Economic Moats and Stock Performance: Is Warren Buffett wrong?

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K. Stephen Haggard
901 S. National Ave., Springfield, MO, USA 65897(shaggard@missouristate.edu)

Stephen Haggard, corresponding author, is a Professor of Finance at Missouri State University.

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Abstract

Warren Buffett champions investing in firms with wide 'economic moats' which protect them from competitors. The Efficient Markets Hypothesis suggests such firms will have their values bid up until any potential excess risk-adjusted returns disappear, eliminating the benefit from investing in such firms. We show that firms with wide economic moats enjoy greater returns than firms with no economic moat but have lower dividend yields – albeit with a faster dividend growth rate. Firms with wide moats do *not* outperform the market. Firms with no moat *underperform* the market. We propose a zero-value long-short portfolio to profit from this disparity while simultaneously eliminating a portion of market risk.

Key Takeaways

- A diversified portfolio of wide-moat firms does not outperform the broader market, as wide-moat firms dominate value-weighted market indices like the S&P 500 due to their large market capitalizations.
- Long positions should not be held in firms with no economic moat, as they underperform the broader market.
- A zero-value portfolio with a long position in wide-moat stocks and a short position in no-moat stocks can be profitable while reducing exposure to market risks. However, the nature of zero-moat stocks requires careful screening of stocks for inclusion in the short position to avoid extreme potential losses and high dividend obligations.

Keywords

Equity returns, competitive advantage, economic moat, mutual funds, Warren Buffett

JEL codes

G11, G12, G14, G23, G24, G35

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Definition and background of economic moat

Michael Porter (1985) laid out five sources of sustainable competitive advantage, which he said contributed to a firm's 'economic moat:' 1) High switching costs prevent customers switching from one product to another (e.g. Apple's iOS), 2) a network effect that increases the value of a good or service as more people use it (e.g., Facebook and LinkedIn), 3) intangible assets (e.g., patents, brand identity), 4) cost advantages (e.g. Walmart), and 5) efficient scale in a market that supports only a few competitors (e.g., FedEx and UPS).

Buffett (1987) popularized Porter's concept of the economic moat, in which one or more sustainable competitive advantages act as a moat to protect the firm from competitors, much like actual moats protected ancient castles from invaders. Buffett (2008) was still promoting the concept 20 years later in his 2007 letter to his shareholders: "A truly great business must have an enduring 'moat' that protects excellent returns on invested capital. The dynamics of capitalism guarantee that competitors will repeatedly assault any business 'castle' that is earning high returns. Therefore a formidable barrier such as a company's being the low-cost producer (GEICO, Costco) or possessing a powerful world-wide brand (Coca-Cola, Gillette, and American Express) is essential for sustained success." (p. 6)

To help investors identify firms with such sustainable competitive advantages, Morningstar (2023) has developed the Morningstar Economic Moat Rating, which they describe as follows:

The Morningstar Economic Moat Rating represents a company's durable competitive advantage. A company with an economic moat can fend off competition and earn high returns on capital for many years to come.

Morningstar has identified five sources of moat. Switching costs are those obstacles that keep customers from changing from one product to another. The network effect occurs when the value of a good or service increases for both new and existing users as more people use that good or service. Intangible assets are things such as patents, government licenses, and brand identity that keep competitors at bay. A company with a cost advantage can produce goods or services at a lower cost, allowing them to undercut their competitors or achieve higher profitability. Efficient scale benefits companies operating in a market that only supports one or a few competitors, limiting rivalry.

A company whose competitive advantages we expect to last more than 20 years has a wide moat; one that can fend off their rivals for 10 years has a narrow moat; while a firm with either no advantage or one that we think will quickly dissipate has no moat.

