İşletme Araştırmaları Dergisi
ISSN: 1309 - 0712

Journal Of
Business Research
Turk
www.isarder.org

Confidence–Stock Yield Relation in Turkish Economy

N. Serap VURUR
Afyon Kocatepe University
Bolvadin College of Applied Sciences
Afyon, Turkey
orcid.org/0000-0003-4339-6474
serapvurur@aku.edu.tr

Huriye Gonca DİLER
Afyon Kocatepe University
Faculty of Economic and Administrative
Sciences, Afyon, Turkey
orcid.org/0000-0002-9937-1324
hgdiler@aku.edu.tr

Extensive Summary

Introduction

The investors mostly relate increases and decreases in the stock market to numerous macro variables. Asserting that the investors may affect from the factors that are not rational, behavioral finance theory is recently working on that there is a relation between macro variables and confidence on economy.

Method

This research study aims to determine the effect of Consumer Confidence (CCI) and Real Sector Confidence Indices (RSCI) on stock market yield. The relation among the mentioned variables were tested via time-series analysis using the monthly data in 2012(1)-2017(8) period. The data about the yield of Istanbul Stock Exchange 100 (ISE 100) index and real sector confidence index was obtained from the Central Bank, and the data about consumer confidence index was provided from the Turkish Statistics Institute (TSI).

Initially unit root test was conducted in the application. Since RSCI variable is stationary (that is I(0)) while stationary I(1) in the first difference of ISE 100 and CCI, the application continued with Autoregressive Distributed Lag (ARDL) co-integration and Toda-Yamamoto causality tests.

Table 1. Results of Co-integration Relation According to ARDL

Independent Variable (k)	F-Statistics	%1 Critical Values in Significance Level	
		Lower Bound I(0)	Upper Bound I(1)
2	11.3090	4.13	5

Since there was a co-integration between the variables, an ARDL model was needed to be set in order for determining long term and short term relations. Therefore, firstly the lag length is 1 according to the Schwarz (SBC) and Hannan-Quinn criteria (HQC). 1 lag values of RSCI, CCI variables and ARDL model (1,1,1) of ISE 100 variable were estimated.

Table 2. Estimation Results ARDL (1,1,1) of Model

Variables	Coefficient	t- Statistics
C	0.451420	0,314533 (0.7542)
$lnISE\ 100_{t-1}$	-0.763227	-6.080887 (0.0000)
$lnRSCI_t$	-0.095291	-0.308986 (0,7584)
$lnCCI_{t-1}$	-0.104432	-0.519088 (0.6056)

The long term coefficients of the model incorporate the anticipated indicators; however they are not statistically significant. The calculated long term coefficients of the estimated ARDL (1,1,1) model are shown on the Table 3.

Table 3. ARDL (1,1,1) of Model Long Term Calculated Coefficients

Variables	Coefficient	t- Statistics
C	0.591463	0.309494 (0.7580)
lnRSCI	-0.124853	-0.304113 (0.7621)
lnCCI	-0.136829	-0.507773 (0.6135)

Table 4. ARDL (1,1,1) of Error Correction Model Short Term Relevant Results

Variables	Coefficient	t- Statistics
C	0.451420	0.314533 (0.7542)
$\Delta lnISE\ 100_{t-1}$	0.236773	1.886454 (0.0641)
$\Delta lnRSCI_t$	0.313229	1.047320 (0.2992)
$\square lnRSCI_{t-1}$	-0.408520	-1.432282 (0.1573)
$\square lnCCI_t$	0.178877	1.266932 (0.2101)
$\square lnCCI_{t-1}$	-0.283309	-1.952640 (0.0555)

ECM_{t-1}	-0.763227	-6.891871 (0.0000)

Following the co-integration test, a standard Vector Autoregression (VAR) model was set according to the values of Toda-Yamamoto causality test and the level values of the data of ISE 100, real sector confidence index, and consumer confidence index. While setting the VAR model, information criteria of Akaike (AIC), Schwarz Bayesian (SBC), and Hannan and Quinn (HQC) were considered in the lag length option. The lag length of the standard VAR model is 1. Since ISE 100 (1), RSCI (0), and CCI (1) the integration level (dmax) is also 1. Therefore, the lag length was determined as 2 by adding the integration level (dmax) to the standard VAR model.

Toda-Yamamoto causality analysis results of ISE 100, RSCI, and CCI variables are presented on Table 9.

Table 5. Toda-Yamamoto Results of the Causality Test

Dependent Variable	MWald Test Statistics			Direction of Causality
	lnISE 100	**lnRSCI**	**lnCCI**	
lnISE 100	_	1.5611 (0.4582)	3.4390 (0.1792)	*lnRSCI* ↛ *lnISE 100* *lnCCI* ↛ *lnISE 100*
lnRSCI	13.4591 (0.0012)	-	-	*lnISE 100* → *lnRSCI*
lnCCI	4.4506 (0.1080)	-	-	*lnISE 100* ↛ *lnCCI*

Result and Suggestions

According to the MWald test results, there observed no causality relation from ISE 100 to CCI, and from RSCI and CCI to ISE 100. In other words, any change in ISE 100 would not affect the CCI, and any change in RSCI and CCI would not influence ISE 100. However, a causality relation from ISE 100 to RSCI was detected. Accordingly, any change in BIST 100 would affect RSCI.

When the results obtained were compared with the research studies in the field, it was determined that they comply with the results of Korkmaz-Çevik (2009) and Collins (2001) regarding the causality relation from ISE 100 index to real sector confidence index. Only the relation of ISE 100 index with the confidence index was examined in this research study. It will be useful for further studies to focus on the changes in the confidence indices on the basis of sectoral indices and considering index volatilities.