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Exploring Net Stock Issues Effect in Borsa Istanbul*

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ABSTRACT

The decrease in future returns in pursuit of stock issuance is called "net stock issues effect"in asset pricing literature.In this research, I explore the presence of net stock issueseffect between July of 2012andJune of 2018 in Borsa Istanbul.The portfolio sorts and regression analysis methods are both used to determine the predictability of stock returns via net stock issues.In portfolio analysis, thequintilesyield average returns ranging between 1.66% and 0.84% monthly for market. Despite negativehedge returnin value-weighted portfolio,it hasfound statistically insignificant.The equal-weighted hedge returnis alsoattainedinsignificant. Furthermore, returns present similar patterns for big,small and micro groups.Since Fama-French three factor model has explanatory power on unexplained returns over CAPM, the average returns associated with net stock issues areattempted to be explained by factor models. To this end, alpha values are evaluated which are obtained from time-series regressions. The alpha values and t-statistics are not consistent across the portfolios in groups.Neither CAPM nor Fama-French three factor model presents significant alpha values.All thesefindings indicate that there is noparticular relation between net stock issues and subsequent stock returns in Borsa Istanbulfor the six-years analysis period.

Keywords: *Net stock issues, market efficiency, asset pricing.*

JEL Classification: *G12, G14*

Net Hisse Senedi İhracı Etkisinin Borsa İstanbul'da İncelenmesi

ÖZET

Gelecek dönem hisse senedi getirilerinin hisse senedi ihracını takiben düşmesi varlık fiyatlama literatüründe "net hisse senedi ihracı etkisi" olarak adlandırılmaktadır.Bu çalışmada, Temmuz 2012 ile Haziran 2018 dönemleri arasında net hisse senedi ihracı etkisinin Borsa İstanbul'da varlığı araştırılmıştır. Gelecek getirilerin net hisse senedi ihracı tarafındantahmin edilebilirliğini belirlemek adına portföyve regresyon analizi yöntemlerikullanılmıştır. Portföy analizinde, piyasa geneli için aylık ortalama getiriler1.66% ile 0.84% arasında değişim göstermiştir.Değer ağırlıklıportföylerdennegatif hedge getiri elde edilmesine rağmen, istatistiki olarak anlamlı bulunmamıştır. Eşit ağırlıklı portföylerden elde edilen hedge getiri için de istatistiki olarak anlamlı değerlere ulaşılamamıştır. Ayrıca, büyük, küçük ve mikro gruplar için getiriler benzer özellikler göstermiştir. CAPM tarafından açıklanamayan getiriler üzerinde Fama-French üç faktör modelinin açıklayıcılığının bulunmasından dolayı, net hisse senedi ihracı ile ilgili ortalama getiriler, faktör modeller tarafından açıklanmaya çalışılmıştır. Bu amaçla, zaman serisi regresyonlarından elde edilen alfa katsayıları değerlendirilmiştir. Alfa katsayıları ve t-istatistikleri, gruplar içerisinde yer alanportföyler arasında tutarlılık göstermemiştir. CAPM ve Fama-French üç faktör modelinden elden edilen alfa katsayıları istatistiki olarak anlamlı bulunmamıştır. Tüm bu bulgular, Borsa İstanbul'da net hisse senedi ihracı ile gelecek dönem hisse senedi getirileri arasında altı yıllık analiz periyodunda anlamlı bir ilişkinin bulumadığını göstermiştir.

Anahtar Kelimeler: *Net hisse senedi ihracı, piyasa etkinliği, varlık fiyatlandırma.*

JEL Sınıflandırması: *G12, G14*

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1. INTRODUCTION

The preliminary research on the relation between the net stock issues and future returns is carried out by Loughran and Ritter (1995). The authorsaffirm that if the companies issue stocks, expected stock returns fall subsequent five years. Either initial public offering or seasoned equity offering, the issuerfirms provide lower returns to the investors in comparison with non-issuer firms.Since it is inconsistent with standard asset pricing theory and could be used in prediction of future returns, it is denominated "net stock issuesphenomenon" in literature.

