Do Value and Growth Matter in Wide-Moat Firms?

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ABSTRACT

This paper explores the growth multiples, i.e., P/E and Price to Cash Flow ratios, influencing the firms with the moat. It examines the Morningstar wide-moat firms from August 2016 to July 2019 after controlling for risk-adjusted factors and financial variables. The findings reveal that growth multiples have explanatory power in explaining excess returns for wide-moat firms. Price to Cash Flow contributes more to this excess return. The evidence shows that wide-moat firm performance is more reconciled to the growth opportunities due to their intrinsic strengths. Furthermore, the tariff policy introduced in July 2018 is a detrimental factor even for sustainable competitive firms.

JEL Classification: G10, G11, G12

Keywords: Economic Moat, Excess Stock Returns, Wide-Moat Firms

INTRODUCTION

The Oracle of Omaha, Warren Buffet's famous 'moat' analogy for a firm, has been a defining notion for sustainable competitive advantage and superior stock performance in the capital markets. An economic moat can be of various forms, such as brand, pricing power, cost advantages, and operations, for consistent growth and performance of a firm. Portfolio managers have adapted strategies to create a portfolio of moat stocks derived from the moat analogy (Dorsey, 2004).

The asset pricing studies show that stock prices are affected by growth, capital employed, profitability, and cash flows (e.g., Fama & French, 2006; Novy-Marx, 2013; Asness, Frazzini, & Pedersen, 2019). They are linked with the economic consequences of a firm influencing the stock price. Literature notes that a successful firm does not have to produce fabulous profits. Broadly, it has considerable and sustainable competitive advantages over its competitors.

The notion of an economic moat is based on competitive advantages and the edge a firm derives in its businesses. Moat is considered a sound quality that determines competitive positioning and sustainable competitive advantages. It is not appraised based on financial parameters or potential income and profits. Nevertheless, it offers valuable insight into the prospects and opportunities for investors in a highly competitive business world. Liu and Mantecon (2017) suggest that investors benefit from firms with higher growth potential. However, the moat firms have a higher Sharpe ratio and are guarded against a mean reversal of profitability. They compare the performance of wide-moat stocks to that of no-moat stocks and find that firms with no competitive advantages outdid the performance of wide-moat stocks. In this study, the paper uses popular measures of investors' analysis of firm performance, i.e., P/E and Price Cash Flow ratios, to shed light on the moat stocks' performance and their enduring competitive advantages.

The price-to-earnings ratio (P/E ratio) measures the stock's or index's valuation and performance. A higher ratio indicates that a stock is valued higher than its earnings. High P/E ratio stocks are considered growth investments, while below-average P/E ratio stocks are treated as value investments. Prior studies confirm that smaller P/E stocks perform better than higher P/E stocks (Fama & French, 1992; Campbell & Shiller, 1998; 2001). Another multiple used in the stock valuation is the Price to Cash Flow ratio. This ratio is a preferred choice for investors to measure a firm's stock value with significant non-cash expenses. Further, a firm's cash flows must be controlled. A lower multiple of price to cash flow is considered an undervalued firm. Both multiples provide growth perspectives and offer investors valuable insights into the firm's performance.

This study contributes to the literature on asset pricing and sustainable investments by empirically examining Morningstar's wide-moat firms of the S&P 500 index from August 2016 to July 2019. It attempts to answer three questions. Whether wide-moat stocks still make a superior return. Can multiples like P/E or Price to Cash Flow explain the superior returns for these firms? Tariff measures imposed in July 2018 affect the cross-section returns of wide-moat firms. The findings suggest that wide-moat stocks outperform the S&P 500 index. The growth multiples, i.e., P/E and Price to Cash Flow ratios, play a significant role in excess stock returns. Trade tariffs dispute negatively affect wide-moat firms. However, they still outperform the S&P 500 firms.

The rest of the paper proceeds as follows: Section II reviews the literature, Section III explains the data and methodology; Section IV reports the empirical analysis; Section V provides the conclusions and concedes limitations.

LITERATURE REVIEW

An economic moat indicates that a firm has a distinct long-term advantage to safeguard its market, business, competition, and profitability. Investors always look for a firm that has a substantial and sustainable competitive advantage in its business for investment. Using the moat analogy, the investors select the firms for their investment portfolio or restructure it to get better returns. Economic policies, technologies, crises, and macroeconomic factors can change the moat advantages.

