197.30%
(Russell 1000 Growth)		147.95%	81.67%	72.54%	185.08%
MPMG SMA			53.89%	194.26%	122.65%
(Russell 2000 Value)			17.31%	96.98%	143.74%
(Russell 1000 Value)			18.53%	86.80%	142.15%
Oakmark - OAKMX		226.89%	-15.59%	50.20%	213.71%
(Russell 1000)		159.37%	50.44%	80.38%	163.57%
Columbia Value and Restructuring - UMBIX			74.19%	163.50%	177.70%
(Russell 1000)			50.44%	80.38%	163.57%
Longleaf - LLSCX		70.29%	8.48%	120.89%	242.29%
(Russell 2000)		160.00%	74.34%	104.22%	169.19%
T. Rowe Price New Horizons - PRNHX	70.11%	211.48%	17.31%	118.69%	293.76%
(Russell 2000 Growth)	74.48%	138.54%	137.95%	110.08%	197.30%

The active managers underperformed their benchmarks in eleven out of the total of twenty-three periods of junk rallies. They outperformed in twelve of these junk rallies. Therefore, the active managers outperformed their benchmarks in about half of the junk rallies and in about two thirds of the high quality rallies. Columbia Value and Restructuring certainly did its best to spoil the story, outperforming its benchmark in all three junk rallies and underperforming its benchmark in two out of three high quality rallies. As mentioned earlier, they did not appear to have any high quality characteristics in the description of their strategy. Broadly speaking, growth managers tend to have more overlap with high quality than value managers because growth managers are by definition looking for high earnings growth, which is one of the high quality characteristics. MPMG, as another example, did not tend to perform better during the high quality rallies the way Riverbridge did, and MPMG appeared to be less harmed by junk rallies than Riverbridge. Despite these exceptions, in general active managers tend to perform better relative to their benchmarks during high quality rallies and suffer in performance relative to their benchmarks more during junk rallies.

As a robustness check, I also examined the 2,188 open-end mutual funds in the Morningstar database that fall under the US Category Group of U.S. Equity with track records that are at least fifteen years to see how many managers out of a larger sample outperformed the broader market over a couple different time periods. As of 9/30/2014, there were only 973 funds out of 2,188 that had positive alphas over the trailing ten years. There were 1,601 funds out of 2,188 that had positive alphas over the trailing fifteen years. Of the 396 actively managed US equity large blend funds, only 106 had positive alphas over the last ten years while 224 had positive alphas over the last fifteen years. Of the 396 actively managed US equity large blend funds, only 111 earned higher mean returns than the S&P 500 (8.03% per year) over the last ten years while 213 earned higher mean returns than the S&P 500 (4.82% per year) over the last fifteen years.⁸ Clearly active managers were more successful over the last fifteen years than they were over the last ten years.

Figure 4 sheds some light on why looking back fifteen years leads to so many more managers generating positive alphas and generally strong performance relative to their benchmarks versus only looking back ten years. The past ten years have featured strong outperformance of low quality stocks over high quality stocks. The last fifteen years have not.

