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Volatility Dynamics of the BIST Corporate Governance Index: Evidence from a GARCH Approach

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Abstract: This study examines the volatility dynamics of the Borsa Istanbul Corporate Governance Index (KURY) by focusing on the effects of political risk and investor sentiment. Using weekly data from November 2013 to March 2025, a GARCH(1,1) model evaluates how Türkiye's five-year Credit Default Swap (CDS) spreads and the Risk Propensity Index (REKS) influence market behaviour. The results show that neither CDS nor REKS significantly affects average returns, but volatility is persistent and clearly clustered. CDS spreads have a strong positive impact on volatility, indicating that sovereign risk plays a central role in shaping uncertainty in governance-based equities. In contrast, REKS does not show a meaningful effect. These findings suggest that external risk perceptions are more influential than domestic sentiment in explaining volatility and provide useful insights for investors and policymakers concerned with financial stability

Keywords: *Corporate Governance Index, Sovereign risk, Risk Propensity Index, Volatility.*

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Introduction

The Borsa Istanbul Corporate Governance Index is a key benchmark for evaluating the governance quality of publicly traded firms in Türkiye. Strong governance, grounded in transparency, accountability, and effective oversight, helps reduce agency conflicts and supports long-term performance (Monks & Minow, 2011; Huang, 2010). Firms with strong governance structures experience lower information asymmetry and benefit from more disciplined managerial behaviour. Investors generally regard these firms as more credible and less risky, which reduces financing costs and contributes to higher market valuations (Pirson & Turnbull, 2011). In today's highly competitive and volatile environment, governance quality also enhances organizational agility by enabling faster and more informed decision-making (Kula, 2023).

Emerging markets such as Türkiye respond rapidly to changes in geopolitical conditions, macroeconomic uncertainty, and investor psychology. Existing research consistently shows that investor sentiment and perceptions of sovereign risk play central roles in influencing market volatility, returns, and capital flows (Ağgöl & Güngör, 2019; Rugås & Winberg, 2015). Credit Default Swap spreads, which are widely recognized indicators of sovereign and political risk, react strongly to economic instability and political tension. Changes in CDS spreads influence international risk premiums and subsequently affect volatility in domestic financial markets (Akkaya, 2017).

Investor sentiment is another important determinant of market behaviour. In Türkiye, the Risk Tendency Index reflects domestic investors' willingness to assume risk under changing economic conditions (Kaya & Coşkun, 2015). Together, CDS and REKS offer a comprehensive perspective on external and internal risk perceptions. This integrated view is useful for explaining volatility in governance-based indices. Since the firms included in KURY adhere to higher governance standards, they may react differently to political or behavioural shocks compared with broader market indices.

Research Gap and Contribution

Research on Türkiye's financial markets is extensive, yet it has primarily concentrated on the BIST100 index or on particular sectors. The Corporate Governance Index has received relatively limited attention, despite its potential to clarify how governance quality affects market stability. Existing studies also tend to examine sovereign risk and investor sentiment in isolation. As a result, there is limited understanding of how these two factors jointly influence volatility in a governance-oriented index.

Furthermore, although many studies employ GARCH-type models to analyse volatility in emerging markets, they seldom investigate whether governance quality moderates the sensitivity of volatility to CDS or sentiment shocks. Consequently, previous research does not fully clarify whether governance-oriented firms display greater or lesser vulnerability to political and behavioural risks.

This study fills this research gap by analysing the extent to which Türkiye's five-year CDS spreads and the REKS index explain volatility movements in the Corporate Governance Index. It makes two primary contributions. First, it incorporates international sovereign risk (CDS) and domestic investor sentiment (REKS) within a unified analytical framework. Second, it assesses whether the KURY index displays volatility dynamics that differ from those of broader market indicators.

Literature Review

Sovereign credit risk consistently emphasizes the usefulness of CDS spreads as important indicators of default probability and political risk (Augustin et al., 2016; Jarrow, 2011). These spreads adjust quickly to macroeconomic developments and shifts in global financial

sentiment, making them essential tools for analysing risk in emerging markets (Giglio, 2016). In Türkiye, empirical studies frequently show a negative relationship between CDS spreads and stock market performance and identify CDS as an important determinant of market volatility (Ceylan et al., 2018; Karagöl, 2023).

