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INVESTMENT-ORIENTED FINANCIAL INSTITUTIONS IN TURKEY: A COMPARATIVE SECTORAL ANALYSIS OF FINANCIAL RATIOS USING BORSA ISTANBUL DATA (2017–2024)

TÜRKİYE'DEKİ YATIRIM ODAKLI FİNANSAL KURUMLAR: BORSA İSTANBUL VERİLERİ KULLANILARAK FİNANSAL ORANLARIN KARŞILAŞTIRMALI SEKTÖREL ANALİZİ (2017–2024)

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Abstract

This study conducts a comparative analysis of the financial performance of investment-oriented financial institutions (IOFIs) operating on Borsa Istanbul over the 2017–2024 period, both at the sectoral level and across different firm sizes. The dataset comprises 119 companies from five subsectors—brokerage firms, real estate investment trusts (REITs), venture capital investment trusts (VCITs), securities investment trusts (SITs), and holding/investment companies—and was obtained from the Central Securities Depository of Turkey (MKK). A multi-dimensional analysis was conducted using distribution-based indicators such as the first quartile (Q1), median, and third quartile (Q3), focusing on profitability, liquidity, capital structure, operational efficiency, expense composition, and growth ratios. The findings reveal substantial variations in financial performance both across sectors and between firm size categories. While large-scale firms exhibit strong financial indicators, smaller firms display significant fragility. Notably, even in equity-intensive sectors, high losses and liquidity constraints were observed. These results underscore the necessity of employing distributional measures over traditional mean-based approaches and highlight the importance of scale-sensitive policy mechanisms for regulators and decision-makers.

Keywords: Investment-oriented financial institutions, financial performance analysis, quartile distribution (q1–q3), borsa istanbul, sectoral comparison.

JEL Classification: G21, G23, C38, L25

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Öz

Bu çalışma, Borsa İstanbul'da faaliyet gösteren yatırım odaklı finansal kurumların 2017–2024 dönemine ait finansal performanslarını sektörel ve firma ölçeği düzeyinde karşılaştırmalı olarak analiz etmektedir. Aracı kurumlar, GYO, GSYO, MKYO ve holding/yatırım şirketleri olmak üzere beş alt sektörde yer alan 119 şirketin verileri, Merkezi Kayıt Kuruluşu'ndan temin edilmiştir. Alt çeyrek (Q1), medyan ve üst çeyrek (Q3) gibi dağılım temelli ölçütler kullanılarak kârlılık, likidite, sermaye yapısı, faaliyet verimliliği, gider ve büyüme oranları üzerinden çok katmanlı bir analiz yapılmıştır. Bulgular, YOFK'ların finansal performanslarının hem sektörler hem de firma ölçekleri arasında belirgin farklılıklar gösterdiğini ortaya koymuştur. Büyük ölçekli firmalar güçlü finansal göstergeler sunarken, küçük ölçekli firmalar kırılganlık sergilemektedir. Ayrıca, özsermaye yoğun sektörlerde dahi yüksek zararlar ve likidite sorunları gözlemlenmiştir. Bu sonuçlar, geleneksel ortalama temelli yaklaşımlar yerine dağılımsal ölçütlerin kullanılmasının gerekliliğini vurgulamakta ve politika yapıcılar için ölçek temelli destek mekanizmalarının önemini ortaya koymaktadır.
Anahtar Kelimeler: Yatırım odaklı finansal kurumlar, finansal performans analizi, çeyreklik dağılım (q1–q3), borsa istanbul, sektörel karşılaştırma.
JEL Sınıflandırılması: G21, G23, C38, L25

1. Introduction

In recent years, the structural transformation of global financial systems has significantly reshaped the structure and functions of financial institutions. This transformation has been driven by increased capital mobility, digitalization, and diversification in investor behavior. At the center of this transformation are investment-oriented financial institutions (IOFIs). These include brokerage firms, real estate investment trusts (REITs), venture capital investment trusts (VCITs), securities investment trusts (SITs), and holding/investment companies. They have assumed increasingly strategic roles due to their interactions with the real economy and their influence on capital markets. In emerging economies such as Turkey, deepening capital markets and expanding the investor base have become key policy priorities. In this context, understanding the financial structures of these institutions is not only of academic relevance. It is also of critical importance for regulatory frameworks and strategic decision-making processes.

However, the existing literature on the financial performance of investment-oriented financial institutions (IOFIs) remains limited and fragmented in both scope and methodology. Most studies tend to focus on a single type of institution, such as REITs or brokerage firms. These studies are typically conducted using cross-sectional approaches based on individual years or firm-specific ranking models. There is a notable lack of comparative sectoral analyses, time series evaluations, and structural examinations based on quartile distributions. In particular, the influence of firm size—such as lower and upper quartile (Q1–Q3) distinctions—on financial performance has been largely overlooked. This gap points to the absence of a comprehensive and integrated perspective on how financial divergence unfolds over time. This applies both across different investment-oriented sectors and among firm groups within the same sector. Moreover, the dominant reliance on average values in financial analyses often obscures the distorting effects of outliers. The failure to incorporate distributional measures such as the median and quartile-based indicators into the analysis limits its analytical depth. This, in turn, hinders the ability to reveal intra-sectoral vulnerabilities and scale-related imbalances.

In this context, the present study aims to examine the financial performance of investment-oriented financial institutions (IOFIs) operating on Borsa Istanbul during the 2017–2024 period. This is achieved through a comprehensive, distribution-based descriptive analysis. Utilizing a unique dataset provided by the Central Securities Depository of Turkey (MKK), the research systematically evaluates six core dimensions. These include profitability, liquidity, capital structure, operational efficiency, cost structure, and growth indicators. The study's distinctive contribution lies in its systematic incorporation of lower quartile (Q1), median, and upper quartile (Q3) values for each financial ratio. This approach makes visible the intra-sectoral inequalities, distributional asymmetries, and scale-based vulnerabilities. In doing so, the study introduces a methodological innovation to the financial performance literature. It also offers data-driven, decision-support insights for policymakers, investors, and regulatory authorities.

2. Literature Review

The financial performance of investment-oriented financial institutions (IOFIs) has become an area of strategic interest in the literature. This relevance is particularly driven by rising global financial liberalization, digitalization, and the trend towards evolving investor behavior. Entities like Real Estate Investment Trusts (REITs), Brokerage Firms, Venture Capital Investment Trusts (VCITs), Securities Investment Trusts (SITs), and Holding/Investment Companies are being analyzed not just in the area of finance. They are also increasingly examined within broader academic streams such as management, economics, and public policy. Their multifaceted role—both in their interface with the real economy and in their wider impact on capital markets—has created this increasing level of interest.

Studies on Real Estate Investment Trusts (REITs) primarily employed financial ratios, volatility models, and multi-criteria decision techniques. Aksoy & Ulusoy (2015), using GARCH and EGARCH models, proved an effective return relationship between the BIST REIT Index and the BIST 100 Index. They also identified systematic volatility patterns on both weekly and monthly intervals. They showed that REIT returns are not only affected by internal performance measures but also by general market forces. Likewise, Ali et al. (2020) examined the volatility structure of the REIT index. They particularly emphasized that the EGARCH model better explains leverage effects and thus offers more profound insight into the sector's sensitivity to asymmetric market shocks.

Yılmaz et al. (2019) used an integrated methodology consisting of IT2F-AHP and Data Envelopment Analysis (DEA) to measure the technical and scale efficiency of REITs under fuzzy decision conditions in Turkey. Their findings indicated that Turkish REITs operated mostly outside economies of scale and had an average technical effectiveness level of around 66%. Their findings point to the firms within the industry falling short of their potential in terms of operating efficiency and identify important points to focus on in the area of resource utilization. Such an indication is confirmed by the work of Çamlıbel et al. (2021), who analyzed the performance of REITs from 2017 to 2020—the COVID-19 episode—through the application and computation of Sharpe and Treynor ratios. Their findings showed that the lack of asset diversification and the dominance by unsystematic risks

intensified during this period. In this context, crisis intervals served to act as stress tests and put the risk-handling capabilities of REITs to the test.

International REIT scholarship is equally focused on the general structural and institutional framework under which these institutions function. Salem and Baum (2016), for example, used a panel Tobit model to examine the determinants of foreign direct investment (FDI) in REITs in the Middle Eastern and African nations. They found that political stability has a significant structural effect on investment inflows. In this line of thought, the success with which REITs can attract foreign investment does not just depend on their performance in the financial sphere but is intricately related to the political and institutional context in which these institutions are situated.

Ayrancı & Gürel (2020) analyzed the financial performance of REITs in the 2010–2019 period based on the price-book (P/B) ratio as the main measure with a panel data approach. They showed that firm value was significantly affected by liquidity, profitability, and capital structure ratios. Likewise, Yılmaz (2019) used the TOPSIS methodology to rank REIT performance and identified some firms like Alarko REIT as superior performers. In more contemporary work, to evaluate the performance of REITs for 2019–2021, Çolak (2023) employed the gray relational analysis approach and found an increasing divergence among firm-level performance in the sector.

An important emphasis in the literature is on the examination of micro – and macro-level determinants driving the profitability performance of brokerage firms. Kaymaz & Kaymaz (2010), using panel regression analysis, identified the determinants of profitability among Turkish brokerage firms and found trade receivables and short-term liabilities to have significant influences on profitability. In another study spanning 2004Q1 to 2021Q4, Cevikcan & Taş (2022) found that risk-taking behavior and capital levels show an important and positive association and stressed the importance of this association to ensure efficient operations and long-term viability. The above findings support the view that the performance of brokerage firms does not merely depend on financial structure but also on decisions made by the manager and strategic choices. As noted by Acar et al. (2017), managerial controls and risk-return optimization are pivotal in determining the performance outcome of brokerage institutions.

