Chapter 9

Global Banking Shocks and Their Transmission to the Turkish Equity Market: Sectoral Evidence from BIST

İnci Merve Altan[1]

Abstract

In March 2023, Silicon Valley Bank (SVB), specializing in banking services for technology startups and financing nearly half of venture-backed technology, went bankrupt. SVB's bankruptcy was followed by the bankruptcies of major banks Silvergate Bank, First Republic Bank, Signature Bank, and Credit Suisse Bank. A series of bank failures and past crisis experiences have increased concerns about the risk of financial contagion across the global economy, and SVB's collapse has drawn attention to the resilience of the global banking system and financial markets. Given that predicting the contagion impact of the crisis is crucial for both investors and the national economy, examining the impact of SVB on sectors listed on the BIST is crucial for Turkey. Therefore, this study aims to examine the impact of SVB's bankruptcy on the banking, insurance, food and beverage, IT, tourism, and services sectoral indices listed on the BIST. An event analysis was conducted for the period January 2, 2023, to August 18, 2023. The findings show that the SVB bankruptcy did not have a homogeneous impact on sector indices. As of the event date, sectors other than the banking sector showed negative cumulative abnormal returns. In the post-event period, significant differences emerged between sectors; cumulative abnormal returns were more negative in the IT and tourism sectors, recovery took longer in the insurance sector, and the banking sector reached positive cumulative abnormal returns the quickest.

1 Asst. Prof., Bandırma Onyedi Eylül University, ialtan@bandirma.edu.tr, ORCID: 0000-0002-6269-7726

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1. Introduction

Banks, one of the main elements of the economy, play an active role in creating the loans needed in the market, capital, and therefore liquidity. Although it triggers economic growth by raising funds and supporting credit formation, it causes risks to spread between countries and sectors; therefore, it is a source of concern for companies and policymakers. There will be more uncertainty regarding the availability of bank loans for businesses seeking funding if bank strength declines. Considering the aforementioned issues, in the worst-case scenario of bankruptcies, it is inevitable that companies affiliated with the bank will affect the entire economy (Aharon, Ali & Naved, 2023; Freixas & Rochet, 2008).

The increasing integration of the global financial system means that banking-related shocks originating in one country can quickly spread to other countries and markets. Sudden liquidity problems, particularly those faced by systemically important banks, can threaten the financial stability of both developed and developing markets and create contagious effects. The bankruptcy of Silicon Valley Bank (SVB) in March 2023, which specializes in banking services for technology startups, is a noteworthy case study due to its different dynamics compared to traditional banking crises. Indeed, following the bankruptcy of SVB, which financed approximately half of venture capital-backed technology companies, large-scale banks such as Silvergate Bank, First Republic Bank, Signature Bank, and Credit Suisse also ceased operations. Thus the banking panic that began in the US quickly spread to major banks in Europe, and the bankruptcy of SVB caused a global banking crisis. After this globally growing banking crisis, attention turned to its impact on financial markets and the reactions of financial markets to current banking shocks (Acharya, et al., 2023; Hayes, 2023). Because investors with uninsured deposits in these banks lost confidence in investing their deposits in long-term securities due to the high interest rates during this period, the conditions were created for the banking crisis to spread to the capital markets (Acharya, et al., 2023).

SVB's bankruptcy led to losses on stock exchanges, particularly in the UK, but also in Hong Kong, South Korea, Australia, and Japan, and many technology startups in China faced financing problems. The approximately 7% decline in the European Banking Index highlighted the impact of this banking-related shock on market value (Aharon et al., 2023; Hayes, 2023). All these developments show that the SVB bankruptcy raises significant questions about the resilience of the global banking system and financial

markets (Martins, 2023; Aharon et al., 2023; Hayes, 2023; Pandey, Hassan, Kumari & Hasan, 2023; Yadav, Rao, Abedin, Tabassum & Lucey, 2023).

Understanding how global banking shocks affect emerging nations is crucial for investor behavior and financial stability. However, the existing literature focuses mostly on developed-country markets; empirical evidence on how unexpected global banking failures are priced at the sectoral level in rising nations such as Turkey is scarce. Unlike previous studies that examined the SVB failure from the perspective of intra-bank financial failure, this study focuses on the sectoral impacts of a global banking shock on Turkish equity markets. Specifically, there is no study yet that directly examines the effects on BIST sectoral indices. Considering the strong contagion effects observed in the global financial crisis, analyzing the impacts of international banking shocks on BIST is of great importance to both academic literature and policymakers. Therefore, the main objective of this study is to examine the short-term effects of the SVB failure on sectoral indices traded on the BIST using an event study method. Accordingly, this study will examine how a shock originating from the global banking sector affected BIST on a sectoral basis.