Competitive advantage literature distinctly validates that a firm's competitive advantages provide an edge in its businesses and favorable competitive positions resulting in more stockholder wealth (Porter, 1985; Barney, 1991; Powell, 1992; Newbert, 2008). Investors show the tendency of flight to quality behavior in their investment portfolio. Firms with competitive advantages are considered high-quality stocks. Investors are concerned about their portfolio performance in a crisis-like situation. They actively attune the portfolios towards high-quality stocks and tend to increase their weights.

Wide-moat portfolios are outperforming the benchmark indices. They exhibit superior returns after adjusting the risk premiums. Boyd and Quinn (2006) find that investors receive higher returns from wide-moat firms. These firms have an advantageous position from their competitive positions resulting in superior earnings and stock return. Kanuri and McLeod (2016) conclude that investors receive higher value from wide-moat firms. They show evidence that the wide-moat portfolio outperforms the benchmark indices substantially.

Literature reveals that higher leverage, the book-to-market ratio, the firm's size, and earnings affect the performance of stocks. Investors treat these firms as risky and expect their returns and financial performances accordingly. However, Qualities such as superior gross profitability, improved earnings quality, or higher operating performance have shown enduring superior returns (Chan et al., 2001; Mohanram, 2005; Ball et al., 2015, Asness, Frazzini, & Pedersen, 2019). These qualities are reflected in the moat stocks; therefore, wide-moat firms would have more substantial performance.

Recent studies on moats include Environmental, Social, and Governance (ESG) criteria to make a case for better firm performance. Azeem et al. (2021) find that organizational culture, innovation, and knowledge sharing promote competitive advantages and business operational success. Wan and Wasiuzzaman (2021) conclude that ESG disclosure, coupled with a competitive advantage, gives a firm improved financial performance. Yu (2022) finds that even in a crisis-like situation such as COVID–19 pandemic, wide-moat stocks perform better than other stocks. However, the abnormal returns generated by these stocks diminish over a longer time horizon.

Factor-based investing help enhances portfolio performance, decreases volatility, and improves diversification. Investors have used factor models to evaluate portfolio performance. Most factors are not significantly correlated with one another, driven by

dissimilar market anomalies, and they pay off at different periods. Kanuri and McLeod (2016) use the factor models in analyzing wide-moat stocks and find that moat stocks maintain a significant level of abnormal returns with factor models. The literature shows several factor models for evaluating portfolio performance. Fama and French (1993) advanced the three-factors model to explain the cross-sectional stock returns. Carhart (1997) offered a four-factor model, and Fama and French (2015) presented a five-factor model to explain the portfolio's risk return.

DATA AND METHODOLOGY

Morningstar has rated the firm as an economic moat since 2002 based on its sustainable competitive advantage criteria and not only on accounting or financial information. The sample firms span from August 2016 to July 2019 from the S&P 500 Index. The wide-moat categories firm's data are obtained from the proprietary data maintained by Morningstar. It uses four criteria to define an economic moat of a firm, i.e., switching costs for clients, cost advantages, intangible assets, and network effect. It categorizes the stocks based on moat size, i.e., wide-moat stock having superior competitive advantages, narrow-moat stock having some competitive advantages, and no-moat stock. It keeps updating its list of moat firms regularly.

Other variables of the sample firms are also obtained from Morningstar. The Fama-French factors data are obtained from the website of Fama and French (https://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html). This paper focuses on the S&P 500 index firms. Morningstar classifies 118 firms as wide-moat firms from the index during 2016. These firms and the rest of the S&P 500 index firms' monthly data are obtained from Morningstar.com. Studies suggest that Morningstar has provided economic moat analysis and a list of firms to advance superior value for investors (Lopez (2003); Larson (2004); Trigg (2005)).

The following regression model estimates the cross-sectional stock returns of the sample firms:

$$Y_{i,t} = \alpha_i + \beta_j P/E_{i,t} + \beta_p P/CF_{i,t} + \sum \gamma_k Z_{k,t} + \sum_i \psi_i FM_{i,t} + \varepsilon_{i,t}$$

where $Y_{i,t}$ is the monthly stock premium or excess stock return., P/E_i and P/CF_i are P/E ratio and Price to Cashflow ratio; Z_k is a vector of k control variables of the sample firms; FM_i is a vector of factors model. The model controls for the fixed effects to account for autocorrelation in the residuals.

