Does Working Capital Management Affects Firm Value? Evidence From An Emerging Economy

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ABSTRACT

This study explores the relationship between net working capital decisions and the value of firms traded in Borsa Istanbul. A panel data set of 317 non-financial Turkish firms for the 2010-2018 sample period is analyzed using a dynamic modeling approach. System GMM estimator is employed. A positive relationship is found between the efficiency of working capital management and the firm value of sample firms. Firms with shorter cash conversion cycles are found to be more valuable. However, this relationship weakens for firms with a high level of liquidity in terms of cash holdings. The evidence from this study suggests that even though inefficient management of non-cash operating assets has a negative effect on firm value; cash holdings moderate this relationship.

Keywords: Firm Value; Working Capital Management; Emerging Economies.

1 Introduction

It is a generally accepted fact that the value of a firm depends on the effective management of its assets. In that respect, both investments in long-term assets and working capital decisions can be crucial. Working capital is the current assets of a firm and has three main components: cash and marketable securities, account receivables, and inventories. Firms finance their working capital by short-term liabilities such as short-term bank loans and trade credits as much as possible. Still, the difference between the current assets and the short-term liabilities should be positive for a healthy firm. The excess amount is called net working capital (NWC), which is to be funded by long-term financing (Hill et al., 2010).

The relationship between working capital management and firm value can be explained within the discounted cash flow valuation framework. Similar to any other asset, the present value of a firm is the sum of the present values of its future free cash flow streams (Brigham and Ehrhardt, 2013):

$$V_0 = \sum_{t=1}^{\infty} \frac{FCF_t}{(1 + WACC_t)^t} \qquad (1)$$

Here, V_0 is the present value of the firm, FCF_t is the free cash flow at time t, and $WACC_t$ is the weighted average cost of capital at time t. Working capital decisions affect the firm value via FCF in Equation (1). A textbook formulation of FCF_t is provided by Ross *et al.* (2016) as follows:

$$FCF_t = [\, EBIT_t \times (1 - t_c)] + Depreciation_t - \Delta\, NWC_{\ t} - Capital\ Expenditures_t \qquad (2)$$

Here, EBIT is earnings before interest and taxes, estimated by subtracting the cost of goods sold and operating expenses from sales revenues. t_C is the corporate tax rate and NWC is the change in the net working capital. A straightforward implication of Equation (2) is the decreasing effect of NWC on FCF. However, as Kieschnick, Laplante, and Moussawi (2013) state, it is reasonable to expect that current NWC investments increase future EBITs. NWC also affects the capital structure, which in turn affects WACC (Damodaran, 2007). The trade-off theory, which suggests an optimal capital structure to maximize firm value, also implies an optimal NWC (García-Teruel & Martínez-Solano, 2007). A positive NWC indicates that the firm has sufficient funds to meet its short-term financial obligations. However, it also points out that the firm does not invest its excess funds in long-term assets that generate higher profits. Overinvestment in working capital has a downward pressure on firm value and profitability (Kieschnick et al., 2013). Therefore, firms have optimal NWCs at the trade-off between profitability and financial distress due to underinvestment in working capital (Sharma and Kumar, 2011).

The research on the relationship between working capital management and firm value can be traced back to Lewellen, McConnell, and Scott (1980). They argue that firm value is irrelevant to trade credits in perfect market conditions. In other words, trade credits affect firm value because of market imperfections. Empirical studies support their view. (i.e., Deloof and Jegers, 1996). Effective management of working capital, like investment and financing decisions, is crucial for increasing a firm's value.

Previous studies document an association between working capital management and firm value. (e.g. Afrifa, 2016; Altaf, 2018; Autukaite and Molay, 2014; Baños-Caballero, García-Teruel, & Martínez-Solano, 2019; Dhole, Mishra, & Pal, 2019; Kieschnick et al., 2013; Wichitsathian and Pestonji, 2019). In an influential study, Kieschnick *et al.* (2013) investigate the relationship between NWC management and firm value for US firms. They prove that investing in cash or long-term assets is more valuable than investing in NWC. This finding emphasizes the vitality of effective NWC management. NWC investments increase the market values of French firms (Autukaite and Molay, 2014). Conversely, Wasiuzzaman (2015) documents a negative relationship between NWC investment and the market values of Malaysian small/mid-size firms. He concludes that Malay investors opt for firms with restrictive working capital policies due to potential agency problems. Some researchers show that there is an optimal NWC for each firm (Aktas, Croci, & Petmezas, 2015; Cooper, Gulen, & Schill, 2008; Deloof, 2003; Ek and Guerin, 2011).

The cash conversion cycle (CCC) is also used as an alternative measure of the working capital management efficiency in the literature (i.e. García-Teruel and Martínez-Solano, 2007). Ogundipe, Idowu, and Ogundipe (2012) detect a negative relationship between CCC and firm value in Nigeria. Arachchi, Perera, and Vijayakumaran (2017) report similar findings for Colombian firms. They reveal that firms can increase their values by decreasing their days receivables outstanding and days inventory outstanding. Vijayakumaran (2019) has reported that effective working capital management increases the market values of Chinese firms.

Furthermore, days sales outstanding and days inventory outstanding decrease their market value. Kieschnick *et al.* (2013) show that investing in account receivables has a more significant effect on value than investing in inventory in the USA. Various other studies confirm the decreasing effects of CCC on the market values of Malaysian, Thai, and Japanese firms. (Nurein and Din, 2017; Wang, 2002; Wichitsathian and Pestonji, 2019).

In a recent study, Dhole *et al.* (2019) investigate the moderating role of working capital management on financial constraints and firm value relationships. They employ the cash ratio and the cash conversion cycle as proxies of working capital management and report a significant and negative effect of the cash ratio on market value. Contrary to the previous research, their results imply that longer cash conversion cycles lead to higher firm values. Baños-Caballero *et al.* (2019) investigate the relationship between the net trade cycle (Shin and Soenen 1998) and firm value using a multinational sample from 30 countries. They conclude that there is a positive relationship between the net trade cycle and firm value around the globe. However, the magnitude of this relationship depends on country-specific factors. The effect is robust in developed countries with a high level of shareholder protection. Their findings reveal the necessity of country-specific research studies on the relationship between net working capital and firm value.

Some researchers employ firm profitability as a proxy of its value and find a positive relationship between working capital efficiency and profitability. (Baños-Caballero et al., 2019; Chen and Chen, 2011; Deloof, 2003; Lazaridis and Tryfonidis, 2006; Enqvist, Graham, and Nikkinen, 2014; García-Teruel and Martínez-Solano, 2007;).