Günay & Kaya (2017) compared the financial performance of brokerage firms operating on the Borsa Istanbul in the 2014–2015 period by using the ELECTRE, ORESTE, and TOPSIS approaches and noted that firms like İNFO and GEDİK featured prominently in all evaluation models. Köse & Akıllı (2021), by performing VIKOR ranking based on 2016–2019 data, found that firms operating with lower debt levels and more advantageous profitability structures were better positioned in financial terms. Baykuş & Bektaş (2024), by examining the 2020–2023 performance of firms on the XAKUR index with LOPCOW and WASPAS methods, found financing costs and equity levels to be the most significant factors. Pala (2022), in an application for 2021 using an IMV – and WASPAS-developed evaluation, accompanied the ranking of brokerage firms with the performance under sensitivity testing and added the use of the IMV approach to the literature. Medetoğlu (2024), utilizing an

integrated approach based on entropy weighting and TOPSIS-VIKOR, found an increasing trend in firms like this article and Oyak Yatırım's performance.

Research on the influence of investor behavior on market dynamics is equally prominent in the literature. Çoşkun et al. (2023), for instance, investigated the impact of foreign and domestic investor types on the BIST 100 Index with the Bayesian Vector Autoregression (BVAR) model and showed that foreign investment funds statistically contributed to index volatility. The evidence indicates that investor types may have structural effects on market stability. Chebbi et al. (2024), on the other hand, examined the interaction between investor attitudes and stock returns amid the pandemic through the use of Twitter data and pointed to the rising promise of online sources of data on mapping investment behavior.

Other empirical work related to REIT performance provides additional insights regarding sectoral linkages like volatility, return, and efficiency. Aksoy & Ulusoy (2015) discussed how calendar anomalies impacted the performance of the BIST REIT Index via GARCH and EGARCH models, with emphasis being on the strong relationship between the index and the general stock market. The work of Ali et al. (2020), following similar arguments, illustrated how the EGARCH dominates conventional models and thus offers methodological significance for the selection of models while testing volatility. Yılmaz et al. (2019) combined the IT2F-AHP and DEA frameworks to examine the technical input utilization reduction by REITs from Turkey and computed the probable utilization reduction by the businesses at 34%. The findings bespeak bidirectional causation between performance on the stock market and REITs' technical efficiency.

Likewise, Salem & Baum's (2016) study in the MENA region emphasizes the pivotal role played by political stability and the structure of institutions in attracting foreign direct investment. The study points out the significance of examining not just the financial performance of REITs but also the structural indicators that define the international capital attracting capability of all investment-seeking financial institutions.

The risk management practices and system risk levels in financial institutions are explored with considerable depth in the literature. In an investigation into the interaction between risk management practices and capital adequacy regulations, Chen et al. (2020) found that market value reporting enhances risk management more effectively compared to historical cost reporting, which instead compromises this function. The implications are that there are immediate effects on risk management effectiveness, and significant linkages are demonstrated to exist between the regulatory regime and the emergence of risk strategies in institutions.

The problem of system risk and financial stability has been scrutinized mainly in the framework of Turkey. Caliskan et al. (2021) proved with the use of the CES approach that system risk is principally concentrated among major commercial banks. In 2013, system risk and the Systemic Expected Shortfall (SES) model proposed by Acharya et al. were applied to the Turkish financial system and found to provide more explanatory power under crisis conditions compared to conventional risk

measures. The empirical findings confirmed that system risk is not an institution-specific factor but an indicator of sectoral financial vulnerability.

Narayan et al. (2023), in their work on India, pointed to leverage ratio, level of liquidity, and size of the board as being among the main structural determinants of systemic risk. They contended that these factors could drive sectoral risk agglomeration. In this regard, both managerial organization and financial risk elements residing on company balance sheets have implications at the system level and reinforce firm-level and system-level interconnectedness.

The sustainability and environmental performance of the financial sector has become increasingly relevant in the literature. Cannas et al. (2023) explored how ESG scores influence market valuations and concluded that the environmental and governance dimensions positively drive market multiples. Lapinskaite & Skvarciany (2023), on the other hand, evaluated the level of ESG scores' conversion to price-to-earnings (P/E) ratios and found that high ESG-score institutions are not always rewarded with valuation advantages by investors. The implications are that sustainability and environmental performance differ among sectors and are not always directly connected with investors' perceptions.

The processes of digital transformation and operational resilience within financial institutions have been a leading area of interest in the literature. Iyer et al. (2024) analyzed the Basel III-developed regulatory frameworks to promote operational resilience among global systemically important banks (G-SIBs), highlighting the need among these banks to set up risk-oriented organizational designs. Equally, Sun & Xie (2024) analyzed the effect of the application of digital finance on entrepreneurship and noted how solutions from traditional banks and BigTech firms make equally significant contributions to various kinds of entrepreneurial endeavors in diverse ways. Such work demonstrates that not only do operational processes undergo an impact through digitalization, but so too do more macro aspects like entrepreneurship and economic inclusion.

Finally, the effects of macroeconomic shocks like the COVID-19 pandemic on financial institutions with an investment focus are well-covered in the literature. Chebbi et al. (2024) showed that U.S. states' crisis response policies implemented during the pandemic shifted the effect of investor sentiment on the returns of financial institutions' stocks. Akkas & Al Samman (2022), in a similar study, compared Islamic with conventional financial institutions' resilience in Gulf economies during the same period and found Islamic institutions to be comparatively less hit by the pandemic. Crisis times are natural experiments to measure the resilience of alternative financial structures and are thus very important to sectoral vulnerability assessments.

The link between performance and corporate governance principles is most important in the context of investment trusts. Karasioğlu & Öztemiz (2023) examined the effect of the level of corporate governance on intellectual capital and concluded that this link is statistically significant only among high price-book (P/B) firms. Likewise, Cannas et al. (2023) underscored that environmental and governance dimensions are the most determinant in framing investor attitudes. In this context, sustainability-focused methods need to be incorporated into the processes of valuing investment trusts—both from a financial and corporate social responsibility perspective.

3. Methodology

This study aims to examine the financial performance of investment-oriented financial institutions operating in Borsa Istanbul between 2017 and 2024, using distribution-based statistical indicators. The analysis focuses explicitly on capital market-oriented companies. These include brokerage firms, real estate investment trusts (REITs), venture capital investment trusts (VCITs), securities investment trusts (SITs), and holding companies. The primary motivation of this research is to systematically assess the performance indicators of these institutions within the context of sectoral differences. It also aims to make visible their trends over time.

All data used in this research were obtained from the "Periodic Financial Ratios" database of the Central Securities Depository of Turkey following the researcher's official data request. The dataset includes annual observations for the period 2017–2024 and covers only companies listed on Borsa Istanbul. Raw data were transferred to Microsoft Excel, subjected to preprocessing procedures, and subsequently restructured for analytical purposes.

The units of analysis were categorized under the subgroups of investment-oriented financial institutions. As of 2024, the sample comprises a total of 119 companies, including eight brokerage firms, 47 real estate investment trusts (REITs), seven venture capital investment trusts (VCITs), nine securities investment trusts (SITs), and 48 holding and investment companies. Each subsector was treated as an independent subset for financial analysis, and categories with an insufficient number of firms were excluded from the study. This sampling criterion was adopted to enhance the statistical reliability of the research and to allow for more robust sectoral comparisons.

Financial ratios were grouped into six thematic categories based on their conceptual similarity and functional relevance: (i) Profitability, (ii) Liquidity, (iii) Capital Structure, (iv) Operational Efficiency, (v) Income-Expense Ratios, and (vi) Growth Indicators. The ratios within each category were analyzed through both horizontal (time-series) and vertical (cross-sectoral) comparisons. For instance, the profitability dimension included indicators such as net profit margin, return on assets (ROA), and return on equity (ROE). At the same time, the liquidity category focused on the current ratio, quick ratio, and cash ratio. Operational efficiency was assessed using asset and equity turnover ratios. Expense ratios were evaluated based on the proportions of marketing, R&D, and general administrative expenses relative to total revenue and net income.

The descriptive statistical methods were used to carry out the study with an approach that accommodates multidimensional analysis by quartile distribution. To move beyond the confines of average measures, the individual financial ratios were analyzed by computing the first quartile (Q1), median value, and third quartile (Q3). These metrics supported comparative table evaluations. Such an approach offers more in-depth and layered findings by reporting on in-sector performance differences. It also captures the impact of outliers on overall measures, thereby enhancing interpretive depth.

The analysis process relied exclusively on descriptive techniques; no parametric statistical tests or advanced modeling methods were employed. Evaluations were limited to tabular analyses based on sectoral averages and distributional measures. Nonetheless, through the use of a distribution-focused framework, performance outliers and intra-sectoral structural disparities were made more visible. These patterns are often overlooked in conventional analyses but became analytically accessible through this approach.

The primary limitation of this study lies in its exclusive focus on publicly listed companies included in the Central Securities Depository database. Consequently, privately held or unregistered firms were excluded from the scope of the analysis. Nevertheless, the representativeness of the sample is deemed sufficient to ensure the reliability of intra-sectoral comparisons.

4. Findings

Between 2017 and 2024, the profitability indicators of financial institutions listed on Borsa Istanbul exhibited a volatile trajectory, shaped by both macroeconomic developments and firm-scale dynamics. The average net profit margin surged to extraordinary levels in 2021 and 2022—112.83% and 250.28%, respectively—but sharply declined to 17.30% in 2024. This dramatic contraction reflects the impact of post-2023 tight monetary policies, rising funding costs, and a shrinking credit volume, all of which exerted pressure on sectoral operations. During the same period, both return on equity (ROE) and return on assets (ROA) also weakened significantly. From highs of 54.80% and 37.59% in 2022, these ratios dropped to 3.24% and 1.58%, respectively, in 2024, indicating a substantial erosion in the ability of capital and assets to generate returns.

