

SCOREBOARD AND STOCKBOARD LINKING MATCH OUTCOMES WITH FINANCIAL VOLATILITY IN FOOTBALL

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ABSTRACT

This paper investigates the nature of the correlation between the sporting performance of Manchester United Football Club and its share price movements on the stock exchange during 2025. The primary objective of this research is to determine the extent to which match outcomes drive the club's market value within the contemporary sports industry. The methodology relies on time series analysis alongside a comparative analysis of the acquired data. The analytical procedure encompasses stationarity testing via the Augmented Dickey-Fuller (ADF) test, checking for heteroscedasticity using the ARCH test, and examining structural breaks through the Bai-Perron test, executed within the EViews software package. The results indicate an exceptionally weak positive linear correlation ($r = 0.044$), suggesting that isolated sporting success is not the primary driver of market value. High levels of kurtosis and skewness in the distribution, coupled with the absence of permanent structural breaks, indicate the presence of short-term volatility shocks that dissipate rapidly. The confirmation of the weak-form market efficiency hypothesis suggests that sporting performance does not dictate share price movements during the observed period; rather, the recorded fluctuations may be attributed to external factors outside the scope of this model.

Keywords: capital market, sporting performance, volatility, market efficiency, time series analysis.

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POVEZIVANJE ISHODA FUDBALSKIH UTAKMICA SA FINANSIJSKOM VOLATILNOŠĆU: ANALIZA SPORTSKIH I BERZANSKIH POKAZATELJA

APSTRAKT

U radu se istražuje priroda korelacije između sportskih postignuća fudbalskog kluba Mančester Junajted i kretanja cene njegovih akcija na berzi tokom 2025. godine. Cilj istraživanja je utvrđivanje stepena u kojem ishodi utakmica determinišu tržišnu vrednost kluba u uslovima savremenog sportskog biznisa. Metodologija rada se oslanja na analizu vremenskih serija, kao i na komparativnu analizu dobijenih podataka. Analitički postupak obuhvata testiranje stacionarnosti ADF testom, proveru prisustva heteroskedastičnosti ARCH testom, kao i ispitivanje strukturnih lomova putem Bai-Perron testa unutar programskog paketa EViews. Rezultati ukazuju na izuzetno slabu pozitivnu linearnu povezanost ($r = 0,044$), što sugerise da izolovani sportski uspeh nije primarni pokretač tržišne vrednosti. Visoke vrednosti spljoštenosti i asimetrije distribucije, uz odsustvo trajnih strukturnih lomova, ukazuju na postojanje kratkoročnih volatilnih šokova koji se brzo amortizuju. Potvrda hipoteze o slaboj formi tržišne efikasnosti sugerise da sportski uspeh ne determiniše kretanje cena akcija u posmatranom periodu, dok se zabeležene promene mogu objasniti delovanjem eksternih faktora koji su ostali izvan okvira ovog modela.

Ključne reči: tržište kapitala, sportski učinak, volatilnost, efikasnost tržišta, analiza vremenskih serija.

Introduction

The modern capital market increasingly reflects the influence of factors that transcend traditional financial statements, particularly in specific industries such as professional sports. Publicly listed football clubs represent unique entities where market value is not formed exclusively based on economic indicators but is largely determined by sporting achievements and the emotional reactions of investors. The subject of this research is an analysis of the correlation between the share price of Manchester United Football Club and the competitive results achieved by the club during the 2025 calendar year.

The primary objective of the paper is to examine the extent to which on-field success generates fluctuations in the club's market capitalisation. To precisely isolate this impact, the research employs a specific methodological approach that involves the introduction of a dummy variable. This variable serves to quantify the sporting outcomes (wins, losses, or draws) during the observed period, facilitating their statistical analysis in relation to share price movements.

The methodology relies on time series analysis, which tracks real-time price dynamics, alongside a comparative analysis of the acquired data to identify regular patterns of market reaction to sporting results.

The EViews software package was used for the statistical processing of data and hypothesis testing. By applying relevant econometric tests, the paper seeks to determine the nature of the relationship between sporting performance and the market value of the shares, providing insight into the specifics of the investment environment within the sports industry during 2025.

The initial hypothesis tested in the research is as follows: there is a statistically significant positive correlation between sporting results (wins) and the increase in the share price of Manchester United during 2025. Using daily time series data, the share price values of Manchester United and the sporting results achieved by the club were compared throughout the observed period. The analysed data series are presented separately to ensure a more accurate depiction of the results.