This study contributes to the previous literature by exploring the effect of working capital management on firm value for publicly listed firms in Borsa Istanbul. Its originality comes from using the firm's market value as the dependent variable and exploring the effects of various proxies of working capital management policies on firm value in detail. Our main findings reveal a positive relationship between the efficiency of non-cash operating asset management and firm value. Firms with shorter cash conversion cycles have higher market values. Besides, firms with strict credit terms and more extended payment periods are found to be more valuable. However, these relationships weaken for firms with a high level of liquidity in terms of cash holdings. Thus, even though inefficient management of non-cash operating assets has a negative effect on firm value; strong liquidity indicators moderate this relationship.

The remainder of this article is organized as follows. Section 2 explains the dataset and methodology of the study. Section 3 details the empirical results. Lastly, Section 4 concludes.

2 Research Methodology

The sample data set comprises annual observations of 317 publicly-listed non-financial Turkish firms whose data are available in the Compustat Global Capital IQ database. Firms with negative shareholder's equity are excluded. The sample period covers nine years from 2010 to 2018. The sample data set is winsorized at the 1% and 99% levels to eliminate outliers.

Following Baños-Caballero et al. (2019), the dependent variable is the market value (MV) in this study. The market value for a given year is measured as the sum of the market value of equity, the book value of short-term debt, and long-term debt. Here, the market value of equity is estimated by multiplying the year-end closing stock price with outstanding shares. Since the estimated market values have a skewed distribution, their natural logarithms are employed.

This study investigates working capital management decisions of sample firms using net working capital (NWC), cash ratio (CUR), current ratio (CAR), and cash conversion cycle (CCC) as focus variables. NWC is estimated as the natural logarithm of the sum of accounts receivable and inventory minus accounts payable. A negative net working capital is uncommon for a healthy firm (Ross et al., 2016). Net working capital investments are vital for firms to continue their operating activities efficiently and reduce the risks of not meeting their short-term debt services. However, too much investment in net working capital may indicate underinvestment in long-term assets. Recent studies show that net working capital investment increases firm value (i.e., Autukaite and Molay (2014); Banos-Caballero et al., 2019).

CUR is estimated as the ratio of current assets to short-term liabilities. It reflects the capacity of the firm to meet its short-term obligations. A current ratio value lower than one indicates that the firm's cash-generating capacity within a year will not be sufficient to fulfill its short-term liabilities. On the other hand, a current ratio much higher than one indicates that the firm over-invested in the current assets. Similarly, CAR is the ratio of cash and marketable securities to short-term liabilities. It defines cash and marketable securities as a percentage of current liabilities. This ratio shows how much of the firm's short-term debt can be paid with the cash in hand if it cannot convert its less liquid current assets into cash within a year. Firms invest in cash and marketable securities to meet their unanticipated cash requirements. Cash holdings create value for shareholders by decreasing the probability of financial distress and providing internal funding for positive NPV projects. However, they have an opportunity cost in terms of underinvesting in profitable long-term assets. There is a growing literature on the determinants of corporate cash holdings, which show that FCF, dividend payment, growth opportunity, capital structure, and capital expenditure affect cash holdings. (D'Mello, Krishnaswami, & Larkin, 2008; Maheshwari and Rao, 2017). Also, there is a negative relationship between cash holdings and other current assets (Bates, Kahle, & Stulz, 2009). The free cash flow hypothesis states that cash holdings increase agency problems between managers and stockholders (Harford, 1999).

Consequently, investors undervalue firms with a high amount of cash holdings. On the other hand, according to the trade-off theory, increasing cash holdings decreases the probability of financial distress and enables firms to borrow at lower debt costs (Opler, Pinkowitz, Stulz, & Williamson, 1999). Martínez-Sola, García-Teruel, and Martínez-Solano (2013) report a concave relationship between cash holdings and firm value that implies an optimal level of cash holdings. Drobetz and Gruninger (2007) also show that firms have optimal levels of cash holdings to which they adjust periodically. The market value of the firm increases when it reaches the optimal level. Thus, the efficient management of cash holdings can increase the market value (Dittmar and Mahrt-Smith, 2007; Du, Wu, & Liang, 2016). Pinkowitz, Stulz, and Williamson (2006) find that investors in countries with weak governance value cash holdings less than investors in countries with strong governance. Besides, firms operating in countries with low protection of shareholder rights opt to hold more cash and marketable securities (Dittmar, Mahrt-Smith, & Servaes, 2003). Luo and Hachiya (2005) show that investors prefer profitable firms that maintain higher levels of cash holdings.

Also, days sales outstanding (DSO), days inventory outstanding (DIO), days payables outstanding (DPO), and cash conversion cycle (CCC) are employed as focus variables in this study. DSO, DPO, and DSI are also employed as proxies of cash conversion policies of firms. DSO can be defined as the number of days it takes for the accounts receivable to be collected on average. The receivable collection policy depends on the firm's relationships with its customers. A strict credit policy may decrease sales and may cause a loss of market share. However, a too loose credit policy may trigger financing problems for the firm. DPO is the number of days it takes to pay the accounts payable on average. Firms prefer to pay their accounts payable as late as possible. However, the credit terms of their suppliers are usually the main determinants of the firms' accounts payable payment period. DIO is the number of days it takes to sell the average inventory. A smaller DIO is better as it is unnecessary to over-invest in inventory instead of channeling funds to profit-generating activities. The sum of DSO and DIO constitute the operating cycle. Lastly, CCC is estimated by subtracting the days payable outstanding from the operating cycle. CCC gives information about the efficiency of working capital management. It accelerates with the rapid collection of credit sales and is negatively affected by the delays in collecting receivables. Therefore, firms are recommended to shorten their credit collection periods and waiting times in inventory and shorten their cash conversion cycle by extending their commercial debt payment periods. As it is unnecessary to over-invest in inventory instead of channeling funds to profit-generating activities, a smaller CCC is better.

Table 1**:** Variable Definitions

Variables	Definition	Symbol	Formula	Source

Dependent Variable	Market Value	*MV*	$Log(\ (Number\ of\ Shares\ Outstandin_{t} \times Stock\ Price) + Short\ Term\ Debt + Long\ Term\ Debt)$	
Focus Variables	Current Ratio	*CUR*	$\frac{Current\ Assets}{Current\ Liabilities}$	
	Cash Ratio	*CAR*	$\frac{Cash\ and\ Marketable\ Securities}{Current\ Liabilities}$	
	Net Working Capital	*NWC*	Nathural Logarithm of (Accounts Recei + Inventories − Accounts Payable)	All Financial data were collected from Compustat Capital Global IQ database
	Cash Conversion Cycle	*CCC*	$Days\ Sales\ Outstanding + Days\ Inventory\ Outstanding - Days\ Payable\ Outstanding$	
	Firm Profitability	*PRO*	$Net\ Income/Total\ Equity$	
Control Variables	Market Leverage	*LEV*	$Financial\ Debt/Total\ Capital$	
	Firm Size	*SIZ*	$\text{Log}(Total\ Assets)$	

In addition to the focus variables, profitability (PRO), leverage ratio (LEV), and firm size (SIZ) are included in the analyses as control variables. PRO is estimated as the ratio of net income to the total book value of equity. The market value will be higher for firms with higher profitability. LEV is estimated as financial debt over total invested capital. Financial debt is the sum of short and long-term interest-bearing debt. Total invested capital is the sum of the financial debt and the market value of equity. The market value of equity is estimated by multiplying the number of shares outstanding by the year-end stock price. LEV is a measure of risk within this study. Lastly, SIZ is the natural logarithm of total assets. This variable is often used as the reverse proxy for the possibility of bankruptcy in the literature. Therefore, a positive relationship between firm size and performance is expected in this study. Variable definitions and data sources are given in Table 1. Descriptive statistics and correlation tables of the dependent and independent variables are presented in Tables 2 and 3.