⁸ Morningstar

Figure 4



Predicting the Future

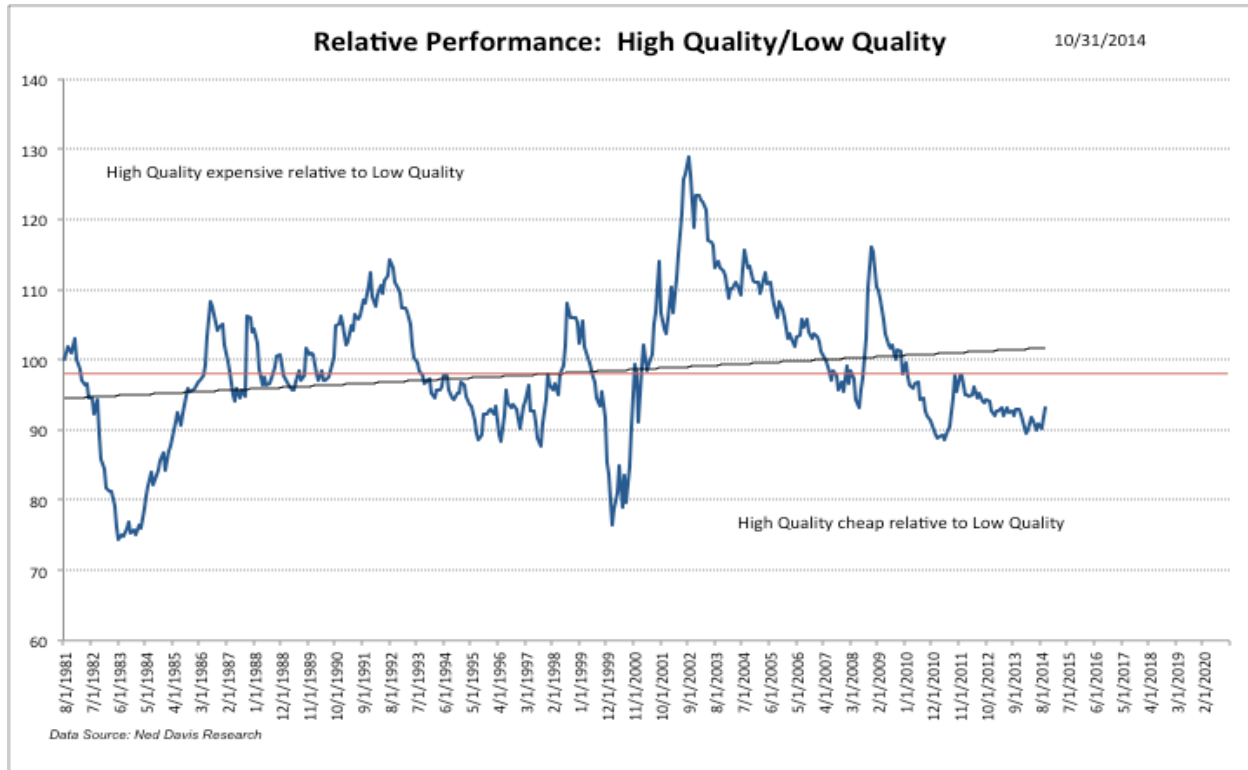
Now that I have established that active managers tend to perform better during high quality rallies than during junk rallies, the next logical question is, “Will high quality outperform or underperform low quality in the future?” I will not pretend that I know for sure which will outperform in the future the way I can know for sure which outperformed over some past time period. However, I will offer a framework for thinking about which is more likely to outperform in the future.

I have found a couple variables that appear to be good at predicting future relative performance between high and low quality stocks. The first variable is a relative valuation variable. The second variable is an interest rate variable. There is actually a third variable that is very strongly correlated to the relative performance between high and low quality stocks, but it is a coincident indicator rather than a leading indicator. If one had the ability to predict future readings of this variable today with extremely good accuracy, that information would be very useful in predicting future relative performance between high and low quality stocks. Unfortunately, no one is likely to have such an extraordinary ability, so this variable is more useful in explaining why high quality performed the way it did compared to low quality over some past time period than it is for predicting the future.

The significance of relative valuations should be obvious. Good valuation metrics are always useful in predicting future performance of any asset. Likewise, good relative valuation metrics are equally useful in predicting future relative performance between two assets. The relative valuation metric used in this model is simply the level of the relative total return index divided by its own log-linear trend. Figure 5 illustrates this. The blue line is the relative total return index (high quality total return index divided by

low quality total return index). The black line is the log-linear trend line. The black line is constructed by running a regression of the natural log of the relative total return index on a time variable that starts at zero and just adds one for each month. The red line is just the average level of the relative total return index (technically the exponential of the average of the series that is comprised of the natural log of the relative total return index observations).

Figure 5



The assumption that is implicit in this relative valuation model is that the trend line that is shown in black will continue to be the trend line for this relative total return index going forward over the long-run. In this case, the trend-line that has been observed in the data shown in Figure 5 that goes back to the early 1980's has a slightly positive slope. This means that the expectation is that high quality stocks will outperform low quality stocks over the long-run. While there is probably not enough data to be able to say definitively whether the slope of the trend line should be positive or negative, the thirty plus years worth of data accumulated thus far indicates that the slope should be positive. Of course, a more conservative assumption that high quality and low quality stocks earn the same return over the long-run would mean the red average line would be the trend line. Whether the black or red line is used, the present conclusion is that high quality stocks are modestly cheap relative to low quality stocks.