EMPIRICAL ANALYSIS:

To explore the characteristics and performance of wide-moat firms, the paper compares their variables to those of the S&P 500 Index firms. Table 1 presents the summary of the descriptive statistics. Panel A summarizes the S&P 500 Index firms during the sample period. Panel B presents the summary of the wide-moat firms. The mean and median monthly stock returns (1.45%; 1.62%) of wide-moat firms are higher than those of the S&P 500 Index firms (1.11%; 1.23%). The excess stock return of the S&P 500 Index firms is lower at a median level of 0.03% compared to wide-moat firms

(0.30%). The mean stock and excess returns are annualized for S&P 500 Index and wide-moat stock firms. They show that wide-moat firms have better stock and excess returns (4.70% and 4.28%, respectively).

When the standard deviations of stock and excess returns are compared, wide-moat firms (6.10% and 5.06%) have lower return variations than the S&P 500 Index firms (7.08% and 6.10%, respectively). Similarly, all other variables of the S&P 500 Index are lower. In the debt-to-capital ratio, both groups are not significantly different. Thus, the preliminary evidence suggests that wide-moat firms have slightly better financial measures. The analysis suggests that the performance of wide-moat firms would not quickly settle with risk-adjusted rationalizations. The lower standard deviation would be challenging to produce a higher additional stock return.

The Table 2 reports the correlation statistics. A strong correlation exists between monthly and excess stock returns. Other pairs of variables do not show a high level of correlation with each other. However, the paper uses the variance inflation factor to confirm if there is any multicollinearity issue among explanatory variables.

Factors models are frequently used for evaluating portfolio performance. Literature documents that several accounting variables explain the cross-sectional stock return apart from systematic risk. Fama and French (1992) offer that book-to-market ratio and size variables are significant factors in explaining cross-sectional stock returns. The sample firms, i.e., S&P 500 Index and wide-moat firms, are more prominent in size. They have a lower book-to-market ratio. First, the paper analyzes the monthly stock premium (stock return minus risk-free rate) and several factor models. Table 3 reports the estimates of the next factor alphas with these models; three-factor alpha using Fama and French model (1993), four-factor alpha using Carhart's model (1997), five-factor alpha using Fama and French model (2015), and five-factor plus momentum alpha as model envisaged by Fama and French (2018).

The results of Table 3 show that all alphas of these factors are positive and significant, suggesting superior performance delivered by wide-moat firms. The results are consistent with the findings of Kanuri and McLeod (2016). When the alphas are annualized, it suggests that wide-moat firms provide an average of 3.50% above returns after controlling for factors. The results indicate that wide-moat firms offered investors considerable value during the sample period.

Now, the paper includes two multiples in the factor models to examine the effect of multiples on the stock premium or excess return. The sample firms are big, members of the S&P 500 Index, and widely followed stocks. Therefore, the P/E ratio and Price to Cash Flow ratio help explain superior performance. Studies show the linkage between these multiples and capital market reactions. Investors react to the multiples change when the firm reports financial information. Any change in multiples leads to the price effect in the stocks. Ramcharran (2002) notes that most investors prefer to invest in firms based on the P/E ratio and higher growth expectancy.

Table 4 presents the results of the multiples with factors model. Model 1 of Table 4 shows that when the P/E ratio and Price to Cash Flow ratio are included in the model along with five factors, the estimates of multiples (0.004; 0.045) are positive and significant for S&P 500 Index firms, while the alpha becomes negative. Only the Price to Cash Flow ratio is positive and significant for no-moat firms, as shown in Model 2 of Table 4. The regression analysis is performed for wide-moat firms (Model 3 of Table 4);

both multiples are positive and significant. The results show that the estimates of the P/E ratio (0.006) and Price to Cash Flow ratio (0.049) for wide-moat firms are more significant than those of the S&P Index firms. When the same model is regressed with excess stock return as the dependent variable (Model 4-6 of Table 4), the results are similar to models for stock premium. Excess stock return is another measure of return to corroborate the results observed for stock premiums.

Thus, the evidence indicates that both multiples have explanatory power in the cross-sectional variation in wide-moat stock returns after controlling for risk-adjusted factors. Price to Cash Flow is positive and significant in all portfolios. The results imply that both multiples' significance and magnitude, when factored in wide-moat firms, can provide superior performance for investors.

