

# Necessity of Regulating Private Sector: An Empirical Analysis\*

# 🔟 Burak Yüksel

Istanbul Commerce University, Turkey

Received: August 6, 2021 Accepted: October 27, 2021 Published: December 30, 2021

**Abstract:** Regulation theory covers governmental intervention to an industry for public's or industry's benefit. Anyhow, it is only banking and other finance sectors which its participants' financial performances are overseen. Failure of a company, both in terms of financially and commercially, causes a series of events which may result a financial crisis. In this regard, necessity to regulate financial performance of private sector is analyzed. Balance sheets that are collected from Central Bank of Republic of Turkey is used in a linear regression analysis. Results show that macro economy is related with financial performance of companies and companies' success depends on their financial performance. Therefore, it is concluded that regulating financial performance of private sector is necessary to prevent future financial crisis and achieve greater economic performance.

**Keywords:** Regulation Theory, Linear Regression, Principal Components Analysis **JEL Classification:** G28

# 1. Introduction

Regulation theory draws attention of social scientists with different perspectives and approaches. Selznick defines regulation as "the sustained and focused control exercised by a public authority over activities valued by the community" (Selznick, 1985). This definition was criticized by Black as it didn't fully explain community, public authority and control. Black's definition of regulation is "the intentional use of authority to affect behavior of a different party according to set standards, involving instruments of information-gathering and behavior modification" (Black, 2001). Stigler was the first economist who provides an empirical theory about the subject. Instead of public interest, Stigler argues that regulation is operated for industry's benefit (Stigler, 1971). However, Posner sets a different perspective to the subject and claims that some consumer groups

<sup>&</sup>lt;sup>\*</sup> This article is created from Mr. Burak Yüksel's PhD thesis in Istanbul Ticaret University, Institute of Finance, Financial Economics Program.

benefit from regulations more than others (Posner, 1971). Peltzman takes it one level higher and argues that politicians use that in their political campaigns to gain political support (Peltzman, 1976). Becker was more focused on competition between different parties. He claims that some groups are better to turn political pressure to their advantage and this results transfer of wealth from less efficient groups to more efficient groups (Becker, 1983).

Apart from its definition, application of modern economic regulation dates back to second half of nineteenth century as gas and electric prices were regulated in United States of America (Troesken, 1994). Starting from that, both its application and theory has been developing exponentially. Interstate Commerce Commission is the first regulating institution that is established to regulate railroad rates in USA. That is followed by Federal Communications Commission, Federal Power Commission and Securities and Exchange Commission between 1934 and 1935. Today there are several regulators, in different countries, regulating different industries. Industries such as transportation, health, telecommunication, media, internet and etc. are regulated in terms of public and industry interests (Network of Economic Regulators Participants, 2021).

Authority and responsibility of the regulating institutions differ from one industry to another and from one country to another. Anyhow, general instruments of regulation are always same: control of price, control of quality, control of quantity and control of entry. Depending on the needs of the market, selection of these instruments and their usage may change. Price control is applied in some industries in order to prevent over and under pricing by setting minimum and maximum prices. Control of entry and control of quantity is more related with creating a competitive market and mostly used in telecommunication and transportation (such as total number of taxicabs in a city) industries. Setting minimum quality standard is important in terms of protecting nature and consumers' health.

Nonetheless, there are not any regulation activity regarding performance of companies, except in banking and other financial sectors. Whether achieving their organizational goals or not, whether they are profitable or not, the main concern is always industrial activities. A company may enter a market which its entry is regulated by an institution, operate in an industry which level of price is set by an institution and under these circumstances it can underperform and close its business which causes public loss. Even though it is not a public loss, it surely will be waste of scarce resources in an economy. During lifetime of the company, price level of its products and their quality will be

monitored and examined by legal authorities, however its financial performance will never be questioned.

As a matter of fact, failure of a company affects more than its shareholders and beneficiaries. At individual level, its suppliers will lose their job, its creditors will not get their money back, and its employees will have to look for other jobs. At macro level, this will result higher unemployment rates, lower gross domestic product (GDP) and even higher current account deficits depending on company's line of business. Each single failure has a chance to create a domino effect and may cause industrial or national financial crisis.