The second variable in the model is an interest rate related variable. This is important because one of the characteristics of high or low quality stocks is the amount of debt the issuing company has outstanding. High levels of debt are typically associated with low quality stocks. When interest rates are high, companies with high levels of debt (low quality companies) are punished more harshly for having a lot of debt. Conversely, when interest rates are low, low quality companies have a lot of "cheap" debt. Interest costs are significantly lower. Interest rate levels do not have much impact on high quality

companies because these companies have very little debt, so their interest costs will hardly be impacted by changes in interest rate levels.

The interest rate variable is constructed by taking the natural log of one divided by Baa corporate yields. The Baa corporate yield data comes from the Federal Reserve's H.15 release. These yields are corporate yields for companies whose debt ratings are less than spectacular. Low quality companies with a lot of debt would certainly fall into this category. Much like the earnings yield is the inverse of the price to earnings ratio, one divided by a bond yield is similar to a bond valuation. Taking the natural log of this valuation metric has the attractive quality that the variable is unbounded to the upside and to the downside. This range of possible values is the appropriate range for a variable in a regression equation.

The third variable, which is not as helpful for predicting future relative performance between high and low quality stocks as it is for explaining the past, is the continuously compounded return to the S&P 500. An important distinction between this variable and the first two is that we need the future return to the stock market to be able to predict the future relative performance between high and low quality stocks. Said another way, it is coincident stock market performance that is correlated to relative performance between high and low quality stocks. We do not know today what the stock market will do next month, so this variable cannot help us predict whether high quality or low quality is more likely to perform better next month. Last month's stock market performance is uncorrelated with next month's relative performance between high and low quality stocks. With the valuation and interest rate variables, we can observe last month's readings on those variables and that information tells us something about what relative performance between high and low quality stocks will be this month. Because we do not have that luxury with the stock market performance variable, the usefulness of this variable is in understanding relative performance between high and low quality stocks. Specifically, when the stock market is performing very well, low quality stocks tend to outperform high quality stocks and vice versa. A reasonable explanation for this observation is that stocks tend to perform well during favorable portions of the business cycle. Low quality stocks tend to be more cyclical in nature, meaning they tend to be more sensitive to the overall economy. When the economy is growing strongly as it does during recoveries and expansions in the business cycle, low quality stocks benefit more than high quality stocks. When the economy goes into recession, low quality stocks tend to struggle more than high quality stocks.

Table 3

Predicting One Month Forward LN Relative Returns Between High & Low Quality Indices				
(t-statistics shown in parentheses under coefficients)				
Specification	A	B	C	D
Date Range	6/30/1983 - 9/30/2014	6/30/1983 - 9/30/2014	6/30/1983 - 9/30/2014	6/30/1983 - 9/30/2014
R Squared	0.0240	0.0110	0.0337	0.2750
Alpha	0.0007 (0.5558)	0.0240 (2.0825)	0.0227 (1.9887)	0.0242 (2.4484)
VAL - beta coefficient	-0.0385 (-3.0306)		-0.0375 (-2.9600)	-0.0346 (-3.1492)
INT - beta coefficient		-0.0092 (-2.0418)	-0.0087 (-1.9403)	-0.0084 (-2.1593)
MKT - beta coefficient				-0.2671 (-11.1257)

Table 3 shows the summary results from empirical testing of these different variables in their ability to predict future relative returns to high quality versus low quality. The frequency of the data is monthly. The dependent variable is the natural log of the ratio of the relative total return index (high quality total return index divided by low quality total return index) one month advanced to the current reading of the relative total return index. The VAL variable is the relative valuation variable that compares the relative total return index to the upward sloping trend line shown in Figure 5. The natural log of this relative valuation metric is then used. The INT variable is the natural log of the ratio of one to the current Baa yield. The MKT variable is the continuously compounded one-month forward return to the S&P 500 (including reinvested dividends). The choice to make this a one-month forward return makes it coincident with the one month forward continuously compounded relative return between high and low quality stocks. Neither of these two return data series leads the other one.