Prior studies document several financial variables that show a stock performing well, and winners can be identified (Lev and Thiagarajan 1993 and Piotroski 2000). Most of these variables signal the firm'sfirm's improved stock returns and more vital financial conditions. Table 5 reports the estimates of the multiples for wide-moat firms with financial variables as controlled measures. Model 1 of Table 5 shows that both multiples, i.e., P/E ratio and Price to Cash Flow, continue to be positive and significant with the stock premium. After controlling for financial measures, growth multiples positively affect wide-moat firms. It is clear that sustainable competitive firms, as measured by wide-moat, reward better to their investors.

The rest of the models' results are similar to Table 4 of the factors models. Likewise, the regression results exhibit that the estimates of both multiples for wide-moat stocks are more prominent than those of S&P 500 Index firms or no-moat firms. Therefore, the multiples provide signals of their role for investors even in the case of wide-moat firms when financial variables are controlled. Nevertheless, the outcome is firmer for wide-moat firms, as observed in Models 3 and 6 of Table 5.

It is crucial to explore how both multiples perform in a risk-adjusted model with five factors and control variables. Table 6 shows the causal relationship of multiples with excess stock returns. Model 1 of Table 6 reveals that both multiples are positive and significant with the excess stock returns. Even after combining the five factors of Fam and French (2015) with the control variables, the estimates of multiples remain strong, positive, and significant. When the regression analysis is performed on no-moat firms (Model 2 of Table 6), Price to Cash Flow is positive and significant, as noted in Tables 4 and 5. In the case of wide firms, as shown in Model 3 of Table 6, the estimates display that both multiples are positive and significant with excess stock returns. However, the Price to Cash Flow coefficient is bigger than the P/E ratio. It denotes that Price to Cash Flow contributes to risk-adjusted returns more sustainably. Thus, the multiples are significantly and positively priced in all models for wide-moat firms, suggesting that wide-moat firms provide superior stock performance due to growth outlook, maintaining all other factors constant.

During the sample period, the U.S. Government imposed tariffs, particularly on imports from China. It is persuasive to examine whether the tariff imposition affects the wide-moat firms. Therefore, a dummy variable is included in Model 4 of Table 6, where the pre-July 2018 period is considered 0 and otherwise 1. For S&P 500 Index firms, the coefficient of trade dummy is negative and significant with the excess stock return suggesting that investors recognize the tariffs as a negative factor in excess stock return.

In the case of no-moat or wide-moat firms, the coefficient of the trade dummy is negative but not significant. The tariffs negatively affect all sample firms, including sustainable competitive firms. Further, it is worth noting that the economic moat is a significant feature in excess stock return.

Lastly, the paper performs a robustness check to determine whether both multiples remain positive and significant under logistic regressions. Model 1 of Table 7 shows that the P/E ratio and Price to Cash Flow ratio are positive and significant. The results remain consistent with the fact that Price to Cash Flow has a higher effect on the wide-moat firm's higher performance. When the trade dummy is included in Model 2 of Table 7, the results continue to show the estimates of multiples positive and significant, while the trade dummy is negative and significant.

Overall, the findings clearly show that the P/E ratio and Price to Cash Flow ratio are important variables in explaining the superior performance of wide-moat firms. Further, the tariffs imposed in July 2018 are a drawback for firm performance.

CONCLUSION

This paper studies the wide-moat firms and empirically analyzes their relationship with the multiples, specifically the P/E ratio and Price to Cash Flow. Investors realize that wide-moat firms show superior performance due to their sustainable competitive advantages. This study goes beyond the factors and accounting measures and focuses on understanding the growth characteristics of the firms in identifying improved stock performance.

The paper finds that wide-moat firms provide excess return under risk-adjusted factors. The cross-sectional performance is evident in the stock premium or excess stock returns. The annualized excess returns, i.e., alpha, are around 3.50%. They shield their better performance even after controlling for financial variables affecting cross-sectional stock returns. When the multiple growth characteristics, i.e., P/E ratio and Price to Cash Flow, are included in the regression analysis, both multiples are positively and significantly related to stock premium or excess stock returns. The estimates of these variables for wide-moat firms are more prominent than those of the market index firms. When no moat firms are examined with multiples, Price to Cash Flow has a positive and significant relationship with the stock performance.