Research into volatility in emerging markets often uses GARCH-type models to study how financial markets react to shocks. Numerous studies have demonstrated that volatility tends to persist over time, negative events tend to trigger stronger market responses than positive events, and volatility patterns often change during periods of financial crisis (Günay & Shi, 2016; Dritsaki, 2017). More advanced models, including VAR-BEKK-GARCH and approaches that incorporate high-frequency data, are able to capture long-term dependencies and cross-market spillovers (Fang et al., 2020; Camgöz, 2023). These findings emphasize the need for models that can account for both short- and long-horizon volatility components.

Research on investor sentiment has also expanded considerably. Global indicators such as the VIX measure investor fear and expectations of near-term volatility. In Türkiye, the REKS index serves as a domestic sentiment indicator that captures shifts in risk appetite across different groups of investors (Tekbaş, 2022). Studies show that REKS interacts dynamically with other financial indicators and exhibits time-varying relationships with market volatility (Kamışlı, 2024). Research employing wavelet coherence methods further indicates that the effects of sentiment and risk indicators differ across various time horizons (Karaçayır, 2025).

Collectively, prior research shows that sovereign risk, investor sentiment, and volatility are closely connected in emerging markets. CDS spreads are generally treated as indicators of external risk perception and political uncertainty, whereas REKS reflects domestic investors' risk appetite. However, most studies focus on broad market indices and provide limited evidence on governance-based indices such as KURY. Consequently, the combined impact of international political risk and domestic behavioural shifts on the volatility of governance-oriented firms remains insufficiently understood.

Building on this gap, this study incorporates CDS and REKS into a unified volatility framework for the Corporate Governance Index. The analysis offers new evidence on the stability and resilience of governance-driven firms in an environment where political and behavioural risks frequently influence market dynamics.

Conceptual Framework

The conceptual framework of this study is grounded in the view that firms with stronger corporate governance structures may respond differently to external and behavioural risk factors. Strong governance enhances monitoring, reduces information asymmetry, and increases a firm's capacity to withstand external shocks. These strengths may limit the degree to which political risk or investor sentiment translates into volatility. However, emerging markets remain highly sensitive to macroeconomic instability and behavioural fluctuations, creating channels through which CDS and REKS may influence the KURY index.

The conceptual framework of this study is based on three core relationships. First, CDS spreads capture sovereign and political risk. An increase in CDS spreads reflects higher uncertainty and may contribute to greater volatility in the KURY index. Second, REKS measures domestic investor sentiment by reflecting changes in market participants' risk appetite. Shifts in REKS may therefore affect volatility through behavioural responses in the market. Third, KURY consists of firms with strong governance ratings, which may cause the index to respond differently to these risk factors compared with broader market indices.

Accordingly, the framework links external sovereign risk, domestic investor sentiment, and the volatility dynamics of governance-oriented firms. This structure provides the basis for examining whether CDS and REKS influence the conditional volatility of the Borsa Istanbul Corporate Governance Index within a GARCH-based empirical setting.

Data, Methodology and Limitations

This study analyzes the volatility dynamics of the Borsa Istanbul Corporate Governance Index using weekly data from 1 November 2013 to 14 March 2025. All data consist of historical observations; no projected or simulated values are included.

The dependent variable is the weekly return of KURY, which measures the performance of firms that comply with the corporate governance standards established by the Capital Markets Board of Türkiye. Since the index comprises firms with stronger disclosure, accountability, and oversight practices, it offers an appropriate context for analyzing how external risk factors affect governance-oriented segments of the market. Credit Default Swap spreads, representing Türkiye's five-year sovereign risk premium, reflect global investors' perceptions of the country's political and economic stability. These spreads increase when uncertainty or political risk rises and are widely used as forward-looking indicators of sovereign-level risk. The Risk Tendency Index (REKS), produced by the Central Securities Depository of Türkiye, measures the aggregate risk appetite of domestic investors. An increase in the REKS value indicates a stronger willingness to take financial risk, whereas a decline reflects greater risk aversion.