Table 1: Distribution-Based Financial Performance Metrics of Investment-Oriented Financial Institutions in Turkey (2017–2024)

Arithmetic Mean	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Gross Profit Margin (%)	34,84	34,47	35,44	33,76	33,96	43,36	40,17	37,83
Operating Profit Margin (%)	28,40	26,07	29,69	20,99	78,16	39,20	47,17	32,82
Net Profit Margin (%)	18,62	18,18	30,80	16,70	112,8	250,2	50,79	17,30
Net Income / Equity (Return on Equity – ROE) (%)	5,48	4,75	10,87	13,24	23,71	54,80	10,14	3,24
Net Income / Assets (Return on Assets – ROA) (%)	3,85	3,29	5,98	6,78	13,66	37,59	4,24	1,58
Net Income Growth Rate (%)	-6,66	-22,7	-24,0	19,07	114,8	272,3	-60,87	-48,12
Equity Change Rate (%)	8,85	8,43	13,76	32,08	62,17	114,6	103,3	42,15
First Quartile (Q1)	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Gross Profit Margin (%)	10,45	9,50	13,87	11,93	8,64	14,84	10,82	10,73
Operating Profit Margin (%)	1,88	0,96	5,43	2,05	2,17	7,48	5,04	2,17
Net Profit Margin (%)	0,05	0,05	0,81	1,17	3,63	10,74	-0,93	-1,55
Net Income / Equity (Return on Equity – ROE) (%)	-0,11	-1,98	3,29	1,61	9,32	26,90	-0,15	-6,43
Net Income / Assets (Return on Assets – ROA) (%)	-0,03	-1,28	1,43	0,46	4,35	14,26	-2,28	-3,79
Net Income Growth Rate (%)	-92,4	-90,9	-85,8	-77,8	-40,19	82,28	-105,7	-103
Equity Change Rate (%)	2,70	-0,84	3,71	2,24	17,50	66,48	69,21	26,05
Third Quartile (Q3)	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**

Gross Profit Margin (%)	60,80	52,78	57,34	57,23	61,74	69,28	73,36	66,69
Operating Profit Margin (%)	46,84	36,53	38,66	40,16	64,64	58,83	78,16	59,00
Net Profit Margin (%)	45,93	32,29	53,92	24,47	162	251,7	74,66	40,61
Net Income / Equity (Return on Equity – ROE) (%)	14,27	13,95	19,64	21,37	36,86	81,23	25,40	10,55
Net Income / Assets (Return on Assets – ROA) (%)	8,58	8,83	11,18	12,10	21,19	57,91	15,55	7,36
Net Income Growth Rate (%)	63,03	79,40	49,55	99,84	262,7	435,0	-3,08	-0,77
Equity Change Rate (%)	16,96	22,53	24,13	50,07	86,43	153,5	141,6	54,93
Median	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Gross Profit Margin (%)	30,91	28,58	28,40	26,10	27,52	35,81	33,24	30,67
Operating Profit Margin (%)	10,39	10,41	15,77	10,23	15,09	18,44	21,20	14,71
Net Profit Margin (%)	4,94	6,77	9,11	5,82	29,54	63,75	12,80	7,00
Net Income / Equity (Return on Equity – ROE) (%)	7,11	4,92	9,70	8,23	18,45	56,19	11,75	4,17
Net Income / Assets (Return on Assets – ROA) (%)	4,62	2,49	5,00	4,87	10,89	33,95	7,47	3,22
Net Income Growth Rate (%)	-10,7	-24,7	-19,9	-25,2	70,7	197,4	-57,2	-50,9
Equity Change Rate (%)	9,63	7,64	13,33	20,31	53,69	109,92	97,51	41,92

At the firm group level, there is a remarkable divergence in profitability between lower-quartile (Q1) and upper-quartile (Q3) firms. As of 2024, the Q1 firms showed negative values—net profit margin of –1.55%, ROE of –6.43%, and ROA of –3.79%—implying that these lower-tier, financially weakened firms have entered into loss-making ground. The trend reflects their increased exposure to economic volatility and poor utilization of financial resources. Conversely, the Q3 firms showed an impressive performance with 40.61% net profit margin, 10.55% ROE, and 7.36% ROA—well exceeding sectoral norms—demonstrating their consistent operating efficacy and cost containment under crisis-like conditions. This divergence shows how larger firms enjoy economies of scale and thus sustain competitiveness and better-than-average resilience to macroeconomic uncertainties.

The fact that median values remain significantly below the mean further indicates that profitability is not broadly distributed across the sector. As of 2024, the median net profit margin stood at 7.00%, with median ROE and ROA at 4.17% and 3.22%, respectively. These figures suggest that a limited number of high-performing firms are skewing the statistical distribution upward, while the majority of firms operate with low or marginal profitability. In particular, the underperformance of small-scale firms creates an artificial sense of balance in overall profitability and obscures the underlying fragility within the sector.

The net income growth rate has exhibited a trajectory closely aligned with profitability trends. After peaking at 272.33% in 2022, the rate dropped sharply to –48.12% by 2024, signaling a substantial slowdown in income generation. This abrupt reversal can be attributed to contracting demand, elevated financing costs, and a downturn in real economic activities. Moreover, the findings suggest that the sector's growth potential lacks a sustainable foundation and remains highly susceptible to external shocks, which exert considerable pressure on revenue structures.

While liquidity indicators overall have been on an ascending path, this progress has not equally applied to all firms. The mean current ratio increased from 1.65 in 2017 to 4.84 in 2024 and reflects the overall improvement in the ability to cover short-term liabilities. Nonetheless, the current ratio

among Q1 firms stood at merely 0.99 and the quick ratio at 0.45, which attests to the continued liquidity problems confronting firms belonging to the lower part of the sector in being able to cover short-term liabilities. Conversely, Q3 firms illustrated far better liquidity positions with a current ratio and quick ratio standing at 3.74 and 1.66, respectively, highlighting their more robust financial resilience to cope with short-term liabilities.

The cash ratio offers an even more dramatic snapshot. As of 2024, Q1 firms maintain only 0.09 on the cash ratio front, which points to an extreme liquidity constraint in the form of freely available cash assets. While the sector-average cash ratio had risen to an all-time high of 1.12 in 2021, it fell to 0.88 in 2024, which points to an erosion in the firms' capacity to fulfill commitments with immediate cash reserves on hand. Additional evidence comes from persistently low median values—1.75 on the current ratio and 0.94 on the quick ratio—which point to the improvement in liquidity not being spread out through the sector but rather with leading firms.

These findings indicate that the observed improvement in sector-wide liquidity is confined primarily to a select group of firms, and a broad-based liquidity stabilization has not been achieved. While firms in the lower segment struggle to manage liquidity risks, those in the upper segment have succeeded in strengthening their financial buffers. In this context, although the sector's overall liquidity profile appears nominally positive, it is distributionally uneven and reflects an underlying structural vulnerability.

Capital structure-wise, the period 2017–2024 demonstrates unequivocally a move from asset financing through debt to greater dependence on equity capital. While the equity-debt proportion, which had been 959.22% in 2021, dropped to 447.62% by 2024, it remains indicative of a strong capital structure. At the same time, the proportion of equity against total assets touched 70.86%, indicating that companies increasingly rest on the risk-averse financing approach by preferring internal assets to external financing sources in the form of borrowing funds. Remarkably, equity-debt proportion varies widely depending on firm size, with Q1 firms logging just 109.01% compared to 595.74% by Q3 firms. Such disparity makes clear that there is considerable heterogeneity in capital structure by firm size, with larger firms being more successful in bolstering the equity base.

The fall in the proportion of total liabilities to total assets from 34.78% in 2021 to 29.14% in 2024 and the simultaneous fall in short-term debt indicate movement away from the debt-financed model of growth in the industry. Additionally, the slowing down of debt growth—from 98.73% in 2022 to 66.98% in 2024—represents firms' adoption of more prudent borrowing behavior. This indicates an alignment with a post-crisis managerially driven demeanor focused on financial prudence and reflects a strategic move to more sustainable capital arrangements.

To wrap up, profitability, capital structure, and liquidity indicators in the financial institutions industry show marked differences both through the period and by firm size segments. While big firms are holding up their financial positions, smaller firms are still susceptible. While improvement in the sector as a whole may seem to be on track statistically, it is not structurally consistent and is not sustainable—especially in the segment of smaller performing firms. Hence, improvement in

the sector's overall financial condition can only be made sustainable through focused policy actions targeting specifically the financially vulnerable firms.

4.1. Brokerage Firms Sector

Between 2024 and 2017, brokerage firms listed on Borsa Istanbul showed an extremely volatile profitability performance with steep fluctuations characterized by dramatic surges in the post-pandemic period and chronic crashes afterward. The average net profit margin, which had been just 2.30% in 2019, shot up to 6.52% in 2020 and climbed to 10.09% in 2021—representing a remarkable sectoral upswing. However, this could not be sustained; by 2024, the margin had stooped to an abysmal 0.34%, indicating an alarming depression in profitability. This dramatic fall is traceable to an emission in trading volumes and increased operating costs. A similar trend is seen in the return on equity (ROE) measure. Having hit an all-time high of 57.22% in 2020, ROE dropped to 11.66% in 2024. The median ROE in the same year at a paltry 7.35% highlights that the fall had an industrywide spread.

