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The impact of economic outlook on selected sector performances: A study on Türkiye

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ABSTRACT

It is known that economic trends have an impact on financial markets. However, the impact of this may vary across sectors. Based on this, this study examines the short- and long-term effects of the AFI economic outlook index and its components on the performance of selected sectors specifically for the period 2015:02 – 2025:01. The study, which applied the ARDL bound test approach, found that the economic outlook index affected the sectors examined at different levels. However, the findings obtained in both the short term and the long term show parallels. Therefore, it can be stated that the findings obtained in the short term continue to have an effect in the long term. The results clearly demonstrate that changes in the economic outlook have created meaningful and lasting effects on sectoral financial performance.

Ekonomik görünümün seçilmiş sektör performansları üzerindeki etkisi: Türkiye üzerine bir araştırma

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ÖZ

Ekonomik gidişatın finansal piyasalar üzerinde etkili olduğu bilinmektedir. Fakat bu etkinin sektörel bazda yansıması farklılaşabilmektedir. Buradan hareketle bu çalışmada, FKB ekonomik görünüm endeksi ve bileşenlerinin seçilmiş sektör performansları üzerindeki kısa ve uzun dönemli etkileri 2015:02 – 2025:01 dönem aralığı özelinde incelenmektedir. ARDL sınır testi yaklaşımının kullanıldığı çalışma sonucunda, ekonomik görünüm endeksinin incelenen sektörleri farklı düzeylerde etkilediği tespit edilmiştir. Bununla birlikte, gerek kısa dönemde gerekse uzun dönemde elde edilen bulgular paralellik göstermektedir. Dolayısıyla kısa dönemde elde edilen bulguların, uzun dönemde de etkisini sürdürdüğü ifade edilebilmektedir. Sonuçlar, ekonomik görünümdeki değişimlerin sektörel finansal performans üzerinde anlamlı ve kalıcı etkiler yarattığını açık biçimde ortaya koymaktadır.

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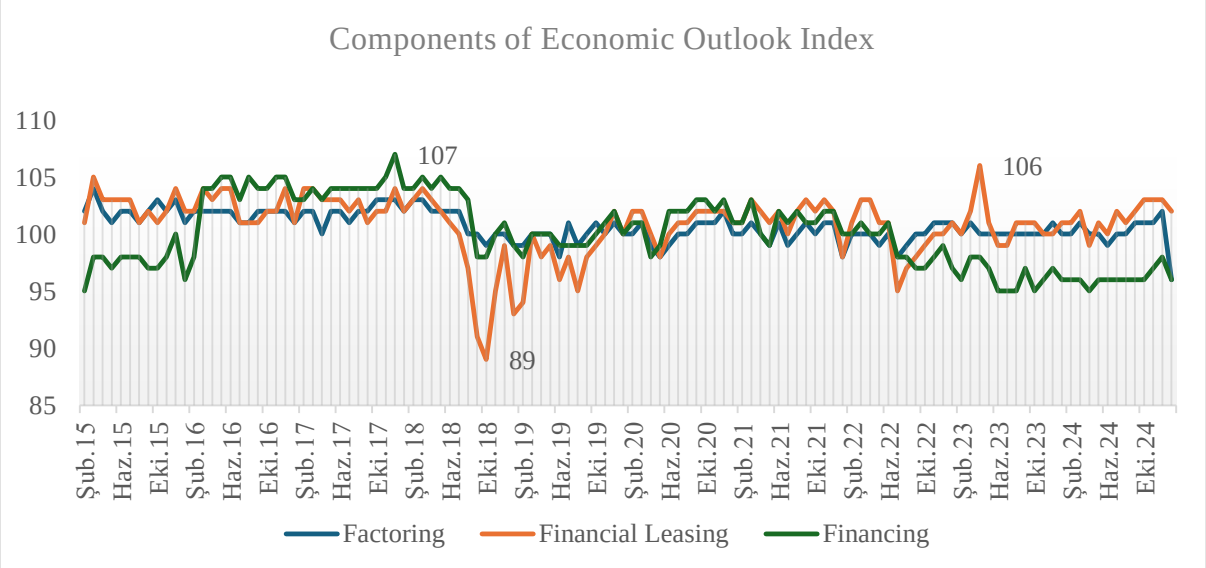
1. Introduction

Investor behavior plays an important role in finance. In fact, while traditional finance argues that investors are rational and make decisions based on expected return and risk factors, behavioral finance argues that investors are irrational and that different factors, especially psychology, may be influential in investment decisions (Aytekin and Aygün, 2016, p. 144; Tekin, 2016, p. 76). In this context, it can be stated that investor behavior has an important place in the field studies and discussions continue. In addition, it can be said that investor expectations are also important in the decision-making process. Investors are thought to be influenced by global and national changes, the economic outlook, forward guidance from central banks, sectoral changes and, ultimately, the expectations formed as a result of these changes and developments. In this respect, it can be stated that developments in the economy are particularly important. Because economic developments can directly affect the trend of investments. For example, it can be said that in a period of technology revolution, interest in technology stocks may be intense, while in a period of high risk, gold investments, known as safe-heaven asset, may gain importance. In this direction, it is thought that the economic outlook data announced in line with the changes and developments experienced have an important place in the investments to be made. Furthermore, such data, which assesses the economy as a whole, can provide more comprehensive information about the general economic trend. Because analyzing and evaluating data on an individual basis will lead to an incomplete interpretation of economic dynamics and will not fully reflect long-term trends. Therefore, it can be stated that economic outlook indices, which are expressed at the macro level and address the economy as a whole, are important.

The Association of Financial Institutions (AFI) economic outlook index consists of three main components: factoring, leasing and financing. The index is calculated using data from the Central Invoice Recording System, the Financial Leasing Contract Registration System and the Financing Sector's transaction volume and number of contracts. The calculated index aims to measure the trade and investment tendency in Türkiye. However, an increase in the index value announced on a monthly basis indicates that the economic outlook is favorable, while the opposite indicates that the economic outlook is unfavorable (AFI, 2025). The calculated index data are published by the Central Registry Agency (CRA) on a monthly basis (CRA, 2025).



Note: The AFI Economic Outlook Index is normalized to March 2019 = 100. The components, construction and variable definitions of the index are provided in section 4.1

Figure 1. Economic Outlook (Source: AFI, 2025)

Figure 1 above shows the overall trajectory of the components of the economic outlook index. As can be seen from the figure, the financial leasing index in particular experienced steeper declines than the factoring and financing indices and reached a historic low of 89 in October 2018. This value is

also the lowest value calculated for all three indices. However, it is observed that the financing index has diverged somewhat negatively from other indices in recent periods. Looking at the general course, it can be stated that all three indices move together.

Expectations about the economy can affect different sectors with different degrees of importance. Considering that each sector has different dynamics and a different structure, it is considered important to investigate the impact of these expectations on a sectoral basis. Therefore, two different research questions are developed in the current study: "Which sector is affected by the economic outlook components separately and how?" and "Which sector is affected by the economic outlook index as a whole and how?". In this study, the impact of the AFI economic outlook index on the performance of selected sectors over the period 2015:02 - 2025:01 is analyzed. The first part of the study consists of introduction where the importance of the subject is explained. The second part of the study, the theoretical background section, presents the relevant theoretical approaches. The third part of the study includes a literature review section where the studies in the literature on the subject are presented. The fourth section of the study presents the methodology section, which includes information on the variables used, the period interval and the econometric methodology. The fifth part of the study includes the findings section where the outputs obtained as a result of the analyzes are presented, while the sixth part, which is the last part of the study, includes the conclusion and recommendations section where the results obtained are interpreted in general terms and recommendations are presented as a result.