VAL has a negative correlation with future relative performance between high and low quality, which is exactly what was expected. When high quality stocks are expensive relative to low quality stocks, high quality stocks should not perform as well compared to low quality stocks going forward. This negative correlation is consistent across all three specifications that include this variable (A, C, and D). The absolute value of the t-statistics in all three specifications that include VAL are around three (greater than two indicates statistical significance), so the correlation with future relative returns between high and low quality appears to be strong, not dependent upon the other variables, and robust.

INT also has a negative correlation with future relative performance between high and low quality stocks, as it should because this indicates that when interest rates are high, high quality tends to outperform low quality. This should be the case because high interest rates hurt low quality more than they hurt high quality. The strength of this correlation is slightly weaker than the strength of the correlation between VAL and future relative performance between high and low quality, but the absolute value of the t-statistics are slightly above two in two out of the three specifications (B and D) and only slightly below in the other specification (C).

MKT has the strongest correlation with future relative returns between high and low quality, which should not be too surprising since it is coincident with the dependent variable and not leading it. Stronger correlations are usually easier to find with two variables that are coincident. The direction of the relationship appears to be consistent with what was expected, namely high quality tends to underperform low quality when the stock market is performing well and vice versa. Specification D, which includes all three variables is helpful in explaining past relative performance between high and low quality since it has a coincident variable with a very strong correlation to the dependent variable.

Specification C is helpful in predicting the future as its two variables, VAL and INT, are both leading indicators of future relative performance between high and low quality. Figure 6 highlights how effective this model has been at predicting future relative performance between high and low quality. The blue line shows the annualized expected relative return between high and low quality. For example, in the early 2000's, the expectation was for high quality to outperform low quality by about 10% per year going forward. From 8/31/2000 to 8/31/2002, high quality stocks returned 5.72% on an annualized basis while low quality stocks returned -16.08% on an annualized basis. This means high quality outperformed low quality by 25.98% per year over this two year time period, which is more outperformance than the roughly 10% (11.39% to be exact) that was expected. Because high quality outperformed low quality by more than expected from 8/31/2000 to 8/31/2002, high quality got expensive relative to low quality by 8/31/2002. On 8/31/2002 the new forward expectation was for high quality to underperform low quality by 10.26% per year. Interestingly, when one index has been expected to outperform the other by 5.5% per year or more, there have been no cases where the index that was expected to outperform actually underperformed over the next two years using data going back to 1983.

As a robustness check, I also estimated the beta coefficients on the VAL and INT variables over the first half of the 6/30/1983 – 9/30/2014 period and again over the second half. In both halves, the beta coefficients were both negative and similar to what they were for the whole time period.

