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Investigation Of The Effect Of Asset-Backed Securitization On Compaines' Financial Failure Possibilities[1]

Varlığa Dayalı Menkul Kıymetleştirme İşleminin Firmaların Finansal Başarısızlık Tahmini Üstüne Etkileri

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Abstract

Securitization is a financial method that enables companies to remain liquid by converting their future receivables (such as mortgage, automobile loan, trade receivables) into securities with favorable interest rates. This method is yet to be widespread in Turkey demonstrates the need to investigate the utility of this method. For this reason, in this study, what kind of change occurs in the financial failure probability of the firms that make securitization under appropriate conditions is investigated. The telecommunications sector from the real sector was chosen as the sample. Balance sheet information disclosed to the public between 2015 and 2019 was used. As a result of the study, where Springate S-Score was calculated as a financial failure model, it was concluded that securitization also reduces the probability of financial failure of firms.

Keywords: *Asset-Backed Securitization, Financial Failure, Springate S Score*

JEL Codes: *G30, G33, F34*

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Özet

Menkul Kıymetleştirme firmaların gelecekteki alacaklarının (mortgage, otomobil kredisi, ticari alacakları gibi) uygun faiz oranlarıyla menkul kıymet haline getirilerek firmaların likit kalmasını sağlayan finansal bir yöntemdir. Bu yöntemin Türkiye'de henüz yaygın olmaması bu yöntemin kullanılabilirliğinin araştırılması gerekliliğini göstermektedir. Bu nedenle, bu çalışmada uygun koşullarda menkul kıymetleştirme yapan firmaların finansal başarısızlık ihtimallerinde ne gibi bir değişiklik olduğu araştırılmıştır. Örneklem olarak reel sektörden telekomünikasyon sektörü seçilmiştir. 2015 - 2019 yılları arasında halka açıklanan bilanço bilgileri kullanılmıştır. Finansal başarısızlık modeli olarak Springate S-Skor hesaplaması yapılmış olan çalışma sonucunda, menkul kıymetleştirmenin firmaların finansal başarısızlık ihtimalini de düşürdüğü sonucuna ulaşılmıştır.

Anahtar Kelimeler: *Varlığa Dayalı Menkul Kıymetleştirme, Finansal Başarısızlık, Springate S Skoru*

JEL Sınıflaması: *G30, G33, F34*

Introduction

Today, securitization is an important component of properly functioning markets. While securitization sounds complex in terms of terminology, it can actually be thought of as a technique for increasing financing in its simplest form and a support mechanism for lending in the real economy. In addition to lending or financing companies, securitization brings markets closer together. Generally, a securitization transaction can be defined as the conversion of illiquid assets into securities stocks, which provides the securitizer with a means to transfer risk and increase funds.

Mainly to the presence of American securitization market, is seen as active in the UK and the Netherlands are associated mainly in Turkey. However, the use of securitization as seen by the side of the big banks and the real sector in Turkey is not yet widespread. When Turkey securitization techniques in the real sector debt ratios and credit cost are taken into consideration it can be used to create a fund in many companies.

Turkey's real sector is unable to pay their debts of financial firms, defined as failure given the high debt ratios or measuring the risk of legal bankruptcy is critical for firms. Therefore, many models have been developed for the prediction of financial failure in the financial literature. Among the models, the most used model in the studies is the Springate S Model, which is a variant of the Altman Z Model developed by Altman.

The aim of this study is to reveal empirically to what extent firms using securitization technique change the risk of financial failure. In this context, securitization and financial failure concepts are defined. In addition, recent studies on securitization and financial failure are included, and the effect of the difference in their balance sheets on the risk of financial failure has been measured under the assumption of securitization for companies which perform under the telecommunication sector.