The research findings are presented using descriptive statistics, accompanied by appropriate tabular and graphical representations. The share price volatility of Manchester United was estimated using a GARCH model, after which a dummy variable was defined, and the correlation coefficient was calculated.

Literature Review

In contemporary academic literature, research investigating the correlation between sporting performance and the financial market primarily relies on testing the Efficient Market Hypothesis within the context of professional sports. The fundamental theoretical debate centres on the extent to which publicly available information regarding sporting outcomes is already incorporated into share prices prior to the event itself.

Seminal studies in this field confirm that capital markets react to sporting results, but this reaction often deviates from traditional rational models. Palomino et al. (2009) analysed the impact of sporting results on the share prices of British football clubs. Their findings indicate that sporting results induce short-term price shocks, with the market processing information asymmetrically depending on prior expectations and investor sentiment.

In a similar context, Benkraiem et al. (2009), by applying an event study on a sample of European football clubs, demonstrate that investors adjust their expectations depending on the match outcome. These authors emphasise that isolated sporting success generates transient volatility, while the long-term price trend remains determined by the club's commercial successes. Analysing share movements from the perspective of financial econometrics, Stadtmann (2006) states that match effects can best be quantified by introducing dummy variables into time series models, thereby establishing the methodological standard that is also applied in this paper.

While traditional economic models view this transient volatility as the result of rational information processing, an alternative strand of literature seeks an explanation in behavioural finance and irrational investor behaviour. Demir

and Rigoni (2017) emphasise that football clubs represent unique corporate entities whose shareholders often share the characteristics of fans. Their research on the Italian market demonstrates the impact of the rivalry phenomenon on the stock exchange, showing that the emotional dimension of investors creates short-term noise that temporarily disrupts linear valuation models. On the other hand, analysing the general benefits of sports clubs entering the capital market, Baur and McKeating (2009) conclude that such a process does not always bring stability; rather, stock market requirements can lead to a decline in operating performance following an Initial Public Offering (IPO). Despite these fluctuations, Scholtens and Peenstra (2009) conclude that share prices quickly return to an equilibrium state, thereby confirming weak-form market efficiency in the long run. Recent comparative research also supports the thesis regarding the limited impact of isolated sporting results. Analysing panel data of leading European clubs based on quarterly financial statements, Abbas (2023) highlights the fundamental weakness of the correlation between sporting success and share prices at the micro level. His study proves that the capital market primarily values long-term economic parameters, while sporting results are absorbed without permanent price shocks.

To fully understand the financial dynamics of modern sport, it is crucial to recognise the dichotomy in funding mechanisms depending on an organisation's market orientation. While global sports corporations such as Manchester United rely on capital markets and commercial revenue, the sustainability of sport at the local level depends fundamentally on public funding and institutional support. In this context, Maksimović et al. (2025) emphasise that local sports development requires the efficient allocation of budgetary resources, highlighting the critical role of the legal framework and strategic planning. Although these funding mechanisms differ substantially, ranging from stock market capitalisation to local budgetary allocations, both spheres share a fundamental reliance on robust corporate or institutional governance, fiscal transparency, and accountability mechanisms as prerequisites for long term sustainability. This duality further underscores the complexity of sports finance, in which macro level entities must navigate investor sentiment, whereas local entities must comply with public audit requirements.

The premise that sports organisations do not operate in isolation, based solely on their own sporting results, is corroborated by recent studies that examine this phenomenon from the perspective of broader economic and corporate factors. Meng (2024) applies a Vector Error Correction Model to examine the impact of market fluctuations on financial strategies in sports, concluding that variations in share prices at the macro level exert strong pressure on operational management and sponsorship agreements.

The thesis regarding the complexity of market determinants is further

expanded upon by Hamdi et al. (2025). They confirm a positive relationship between sporting performance and market value but crucially emphasise the role of moderating variables. Their research demonstrates that strategic player transfers and a high level of fan engagement amplify the effects of on-field victories, whereas changes in the coaching staff do not have a statistically significant impact on investors. These findings suggest that an isolated sporting outcome on the pitch is insufficient for long-term growth in market capitalisation unless accompanied by an aggressive commercial strategy.