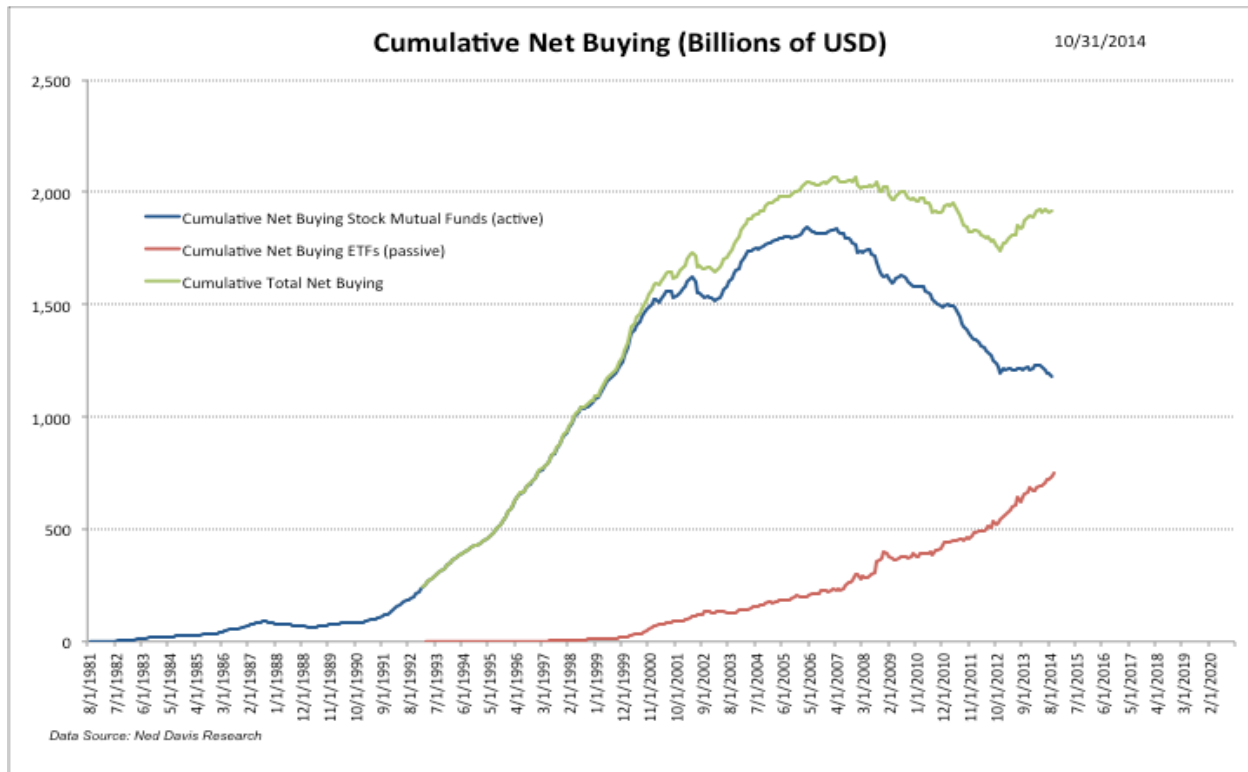
Presently, this model is indicating that there is not much of an advantage for high quality or low quality over the other one. Valuations on high quality look more attractive, but the low interest rate environment, which favors low quality, offsets this valuation advantage.

Figure 6



Figure 7 shows another interesting dynamic. Over the last ten years while passive indices have been outperforming active managers and low quality has been outperforming high quality, money has been flowing out of actively managed mutual funds and into passive ETFs. The data history is fairly short, so incorporating these flows into a variable that relates to relative performance between high and low quality stocks has not been as successful an endeavor as I hoped it would be. However, this trend is still a noteworthy one. It is not clear how much the flows out of mutual funds and into ETFs can be attributed to the newness of the ETF industry and the idea that in the early years growth for these products may be higher and then will “level off” at some point. It is also possible that investors are reacting to the observation that passive management has been outperforming active management and there is an effort to jump on the bandwagon. Perhaps this has to some degree been a self-fulfilling prophecy, and at some point this trade may become too crowded. However, I have not been able to find a good way to gauge how crowded this trade has gotten in a way that has empirical support for being predictive of relative performance between high and low quality stocks.

Figure 7



Conclusion

Active managers do appear to perform better when high quality is outperforming low quality. This dynamic is more pronounced with growth managers than with value managers. The managers White Oaks currently uses appear to demonstrate this feature and a much larger sample of managers also appear to demonstrate this. High quality tends to outperform low quality when it is cheaper, when interest rates are high, and when the stock market is not performing well. Low quality tends to outperform high quality when the opposite is true. In the current environment, there is not much of a prospective advantage for one over the other because high quality is cheaper, but interest rates are low. A few years ago, there was an advantage in favor of low quality, and low quality has subsequently outperformed high quality in recent years. This has created a challenging environment for active managers for the past few years. The next few years should be less challenging for active managers.



Citations

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About the Author

Alex joined White Oaks Investment Management in April 2014 after spending nearly 8 years doing investment research at The Roseline Financial Group in Richmond, Virginia. As an Investment Analyst at White Oaks, he performs investment research, asset allocation of various strategies, assesses client portfolios and assists with overall client communication.

Alex holds a Bachelor of Arts in Economics and a Minor in Mathematics from the College of William and Mary in Williamsburg, Virginia and a Master of Science in Finance from the University of Illinois at Urbana-Champaign, where he specialized in financial engineering. He is also a CFA Charterholder.