Incorporating REKS into the analysis provides behavioral insight into how shifts in investor sentiment influence volatility beyond what can be explained by macroeconomic factors alone. All price series are transformed into logarithmic returns using:

$$R_t = \log\left(\frac{P_t}{P_{t-1}}\right) \quad (1)$$

The data were obtained from Investing.com and Yahoo Finance, two reputable and widely used financial databases. Drawing on multiple sources enables cross-validation and ensures greater consistency, accuracy, and reliability of the dataset. By combining carefully selected variables, a clearly defined observation period, and reliable data collection practices, this study establishes a strong empirical foundation for analyzing the dynamic interactions between political risk, investor sentiment, and corporate governance in Türkiye.

The Augmented Dickey–Fuller (ADF) unit root test is applied to assess the stationarity of the time series. Establishing stationarity is crucial because the presence of a unit root can result in spurious regressions and unreliable statistical inference. The ADF test extends the classical Dickey–Fuller procedure by incorporating lagged differences of the dependent variable to address potential serial correlation in the error term. Prior to model estimation, all series are subjected to the ADF test to ensure that non-stationarity does not distort the regression results. Given the presence of trends in the data, the ADF test is implemented using the following specification:

$$\Delta y_t = \alpha + \beta t + \gamma y_{t-1} + \sum_{i=1}^p \delta_i \Delta y_{t-i} + \varepsilon_t \quad (2)$$

In order to model the volatility dynamics of financial time series, this study employs the Autoregressive Conditional Heteroskedasticity (ARCH) framework, which was introduced by Engle (1982), as well as its generalization: the Generalized ARCH (GARCH) model, which was proposed by Bollerslev (1986). These models are widely used in empirical finance to capture time-varying volatility, a defining feature of financial returns that cannot be adequately represented by standard linear models. In the ARCH(q) specification, the conditional variance of the error term is modeled as a function of past squared residuals (Sarıkovanlık et. al., 2019):

$$\sigma_t^2 = \alpha_0 + \sum_{i=1}^q \alpha_i \varepsilon_{t-i}^2 \quad (3)$$

Equation (3) defines the conditional variance as a function of a constant term and lagged squared innovations. Here σ_t^2 refers to the time-varying variance at period t , α_0 is a constant, and α_i measures how shocks from previous periods contribute to current volatility.

The GARCH(p,q) model generalizes the ARCH framework by allowing conditional variance to depend on both lagged squared residuals and lagged conditional variances (Sarıkovanlık et. al.,2019):

$$\sigma_t^2 = \alpha_0 + \sum_{i=1}^q \alpha_i \varepsilon_{t-i}^2 + \sum_{j=1}^p \beta_j \sigma_{t-j}^2 \quad (4)$$

where the β_j terms capture the persistence of volatility.

Given their suitability for modelling financial return data, this study applies the GARCH methodology to examine how volatility in Türkiye's CDS spreads and the REKS index influences the Borsa Istanbul Corporate Governance Index.

The GARCH(1,1) model was selected for this study because weekly financial data usually exhibit symmetric volatility patterns. The ARCH-LM diagnostics used in this study revealed no significant asymmetric effects that would justify the use of EGARCH or TGARCH models. The GARCH(1,1) model provides a stable and straightforward structure that performs reliably in studies of emerging-market volatility. More complex models add extra parameters and may lead to overfitting when several variables are included. For this reason, GARCH(1,1) is the most suitable and efficient choice for analysing the volatility dynamics in this study.