Brilliant and Collins (2014) expound on 'The Morningstar Approach to Stock Investing' in their work *Why Moats Matter*. In this work, they expand on each of the five sources of economic moat. Additionally, they provide the questions used by Morningstar analysts to help determine the width of a firm's economic moat, if any. For example, when analyzing intangible assets, they ask the following questions (p. 18-19):

1. *How do you quantify the strength of the brand? What is the pricing power the brand conveys? What is the premium that the company can charge relative to competitors?*
2. *Is the premium offset by higher costs?*
3. *How do the company's margins compare with competitors that don't have strong brands?*
4. *What gives you the confidence that the brand strength, the premium pricing, and the higher operating margins are sustainable for 10-20 years?*

Morningstar (2023) makes the claim that the 'Morningstar Economic Moat Rating can help you uncover companies that will provide superior long-term returns.' However, in an efficient market, if firms with wide economic moats provided superior risk-adjusted returns, investors would simply bid up the price of such firms until such superior returns were eliminated.

Prior studies

The empirical evidence on the value of wide economic moats is mixed. Boyd (2005) appears to be the first to examine the financial performance of wide-moat firms. The author examines the 85 firms (at the time) that Morningstar designated as having wide economic moats and documented outperformance by these firms. However, his approach was simplistic and used simple return quantiles to examine whether these wide-moat firms outperformed, and did not perform any multivariate analysis to control for important differences among firms.

Boyd and Quinn (2006) examined wide-moat, narrow-moat, and no-moat firms as defined by Morningstar and found higher returns and lower volatility for wide-moat firms at the ten-year level, but not at the five-year level, consistent with Morningstar's prediction (Larson, 2004). Once again, Boyd used a simplistic approach and did not perform multivariate analysis.

Kanuri and McLeod (2016) examined individual wide-moat stocks and determined that, over the period from 2002 to 2014, such stocks outperformed based on total returns and risk-adjusted returns, especially during the 2007-2009 financial crisis. They also report the tendency of wide-moat firms to have large market capitalizations. Liu and Mantecon (2017) report that investing in firms with wide economic moats does not earn higher total returns but does earn higher risk-adjusted returns. They report that the higher total returns of their no-moat sample were due to the stellar performances of a handful of penny-stock outliers. Similarly, Manditch (2018) compared Morningstar-analyzed stocks with wide moats and stocks with no moat and reports that wide-moat stocks underperform no-moat stocks from a total return perspective.

Considering the mixed conclusions of prior studies, we think another examination of economic moat and financial performance is in order. In this study, we use a large sample and a

multivariate approach to disentangle the effects of economic moats, firm size, stock exchange listing requirements, and economic sector on nine performance variables: Total annualized return (1, 5, and 10 year), net income growth (1 and 3 year), revenue growth (1 and 3 year), dividend growth (5 year), and dividend yield.

Data discussion and sample descriptive statistics

We downloaded data from Morningstar on August 15, 2024. We exclude stocks with exchanges other than NYSE and NASDAQ to eliminate small stocks with low liquidity. Further, we require each firm to have a rating of None, Narrow, or Wide Economic Moat. After imposing these restrictions, we are left with 5,304 observations, 295 of which have a wide economic moat and 1,090 have a narrow economic moat. Most firms in the sample have no economic moat.

In Table 1, we report descriptive statistics for all three moat categories and the full sample. We include *t*-statistics for each regression coefficient. *t*-statistics with magnitude > 1.64 represent statistical significance at the 10 percent level, magnitude > 1.96 represents statistical significance at the 5 percent level, and magnitude > 2.58 represents statistical significance at the 1 percent level. Significant results are represented in bold in the table below.

Table 1. Arithmetic means for variables of interest

Variable	Wide	Narrow	None	All	Wide - None	*t*	Narrow - None	*t*
Market Cap (Millions)	151509.35	13243.23	3183.18	13500.24	**148326.17**	**26.37**	**10060.05**	**3.15**
NYSE	0.63	0.50	0.32	0.37	**0.31**	**11.02**	**0.19**	**11.60**
Dividend Growth 5 Yr	9.68	8.06	5.80	6.91	**3.88**	**2.99**	**2.27**	**2.30**
Dividend Yield	1.65	2.58	4.28	3.52	**-2.63**	**-11.22**	**-1.69**	**-9.87**
Net Income Growth 1 Yr	27.54	33.48	18.23	24.16	9.32	1.22	**15.25**	**2.92**
Net Income Growth 3 Yr	23.75	23.66	21.84	22.65	1.91	0.44	1.81	0.57
Revenue Growth 1 Yr	7.66	25.59	37.54	33.45	-29.87	-1.60	-11.95	-1.11
Revenue Growth 3 Yr	12.40	18.48	23.88	22.17	**-11.49**	**-2.53**	**-5.41**	**-1.94**
Total Return 1 Yr	18.33	13.78	-3.31	1.47	**21.64**	**5.70**	**17.09**	**7.74**
Total Annual Return 5 Yr	14.57	10.08	-6.46	-1.35	**21.03**	**15.14**	**16.55**	**18.14**
Total Annual Return 10 Yr	14.95	8.23	-3.78	0.71	**18.73**	**18.24**	**12.01**	**16.82**
n	295	1,090	3,919	5,304				