2. Theoretical background

Theories developed in the field of finance are closely related to economic developments. In fact, economic development brings with it financial deepening (Li, Ouyang, and Chen, 2025; Song, Chang, and Gong, 2021). As a result, it is expected that new financial products will be introduced or new risk indicators will begin to be calculated, thereby necessitating new financial approaches. In this context, the Mean-Variance Theory proposed by Markowitz (1952) is significant in that it was the first to quantify the concept of risk, which came to the fore with the development of financial markets. However, theory suggests diversification by considering the correlation between variables in order to minimize portfolio variance (risk). It can be said that this approach aims to protect investors against the concept of risk. On the other hand, the Capital Asset Pricing Model (CAPM), which was proposed as a critique of the limitations of the Mean Variance Model, argues that there is a linear relationship between risk and expected return (Sharpe, 1964). More clearly, it is stated that as the economic situation worsens, risk will increase, this increase will lead to declines in asset prices, and assets purchased at low prices compared to the average price will offer high expected returns. CAPM has also made significant contributions to the concept of "risk," which has gained importance in the finance world with the Mean Variance Model. In this regard, the theory categorizes the concept of risk into two different classes: systematic and unsystematic (Fama and French, 2004). Systematic risk can be defined as risk that affects the entire market and cannot be eliminated through diversification (Rutkowska-Ziarko, Markowski, and Abdou, 2025). Due to the fact that the deterioration in the economic outlook, which is also the subject of the current study, affects the entire market and cannot be eliminated through diversification, it is considered that it can be classified in this risk group. Unsystematic risk can be defined as risk that is not related to economic factors (Vergara-Fernandez, Heilmann, and Szymanowska, 2023). In other words, it can be said that unsystematic risk consists of firm-specific risks and can be eliminated through diversification. However, the theories criticized in the literature for measuring risk with a single factor (beta coefficient) and not taking inflation into account (Fama and French, 1992; Ross, 1976).

In today's investment environment, where risk factors are increasing day by day, it is thought that expressing the risk factor with a single coefficient or not taking into account the time value of money in investments may cause serious deviations in the investor's expected return at the end of the term. In this regard, Ross (1976) proposed the Arbitrage Pricing Theory (APT), which argues that the return on an asset is influenced by multiple "k" factors. According to theory, the factors (k factors) that affect the expected return on an asset are macroeconomic factors and represent the systematic risk elements defined in the CAPM theory. In sum, APT states that asset prices are determined by sensitivity to "k" factors. In this regard, it is considered that the economic outlook index and its components, which constitute the independent variables of the current study and affect the general course of the economy,

can be considered as macroeconomic variables. In clearer terms, it can be stated that the economic outlook index and its components, which cannot be diversified or minimized, are taken into account as a systematic risk factor and therefore represent the "k" factor emphasized in APT theory. In conclusion, it can be said that the APT theory can also be discussed and interpreted in this study. On the other hand, behavioral finance theory assumes that investors are irrational, unlike traditional finance theories (Wang and Ge, 2025). According to theory, investors are influenced by psychological and environmental factors when making decisions (Costa, De Melo Carvalho, De Melo Moreira, and Do Prado, 2017; Sattar, Toseef, and Sattar, 2020). Therefore, it can be said that the theory is based on the assumptions that markets are not always rational and that psychological factors play a role in the investment process. Considering that every investor has a different perception of risk, return target, and term preference, the theory is considered to be explainable. However, the theory also aims to explain investor behavior that influences investment decisions. In this context, it can be stated that the concepts of overconfidence (Byun, Lim, and Yun, 2016; Mejer, 2018), prejudice (Park, Konana, Gu, Kumar, and Raghunathan, 2010), and herding behavior (Spyrou, 2013) are explained in theory.

3. Literature review

Economic data provides investors with useful information for decision-making. Based on these data, it is important to form expectations for the future and to make investment decisions in this perspective in order to achieve the expected return on investments. In this context, Kavussanos, Marcoulis, and Arkoulis (2002) examined the linkage of 38 international industries with macroeconomic factors over the period 1987:03 - 1997:10. The study revealed that macroeconomic factors affect each sector at different levels of significance. In another study in the literature, Albeni and Demir (2005) examined the impact of macroeconomic indicators on the financial sector for the period 1991-2001. As a result of the study, different macroeconomic factors affecting financial sector stocks were identified. The findings are explained by the sensitivity of the financial sector to economic factors. Examining the similar issue from a different perspective, Kaya, Çömlekçi, and Kara (2013) analyzed the effect of macroeconomic indicators on stock returns for the period 2002:01 - 2012:06. Using the IMKB-100 Index as the dependent variable, the study reveals that money supply has a positive effect on the index return while exchange rate has a negative effect on the index return. It is also stated that the findings of the study are in line with expectations. Alper and Kara (2017), who examined a similar issue for the BIST Industrial Index, based their study on the period 2003:01 - 2017:02 and used the time series analysis method. As a result of the study, it is found that stock returns are generally affected by their own lagged value, but macroeconomic factors also have an impact. The findings of the study are explained on economic grounds. In another study, Sailaja and Mandal (2018) investigated the impact of selected macroeconomic indicators on the sector indices in the Indian BSE stock exchange for the period 2009:04 - 2015:03. The study reveals that the impact of macroeconomic indicators differs by sector. In another study conducted in the same year, Banerjee and Majumdar (2018) examined the impact of firm-specific factors and macroeconomic factors on the insurance sector in the UAE between 2009 and 2013. The analysis revealed that both firm-specific factors and macroeconomic factors such as GDP and inflation affect the insurance sector to different degrees. However, the study found statistically insignificant findings between the loss ratio, risk retention ratio and the insurance sector. Based on the findings of the study, it is recommended that insurance companies focus on internal factors to improve their financial performance.

Bhuiyan and Chowdhury (2020) investigated the impact of macroeconomic variables on different sectors for the period 2000-2018 for the USA and Canada. As a result of the study, it is stated that macroeconomic variables affect the sectors in the USA at different levels of significance in the long-run, but the same effect cannot be obtained for Canada. The findings are explained by economic developments and the dominance of the USA over global markets. Jin and Guo (2021), who addressed a similar issue for the USA and China, examined the impact of macroeconomic factors on sectors in the period 2005:01 - 2019:05. The analysis revealed that the impact of macroeconomic indicators on sectors varies across countries. The findings are explained in the context of countries' economic systems, financial markets and industrial structures. In another study, Demirhan (2022) investigated the firm-specific and macroeconomic variables affecting the profitability of manufacturing and service sectors. As a result of the study, it was determined that some variables provide similar results in both sectors,

but some variables differ on a sector basis. The findings are evaluated in the context of economic structure and sector dynamics. In another recent study, Ünlü (2023) investigated the linkage between macroeconomic indicators and the BIST Energy Sector. The study is based on the period 2018:07 - 2022:12 and the ARDL method, which is frequently preferred in short and long-run analysis, is used. As a result of the analysis, it was determined that some variables positively affect the index, some variables negatively affect the index and some variables have no effect on the index. The results are interpreted in the context of the structure of the Turkish economy and the trend of the energy sector. In contrast, Jawadi, Cheffou, and Bu (2023) found that energy inflation has a significant impact on the real economy. The study found that changes in oil prices, a macroeconomic variable, significantly affect the real and financial sectors, and that this effect is linked to economic conditions such as geopolitical tensions and the Ukraine war. In another study, Hanif, Sibt-e-Ali, Asghar, and Farhan (2024) investigated the linkage between macroeconomic factors and the cement sector with the help of panel data analysis method for the period 2011-2020 in Pakistan. As a result of the study, it was found that different macroeconomic indicators affect the sector with different degrees of significance. Moreover, the rationale for the findings of the study is explained in the context of the country's economic dynamics and Central Bank decisions. Similarly, Oruwari, Okwudiri, and Chibuike (2024) found that macroeconomic factors affected the cement sector in Nigeria to different degrees. The study also emphasizes the stability of macroeconomic factors. In another recent study, Hoxha, Bajrami, and Prekazi (2025) examined the impact of internal and macroeconomic factors on banking sector performance in the Western Balkan countries between 2005 and 2021. The study, which utilized panel data analysis methods, found that the variables used in the study affected sector performance at different levels of importance. The study concludes that banks need to focus more on internal factors to maximize risk-adjusted returns.