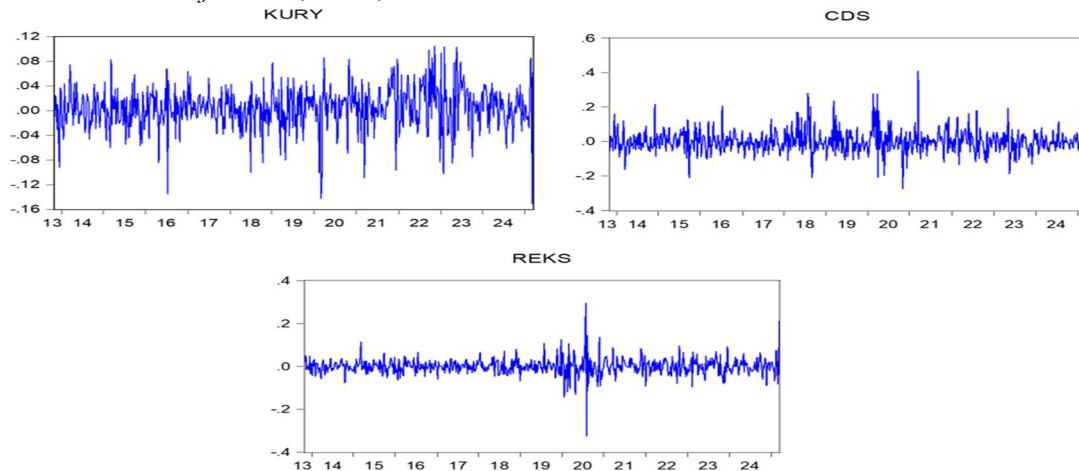
Limitations

Several limitations should be acknowledged. First, the study employs a symmetric GARCH model, and asymmetric effects are not examined. Second, although the sample period includes major global shocks, such as COVID-19, geopolitical conflicts, and episodes of monetary tightening, the model does not separately identify the effects of these events. Third, external macro-financial variables such as the VIX, exchange rates, and interest rates are not incorporated, even though they may influence volatility.

Findings

The return series of KURY, CDS, and REKS show distinct volatility patterns, characterized by persistent fluctuations. KURY exhibits frequent movements, with sharper swings in recent years, indicating rising market uncertainty. CDS and REKS remain relatively stable most of the time but occasionally display large jumps. The timing of these spikes across all three series suggests that they were triggered by common shocks. However, KURY appears more sensitive to ongoing market conditions, whereas CDS and REKS tend to react mainly to rare, high-impact events.

Figure 1: Returns of KURY, CDS, and REKS Indexes



The plotted return series for KURY, CDS, and REKS indicate episodes of volatility clustering, consistent with a well-documented feature of financial time series. As shown in Figure 1, periods of large return movements tend to occur consecutively, while periods of relative stability also appear in grouped intervals. This indicates that market shocks do not fade immediately but instead lead to extended periods of heightened volatility. Volatility clustering is especially visible in KURY, where several successive weeks exhibit elevated fluctuations, as well as in the sharp, recurring spikes observed in CDS and REKS. These patterns provide strong empirical justification for using GARCH-type models.

Descriptive Statistics for KURY, CDS, and REKS

Analysis of the descriptive statistics presented in Table 1 provides the following insights for each variable:

KURY returns have a small positive mean (0.00423) and median (0.00565), indicating a small but positive average performance over the observation period. The standard deviation (0.03481) suggests moderate volatility compared to the other series. The minimum (-0.1507) and maximum (0.1047) values reveal significant, but not extreme, fluctuations. Skewness (-0.537) indicates a mild left skew, meaning larger negative returns occur slightly more often than positive ones. Kurtosis (5.065) shows a leptokurtic distribution, with more extreme observations than a normal distribution. Overall, KURY demonstrates persistent volatility, occasional large losses, and heavy tails.

CDS returns have a near-zero mean (0.00062) but a negative median (-0.00474), suggesting that returns are generally slightly below zero despite occasional large positive moves. The standard deviation (0.06456) is the highest among the three series, reflecting considerable volatility. The return range is notably wide, spanning from (-0.273614) to (0.409158). Skewness (0.839) shows a moderate right skew, pointing to occasional large upward movements. Kurtosis (7.171) signals strong leptokurtosis, suggesting frequent extreme events relative to a normal distribution. In sum, CDS is the most volatile series, with pronounced upward outliers and heavy-tailed behaviour.

REKS returns have an almost negligible mean (0.00012) and a slightly negative median (-0.00074), indicating a balanced distribution of positive and negative returns over time. The standard deviation (0.03985) reflects moderate volatility, compared to KURY and CDS. The minimum (-0.3233) and maximum (0.2948) statistics reveal substantial but relatively balanced extreme values on both sides. Skewness (0.084) is close to zero, suggesting near symmetry. However, kurtosis (16.676) is exceptionally high, indicating extremely heavy tails and a high probability of extreme observations. Overall, REKS shows moderate volatility, symmetric return patterns, but a strong tendency toward rare, extreme movements.