1. Securitization Framework

Securitization is a method of converting less liquidity assets into securities, a capital market instrument; This is another way of raising funds by pooling illiquid assets that are difficult to sell or exchange, and securitize investors for final sale (Babour et al., 1997). The purpose of securitization is to separate the assets from the negative risks of the organization (Schwarz, 2011). Start with unavailability due to fund demand and low liquidity on assets; The asset transformation process converts a low liquidity asset into a high liquidity asset. Most securitizable assets are one that can generate income streams. Subsequently, the Special Purpose Entity will bring future income from the sale of financial instruments to investors for the creator's repayment. Thus, securitization is not to borrow money, but to sell a cash flow that accrues from the business assets and securitizes them.

The word "securitization" has many different meanings. However, it all means the process of bringing together the assets in the firm's balance sheet for the issuance of securities. These assets are transferred to the Special Purpose Vehicle, and then the asset-backed securities are sold to investors. While the asset owner or creator receives funds from the sale of securities from the Special Purpose Institution, depending on the present value of the transferred assets in the market, the investors will receive a return on the proceeds from the transferred assets. Securitization often involves illiquid assets that are rarely sold to others and for which funding is impossible. Therefore, the main purpose of securitization is to offer an easier way to sell such assets by combining illiquid assets and converting them into salable forms, or in other words to increase liquidity for such assets. In this way, the party creating the asset is to use traditional borrowing through factoring. not by converting an illiquid asset into a security that can be bought and sold in a capital market, and earns income through the issue of asset-backed securities that are more liquid than underlying assets (Giddy, 2000).

The purchase of assets for securitization involves three basic activities: Creation, Service, and Financing. The starting point of the process is the fund generating company with the right to collect receivables.

Fundraising refers to the process of creating assets that act as collateral for asset-backed securities. This is an activity usually carried out by financial institutions and banks in the normal course of their operations, as well as by some institutions that specialize in the activity for securitization purposes. More than one institution can create loans in the pool. The foundation business includes advertising, cross-selling of depositors, and establishing banking relationships with dealers. It also includes credit assessment (Davidson, 2003) The

Originator firm, also called the Originator, selects the receivables related to the specific criteria and will transfer them to the so-called special purpose vehicle (SPV). The SPV is created by the firm or a specialist firm that offers this service. The sole purpose of SPV is to hold receivables and protect them for investors (Kothari, 2006). When the SPV is the owner of the receivables, investors will get an interest there by paying the present value of their receivables.

SPV issues debt instruments to investors who pay at predetermined rates and dates. These instruments are called asset-backed securities (ABS) and can be freely bought and sold in the capital markets. The originating firm usually acts as the mechanism that collects payments from receivables and takes action in case of default or default (Kothari, 2006). Towards the end of the process, when the amount of unpaid receivables is small, the originating firm gets back the unpaid receivables and closes the transaction.

Almost any type of asset can be securitized as long as it has a reasonable predictable future cash flow. While the assets that are the easiest to securitize are those that occur in large pools, they have a long history that can be used to estimate default rates, have standard documentation, and assets to which ownership can be transferred. The most common type of asset securitized is residential mortgages. Following the success of the Mortgage Backed Securities (MBS) market, institutions began to apply the securitization concept to other types of assets (ABS) and non-mortgage-backed securities. The most commonly used collaterals for ABS are credit card receivables, automobile loans, commercial mortgages, lease and trade receivables (Davis, 2000).

Since the 1990s, securitization, which provides high leverage, has been used extensively and provides banks with high profit opportunities in periods when markets are well functioning and risk is low. However, the tendency of financial institutions to use high leverage causes their capital adequacy ratios to decrease, banks not to renew their debts, the liquidity crisis of banks needing capital to be triggered, and a crisis of confidence in the markets leads them to financial failure (BDDK, 2009). Although it is a subject of research how to affect the financial ratios of the firm as a result of securitization in the real sector, which is not a financial institution, looking from the perspective of financial failure can make a deeper contribution to the literature. Before analyzing these two concepts together, the next section has been prepared to present the conceptual framework of financial failure.

2. Financial Failure Framework

Financial failure is often confused with the bankruptcy of the business, but it is different from economic failure and the concept of bankruptcy. Financial failure can basically be defined as a business losing its ability to pay its debts.