Table 2: Descriptive Statistics

	Mean	Median	St. Dev.	C.V.	Skew.	Kurt.	Obs.
MV	7.697	4.117	1.802	0.234	0.344	2.591	1872
NWC	4.152	-4.269	1.856	0.447	-0.360	3.418	1872
CAR	0.649	0.001	1.682	2.593	4.746	27.114	1872
CUR	2.340	0.263	2.547	1.089	3.571	18.166	1872
CCC	207.450	-161.305	482.249	2.325	6.842	54.213	1872
DIO	116.211	0.000	167.881	1.445	4.730	30.212	1872
DSO	210.566	3.812	669.965	3.182	7.978	68.636	1872
DPO	107.865	3.166	212.900	1.974	7.534	64.458	1872
PRO	0.037	-1.886	0.277	7.414	-3.516	22.776	1872
SIZ	5.852	2.271	1.777	0.304	0.232	2.595	1872
LEV	0.039	0.000	0.068	1.748	3.672	21.074	1872

Source: Authors

As can be seen in Table 3, the correlation coefficients between NWC, NOWC, and SIZ are higher than 80%. Therefore, the results of the models that include them need to be interpreted with caution.

Table 3: Correlation Matrix

	MV	NWC	CAR	CUR	CCC	DIO	DSO	DPO	PRO	SIZ	LEV
MV	1.00										
NWC	0.75*	1.00									

CAR	0.07*	-0.18*	1.00								
CUR	-0.03	-0.19*	0.82*	1.00							
CCC	-0.17*	-0.08*	-0.03	0.10*	1.00						
DIO	-0.15*	-0.07*	-0.01	0.03	0.56*	1.00					
DSO	-0.14*	-0.09*	-0.04	0.06*	0.96*	0.41*	1.00				
DPO	-0.11*	-0.10*	-0.06*	-0.05*	0.65*	0.50*	0.74*	1.00			
PRO	0.29*	0.21*	0.11*	0.16*	-0.07*	-0.08*	-0.07*	-0.10*	1.00		
SIZ	0.88*	0.84*	-0.01	-0.16*	-0.11*	-0.10*	-0.07*	-0.04	0.16*	1.00	
LEV	-0.09*	0.07*	-0.15*	-0.25*	-0.01	-0.01	0.01	0.07*	-0.33*	0.16*	1.00

Source: Authors

* $p < 0.05$

3 Methodology

This study employs a two-step system GMM estimator (Arellano, & Bond, 1991) since the sample panel data set is an unbalanced micro panel with a small T large N property with an assumed dependence of the regressand on its first lag. Even though the time dimension of the data set only consists of nine years, stationarity may still be a problem. Pesaran's (2015) test is employed to check the cross-sectional dependence of the variables. The null hypothesis of weak cross-sectional dependence is rejected with a CD test statistic (p-value) of 27.064 (0.000). Thence, a first-generation panel unit root test is employed to test the stationarity of the variables. Due to the unbalanced nature of the data set, Maddala and Wu's (1999) stationarity test is used. Test results have revealed that all variables are stationary. The following panel data model is estimated in this study.

$$\mathrm{MV_{it}} = \beta_0 + \delta_0\,\mathrm{MV_{it-1}} + \sum_{k=1}^{K}\beta_k \mathrm{F_{k,it}} + \sum_{m=1}^{M}\gamma_m \mathrm{C_{m,it}} + \sum_{t=1}^{T}\mathrm{Y_t} + \varepsilon_{it} \qquad (3)$$

Here MV_{it}, is the natural logarithm of market value of the ith firm of the sample in the tth year. MV_{it-1} is the natural logarithm of market value of the ith firm of the sample in the $t-1$th year. $F_{k,it}$ is the kth focus variable of ith firm of the sample in the tth year. NWC, CAR, CUR, DSO, DIO, DPO and CCC are the focus variables used in the model. Various combinations of the focus variables are used to create different versions of the model given in Equation (3). $C_{m,it}$ is the mth control variable of ith firm of the sample in the tth year. Control variables used in the analysis are PRO, TAN, and SIZ. Lastly, Y_i 's are the time dummies [1] and β_0, δ_0, β_k, and γ_m are model parameters.

[1] Industry dummies are also used in the model formation process. However, they are not employed in the final models due to their insignificance. These may cause from the existence of insufficient number of firms for each industry.

4 Results and Discussion

The results of Equation (3) are presented in this section[2]. Table 4 gives the estimation results for single focus variables. In line with our expectations, CAR has a significant and positive coefficient estimate in Table III. All other things equal, the market values of firms increase with investing in cash holdings. This finding is in accordance with the previous research on the relationship between cash holdings and firm value (Dittmar and Mahrt-Smith, 2007; Du *et al.*, 2016). The coefficient estimates of CUR is also positive but insignificant. In addition, the coefficient estimate of NWC is insignificant. Consistent with the previous literature, CCC is found to have a negative effect on firm value (Arachchi *et al.*, 2017; Nurein and Din, 2017; Ogundipe *et al.*, 2012; Wang, 2002; Wichitsathian and Pestonji, 2019). Firms can increase their market values with efficient management of their operating cycle. Lastly, DSO has a negative and significant coefficient while the other two components of CCC are insignificant. Taken together, these results suggest that firms with strict credit terms and more cash holdings have higher market values. Among the control variables, both SIZ and PRO have highly significant and positive coefficients in all models. As predicted, large and profitable firms have higher market values. Also, LEV has a significant and negative effect on firm value.

Estimation results of models with combinations of focus variables are presented in Table 5. CUR has significant and positive coefficients in all models. The coefficient of CCC loses its significance when it is modeled with CAR. This rather remarkable finding shows that cash holdings have a moderating effect on the relationship between the efficiency of non-cash operating assets management and firm value. Even though inefficient management of non-cash operating assets has a negative effect on firm value; the effect will be eliminated by a sufficient level of liquidity, especially in the form of cash holdings. The significance of CCC increases when CUR is controlled in Model 5b. This finding may partly be explained by the CUR's being a compact measure of liquidity that reflects both the non-cash operating assets and the liquidity policies of firms. Thus, the moderating effect of cash holdings on the operating cycle and firm value relationship may be suppressed by the impact of operating assets on CUR.