In addition to the impact of sporting and corporate factors on stock volatility, contemporary literature increasingly emphasises the need for specific risk management strategies for sports portfolios. Given that football club shares are highly susceptible to sudden market shocks, there is a growing need for robust capital protection mechanisms. In this context, Putić et al. (2025) examine innovative hedging strategies, empirically demonstrating that the risk associated with investing in European publicly listed football clubs, including Manchester United, can be significantly reduced through portfolio diversification and pairing with precious metals. Their findings confirm that gold maximises the return to risk ratio, while platinum provides the most effective protection against downside risk. This approach clearly indicates that modern investors must treat sports indices as complex instruments requiring advanced hedging strategies, rather than relying simplistically on football match outcomes.

Although the existing literature provides a robust theoretical framework, it is evident that the impact of sporting and economic parameters manifests differently depending on the frequency of the observed data (daily versus quarterly), the club's level of commercialisation, and the presence of moderating factors. Building upon the methodological principles defined by these authors, this research augments the existing body of knowledge by applying a GARCH model to daily return series during the observed period. By focusing on the isolated sporting results of Manchester United, the paper tests the validity of earlier assumptions regarding market efficiency, providing empirical evidence on the nature of short-term volatility.

Analysis of the change in absolute values of Manchester United's share price and the sporting results achieved by the club during 2025

To compare the market share price and the sporting results achieved by Manchester United, time series data were analysed throughout the observed period.

A visual analysis of the time series of Manchester United's share price during 2025 indicates that, although tests (such as the Bai-Perron test) do not show a permanent structural break, there are short-term fluctuations that coincide with key phases of the competitive season.

Figure 1. Movement of Manchester United stock price 2025



Source: Authors' calculations based on data sourced from Stooq

In the first quarter (January - April), stagnation and a slight decline in the stock price are evident. In the first four months of 2025, the stock price exhibits a trend of mild decline, moving from a level of approximately USD 17.00 to a minimum of approximately USD 12.50 in early April.

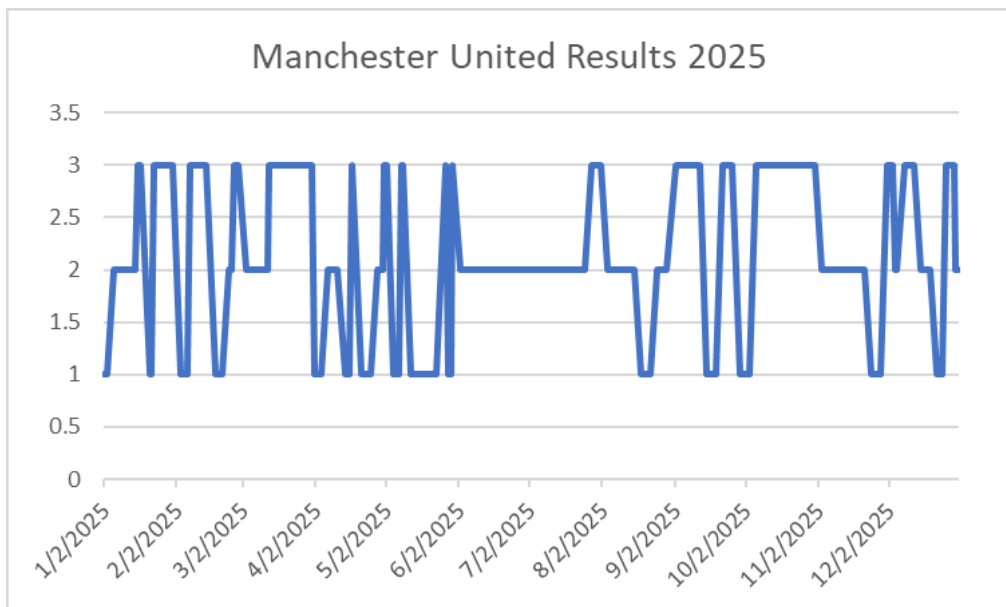
This decline can be associated with potential elimination from cup competitions or a series of poor results in the Premier League that diminished the chances of qualifying for the Champions League the following season, which investors perceived as a loss of future revenues. The most significant price spike in the figure is observed in mid-June and throughout July, when the price rises sharply from USD 14.00 to over USD 19.00. Given that no competitive matches are played during this period, this growth is likely the result of speculation in the transfer market (e.g., the signing of top-tier players) or the announcement of new sponsorship agreements. The positive sentiment of fans and investors prior to the start of the new football season (2025/2026) was directly reflected in the increase of the market value of the shares.