As can be seen from the studies in the literature, it can be said that the linkage between macroeconomic indicators and sector performances has been of interest and debated by researchers for many years. Furthermore, as seen in field studies, no definitive conclusion has been reached on this matter. Findings may differ by sector or even by country. In this context, it is thought that a detailed investigation of the current issue will provide useful information to the relevant parties. However, to the best of our knowledge, this is the first time that the linkage between the AFI Economic Outlook Index and sector performances is investigated. This aspect of the study reveals its unique value. Therefore, it is expected that this study will contribute to the literature by filling this gap and provide useful information to researchers, investors, and other relevant parties.

4. Methodology

This section contains the “4.1. Data” section, which provides explanatory information about the purpose of the study, the variables used, and its scope, and the “4.2. Model” section, which presents the econometric process of the study. The relevant sections are listed below respectively.

4.1. Data

This study aims to reveal the impact of the AFI economic outlook index on the performance of selected sectors. For this purpose, the dependent variables of the study are based on sector indices, while the independent variables are based on the AFI economic outlook index and its components. Explanatory information on the variables used in the study is given in Table 1 below.

Table 1

Variables of the study

	Variable	Acronym	Calculation Method	Scope	Source
Dependent Variable	BIST Bank Index	BANK	Logarith $Ln(P_t)$	2015:02-2025:01	Investing.com
	BIST Financial Leasing Factoring Index	FINK			
	BIST Food and Beverage Index	GIDA			
	BIST Real Estate Investment Trust Index	GMYO			
	BIST Holding and Invesment Index	HOLD			
	BIST Construction Index	INSA			
	BIST Insurance Index	SGRT			
	BIST Trade Index	TCRT			
	BIST Textile Leather Index	TEKS			
	BIST Transportation Index	ULAS			
Independent Variable	Economic Outlook Index	ECO			CRA
	Factoring Outlook Index	FAC			
	Leasing Outlook Index	FINL			
	Financing Outlook Index	FIN			

As can be seen from the table above, the dependent variables of the study consist of 10 different sectors calculated specifically in Borsa Istanbul. These are BIST bank index (BANK), BIST financial leasing index (FINK), BIST food and beverage index (GIDA), BIST real estate investment trust index (GMYO), BIST holding and investment index (HOLD), BIST construction index (INSA), BIST insurance index (SGRT), BIST trade index (TCRT), BIST textile leather index (TEKS) and BIST transportation index (ULAS). When selecting the relevant indices, care is taken to ensure that they are the indices that attract the greatest investor interest among investors along with their trading volumes. In addition, the independent variables of the study consist of the AFI economic outlook index and its components. The Factoring outlook index is composed of data derived from the Central Invoice Recording System and AFI-derived data; the Leasing outlook index is composed of data derived from the Leasing Contract Registration System and AFI-derived data; and the Financing outlook index is composed of AFI-derived data on the Financing Sector. The combination of these three indices provides the AFI Economic Outlook Index (AFI, 2025). Indices are considered to be important in terms of reflecting economic trends and shedding light on investment decisions by creating expectations in investors for the future. In addition, February 2015, the date when the outlook indices were first calculated, constitutes the starting frequency of the study dataset, while January 2025, the date when the study began to be prepared, constitutes the ending frequency of the study dataset. In other words, the

data set of the study consists of monthly data and covers the period between 2015:02 and 2025:01. Moreover, in order to minimize all variables, their natural logarithms are first taken and then the econometric analysis process is started.

4.2. Model

The ARDL (Autoregressive Distributed Lag) method is applied to determine the short- and long-term effects of the AFI economic outlook index and its components on the performance of selected sectors. For this purpose, descriptive statistics are calculated to understand the structure of the data set. Thus, it is possible to see the structure of the study dataset before proceeding to econometric analysis. Subsequently, correlation analysis and VIF (Variance Inflation Factor) test, which are known as preliminary tests and are frequently used to detect multicollinearity problems, are analyzed. After determining that the variables used in the study do not cause any problems, unit root tests are conducted. At this point, different tests are applied, some considering structural breaks and others not. First, the ADF test developed by Dickey and Fuller (1979) and the PP test developed by Phillips and Perron (1988), which do not consider structural breaks, are analyzed. Subsequently, a unit root test developed by Zivot and Andrews (1992), which takes structural breaks into account, is tested. After the unit root test revealed that the dependent variables contain unit root at level I(1) and the independent variables are stationary at level I(0), the ARDL (Autoregressive Distributed Lag) test developed by Pesaran and Shin (1995), which is suitable for short and long-run coefficient estimation among the series that are stationary at different degrees, is applied. In this context, the regression equation used in the long-run coefficient estimation is given in equation 1 below;

$$\Delta Y_t = \alpha_0 + \delta_1 Y_{t-1} + \delta_2 ECO_{t-1} + \delta_3 FAC_{t-1} + \delta_4 FINL_{t-1} + \delta_5 FIN_{t-1} + \sum_{i=1}^{m} \beta_{1i} \Delta Y_{t-i} + \sum_{i=0}^{n} \beta_{2i} \Delta ECO_{t-i} + \sum_{i=0}^{n} \beta_{3i} \Delta FAC_{t-i} + \sum_{i=0}^{n} \beta_{4i} \Delta FINL_{t-i} + \sum_{i=0}^{n} \beta_{5i} \Delta FIN_{t-i} + \varepsilon_t \quad (1)$$

In the equation, Y is the dependent variable, α_0 is the constant coefficient, t is the time term, Δ is the first difference operator, δ is the long-run relationship and ε is the model error term. The null hypothesis of the test is $H_0: \delta_1 = 0$, while the alternative hypothesis is $H_1: \delta_1 \neq 0$. In other words, the null hypothesis of the test states that there is no long-run cointegration relationship between the variables, while the alternative hypothesis states that there is cointegration (Bahmani Oskooee and Nasir, 2004). For the interpretation of the obtained results, we first look at the F-stat. results developed by Pesaran, Shin, and Smith (2001). According to the F-stat. results, the fact that the calculated value is higher than the 5% upper value I(1) indicates the existence of a cointegration linkage between the variables. In the opposite case, it is concluded that there is no cointegration linkage between the variables. In the next stage of the study, the Error Correction Model (ECM) is used to estimate the short-run coefficient. The estimated regression equation is as follows;

$$\Delta Y_t = \alpha_0 + \delta_1 Y_{t-1} + \delta_2 ECO_{t-1} + \delta_3 FAC_{t-1} + \delta_4 FINL_{t-1} + \delta_5 FIN_{t-1} + \sum_{i=1}^{m} \beta_{1i} \Delta Y_{t-i} + \sum_{i=0}^{n} \beta_{2i} \Delta ECO_{t-i} + \sum_{i=0}^{n} \beta_{3i} \Delta FAC_{t-i} + \sum_{i=0}^{n} \beta_{4i} \Delta FINL_{t-i} + \sum_{i=0}^{n} \beta_{5i} \Delta FIN_{t-i} + \lambda ECM_{t-1} + \varepsilon_t \quad (2)$$

Unlike Equation 1 above, the term λECM_{t-1} in Equation 2 refers to the error correction coefficient. The findings obtained at the end of the econometric process are presented in the next section of the study.