The paper further analyzes the enhanced stock performance of wide-moat stocks after controlling for risk-adjusted factors and financial variables. The multiples continue to show a significant and positive relationship with stock returns. When a tariff dummy is included to test the effect of the tariffs on the wide-moat firms, the findings suggest that investors perceive the tariff imposition as a negative feature. The evidence demonstrates that wide-moat firm performance is more reconciled to the growth opportunities due to their intrinsic strengths.

Limitation of the Paper

The P/E ratio cannot be employed for a loss-making firm. Similarly, Price to cash flow does not apply to a negative cash flow firm. Smaller firms are inherently excluded since Morningstar invariably shuns small firms considering a moat firm due to its criteria.

This paper uses the sample data only from the S&P 500 Index. Morningstar has wide-moat firms outside this index.

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Table 1: Descriptive Statistics

This table summarizes descriptive statistics of variables used in the study. Stock return is the monthly stock return. Excess stock return is the difference between stock return and S&P 500 index return. The P/E ratio is the market value of a stock to profit earning per stock. The price to Cash Flow Ratio is the market value of a stock to the operating cash flow per stock. A sustainable growth rate is computed by multiplying a firm's dividend retention rate by its return on equity. Debt to capital ratio is computed by dividing a firm's total debt by its total capital (total debt + total stockholders' equity). Cash flow per share is computed as (operating cash flow minus preferred dividends) divided by total outstanding common stocks. Return on equity is computed by dividing net income by total stockholders' equity. Panel A presents the statistics for all firms in the S&P 500 index. Panel B shows the statistics for the wide-moat firms' sample.

Panel A: S&P 500 Index Firms

Variables	N	Mean	Median	Standard Deviation	Minimum	Maximum
Stock Return	17996	1.11	1.23	7.08	-19.26	20.84
Excess Stock Return	17996	-0.01	0.03	6.10	-17.01	17.61
P/E Ratio	16577	32.21	22.71	47.88	6.34	364.20
Price to Cash Flow Ratio	17678	16.79	14.61	11.35	3.07	78.98
Sustainable Growth Rate	14508	0.15	0.11	0.23	-0.23	1.58
Debt to Capital Ratio	17011	43.78	42.82	20.93	1.33	96.26
Cash Flow per Share	17975	7.17	5.48	6.67	-0.71	46.68
Return on Equity	17284	14.90	15.09	10.19	-11.92	26.60

Panel B: Wide-moat Firms

Variables	N	Mean	Median	Standard Deviation	Minimum	Maximum
Stock Return	4178	1.45	1.62	6.10	-19.26	20.84
Excess Stock Return	4178	0.34	0.30	5.06	-17.01	17.61
P/E Ratio	4096	33.65	25.21	39.20	6.39	364.20
Price to Cash Flow Ratio	4143	19.71	18.33	9.63	3.07	78.98
Sustainable Growth Rate	3463	0.22	0.14	0.31	-0.23	1.58
Debt to Capital Ratio	3859	45.87	42.74	23.09	1.33	96.26
Cash Flow per Share	4176	7.57	5.74	7.43	-0.71	46.68
Return on Equity	3916	19.64	22.87	8.19	-11.92	26.60

Table 2: Correlation Statistics
This table describes pairwise correlation statistics.

Variables	Stock Return	Excess Stock Return	P/E Ratio	Price to Cash Flow Ratio	Sustainable Growth Rate	Debt to Capital Ratio	Cash Flow per Share	Return on Equity
Stock Return	1.000							
Excess Stock Return	0.877	1.000						
P/E Ratio	0.044	0.052	1.000					
Price to Cash Flow Ratio	0.082	0.081	0.251	1.000				
Sustainable Growth Rate	0.019	0.023	-0.180	0.062	1.000			
Debt to Capital Ratio	-0.006	-0.006	-0.011	-0.117	0.292	1.000		
Cash Flow per Share	0.006	0.007	-0.077	-0.253	0.126	0.011	1.000	
Return on Equity	0.011	0.012	-0.357	0.059	0.129	0.129	0.153	1.000

Table 3: Factor Models Analysis for Wide-moat Firms
This table reports the results of the cross-sectional regressions used to estimate the stock premium of wide-moat firms. Standard errors are heteroskedasticity-robust. *T*- statistics are in brackets.