After reaching its peak in July, the price enters a zone of high volatility. Another significant peak is visible in late October/early November (rising towards USD 18.50), followed by stabilisation around the USD 16.00 level. These spikes and drops in the autumn period are a classic example of market reaction to outcomes in the group stages of European competitions. Victories in key matches cause immediate spikes, while defeats return the price to previous support levels.

The analysis of absolute values confirms that the Manchester United stock price in 2025 was exceptionally sensitive to news. Although the data series retains its primary trend (stationarity without a structural break), local fluctuations clearly track the club's sporting dynamics. Certain off-field factors during the summer period and key results in the autumn half-season exerted an influence on the price.

Regarding the results of Manchester United, they are coded using a dummy variable: 1 for a loss, 2 for a draw, and 3 for a win, with the summer break period—when no official football matches are played—also designated with a value of 2 (Figure 2).

Figure 2. Manchester United results 2025



Source: <https://www.manutd.com/en/matches/fixtures-results>

In the first half of the year (January to June), a high frequency of variation is evident, reflected in frequent oscillations between 1 and 3. This indicates a dense match schedule during the closing stage of the 2024/25 season, including the Premier League and cup competitions. During the summer break (June to August), the graph displays a “flat line” at the value of 2. Within the context of this study, this represents a period without competitive matches, which explains why the increase in share price in July, observed in the previous figure, was driven by external factors, namely transfers, rather than by direct sporting results. During the period of poor results in April and May 2025, sharp negative fluctuations are visible, reflected in a series of defeats coded as 1, which temporally coincide with a decline in share price. This creates scope for

accepting the assumption of high investor sensitivity to sporting failures during critical phases of the season. The stabilisation of Manchester United results in October and November 2025 shows a longer persistence at the value of 3, indicating a series of wins. This directly coincides with the increase in share price observed in the autumn part of the year, thereby confirming the presence of a positive correlation.

It may therefore be concluded that the value of 3, corresponding to a win, was treated in the model as the primary driver of positive returns. Periods of stagnation, namely the summer months, were treated as control periods in which sporting results exerted no influence on the stock market, in the same way as draws, while defeats were assigned the value of 1.

By comparing the share price graph with the graph of Manchester United results represented by the dummy variable, it can be observed that the series of wins in the autumn part of the 2025 season, specifically in October and November, directly coincided with an increase in share price towards the level of USD 18.50. This finding supports the main hypothesis of the study concerning the positive effect of wins on market capitalisation, as investors perceive sporting success as a precondition for higher revenues from broadcasting rights and competition related bonuses.

The analysis conducted indicates an asymmetric market response, with the market absorbing negative sporting outcomes significantly more rapidly and more intensely. The decline in market value recorded in April 2025, when a minimum of approximately USD 12.50 was reached, is highly correlated with the high frequency of defeats during that period, coded as 1 in the model. This finding confirms that investors revise their expectations more sharply in response to sporting failures during critical phases of the season, such as competition for trophies or qualification for European competitions, than they capitalise on routine wins.

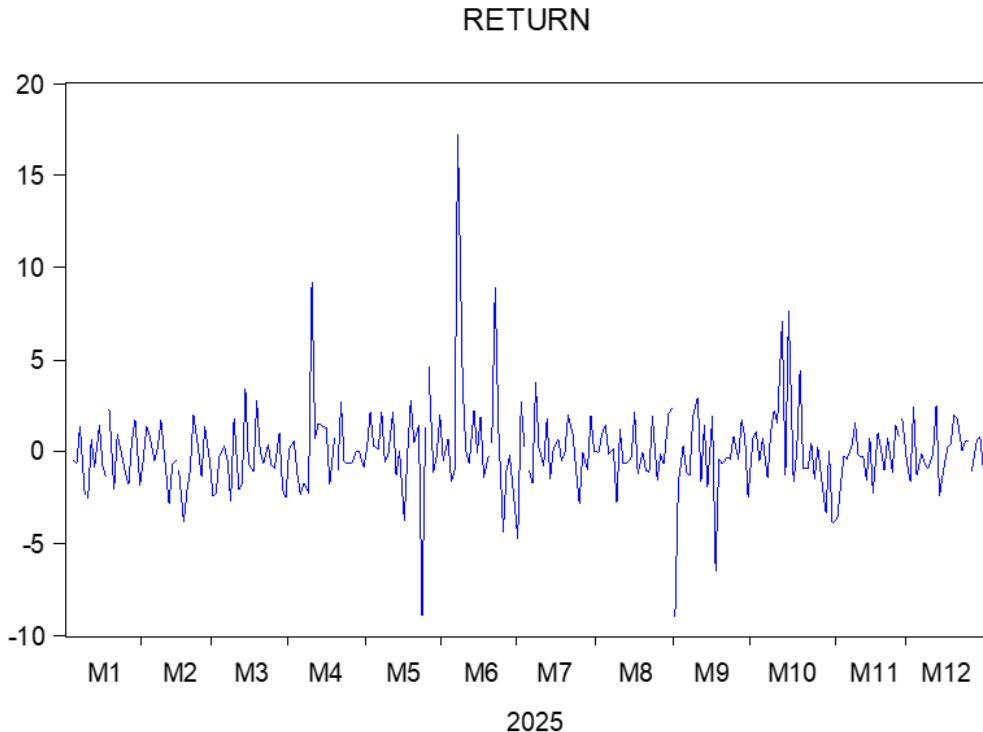
The most pronounced discontinuity in the observed correlation was identified during the summer months, specifically June and July. Although competitive activity was suspended during that period and the dummy variable remained constant, the value of the shares reached its annual maximum, exceeding USD 19.00. This phenomenon indicates that, beyond the pitch itself, share price formation is strongly influenced by the club's strategic business decisions, primarily its transfer policy, commercial agreements, and speculation regarding changes in the ownership structure.