[2] Models in Table 3 are re-estimated without including SIZ to check whether the results are affected by the correlations between NOWC, NWC, and SIZ. The findings are robust to this change. These results can be obtained from the authors upon request.

Table 4: System GMM Results with Focus Variables.

	Model 1a	Model 2a	Model 3a	Model 4a	Model 5a
Lag MV	0.7473*** [0.0602]	0.7587*** [0.0601]	0.7378*** [0.0645]	0.7787*** [0.0603]	0.7603*** [0.0607]
CAR	0.0183** [0.0088]	-	-	-	-
CUR	-	0.0089 [0.0064]	-	-	-
NWC	-	-	-0.0044 [0.0143]	-	-
CCC	-	-	-	-0.0001** [0.0000]	-
DSO	-	-	-	-	-0.0001** [0.0000]
DIO	-	-	-	-	-0.0001 [0.0001]
DPO	-	-	-	-	0.0001 [0.0001]
LEV	-1.6397*** [0.4192]	-1.5635*** [0.4368]	-1.6169*** [0.4619]	-1.5039*** [0.4634]	-1.6322*** [0.4525]
SIZ	0.2496*** [0.0546]	0.2392*** [0.0551]	0.2551*** [0.0582]	0.2136*** [0.0541]	0.2316*** [0.0546]
PRO	0.2422*** [0.0427]	0.2428*** [0.0439]	0.3028*** [0.0577]	0.2610*** [0.0427]	0.2463*** [0.0429]
Constant	0.5743*** [0.1534]	0.5360*** [0.1461]	0.5282*** [0.1862]	0.5785*** [0.1605]	0.7470*** [0.1616]
Year Dummy	Yes	Yes	Yes	Yes	Yes
AR (1) Test p-value	0.000	0.000	0.000	0.000	0.000
AR (2) Test p-value	0.183	0.316	0.269	0.307	0.244
Hansen Test p-value	0.346	0.077	0.063	0.106	0.119
Wald Test p-value	0.000	0.000	0.000	0.000	0.000
Number of Instruments	47	47	47	47	49
Number of Groups	302	303	295	294	302
Number of Observations	1783	1826	1712	1746	1801

Standard errors in brackets
Source: Authors
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Similarly, DSO has a negative effect when its modelled with CUR. However, the significance of this effect decreases when CUR is replaced by CAR. The coefficient of DPO is also found to have a weak significance. Thus, it can be said that firms can increase their values by adapting strict credit policies and increasing their payment periods. Contrary to expectations, this study did not find a significant effect of NWC on firm value. Lastly, the signs and significances of control variables are the same as the results of the models presented in Table 4.

Table 5: System GMM Results with Combinations of Focus Variables.

	Model 1b	Model 2b	Model 3b	Model 4b	Model 5b	Model 6b
Lag MV	0.7296*** [0.0661]	0.7743*** [0.0614]	0.7473*** [0.0632]	0.7309*** [0.0677]	0.7796*** [0.0625]	0.7666*** [0.0613]
CAR	0.0220* [0.0114]	0.0209* [0.0111]	0.0165* [0.0090]	-	-	-
CUR	-	-	-	0.0106 [0.0077]	0.0136 [0.0085]	0.0102 [0.0067]
NWC	0.0133 [0.0155]	-	-	-0.0014 [0.0141]	-	-
CCC	-	-0.0001 [0.0000]	-	-	-0.0001*** [0.0000]	-
DSO	-	-	-0.0000* [0.0000]	-	-	-0.0001*** [0.0000]
DIO	-	-	-0.0001 [0.0001]	-	-	-0.0001 [0.0001]
DPO	-	-	0.0001* [0.0001]	-	-	0.0001* [0.0001]
LEV	-1.6229*** [0.4445]	-1.5170*** [0.4377]	-1.6726*** [0.4280]	-1.5850*** [0.4523]	-1.4255*** [0.4517]	-1.5597*** [0.4469]
SIZ	0.2492*** [0.0579]	0.2211*** [0.0553]	0.2460*** [0.0570]	0.2616*** [0.0608]	0.2155*** [0.0570]	0.2284*** [0.0559]
ROE	0.2788*** [0.0558]	0.2476*** [0.0418]	0.2355*** [0.0422]	0.2914*** [0.0562]	0.2467*** [0.0422]	0.2329*** [0.0428]
Constant	0.4558** [0.1885]	0.5505*** [0.1602]	0.5112*** [0.1810]	0.5094*** [0.1819]	0.5316*** [0.1533]	0.6922*** [0.1535]
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes
AR (1) Test p-value	0.000	0.000	0.000	0.000	0.000	0.000
AR (2) Test p-value	0.244	0.123	0.148	0.215	0.219	0.210
Hansen Test p-value	0.054	0.253	0.101	0.065	0.338	0.207
Wald Test p-value	0.000	0.000	0.000	0.000	0.000	0.000
Number of Instruments	47	47	45	47	53	48
Number of Groups	302	301	289	294	286	294
Number of Observations	1801	1759	1631	1688	1607	1671

Standard errors in brackets

Source: Authors
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

5 Conclusions

The role of working capital management as a determinant of firm value has received increased attention in the previous literature. This study contributes to the literature by exploring the effect of working capital management on the market value of publicly listed firms in an emerging economy. A sample of 317 publicly listed non-financial Turkish firms for the 2010-2018 sample period is analyzed. The twofold importance of this study comes from using the firm's market value as the dependent variable and providing a comprehensive examination of the working capital management policies with numerous focus variables. Net working capital, cash ratio and current ratio days sales outstanding, days inventory outstanding, days payables outstanding, and cash conversion cycle are employed as proxies of the working capital decisions of firms. The findings reveal a positive relationship between the efficiency of non-cash operating asset management and firm value. Ceteris paribus, firms with shorter cash conversion cycles, strict credit terms, and more extended payment periods have higher market values. Investors opt for firms that finance their current assets with long-term debt or equity. However, the cash holdings have a moderating role in these relationships. In other words, investors do not consider long cash conversion cycles as negative signals for firms with high levels of cash holdings. These findings show the importance of effective working capital management for increasing the firm value in Turkey.