Financial failure occurs due to various reasons, and when it occurs, it causes disruptions in business activities (Mellahi and Wilkinson, 2004). The disruption in the activities causes a decrease in the activities of the company with its business partners (suppliers, buyers, etc.) and accordingly a decrease in the rate of profit from its main activity. This event causes the cash management not to be managed effectively and the business therefore loses its ability to meet its liabilities. Businesses in this situation may go into debt to the financial sector in order to meet their liabilities. However, the debt obligations of businesses that follow this path are entering an increasing trend. As a result, this situation causes a vicious circle in businesses, and brings about the process of bankruptcy and liquidation. From this point of view, all situations such as the struggle of businesses with financial difficulties, liquidation and bankruptcy can be defined as financial failure (Mellahi and Wilkinson, 2004, pp.22-23).

While there are many models in the literature that predict financial failure, the famous Enron Corporation incident is a strong exception to all of these models. In the years when financial ratios do not give away, the concept of securitization actually has an effect. Enron company sold its Collateralized Debt Obligations and reduced the risk of liquidity on it. Looking at the probability of financial failure for this period, the analysis result was obtained as a very low probability. This small possibility has also been recorded as a Counterparty Risk (Tiftik,2020). However, by the end of the day, Enron Company had a financial failure and went bankrupt. From this perspective, it becomes prominent that securitization should not be overlooked in studies on financial failure.

3. Literature Review

When the securitization literature is reviewed, It is observed that the literature concentrates on two areas. The first of these is the analysis of why securitization takes place. The other is the studies examining the effects of securitization on both businesses and the market in general.

Considering the structure of the literature examining the effects of securitization, a comprehensive and contradictory framework emerges in general. This is because the analysis performed in the literature cannot reach a clear consensus on the risks and benefits of securitization (Carmen et al., 2018)

When the use of securitization by companies is investigated in the literature, it is seen that the first of the early studies belongs to Schwarz. In this study, Schwarz (1994) demonstrated how an enterprise can use the securitization method. According to Schwarz (1994), with securitization, businesses can reduce their financing costs by accessing capital market funds at a lower cost. In the study, the analysis results for this were shared, and it was concluded that securitization will become increasingly important.

Öcal (1994) discussed the concept with regard to securities securitization and securitization legislative and accounting effects have been found in solutions for problematic locations in Turkey. In addition; Uğur and Erkuş (2007) examined the securitization process in America and Europe and developed suggestions that could contribute to the development of the Turkish securities market in their studies. They emphasized that the main deficiency was regulation and suggested the use of securitization as a financial technique.

Giddy's (2000) study examines the benefits of a long-term securitization agreement through a case study. As a result of the study, Giddy found that the cost of accessing capital of firms is cheaper with securitization, and in macroeconomic terms, securitization of the private sector is also beneficial for the country in macroeconomic terms. Although the relationship between the securitization process and financial failure is not directly examined, the relationship between various financial ratios etc. that may be components of financial failure models, has been examined. One of these studies was conducted by Erdönmez (2006) and focused on the benefits of securitization to different parties. In this study, the benefits provided to the institution issuing loans are listed as follows: The sale of assets and gaining income from these sales is stated as the use of the remaining capital to provide a higher rate of loans. Besides, the benefits for investors are increasing diversification, creating liquidity, generating high earnings from rated securities and generating potential trade returns. Benefits to customers and borrowers; low fund costs and regular funding opportunities. The benefits for investment banks are the provision of new production channels, potential market expansion for innovation, increased trade volume and earnings, and regular cash flows of institutions that provide fees and loans.

Turan (2012) also focused on the benefits of securitization and saw it as a method of generating funds for some companies from a method applied to improve the values in the financial statement. In this context, it is seen as an effective means of providing resources for companies that lack the power to issue bonds and similar debt instruments but have high payment reliability. On the other hand, Loutskina (2011) advocated the opposite view in a study he conducted specifically for banks. When banks convert illiquid funds to liquid, their lending ability will increase, but they may suffer a loss in any crisis.