Market capitalization is greatest for firms with wide economic moats, then for firms with narrow economic moats. The difference with no-moat firms is economically large and statistically significant. This result is unsurprising for at least two reasons. First, firms with economic moats might outperform rivals and create additional value as a result. Second, greater firm size contributes to wider economic moats through economies of scale, which produces a cost advantage, and efficient scale, which limits competition. We also observe a greater

propensity of firms with wide economic moats to list on NYSE. 68% of all wide economic moat firms are listed there, compared to 50% for narrow-moat firms, and 32% for no-moat firms.

We observe several statistically significant financial performance differences in our sample. Both wide- and narrow-moat firms enjoy faster dividend growth. However, this faster growth might be due to the lower dividend yields of these two groups of stocks. Profitable firms with lower dividend yields likely face investor pressure to disgorge more cash, leading to faster dividend growth for such firms. One-year net income growth is greater for narrow-moat firms but surprisingly not for wide-moat firms. Three-year revenue growth is significantly lower for both wide-moat firms and narrow-moat firms. This result, which might be surprising at first, could be due to the large size of firms with wider economic moats. Rapid growth in percentage terms is easier from a lower base.

Of course, the goal of financial management is to maximize shareholder wealth, so the total return measures are of greatest interest. We examine one-, five-, and 10-year returns and find them all to be substantially higher for firms with economic moats than for those without. One-year annual returns are 21.64% higher for wide-moat firms and 17.09% higher for narrow-moat firms than for those with no economic moat. Five-year annual returns are 21.03% higher for wide-moat firms and 16.55% higher for narrow-moat firms than for those with no economic moat. 10-year annual returns are 18.73% higher for wide-moat firms and 12.01% higher for narrow-moat firms than for those with no economic moat. These differences, while impressive, are less so after recognizing that no-moat stocks have negative average returns in all three examined timeframes.

The excess performance of firms with wide economic moats is impressive, but it might be due to clustering of economic moat firms in high risk, high reward sectors. The following table provides a breakdown of the sample into the eleven Morningstar sectors present in the sample.

Table 2. Number of firms and market capitalization by moat and sector

	Wide Moat		Narrow Moat		No Moat		Total	
Sector	**n**	**Mkt Cap (MM)**	**n**	**Mkt Cap (MM)**	**n**	**Mkt Cap (MM)**	**n**	**Mkt Cap (MM)**
Basic Materials	12	660,285.29	50	550,577.55	159	795,214.88	221	2,006,077.72
Communication Services	10	6,197,583.45	55	973,896.40	196	516,836.44	261	7,688,316.29
Consumer Cyclical	33	4,620,138.14	131	1,182,976.34	406	1,290,228.91	570	7,093,343.39
Consumer Defensive	31	3,167,832.56	43	608,785.60	166	436,297.52	240	4,212,915.68
Energy	5	147,636.86	45	1,832,600.65	176	1,602,702.41	226	3,582,939.92
Financial Services	25	3,959,276.46	267	3,279,160.89	614	3,392,329.81	906	10,630,767.16
Healthcare	40	6,137,843.08	102	1,431,018.29	993	925,605.85	1,135	8,494,467.22
Industrials	75	3,679,546.38	173	1,262,863.15	374	621,001.51	622	5,563,411.04
Real Estate	1	30,137.93	23	446,781.35	226	1,141,046.12	250	1,617,965.40
Technology	63	16,094,979.36	155	1,744,663.97	542	1,331,810.72	760	19,171,454.05
Utilities	0	-	46	1,121,795.69	67	421,826.69	113	1,543,622.38
Total	295	44,695,259.51	1090	14,435,119.88	3919	12,474,900.86	5,304	71,605,280.25