Therefore, in order to test the necessity to regulate performance of private sector, it is analyzed that if performance of private sector is related with macro economy. After then that, relationship between indicators of company failure and financial performance is tested to see what causes companies to fail. Section 2 provides details regarding data and analysis, while section 3 discusses the results.

# 2. Data and Analysis

#### 2.1 Data

A two stage analysis is conducted in order to analyze the necessity to regulate private sector. First, effect of financial ratios of companies on macroeconomic variables is tested in order to find if success of an economy depends on success of companies. Then, the relationship between financial ratios and indicators of company failure is analyzed to decide in which perspective the companies are needed to be regulated.

"Sektör Bilançoları" dataset of Central Bank of the Republic of Turkey is used to calculate financial rations of companies. As the dataset in the web site dates back only to 2009, central dataset, which is stored in Central Bank's data warehouses, is collected through a special permission granted by the Central Bank (Sektör Bilançoları İstatistikleri, 2021). Final data is ranged between 1989 and 2016, and consists of different financial ratios that is calculated from balance sheets and income statements of companies. The financial ratios are as follows:

Financial Ratio	Calculation	Abbreviation
Current Ratio	Current Assets/ Current Liabilities	CARI_ORAN
Long-Term Liabilities/ Fixed Equity	Long-Term Liabilities/ ( Long Term Liabilities+ Equity )	UVYK_DEVSER
Bank Loans/ Assets	( Short Term Bank Loans+ Current Maturities of Long Term Credits and Accrued Interest + Long Term Bank Loans) / Assets	BKRE_AKT
Tangible Current Assets/ Assets	Tangible Current Assets (Net) / Assets	MADDUR_AKT
Operating Profit Or Loss/ Net Sales	Operating Profit Or Loss/ Net Sales	FKAR_NETS
Cost Of Sales/ Net Sales	Cost Of Sales/ Net Sales	SATMAL_NETS
Current Assets/ Assets	Current Assets/ Assets	DONV_AKT
Short Term Receivables/ Assets	( Short Term Trade Receivables+ Other Short Term Receivables) / Assets	KVA_AKT
Equity/ Assets	Equity/ Assets	OZK_AKT
Current Liabilities / Liabilities	Current Liabilities / ( Current Liabilities + Long- Term Liabilities)	κνγκ_γκ
Stocks / Current Assets	Stocks / Current Assets	STOK_DONVAR
Stocks / Assets	Stocks / Assets	STOK_AKT
Short Term Receivables/ Current Assets	Short Term Receivables/ Current Assets	KVA_DONVAR
Current Liabilities / Assets	Current Liabilities / Assets	KVYK_AKT
Long-Term Liabilities/ Assets	Long-Term Liabilities/ Assets	UVYK_AKT
Tangible Current Assets/ Equity	Tangible Current Assets(Net) / Equity	MADDUR_OZK
Fixed Assets/ Liabilities	Fixed Assets/ Liabilities	DURV_YABKAY
Short Term Bank Loans/ Current Liabilities	( Short Term Bank Loans+ Current Maturities of Long Term Credits and Accrued Interest ) / Current Liabilities	KVBK_KVYK
Stock Turnover	Cost Of Sales / ( ( Previous Year Stocks + Current Year Stocks ) / 2 )	STOK_DEV
Receivables Turnover	Net Sales / ( Short Term Trade Receivables+ Long Term Trade Receivables )	ALA_DEV
Net Working Capital Turnover	Net Sales / ( Current Assets- Current Liabilities )	NCS_DEV
Equity Turnover	Net Sales / Equity	OZK_DEV
Assets Turnover	Net Sales / Assets	AKT_DEV
Net Profit / Equity	Net Profit / Equity	NETK_OZK
Net Profit / Assets	Net Profit / Assets	NETK_AKT
Operating Expenses/ Net Sales	Operating Expenses/ Net Sales	FAAGID_NETS
Financial Expenses/ Net Sales	Financial Expenses/ Net Sales	FINGID_NETS

# Table 1. Financial Ratios Calculated From Balance Sheets

Number of companies the dataset has for each year is as follows:

	Table 2. Number of Con	ipanies by Each	riscai i eai
Year	Number of Companies	Year	Number of Companies
1989	5.134	2003	10.054
1990	8.186	2004	9.668
1991	10.634	2005	9.277
1992	11.881	2006	9.364
1993	13.759	2007	10.736
1994	15.154	2008	12.868
1995	15.259	2009	14.418
1996	13.410	2010	15.509
1997	10.453	2011	16.207
1998	8.843	2012	18.350
1999	9.157	2013	16.468
2000	9.719	2014	16.185
2001	9.537	2015	14.493
2002	10.865	2016	12.174