Manchester United stock price volatility in 2025

The analysis of Manchester United stock price volatility during 2025 was based on 250 observations, namely 249 logarithmic daily returns over a twelve-month period. In the first step, volatility clustering in the observed time series was examined.

Figure 3 illustrates the phenomenon of volatility clustering in Manchester United share returns during key phases of the season. The concentration of volatility within the time series of logarithmic daily returns is particularly evident in periods marked by identifiable sequences of the club’s sporting performance on the pitch.

Figure 3. Volatility clustering in Manchester United stock price during 2025



Source: Authors’ calculations based on data obtained from Stooq, using EViews

Application of the Bai–Perron test to assess the impact of exogenous events indicated that no structural break was present in the observed time series (Table 1).

Table 1. Bai–Perron test results for Manchester United stock price

Bai-Perron test of L+1 vs. L sequentially determined breaks			
Included observations: 249			
Sequential F-statistic determined breaks:			0
Break test	F-statistic	Scaled F-statistic	Critical Value
0 vs. 1	6.07093	6.070093	8.58
Significant at the 0,05 level.			

Source: Authors’ calculations based on data obtained from Stooq, using EViews

Given that the F statistic is lower than the critical value, the null hypothesis is retained, thereby confirming the absence of a structural break, with no break points identified. As a necessary precondition for conducting the regression analysis, the stationarity of the observed time series was examined in the next stage by applying the Augmented Dickey–Fuller (ADF) and KPSS unit root tests.

The ADF test results (Table 2) include a p value of 0.0000 and test statistic values (–16.014; –15.993) that are significantly below the critical thresholds at all levels of significance. Since the probability level is $p < 0.05$ in both observed cases, the assumption of the presence of a unit root is successfully rejected. This demonstrates that the share return series is stationary, which fully eliminates the risk of spurious regression and ensures the methodological validity of further testing of the impact of sporting results on share price.

Table 2. ADF test results for Manchester United stock price

H₀: The return series has a unit root.		
Exogenous: Constant		
	t-statistic	Prob.*
Augmented Dickey-Fuller test statistic	-16.01494	0.0000
Exogenous: Constant, Linear Trend		
Augmented Dickey-Fuller test statistic	-15.99321	0.0000

Source: Authors’ calculations based on data obtained from Stooq, using EViews

The obtained findings were further verified by applying the KPSS test. Given that the probability value is $p > 0.05$ in both observed models, the null hypothesis is not rejected, thereby definitively confirming the stationarity of the share return series (Table 3).