5. Findings

Before proceeding with the findings of the study, it would be useful to provide information about the basic structure of the data set. Thus, both more detailed information about the variables is provided and the variables can be compared among themselves. For this purpose, the results of descriptive statistical information calculated on the raw data are given in Table 2 below;

Table 2

Descriptive statistics

Variables	Mean	Max.	Min.	Std. Dev.	Jarque-Bera	Observations
BANK	3281.06	15129.64	978.85	3895.68	124.03***	
FINK	1210.66	4332.56	167.76	1191.17	41.16***	
GIDA	3161.64	14088.72	953.05	3433.96	80.41***	
GMYO	969.44	3635.17	250.67	949.61	46.64***	
HOLD	2423.63	9719.15	590.56	2789.07	51.84***	
INSA	3022.40	11725.99	577.26	3543.28	36.52***	
SGRT	10820.81	66753.79	1614.47	16713.68	166.09***	
TCRT	5795.71	28636.01	1301.56	7161.20	91.15***	120
TEKS	1160.67	4241.50	122.90	1280.99	26.80***	
ULAS	7335.45	37303.77	513.45	11196.20	56.67***	
ECO	100.55	105.00	95.00	1.90	1.01	
FAC	100.71	104.00	96.00	1.29	3.51	
FINL	100.90	106.00	89.00	2.65	154.32***	
FIN	100.10	107.00	95.00	3.11	7.04**	

Note: ***, and ** denote statistical significance at the 1%, and 5% levels, respectively.

When the results in the table above are analyzed, it is seen that the variable with the highest mean is SGRT and has a value of 10820.81, while the variable with the lowest mean is GMYO and has a value of 969.44. However, it is observed that the variable with the highest value in the study dataset is SGRT with a value of 66753.79, while the variables with the lowest values are ECO and FIN with 95. In addition, the variable that deviates the most from the mean among the variables is the SGRT variable, which takes the value of 16713.68. In other words, the SGRT variable is more volatile than the other variables used in the study. Finally, Jarque-Bera results show that all variables except ECO and FAC are statistically significant. Based on these results, it can be stated that ECO and FAC variables show normal distribution characteristics, while all other variables do not exhibit normal distribution characteristics. In the next stage of the study, the multicollinearity problem is detected. The correlation and VIF test results tested in this context are presented in Table 3 below;

Table 3

Results of correlation analysis and VIF test

Panel A: Results of Correlation Analysis				
Variables	ECO	FAC	FINL	FIN
ECO	1.00			
FAC	0.73	1.00		
FINL	0.77	0.56	1.00	
FIN	0.78	0.43	0.29	1.00
Panel B: Results of VIF Test				
Variables	Centered VIF		Tolerance Value	
ECO	8.21		0.12	
FAC	2.05		0.48	
FINL	4.26		0.23	
FIN	2.48		0.40	

The high linear linkage between independent variables may cause the problem of multicollinearity in studies (Daoud, 2017). In this context, it can be stated that a correlation of 80% or more between independent variables (Vatcheva, Lee, McCormick, and Rahbar, 2016) or a VIF value of

10 or more (Upendra, Abbaiah, and Balasiddamuni, 2023) may cause multicollinearity problem. Based on the information provided, the results of the correlation analysis in Panel A of the table above indicate that the highest correlation between the independent variables is found between ECO and FIN variables with a value of 0.78. On the other hand, the VIF test results in Panel B of the same table show that the highest VIF value is found for the ECO variable, which is 8.21. Therefore, it can be said that the independent variables used in the study do not cause multicollinearity problem. In other words, it can be said that there is no drawback in using the independent variables of the study together. In addition, the fact that the tolerance value obtained by dividing the VIF value by 1 (1/VIF) is 0.12 (1/12), which is greater than 0.10 (1/10), supports the findings obtained.

Since it is determined that the variables used in the study do not pose a problem as a whole, the unit root test, which is one of the basic assumptions of time series analysis, is started in the next stage of the study. To this end, unit root tests that do not consider ADF and PP structural breaks, which are frequently preferred in the literature, and the Zivot-Andrews unit root test, which considers structural breaks, are analyzed. The findings are presented in Table 4 below;

Table 4

Results of unit root tests

Panel A: Results of ADF and PP Unit Root Tests								
Variable	ADF				PP			
	Level		1st difference		Level		1st difference	
	Constant	Trend	ΔConstant	ΔTrend	Constant	Trend	ΔConstant	ΔTrend
BANK	1.27	-0.78	-10.75***	-11.21***	1.31	-0.76	-10.75***	-11.21***
FINK	-0.68	-2.36	-11.12***	-11.08***	-0.33	-2.76	-12.03***	-11.97***
GIDA	1.01	-1.47	-10.03***	-10.32***	1.08	-1.41	-10.01***	-10.38***
GMYO	1.22	-1.24	-9.82***	-10.17***	1.14	-1.24	-9.88***	-10.27***
HOLD	1.07	-1.39	-9.70***	-9.90***	1.06	-1.39	-9.67***	-9.86***
INSA	1.04	-1.51	-11.10***	-11.36***	1.20	-1.45	-11.11***	-11.43***
SGRT	0.83	-1.14	-7.60***	-7.78***	1.85	-0.75	-7.35***	-7.45***
TCRT	1.69	-0.99	-9.35***	-9.67***	1.55	-1.06	-9.37***	-9.62***
TEKS	0.10	-2.76	-10.50***	-10.47***	0.14	-2.81	-10.50***	-10.47***
ULAS	1.20	-1.52	-10.53***	-10.86***	1.05	-1.55	-10.61***	-10.88***
ECO	-4.01***	-4.94***	-	-	-3.94***	-4.99***	-	-
FAC	-2.58*	-4.65***	-	-	-5.18***	-7.26***	-	-
FINL	-4.54***	-4.56***	-	-	-4.52***	-4.57***	-	-
FIN	-2.78*	-3.95**	-	-	-2.68*	-3.89**	-	-
Critical Value	Constat: 1%(-3.48), 5%(-2.88), 10%(-2.57) Trend: 1%(-4.03), 5%(-3.44), 10%(-3.14)							

Panel B: Results of Zivot-Andrews Unit Root Test				
Variable	Level		1st difference	
	Constant and Trend	Break Date	ΔConstant and Trend	Break Date
BANK	-4.292	2022M05	-11.721**	2022M07
FINK	-3.631	2023M05	-11.345**	2018M05
GIDA	-3.999	2022M02	-6.302***	2023M07
GMYO	-4.776	2021M06	-8.032***	2019M09
HOLD	-3.581	2021M03	-10.656***	2021M11
INSA	-3.190	2022M02	-8.864***	2023M01
SGRT	0.118	2023M07	-7.953***	2023M06
TCRT	-3.844	2021M12	-7.973***	2023M06
TEKS	-2.924	2020M02	-11.041**	2023M01
ULAS	-4.042	2021M07	-7.100***	2021M11
ECO	-6.206**	2018M06	-	-
FAC	-5.870***	2018M08	-	-
FINL	-6.142**	2018M07	-	-
FIN	-5.638***	2020M06	-	-
Critical Value	Constat and Trend: 1%(-5.57), 5%(-5.08), 10%(-4.82)			

Note: ***, and ** denote statistical significance at the 1%, and 5% levels, respectively.