After exploring the abnormal return pattern,new studies pursue in international markets. Daniel and Titman (2006) have found a strong negative relation between future returns and stock issuance between 1968 and 2001 in the US. market. They attributed thereasonof the effect for behavioral factors rather than risk-based ones.Pontiff and Woodgate (2008)examinewhether stock issuance is used to predict future returns in the US. market. The authors analyse the pre-1970 period and the post-1970 period bothfor annual and 5-year holding period. Although the relation between share issuance and returns is found insignificant pre-1970 period, the post-1970 period, in contrast, gives strong relation both for the annual and 5-year holding period. In research, the possibility about the finding might be sample-specific has left vague and the subject to future studies. Fama and French (2008) examinedwell-documented anomalies of size, value, momentum, profitability, asset growth, accruals andnet stock issues (hereafter NSI)between 1963 and 2005 in the US.market. The authors split the stocks into the groups as micro, small and big to better analyseif the anomaly findings are pervasive in allgroups. The results revealed the existence ofthe NSI effect in all groups in the US.market. Sehgal, Subramaniam and Morandiere (2012) searched the presence of size, value, momentum, liquidity, accruals, profitability and net stock issues anomalies between 1996 and 2010 in Bombay Stock Exchange. Following the prior literature, the portfolio sorts and factor models are used to examine the presence and significance of the corresponding effect. In portfolio approach, the stocks are ranked as per anomaly variables and sorted five groups. The 20% of lowest and highest quintiles are denominated as corner portfolios and hedge returns are calculated by taking the difference of corner portfolios. The intercepts are taken into consideration for the factor models. The average return of low net stock issues portfolio is calculatedmonthly 2% while high net stock issues portfolio is 2.8%. The intercepts that are obtained from CAPM are found insignificant which means the anomalous returns are explained by the model. Contrary to Fama and French (2008) study, it is found that net stock issues are positively related to stock returns in India,the intercepts are statistically insignificant and hence it is no more challenging the asset pricing models. Jiang and Zhang (2013) reexamined the NSI together with nine stock market anomalies. The stocks traded in NYSE, AMEX and NASDAQ are included to the sample. The analysis period is chosen from 1962 to 2011. By keeping the standard literature in the analysis, the portfolio sorts and factor models are used to investigate the presence of anomalies in the US. market. They found pervasive NSI effect across different groups. Although they exclude the fifty percent of high NSI stocks or low NSI stocks from the sample, the effect remains pervasive. The authors found that the explanatory power of the factor models was limited. All those findings strengthen the effect of NSI on average returnsin the US. market.

Drechsler and Drechsler (2014) examine the relationship between shorting-fees and well-known anomalies including NSIbetween 2004 and 2012 in the US. market. Similar to

prior research, both univariate portfolio sorts and factor models are tested. For univariate portfolios, the stocks split into ten deciles for each anomaly variable and long-short portfolios are constructed. The authors asserted the most of the premiums disappear in case of low short fees. Chen and Jiang (2018) and Li et al. (2018) are further searched and documented strong evidence of the phenomenon in the US. market. Li et al. (2018) investigate the effect of cash flows on net stock issuance. In order to analyse NSI, the stocks split into portfolios and searched the anomaly finding across the portfolios. Besides, Fama and Macbeth (1973) cross-sectional regressions are used to unveil the relation between the expected returns and stock issues. The findings support the existence of NSI anomaly between 1970 and 2010. Chen and Jiang (2018) reexaminedNSIfor the period from 1980 to 2016. The authors proved the persistence of anomaly in the US.market. They further assertedthe predictive power of net stock issueswasstatistically and economically large.