<b>-</b>				- 11/
Table 2.	Number of	of Companies	by Each	Fiscal Year

Descriptive statistics of the financial ratios is as follows:

Financial Ratio	Observat ion	Min	Max	Average	Std Deviation	Skewness	Kurtosis
CARI_ORAN	28	1,08	1,40	1,25	0,10	-0,16	-1,42
UVYK_DEVSER	28	0,21	0,52	0,34	0,07	0,44	0,23
BKRE_AKT	28	0,16	0,34	0,25	0,04	0,09	0,01
MADDUR_AKT	28	0,25	0,32	0,28	0,02	0,05	-1,36
FKAR_NETS	28	0,03	0,10	0,06	0,02	0,37	0,37
SATMAL_NETS	28	-0,93	-0,82	-0,86	0,03	-0,89	0,22
DONV_AKT	28	0,48	0,63	0,55	0,05	0,43	-1,45
KVA_AKT	28	0,16	0,25	0,19	0,02	1,13	0,42
OZK_AKT	28	0,28	0,50	0,37	0,07	0,66	-0,66
Κνγκ_γκ	28	0,36	0,58	0,44	0,07	0,36	-1,35

Table 3. Descriptive Statistics of Financial Ratios

Financial Ratio	Observat ion	Min	Мах	Average	Std Deviation	Skewness	Kurtosis
STOK_DONVAR	28	0,23	0,31	0,26	0,02	0,36	-0,75
STOK_AKT	28	0,11	0,19	0,15	0,02	0,60	-1,21
KVA_DONVAR	28	0,32	0,40	0,34	0,02	1,20	0,73
ΚVYK_ΑΚΤ	28	0,36	0,58	0,44	0,07	0,36	-1,36
UVYK_AKT	28	0,13	0,32	0,19	0,05	1,10	0,74
MADDUR_OZK	28	0,51	1,09	0,79	0,17	-0,24	-1,26
DURV_YABKAY	28	0,51	1,04	0,73	0,15	0,51	-0,77
KVBK_KVYK	28	0,21	0,33	0,28	0,03	-0,42	-0,20
STOK_DEV	28	0,00	13,48	6,00	2,49	0,80	2,89
ALA_DEV	28	3,92	13,17	6,55	2,38	1,31	0,91
NCS_DEV	28	6,52	53,40	14,54	10,78	2,01	5,12
OZK_DEV	28	1,81	7,82	3,65	1,77	0,92	-0,33
AKT_DEV	28	0,71	2,58	1,27	0,48	1,08	0,55
NETK_OZK	28	-0,05	0,18	0,08	0,05	-0,27	1,82
NETK_AKT	28	-0,01	0,06	0,03	0,02	-0,42	0,72
FAAGID_NETS	28	0,05	0,11	0,08	0,02	-0,55	-0,87
FINGID_NETS	28	0,02	0,08	0,04	0,02	0,43	-0,29

Macroeconomic variables, which are used in the analysis is as follows:

ומו	JIE 4. Macibecononnic Van	ables useu	III the Model	
Indicator of Company Failure	Information	Range	Source	Abbreviation
Gross Domestic	Gross Domestic Product Per	1989 -	World Bank	CDD
Product	Capita (Current prices, USD)	2016	world Bank	GDP
Inflation	YoY percentage change of	1989 -	Marild David	
Inflation	consumer prices index	2016	World Bank	INFLATION
		1989 -		
Unemployement Rate	Unemployed / Workforce	2016	World Bank	UNEMPLOYEMENT

Table 4. Macroeconomic Variables Used in the Model

Number of closed businesses, number of check usage ban, number of bad checks, amount of protested bills, non-performing loans over total loans are the variables used as indicators of company failure. General information regarding these variables is as follows:

Indicator of Company Failure	Information	Range	Source	Abbreviation
Number of closed businesses	Total number of closed commercial businesses in that given year	1989 - 2016	Turkish Statistical Institute	KAP_FIR
Number of check usage ban	Total number of companies that are banned to use checks by legal court decision	2000 - 2016	Central Bank of Republic of Turkey	CEK_YAS
Number of bad checks	Total number of bad checks in that given year	2000 - 2016	Central Bank of Republic of Turkey (2000 - 2008) The Banks Association of Turkey Risk Centre (2008 - 2016)	KAR_CEK_SA Y
Amount of protested bills	Total number of protested bills in that given year	2000 - 2016	Central Bank of Republic of Turkey (2000 - 2008) The Banks Association of Turkey Risk Centre (2008 - 2016)	PRO_SEN_TU T
Non-performing loans over total loans	Non-performing loans over total loans (Banking sector consolidated)	1989 - 2016	The Banks Association of Turkey	TAKKRE_TOP KRE

Table 5. Indicators of Company Failure Used in the Analysi	S
--	---

General descriptive statistics for macroeconomic variables and indicators of company failure are as follows:

				railures				
Statistics	GSYIH	ENFLASYO N	ISSIZLIK	TAKKRE_T OPKRE	PRO_SEN_ TUT	KAR_CEK_S AY	CEK_YAS	KAP_FIR
Observatio n	28	28	28	28	17	17	17	28
Min	2022	6,25	0,06	1,97	629803	515915	5602	10152
Max	12519	105,21	0,14	37,44	12288133	1651880	392314	37343
Average	6447	39,97	0,09	6,34	5173371	908338	62130	14848
Std Deviation	3734	33,39	0,02	7,16	3500887	334724	89724	5594
Skewness	0,39	0,36	0,36	3,44	0,28	0,86	3,45	2,79
Kurtosis	-1,61	-1,47	0,42	13,55	-0,69	-0,09	13,11	9,37

Table 6. Descriptive Statistics of Macroeconomic Variables and Indicators of Company Failures

## 2.1 Analysis

Financial ratios are mostly correlated with each other as they both use same or similar balance sheet or income statement accounts. In order to reduce correlation and create more powerful variables Principal Components Analysis with "varimax" method is applied to the financial ratios. Factors which has eigenvalue greater than 1 are selected. Financial ratios which had high correlations with more than one factors were eliminated and procedure was repeated until no financial ratio is correlated with more than one factor. After several tries, the final result is as follows:

Factor	Total	Percentage of Variance	Percentage of Cumulative Variance
1	4,65	42,23	42,23
2			,
2	3,89	35,32	77,55
3	1,66	15,07	92,62
4	0,45	4,12	96,74
5	0,19	1,77	98,51
6	0,11	0,96	99,47
7	0,03	0,31	99,78
8	0,01	0,12	99,90
9	0,01	0,06	99,96
10	0,00	0,03	100,00
11	0,00	0,00	100,00

Table 7. Factors and Explained Variance

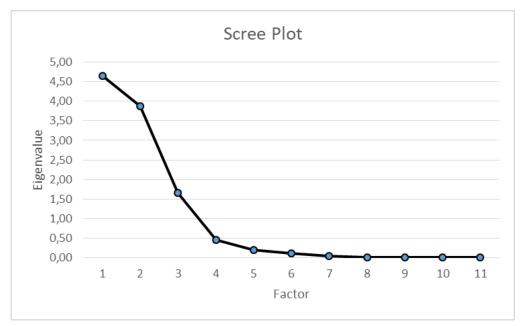


Figure 1. Scree Plot

		Factor	
Financial Ratio	1	2	3
DONV_AKT	0,94	-0,17	0,20
DURV_YABKAY	-0,94	-0,30	-0,10
CARI_ORAN	-0,93	-0,08	0,21
MADDUR_OZK	0,89	0,36	-0,07
KVA_AKT	0,81	-0,26	0,38
BKRE_AKT	0,14	0,98	-0,10
UVYK_DEVSER	0,18	0,96	-0,09
UVYK_AKT	-0,31	0,93	-0,04
KVBK_KVYK	0,14	0,84	-0,10
SATMAL_NETS	-0,16	-0,11	0,97
FKAR_NETS	0,38	-0,10	0,88

Table 8. PCA – Inverted Matri
-------------------------------

Table 9. PCA – Kaiser-Meyer-Olkin and Bartlett's Tests

Kaiser-Meyer-Olkin (KMO) Test Statistic		0,55
Bartlett's Test	Chi-Square	614,65
	P Value	0,00

Kaiser-Meyer-Olkin statistics suggest that the factors fit and table shows that 3 factors alone explains 92 percent of all variance. First factor is more related with assets, second factor is related with liabilities, while the last factor represents revenue more. Therefore, the results of PCA is accepted and is used in the analysis.