In Panel A of Table 4 above, the ADF and PP unit root test results that do not consider structural breaks are presented. Firstly, ADF unit root test results show that all dependent variables used in the study contain unit root at the level but become stationary after the first difference process. However, it is observed that the independent variables of the study do not contain unit root at the level. On the other hand, the PP test, another unit root test used in this study, provides similar results. Therefore, according to both unit root test results, the dependent variables of the study are I(1) while the independent variables are I(0). Looking at the Zivot-Andrews test results in Panel B of the table, it can be seen that the results remain the same (Table 4). In other words, based on the Zivot-Andrews unit root test results, it is determined that the dependent variables of the study contain a unit root at the level but become stationary after the first difference process. However, according to the same test results, it is found that the independent variables of the study are stationary at the level. Additionally, looking at the break dates in the test results, it can be seen that breaks are generally detected in the sector indices between 2021 and 2023. It is considered that the currency increases experienced in Türkiye during the relevant period, the negative developments in the Central Bank's foreign exchange reserves, and the inflation process had an impact on the indices. However, it is determined that the breaks in the economic outlook index clustered around 2018 in the overall picture. It is considered that the sharp increases in the exchange rate experienced in Türkiye during the relevant period and the subsequent shocks such as the high cost of living caused shocks in the economic outlook.

As a result, according to the results of the non-structural break ADF and PP tests and the structural break Zivot-Andrews tests, it can be stated that the variables are stationary at different levels. It is considered important that the test results support each other by identifying similar findings. Considering that the unit root results will be decisive in the next stage of the econometric process, the importance of the issue will be better understood.

Based on the fact that the dependent variables contain unit root at the level, whereas the independent variables are stationary at the level, the ARDL Bounds Test approach, which is suitable for short and long-run coefficient estimation between series that are stationary at different degrees and is frequently used in the literature, is applied. In this context, it is first necessary to determine the lag lengths. The results of the information criteria tested on a model basis are shown in Table 5 below.

Table 5

Results of lag length criteria

Model	Lag	LogL	AIC	SC	HQ
BANK	0	1236.75	-22.81	-22.68	-22.75
	1	1560.64	-28.34	-27.60	-28.04
	2	1576.42	-28.17	-26.80	-27.62
	3	1603.93	-28.22	-26.23	-27.41
	4	1621.41	-28.08	-25.47	-27.02
	5	1634.02	-27.85	-24.62	-26.54
FINK	0	1229.79	-22.68	-22.55	-22.63
	1	1507.98	-27.37	-26.62	-27.06
	2	1523.54	-27.19	-25.82	-26.64
	3	1547.82	-27.18	-25.19	-26.37
	4	1563.45	-27.00	-24.40	-25.95
	5	1579.38	-26.84	-23.61	-25.53
GIDA	0	1249.28	-23.04	-22.91	-22.99
	1	1584.53	-28.78	-28.04	-28.48
	2	1600.30	-28.61	-27.25	-28.06
	3	1626.11	-28.63	-26.64	-27.82
	4	1645.80	-28.53	-25.92	-27.47
	5	1659.47	-28.32	-25.09	-27.01
GMYO	0	1241.87	-22.90	-22.78	-22.85
	1	1584.50	-28.78	-28.04	-28.48
	2	1600.18	-28.61	-27.24	-28.06
	3	1627.55	-28.65	-26.67	-27.85

	4	1646.61	-28.54	-25.94	-27.49
	5	1672.03	-28.55	-25.32	-27.24
HOLD	0	1242.61	-22.91	-22.79	-22.86
	1	1593.60	-28.95	-28.21	-28.65
	2	1608.02	-28.75	-27.39	-28.20
	3	1636.15	-28.81	-26.83	-28.01
	4	1654.69	-28.69	-26.09	-27.64
	5	1673.40	-28.58	-25.35	-27.27
INSA	0	1228.86	-22.66	-22.53	-22.61
	1	1591.06	-28.90	-28.16	-28.60
	2	1606.40	-28.72	-27.36	-28.17
	3	1632.16	-28.74	-26.75	-27.93
	4	1647.27	-28.56	-25.95	-27.50
	5	1668.46	-28.49	-25.26	-27.18
SGRT	0	1213.82	-22.38	-22.26	-22.33
	1	1569.72	-28.51	-27.76	-28.21
	2	1590.90	-28.44	-27.07	-27.88
	3	1618.21	-28.48	-26.49	-27.67
	4	1639.61	-28.41	-25.81	-27.36
	5	1651.56	-28.17	-24.94	-26.86
TCRT	0	1240.99	-22.88	-22.76	-22.83
	1	1600.52	-29.08	-28.33	-28.78
	2	1613.33	-28.85	-27.49	-28.30
	3	1636.41	-28.82	-26.83	-28.01
	4	1660.48	-28.80	-26.19	-27.74
	5	1678.38	-28.67	-25.44	-27.36
TEKS	0	1210.17	-22.31	-22.19	-22.26
	1	1572.73	-28.56	-27.82	-28.26
	2	1586.03	-28.35	-26.98	-27.79
	3	1610.63	-28.34	-26.35	-27.53
	4	1625.61	-28.15	-25.55	-27.10
	5	1645.84	-28.07	-24.84	-26.76
ULAS	0	1197.55	-22.08	-21.96	-22.03
	1	1548.42	-28.11	-27.37	-27.81
	2	1564.03	-27.94	-26.57	-27.39
	3	1593.28	-28.02	-26.03	-27.21
	4	1610.19	-27.87	-25.26	-26.81
	5	1627.92	-27.73	-24.51	-26.43

Notes: Indicates lag order selected by the criterion AIC: Akaike information criterion, SC: Schwarz information criterion, HQ: Hannan-Quinn information criterion.
The maximum lag length is set as 12.

Three different information criteria, namely AIC, SC, and HQ, are used to determine the lag length based on the model (Table 5). As can be seen from the results in the table, all information criteria tested in the study determined the most appropriate lag length to be 1 in all models developed in the study. In this regard, it can be stated that the most appropriate lag length for ARDL models established on a sector basis in the next stage is determined as 1.

For ARDL models established by considering appropriate lag lengths to be valid, the F-statistic results must first be greater than the upper value of 5% I(1). For this purpose, the F-test results tested on a model basis are shown in Table 6 below;

Table 6

Results of F-Bounds test

Model	F-stat.	5% Critical Value		Cointegration
		I(0)	I(1)	
BANK	26.58	2.86	4.01	√
FINK	25.42			√
GIDA	10.53			√
GMYO	11.50			√
HOLD	19.57			√
INSA	28.46			√
SGRT	8.51			√
TCRT	22.69			√
TEKS	17.82			√
ULAS	24.29			√

In the current study, 10 different sectors are analyzed. Therefore, 10 different models are developed. The table above shows the F test results for each model. It is seen that the upper value calculated at 5% significance level is 4.01 for the models developed in the study. Since the F-stat. values obtained for the models are higher than the upper value I(1), it can be concluded that there is a long-run cointegration linkage between the variables. In other words, there is a long-run equilibrium linkage between the variables. After the identification of the long-run relationship, the long-run coefficient estimation is proceeded. The ARDL long-run coefficient results obtained in this context are as in Table 7 below;

Table 7

Results of ARDL long-run coefficients

Model	ECO	FAC	FINL	FIN
BANK	4.97	-2.23	-2.08*	-2.18*
FINK	5.89	-1.56	-2.12	-2.03
GIDA	5.83**	-3.98***	-1.92**	-2.05**
GMYO	5.70**	-4.66***	-1.33*	-1.93*
HOLD	4.75*	-1.22	-1.83*	-1.69*
INSA	2.55	-3.22**	-0.68	-0.74
SGRT	6.00*	-2.28	-2.20*	-2.65**
TCRT	1.26	-2.11*	-3.76***	-0.81*
TEKS	6.50	-3.13	-2.55*	-1.91
ULAS	8.89**	-4.42**	-2.75*	-3.01**