Table 1: Descriptive Statistics for KURY, CDS, and REKS Indexes

	<i>KURY</i>	<i>CDS</i>	<i>REKS</i>
Mean	0.004230	0.000621	0.000123
Median	0.005648	-0.004738	-0.000739
Maximum	0.104661	0.409158	0.294841
Minimum	-0.150706	-0.273614	-0.323333
Standard Deviation	0.034813	0.064564	0.039848
Skewness coeff.	-0.537152	0.839168	0.084306
Kurtosis coeff.	5.065078	7.170934	16.67579
Jarque-Bera	134.1123	500.2841	4629.630
Probability	0.000000	0.000000	0.000000

Sum	2.512457	0.368806	0.073316
Sum Sq. Dev.	0.718676	2.778737	0.941613
Observations	594	594	594

Unit Root Analysis

The ADF test results reported in Table 2 indicate that all series are stationary at conventional significance levels. For KURY, the ADF test statistic (-23.60077) is substantially more negative than the 1% critical value (-3.441148), while the associated p-value (0.0000) leads to the rejection of the null hypothesis of a unit root. Similarly, the CDS series has an ADF statistic of -25.66060 , well below the 1% critical value (-3.973606), with a p-value of 0.0000 , confirming stationarity. The REKS series also records a markedly negative test statistic (-28.16101) relative to the 1% critical value (-3.973606), again with a p-value of 0.0000 , supporting rejection of the unit root hypothesis. Overall, these results confirm that all variables meet the stationarity requirement for subsequent time-series modelling and inference.

Table 2: ADF Test on KURY, CDS, and REKS

ADF Unit Root Test on KURY (Trend and Intercept)			
		t-value	Prob.*
ADF test statistic		-23.60077	0.0000
Test critical values:	1%	-3.441148	
	5%	-2.866195	
	10%	-2.569308	
ADF Unit Root Test on CDS (Trend and Intercept)			
		t-value	Prob.*
ADF test statistic		-25.66060	0.0000
Test critical values:	1%	-3.973606	
	5%	-3.417415	
	10%	-3.131114	
ADF Unit Root Test on REKS (Trend and Intercept)			
		t-value	Prob.*
ADF test statistic		-28.16101	0.0000
Test critical values:	1%	-3.973606	
	5%	-3.417415	
	10%	-3.131114	

The ARCH–LM test was then used to evaluate whether the series exhibited conditional heteroskedasticity, thereby guiding the choice of an ARCH-type modelling framework.

As the first step, the mean equation was specified. Among alternative ARMA specifications, the model minimizing the Schwarz Information Criterion (SC) was selected as the most suitable. Based on the SC values, the appropriate mean equation for the KURY series was identified as an AR(4) process, with an SC value of -4.130247 .

After specifying the model, the ARCH–LM test was conducted to examine the presence of heteroscedasticity. The test results are reported in Table 3.

Table 3: ARCH–LM Heteroskedasticity Test Results

F-stat.	2.616574	Prob. F(30,529)	0.0000
Obs*R²	72.35991	Prob. χ^2 (30)	0.0000

The GARCH(1,1) model was estimated for the series in which the ARCH–LM test indicated the presence of conditional heteroskedasticity. This finding supports the use of a GARCH specification to capture the time-varying nature of volatility. The selected GARCH model satisfies the stationarity condition ($\alpha + \beta < 1$), suggesting a mean-reverting volatility process in which long-term volatility forecasts converge to a finite level.

According to the Table 4, the mean equation results show that neither CDS spreads nor REKS significantly affect the average weekly return of the Corporate Governance Index. This suggests that short-term movements in sovereign risk or domestic sentiment do not directly change the index’s return level. This finding is consistent with the idea that governance-oriented firms, which tend to have stronger disclosure and oversight systems, may be less sensitive to short-lived political or behavioural shocks.