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24. FİNANS SEMPOZYUMU

20 - 23 EKİM 2021
SAKARYA

Sempozyum Bildiri Kitabı

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Finans Bilim Platformu

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24. Finans Sempozyumu Bildiri Kitabı

24th Finance Symposium Proceeding Book

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Destekçilerimiz

24. Finans Sempozyumu'na yapmış oldukları katkılarından ötürü; Borsa İstanbul A.Ş., Türkiye İş Bankası A.Ş., GCM Yatırım Menkul Değerler A.Ş. ve İnfo Yatırım A.Ş.'ye teşekkürlerimizi sunarız.

Değerli bilim insanları;

Dünyada eşi görülmemiş bir şaşkınlık, hayatın her yönünde ani bir duruş ve dönüşüm yaşatan Covid-19 salgınının gölgesinin hala üzerimizde olduğu şu günlerde; en çok özlediğimiz ve sabırsızlıkla beklediğimiz, sağlık riski olmadan bir araya gelmek ve kaynaşmak oluyor.

1995 yılından günümüze finans alanında çalışan en kıdemli akademisyenlerden, henüz ilk bildirilerini yazan genç finansçılara kadar geniş bir topluluğu bir araya getiren Finans Sempozyumu'nu 2020 yılında pandemi nedeniyle gerçekleştiremedik. Türkiye'nin en köklü ve nitelikli akademik organizasyonlarından biri olan sempozyumumuzu, yıllardır bu organizasyonun kültürü haline gelen bir arada olma ve ağ oluşturma imkanlarının olmaması nedeniyle çevrimiçi yapmayı tercih etmedik.

Post-Pandemi dünyasının belirsizliği yeni ve güçlü bir değişken olarak hayatın doğal akışına eklemleniyor. Ayrıca Post Küreselleşme dönemine girdiğimiz dünyada; insanoğlu bir yandan yapay zekaya dayalı büyük veri ve bilgi oluştururken, diğer yandan tezat biçimde, sorunları daha karmaşık hale geliyor, öngörülemezlik artıyor ve sürdürülebilirlik ajandanın en üstünde yerini alıyor.

Bu "yeni normal paradigmada" finansal akımlara ve enstrümanlara dayalı küreselleşme ve büyüme sorgulanırken, hızla artan parasal genişlemenin ve özellikle kobileri savunmasız bırakan salgının yıkıcı etkilerinin yıllarca devam etmesi bekleniyor. Bununla birlikte hala özellikle gelişmiş ülkelerin en zeki ve yetenekli gençleri finans sektörüne girmeye devam ediyor.

1200'lü yıllarda poliçenin kullanılması ile başlayan, 1950'li yıllarda bugünkü anlamında bilim haline dönüşen ve 2000'li yıllarda kripto paraya kadar evrilen bir hikayede artık saha, finans mühendislerinden, finans veri bilimcilerine geçmiş gözüküyor. İşte bu ortamda 24. Finans Sempozyumu'nu 20-23 Ekim 2021 tarihleri arasında Sakarya Radisson Blu Hotel'de gerçekleştirdik. Pandemi koşullarında olmamıza rağmen otuzyedi şehir ve elliyedi farklı üniversiteden yüzotuzüç akademisyenin katılım sağladığı ve ellialtı bildirinin sunulduğu sempozyumda geçmiş yıllardan farklı olarak bir de doktora kolokyumu yapıldı. Sempozyumun son akşamında en iyi bildiri ödülleri sahiplerine verildi. Bizler de en iyi bildiri ödülü alan akademisyenlerimizi kutluyoruz. Ayrıca aynı akşam 2019 yılında Marmara Üniversitesi'nden devraldığımız bayrağı Burdur Mehmet Akif Ersoy Üniversitesine devrettik.

Sakaryamıza özgü bir atasözü "Misafirin sevileni ekmeğin yapıldığı gün gelir" der. Ekmeğimizin yapıldığı 24. Finans Sempozyumu'nda finans alanında çalışma yapan akademisyenlerle birlikte olmaktan ve onlara ev sahipliği yapmaktan onur duyduk. Bu vesile ile katılım sağlayan, mazereti sebebi ile katılamayıp iyi dileklerini ileten tüm akademisyenlere teşekkür eder önümüzdeki yıllarda yapılacak sempozyumlarda tekrar bir arada olmayı gönülden dileriz.

Prof. Dr. Hakan Tunahan
Sempozyum Başkanı

Doç. Dr. Sinan Esen
Sempozyum Başkanı

Değerli Meslektaşlarım,

Finans alanındaki tüm öğretim üye ve elemanlarının oluşturduğu bir sivil toplum kuruluşu olan Finans Bilim Platformu, her yıl Ekim ayında genellikle de ikinci yarısında, bir üniversite ile ve bu üniversitenin ev sahipliğinde Finans Sempozyumu düzenlemektedir. Türkiye'de bu sempozyum finans alanındaki akademik camiada, akademik çalışmaların sunulduğu öncelikli bir etkinlik olarak kabul görmektedir.

Her yıl aralıksız olarak düzenlenmekte olan bu sempozyumu 2020 yılında maalesef pandemi yüzünden gerçekleştiremedik. Dolayısıyla bundan böyle söylemlerimizde 2020 yılı hariç her yıl diyeceğiz. 23. Finans Sempozyumu'nu 2019 Ekim ayında Marmara Üniversitesi'nin ev sahipliğinde Antalya'da gerçekleştirdikten sonra 24. FİNANS SEMPOZYUMU'nu 20-23 Ekim 2021 tarihleri arasında Sakarya Üniversitesi İşletme Fakültesi ve Sakarya Uygulamalı Bilimler Üniversitesi, Uygulamalı Bilimler Fakültesi'nin ev sahipliğinde gerçekleştirmek üzere SAKARYA'da Radisson Blu Hotel'de bir araya gelmiş bulunmaktayız.

Yoğun emek, maddi imkan ve belki de hepsinden önce büyük özveri gerektiren bu tür organizasyonlar sadece düzenlendiği yıl değil, sonra ki yıllarda da hafızlarımızda kalıcı hale gelmekte, bilimsel birikim ve anılarımız zenginleşmekte, bir sonraki sempozyum sabırsızlıkla beklenir olmaktadır.

Pandemi ortamında ve bunun beraberinde getirdiği zorlu şartlar altında Sakarya'da gerçekleştirilmekte olan bu sempozyumun haklı gururunu başta üniversite yönetimi, düzenleme kurulu olmak üzere, emeği geçen, katkı veren, katılımıyla destek veren herkes fazlasıyla yaşayacak ve yaşatacaktır.

1995 yılında İstanbul Bayramoğlu'ndaki ilk toplantıyla başlayan, bu yıl Sakarya'da gerçekleştirilmekte olduğumuz sempozyumun 25.'si 2022 yılında Burdur Mehmet Akif Ersoy Üniversitesi'nin ev sahipliğinde, 26.'sı da 2023 yılında Malatya Turgut Özal Üniversitesi'nin ev sahipliğinde gerçekleştirilecektir.