Note: ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

An analysis of the long-run coefficient results obtained on a model basis reveals that a one-unit increase in the FINL variable causes a -2.08-unit decrease in the BANK variable. Developments in the leasing trend can provide important indicators regarding the financing side of the issue and economic expectations. In an economy where leasing rather than purchasing is on the rise, financing costs may be high or future prospects may deteriorate. In both cases, it is thought that the failure to repay the loans may create problems in the banking sector and thus negatively affect the sector. Another result obtained in the same model is that a one-unit increase in the FIN variable causes a -2.18-unit decrease in the BANK variable. Similarly, considering that increases in the propensity to finance increase the risk of non-repayment of loans, the banking sector will be adversely affected by this situation. It is thought that this situation can be explained by economic reality. In the model with FINK as the dependent variable, it is observed that the independent variables used in the study do not provide statistically significant results. It is thought that the main reason for this situation may be due to sector dynamics. On the other hand, if we look at the results of the model with GIDA as the dependent variable, it is seen that a one-unit increase in the ECO variable causes an increase of 5.83 units in the GIDA variable, a one-unit increase in the FAC variable causes a decrease of -3.98 units in the GIDA variable, a one-unit increase in the FINL variable causes a decrease of -1.92 units in the GIDA variable and finally a one-unit increase

in the FIN variable causes a decrease of -2.05 units in the GIDA variable. Therefore, it can be said that all independent variables used in the study have an effect on the GIDA variable. Increases in FAC, FINL and FIN variables, which are components of the economic outlook index, may lead to more money circulating in the market or an increase in disposable income. This may adversely affect inflation indicators. Therefore, increases in all three indices are expected to affect the food sector. On the other hand, the ECO variable, which is a combination of the three indices, has a positive effect on the food sector. It is thought that this situation may be related to investor perception. A rise in the index may leave investors with a psychologically positive impression of the future and positively affect investor risk appetite. As a result, the positive impact on the food sector is thought to be explainable. Similarly, the findings obtained for the model with GIDA as the dependent variable are also valid for the GMYO sector. Considering that both sectors have a dynamic structure for Türkiye, the findings are understandable. In addition, another sector analyzed in the study is the Holding sector. According to the results of the long-run analysis, a one-unit increase in the ECO variable leads to a 4.75-unit increase in the HOLD variable, while increases in the FINL and FIN variables lead to a decrease in the HOLD variable. Considering that different sectors operate within the Holding, it is expected that developments in economic expectations will affect the sector differently in this context.

The findings for the model with INSA as the dependent variable indicate that a one-unit increase in FAC leads to a -3.22 unit decrease in INSA. Increases in additional financing solutions such as factoring may be due to difficulties in accessing financing, high costs or cash constraints. In such cases, sectors that are shaped by future expectations, such as the construction sector, are expected to be adversely affected. It can also be stated that ECO, FINL and FIN variables have no effect on the INSA variable. However, when the results obtained for the insurance sector are analyzed, it is seen that a one-unit increase in the ECO variable causes a 6-unit increase in the SGRT variable, a one-unit increase in the FINL variable causes a decrease of -2.20 units in the SGRT variable and a one-unit increase in the FIN variable causes a decrease of -2.65 units in the SGRT variable. Increases in financial leasing and financing increase the demand for insurance policies. As a result, insurance companies' sales increase, but at the same time their risks increase in a linear fashion. In a situation where insurance payments are involved, sector companies can pay large amounts. In this context, increases in the financial leasing and financing indices are thought to have increased the sector risk, thus negatively affecting the sector. On the other hand, an increase in the general economic outlook may increase the risk appetite of investors, which in turn may increase the flow of funds to risky assets and thus positively affect the sector. When we look at the findings obtained for the model, which is another sector analyzed in the study and whose dependent variable is TCRT, it is seen that a one-unit increase in the FAC variable causes a decrease of -2.11 units in the TCRT variable, a one-unit increase in the FINL variable causes a decrease of -3.76 units in the TCRT variable, and a one-unit increase in the FIN variable causes a decrease of -0.81 units in the TCRT variable. Increases in investment and trade tendencies are expected to positively affect the trade sector, but the findings suggest the opposite. The main reason for this situation may be related to the developments in the economy, announced data and investor psychology. In some periods, investors may turn to investment instruments that they consider more profitable or seize opportunities. It is thought that the findings obtained in the TCRT sector can be interpreted in this context. On the other hand, if we look at the findings obtained for the Textile and Leather sector, which is another sector analyzed in the study, it is seen that only the FINL variable affects the sector. More precisely, it can be stated that a one-unit increase in the FINL variable causes a decrease of -2.55 units in the TEKS variable. Machinery and equipment have an important place in the Textile and Leather sector. Leasing such equipment rather than buying it may be due to uncertainty about the future or a low appetite for risk. Therefore, the increase in financial leasing may actually create a negative perception of the future and affect the sector negatively. When we look at the findings obtained for the transportation sector, which is the last sector examined in the current study, it is seen that all independent variables used in the study have an impact on the transportation sector. In other words, a one-unit increase in the ECO variable causes an increase of 8.89 units in the ULAS variable, a one-unit increase in the FAC variable causes a decrease of -4.42 units in the ULAS variable, a one-unit increase in the FINL variable causes a decrease of -2.75 units in the ULAS variable and finally, a one-unit increase in the FIN variable causes a decrease of -3.01 units in the ULAS variable. Based on the sector-specific findings, it is thought that increases in financing items may reduce confidence in the sector and as a result, the sector may be negatively affected.

However, an increase in the ECO variable, which consists of components and reflects the economic outlook as a whole, is interpreted as a positive economic outlook. Therefore, an increase in the ECO variable may increase the risk appetite of investors who want to take advantage of opportunities in advance and accelerate the flow of funds to financial markets. As a result, the sector can be expected to be positively affected.

After the long-run coefficient analysis, we proceeded to the short-run coefficient analysis. The ARDL short-run coefficient results obtained from the Error Correction Model are shown in Table 8 below;

Table 8

Results of ARDL short-run coefficients

Model	ECO	FAC	FINL	FIN	CointEq (-1)
BANK	5.10	-2.28	-2.13*	-2.24**	-0.02***
FINK	6.19	-1.64	-2.23	-2.13	-0.35***
GIDA	6.89**	-4.70**	-2.27**	-2.42**	-0.06***
GMYO	8.07**	-6.60***	-1.88*	-2.73**	-0.02***
HOLD	4.29*	-1.10	-1.65*	-1.53*	-0.90***
INSA	2.81	-3.54**	-0.75	-0.81	-0.06***
SGRT	5.31*	-2.02	-1.95*	-2.34**	-0.88***
TCRT	1.22	-2.04*	-3.64***	-0.79*	-0.96***
TEKS	6.52	-3.14	-2.56*	-1.91	-0.97***
ULAS	8.68**	-4.32**	-2.69*	-2.94**	-0.97***

Note: ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Before proceeding to the interpretation of the short-run coefficient results, firstly, the CointEq(-1) results in the table above are analyzed. It is seen that the results obtained on model basis are significant and lie between 0 and -1. Therefore, it can be stated that short-run deterioration stabilizes in the long-run and the short-run coefficient results obtained are valid. In other words, it can be interpreted that all short-run deviations disappear in the long-run. A detailed analysis of the obtained coefficients reveals that FINL and FIN variables have a negative impact on the banking sector, while ECO and FAC variables have no effect on the sector. In this context, it is considered that increases in financing items increase the sector risk, thus negatively affecting the sector. In the findings obtained for the financial leasing sector, it is observed that none of the independent variables used in the study provide statistically significant results. It is thought that this finding may be due to sector dynamics and the shallowness of the sector. In the opposite direction, it is seen that all independent variables used in the study affect the GIDA variable. Increases in financing items may increase inflation and thus adversely affect investor risk appetite. Improvements in the economic outlook are expected to have a positive impact on the sector. Similarly, it is observed that all independent variables provide statistically significant results on the dependent variable of GMYO. The reason for this finding can be explained by economic and sectoral dynamics. When the findings obtained for the holding sector are analyzed, it can be said that ECO, FINL and FIN variables provide statistically significant results, but FAC variable provides statistically insignificant results. Since the coefficients are similar to the findings obtained in the long-run, it is considered that the reasons explained in the related section above are also valid in the short-run.