The study offers three main contributions to the literature. Firstly, this study is one of the limited number of empirical studies examining the impact of the globally resonant SVB bankruptcy on the BIST and its sectoral indices. Secondly, using the event study method, market responses are analyzed at the sectoral level, and evidence is presented on how the effects of banking-related shocks on equity markets differ across sectors. Thirdly, by addressing the contagion mechanism of global banking failures in an emerging market context, the study provides findings that complement existing literature, which predominantly focuses on developed country markets. In this respect, the results offer important implications for investors and policymakers in assessing the impact of global banking shocks on local markets.

In the study, firstly, the effect of bank collapses and the effect of SVB's bankruptcy on banks and financial markets were explained, and in the second part, a conceptual framework was formed from the studies on SVB's bankruptcy. In the third chapter, how the main sectors operating in the BIST reacted to the bankruptcy of the SVB was analysed using the event study method, and its findings were included. Finally, in the conclusion part, the findings are interpreted and future studies are shed light on.

2. Literature

Banking crises limit the activities of households and companies, reduce investment and consumption, and disrupt the functioning of the credit and payment systems. Thus, it affects all developed and developing countries. There are many studies in the literature that try to understand banking crises and examine the transmission channels of crises (Çinko & Ak, 2009; Dungey & Gajurel, 2015; Clarke & Dercon, 2019; Himino, 2021; Ozili, 2023; Metrick & Schmelzing, 2023; Ozili, 2024; Huberdeau-Reid & Pennacchi, 2025; Amoah et al., 2025).

SVB went bankrupt in 2023, and there were countless further bankruptcies that followed. Many academic research have been conducted on these bankruptcies. Studies have mostly concentrated on these problems since the effects of the SVB's failure on the financial markets and banking sector are crucial for both researchers and policymakers (D'Ercole, 2023; Aharon et al., 2023; Martins, 2023; Pandey, Hassan, Kumari & Hasan, 2023; Acharya, et al., 2023; Oefele, Baur & Smales, 2023; Yadav, Rao, Abedin, Tabassum & Lucey, 2023; Lan, 2024; McClane, 2025; Feldberg, et al., 2025). Some of these studies are summarized below.

Naveed, Ali, Gubareva & Omri (2024), in their study using the event study method, examined the reactions of the forex, energy, metal, and cryptocurrency markets to the collapse of the SVB. They found that, while the cryptocurrency and energy markets reacted unfavorably, the forex and metal markets performed well both during and after the incident. They did note that the bitcoin market generated good anomalous returns. They also emphasized the dangerous consequences of the SVB failure, citing the possibility of contagious repercussions extending to international financial markets. Similarly, Ofele et al. (2023) looked at how the 2023 banking crisis, which was brought on by SVB's insolvency, affected the stablecoin market in the cryptocurrency space. They find that investors distinguish between money market mutual funds and stablecoins and balance portfolio returns with safe assets. Warren (2025) examined how Silvergate Bank managed its balance sheet to maintain liquidity and protect its ability to absorb significant and unpredictable outflows from depositors of its crypto clients following SVB and subsequent bank failures.

In their another study employing the event study approach, Ali, Naveed, Gubareva, and Vo (2024) found that banks in the United States and Europe saw negative returns as a result of SVB's failure, but banks in China were mostly unaffected. They also discovered that the SVB bankruptcy had a negative influence on the stock prices of banking businesses in the United

States and Europe, but a favorable impact on the stock prices of technology companies in the same countries. Similarly Martins (2025) examined how the US banking sector responded to the collapses of SVB and Credit Suisse. Analysis of the abnormal returns generated by the announcement of the bank collapses revealed a negative impact on the largest publicly traded United States banks.

Tabash, Sheikh, Shawkat, and Hoon (2025) investigated the cumulative abnormal returns (CAR) and abnormal returns (AR) of worldwide Sharia-compliant and non-Sharia sectors following the collapse of the SVB. They discovered that non-Sharia-compliant sectors experienced lower cumulative anomalous losses than Sharia-compliant sectors, and that the worldwide non-Sharia-compliant banking sector was more significantly impacted by the SVB collapse. They argued that the most economical risk mitigation strategy given protracted volatility in most non-Sharia-compliant industries was to take short positions in Sharia-compliant energy companies.