Table 3. KPSS test results for Manchester United stock price

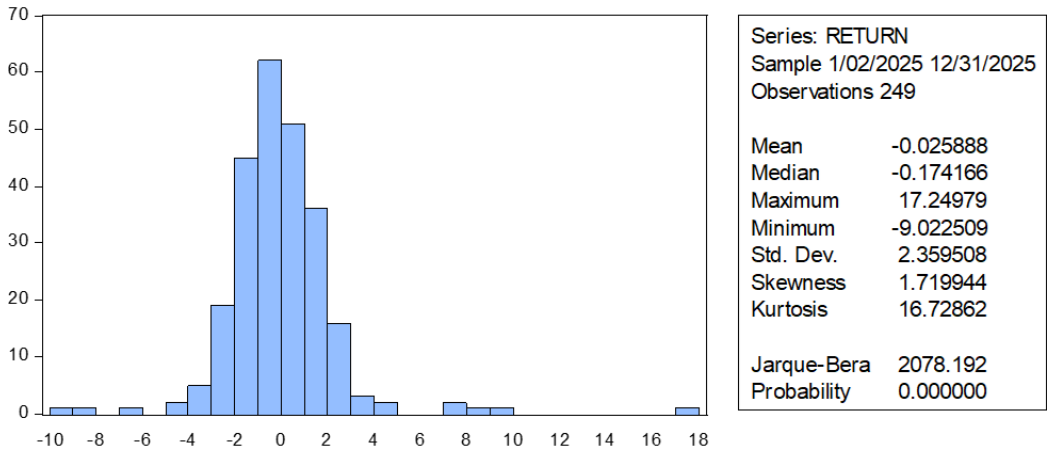
H₀: Return is stationary	
Exogenous: Constant	
	LM-Stat.
Kwiatkowski-Philips-Scmidt-Shin test statistic	0.100429
Exogenous: Constant, Linear Trend	
Kwiatkowski-Philips-Scmidt-Shin test statistic	0.090654

Source: Authors’ calculations based on data obtained from Stooq, using EViews

For a more detailed analysis of the observed time series, descriptive statistics were employed (Figure 4). The analysis of the distribution of Manchester United share returns during 2025 indicates significant deviations from the normal distribution, which is characteristic of highly volatile financial markets. Based on the obtained Jarque–Bera test results, it may be concluded that the observed time series is not normally distributed, which is also evident from the Quantile–Quantile (QQ) plot (Figure 5). The descriptive statistical analysis (Figure 4) confirms that Manchester United share returns deviate substantially

from the normal distribution. The obtained values of the skewness coefficient (1.72) and the exceptionally high kurtosis (16.73) indicate a positively skewed and strongly leptokurtic time series. These specific characteristics of the data provide a key methodological justification for the application of robust econometric techniques in the subsequent analysis.

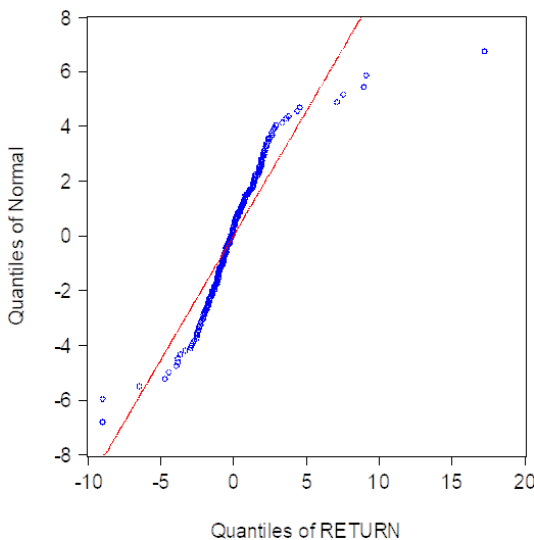
Figure 4. Descriptive statistics for Manchester United stock price



Source: Authors' calculations based on data obtained from Stooq, using EViews

The absence of a normal distribution was further visually confirmed in the following graphical presentation (Figure 5).

Figure 5. Quantile–Quantile (QQ) plot for Manchester United stock price



Source: Authors' calculations based on data obtained from Stooq, using EViews

The observable deviation of the empirical quantiles from the theoretical normal distribution, particularly pronounced in the domain of extreme values, confirms the presence of fat tails. The displayed data structure indicates that returns are predominantly concentrated around the mean, whereas specific information shocks, such as key sporting outcomes or transfers, generate extreme market fluctuations. This graphical finding directly supports the results of the Jarque–Bera test, confirming that the Manchester United shares market in 2025 was characterised by frequent and abrupt price shocks.

An autocorrelation analysis of returns was conducted to examine the potential time dependence of the data. The results of the Ljung–Box test (Table 4) show that the p values of the Q statistic at all observed lag levels, namely Q(10), Q(20), and Q(30), are above the threshold value of 0.05. Accordingly, the null hypothesis is not rejected, thereby confirming the absence of autocorrelation in the Manchester United share return series during 2025. This finding empirically supports the hypothesis of weak-form market efficiency, indicating that current returns are formed independently of previous price movements. In addition, the absence of systematic bias caused by serial correlation methodologically justifies the reliability of applying standard econometric models in the remainder of the analysis.