Variables	Stock Premium			
	Fama and French Three-Factor Model I	Carhart's Four-Factor Model II	Fama and French Five-Factor Model III	Fama and French Five-Factors plus Momentum Model IV
Market Premium	0.960	0.943	0.948	0.932
	(41.45)	(37.67)	(36.10)	(32.39)
SMB	-0.116	-0.121	-0.063	-0.071
	(-3.45)	(-3.60)	(-1.58)	(-1.75)
HML	-0.068	-0.096	-0.073	-0.087
	(-2.26)	(-2.80)	(-1.90)	(-2.18)
MOM		-0.056		0.177
		(-1.71)		(2.24)
RMW			0.193	-0.002
			(2.46)	(-0.02)
CMA			0.025	-0.048
			(0.36)	(-1.40)
Intercept	0.292	0.304	0.286	0.296
	(3.48)	(3.61)	(3.40)	(3.51)
Alpha (Annualized Return)	3.56%	3.71%	3.49%	3.61%
Adj.R Square	0.31	0.31	0.31	0.31
Number of Observations	4061	4061	4061	4061

Table 4: The Multiples with Factors Model
This reports the regression results of the estimates for the S&P index, no-moat, and wide-moat firms. Standard errors are heteroskedasticity-robust. *T*- statistics are in brackets.

Variables	Stock Premium			Excess Stock Return		
	Model 1 Overall	Model 2 No Moat	Model 3 Wide-moat	Model 4 Overall	Model 5 No Moat	Model 6 Wide-moat
P/E Ratio	0.004 (3.43)	0.002 (0.92)	0.006 (3.14)	0.004 (3.41)	0.002 (0.84)	0.007 (3.17)
Price to Cash Flow Ratio	0.045 (10.00)	0.024 (2.19)	0.049 (5.28)	0.045 (9.98)	0.024 (2.25)	0.050 (5.37)
Market Premium	0.981 (63.15)	0.995 (26.40)	0.947 (35.96)	0.010 (0.63)	0.038 (1.01)	-0.038 (-1.44)
SMB	0.054 (2.26)	0.166 (2.85)	-0.069 (-1.72)	0.167 (7.06)	0.281 (4.86)	0.042 (1.05)
HML	-0.044 (-1.91)	0.025 (0.44)	-0.078 (-2.01)	-0.010 (-0.43)	0.055 (0.98)	-0.046 (-1.18)
RMW	0.183 (3.95)	0.239 (2.09)	0.201 (2.57)	0.179 (3.89)	0.238 (2.09)	0.197 (2.53)
CMA	0.195 (4.87)	0.244 (3.50)	0.048 (0.71)	0.133 (3.34)	0.277 (2.85)	0.001 (0.01)
Intercept	-0.848 (-9.44)	-0.735 (-3.74)	-0.909 (-4.60)	-0.828 (-9.26)	-0.741 (-3.80)	-0.882 (-4.48)
Adj.R Square	0.27	0.25	0.32	0.11	0.12	0.13
Number of Observations	15888	3250	3961	15888	3250	3961

Table 5: The Multiples with Control Variables
This table reports the results of the cross-sectional regressions of multiples with control variables. Standard errors are heteroskedasticity-robust. *T*- statistics are in brackets.

Variables	Stock Premium			Excess Stock Return		
	Model 1 Overall	Model 2 No Moat	Model 3 Wide-moat	Model 4 Overall	Model 5 No Moat	Model 6 Wide-moat
P/E Ratio	0.004 (2.60)	0.004 (1.44)	0.007 (2.15)	0.005 (4.04)	0.004 (1.57)	0.008 (3.19)
Price to Cash Flow Ratio	0.057 (8.75)	0.039 (2.68)	0.060 (3.97)	0.045 (8.22)	0.032 (2.56)	0.042 (3.38)
Sustainable Growth Rate	0.468 (1.44)	-0.156 (-0.15)	0.582 (1.31)	0.449 (1.64)	-0.015 (-0.02)	0.523 (1.46)
Debt to Capital Ratio	-0.002 (-0.88)	-0.004 (-0.44)	-0.005 (-0.82)	-0.004 (-1.55)	-0.003 (-0.43)	-0.003 (-0.65)
Cash Flow per Share	0.022 (2.28)	0.056 (1.81)	-0.009 (-0.57)	0.022 (2.74)	0.058 (2.18)	-0.002 (-0.17)
Return on Equity	0.008 (0.85)	0.018 (0.88)	0.017 (0.79)	0.014 (1.83)	0.020 (1.13)	0.011 (0.69)
Intercept	-0.428 (-1.81)	-0.660 (-1.16)	-0.343 (-0.65)	-1.225 (-6.16)	-1.502 (-3.07)	-0.936 (-2.20)
Adj.R Square	0.11	0.12	0.11	0.09	0.10	0.11
Number of Observations	13132	2804	3149	13460	2871	3225

Table 6: The Risk Adjusted Performance Analysis
This table reports the regression results used to estimate the excess stock returns. Standard errors are heteroskedasticity-robust. *T*- statistics are in brackets.