A distributional segmental analysis of financial performance indicates that relatively poor profitability metrics always characterize lower-quartile (Q1) businesses. In 2024, these businesses recorded an average net profit margin of only 0.09% and an ROE of merely 3.11%. What these metrics indicate is that small-scale businesses fail to counteract increasing operating costs with limited revenue streams and fail to leverage equities effectively. Higher-quartile (Q3) businesses, on the other hand, showed strong performance overall—for example, in 2022, these businesses recorded a net profit margin of 5.57% and an ROE of 87.07%, highlighting how these businesses are the sector's major profitability contributors. The gap highlights the extent to which size allows larger firms to leverage economies of scale and maintain profitability despite market volatility.

Net revenue growth rates are another significant measure that shows the industry's extreme sensitivity to macroeconomic conditions. In 2020, the industry had an unprecedented growth rate of 536.45%, following 200.30% growth in 2022. In 2024, these growth rates had dramatically turned negative, with an average growth rate of –63.39% and a median growth rate of –81.71%, indicating the drastic contraction in the industry overall. The dramatic decrease highlights the level at which brokerage firms' capital market operations are extremely vulnerable to macroeconomic fluctuations and changes in interest rate regimes.

As far as liquidity indicators are concerned, the brokerage sector has had a relatively stable structure, generally. Average current ratio fell modestly from 1.48 in 2017 to 1.41 in 2024, and the quick and cash ratios similarly trended down to 1.40 and 0.54, respectively. Median figures were likewise on par with the current ratio level at 1.36, the quick ratio level at 1.35, and the cash ratio level at 0.51, which together hint that overall the sector still had an adequate ability to cover short-term obligations. Yet this stability hides significant differences among firm segments. As of 2024, the Q1 firms had an inferior average current ratio level of 1.18 and cash ratio level of 0.43, and thus demonstrate poor liquidity resilience. In sharp distinction, the Q3 firms had superior liquidity positions with current

and quick ratios levels of 1.58 and cash ratio level of 0.63, and reflect better cash flow management and better risk control by the sector's better-capitalized firms.

Table 2: Distribution-Based Liquidity Ratios of Brokerage Firms Sector (2017–2024)

Arithmetic Mean	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Current Ratio	1,48	1,61	1,15	1,20	1,20	1,20	1,45	1,41
Quick Ratio	1,47	1,60	1,14	1,19	1,20	1,19	1,44	1,40
Cash Ratio	0,61	0,80	0,38	0,40	0,42	0,39	0,60	0,54
First Quartile (Q1)	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Current Ratio	1,14	1,21	1,14	1,15	1,15	1,10	1,26	1,18
Quick Ratio	1,13	1,19	1,13	1,14	1,15	1,10	1,22	1,17
Cash Ratio	0,42	0,57	0,34	0,38	0,40	0,36	0,43	0,43
Third Quartile (Q3)	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Current Ratio	1,87	1,99	1,16	1,20	1,26	1,28	1,65	1,58
Quick Ratio	1,87	1,98	1,15	1,20	1,25	1,27	1,63	1,58
Cash Ratio	0,71	0,93	0,48	0,41	0,43	0,47	0,67	0,63
Median	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Current Ratio	1,37	1,30	1,15	1,19	1,19	1,19	1,33	1,36
Quick Ratio	1,36	1,29	1,14	1,18	1,19	1,19	1,33	1,35
Cash Ratio	0,42	0,78	0,44	0,39	0,41	0,45	0,62	0,51

The consistently low cash ratios during the period under observation, compared to quick and current ratios, show that brokerage firms have little ability to satisfy obligations from current cash holdings. Especially in the 2019–2020 period, the average cash ratio dipped to 0.38–0.40 levels, evidencing the transmission effect of market-level liquidity stress on firm balance sheets. Though the ratio increased to 0.60 in 2023, it dropped to 0.54 in 2024, indicating the sector's lingering exposure to cyclical swings in cash levels.

A review of capital structure measures demonstrates an overarching drift towards debt financing throughout the brokerage industry and a steady weakening in equity ratios. The mean equity-to-debt ratio fell from 54.79% in 2017 to 48.95% in 2024, and the median value dropped from 52.97% to 40.61%, evidencing an extensive weakening in capital resilience. Throughout the same period, the proportion of total debt to total assets increased from 68.39% to 69.57%, and the proportion of short-term debt grew from 67.33% to 68.73%. The above indicators show that brokerage firms wholly depend on short-term liabilities to fund operations and are therefore more susceptible to liquidity issues in the sector.

As of 2024, bottom-quartile firms are highly vulnerable financially, with an equity-to-total-assets ratio of 19.74% and a debt-to-assets ratio of 57.61%. Top quartile firms have far more solid and stable capital structures with an equity proportion of 42.39%. Industry-wise, the average long-term debt-to-assets ratio ranges from 1% to 1.3%, proving that brokerage firms are heavily dependent on short-term funding. Such structural inclination increases their sensitivity to interest rate rise and represents an important risk in their financial structure.

Summing up, the brokerage industry in Turkey experienced underlying difficulties from 2017 to 2024 with high volatility, profitability vulnerability, and imbalances in the capital structure. Small – and medium-sized firms were particularly hit hard with huge losses in income and equity due to decreased trading volumes and increased operating costs. Large-scale firms, on the other hand, were comparatively stable by taking advantage of economies of scale, better liquidity positions, and more organized structures. This divergence reflects that success in the industry in financial terms has grown more concentrated among top-tier firms and increased underlying structural imbalances. To achieve sustainable profitability and a healthy capital base, brokerage firms need to react to market fluctuations in addition to internal efficacy, cost control, and sound liquidity management.

4.2. Real Estate Investment Trust Sector

The REITs sector witnessed unprecedented fluctuations in profitability metrics during 2017-2024, bringing out into the open its extreme sensitivity to macroeconomic and sectoral developments alike. The net profit margin expanded to a record level on average—263.15% in 2021 and 743.03% in 2022—due primarily to revaluation adjustments and base effect. The dramatic fall in these margins in 2023 and 2024 proved that sustainability was an exception rather than the norm. The upper quartile (Q3) players witnessed an outlandish net profit margin of 1,064.18% in 2022, skewing the sector average enormously. In contrast, the lower quartile (Q1) companies reported negative margins in some years (viz., 2020 and 2024), remaining in negative territory. The very controlled divergence highlights the structural disequilibrium in the sector.

Similarly, return on equity (ROE) and return on assets (ROA) reached high average levels of 74.78% and 55.65%, respectively, in 2022. These peak figures demonstrate that the sector possesses the potential to generate substantial returns during certain periods; however, they also reveal its inability to maintain such performance consistently, indicating a strong dependence on external conditions. The net income growth rate reflects this fragility more explicitly: in 2023 and 2024, the sector recorded sharp declines of –42.57% and –38.67%, respectively, highlighting that a substantial contraction in revenue growth mirrored the profitability downturn. The fact that median growth rates only exhibited a positive surge in 2021 and 2022 further suggests that the majority of firms within the sector struggled to achieve sustained long-term growth.

On the liquidity indicators front, the Real Estate Investment Trust (REIT) industry showed an improvement, more so during the period following the pandemic. The mean current ratio increased from 2.08 in 2017 to 4.74 in 2024, which indicates overall improvement in the sector's ability to service short-term liabilities. Quick and cash ratios showed an increased trend in the same direction with the cash ratios reaching 1.31 and 1.36 in 2021 and 2022, respectively—reflecting instances of better cash position management in the sector. However, these increases were not evenly spread across all firms. In 2024, Q1 firms had a current and cash ratio of 0.94 and 0.05, highlighting the acute vulnerability to liquidity shocks by these firms. Q3 firms had a substantially more robust liquidity position with a 5.83 current ratio in the same year, starkly revealing the heterogeneity in financial resilience in the sector.

Capital structure data show the declining trend in leverage in the Real Estate Investment Trust (REIT) industry to reflect an increasing penchant for equity financing. The Equity/Total Liabilities ratio in 2017 stood at 279.34 and jumped to an unprecedented 2,211.51 in 2023 and dropped to 446.11 in 2024. Though this decreased from its peak, the industry has still had a largely equity-centric structure. Likewise, the Equity/Total Assets ratio hit 76.27% in 2024 to reflect sector-wide preference towards internal financing compared to external debt financing. Q3 firms specifically showed an Equity/Total Assets ratio over 97%, which demonstrates the presence of these firms with almost zero leverage and with a robust capital structure.