In this study, I aimed to uncover whether NSI is negatively related to subsequent stock returns and factormodels canexplain the returns associated with the phenomenon in Turkey. The portfolio sorts present no significant relationshipbetween returns and stock issuance. The results of CAPM and Fama-French three factor model are also found in line with portfolio sorts. Thus the findings are interpreted as the stock issues effect is not observed in Turkey and theresultsare not compatible with the US. marketas mentionedin Fama and French (2008) study. Contrarily to size and value anomalies,both arewidely searchedin literature, the NSIanomaly has sparse evidence. So that the findings of thispaperareexpected to contribute the existing literature specificallyfor the developing markets.

2. DATA AND METHODOLOGY

The sample consists of all nonfinancial firms traded in Borsa Istanbul between 2012 and 2018. The data of analysis is provided from different sources.The closingstock pricesare obtained from Borsa Istanbul DataStore and accounting datafrom Public Disclosure Platform. The treasury bill returnisused as the risk-free rate (R_F) and taken from the website of Central Bank of Turkey Republic. BIST-100 index is used as a market proxy (R_M). The data for the split-adjusted shares outstandingis from Central Securities Depository of Turkeyand Public Disclosure Platform.Since the data of actual shares outstanding starts from Septemberof 2010that limits the analysis period of research[1].Thus the analysis covers the datafrom December of 2010 to June of 2018.

The NSI is measured as the changes in split-adjusted shares outstandingat the fiscal year ending in year *t-2* to the fiscal year-ending in *t-1*by following Fama and French (2008: 1676).In literature, the anomaly studies arecommonly carried out byusing both portfolio and regression approaches. Keeping on the track of prior studies and in light of Fama and French (2008), I useboth the portfolio approach and regressions to test the existenceof anomaly. In a similar manner of Fama and French (2008), I split the stocks each year into five quintiles and calculate the equal and value-weighted portfolio returns for the market.Further, I construct groups as micro, small and big using 60%-20%-20% breaking points. To tackle the possible effect of outliers, 1% of the bottom and upper values are excluded from the sample. The stocks are sortedinto five quintiles from N1to N5for each group.The difference between high

[1] The actual shares outstanding started to announce daily on website of Central Securities Depository of Turkey as per the Capital Markets Board of Turkey decree no 5/157 of 17th February, 2011.

and low quintile is taken and equal and value-weighted returns are calculated for the July of *t* to June of *t+1*. In other words, zero-cost portfolios are formed. The portfolios are rebalanced at the end of June each year and the values are evaluated as per t-statisticas shown below.

$$t - statistics = \frac{Average\ Return - \mu_0}{Standart\ Deviation\ /\sqrt{Number\ of\ Observation}}$$

where, μ_0 is the population mean andit equals to 0.

Fama and French (1993, 1996) asserted that Fama-French three factor model was better on explaining the anomaly variables over CAPM. So it is noteworthy to use CAPM and Fama-French three factor model to see if the models can explain the average returns. CAPM and Fama-French three factor model's explanatory poweron returnsassociated with NSI is examined as an alternative approach.In CAPM, the excess return over risk-free rate is explained by market risk factor as presented in the following equation:

$$R_P - R_F = \alpha + \beta\ (R_M\ - R_F\ )_t + \varepsilon_t$$

The portfolio excess return over the risk-free rate (R_P -R_F) takes part as the dependent variable in equation and market risk factor (R_M-R_F) is the sole explanatory variable. The intercept term and factor loading are shown α and β, respectively.

In Fama and French three factor model, size and value are identified as risk factors in addition to market factor.The size is calculated by multiplying the closing price of stock with the number of shares outstanding. In order to form the value factor, book equity of stock is divided by market equity and year-end values are taken in calculation. The stocks are ranked in accordance with the size and split into two groups as smalland big. Similarly, the stocks are independently sorted book-to-market ratio (book equity to market equity, BE/ME ratio) and divided into three groups using %30-%40-%30 breaking points. Afterall the intersection of portfolios is taken and constructed six portfolios. The size factor (SMB)is formed bysubtracting the average returns of small portfolios from the average returns of big portfolios. The value factor (HML) is the difference between the portfolio returns ofhigh BE/ME stocks and low BE/ME stocks.