The estimated variance equation indicates pronounced volatility clustering and a high degree of volatility persistence, as both the ARCH term (0.1199, $p < 0.01$) and the GARCH term (0.8572, $p < 0.01$) are statistically significant. These results suggest that current volatility is shaped by both past shocks and past conditional variances. This finding implies that market shocks, such as political developments or macroeconomic uncertainty, may continue to affect volatility. This pattern is consistent with the typical behaviour of emerging markets, where information may be incorporated into prices more gradually.

The positive and statistically significant coefficient of CDS spreads (0.0022, $p < 0.01$) suggests that increases in sovereign risk are associated with higher volatility in corporate governance-based equities. Higher CDS levels signal rising political or macroeconomic stress, leading investors to demand higher risk premiums and adjust their portfolios more cautiously. As a result, market volatility increases. This finding confirms that external risk perceptions play a major role in volatility transmission in Türkiye’s corporate governance segment.

In contrast, the REKS index does not have a significant effect on volatility. One explanation is that governance-oriented firms often attract more stable, long-term investors who are less reactive to short-term sentiment shifts. Another possibility is that domestic sentiment may already reflect broader sovereign risk conditions; once CDS is included in the model, REKS contributes little additional information. This suggests that external risk factors outweigh domestic behavioural factors in explaining volatility.

Taken together, the results show that volatility in the Corporate Governance Index is strongly driven by sovereign risk and characterized by persistent clustering. Domestic investor sentiment plays a limited role, while external political and macroeconomic conditions remain the dominant forces shaping volatility. These findings underscore the importance of monitoring CDS spreads when assessing risk in governance-sensitive equities.

Table 4: GARCH(1,1) Estimation Results, CDS Spreads and REKS as Volatility Drivers

<i>Variables</i>	<i>Coeff.</i>	<i>SE</i>	<i>z-score</i>	<i>Prob.</i>
C	0.003585	0.001108	3.236467	0.0012
REKS	-0.031392	0.026296	-1.193786	0.2326
CDS	-0.255561	0.015745	-16.23076	0.0000

AR(4)	0.076703	0.040947	1.873229	0.0610
Variance Equation				
C	9.30E-05	2.31E-05	4.026362	0.0001
RESID(-1)^2	0.119936	0.032137	3.731988	0.0002
GARCH(-1)	0.772006	0.043093	17.91495	0.0000
REKS	-0.000831	0.000637	-1.304973	0.1919
CDS	0.002235	0.000389	5.741375	0.0000
R^2	0.252797	Mean dependent variable		0.004269
Adjusted R^2	0.248972	Std. deviation of the variable		0.034886
Standard error of the regression	0.030233	Akaike information criterion		-4.304653
Sum of squared residuals	0.535622	Schwarz information criterion		-4.237837
Log-likelihood value	1278.873	Hannan-Quinn information criterion		-4.278623
Durbin-Watson statistic	1.995742			
Inverted AR Roots		0.53		

This finding highlights the sensitivity of such equities to country-level risk perceptions. Following the GARCH(1,1) estimation, the diagnostic test results show that ARCH effects no longer remain in the residuals. Since both the F-statistic and the Obs*R-squared statistic are insignificant, with p-values exceeding 0.42, the model appears to capture the conditional variance dynamics of the series effectively. This supports the suitability of the chosen GARCH specification.

Conclusion and Discussion

The results of this study offer important insights into the volatility dynamics of Türkiye's Corporate Governance Index (KURY). While neither CDS spreads nor REKS influence average returns, the variance equation shows clear volatility clustering and persistence, indicating that shocks have lasting effects. CDS spreads significantly increase volatility, whereas REKS remains insignificant, suggesting that external political risk outweighs domestic sentiment in shaping fluctuations in governance-based equities.

These findings align with theories of risk transmission and market efficiency, which argue that political and macroeconomic information has stronger and more persistent effects in emerging markets. The dominance of CDS is consistent with evidence from Brazil, India, and South Africa, where sovereign risk measures also play a greater role in volatility than domestic sentiment indicators. The limited impact of REKS may reflect the investor base of governance-oriented firms, which tend to attract more stable, long-horizon institutional investors who respond less to short-term sentiment shifts.

Corporate governance also appears to serve as a stabilizing mechanism. Firms in KURY operate under higher transparency and oversight standards, which likely reduces their sensitivity to sentiment-driven volatility. However, stronger governance cannot fully insulate these firms from country-level political risk, explaining why CDS maintains a significant influence.