Table 3: Distribution-Based Capital Structure Indicators of the Real Estate Investment Trust (REIT) Sector (2017–2024)

Arithmetic Mean	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Equity / Total Liabilities (%)	279,3	286,3	245,5	276,7	1.018	1.503	2.211	446,1
Equity / Total Assets (%)	65,55	61,78	63,22	63,62	69,32	75,32	79,89	76,27
Short-Term Liabilities / Total Assets (%)	17,36	19,25	19,81	22,57	17,87	14,61	7,89	7,88
Total Liabilities / Total Assets (%)	34,45	38,22	36,78	36,38	30,68	24,68	20,11	23,73
Total Liabilities Growth Rate (%)	18,87	20,29	-1,21	6,25	23,63	67,92	93,24	391,3
Long-Term Liabilities / Total Assets (%)	17,09	18,97	16,97	13,81	11,20	8,37	8,45	15,02
First Quartile (Q1)	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Equity / Total Liabilities (%)	89,48	89,48	84,93	80,63	112,0	171,0	187,2	227,7
Equity / Total Assets (%)	49,70	49,79	49,81	49,06	53,36	65,24	68,27	71,70
Short-Term Liabilities / Total Assets (%)	5,25	7,36	5,29	8,63	3,02	1,70	1,89	1,31
Total Liabilities / Total Assets (%)	14,46	15,59	13,33	13,20	4,32	3,26	2,33	13,58
Total Liabilities Growth Rate (%)	2,27	-23,58	-3,29	-8,92	-8,73	0,18	46,64	34,95
Long-Term Liabilities / Total Assets (%)	1,11	0,64	0,69	0,53	0,29	0,21	0,16	6,99
Third Quartile (Q3)	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Equity / Total Liabilities (%)	368,9	253,4	200,4	331,1	707,7	1.187	1.469	595,5
Equity / Total Assets (%)	85,54	84,41	86,67	86,80	95,68	96,74	97,67	86,42
Short-Term Liabilities / Total Assets (%)	25,60	27,35	36,16	35,88	25,04	20,03	10,10	12,28
Total Liabilities / Total Assets (%)	50,30	50,21	50,19	50,94	46,64	34,76	31,73	28,30
Total Liabilities Growth Rate (%)	39,02	29,39	13,11	25,67	50,16	121,1	119,4	365,3
Long-Term Liabilities / Total Assets (%)	26,76	31,58	27,24	17,87	15,19	13,14	9,54	20,03
Median	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Equity / Total Liabilities (%)	148,4	132,5	138,5	152,5	258,2	353,1	519,9	321,5
Equity / Total Assets (%)	61,04	61,65	61,25	64,83	73,57	80,54	86,88	78,22
Short-Term Liabilities / Total Assets (%)	14,22	17,02	15,01	17,91	13,54	7,39	4,27	4,88
Total Liabilities / Total Assets (%)	38,96	38,35	38,75	35,17	26,43	19,46	13,12	21,78
Total Liabilities Growth Rate (%)	21,07	11,29	2,20	0,75	14,82	43,60	67,71	78,76
Long-Term Liabilities / Total Assets (%)	10,82	12,53	7,28	5,22	3,00	3,79	4,04	12,75

The proportion of short-term liabilities to total assets decreased from 17.36% to 7.88%, which shows that the sector has grown more stable and controlled in its debt arrangement structure. Yet the total debt growth rate registered an unprecedented surge in 2024 to 391.31%. The sudden spike indicates that some companies might have resorted to debt restructuring or encountered increased short-term

liquidity requirements. It reflects the resilience with which cyclical fluctuations diverge from the universal tendency of the sector and speak to continued volatility in debt dynamics despite overall improvement in the structure of capital.

The operational efficiency indicators have remained relatively poor in the REIT (Real Estate Investment Trust) industry. The asset turnover ratio rose marginally from 0.15 in 2017 to 0.12 in 2024, evidencing poor asset utilization to generate revenue. Likewise, the equity turnover ratio decreased to 0.11 in 2023 and marginally increased to 0.17 in 2024, indicating that there is a need to utilize capital better in the industry. Conversely, the accounts receivable turnover ratio dramatically improved from 11.72 in 2017 to 19.95 in 2024, evidencing a significant improvement in cash realization from receivables. Furthermore, the decrease in the proportion of inventories in current assets from one year to the following year evidences the move to adopting an efficient working capital structure.

As far as the cost structure is concerned, the most impressive aspect of the REIT (Real Estate Investment Trust) industry is the considerable reduction in financial costs. In 2018, the proportion of finance costs to overall revenue was an incredible 98.41%, whereas by 2024, this fell to 19.36%, revealing the sector to have more control over its financing costs. Conversely, general administrative costs hit an all-time high of 16.59% in 2023 and are probably an indication of the operational growth that followed the pandemic years. R&D costs remained stable at about 0.21%, revealing that the sector has little attention devoted to innovation and still focuses primarily on fixed asset management. As a whole, this cost structure reflects the sector's requirement for fresh strategies to balance operational costs to ensure long-term growth.

In total, the REIT sector in Turkey had a complicated financial structure during 2017-2024 with both exceptional returns and underlying fragilities. As the sector went through spasmodic profitability peaks, these were found to be unsustainable in the long run. While liquidity and capital structure indicators were found to be strong overall, these are unevenly distributed among firm sizes. Q1 firms in particular showed chronic vulnerabilities in liquidity and financial structure, and thus are a priority to be monitored in terms of sector-level resilience. In the interest of sustainable financial resilience, the REIT sector needs to move away from being almost exclusively dependent on valuation gains to being based on operating efficiency and rigorous expense control.

4.3. Venture Capital Investment Trust

During the post-2020 era, the Venture Capital Investment Trusts (VCITs) industry has witnessed extreme volatility in profitability metrics, characterized by high return prospects and high risk exposure. In 2021, the average net profit margin attained an unprecedented level of 4,290%, sharply fell to –498% in 2023, and –65% in 2024. The median net profit margin showed a similar trend to decrease from 271% to –62% within the same period, which suggested that losses affected not just a select group of firms but spread throughout the industry. The –591% net income decline witnessed in Q1 suggests disproportionate effects of crises on smaller firms compared to Q3 firms with a 26% net profit margin in 2024, which reflects size-related disparity in financial performance.

These pronounced fluctuations in profitability have also significantly affected return on equity (ROE). The median ROE, which stood at 39.9% in 2021, declined sharply to –22% in 2023 and further to –5.7% in 2024. Such a downward trend poses a potential threat to investor confidence in the sector. Nevertheless, Q3 data reveals an ROE of 10.8% in 2024, indicating that firms with strong capital structures managed to maintain profitability. On the other hand, the sector's historically high equity growth rates—reaching around 110%—reflect a tendency toward rapid expansion. However, the substantial 34.7% drop in 2024 raises concerns about the financial sustainability of this growth trajectory.

Liquidity indicators have similarly exhibited a volatile trajectory. While the average current ratio reached an exceptionally high level of 318% in 2018—driven by a few outlier firms—the median value remained at just 35%, reflecting significant internal disparities within the sector. As of 2024, the median current ratio has declined to 2.95%, and the cash ratio has dropped to 0.29%, signaling a substantial erosion of cash reserves and an increasing fragility in managing short-term liabilities. According to Q1 data, the current ratio fell dramatically from 7.37% in 2023 to just 0.88% in 2024, clearly indicating that small and medium-sized firms have become highly vulnerable in terms of liquidity resilience.

In terms of capital structure, the Venture Capital Investment Trusts (VCITs) sector presents an exceptionally low-debt profile, characterized by a funding structure that relies predominantly on equity. In 2023, the median Equity-to-Total Liabilities ratio soared to an extraordinary 30,808%, clearly indicating that external financing was employed only minimally across the sector. The debt-to-assets ratio remained below 1%, while the ratio of short-term liabilities to total assets did not exceed 0.3%. This highly equity-driven configuration enhances the sector's resilience during periods of financial distress; however, it also limits growth potential due to the underutilization of financial leverage. The relatively modest increases in debt levels observed in 2023 (53%) and 2024 (31%) may suggest a cautious shift in financing strategy. However, these changes are not yet substantial enough to alter the sector's overall structure.

In terms of operational efficiency, asset turnover remained notably low across the 2017–2024 period, with the modest improvement observed in 2022 (0.54%) proving unsustainable in subsequent years. Notably, the receivables turnover ratio reached an exceptionally high median value of 155,843 in 2021—a figure likely attributable to one-off collections or discrepancies in accounting entries rather than ongoing operational improvements. The declining share of current assets within total assets suggests a strategic shift from liquid asset holdings to more static, long-term investments. This pattern indicates that Venture Capital Investment Trusts (VCITs) predominantly adopt a portfolio-based investment approach, rather than focusing on enhancing operational cycle efficiency.

Table 4: Distribution-Based Operational Efficiency and Asset Composition Indicators of the Venture Capital Investment Trust (VCIT) Sector (2017–2024)