In regression model, the portfolio returnover risk-free rate (R_P –R_F) is used dependent variable andmarket, size and value factors (denoted as (R_M– R_F), SMBand HML, respectively) are explanatory variables asdescribed below.

$$R_P - R_F = \alpha + \beta\ (R_M\ - R_F\ )_t + s\ SMB_t + b\ HML_t + \varepsilon_t$$

The regression models of CAPM and Fama-French three factor model are independently run for the portfolios and the intercepts(denoted α) are evaluated.In regression models, interceptsrepresent theunexplained returns. If the α is high, that implies the explanatory power of the model is not well.When the returns hadcompletely explained by factors, the intercept would have been zero.In the case of statistically positive or negative returns, it shows the returns are not captured by the model and hence the anomaly finding is proved. To this end, both CAPM and Fama-French three factor model are tested to determine whether the returns associated with NSI are explained by the models.

3. EMPIRICAL FINDINGS

On average 188 firms data is used although the observations vary from year to year in the sample.The analysis is held between July of 2012 and June of 2018 due to the dataunavailability. The portfolio approach enables dissecting the anomaly findings in groups and to detect whether the anomaly prevails only in particular group(s). In addition to this, CAPM and Fama-French three factor model allow to further explore the returns relating toNSIby using time-series regressions.

Table 1 presents the low-high portfolio returns with t-statistics for the market.

Table 1. Hedge Portfolio Returns for Market

Stock Issues Sorted Portfolios	**N1**		**N5**		**Zero-Cost Portfolio**	
MARKET	Mean	t-stat	Mean	t-stat	Mean	t-stat
Equal-weighted Returns (%)	1.204	**1.657**	1.409	**2.235**	0.205	**0.481**
Value-weighted Returns (%)	1.496	**2.022**	1.443	**2.148**	-0.052	**-0.093**

The portfolio N1 consists of the lowest NSI stocks so that the return of the portfolio is expected to be the highest among quintiles. In contrast, the portfolio N5 comprises the highest NSI stocks and the returns are expected to be lower. When the investor takes a long position in N1 portfolio and short position in N5 portfolio, he might generate premium. The hedge returns are calculated by subtracting the return of N5 from N1in order to exhibit the negative relation between NSI and expected returns. The results are evaluated as per 5% level of significance. In market portfolio, the value-weighted hedge return providesa negative premium of approx. 0.05% monthly but t-statistic is insignificant. For the equal-weighted return, neither it is negatively provided nor t-statistic is significant.

Table 2. Hedge Portfolio Returns for Big, Small and Micro Groups

Stock Issues Sorted Portfolios	**N1**		**N5**		**Zero-Cost Portfolio**	
BIG	Mean	t-stat	Mean	t-stat	Mean	t-stat
Equal-weighted Returns (%)	1.837	**2.435**	2.125	**1.584**	0.288	**0.225**
Value-weighted Returns (%)	0.203	**2.045**	0.248	**2.402**	0.044	**0.444**
Stock Issues Sorted Portfolios	**N1**		**N5**		**Zero-Cost Portfolio**	
SMALL	Mean	t-stat	Mean	t-stat	Mean	t-stat
Equal-weighted Returns (%)	1.358	**1.565**	1.006	**1.312**	-0.352	**-0.536**
Value-weighted Returns (%)	0.181	**1.551**	0.147	**1.378**	-0.034	**-0.388**
Stock Issues Sorted Portfolios	**N1**		**N5**		**Zero-Cost Portfolio**	
MICRO	Mean	t-stat	Mean	t-stat	Mean	t-stat
Equal-weighted Returns (%)	1.432	**2.096**	1.043	**1.310**	-0.390	**-0.731**
Value-weighted Returns (%)	0.070	**2.180**	0.014	**0.395**	-0.056	**-2.054**

The hedge portfolio returns are shown with t-statistics In Table 2 for big, small and micro groups. In small and micro groups, the hedge returns are negative,in contrast, they are positive in big group.The t-statistics are found insignificant except value-weighted hedge return in micro group. In order to evaluate the tendency of returns from low to high NSI, the quintiles for market, big, small and micro groups are also tabulated below.