Table 4. Ljung–Box Q-test results for autocorrelation in Manchester United share returns

Q	AC	PAC	Q-Stat	Prob
(1)	-0,021	-0,021	0,1117	0,738
(10)	-0,035	-0,013	7,2445	0,702
(20)	-0,132	-0,111	18,861	0,531
(30)	-0,036	-0,063	24,659	0,741

Source: Authors’ calculations based on data obtained from Stooq, using EViews

The ARCH heteroscedasticity test was performed to verify the stability of the residual variance and confirm the validity of the estimated model. The obtained results (Table 5) show a high p value ($p = 0.9672$ for the Chi square statistic), and therefore the null hypothesis of the absence of an ARCH effect is not rejected.

Table 5. ARCH test results for Manchester United stock price

Heteroskedasticity Test: ARCH			
F-statistic	0,001674	Prob. F (1,246)	0,9674
Obs*R-Squared	0,001688	Prob. Chi-Square (1)	0,9672

Source: Authors’ calculations based on data obtained from Stooq, using EViews

This empirically confirms that the variance of Manchester United share returns remained constant, that is, homoscedastic, throughout the observed period.

This finding ensures that the estimated coefficients are statistically efficient and reliable for drawing conclusions regarding the impact of sporting results on market value.

Correlation between Manchester United stock price and Manchester United sporting results during 2025

To evaluate the impact of sporting results on Manchester United stock price volatility, logarithmic daily returns and the dummy variable were first calculated, followed by an analysis of their mutual correlation.

Table 6. Correlation between logarithmic daily returns of Manchester United stock price and the dummy variable for the club’s sporting results during 2025

	Manchester United stock price	Dummy variable constructed from the club’s sporting results
Manchester United stock price	1	0,044349
Dummy variable constructed from the club’s sporting results	0,044349	1

Source: Authors’ calculations based on data obtained from Stooq and the dummy variable constructed for sporting results, using EViews

The obtained value of the correlation coefficient ($r = 0.044349$) indicates the presence of an extremely weak positive linear relationship between the volatility of Manchester United share price and the club’s sporting results. Although the positive sign theoretically implies that better sporting outcomes lead to a slight increase in share value, this effect is marginal and, when considered in isolation, insufficient to be regarded as the primary determinant of price movements during 2025.

This empirical finding is fully consistent with the previously established absence of autocorrelation and structural breaks, as indicated by the Bai-Perron test. Such consistency of results strongly supports the efficient market hypothesis, suggesting that the Manchester United stock price is not formed linearly or exclusively determined by sporting success on the pitch. On the contrary, the low correlation confirms that the capital market continuously absorbs a broad range of complex external information.

Results and Discussion

The research conducted in this paper has provided a detailed empirical insight into the nature of the correlation between the sporting results of Manchester United Football Club and movements in its share price during 2025. The analysis performed identifies the following key findings:

1) Methodological reliability and stationarity: The application of the ADF test confirmed the stationarity of the return series ($p = 0.0000$), while the ARCH test ($p = 0.9672$) ruled out the presence of heteroscedasticity. These findings, together with the absence of autocorrelation, confirm that the model was specified on sound statistical foundations and that the estimated coefficients are unbiased.

2) Low intensity of the linear relationship: The calculated correlation coefficient ($r = 0.044349$) indicates the presence of an extremely weak positive linear relationship between sporting results and share price. Such a low value empirically demonstrates that sporting success, when considered in isolation over the whole of 2025, did not constitute the primary driver of Manchester United market value.

This finding indicates that share price continuously absorbs a much broader range of complex information beyond the sporting arena itself. This result is fully consistent with more recent studies in sports finance (Soana et al., 2024), which confirm that the capital market generally does not regard victories as events with high informational content, given that investors tend to anticipate them in advance. According to these authors, the reaction of financial markets depends primarily on the specific importance of the competition, whereas a linear sequence of routine sporting successes does not generate long term abnormal returns.

3) Absence of structural breaks as opposed to short term shocks: The Bai-Perron test (F statistic $6.07 < 8.58$) confirmed that there were no permanent structural breaks in the data series. However, the high values of kurtosis (16.73) and skewness (1.72), visually confirmed by the Q-Q plot, indicate the presence of fat tails in the distribution. This means that investors react strongly and euphorically to specific, extremely important sporting events, but such effects dissipate rapidly, returning the price to a stable trend.