Arithmetic Mean	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Asset Turnover Ratio	0,33	0,28	0,09	0,30	0,08	0,56	0,21	0,29
Equity Turnover Ratio	0,34	0,28	0,10	0,30	0,09	0,56	0,26	0,37
Inventory Turnover Ratio_1	-	-	-	-	-	-	-	-
Inventory Turnover Ratio_2	-	-	-	-	-	-	-	-
Accounts Receivable Turnover	36.904	38,7	46,80	157	155.843	615	17.475	4.569
Inventories / Current Assets (%)_1	-	-	-	-	-	-	-	-
Inventories / Current Assets (%)_2	-	-	-	-	-	-	-	-
Current Assets / Total Assets (%)	38,82	41,66	40,06	43,95	37,62	30,48	27,72	12,16
Tangible Fixed Assets / Total Assets (%)	0,01	0,03	0,07	0,05	0,03	0,06	0,10	0,15
Intangible Fixed Assets / Total Assets (%)	0,00	0,00	-	0,03	0,02	0,01	0,00	0,01
First Quartile (Q1)	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Asset Turnover Ratio	-0,07	0,04	0,02	0,03	0,03	0,25	0,02	0,11
Equity Turnover Ratio	-0,07	0,04	0,02	0,04	0,03	0,25	0,03	0,12
Inventory Turnover Ratio_1	-	-	-	-	-	-	-	-
Inventory Turnover Ratio_2	-	-	-	-	-	-	-	-
Accounts Receivable Turnover	19.434	7,87	11,6	157,5	77.925	319,3	115,	372
Inventories / Current Assets (%)_1	-	-	-	-	-	-	-	-
Inventories / Current Assets (%)_2	-	-	-	-	-	-	-	-
Current Assets / Total Assets (%)	6,28	16,55	6,59	11,02	7,85	3,20	4,03	3,89
Tangible Fixed Assets / Total Assets (%)	0,00	0,01	0,01	0,01	0,01	0,02	0,04	0,06
Intangible Fixed Assets / Total Assets (%)	0,00	0,00	-	0,02	0,01	0,01	0,00	0,00
Third Quartile (Q3)	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Asset Turnover Ratio	0,43	0,29	0,15	0,35	0,11	0,85	0,39	0,53
Equity Turnover Ratio	0,43	0,29	0,17	0,35	0,12	0,85	0,44	0,60
Inventory Turnover Ratio_1	-	-	-	-	-	-	-	-
Inventory Turnover Ratio_2	-	-	-	-	-	-	-	-
Accounts Receivable Turnover	54.373	56,4	69,2	157,5	233.760	912	33.584	4.939
Inventories / Current Assets (%)_1	-	-	-	-	-	-	-	-
Inventories / Current Assets (%)_2	-	-	-	-	-	-	-	-
Current Assets / Total Assets (%)	63,91	64,20	68,76	81,12	55,74	49,93	39,64	9,55
Tangible Fixed Assets / Total Assets (%)	0,02	0,04	0,09	0,06	0,04	0,10	0,13	0,20
Intangible Fixed Assets / Total Assets (%)	0,00	0,00	-	0,04	0,03	0,01	0,00	0,02
Median	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Asset Turnover Ratio	0,02	0,24	0,05	0,09	0,06	0,54	0,08	0,23
Equity Turnover Ratio	0,03	0,25	0,08	0,09	0,06	0,54	0,31	0,23
Inventory Turnover Ratio_1	-	-	-	-	-	-	-	-
Inventory Turnover Ratio_2	-	-	-	-	-	-	-	-
Accounts Receivable Turnover	36.904	12,3	21,3	157,5	155.843	615,7	1.637	742
Inventories / Current Assets (%)_1	-	-	-	-	-	-	-	-
Inventories / Current Assets (%)_2	-	-	-	-	-	-	-	-
Current Assets / Total Assets (%)	26,30	26,70	27,28	30,61	30,71	7,24	6,96	7,90
Tangible Fixed Assets / Total Assets (%)	0,01	0,02	0,04	0,04	0,03	0,03	0,08	0,10
Intangible Fixed Assets / Total Assets (%)	0,00	0,00	-	0,03	0,02	0,01	0,00	0,01

The cost structure within the sector further reinforces its underlying fragilities. In 2022, financial expenses reached an exceptionally high median level of 44,981%, reflecting the intense pressure exerted on certain firms by external financing sources. Although this ratio declined in the following years, general administrative and marketing expenses remained relatively low. Nonetheless, the ratio of total expenses to net income surged to 64.6% in 2021, highlighting the ongoing burden of non-operating costs on profitability. The renewed upward trend in this ratio during 2023 and 2024 suggests that the sector has yet to establish a stable and effective cost management framework.

Growth indicators are one of the most dramatic yet unpredictable features of the Venture Capital Investment Trusts (VCIT) industry. Extraordinary revenue growth rates both in 2020 and 2022 stood at 232% and 1,516%, respectively; this rate quickly fell to just 1.85% by 2024. Those kinds of fluctuations demonstrate that the income structure of the sector comes more from the returns on investment and not from the underlying operations. In sharp contrast to this are total asset growth rates; these have shown more stability, with the median rate standing at 54.9 in 2020 and increasing to 98.9 by 2022. This trend shows that the sector has expanded its balance sheet more slowly and consistently in this period.

4.4. Holding Companies and Investment Firms Sector

The Holding and Investment Companies sector demonstrated remarkable acceleration in growth performance in the post-pandemic years 2017–2024; nevertheless, this momentum slackened to more muted levels in 2023 and 2024. A study into the dynamics of growth within the sector reports an oscillating but overall rising trend in both total revenue growth and total asset growth.

Based on an evaluation of the median level, revenue growth rates show that 2020 was the year of lower growth capabilities for the sector under crisis conditions. In this particular year, the median growth revenue remained just 2.09%, an indication of the significant influence of the pandemic on investment choices, portfolio performance, and market activity overall. In the following years, though, the sector bounced back very quickly, with median revenue growth reaching 56.27% in 2021. This improvement can be attributed to an intense revaluation of market assets following the pandemic, greater diversification of the portfolio, and the return of capital to the sector. Year 2022 turned out to be the sector's peak growth period with an impressive median revenue growth figure of 117.69%. Not only are base-year effects responsible for this outstanding performance, but also the improvement in the base value of the portfolio and significant income created through asset sales.

In 2023 and 2024, the median revenue growth rates were recorded at 71.65% and 36.71%, respectively, indicating a shift from a phase of rapid expansion toward a more balanced and sustainable growth trajectory. The relative deceleration observed in 2024 particularly suggests that the sector has entered a maturation stage, redirecting its focus from speculative expansion to structural consolidation. In this

context, the decline in growth rates should not be interpreted as a sign of deteriorating performance but rather as a reflection of more rational and sustainable growth strategies.

The total asset growth rates confirm a similar trend. In 2020, the median asset growth rate stood at a modest 21.82%, reflecting the pandemic's constraining effects on investment volumes. However, during 2021 and 2022, the median growth rates increased significantly to 63.33% and 80.53%, respectively, clearly indicating a post-pandemic recovery period characterized by restructuring and capital expansion within the sector. In 2023, the median asset growth surged to 83.28%, suggesting that large-scale firms continued to increase their asset base, thereby sustaining the momentum of sectoral expansion. Nevertheless, the median asset growth declined to 45.31% in 2024, signaling a more cautious investment approach and a strategic shift toward rational limitations in balance sheet management, in line with the slowdown in revenue growth.

Analysis of intra-sectoral distribution using quartile-based analysis identifies considerable growth rate and firm size differences. Firms in the bottom quartile (Q1) showed considerably weaker growth performance, especially during the period of crisis. They witnessed negative revenue growth by –24.41% in 2020 compared to the sector median and attained an asset growth rate of merely 9.41%. This points to small and medium-sized enterprises being far more susceptible to market shocks. Conversely, firms in the top quartile (Q3) showed impressive growth in 2022, with revenue and asset growth rates of 186.97% and 136.33%, respectively. This reflects that top firms not only could sustain the growth momentum but were also able to leverage better the opportunities created by the post-crisis period on account of size advantages.

Table 5: Distribution-Based Growth Metrics of the Holding Companies and Investment Firms Sector (2017–2024)

Arithmetic Mean	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Total Revenue Growth Rate (%)	26,30	20,61	-7,09	-3,64	68,27	142,11	77,93	40,99
Total Assets Growth Rate (%)	11,05	10,74	11,38	19,32	71,78	101,44	85,06	46,16
First Quartile (Q1)	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Total Revenue Growth Rate (%)	10,45	7,27	-37,81	-24,41	33,21	81,05	33,53	6,21
Total Assets Growth Rate (%)	5,69	-5,44	3,70	9,41	47,06	55,20	61,38	26,53
Third Quartile (Q3)	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Total Revenue Growth Rate (%)	36,11	44,30	20,22	27,62	99,34	186,97	122,88	72,19
Total Assets Growth Rate (%)	23,16	23,20	21,52	28,92	88,23	136,33	119,66	64,54
Median	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Total Revenue Growth Rate (%)	26,46	31,97	3,08	2,09	56,27	117,69	71,65	36,71
Total Assets Growth Rate (%)	13,25	13,42	10,33	21,82	63,33	80,53	83,28	45,31

The differences found in quartile-based data confirm the heterogeneous nature of the Holding and Investment Companies sector and identify an explicit connection between firm size and financial performance. Large-scale firms in this instance exhibit more stable growth patterns based on superior access to capital markets and greater investment funds and diversified assets compared to smaller firms that are more exposed to market fluctuations. The structure reflects that economies

of scale are an important growth determinant in the sector and that growth rates are influenced by macroeconomic forces as well as by firm-specific capabilities and strategic focus.

Therefore, the Holding and Investment Companies sector experienced high growth in the period after 2021; however, its growth has gradually transformed into one that is more controlled, balanced, and focused on sustainability. The move in revenue and asset growth rates signals that the sector is entering the stage of maturity with its focus on both size enhancement and investment efficiency and risk control. Deceleration in growth can be perceived not as an indication of sectoral weakening but more so as an indication of strategic rebalancing and increased financial discipline. Thus, the sector's future performance will be framed on this stable base and ongoing divergence by firm size.

4.5. Securities Investment Trust Sector

The profitability performance of the Securities Investment Trusts sector from 2017 to 2024 showed intense volatility, striking evidence of its increased sensitivity to market shocks. 2022 was the peak period, with the median return on equity standing at 22.89% and the net profit margin reaching 8.02%. However, these metrics drastically dropped in 2023 to –27.06% and –10.50%, respectively. Though a modest improvement occurred in 2024, the larger trend continued to be negative. The cause of this drop can be linked to the decline in the value of capital market instruments, increased interest rates, and declining investment returns. Notably, companies in the lower quartile (Q1), being smaller in size on average, were more susceptible to the shocks and registered deeper net losses. Companies in the upper quartile (Q3), on the other hand, registered an ROE of up to 52.12% in 2022, showing clear evidence of profitability disparity based on the size of the firm within the sector.

The growth in net income in the Securities Investment Trusts sector has also traced an equally unstable path. In 2023, the median rate dropped to –239.19%, marking an extreme negative drop that eroded investor confidence and spurred capital flight. The fall highlights the importance of strategic practices like market diversification and active portfolio management so that profitability in the sector is sustainable.

Liquidity ratios in the Securities Investment Trusts (MKYO) industry have been quite high due to the industry's operational model; however, there has been an emerging normalization trend in the long term. In 2019, Current and Quick Ratios were nearly 245%, an indication of the prevalence of highly liquid securities in the composition of the portfolios. While this abundance of liquidity levelled out substantially in the period 2022–2023 and fell to the level of 74% to 83%, there are some concerns with the deterioration in the lower-quartile (Q1) firms, with the Current Ratio dropping to 22.85%, an indication that there are difficulties in the repayment of short-term obligations. In contrast to this, upper-quartile (Q3) firms continued to maintain high liquidity positions with the Current Ratios above 234% in 2024 and thus maintained financial mobility.