For investors and portfolio managers, CDS spreads serve as a useful early warning indicator of rising volatility in governance-sensitive equities. For firms, strengthening governance practices remains important for maintaining resilience. For policymakers, the results reinforce the need to support sovereign credibility and macroeconomic stability to reduce market-wide volatility.

This study uses weekly data and a symmetric GARCH model; future work could employ higher-frequency data or asymmetric specifications to capture additional dynamics. Cross-country comparisons would also help determine whether the resilience of governance-based indices observed in Türkiye extends to other emerging markets. External shocks—such as COVID-19 or geopolitical events—could be integrated into future models to assess their specific influence.

In sum, the study shows that volatility in Türkiye's Corporate Governance Index is driven primarily by political and sovereign risk, while domestic investor sentiment plays a secondary role. These results highlight the central importance of sovereign credibility and confirm the partial stabilizing role of strong corporate governance in emerging markets.

References

- Ağgöl, S., & Güngör, B., (2019). Yatırımcıların duygusal zeka alt boyutlarından stres yönetimlerinin ve genel ruh hallerinin aldıkları yatırım kararları üzerine etkisi. *İşletme Araştırmaları Dergisi*, 11(3), pp.1840–1853.
- Akkaya, M., (2017). Türk tahvillerinin CDS primlerini etkileyen içsel faktörlerin analizi. *Maliye ve Finans Yazıları*, 1(107), pp.130–145. <https://doi.org/10.2139/ssrn.2960083>.
- Augustin, P., Subrahmanyam, M. G., Tang, D. Y., & Wang, S. Q., (2016). Credit default swaps: Past, present, and future. *Annual Review of Financial Economics*, 8, pp.175–196. <https://www.jstor.org/stable/26774073>.
- Bollerslev, T., (1986). Generalized autoregressive conditional heteroskedasticity. *Journal of Econometrics*, 31(3), pp.307–327. [https://doi.org/10.1016/0304-4076\(86\)90063-1](https://doi.org/10.1016/0304-4076(86)90063-1)
- Brooks, C. (2019). *Introductory econometrics for finance* (2nd ed.). Cambridge University Press.
- Camgöz, M., (2023). Revealing volatility spillover effects between CDS premiums and equity markets in developed and developing countries: VAR-BEKK-GARCH model approach. *Trends in Business and Economics*, 37(2), pp.98–110. <https://doi.org/10.5152/TBE.2022.221748>.
- Ceylan, İ. E., Ceylan, F., Tuzun, O., & Ekinçi, R., (2018). The effect of credit default swaps (CDS) on BIST100 in Turkey: MS-VAR approach. *Ecoforum Journal*, 7(1). <https://ecoforumjournal.ro/index.php/eco/article/view/2107>.
- Dickey, D. A., & Fuller, W. A., (1979). Distribution of the estimators for autoregressive time series with a unit root. *Journal of the American Statistical Association*, 74(366), pp.427–431. <https://doi.org/10.2307/2286348>.
- Dritsaki, C., (2017). An empirical evaluation in GARCH volatility modeling: Evidence from the Stockholm Stock Exchange. *Journal of Mathematical Finance*, 7, pp.366–390. <https://doi.org/10.4236/jmf.2017.72020>.
- Engle, R. F., (1982). Autoregressive conditional heteroscedasticity with estimates of the variance of United Kingdom inflation. *Econometrica*, 50(4), pp.987–1007. <https://doi.org/10.2307/1912773>.
- Fang, T., Lee, T. H., & Su, Z., (2020). Predicting the long-term stock market volatility: A GARCH-MIDAS model with variable selection. *Journal of Empirical Finance*, 58, pp.36–49. <https://doi.org/10.1016/j.jempfin.2020.05.007>.
- Qiao, G., Yang, J., & Li, W., (2020). VIX forecasting based on GARCH-type model with observable dynamic jumps: A new perspective. *The North American Journal of Economics and Finance*, 53, 101186. <https://doi.org/10.1016/j.najef.2020.101186>.
- European Systemic Risk Board., (2016). Credit default swap spreads and systemic financial risk (No. 15). <https://data.europa.eu/doi/10.2849/875577>.
- Günay, S., & Shi, Y., (2016). Long-memory in volatilities of CDS spreads: Evidences from the emerging markets. *Journal for Economic Forecasting*, 1, pp.122–137.