Yadav et al. (2023) investigated how the bankruptcy of SVB affected the top nine stock indices globally. According to their findings, the collapse of a sizable financial institution like the SVB might have a considerable effect on international equities markets and cause contagion effects. Aharon et al. (2023) examined how the collapse of SVB affected international equity markets in the Middle East, Europe, Africa, and Latin America on the day of the collapse and for some time afterward, and found a significant negative reaction in financial markets. Based on their findings, they warned investors that a major negative event like the bankruptcy of SVB may not always yield the desired benefits. Similar to this, Pandey et al. (2023) also looked at how the SVB's bankruptcy affected international stock markets. According to their research, developed markets have a larger bankruptcy effect because of their greater economic connection with the world economy. They also stated that the effect of bankruptcy did not affect all countries equally and that countries with stable and strong banking systems were differentiated. Martins (2023) examined the reflection of SVB and Credit Suisse's bankruptcy on the stocks of listed banks in Europe. These two bank collapses have caused bank stocks to respond quite negatively. He cited systemic contamination, knowledge asymmetries, and uncertainty as the causes of the overall decline in the banking sector.

When the studies on the bankruptcy of the SVB are examined, it can be said that the studies are especially concentrated on the capital market. In the studies, it is seen that the effect of bankruptcy is examined in terms of stock markets, sectors, and stocks. However, among the studies available, there is

no research that examines how the bankruptcy of SVB affected BIST and the sectors within BIST. In this direction, in the next part of the study, the effect of the bankruptcy of the SVB on the main sectoral indices operating in the BIST was analysed with the event study method, which is frequently used in literature.

3. Model and Findings

Usually, the event study method is applied to examine how financial markets react to unforeseen events like bankruptcies, crises, and elections (Yılmaz & Elmas, 2019; Pandey, et al. 2023). The event study method is a method that focuses on abnormal returns and the effect of these returns on market value. For this reason, in the study, event analysis was used to examine the effect of the bankruptcy of SVB on the banking (XBANK), insurance (XSGRT), food and beverage (XGIDA), IT (XBLSM), tourism (XTRZM), and service (XUHIZ) sectoral indices in BIST. Data were obtained from the internet address investing.com (2023). March 10, 2023, when the SVB went bankrupt, when rapid deposit withdrawals took place, and was taken over by the FDIC, was chosen as the event day. Accordingly, daily data from January 2, 2023 to August 18, 2023, were used in the analysis method. In order to obtain more real results in average and abnormal return calculations, the event window is kept long. 117 trading days from t-45 (January 2, 2023) to t + 109 (August 18, 2023) are taken into account. The average return of the window estimate is used to calculate the expected return in the period t-45 to t-1. The abnormal return is calculated by deducting the expected return from the relevant sector's stock market return. The formulation of abnormal return is given in (1) (Irfan, Tahir & Yadav, 2021; Yadav et al., 2023).

$$AR = R_t - E(R) \tag{1}$$

In equation (1), AR shows the abnormal return, R_t shows the daily return of the sectors, and E(R) shows the expected return. By dividing the standard error of the window estimate, denoted by SE, by the abnormal return on the relevant day, the t-statistic, which displays the importance of the abnormal return, is generated. Its formulation is given in (2).

$$\dot{A}R = \frac{\mathrm{AR}}{\mathrm{SE}}, \quad SE = \frac{\sigma AR_t}{\sqrt{n}} \tag{2}$$

Equation (3) is used to determine the cumulative abnormal return expressed in CAR after calculating the abnormal return and t-statistics.

$$CAR = \sum_{t=0}^{T} AR_t \quad (3)$$

The values for the effect of the bankruptcy of the SVB obtained from the equations (1) and (2) on the banking, insurance, food and beverage, IT, tourism, and service sector indices in BIST are given in Figure 1 for easy traceability.