These factors are used to explain macroeconomic variables as in the following formulas:  $GDP_t = \beta_0 + \beta_1 ASSETS_t + \beta_2 LIABILITIES_t + \beta_3 REVENUES_t + u_t$ 

 $INFLATION_t = \beta_0 + \beta_1 ASSETS_t + \beta_2 LIABILITIES_t + \beta_3 REVENUES_t + u_t$ 

 $UNEMPLOYEMENT_t = \beta_0 + \beta_1 ASSETS_t + \beta_2 LIABILITIES_t + \beta_3 REVENUES_t + u_t$ 

Least squares method is used in the linear regression. 5 percent is the highest accepted probability value. Error terms are tested in terms of autocorrelation and heteroscedasticity. First, the model is built as it is formulated above, then factors transformed if one or more condition in the linear regression is not met. After several tries, the final results are as follows:

Variable	Coefficient	Standard Error	t-stat	P Value
LIABILITIES	0,17	0,05	3,48	0,00
ASSETS	-0,54	0,05	-10,65	0,00
Intercept	8,59	0,05	174,24	0,00
R2	0,83			
Adjusted R <sup>2</sup>	0,82			

# Table 10. Gross Domestic Product - Factors Linear Regression

# Table 11. Gross Domestic Product - Factors Autocorrelation Test

Breusch–Godfrey Test Statistic	5,41
P Value	0,07

# Table 12. Gross Domestic Product - Factors Heteroscedasticity Test

Breusch-Pagan-Godfrey Test Statistic	1,80
P Value	0,41

#### Table 13. Inflation Rate – Factors Linear Regression

Variable	Coefficient	Standard Error	t-stat	P Value
ASSETS	0,42	0,11	4,03	0,00
LOG_INF_1 ( First difference of log(INFLATION) )	0,61	0,10	6,18	0,00
Intercept	1,19	0,33	3,66	0,00
R2	0,96			
Adjusted R <sup>2</sup>	0,95			

Table 14. Inflation Rate – Factors Autocorrel	ation Test
---	------------

Breusch-Godfrey Test Statistic	0,58
P Value	0,75

#### Table 15. Inflation Rate – Factors Heteroscedasticity Test

Breusch-Pagan-Godfrey Test Statistic	1,11
P Value	0,57

Variable	Coefficient	Standard Error	t-stat	P Value	
ASSETS	-0,14	0,02	-6,15	0,00	
REVENUES	0,05	0,02	2,20	0,04	
Intercept	-2,40	0,02	-103,65	0,00	
R2	0,63				
Adjusted R <sup>2</sup>	0,60				

Table 16.	Unemployme	nt - Factors	Linear	Regres	sion

Table 17. Unemployment – Factors Autocorrelation Test		
Breusch-Godfrey Test Statistic	3,40	
P Value	0,05	

Table 18. Unemployment – Factors Heteroscedasticity Test		
Breusch-Pagan-Godfrey Test Statistic	1,82	
P Value	0,40	

As it is seen in the results, all factors are related with one or more macroeconomic variables and assumptions of linear regression are met. The final equations are as follows:

 $LOG_GDP_t = 8,59 + 0,17 ASSETS_t - 0,54 LIABILITIES_t$ 

 $LOG_INFLATION_t = 1,19 + 0,42 ASSETS_t + 0,61 LOG_INFLATION_1_t$ 

 $LOG\_UNEMPLOYEMENT_t = -2,40 - 0,14 ASSETS_t + 0,05 REVENUES_t$ 

After then that, relationship of factors with indicators of company failure is analyzed. Formulation of relationship is as follows:

 $KAP\_FIR_t = \beta_0 + \beta_1 ASSETS_t + \beta_2 LIABILITIES_t + \beta_3 REVENUES_t + u_t$ 

 $CEK_YAS_t = \beta_0 + \beta_1 ASSETS_t + \beta_2 LIABILITIES_t + \beta_3 REVENUES_t + u_t$ 

 $KAR\_CEK\_SAY_t = \beta_0 + \beta_1 ASSETS_t + \beta_2 LIABILITIES_t + \beta_3 REVENUES_t + u_t$ 