Regarding the findings obtained for the INSA dependent variable, it is found that among the independent variables, only the FAC variable provides significant results and has a negative impact on the construction sector. Increases in factoring contracts are expected to create a negative investment environment for the future of the construction sector. In this context, it can be said that the finding obtained is consistent. On the other hand, in the insurance sector, only the FAC independent variable provides statistically insignificant results, while the other independent variables provide statistically significant results. It is thought that increases in financing items may increase the risk of insurance companies in terms of loan repayment and thus have a negative impact on the sector, while

improvements in the economic outlook may have a positive impact on sector companies. In the trade sector, which is another sector analyzed in the current study, it is found that the ECO variable provides insignificant results, while other independent variables provide significant and negative results. Increases in financing items are expected to boost trade volume. In this context, the findings obtained in the opposite direction can be explained by economic and sector dynamics and investor psychology.

In the textile and leather sector, only the FINL variable among the independent variables is found to provide significant results. More precisely, a one-unit increase in the FINL variable causes a -2.56-unit decrease in the TEKS variable. It is thought that financial leasing is important for the textile and leather sector and the finding obtained should be evaluated in this direction. According to the findings for the transportation sector, which is the last sector analyzed in the study, all independent variables used in the study have an impact on the sector. It can be stated that financing items affect the sector negatively, while the economic outlook affects the sector positively. It is thought that the sector findings can be explained by economic reality and investor psychology.

When the short-run and long-run coefficient results are evaluated in general terms, it can be said that the findings are similar and therefore, the short-run results continue to be effective in the long-run. Since it is assumed that the rationale for the findings in both periods may be similar, long-term coefficient interpretations have been kept broad, but short-term coefficient interpretations have been evaluated in general terms to avoid repetition. As such, the results are considered to form a unity within themselves. In the next stage of the econometric process, diagnostic tests are conducted. The findings are presented in Table 9 below;

Table 9

Results of diagnostic test

Model	Heteroskedasticity (Breusch-Pagan-Godfrey)		Autocorrelation (Breusch-Godfrey LM)		Normal Distribution (Jarque-Bera)	
	F-stat.	Prob.	F-stat.	Prob.	Coefficient	Prob.
BANK	1.37	0.23	1.40	0.17	1.08	0.58
FINK	1.20	0.28	0.76	0.68	1.34	0.51
GIDA	1.06	0.42	0.21	0.64	0.34	0.84
GMYO	1.34	0.22	1.15	0.28	0.04	0.97
HOLD	1.38	0.23	0.01	0.96	0.16	0.92
INSA	1.74	0.12	0.13	0.71	3.07	0.21
SGRT	0.93	0.60	0.56	0.45	2.21	0.32
TCRT	0.87	0.68	0.47	0.49	1.36	0.50
TEKS	0.23	0.94	0.27	0.60	0.66	0.71
ULAS	1.05	0.41	1.41	0.20	0.68	0.71

Note: The maximum lag length is set as 12.

The table above shows the Breusch-Pagan-Godfrey F-ist. values for heteroskedasticity, Breusch-Godfrey LM F-ist. values for autocorrelation and Jarque-Bera coefficient results for normal distribution. When the results in the table are analyzed, the probability values of all diagnostic tests calculated for the models developed in this study are above the critical value of 0.05. Therefore, the null hypotheses of the tests cannot be rejected. In other words, sectoral ARDL models do not have problems of heteroscedasticity and autocorrelation and the models are normally distributed. As a result, it can be stated that the ARDL models are valid and do not pose a problem. In the last step of the econometric process, CUSUM graphs are tested to test the constancy of the parameters. The findings are as follows;

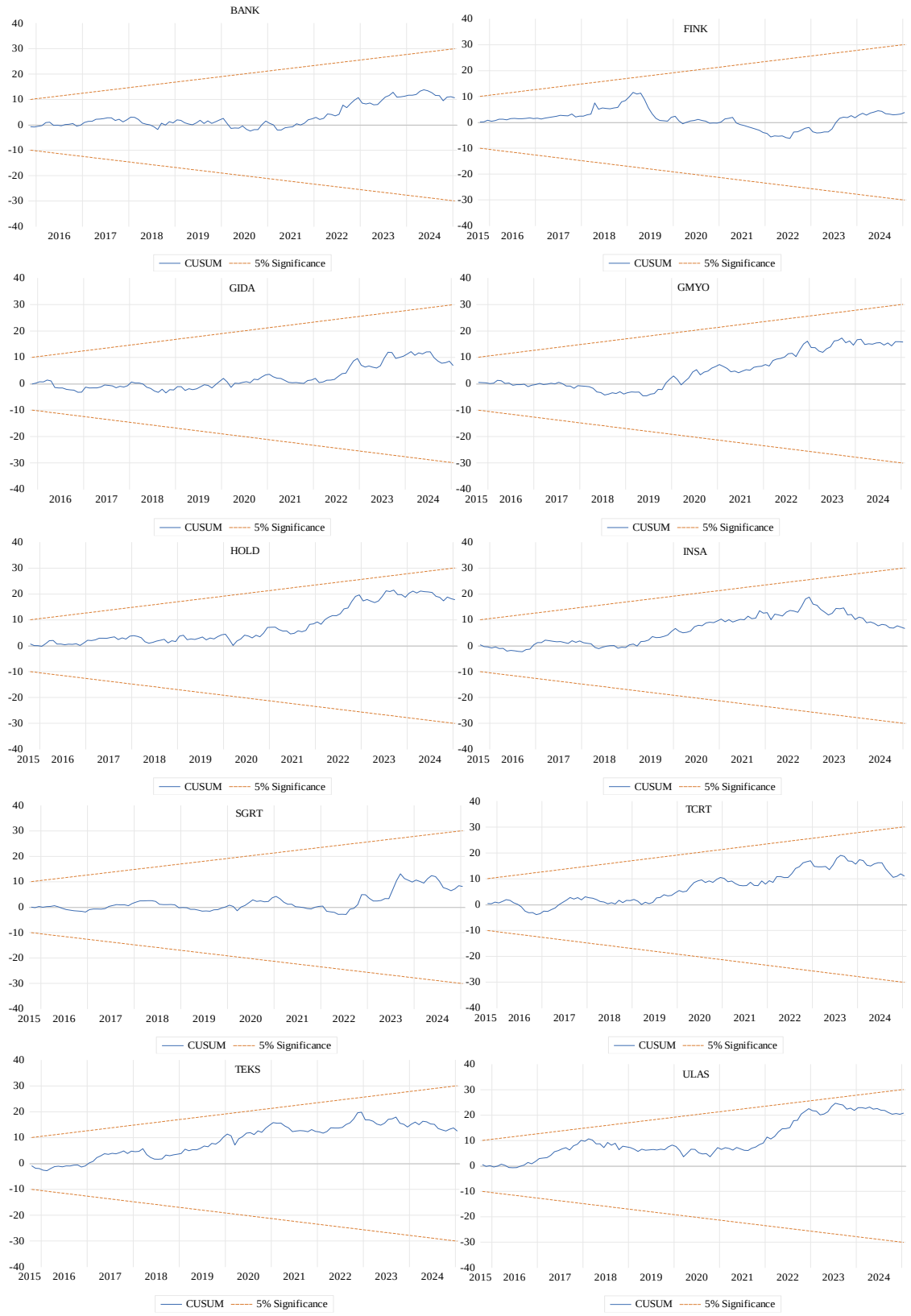


Figure 2. CUSUM charts (Source: Author's own work).