Table 3. Univariate Portfolio Sorts For MarketQuintiles

	Equal-weighted Returns				
	N1	**N2**	**N3**	**N4**	**N5**
Mean (%)	1.204	0.912	1.520**	1.540**	1.409**
t-stat	**1.657**	**1.317**	**2.286**	**2.300**	**2.235**
	Value-weighted Returns				
	N1	**N2**	**N3**	**N4**	**N5**
Mean (%)	1.496**	0.838	1.052	1.661**	1.443**
t-stat	**2.022**	**1.372**	**1.581**	**2.474**	**2.148**

Note: (***)(**) (*) respectively indicate %1, %5 ve %10 significance levels.

Table 3 presents the quintiles for the market. The first row shows the averagereturns (%) and the statistics are given under returns.The three of five portfolio returns are significant at 5% level. From equal-weighted portfolio N1 to N5, the returns present an upwardtendency even unsteady. However, the returns should decrease from low NSI portfolio to high NSI portfolio. On the other hand, the same finding is not observed for the value-weighted returns and further the hedge return is negatively attained. In general, we can't speak of a monotonic fall from N1portfolio to N5 portfolio for market. The t-statistics are not significant in all quintiles and the hedge returns are statistically insignificant.

Table 4. Univariate Portfolio Sorts For Big Quintiles

	Equal-weighted Returns				
	N1	**N2**	**N3**	**N4**	**N5**
Mean (%)	1.837**	1.295*	1.486*	1.141	2.125
t-stat	**2.435**	**1.764**	**1.932**	**1.541**	**1.584**
	Value-weighted Returns				
	N1	**N2**	**N3**	**N4**	**N5**
Mean (%)	0.203**	0.253**	0.214*	0.161	0.248**
t-stat	**2.045**	**2.635**	**1.882**	**1.572**	**2.402**

Note: (***) (**) (*) respectively indicate %1, %5 ve %10 significance levels.

Table 4 present the results of univariate portfolio sorts for big group. The statistical significance of the portfolios is lower in comparison with the market portfolios.For example,N2 and N3 in equal-weighted portfolios and N3 in value-weighted portfolio are significant at 10% level.The returns are increasing from portfolio N1 to portfolio N5, with some exceptions. Thus the tendency of portfolios is almost upward.In addition,the hedge returns are positive and further the t-statistics are insignificant.

Table 5. Univariate Portfolio Sorts For Small Quintiles

	Equal-weighted Returns				
	N1	**N2**	**N3**	**N4**	**N5**
Mean (%)	1.358	1.369*	1.636*	0.476	1.006
t-stat	**1.565**	**1.886**	**1.889**	**0.632**	**1.312**
	Value-weighted Returns				
	N1	**N2**	**N3**	**N4**	**N5**
Mean (%)	0.181	0.204**	0.265*	0.061	0.147
t-stat	**1.551**	**2.066**	**1.955**	**0.615**	**1.378**

Note: (***) (**) (*) respectively indicate %1, %5 ve %10 significance levels.

Table 5 present the results of the small group which comprises 20% of the stocks traded in the market. None of the portfolios are found significant at 5% or 1% level except

value-weighted N2 portfolio. The low-high portfolio (zero-cost) portfolio returns are negative both in equal and value-weighted portfolios and that is compatible with the new share issuance brings the negative return in subsequent period. However, the tendency of quintiles doesn't present monotonic rise or fall as a signal of the returns are increasing by the fall of net stock issues and vice-versa.