Based on the country base researches, Uğur and Erkuş (2007) conducted a descriptive study examining the securitization processes in the USA and Europe, respectively. According to the securitization mania securities in the United States and Europe that Turkey remains low and securitization adjustments in order to use more Turkish trade law have summarized the necessity of more effectiveness.

Based on industry related studies; Günceler and Kesebir (2018) empirically examine the effects of asset-backed securitization on telco firms. In this study, which analyzed the effect of a sample securitization transaction on the ratios of companies with 2016 balance sheet data, it was concluded that a securitization transaction in cash flows strengthened the balance sheet structures of companies.

As can be seen in the literature section, the number of studies on the use of securitization by firms is very few. With this study, it is aimed to enrich the empirical studies on the benefits of securitization by companies and to deal with the benefits of securitization empirically with a different financial method.

4. Methodology

4.1. The Springate S Score

Over the past years, researchers have developed models for assessing the likelihood of financial failure. These studies generally try to create a model by using the publicly available information from the financial statements to estimate the probability of these businesses going bankrupt at some point by comparing the matching examples of non-bankrupt and insolvent firms.

When we look at the previous studies, it is seen that statistical methods are the leading methods used for financial failure prediction. Some of the models used in these studies are univariate, while some are multivariate. Therefore, it is possible to divide the models used for the prediction of financial failure into two groups as univariate and multivariate. For the purpose of this study, financial failure prediction will be made by using Springate S Model, which is a derivative of Altman Z-Score used in the prediction of financial failure in the literature.

Springate S Score was developed by Gordon LV Springate in 1978. This bankruptcy model is a similar, multi-stage and multivariate model developed on Altman's model. Springate (1978) used multivariate differentiation analysis method in this study. It determines successful and unsuccessful businesses over 4 basic rates and calculates an S Score with certain coefficients. Transactions with an S value less than 0.862 are considered unsuccessful. In the Springate model, the S score value is calculated as follows (Pakdaman, 2018):

$$S = 1.03X_1 + 3.07X_2 + 0.66X_3 + 0.4X_4 \qquad (1)$$

Table 1. Financial Ratios Used for

Variables	**Variable Explanation**
X1	Net Working Capital / Total Assets
X2	Profit Before Tax and Operating Expenses (EBIT) / Total Assets
X3	Profit Before Tax and Operating Expenses (EBIT) / Short Term Liabilities
X4	Sales / Total Assets

Source: (Pakdaman, 2018)

4.2. Asset Backed Securitization

The sample scenario prepared by Günceler and Kesebir (2018) is used as the case study of asset backed securitization of this study. According to this scenario, it is assumed that the firm obtains financing through securitization at the same rate as a cheaper cost alternative instead of borrowing from financing banks (thought to be 70%). For this, the question of how the firm's financial failure estimates would change if its future receivables were converted into cash through securitization is discussed.

The interest rates in Table 5.2 are taken into account as the securitization medium. In this interest environment, it is assumed that the firm offers 1.5% higher interest than the securitization rate deposit rates.

Table 2. Market Interest Rates and Interest Assumption of Securitization

	Commercial Loan (%)	**Deposit (%)**	**Securitization Interest Rate**
2019	12,02	10,11	11,61
2018	27,04	23,85	25,35
2017	17,06	14,85	16,35
2016	13,57	11,41	12,91

2015	14,67	11,61	13,11

Source: Author's Calculation

5. Data Set

Data set used in the study and public companies operating in the telecom sector in Turkey of 2015 - the last year they announced was made by the public between 2019 financials. As per the relevant law of the capital market, the company names are not included, since no permission is obtained from the companies. The financial ratios used in the calculation of the variables in the study are working capital, EBIT, sales total assets and short-term debts.

Primary data were obtained from the electronic data distribution system of the Central Bank of Turkey. Commercial loans represent interest rates, excluding KMH on TL and commercial credit card interest rates, and deposit interest rates on TL deposit rates up to 1 year.