An analysis of the CUSUM graphs above reveals that the recursion errors calculated from the sectoral ARDL models fall within the 5% critical values. Based on this result, it can be said that the parameters estimated in this study are stable and this stability is maintained throughout the entire study period. Moreover, in the sectors analyzed in this study, recursion errors have generally moved away

from zero in recent years. It is thought that the reason for this situation can be explained by the economic developments.

6. Conclusion and recommendations

Economic developments play an important role in future expectations. In a conjuncture where the level of uncertainty increases, more risk-free investment instruments may be preferred, while in the opposite situation, more risky assets may be preferred. In this context, the AFI Economic Outlook Index, which measures investment and trade trends, is considered significant. However, there is a gap in the literature on this index. Therefore, it is thought that the literature studies to be conducted on the related index will contribute to the literature and provide useful information to investors. Therefore, this study aims to investigate the impact of the AFI economic outlook index on the performance of selected sectors. BIST Banking Index (BANK), BIST Financial Leasing Factoring Index (FINK), BIST Food and Beverage Index (GIDA), BIST Real Estate Investment Trust Index (GMYO), BIST Holding and Investment Index (HOLD), BIST Construction Index (INSA), BIST Insurance Index (SGRT), BIST Trade Index (TCRT), BIST Textile and Leather Index (TEKS) and BIST Transportation Index (ULAS) are the dependent variables of the study. The independent variables of the study are AFI Economic Outlook Index (ECO), Factoring Index (FAC), Financial Leasing Index (FINL) and Financing Index (FIN). In addition, a data set is created based on the date of the first calculation of the Economic Outlook Indices and the date of the preparation of the study, and the scope of the study is determined as 2015:02 - 2025:01. In this study, ARDL bounds test approach, which is one of the time series tests, is used to determine the short and long-run effects of Economic Outlook Indices on sector performances.

6.1. Evaluation of model results in the context of theory and literature

According to the short and long-run coefficient results obtained as a result of the analyses, financial leasing and financing variables affect the banking sector negatively; economic outlook variable affects the food and beverage, real estate investment trust and transportation sectors positively and factoring, financial leasing, and financing variables affect them negatively; holding-investment and insurance sectors are positively affected by the economic outlook variable and negatively affected by the financial leasing and financing, the construction sector is negatively affected by the factoring variable; the trade sector is negatively affected by the factoring, financial leasing and financing variables, and the textile leather sector is negatively affected by the financial leasing variable. In addition, it is determined that the independent variables used in the study have no effect on the financial leasing factoring index. The parallelism of the findings obtained in the short- and long- run provides consistency to the study. According to the results of the diagnostic tests conducted to test the validity of the ARDL models established in the study, it is determined that the models established in the study do not have problems of heteroscedasticity and autocorrelation and that the models exhibit normal distribution characteristics. Moreover, according to the CUSUM results, it is observed that the identified parameters are stable and this stability is maintained throughout the entire study period.

Considering the findings in a theoretical context, it can be seen that the average variance theory, which suggests that each investor has a different investor curve, is consistent with the findings of this study. In other words, it can be said that the independent variables of the study can be explained by different statistical and significance results in different sectors. Therefore, it is thought that this finding can be explained by the investor curve expressed in theory. Similarly, it can be argued that the fact that the same risk factor affects different sectors to different degrees may be related to investor psychology, which forms the basis of behavioral finance theory. However, as can be seen from the results obtained on a sector basis, it can be said that multiple factors can affect asset prices. Based on this, it is suggested that the hypothesis that multiple factors can affect asset prices, as expressed by APT theory, is supported in this study. Finally, it can be said that the approach of measuring risk as a single factor (beta coefficient) proposed in CAPM theory is not consistent with the results of the study.

When the results are compared with the studies in the literature, it can be stated that they are similar to the studies of Kavussanos et al. (2002), Albeni and Demir (2005), Alper and Kara (2017), Sailaja and Mandal (2018), Bhuiyan and Chowdhury (2020), and Jin and Guo (2021), who found that macroeconomic variables affect each sector at different levels of importance. However, the overall picture shows that the AFI economic outlook index is statistically significant and has a positive effect

on sector indices, but the sub-components of the AFI economic outlook index are statistically significant and have a negative effect on sector indices. In other words, while a negative effect is observed in the sub-indices, a positive effect is observed in the composite index. Based on this finding, it is thought that the sub-indices price factors such as borrowing costs and risk appetite and are therefore more fragile, while the composite index is not a simple average of the sub-indices and therefore reflects the overall economic perception in a comprehensive manner.

6.2. Recommendations and policy implications based on model results

Finally, the current study offers some recommendations. It is recommended that investors who will invest in the sectors examined in the study should take into account the findings among the variables and consider them at the decision stage. However, considering that the independent variables used in the study consistently affect the performance of different sectors in both the short and long term, it is thought that the performance of these sectors is important in determining the content of investor portfolios in investments made specifically on the Istanbul Stock Exchange. Therefore, investors are recommended to monitor the independent variables of the study and take proactive measures based on the signals (increases or decreases) identified for each variable. At this point, it is recommended that investors remain cautious in the event of a possible decline in the economic outlook index, and that they analyze their investments based on their own risk and expectation profiles in the opposite scenario. In clearer terms, it is recommended that the relationship between the economic outlook index and the sector in which the investment is made, along with other risk factors, be assessed, particularly taking into account its direction and trends. It is believed that such an assessment will enable investors to develop more predictable and realistic risk management strategies. However, policy-makers are advised to take constructive steps to improve the investment environment and increase the depth of financial markets. In this case, it is considered that financing support and tax incentives could be applied on a sectoral basis. Moreover, considering that the economic outlook index affects each sector at a different level of importance, it is recommended that a ‘Sectoral Impact Monitoring and Warning System’ be established to track this impact. However, causal relationships are not analysed in the study. Nevertheless, the identified relationships support the use of the index as a trend-tracking tool. This will enable the development of an early warning system for policy-makers and the refinement of policy objectives. Finally, maintaining macrofinancial stability and predictability in the food and beverage, real estate, holding, insurance and transport sectors, which are positively affected by the economic outlook index; the banking sector should assess any increase in financing instruments alongside asset quality; the construction sector should consider cash flow and receivables maturities during the financing phase; the commercial sector should be targeted and selective in non-bank financing; and finally, the textile and leather sectors should consider investments that increase efficiency in financial leasing and make investment decisions accordingly. Furthermore, the study can be developed by including macroeconomic variables in the model.

Author statement

Research and publication ethics statement

This study has been prepared in accordance with the ethical principles of scientific research and publication.

Approval of the ethics board

Ethics committee approval is not required for this study.

Author contribution

This study has one author.

Conflict of interest

There is no conflict of interest arising from the study for the authors or third parties.

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