Finans Sempozyumu düzenlemenin yanında, Finans Bilim Platformu'nun bir diğer etkinliği de, öğretim üye ve elemanları ile aileler arasındaki tanışıklığı artırmak amacıyla genellikle her yıl, Mayıs -Haziran aylarında gerçekleştirdiği, Bahar Toplantısı olmaktadır. Bu toplantılarımızın sonuncusunu, 2019 yılı Bahar Toplantısını, 2019 yılı Nisan ayında Mardin'de gerçekleştirmiş bulunmaktayız. Maalesef pandemi dolayısıyla Afyon Sandıklı olarak planladığımız Bahar Toplantımızı 2020 ve 2021 yıllarında gerçekleştiremedik.

Gelecek yıl Burdur'da yapılacak 25. Finans Sempozyumu'nda yeniden birlikte olmak arzusuyla, Sakarya'daki bu sempozyumun başarılı olmasını, iş hayatına, bilim ve akademik çalışmalara katkı sağlamasını dilerim.

Saygı ve sevgilerimle,

Prof. Dr. Metin Kamil Ercan (Finans Bilim Platformu Başkanı)

24. FİNANS SEMPOZYUMU PROGRAMI
20-23 EKİM 2021
RADISSON BLU HOTEL SAKARYA

20 Ekim 2021 Çarşamba

Otele Giriş ve Sempozyum Kayıt (14:00-18:30)

Akşam Yemeği (18:30-20:30)

21 Ekim 2021 Perşembe

Sempozyum Kayıt (09:00-09:30)

Protokol ve Açılış Konuşmaları (09:30-10:30)

Kahve Arası (10:30-11:00)

Davetli Konuşmacılar (11:00-12:30) - (Online Etkinlik)
Nihal KANAY - Energy Pro Senior Partner – Shell Alumni: Finans Baş Sorumlusunun Perspektifinden Belirsiz Zamanlarda Çeviklik: Değişimi Yönetmek
Fatma MELEK - Akbank Baş Ekonomist: Ani Duruştan Hızlı Büyümeye Türkiye ve Dünya Ekonomisi

Öğle Yemeği (12:30-14:00)

I. Oturum (14:00-15:15)

Karya Salonu	*Hitit Salonu*	*Troya Salonu*
Oturum Başkanı: Prof. Dr. Metin Kamil ERCAN	**Oturum Başkanı: Prof. Dr. Mehmet Şükrü TEKBAŞ**	**Oturum Başkanı: Prof. Dr. Güler ARAS**
COVİD-19 PANDEMİ DÖNEMİNDE MEVDUAT BANKALARININ FİNANSAL PERFORMANSLARININ CRITIC VE EDAS YÖNTEMLERİYLE İNCELENMESİ *Nevzat ÇALIŞ, H. Hüseyin YILDIRIM, Şakir SAKARYA*	YATIRIMCI RİSK İŞTAHI ÜLKE RİSKİNİ TETİKLER Mİ: HATEMİ-J EŞBÜTÜNLEŞME VE ASİMETRİK NEDENSELLİK ANALİZLERİ İLE TÜRKİYE ÜZERİNE BİR UYGULAMA *Abdulkadir KAYA, Ünal GÜLHAN, Bener GÜNGÖR*	TASARRUF FİNANSMAN SÖZLEŞMELERİ İÇİN BİR FİYATLAMA ÖNERİSİ: STOKASTİK MODELLERLE OPSİYON DEĞERLEME YÖNTEMİ *İlker KOÇ, Elçin AYKAÇ ALP*
TÜRKİYE'DE COVID-19 DÖNEMİNDE KONUT FİYATLARININ ENFLASYON, FAİZ ORANI VE DÖVİZ KURU ÇERÇEVESİNDE İNCELENMESİ *Üstün HATİPOĞLU, Yunus Emre KAPUSUZ, Harun TANRIVERMİŞ*	PREDICTABILITY OF RISK APPETITE INDEX IN TURKEY: CAUSALITY-IN-QUANTILES APPROACH *Remzi GÖK, Eray GEMİCİ*	ABD BORSALARINDA GÜN İÇİ DOĞRUSAL OLMAYAN ASİMETRİK İLİŞKİNİN MOMENTUM EŞİK DEĞERLİ MODELLERLE ANALİZİ *Ayben KOY, Oğuz ŞİMŞEK, Mehmet Yusuf GÜNGÖR*
HERDING BEHAVIOR IN THE EUROPEAN BANKING SECTOR DURING THE COVID-19 OUTBREAK: THE ROLE OF SHORT-SELLING RESTRICTIONS *İbrahim YAĞLI, Özkan HAYKIR, Emin Hüseyin ÇETENAK*	TÜRKİYE'NİN CDS PRİMLERİ BİST 100, DÖVİZ KURLARI ve TAHVİL FAİZLERİNİN cDCC E-GARCH İLE MODELLEMESİ *Tuğrul KANDEMİR, N. Serap VURUR, Halilibrahim GÖKGÖZ*	HALKA ARZLARIN KISA DÖNEM HİSSE PERFORMANSI ÜZERİNE ETKİLERİ: BORSA İSTANBUL ÜZERİNE BİR DEĞERLENDİRME *Ali ALAGÖZ, Gülnur UÇAR*

Kahve Arası (15:15-15:30)

II. Oturum (15:30-16:45)

Karya Salonu	*Hitit Salonu*	*Troya Salonu*
Oturum Başkanı: Prof. Dr. İlhan KÜÇÜKKAPLAN		**Oturum Başkanı: Doç. Dr. Sinan ESEN**
YÜKSEK FREKANSLI TİCARET VE PAY ENDEKSİNİN FARKLI VERİ ARALIKLARIYLA ÖNGÖRÜLEBİLİRLİĞİ *Ayben KOY, Andaç Batur ÇOLAK*	**KOLOKYUM:** ALGORİTMİK VE YÜKSEK FREKANSLI İŞLEMLERİN LİKİDİTE VE VOLATİLİTE ÜZERİNE ETKİSİ: BİST-30 ÖRNEĞİ *Mehmet Sinan ÇELİK*	BORSA, FAİZ, KUR, ALTIN, PETROL VE BITCOİN ARASINDAKİ OYNAKLIK YAYILIMLARI *Zekai ŞENOL, Selahattin KOÇ*
VOLATİLİTE ENDEKSİ (VIX) İLE BORSA İSTANBUL ARASINDA ASİMETRİK GETİRİ VE VOLATİLİTE YAYILIMI: KIRILGAN BEŞLİ ÜLKELERİN BORSA ENDEKSLERİ İLE KARŞILAŞTIRMALI BİR ANALİZ *Melih KUTLU, Diler TÜRKOĞLU*		INVESTIGATING THE EFFECTS OF INNOVATIVE EFFORTS AND LENDERS' MONITORING ON THE RELATION BETWEEN FINANCIAL SLACK AND PERFORMANCE *Johnny JERMIAS, Fatih YİĞİT*
PREDICTING BIST 30 INDEX WITH ARIMA AND RNN-LSTM MODELS *Didem GÜLERYÜZ, Erdemalp ÖZDEN, Ünal GÜLHAN*		KÜRESEL BELİRSİZLİK ENDEKSİ İLE BRICS BORSALARI ARASINDA VOLATİLİTE YAYILIMI: BEKK GARCH İLE ANALİZİ *Ethem KILIÇ, Samet GÜRSOY*