In terms of capital structure, the sector presents a debt-free and equity-intensive profile. Between 2017 and 2024, the Equity-to-Total Liabilities ratio fluctuated within the range of 3,000% to 13,000%, clearly indicating a preference for equity financing over debt. The Equity-to-Total Assets ratio remained consistently around 97%, reflecting that most firms in the sector operate without reliance on external funding sources. A temporary increase in the Debt-to-Assets ratio to 4.29% in 2023 appears to be linked to short-term market fluctuations; however, the ratio declined again to 1.42% in 2024, signaling a return to structural equilibrium. While this capital structure minimizes exposure to interest rate and exchange rate risks, it may also constrain the sector's potential for growth and scalability.

Operational efficiency indicators further reflect the investment-oriented nature of the sector. The extraordinary surge in asset and equity turnover ratios—both reaching approximately 49% in 2019—can be attributed to short-term portfolio movements. However, by 2024, these ratios had moderated to 4.15% and 4.22%, respectively, indicating a return to more rational and sustainable levels. The accounts receivable turnover ratio experienced a significant increase from 282% in 2022 to 823% in 2024, suggesting that the cash-based nature of transactions in the sector has accelerated the receivables collection process. Conversely, the near-zero level of tangible fixed asset investment (Tangible Fixed Assets/Total Assets < 0.1%) reveals that physical capital is unnecessary mainly in this sector, with all operational activities being conducted through portfolio management mechanisms.

The fact that current assets account for over 99% of total assets underscores the sector's characteristically high liquidity structure. This configuration not only provides firms with considerable short-term maneuverability but also transforms liquidity management into a strategic advantage, enhancing their responsiveness to market volatility and short-term financial obligations.

In terms of expense structure, the sector presents a highly unbalanced and marginal outlook. The ratio of G&A + Marketing + R&D expenses to revenue reached negative values in both 2023 and 2024 (−42.81% and −178.83%, respectively), reflecting years in which operating expenses exceeded revenues and highlighting an intensifying loss burden. The median G&A/Net Income ratio suggests that firms incurred 6 to 7 TL of expenses for every 1 TL of net income, underscoring the detrimental impact of fixed costs on sector profitability. The near-negligible levels of marketing and R&D expenditures indicate a lack of investment in strategic development areas, potentially undermining future competitiveness. Moreover, the relative increase in financial expenses—despite the sector's low debt structure—reaching 0.45% in 2024, illustrates that interest rate pressures can affect even equity-financed institutions.

Table 6: Distribution-Based Expense Structure Indicators of the Securities Investment Trust Sector (2017–2024)

Arithmetic Mean	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
R&D Expenses / Total Revenue (%)	-	-	-	-	-	-	-	-
Marketing Expenses / Total Revenue (%)	0,19	0,18	0,18	0,19	0,20	0,19	0,40	0,21
Financial Expenses / Total Revenue (%)	-	-	0,25	0,19	0,04	0,02	0,48	0,45
G&A + Marketing + R&D Expenses / Total Revenue (%)	41,4	59,5	15,1	24,8	39,1	34,7	-42,8	-178
G&A + Marketing + R&D Expenses / Net Income (%)	0,86	1,04	1,59	1,61	1,43	2,84	7,95	9,85
General and Administrative Expenses / Total Revenue (%)	0,78	1,00	1,54	1,57	1,39	2,79	7,91	9,82
First Quartile (Q1)	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
R&D Expenses / Total Revenue (%)	-	-	-	-	-	-	-	-
Marketing Expenses / Total Revenue (%)	0,00	0,13	0,15	0,14	0,14	0,14	0,40	0,21
Financial Expenses / Total Revenue (%)	-	-	0,13	0,10	0,02	0,01	0,04	0,13
G&A + Marketing + R&D Expenses / Total Revenue (%)	29,2	-9,37	12	20	23,1	9,37	-54,1	-229
G&A + Marketing + R&D Expenses / Net Income (%)	0,38	0,52	0,04	0,92	0,88	1,77	2,18	1,78
General and Administrative Expenses / Total Revenue (%)	0,38	0,52	0,04	0,90	0,88	1,46	1,78	1,78
Third Quartile (Q3)	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
R&D Expenses / Total Revenue (%)	-	-	-	-	-	-	-	-
Marketing Expenses / Total Revenue (%)	0,29	0,23	0,21	0,24	0,26	0,25	0,40	0,21
Financial Expenses / Total Revenue (%)	-	-	0,36	0,29	0,07	0,03	0,79	0,61
G&A + Marketing + R&D Expenses / Total Revenue (%)	55,9	165	17,4	29,6	53,7	57,1	-30,5	-131
G&A + Marketing + R&D Expenses / Net Income (%)	0,99	1,12	2,21	1,97	1,71	4,37	17,0	16,9
General and Administrative Expenses / Total Revenue (%)	0,92	1,01	2,13	1,90	1,71	4,37	17,0	16,9
Median	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
R&D Expenses / Total Revenue (%)	-	-	-	-	-	-	-	-
Marketing Expenses / Total Revenue (%)	0,13	0,18	0,18	0,19	0,20	0,19	0,40	0,21
Financial Expenses / Total Revenue (%)	-	-	0,25	0,19	0,04	0,02	0,39	0,49
G&A + Marketing + R&D Expenses / Total Revenue (%)	49,3	87	14,5	24,6	41,5	42,	-40	-136
G&A + Marketing + R&D Expenses / Net Income (%)	0,40	0,68	0,73	1,42	1,03	2,59	6,23	6,95
General and Administrative Expenses / Total Revenue (%)	0,39	0,67	0,67	1,42	1,03	2,59	6,23	6,95

Looking at growth rates, the sector showed negative performance both in 2017 and 2018 (−13.80% and −32.77%, respectively). After the 2020 recovery period, median revenue growth hit 55.40% in 2021 and 32.09% in 2024. Nevertheless, this momentum could not be maintained by Q1 firms, which witnessed negative revenue growth in 2020 and 2022. Asset growth, by contrast, showed more stable growth and climbed to 32.84% in 2024. The divergence indicates poor synchronization in revenue and asset growth in the sector. That some firms expanded assets without related revenue growth means that this expansion could have been through debt financing or passive accumulation rather than cash inflow from operations.

Consequently, with high liquidity and sound equity structure, this sector has significant vulnerabilities regarding profitability, expense control, and synchronized growth. In particular, the structural flaws

among businesses in the bottom segments can dominate the overall performance of the sector in operation. So, to have an enhanced and sustainable framework in the future, it is necessary to adopt strategies in the form of diversification in the portfolio, expenditures' rationale, and size-based supportive policies.

5. Conclusion and Discussion

This study centers on two key research questions: "How does the financial performance of investment-oriented financial institutions (IOFIs) vary across subsectors?" and "To what extent does firm size play a role in these variations?" The findings offer clear and compelling answers to both. First, the financial performance of IOFIs differs significantly across subsectors. Second, firm size—measured by lower (Q1) and upper (Q3) quartile classifications—emerges as a critical determinant in performance metrics. Notably, the quartile-based disparities observed in profitability, liquidity, and capital structure indicators clearly reveal the financial vulnerabilities of smaller firms, while highlighting the relative resilience and stability of larger firms.

One of the key findings of the study is that firms in the upper quartile (Q3) consistently exhibit higher profitability ratios, stronger liquidity positions, and more robust capital structures across all sectors. This trend suggests that sectoral statistical averages are often skewed upward due to the strong performance of large firms. Consequently, median and lower quartile (Q1) values offer a more accurate representation of the overall financial health of the sectors. In this context, the use of distribution-based metrics (Q1, median, Q3) in financial analysis represents not only a methodological advancement but also a significant shift in evaluative perspective.

However, the study also reveals some unexpected findings. Notably, sectors with high equity intensity and low leverage—such as Venture Capital Investment Trusts and Securities Investment Trusts—recorded substantial losses and significant liquidity shortages. This busts the common perception that adequacy of capital suffices to provide soundness of finance. The demonstrated volatility of profitability and persistently low cash ratios go against conventional financial dogma. This dogma advocates that equity-based models naturally provide insulation against adversity at times of stress. What this study instead highlights are proper management of operations and cost controls. Resource utilization efficiency also becomes an important corporate sustainability pillar.

The value added to the literature by this study lies both in its methodological approach and its area of focus. By systematically integrating distributional measures—often overlooked in conventional financial performance evaluations—such as the first quartile (Q1), median value, and third quartile (Q3), the study enables more precise identification of intra-sectoral and inter-segment differences. In doing so, an alternate evaluation framework is presented that resists the potentially fallacious conclusions drawn by mean value reports alone. In addition to the above, whereas existing literature on the performance of investment-oriented financial institutions (IOFIs) has addressed either individual sectors or single points in time, this study bridges an important gap in the literature.

It does so by undertaking an overall comparative and time-series approach to several investment-oriented financial sectors.

Compared to the current literature, this study has several significant divergences. In the studies by Aksoy & Ulusoy (2015) and Ali et al. (2020), the volatile return structure within the REIT industry was considered to be primarily the outcome of its sensitivity to general market forces. In this study, however, the volatility is found to stem not only from external macroeconomic forces but also from internal liquidity management weaknesses and expense control deficits. Likewise, whereas Ayrancı and Gürel (2020) identified profitability and liquidity as major firm valuation drivers in the REIT industry, this study offers a more nuanced conclusion. It finds that these metrics are highly significant only among firms within the third quartile (Q3). This divergence highlights the necessity to revisit the assumption of intra-sectoral homogeneity. It also reaffirms the significance of distributional analysis to delve deeper into structural differences.