- Tekin, B., & Hatipoğlu, M., (2017). The effects of VIX index, exchange rate, and oil prices on the BIST 100 Index: A quantile regression approach. *ODÜ Sosyal Bilimler Araştırmaları Dergisi (ODÜSOBİAD)*, 7(3), pp.627–634. <https://doi.org/10.2139/ssrn.2946398>.
- Huang, C.-J., (2010). Corporate governance, corporate social responsibility and corporate performance. *Journal of Management & Organization*, 16(5), pp.641–655. <https://doi.org/10.5172/jmo.2010.16.5.641>.
- Jarrow, R. A., (2011). The economics of credit default swaps. *Annual Review of Financial Economics*, 3(1), pp.235–257. <https://doi.org/10.1146/annurev-financial-102710-144918>
- Karaçayır, E., (2025). Analysis of the relationship between credit default swaps (CDS), the fear index (VIX), and BIST 100 using the wavelet coherence model. *Anadolu Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, 26(2), pp.547–568. <https://doi.org/10.53443/anadoluibfd.1625517>.
- Karagöl, V., (2023). How Vulnerable is the Turkish Stock Market to the Credit Default Swap? Evidence from the Markov Switching GARCH Model. *İstanbul İktisat Dergisi*, 73(1), pp.513–531. <https://doi.org/10.26650/ISTJECON2022-1223833>.
- Kamışlı, S., (2024). Risk eğilim endeksi ile risk göstergeleri arasındaki ilişkilerin belirlenmesi. *Uluslararası Yönetim İktisat ve İşletme Dergisi*, 20(ICMEB'24 Özel Sayı), pp.362–373. <https://doi.org/10.17130/ijmeh.1498395>.
- Kaya, A., & Çoşkun, A., (2015). VIX endeksi menkul kıymet piyasalarının bir nedeni midir? Borsa İstanbul örneği. *Cumhuriyet Üniversitesi İktisadi ve İdari Bilimler Dergisi*, 16(1), pp.175–186. <http://esjournal.cumhuriyet.edu.tr/tr/pub/issue/4267/57473>.
- Kula, M., (2023). Does competition intensity of SMEs moderate the environmental turbulence–organizational agility relationship? *Journal of Organisational Studies and Innovation*, 9, pp.59–75. <https://doi.org/10.51659/josi.22.17>.
- Kula, M. E., (2023). Identifying the innovative tension: A meta-analysis on innovative firm behavior, organizational ambidexterity and innovative performance. *İşletme Araştırmaları Dergisi*, 15(1), pp.593–609. <https://doi.org/10.20491/isarder.2023.1606>.
- Monks, R. A., & Minow, N., (2011). *Corporate governance*. John Wiley & Sons. <https://doi.org/10.1002/9781119207238>.
- Nelson, D. B., (1991). Conditional heteroskedasticity in asset returns: A new approach. *Econometrica*, 59(2), pp.347–370. <https://doi.org/10.2307/2938260>.
- Pirson, M., & Turnbull, S., (2010). Corporate governance, risk management, and the financial crisis: An information processing view. *Fordham University Schools of Business Research*. <https://doi.org/10.2139/ssrn.1723782>.
- Rugås, N., & Winberg, A., (2015). A study on the relation between VIX, S&P 500 and the CDX-index, *University of Gothenburg School of Business Economics and Law*.
- Saparca, Ü., & Yenipazarlı, A., (2023). CDS primi, döviz kuru ve BIST 100 endeksi arasındaki nedensellik ilişkisi: Türkiye örneği. *Adnan Menderes Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 10(2), pp.30–44. <https://doi.org/10.30803/adusobed.1345429>.
- Sarikovanlık, V., Koy, A., Akkaya, M., Yıldırım, H. H., & Kantar, L., (2019). *Finans biliminde ekonometri uygulamaları*. Seçkin Yayıncılık.
- Tekbaş, M. S., (2019). *Yatırım el kitabı*. Scala Yayıncılık.