Kahve Arası (16:45-17:00)

III. Oturum (17:00-18:15)		
Karya Salonu	*Hitit Salonu*	*Troya Salonu*
Oturum Başkanı: Prof. Dr. Hakan AYGÖREN	**Oturum Başkanı: Prof. Dr. Turhan KORKMAZ**	**Oturum Başkanı: Prof. Dr. Ahmet Vecdi CAN**
BORSA İSTANBUL ANA SEKTÖR ENDEKSLERİNİN VOLATİLİTE YAPISI VE YAYILIMININ STOKASTİK VOLATİLİTE MODELİ İLE İNCELENMESİ *Gamze ŞEKEROĞLU, Fatih GÜZEL*	SÜRDÜRÜLEBİLİRLİK AÇIKLAMALARININ HİSSE SENEDİ GETİRİLERİNE ETKİSİ: TÜRK BANKACILIK SEKTÖRÜ ÜZERİNE BİR İNCELEME *Mete BUMİN, Yaşam DEMİR*	FİNANSAL HİZMET SEKTÖRÜNDEKİ KESİNTİLER FİRMANIN HİSSE SENEDİ DEĞERİNİ ETKİLER Mİ: AKBANK KESİNTİLERİNİN DAVRANIŞSAL FİNANS BAKIŞ AÇISI İLE İNCELENMESİ *Çağrı HAMURCU*
SPECULATIVE BUBBLES AND HERDING IN CRYPTOCURRENCIES *İbrahim YAĞLI, Özkan HAYKIR*	ESG PUANLARININ İŞLETMELERİN FİNANSAL PERFORMANSINA ETKİSİ *Seda TURNACIGİL*	İPOTEK SİGORTACILIĞI VE UYGULAMALARININ DEĞERLENDİRİLMESİ *Yunus Emre KAPUSUZ, Harun TANRIVERMİŞ*
AL-SAT TAVSİYELERİNİN BANKALARIN HİSSE SENEDİ GETİRİLERİ ÜZERİNDEKİ ETKİSİ *Mustafa KEVSER, Mesut DOĞAN, Ayşenur TARAKÇIOĞLU ALTINAY*	ÇEVRESEL KUZNETS EĞRİSİ HİPOTEZİ'NİN TÜRKİYE'DE GEÇERLİLİĞİNİN TESTİ *Semra DEMİR, Sevinç ŞAHİN DAĞLI, İsmail ÇELİK*	BANKACILIK SEKTÖRÜNDE YOĞUNLAŞMA: TÜRKİYE'DEKİ MEVDUAT BANKALARI ÜZERİNE BİR İNCELEME *Emine KARAÇAYIR, MÜGE SAĞLAM BEZGİN*
YÖNETİM KURULUNDA KADIN ÜYE VARLIĞININ ŞİRKET PERFORMANSINA ETKİSİ *Nurcan ÖCAL*		
Kahve Arası (18:15-18:30)		
Akşam Yemeği (18:30-20:30)		
22 Ekim 2021 Cuma		
Sempozyum Kayıt (09:00-10:00)		
IV. Oturum (10:00-11:15)		
Karya Salonu	*Hitit Salonu*	*Troya Salonu*
Oturum Başkanı: Prof. Dr. Cantürk KAYAHAN	**Oturum Başkanı: Prof. Dr. Şakir SAKARYA**	**Oturum Başkanı: Prof. Dr. Tuğrul KANDEMİR**
KRİPTO PARALARIN OYNAKLIĞININ GARCH MODELLERLE TAHMİN EDİLMESİ: BITCOIN ÖRNEĞİ *Muhammet Sait IŞILDAK*	THE EFFECTS OF DIVIDEND PAYMENT ANNOUNCEMENT ON STOCK RETURNS: AN EVENT STUDY ANALYSIS OF TURKISH MARKET *Onur OĞUZ*	TÜREV ARAÇ KULLANIMI VE İLK HALKA ARZLARDA DÜŞÜK FİYATLAMA *Ece KOZOL, Yusuf AYTÜRK, Caner AKBABA, Başak TURAN İÇKE*
COVİD-19 PANDEMİ SÜRECİNDE KRİPTO PARA BİRİMİ OLAN BİTCOİN İLE BORSA ENDEKSLERİ ARASINDAKİ İLİŞKİ *Pınar AVCI*	HAVA DURUMU ANOMALİSİNİN KÓNYA PANEL NEDENSELLİK TESTİ İLE ARAŞTIRILMASI: AKDENİZ ÜLKELERİ ÖRNEĞİ *Yaşar ALPTÜRK, Mert Baran TUNCEL, Feyyaz ZEREN, Tayfun YILMAZ*	FUTURES VE SPOT ENDEKSLER ARASINDAKİ İLİŞKİNİN ZAMANA BAĞLI DEĞİŞEN YAPISI: BIST UYGULAMASI *Ercan ÖZEN, Metin TETİK, Ömer F. TÜRK*
COVİD-19 PANDEMİSİ DÖNEMİNDE BİTCOİN YATIRIMLARININ SEÇİLMİŞ BORSALAR ÜSTÜNDEKİ VOLATİLİTE YAYILIMININ İNCELENMESİ *Hüseyin Başar ÖNEM*	SEKTÖREL YOĞUNLAŞMANIN HİSSE SENEDİ YATIRIM FONLARININ PERFORMANSINA ETKİSİ *İbrahim SIRMA, Onur Ozan İŞLEK*	COVİD-19 SÜRECİNDE TÜREV ÜRÜN KULLANIMI VE FİRMA DEĞERİ ETKİLEŞİMİ: BİST30 ENDEKSİ UYGULAMASI *Fatih KONAK, Diler TÜRKOĞLU*
ALTERNATİF BİR YATIRIM ARACI OLARAK BİTCOİN: ULUSLARARASI HİSSE SENEDİ PORTFÖYLERİNDE DAHA ÜSTÜN BİR RİSK-GETİRİ ETKİNLİĞİ MÜMKÜN MÜ? *Mevlüt CAMGÖZ*		
Kahve Arası (11:15-11:30)		