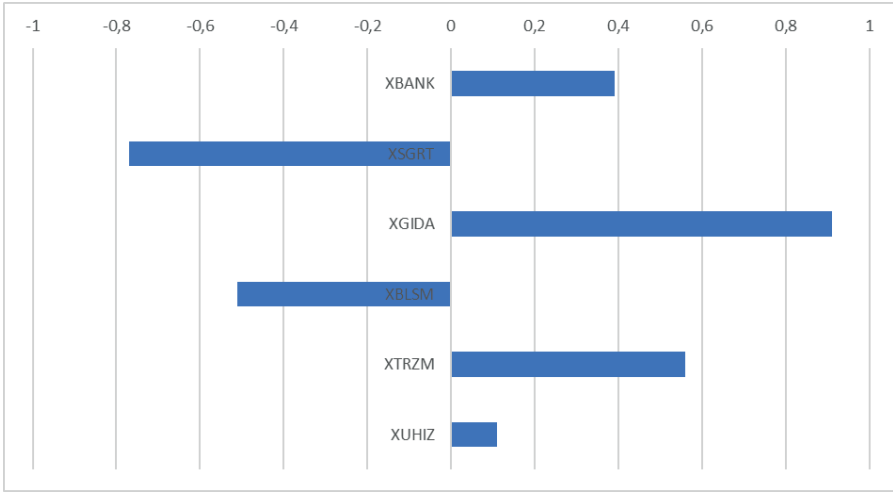

Figure 1. Abnormal Return on SVB Bankruptcy of Sectoral Indices

In Figure 1, when the SVB went bankrupt, BIST's insurance and IT sectors had negative abnormal returns; banks, food and beverage, and service sectors are seen to have positive abnormal returns.

The data is given graphically in Figure 2 for easy tracking. The t-statistics of the cumulative abnormal return values produced by equation (3) in the event window spanning from t-45 to t+109 are significant at the 15% level.