Firms with economic moats are not uniformly distributed across the economic sectors as defined by Morningstar. The greatest number of wide-moat firms can be found in the Industrials sector, but the largest market capitalization, by a large margin, is in Technology. (One caveat: Industrial firms tend to utilize more leverage than technology firms, so some of the disparity in apparent firm size between these two sectors might be due to balance sheet differences.) The Real Estate sector contains only one firm with a wide economic moat, while the Utilities sector contains none, illustrating the difficulty of creating wide economic moats in these sectors. Lastly, we observe that although wide moat firms are fewest in number, they are greatest in market capitalization, representing only 5.56% of sample firms, but 62.42% of sample firm market capitalization.

Multivariate analysis

To disentangle the financial performance impact of economic moat width from other potential factors, we perform an ordinary least squares regression using the following model:

$$Performance = \beta_0 + \beta_1 MarketCapMM + \beta_2 NASDAQ + \beta_3 SectorVector + \beta_4 NarrowEM + \beta_5 WideEM + \varepsilon$$

Where *Performance* = the performance variable (return, growth, yield),

MarketCapMM = firm market capitalization in millions of USD,

NASDAQ = indicator with value of 1 for NASDAQ firms, 0 otherwise,

SectorVector = a vector of indicator variables for all sectors except Utilities,

NarrowEM = indicator with value of 1 for firms with narrow economic moats

WideEM = indicator with value of 1 for firms with wide economic moats, and

ε = error term.

We exclude Utilities from the Sector vector to avoid over-specifying the model. We report regression coefficients for NarrowEM and WideEM below by performance variable. The reported coefficients represent the difference in NarrowEM firm and WideEM firm performance compared to firms with no economic moat. These coefficients are reported as percentages. We include *t*-statistics for each regression coefficient. *t*-statistics with magnitude > 1.64 represent statistical significance at the 10 percent level, magnitude > 1.96 represents statistical significance at the 5 percent level, and magnitude > 2.58 represents statistical significance at the 1 percent level. Significant results are represented in bold in the table below. Complete regression results are available on request.

Table 3. Multivariate analysis results

Measure	WideEM	*t*	NarrowEM	*t*
Dividend Growth 5 Yr	**3.43**	**2.33**	1.23	1.18
Dividend Yield	**-1.53**	**-6.04**	**-1.13**	**-6.51**
Net Income Growth 1 Yr	5.68	0.67	**15.79**	**2.94**
Net Income Growth 3 Yr	-1.09	-0.23	0.15	0.04
Revenue Growth 1 Yr	-15.88	-0.78	-1.73	-0.16
Revenue Growth 3 Yr	**-10.91**	**-2.2**	-3.97	-1.38
Total Return 1 Yr	**13.12**	**3.21**	**12.07**	**5.38**
Total Annual Return 5 Yr	**16.15**	**11.36**	**13.73**	**15.55**
Total Annual Return 10 Yr	**16.99**	**16.2**	**11.38**	**16.6**

Like our univariate results, we find significantly higher dividend growth for wide-moat firms than for no-moat firms. The same difference for narrow-moat firms loses significance once we control for other firm characteristics. Both wide- and narrow-moat firms continue to display significantly lower dividend yields than no-moat firms, consistent with our earlier results. Also consistent with our prior results, one-year net income growth is significantly higher for narrow-moat firms, but not for wide-moat firms. Also like our univariate analysis, three-year revenue growth is significantly lower for wide-moat firms, even after controlling for size. The difference in three-year revenue growth for narrow-moat firms loses significance once we include control variables.