Table 6. Univariate Portfolio Sorts For Micro Quintiles

	Equal-weighted Returns				
	N1	**N2**	**N3**	**N4**	**N5**
Mean (%)	1.432**	1.466**	1.622**	0.948	1.043
t-stat	**2.096**	**2.116**	**2.237**	**1.387**	**1.310**
	Value-weighted Returns				
	N1	**N2**	**N3**	**N4**	**N5**
Mean (%)	0.070**	0.062*	0.069**	0.048	0.014
t-stat	**2.180**	**1.739**	**2.010**	**1.334**	**0.395**

Note: (***) (**) (*) respectively indicate %1, %5 ve %10 significance levels.

The portfolio returns for micro group range from 0.062% to 1.622% monthly and the t-statistics are significant at 10% and 5% levels. The micro group consists of 60% of the stocks in the sample. Similar to the small group, the equal-weighted hedge returnisnegatively obtained but it is insignificant.The picture slightly changes in value-weighted hedge return. Even though the returns are getting lower together with the rise of the value of net stock issues, all are notsignificant statistically.For example, N1 portfolio is significant at %5 level while N5 portfolio is insignificant. It seems as though the high NSI portfolio provided high return but the opposite was not valid.On the other hand, the hedge return is negative and further it is significant at 5% level.To put it briefly, the hedge returns exhibit inconsistency, most of them are statistically insignificant and further none of the portfolio returnsshow a monotonic rise by the decrease of net stock issues.

The univariate portfolio sorts present no significant relation between NSI and returns. As an alternative approach, CAPM and Fama-French three factor model are used to comprehend more about if unexplained returns related NSI could be explained by factor models. To this end, CAPM is primarily tested and next the Fama-French three factor model is used to compare whether the returns that are notcaptured by CAPM, could be explained by Fama-French three factor model.Table 7 and Table 8 present the alpha values of CAPM for market, big, small and micro groups.

Table 7. CAPM Regression Results for Market

MARKET	**α**	**t (α)**	**Adj R^2**	**MARKET**	**α**	**t (α)**	**Adj R^2**
N_1- R_F	**0.006**	**1.102**	**0.480**	**N_1- R_F**	**0.008**	**1.709**	**0.583**
N_2- R_F	0.003	0.595	0.582	N_2- R_F	0.002	0.618	0.629
N_3-R_F	0.009	2.108	0.604	N_3-R_F	0.004	1.093	0.734
N_4- R_F	0.009	2.195	0.636	N_4- R_F	0.010	2.695	0.706
N_5- R_F	**0.008**	**1.919**	**0.549**	**N_5- R_F**	**0.008**	**1.768**	**0.635**

Note: α and t (α) represent the intercept term and t-statistics respectively. The standard errors of predicted parameters are adjusted against autocorrelation and heteroscedasticity by using Newey-West HAC correction.

In regressions of CAPM and Fama-French three factor models, the alpha values are taken into consideration to interpret the results.When the alpha value isdifferent than zero that is supposed tobe the signal of the unexplained returns by the models. In other words, the

statistically significant positive or negative values prove the anomalous returns. It is accepted that Fama-French three factor model is the improvement over CAPM, so Fama-French three factor model is expected to be better inexplaining the returns those are not captured by CAPM. In case of unexplained returns are captured by Fama-French three factor model, that is attributed to the insufficiency of CAPM for the explanation of average returns.

When the alpha values are evaluated for market portfolio, it can be easily observed that the alpha values are very close to each otherfor equal and value-weighted portfolios. The alpha value of N1 is not significantforthe equal-weighted portfolio and it is only significant at 10% level for the value-weighted portfolio. For N5 portfolios, they are alsosignificant at %10 level. The adjusted R^2 values range from 73% to 48%.