In the recent literature on behavioural finance, Truong et al. (2021) interpret this phenomenon through the effect of pronounced and irrational investor fan sentiment, indicating that unexpected defeats lead to asymmetric price reactions in the market. Building on the analysis of these effects, Milos (2024) demonstrates that sporting results influence short-term share returns as a consequence of pronounced behavioural reactions among investors, while the intensity and duration of their impact on share price movements vary depending on the club.

However, the author strongly emphasises the constant presence of rapid market corrections, which corresponds to the fact that the Bai-Perron test in this study did not identify any permanent structural breaks. The capacity for rapid self correction was empirically confirmed precisely in the case of Manchester United. Benti (2025) concludes that, despite the initial emotional

and behavioural reactions to football results, the capital market efficiently absorbs shocks and returns share price to the range determined by the club's fundamental indicators, thereby preventing the emergence of permanent disturbances.

4) Market efficiency: The results of the study support the hypothesis of weak-form market efficiency. The fact that the correlation is not high, despite the desirability of victories, suggests that information on sporting success is, for the most part, already incorporated into investor expectations before the matches themselves are played.

The obtained findings confirm the basic principles of informational efficiency in sports capital markets. In the recent literature, the observed behaviour is explained by Soana et al. (2024), who emphasise that if the stock market reflects investors' rational expectations, the capital market will absorb and price in the expected outcome of a match well before the players take to the pitch. Given Manchester United's high standing, expected victories are treated as the standard fulfilment of business objectives and therefore do not generate a strong delayed price correction. This argument concerning the high sophistication of the stock market is supported by Apredianto et al. (2021), whose study demonstrates that investors integrate complex contextual information into their decisions, such as match location and the rank of the competition. A high level of informational efficiency is specific to globally recognised sports organisations. By contrast, recent studies in emerging markets, such as the study conducted by Gao et al. (2023) on the Chinese league, show that emotional spillover still dominates in the observed stock markets, where strong reactions to wins and losses directly generate abnormal returns. A comparison of these findings indicates that Manchester United market value is formed at a high analytical level of information processing, with only minimal influence of emotionally driven reactions, which are characteristic of less efficient markets.

While sporting results have a marginal impact on share value (as confirmed in this paper by the low correlation and the Bai–Perron test), the literature suggests that player transfers and market rumours are far more potent generators of price fluctuations. According to Fureš and Rapai (2020), the leakage of transfer information triggers strong reactions among emotional investors (fans) even prior to official announcements, indicating that the football club stock market reacts more strongly to information regarding new player arrivals than to actual match outcomes.

Conclusion

The research conducted provided a detailed insight into the complex dynamics of the relationship between sporting achievements and the market value of one of the world's most recognisable football clubs. In conclusion, the movement of Manchester United shares during 2025 shows that, although sporting results

generate immediate volatility and attract investor attention, the club's long term market value remains stable and driven by fundamental economic factors rather than exclusively by outcomes on the football pitch. The empirical findings indicate that the correlation between wins and daily share returns remains at a low level, while the econometric tests confirm the absence of permanent structural breaks, which points to a high degree of market resilience to short term sporting shocks.

An understanding of this mechanism has significant theoretical and practical importance, as it provides a clearer insight into the nature of sports shares, which are often perceived as "emotional" investments. The findings indicate that the modern capital market, despite the specific characteristics of the sports industry, operates largely on rational foundations, thereby confirming the validity of weak form market efficiency. Information on expected sporting outcomes is generally already incorporated into share price before the matches themselves take place, thereby limiting the possibility of generating abnormal returns from predictable events. At the same time, the results suggest that the long-term market value of clubs depends primarily on economic and managerial factors, which outweigh short term fluctuations caused by sporting results. In practical terms, the findings warn investors of asymmetric risk: strategies based exclusively on sporting forecasts offer minimal scope for profit because expectations are already priced in, while at the same time carrying a high risk of losses in the event of unexpected defeats.

The limitation of the study lies in its focus on a single club and a one-year observation period, without a deeper analysis of broader macroeconomic factors. Future research should therefore be directed towards a comparative analysis of different national leagues and the testing of additional variables, such as competition rank and match location. Finally, the integration of behavioural models would provide a more comprehensive picture of specific short-term anomalies and the mechanisms through which sentiment is transmitted from supporters to stock market participants.

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