 $PRO\_SEN\_TUT_{t} = \beta_{0} + \beta_{1} ASSETS_{t} + \beta_{2} LIABILITIES_{t} + \beta_{3} REVENUES_{t} + u_{t}$ 

 $TAKKRE\_TOPKRE_t = \beta_0 + \beta_1 ASSETS_t + \beta_2 LIABILITIES_t + \beta_3 REVENUES_t + u_t$ 

Least squares method is used in the linear regression. 5 percent is the highest accepted probability value. Error terms are tested in terms of autocorrelation and

heteroscedasticity. First, the model is built as it is formulated above, then factors transformed if one or more condition in the linear regression is not met. After several tries, the final results are as follows:

			mean negrebbi	011
Variable	Coefficient	Standard Error	t-stat	P Value
ASSETS	-0,99	0,34	-2,96	0,01
Intercept	9,82	0,30	32,21	0,00
R2	0,37			
Adjusted R <sup>2</sup>	0,33			

Table	10	Charle	Dama	Factors	Lincor	Rearession
lable	19.	Спеск	Bans	- Factors	Linear	Regression

Breusch–Godfrey Test Statistic	1,72
P Value	0,42

Table 21. Check Bans – Factors Heteroscedasticity Test	
Breusch-Pagan-Godfrey Test Statistic	0,00
P Value	0,99

#### Table 22. Closed Companies – Factors Linear Regression

Variable	Coefficient	Standard Error	t-stat	P Value
ASSETS	-2.335,09	996,99	-2,34	0,03
Intercept	14.848,43	979,03	15,17	0,00
R2	0,17			
Adjusted R <sup>2</sup>	0,14			

## Table 23. Closed Companies – Factors Autocorrelation Test

Breusch-Godfrey Test Statistic	0,50
P Value	0,78

## Table 24. Closed Companies - Factors Heteroscedasticity Test

Breusch-Pagan-Godfrey Test Statistic	2,01
P Value	0,16

Variable	Coefficient	Standard Error	t-stat	P Value
LIABILITIES	-144.373,70	59.393,75	-2,43	0,03
Intercept	932.197,30	71.691,54	13,00	0,00
R2	0,28			
Adjusted R <sup>2</sup>	0,23			

## Table 25. Bad Checks - Factors Linear Regression

# Table 26. Bad Checks – Factors Autocorrelation Test

Breusch-Godfrey Test Statistic	3,48
P Value	0,18

Table 27. Bad Checks – Factors Heteroscedasticity		
Breusch-Pagan-Godfrey Test Statistic	0	,59
P Value	0	.44

# Table 28. Protested Bills – Factors Linear Regression

Variable	Coefficient	Standard Error	t-stat	P Value
ASSETS	-4.591.849,00	577.281,70	-7,95	0,00
LIABILITIES	2.520.545,00	300.976,60	8,37	0,00
Intercept	1.726.560,00	519.837,40	3,32	0,01
R2	0,87			
Adjusted R <sup>2</sup>	0,85			

# Table 29. Protested Bills – Factors Autocorrelation Test

Breusch-Godfrey Test Statistic	2,64	
P Value	0,27	

#### Table 30. Protested Bills - Factors Heteroscedasticity Test

Breusch-Pagan-Godfrey Test Statistic	2,79
P Value	0,25

Variable	Coefficient	Standard Error	t-stat	P Value
REVENUES	-3,89	1,18	-3,30	0,00
Intercept	6,34	1,16	5,47	0,00
R <sup>2</sup>	0,29			
Adjusted R <sup>2</sup>	0,27			

Table 31. N	Non Perform	ning Loans –	Factors	Linear Reg	jression

Table 32. Non Performing	Loans - Factors	Autocorrelation Test
--------------------------	-----------------	----------------------

Breusch-Godfrey Test Statistic	3,26
P Value	0,20

Table 33. Non Performing Loans – Factors Heteroscedasticity Tes	
Breusch-Pagan-Godfrey Test Statistic	3,21
P Value	0,07

As it is seen in the results, all factors are related with one or more indicator of company failure and assumptions of linear regression are met. The final equations are as follows:  $KAP_FIR_t = 14848,43 - 2335,08 ASSETS_t$ 