Table 8. CAPM Regression Results for Big, Small and Micro Groups

CAPM (Equal-weighted Returns)				**CAPM** (Value-weighted Returns)			
BIG	**α**	**t (α)**	**Adj R^2**	**BIG**	**α**	**t (α)**	**Adj R^2**
N_1- R_F	0.012	2.288	0.550	**N_1- R_F**	0.000	-0.512	0.454
N_5-R_F	0.014	4.352	0.201	**N_5-R_F**	0.000	-0.123	0.554
SMALL	**α**	**t (α)**	**Adj R^2**	**SMALL**	**α**	**t (α)**	**Adj R^2**
N_1- R_F	0.007	1.026	0.448	**N_1- R_F**	-0.001	-1.209	0.447
N_5-R_F	0.004	0.673	0.425	**N_5-R_F**	-0.001	-1.184	0.399
MICRO	**α**	**t (α)**	**Adj R^2**	**MICRO**	**α**	**t (α)**	**Adj R^2**
N_1- R_F	0.008	1.634	0.403	**N_1- R_F**	-0.001	-5.280	0.352
N_5-R_F	0.004	0.673	0.397	**N_5-R_F**	-0.002	-7.683	0.446

Note: α and t (α) represent the intercept term and t-statistics respectively. The standard errors of predicted parameters are adjusted against autocorrelation and heteroscedasticity by using Newey-West HAC correction.

CAPM regression results are given in Table 8 for the groups. At first sight, it could be noticed that the results are quite similar to the market portfolio with some exceptions. In big group, t-statistics in equal-weighted portfolios are found statistically significant. In micro group, the value-weighted portfoliosare significant at 1% level but none of them are significant in small group. Those results do not provide sufficientinformation in order to reach a deduction. Fama-French three factor model might give some information about the inconsistency across groups and between the market.Table 9 and Table 10 show the results of Fama-French three factor model.

Table 9. Fama-French Three Factor ModelRegression Results for Market

Fama-French Three Factor Model				**Fama-French Three Factor Model**			
MARKET	**α**	**t (α)**	**Adj R^2**	**MARKET**	**α**	**t (α)**	**Adj R^2**
N_1- R_F	**0.812**	**7.843**	**0.513**	**N_1- R_F**	**0.006**	**1.355**	**0.606**
N_2- R_F	0.002	0.412	0.634	N_2- R_F	0.001	0.383	0.626
N_3- R_F	0.008	2.045	0.676	N_3- R_F	0.004	0.995	0.727
N_4- R_F	0.009	2.235	0.689	N_4- R_F	0.010	2.649	0.701
N_5-R_F	**0.007**	**1.719**	**0.628**	**N_5-R_F**	**0.007**	**1.764**	**0.627**

Note: α and t (α) represent the intercept term and t-statistics respectively. The standard errors of predicted parameters are adjusted against autocorrelation and heteroscedasticity by using Newey-West HAC correction.

In Table 9, the alpha value is found 0.812 and significant at 1% level for equal-weighted N1 portfolio whereas it is not valid for value-weighted portfolio. The alpha values of N5 portfolio are insignificant at 5% level for both equal-weighted and value-weighted portfolios.

Table 10: Fama-French Three Factor Model Regression Resultsfor Big, Small and Micro Groups

Fama-French 3 Factor Model (Equal-weighted Returns)				**Fama-French 3 Factor Model (Value-weighted Returns)**			
BIG	**α**	**t (α)**	**Adj R^2**	**BIG**	**α**	**t (α)**	**Adj R^2**
N_1- R_F	0.012	2.207	0.537	N_1- R_F	0.000	-0.518	0.443
N_5-R_F	0.004	0.551	0.470	N_5-R_F	-0.001	-0.756	0.601
SMALL	**α**	**t (α)**	**Adj R^2**	**SMALL**	**α**	**t (α)**	**Adj R^2**
N_1- R_F	0.006	0.944	0.476	N_1- R_F	-0.001	-1.282	0.470
N_5-R_F	0.005	0.788	0.429	N_5-R_F	-0.001	-0.835	0.399
MICRO	**α**	**t (α)**	**Adj R^2**	**MICRO**	**α**	**t (α)**	**Adj R^2**
N_1- R_F	0.006	1.327	0.547	N_1- R_F	-0.001	-6.000	0.455
N_5-R_F	0.004	0.749	0.552	N_5-R_F	-0.002	-7.565	0.532

Note: α and t (α) represent the intercept term and t-statistics respectively. The standard errors of predicted parameters are adjusted against autocorrelation and heteroscedasticity by using Newey-West HAC correction.