Variables	Excess Stock Return					
	Model 1 Overall	Model 2 No Moat	Model 3 Wide-moat	Model 4 Overall	Model 5 No Moat	Model 6 Wide-moat
P/E Ratio	0.005 (3.81)	0.003 (1.37)	0.008 (4.49)	0.005 (3.87)	0.003 (1.40)	0.008 (3.24)
Price to Cash Flow Ratio	0.045 (8.05)	0.030 (2.43)	0.048 (3.47)	0.045 (8.02)	0.031 (2.47)	0.048 (3.44)
Trade Dummy				-0.297 (-2.62)	-0.297 (-1.09)	-0.298 (-1.50)
Sustainable Growth Rate	0.527 (1.90)	0.083 (0.09)	0.575 (1.58)	0.534 (1.93)	0.134 (0.14)	0.576 (1.59)
Debt to Capital Ratio	-0.005 (-1.70)	-0.002 (-0.33)	-0.004 (-0.76)	-0.005 (-1.74)	-0.002 (-0.33)	-0.004 (-0.73)
Cash Flow per Share	0.021 (2.57)	0.056 (2.09)	-0.006 (-0.45)	0.022 (2.72)	0.058 (2.15)	-0.005 (-0.35)
Return on Equity	0.014 (1.71)	0.020 (1.12)	0.009 (0.59)	0.014 (1.79)	0.021 (1.16)	0.010 (0.62)
Market Premium	0.007 (0.41)	0.023 (0.58)	-0.041 (-1.40)	0.011 (0.68)	0.028 (0.69)	-0.036 (-1.23)
SMB	0.152 (5.93)	0.247 (3.98)	0.054 (1.21)	0.146 (5.67)	0.241 (3.86)	0.048 (1.07)
HML	0.004 (0.18)	-0.006 (-0.10)	-0.004 (-0.10)	-0.024 (-0.89)	-0.034 (-0.54)	-0.032 (-0.70)
RMW	0.128 (2.57)	0.137 (1.14)	0.206 (2.38)	0.123 (2.47)	0.133 (1.10)	0.200 (2.32)
CMA	0.172 (4.02)	0.377 (3.68)	-0.074 (-0.99)	0.214 (4.69)	0.419 (3.83)	-0.032 (0.40)
Intercept	-1.137 (-5.65)	-1.424 (-2.89)	-0.920 (-2.14)	-1.028 (-5.00)	-1.331 (-2.66)	-0.818 (-1.88)
Adj.R Square	0.15	0.17	0.18	0.17	0.19	0.18
Number of Observations	13132	2804	3149	13132	2804	3149

Table 7: Logistic Regression – Robustness Check
This table reports the logistic regression results. *P*- values are in brackets.

Variables	Wide-moat and No Moat as a Binary Variable	
	Model 1	Model 2
P/E Ratio	0.005 (<.0001)	0.005 (<.0001)
Price to Cash Flow Ratio	0.081 (<.0001)	0.081 (<.0001)
Trade Dummy		-0.1900 (0.0058)
Sustainable Growth Rate	0.724 (0.0001)	0.738 (<.0001)
Debt to Capital Ratio	-0.001 (0.6919)	-0.001 (0.6770)
Cash Flow per Share	0.061 (<.0001)	0.063 (<.0001)
Return on Equity	0.105 (<.0001)	0.106 (<.0001)
Market Premium	-0.009 (0.3950)	-0.006 (0.5729)
SMB	0.003 (0.8402)	0.001 (0.9591)
HML	0.029 (0.0517)	0.011 (0.5136)
RMW	-0.010 (0.1120)	-0.013 (0.6589)
CMA	-0.026 (0.3202)	0.001 (0.9594)
Intercept	-3.595 (<.0001)	-3.527 (<.0001)
Likelihood Ratio *(Chi-Square)*	1713.43	1721.06
Number of Observations	5953	5953