The primary limitation of this study lies in its exclusive focus on publicly traded companies listed in the Central Securities Depository of Turkey. Consequently, privately held investment institutions were excluded from the analysis, which restricts the generalizability of the findings. Furthermore, the study employed only descriptive statistical methods and did not explore causal relationships or utilize advanced econometric modeling. Future research could address these limitations by incorporating panel data analyses and causal inference techniques such as difference-in-differences. It could also integrate structural variables such as ESG scores to provide a more comprehensive understanding of the dynamics at play.

In the context of policy and regulation, the findings underscore the necessity of scale-based support mechanisms to address performance disparities across sectors. Specifically, for small-scale firms in the Q1 segment, the development of liquidity support programs and the promotion of capital strengthening initiatives are of critical importance. In addition, providing consultancy services aimed at enhancing operational efficiency plays a vital role. Additionally, financial reporting standards should be restructured to reflect not only average performance, but also the underlying distribution and systemic vulnerabilities within sectors. Such regulatory adjustments would both enhance investor protection and reinforce the institutional resilience of capital markets. At the stakeholder level, this study highlights the need for investors and regulatory authorities to base firm selection and assessment processes on more granular and multidimensional analyses.

In conclusion, this study reveals that the performance of investment-oriented financial institutions differs significantly across sectors. It also varies notably across quartile-based distribution segments derived from financial ratios. By doing so, it provides both the academic literature and policymakers with a distributional and holistic evaluation framework. This approach holds the potential to contribute to the development of capital markets that are more equitable, transparent, and resilient.

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References

Acar, M. F., Bakay, A., & Erkoç, T. E. (2017). Efficiency and managerial control in financial institutions. In U. Hacioğlu, H. Dinçer, & N. Alayoğlu (Eds.), *Global business strategies in crisis: Strategic thinking and development* (pp. 335–351). Springer. https://doi.org/10.1007/978-3-319-44591-5_23

Akkas, E., & Al Samman, H. (2022). Are Islamic financial institutions more resilient against the COVID-19 pandemic in the GCC countries? *International Journal of Islamic and Middle Eastern Finance and Management,* 15(2), 331–358. https://doi.org/10.1108/IMEFM-07-2020-0378

Aksoy, M., & Ulusoy, V. (2015). Analysis of relative return behaviour of Borsa Istanbul REIT and Borsa Istanbul 100 Index. Romanian Journal of Economic Forecasting, 18(1), 107–128.

Ali, F., Faisal, F., & Resatoglu, N. G. (2020). Conditional volatility of Turkish real estate investment trusts: A comparative study of GARCH, EGARCH and GARCH-GJR. *Romanian Statistical Review*, (3), 53–75.

Ayrancı, A. E., & Gürel, C. A. (2020). Gayrimenkul Yatırım Ortaklıklarının Finansal Performansı: BİST İşletmeleri Örneği. *International Journal of Applied Economic and Finance Studies*, 5(1), 1–14.

Baykuş, O., & Bektaş, S. (2024). BIST aracı kurumlar (XAKUR) endeksinde yer alan şirketlerin finansal performanslarının değerlendirilmesi. *Kırklareli Üniversitesi Sosyal Bilimler Dergisi*, 8(2), 127–146. https://doi.org/10.47140/kusbder.1543782

Caliskan, H., Cevik, E. I., Cevik, N. K., & Dibooglu, S. (2021). Identifying systemically important financial institutions in Turkey. *Research in International Business and Finance*, 56, 101374. https://doi.org/10.1016/j.ribaf.2020.101374

Cannas, C., Pellegrini, L., & Roncella, A. (2023). Nonbanking financial institutions and sustainability issues: Empirical evidence on the impact of environmental, social and governance scores on market performance. *Journal of Credit Risk*, 19(4), 101–127. https://doi.org/10.21314/JCR.2023.007

Cevikcan, G., & Taş, O. (2022). Risk-oriented efficiency assessment within the level of capitalization for financial institutions: Evidence from Turkish securities firms. *International Journal of Financial Studies*, 10(4), 110. https://doi.org/10.3390/ijfs10040110

Chebbi, K., Ammari, A., Athari, S. A., & Abbass, K. (2024). Do US states' responses to COVID-19 restore investor sentiment? Evidence from S&P 500 financial institutions. *Financial Innovation*, 10(1), 99. https://doi.org/10.1186/s40854.023.00603-1

Chen, X., Higgins, E., Xia, H., & Zou, H. (2020). Do financial regulations shape the functioning of financial institutions' risk management in asset-backed securities investment? *Review of Financial Studies*, 33(6), 2506–2553. https://doi.org/10.1093/rfs/hhz067

Çamlibel, M. E., Sümer, L., & Hepsen, A. (2021). Risk-return performances of real estate investment funds in Turkey including the COVID-19 period. *International Journal of Strategic Property Management*, 25(4), 267–277. https://doi.org/10.3846/ijspm.2021.14957

Çolak, Z. (2023). BİST'te işlem gören gayrimenkul yatırım ortaklıklarının gri ilişkisel analiz yöntemiyle finansal performansının değerlendirilmesi. *Finans Ekonomi ve Sosyal Araştırmalar Dergisi*, 8(1), 75–96. https://doi.org/10.29106/fesa.1199029

Çoskun, M., Bozkurt, G., & Yavuz, M. S. (2023). The investor profiles affecting Borsa Istanbul 100 Index: Local or foreign? *Ekonomi Politika & Finans Araştırmaları Dergisi*, 8(2), 263–282. https://doi.org/10.30784/epfad.1284498

Günay, B., & Kaya, İ. (2017). Borsa İstanbul'da yer alan aracı kurumların performansının çok kriterli karar verme yöntemleri ile değerlendirilmesi. *MCBÜ Sosyal Bilimler Dergisi*, 15(2), 141–164. https://doi.org/10.18026/cbayarsos.323997

Iyer, S., del Hierro, G., & Guzman, I. (2024). A qualitative study of operational resilience in financial institutions. *Journal of Operational Risk*, 19(3). https://doi.org/10.21314/JOP.2024.005

Karasioğlu, F., & Öztemiz, D. (2023). Kurumsal yönetimin entelektüel sermayeye etkisi: BIST kurumsal yönetimdeki holding ve yatırım şirketleri üzerine bir uygulama. *Uluslararası Muhasebe ve Finans Araştırmaları Dergisi*, 5(1), 1–15.

Kaymaz, Ö., & Kaymaz, Ö. (2010). The firm-level determinants underlying the profitability in brokerage institutions: Some evidence from Turkey. *African Journal of Business Management*, 4(2), 172–190. https://doi.org/10.5897/AJBM.9000582

Köse, A., & Akıllı, K. (2021). Aracı kurumların finansal performanslarının VIKOR yöntemi ile değerlendirilmesi. *Cumhuriyet Üniversitesi İktisadi ve İdari Bilimler Dergisi*, 22(2), 168–192. https://doi.org/10.37880/cumuiibf.952969

Lapinskaite, I., & Skvarciany, V. (2023). Sustainable metamorphosis: Examining sustainability transformation into value of financial institutions. *Journal of Business Economics and Management*, 24(5), 923–938. https://doi.org/10.3846/jbem.2023.20665

Medetoğlu, B. (2024). Çok kriterli karar verme yöntemleriyle finansal performans analizi: BIST aracı kurumları üzerine uygulama. *Uluslararası İktisadi ve İdari İncelemeler Dergisi*, 45, 115–132. https://doi.org/10.18092/ulikidince.1482731

Narayan, S., Kumar, D., & Bouri, E. (2023). Systemically important financial institutions and drivers of systemic risk: Evidence from India. *Pacific-Basin Finance Journal*, 82, 102155. https://doi.org/10.1016/j.pacfin.2023.102155

Pala, O. (2022). İMV ve WASPAS tabanlı aracı kurum performans değerlendirilmesi. *Anadolu Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, 23(3), 266–281. https://doi.org/10.53443/anadoluibfd.1103297

Salem, M., & Baum, A. (2016). Determinants of foreign direct real estate investment in selected MENA countries. *Journal of Property Investment & Finance*, 34(2), 116–142. https://doi.org/10.1108/JPIF-06-2015-0042

Sun, X., & Xie, X. (2024). How does digital finance promote entrepreneurship? The roles of traditional financial institutions and BigTech firms. *Pacific-Basin Finance Journal*, 85, Article 102316. https://doi.org/10.1016/j.pacfin.2024.102316

Talaslı, İ. (2013). Systemic risk analysis of Turkish financial institutions with systemic expected shortfall. *Central Bank Review*, 13(SI), 25–40. Retrieved from: https://www.tcmb.gov.tr/wps/wcm/connect /EN/TCMB+EN/Main+Menu/Publications/Research/Working+Paperss/2013/13-11

Yilmaz, M. K., Kusakci, A. O., Tatoglu, E., Icten, O., & Yetgin, F. (2019). Performance evaluation of real estate investment trusts using a hybridized interval type-2 fuzzy AHP-DEA approach: The case of Borsa Istanbul. *International Journal of Information Technology & Decision Making*, 18(6), 1785–1820. https://doi.org/10.1142/S021.962.2019500354

Yılmaz, N. K. (2019). Gayrimenkul yatırım ortaklıklarının finansal performansının TOPSIS yöntemiyle ölçümü. *Business & Management Studies: An International Journal*, 7(1), 423–443. https://doi.org/10.15295/bmij.v7i1.1080

Resume

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