 $LOG\_CEK\_YAS_t = 9,82 - 0,99 ASSETS_t$ 

 $KAR_CEK_SAY_t = 932197,3 - 144373,7 LIABILITIES_t$ 

 $PRO\_SEN\_TUT_t = 1726560 - 4591849 ASSETS_t + 2520545 LIABILITIES_t$ 

 $TAKKRE\_TOPKRE_t = 6,34 - 3,89 REVENUES_t$ 

# 3. Discussion

Factors created from financial ratios regressed with macroeconomic variables. It appears that, GDP is related with liabilities and assets, inflation rate is related with assets, and unemployment rate is related with assets and revenues. As long as results are statistically reliable, it can be concluded that financials of private sector is related with macro economy. Therefore, any change in balance sheet or income statement of companies, either in good way or bad way, has an effect on macroeconomic parameters. Low liquidity, high indebtedness, low equity, low profitability etc. come together and create low GDP, high unemployment rate and high inflation rates. That is to say, failure or success of a single company, doesn't only interest its shareholders and beneficiaries but also country as a whole. Letting a company to use waste resources in an improper way and not intervening in his way to bankrupt will have direct effects on the economy.

Then, factors regressed with indicators of company failure in order to understand what kind of a failure occurs and what type of financial ratios cause that. It is found that assets, liabilities, and revenues both play their roles. As relationship between indicators of company failure and financial ratios is strong and statistically reliable, it shows that current state of financial ratios is related with both commercial and financial failure. Therefore, all aspects of financials of private sector need to be taken into consideration. As different indicators point out different parts of financial statements, policies to improve all parts of the financial statements must be created.

# 4. Conclusion

Regulation theory covers the fundamentals behind governmental intervention to an industry. Aim and scope of intervention varies across countries and sectors. However, it is only banking and other financial sectors that its participants' financial performance is overseen. Liquidity, debt level, profitability and other financial indicators of the companies do not draw attention from any public institution. However, failure of a single company may lead a way which results nationwide financial crisis at the end. Therefore, in this article, it is analyzed if financial performance of private industry requires special attention.

Dataset collected from Central Bank of Republic of Turkey is used to create financial factors. These factors then regressed with macroeconomic variables and indicators of company failure. Results show that macro economy is affected from financial performance of companies and companies fail in both financial and commercial ways because of their financial performance. Therefore, it is concluded that regulating financial performance of private industry is necessary to prevent future financial crisis and achieve greater economic performance.

This article neither offers any specific regulation nor describes ways to enhance financial performance of companies, as aim of this article is to analyze the necessity of regulating private sector. It is left to future researches to find proper institutional organizations, regulation activities and financial performance criteria to do so.

#### References

- Becker, G. (1983). A Theory Of Competition Among Pressure Groups For Political Influence. *Quarterly Journal Of Economics*, pp. 371–400.
- Black, J. (2001). Decentring Regulation: Understanding the Role of Regulation and Self-Regulation in a 'Post-Regulatory' World. *Current Legal Problems*, pp. 47-103.
- *Network of Economic Regulators Participants.* (2021, August 6). Retrieved from OECD: https://www.oecd.org/gov/regulatory-policy/ner-participants.htm
- Peltzman, S. (1976). Peltzman: Toward A More General Theory of Regulation. *Journal of Law and Economics*, pp. 211-240.
- Posner, R. (1971). Taxation by Regulation. Bell Journal of Economics, pp. 22-50.
- Sektör Bilançoları İstatistikleri. (2021, August 6). Retrieved from TCMB Reel Sektör İstatistikleri: https://www.tcmb.gov.tr/wps/wcm/connect/TR/TCMB+TR/Main+Menu/Istatistikler/Re el+Sektor+Istatistikleri/Sektor+Bilancolari/Sektor+Bilanco+Verileri/
- Selznick, P. (1985). Focusing Organisational Research on Regulation. *Regulatory Policy and the Social Sciences*, 363.
- Stigler, G. (1971). The Theory of Economic Regulation. *Bell Journal of Economics and Management Sciences*, pp. 3–71.
- Troesken, W. (1994). The Institutional Antecedents of State Utility Regulation: The Chicago Gas Industry, 1860 to 1913. In C. Goldin, & G. D. Libecap, *The Regulated Economy: A Historical Approach to Political* (pp. 55–80).