There are two distinctive features of group portfolios in Table 10. First, the alpha valueof big group issignificant only for N1 portfolio but not for N5 portfolio. Second, t-statistics are significant at 1% level in value-weighted returns in micro group. When the results are interpreted for the groups, they seem quite similar to CAPM.

All thosefindings barely give meaningful results that may imply the effect of NSI on expected stock returns. The portfolio results are not presenting anomaly signals. In order to verify that,factor models are used as an alternativebefore coming to a conclusion. The alpha values of CAPM and Fama-French three factor model are roughly not significant at 5% level for the market. Theregression resultsarequite similar for big, small and micro group. Although the equal-weighted regression results are significant for the big group, it is not supported by the univariate portfolio sorts. In micro group, the alpha values are found significant at 1% level in value-weighted portfolios. The same finding is valid for the univariate portfolio sorts. When we summarise all those findings both for factor models and portfolio sorts, we can reach a meaningful result only for micro group. The results of micro group strengthenthe evidence about the anomaly findings are more common among micro stocks.It may be attributed to theeffect of extremes in anomaly variables.

In addition to all,the adjusted R2 values are generally low. The adjusted R2 values for Fama-French three factor model are foundhigher vis-à-visCAPM.Final to say about the results, there is not observed consistent net stock issue effect in analysis and further the regression results confirm the univariate portfolio sorts and which is found robust.

4. CONCLUSION

This study objects to dissectthe NSI effectbetween 2012 and 2018in Turkey.For that purpose, univariate portfolio sorts are primarily carried out and next factor models areused to exhibit the relation between the average returns and the NSI.

In portfolio analysis, the stocks are sortedand split into five portfolios for market, big, small and micro groups. The groups enable us whether the anomaly findings are peculiar to specific group or groups. The equal-weighted hedge return is found positive for market while the value-weighted return is negative and the hedge returns are insignificant. For the size groups, the hedge returns are obtained insignificant except value-weighted return in micro group. When the tendency of the quintiles is evaluated, the returns exhibit unsteady patterns. In general, univariate portfolio sorts present no significant relationship between the average returns and NSI.

The factor models are used to determine if the returns related to NSI are captured by them. The models are tested gradually. Firstly the CAPM is tested and if CAPM enables to explain the returns,the regressions give statistically significant alpha values. Next, the explanatory power of Fama-French three factor model is tested. If the returns hadremained unexplained in CAPM but Fama-French three factor model would had explained them, the alpha values would be insignificant. In regression analysis,almost all of the alpha values for market are statistically insignificant for CAPM and Fama-French three factor models. Moreover, the alpha values are generally insignificant for CAPM and Fama-French three factor model in big and small groups but micro group. The negativehedge returnpresents significant t-statistic specifically in value-weighted return thus the regression results are in line with portfolio sorts in micro group. It is thought that it might be attributed to the prevalence of micro stocks.

Final to say, the findings exhibit no significant relation between returns and net stock issues.Fama and French (2008) attained a pervasive NSI effect in the US. but all those results are in contrast to Fama and French (2008) findings.So thatthe results are interpreted as the net stock issues effect is not observed in Turkey and it couldn't be used to predict future returns. The dataunavailabilityrestricted the analysis period of the research sothe presence of the NSI effectmaybe researched for a longer periodand the stock level analysis such as Fama-Macbeth regressionscould be used as an alternative approachin forthcoming studies.

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