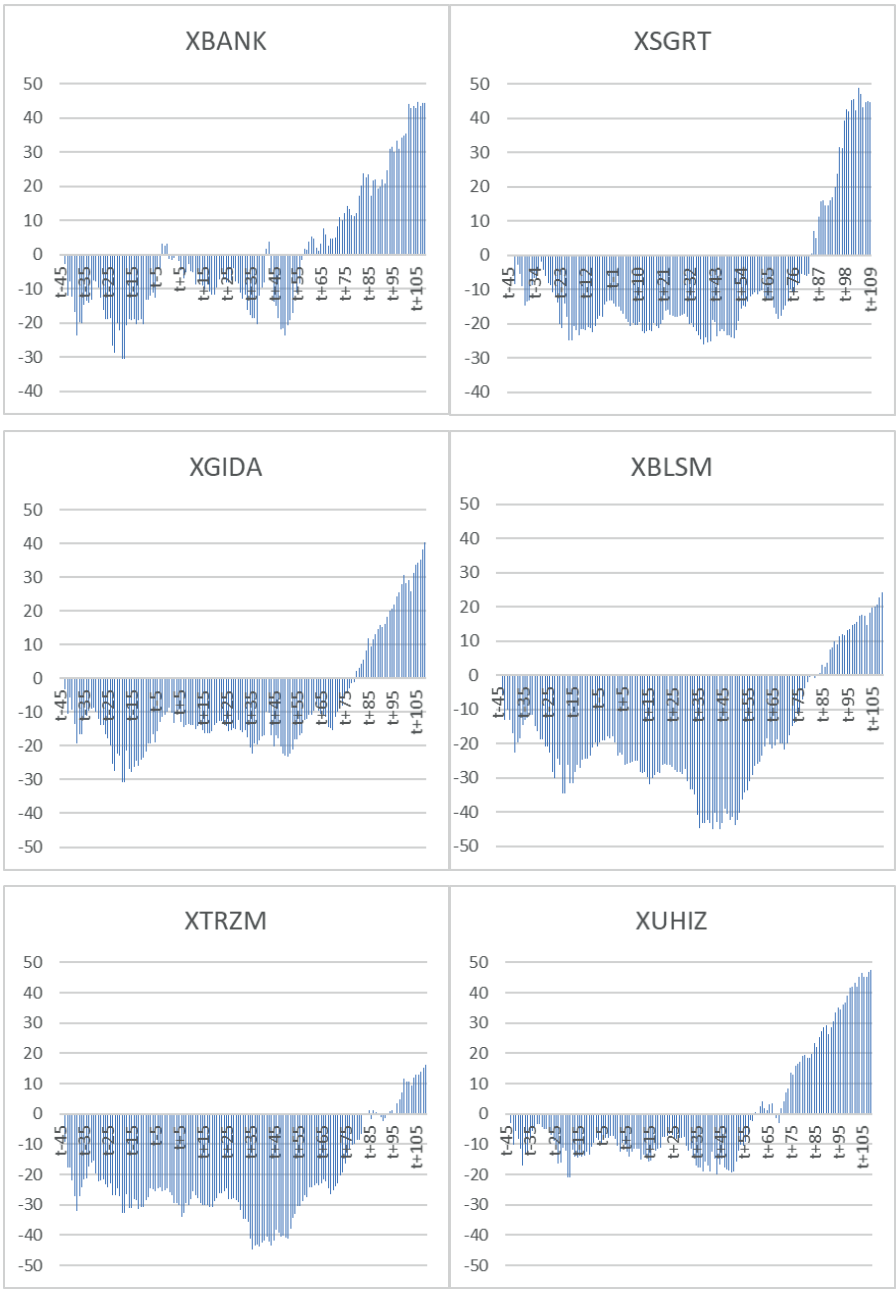

Figure 2. Cumulative Abnormal Returns of Sectors

When Figure 2 is examined, it is seen that the banking, insurance, food and beverage, information technology, tourism, and services sectors included

in the analysis before SVB's bankruptcy had negative cumulative returns; however, a relatively upward trend in returns is observed approximately one week before the event date. It is noteworthy that, with the exception of the banking sector, all other sectors had negative cumulative returns on the event date. When examined after the event, it is striking that the information technology and tourism sectors suffered the greatest losses from SVB's bankruptcy; the insurance sector took the longest time to recover from the effects of the bankruptcy; and conversely, the banking sector recovered the quickest and achieved positive cumulative returns most quickly.

4. Conclusions

Following the bankruptcy of SVB, one of America's largest commercial banks and funding nearly half of the venture capital-backed technology sector, other large-scale banks such as Silvergate Bank, First Republic Bank, Signature Bank, and Credit Suisse also went bankrupt. Even the collapse of SVB in the US triggered financial panic among top banks in Europe. Facing a global banking crisis, concerns increased about the possibility of its effects spreading financially to the wider economy. The SVB bankruptcy underscored the robustness of the global banking system and financial markets.

Considering the financial globalization, it is very important for both investors and countries to foresee the contagion effect of any crisis. In this case, it is very important for Turkey to examine the impact of SVB on capital markets and sectors. In this direction, it is aimed at examining the effect of the bankruptcy of the SVB on the sectoral indices traded on the BIST. To this end, the effects of SVB's bankruptcy on the banking, insurance, food and beverage, information technology, tourism, and service sectors on the BIST were analyzed using an event study method. Accordingly, daily data from January 2, 2023, to August 18, 2023, were used in the event analysis method. In order to obtain more real results in average and abnormal return calculations, the event window is kept long. 117 trading days from t-45 (January 2, 2023) to t + 109 (August 18, 2023) are taken into account.

According to the analysis findings, at the time of the bankruptcy event of the SVB, BIST Insurance and the IT sector had negative abnormal returns; banks, food and beverage, and service sectors were seen to have positive abnormal returns. This findings highlights the difference in the impact of global banking crises on BIST sectors.

According to the cumulative abnormal return findings, all sectors included in the analysis—banking, insurance, food and beverage, IT,

tourism, and services—had negative cumulative abnormal returns prior to SVB's bankruptcy; however, there was a relatively positive trend in returns approximately one week prior to the event. It is noteworthy that, with the exception of the banking sector, all other sectors had negative cumulative returns on the day of the event. According to post-event findings, the sectors that suffered the greatest losses from SVB's bankruptcy were the IT and tourism sectors; the insurance sector had the longest recovery period from the effects of the bankruptcy; and conversely, the banking sector recovered the quickest and achieved positive cumulative returns. The findings of this study are generally consistent with the existing literature, which reveals that the SVB bankruptcy did not create a one-sided and homogeneous impact on financial markets (Pandey et al., 2023; Ali, Naveed, Gubareva & Vo, 2024; Tabash, Sheikh, Shawkat & Hoon, 2025). Based on all these findings, it can be said that investors should pay attention to portfolio diversification during periods of global banking-related crises, and policy structures should take precautions against contagion effects during these periods.

While most existing studies on SVB's bankruptcy focus on developed country markets and bank-specific analyses, this study presents unique findings on how the banking shock stemming from SVB's globally impactful bankruptcy was priced sectorally in an emerging market. However, the limitation of this study stems from its focus on the short-term effects of SVB's bankruptcy on BIST sector indices. Future studies could examine the long-term effects of SVB's bankruptcy using cointegration analyses. This would allow for comparisons and international assessments by conducting short-term or long-term analyses for both developed and developing countries.

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