Controlling for other firm characteristics including economic sector reduces our estimated return differences for both wide- and narrow-moat firms. One-year annual returns are 13.12% higher for wide-moat firms and 12.07% higher for narrow-moat firms than for those with no economic moat. Five-year annual returns are 16.15% higher for wide-moat firms and 13.73% higher for narrow-moat firms than for those with no economic moat. 10-year annual returns are 16.99% higher for wide-moat firms and 11.38% higher for narrow-moat firms than for those with no economic moat.

Practical implications and proposed investment strategy

We have demonstrated that firms with wide economic moats outperform firms with no economic moat. Does this imply that wide-moat firms outperform the market? To find out, we compare the return statistics on the *Morningstar Wide Moat PR USD* index with the return statistics of the S&P 500. As shown in Table 4 below, these return statistics are materially the same. This result is at odds with the findings of Kanuri and McLeod (2016), likely because of the superior performance of wide-moat stocks during the financial crisis of 2007-2009, which falls outside of our sample period.

Table 4: Comparison of Morningstar benchmark indices

Index	Total Annual Return 1 Yr	Total Annual Return 5 Yr	Total Annual Return 10 Yr
Morningstar Wide Moat PR USD	14.97	12.71	13.55
S&P 500 TR USD	15.05	12.86	14.82

In other words, firms with wide economic moats do *not* outperform the market, but firms with no economic moats *underperform* the market. Perhaps this explains the dearth of wide economic moat funds reported by Morningstar. There are only four, all of which are actively managed and have substantial expenses. Perhaps a passively managed index fund based on the Morningstar Wide Moat PR USD with lower expenses could be marketed to Warren Buffett acolytes and draw funds away from the current crop of actively-managed wide-moat mutual funds.

Why is the performance of wide economic moat firms so similar to the performance of the overall market? As discussed previously, such firms tend to have high market capitalizations, making them more likely to be included in the S&P 500 and weighted more highly once included. So how, then, can we use our newfound knowledge to earn a profit? We can form a zero-value portfolio long in wide economic moat firms and short in firms with no economic moat. Because of differences in the compositions of these two groups, the hedge formed by this long-short portfolio will not be perfect, but will eliminate a material portion of market risk while providing positive returns.

Building the short position of the portfolio will be hindered by at least three difficulties. First, no-moat stocks tend to have lower market capitalizations, likely resulting in lower

institutional ownership and, therefore, fewer shares available to borrow for short-selling. Second, no-moat stocks tend to have higher dividend yields. Short sellers borrowing stock are responsible for the payment of all dividends on borrowed shares, leading to a situation where the dividends received on the long position will not be enough to offset the dividends owed on the short position. Finally, the potential for outsize returns on penny stocks in the no-moat short position as reported by Liu and Mantecon (2017) could create extreme losses. Careful screening of non-moat stocks for the short position will help to minimize these issues.

Conclusion

Our research provides valuable insights regarding Warren Buffett's investment strategy of focusing on firms with wide 'economic moats' and its implications in the context of the Efficient Markets Hypothesis. The findings of our study offer several important conclusions. First, we demonstrate that companies possessing wide economic moats do indeed outperform those without such sustainable competitive advantages in terms of overall returns, lending credence to Buffett's investment philosophy and suggesting that economic moats continue to be a relevant factor in assessing a company's long-term value. However, it is important to note that firms with wide moats do not necessarily outperform the broader market.

Our research also shows that companies with wide economic moats tend to have lower dividend yields compared to their counterparts without moats. Firms with wide economic moats compensate for their lower initial dividend yields with faster dividend growth rates, potentially offering long-term value to income-focused investors.

A significant finding of our study is that firms lacking economic moats underperform the market, underscoring the importance of sustainable competitive advantage in sustaining long-term business success and shareholder value. We propose a zero-value long-short portfolio strategy with a long position in wide-moat firms and a short position in zero-moat firms. This approach aims to capitalize on the performance disparity between these two groups of firms, while simultaneously reducing market risk exposure.

In conclusion, while the presence of economic moats does not guarantee market-beating returns, it remains a valuable indicator of company performance and stability. Our findings contribute to the ongoing dialogue between proponents of value investing strategies and advocates of efficient market theories, suggesting that there might be opportunities for savvy investors to leverage these insights in their portfolio management strategies.

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