V. Oturum (11:30-12:45)		
Karya Salonu	*Hitit Salonu*	*Troya Salonu*
Oturum Başkanı: Prof. Dr. Mehmet SARAÇ	**Oturum Başkanı: Prof. Dr. İbrahim Halil EKŞİ**	**Oturum Başkanı: Prof. Dr. Yasemin Deniz KOÇ**
THE IMPACT OF COVID-19 ON PRIVATE PENSION SYSTEM IN TURKEY *Mehmet İSLAMOĞLU, Fatih KAYHAN*	HOW DOES LEVERAGE IMPACT THE PERFORMANCE OF TOURISM FIRMS: AN ANALYSIS IN THE FRAMEWORK OF SIZE AND CRISIS *Yeşim HELHEL, Yıldırım YILMAZ*	EKONOMİK BÜYÜME VE FİNANSAL GELİŞMENİN İŞSİZLİK ÜZERİNE ETKİSİNİN İNCELENMESİ: TÜRKİYE ÖRNEĞİ *Aylin ERDOĞDU, Mustafa TORUSDAĞ, Abdulkadir BARUT*
MOMENTUM FAKTÖRÜ İLE GENİŞLETİLMİŞ FAMA-FRENCH ALTI FAKTÖRLÜ VARLIK FİYATLAMA MODELİNİN BORSA İSTANBUL AÇISINDAN TEST EDİLMESİ *Mesut DOĞAN, Mustafa KEVSER, Bilge Leyli DEMİREL*	NAKİT DÖNÜŞ SÜRELERİNİN FAALİYET KARLILIĞINA ETKİSİ ÜZERİNDE 2008 EKONOMİK KRİZİNİN ROLÜ: BORSA İSTANBUL ÖRNEĞİ *Kemal TAYSI, Emrah AYGÜL*	FİNANSAL GELİŞMİŞLİK VE ENERJİ TÜKETİMİ ARASINDAKİ İLİŞKİ *Murat DİLMAÇ, Serpil SUMER*
COVİD-19 PANDEMİSİ DÖNEMİNDE KRİPTO PARALARIN PORTFÖY ÇEŞİTLENDİRMESİNDEKİ ROLÜ: FİYAT ETKİNLİĞİ VE GÜVENLİ LİMAN ÖZELLİĞİ *Deniz ERER, Elif ERER*	DOES WORKING CAPITAL MANAGEMENT AFFECTS FIRM VALUE: EVIDENCE FROM AN EMERGING ECONOMY *Rümeysa BİLGİN, Sema TURAN*	TÜRKİYE'DE SAĞLIK HARCAMALARININ TURİZM GELİRLERİ VE BIST SAĞLIK ENDEKSİ ÜZERİNE ETKİSİ *Ahmet ŞİT, Nuri HACIEVLİYAGİL, Berna DOĞAN BAŞAR*
TÜRKİYE'DE COVİD-19 SALGINI ÖNCESİ VE SONRASI DÖNEMDE KARŞILAŞTIRMALI PORTFÖY OPTİMİZASYONU: BİR YAPAY ZEKA UYGULAMASI *Oğuz SAYGIN, Saffet AKDAĞ, Ömer İSKENDEROĞLU*		
Öğle Yemeği (12:45-14:00)		
VI. Oturum (14:00-15:15)		
Karya Salonu	*Hitit Salonu*	*Troya Salonu*
Oturum Başkanı: Prof. Dr. M. Başaran ÖZTÜRK	**Oturum Başkanı: Prof. Dr. Hakan TUNAHAN**	**Oturum Başkanı: Prof. Dr. Bener GÜNGÖR**
COVID-19 PANDEMİSİ DÖNEMİNDE ASİMETRİK VOLATİLİTE BULGULARI: BIST SEKTÖR ENDEKSLERİNDE BİR İNCELEME *Berkan ATAŞ, Osman Emre ARLI*	BANKALARDA KREDİ KALİTESİNİ ETKİLEYEN REEL SEKTÖR FAKTÖRLERİ *Eyüp KADIOĞLU, Niyazi TELÇEKEN*	TÜRKİYE'NİN FİNANSAL KIRILGANLIĞI VE DIŞ TASARRUF AÇIĞI SORUNU ÜZERİNE ANALİZLER *Umut ÇAKMAK, Nuri Çağrı AKAR*
YÜZYILIN VEBASI: COVİD-19 PANDEMİSİ YATIRIMCI DAVRANIŞINI NASIL ETKİLEDİ: AŞI HABERLERİNİN FİYATLANMASI *Özge KORKMAZ, Elif ERER, Deniz ERER*	EKONOMİK ÖZGÜRLÜKLERİN BORÇLANMA FAİZ ORANLARI ÜZERİNDEKİ ETKİLERİ *Burak BÜYÜKOĞLU, İbrahim Halil EKŞİ, Burcu BUYURAN*	ÜÇÜZ AÇIK BASKI ENDEKSİ VE FİNANSAL KRİZLERİN TAHMİNİ: TÜRKİYE UYGULAMASI *Murat AKKAYA*
IMPACT OF COVID-19 CRISIS ON ILLIQUIDITY PRICING AND STOCK RETURNS: AN EMPIRICAL EXAMINATION USING SYSTEM GMM *Asma AİB*	KREDİ RİSKİ YÖNETİMİNDEKİ PERFORMANSI ETKİLEYEN FAKTÖRLERİN, BANKA TÜRÜ VE FİNANSE EDİLEN SEKTÖRE GÖRE FARKLILAŞMASI: TÜRKİYE ÜZERİNE BİR UYGULAMA *Mehmet SARAÇ, Sümeyra UZUN*	VIX ENDEKSLERİNİN VOLATİLİTE ÖNGÖRÜ PERFORMANSLARININ KARŞILAŞTIRILMASI *H. Serdar YALÇINKAYA*
COVID-19 PANDEMİ SÜRECİNİN FİNANSAL PİYASALAR ÜZERİNDEKİ ETKİSİ: BORSA İSTANBUL ÜZERİNE BİR OLAY ÇALIŞMASI *Esra KARPUZ, Yasemin Deniz KOÇ*		
Kahve Arası (15:15-15:30)		
Panel: Reel Sektör Firmalarının Halka Arza Karşı Tutumları - Prof. Dr. İbrahim Halil EKŞİ (15:30-16:00) / Karya Salonu		
Panel: Sermaye Piyasalarında Güncel Gelişmeler - GCM Yatırım Menkul Değerler A.Ş. (16:00-17:00) / Karya Salonu		
Kahve Arası (17:00-17:15)		
Genel Değerlendirme Toplantısı ve Kapanış (17:15-18:00)		
Gala Yemeği (20:00-23:00)		
23 Ekim Cumartesi		
Sapanca Gölü-Taraklı Sosyal Gezisi (09:00-18:00)		

İçindekiler