6. Findings

In this part of the study, the changes in the financial failure model results with the securitization of 70% of the trade receivables of the firms in the default interest environment will be discussed. In order to interpret the findings of the study, firstly, the rates and S-score information calculated by years before the securitization of the companies are shown in Table 7.1.

Table 3a. Financial Failure Prediction For Firm A Before Securitization

	2019	**2018**	**2017**	**2016**	**2015**
X 1	-0.041	-0.071	0.065	0.031	-0.004
X 2	0.175	0.180	0.149	0.109	0.140
X 3	1.168	1.563	1.770	1.492	1.388
X 4	0.593	0.564	0.622	0.599	0.563
S-Score	1.505	1.736	1.943	1.592	1.568

Source: Author's Calculation

Table 3b. Financial Failure Prediction For Firm B Before Securitization

	2019	**2018**	**2017**	**2016**	**2015**
X 1	0.146	0.154	0.143	0.190	0.095
X 2	0.152	0.174	0.124	0.112	0.139
X 3	2.801	2.798	1.592	2.234	5.000

X 4	0.550	0.498	0.501	0.446	0.488
S-Score	2,687	2,740	1,778	2,192	4,019

Source: Author's Calculation

When we look at the S scores for company A, the score increased between 2015 and 2017, but a dramatic decrease was observed in 2018 and 2019. This shows that the probability of financial failure of the firm decreased between 2015 and 2017, but this probability increased in the last 2 years. Considering firm B, while the probability of financial failure in 2015 was very low, this possibility increased dramatically due to the decrease in EBIT / Short-Term Debt ratio in 2016. In 2017, it reached the lowest S-Score level, in other words, the probability of financial failure has reached the highest level. With the increase in EBIT / Short Term Debt ratio in the following years, this possibility was also decreased.

Post-securitization results are shown in Tables 4a and Table 4b.

Table 4a. Financial Failure Prediction For Firm A After Securitization

	2019	**2018**	**2017**	**2016**	**2015**
X 1	-0.045	-0.079	0.074	0.035	0.005
X 2	0.196	0.204	0.170	0.123	0.158
X 3	1.171	1.595	1.777	1.503	1.402
X 4	0.659	0.627	0.704	0.672	0.628
S-Score	1.591	1.848	2.052	1.675	1.657

Source: Author's Calculation

Table 4b. Financial Failure Prediction For Firm B After Securitization

	2019	**2018**	**2017**	**2016**	**2015**
X1	0,153	0,161	0,152	0,205	0,107
X2	0,160	0,184	0,132	0,121	0,157
X3	2,806	2,828	1,596	2,242	5,024
X4	0,578	0,519	0,533	0,482	0,549
S-Score	2,733	2,803	1,828	2,255	4,127

Source: Author's Calculation

The results Table 4a and Table 4b include the S-cores calculated after securitization of 70% of the firms' trade receivables, after their current assets and short-term debts are recorded. When the S-Score ratios reached between before and after securitization are examined, a positive difference is seen. This difference can be interpreted as if firms make securitization of trade receivables of 70% in the current market condition, there will be a positive decrease in the possibility of financial failure.

CONCLUSION

In this study, the use of financial instruments in Turkey is intended as a contribution to what extent it provides the possibility of financial failure of the asset-backed securitization firms unpopular. According to the findings, firms reduce the risks of financial failure with asset-based securitization and show that this securitization has a positive effect in distributing the risks of firms. Interest rates and exchange rates in emerging countries such as Turkey varies. In this context, traditional financial firms that are popular abroad, but the use of outside technical and non-technical yet very widely used in Turkey may be more advantageous to maintain the profitability of the company. Especially when it is considered in the securitization specification, it creates a positive effect on the financing expenses of companies by being a technique that provides access to capital at a lower cost. It is thought that the issuance of working securities in a low-interest environment will attract more investors due to the interest rate cut.

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