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WHY DO FIRMS REPURCHASE THEIR STOCKS? EVIDENCE FROM AN EMERGING MARKET

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Abstract

Though it has recently become a contemporary financial management tool, stock repurchase can be so dangerous that it may raise concerns about insider trading and manipulative transactions. In fact, such concerns underlie the most important critique of stock repurchase and justify its prohibition, at least its restriction, in several jurisdictions to date. Turkey, as one of these jurisdictions, has latterly been updated in order to allow open market stock repurchases with certain restrictive provisions. We intend to explore why Turkish firms decide to repurchase their stocks. Having employed a conditional logistic regression model, the results reveal that signaling hypothesis, i.e. undervaluation and positive information dissemination, and excess capital and free cash flow hypothesis, i.e. excess cash distribution, hold for Turkish companies.

Keywords: Stock Repurchase, Emerging Market, Conditional Logistic Regression, Turkey

1. Introduction

Although it has been a widely accepted notion and practice in well-developed countries such as US, UK, and Canada for years, stock repurchase has received increasing attention in lots of countries regardless of the development status of their financial markets. Research shows that S&P 500 companies' expenditures on stock repurchases reached $536,4 billion in 2016 (Prnewswire, 2017). This figure was about £46 billion in the UK, which was very close to the amount of dividend payments of £62 billion, as of 2006 (Dhanani and Roberts, 2009). Canadian markets witnessed a repurchase amount of $3.3 billion in 2003, a considerable growth rate of 670% on the level in 1985 (Kooli and L'Her, 2010). Even in Continental Europe and Asia, where dividends are more common, stock repurchases have been gaining respect for a decade. Repurchase transactions have amounted to €3.5 billion in Germany and to €6.2 billion in France (Mieczysław, 2011). In Japan, more than one half of firms listed in Tokyo Stock Exchange have engaged in stock repurchases since 2001 (Franks *et al.* 2017).

The case in Turkey, where regulations regarding stock repurchases have come into effect more recently than other countries, is unexplored in that respect and it is worth to provide some primary evidence on which factors stimulate companies to repurchase their own stocks. Indeed,

company law regulations have been initially revised in order for stock repurchases to gain acceptance in Turkish financial system only in 2010, when first stock repurchase transaction is carried out in the last quarter, with a last revision date of January 3, 2014.

Studies regarding the motivation behind stock repurchases in several jurisdictions reveal that companies repurchase their shares so as to replace cash dividends due to tax considerations (excess capital hypothesis), to allocate excess cash to shareholders (free cash flow hypothesis), to optimize capital structure (optimal leverage hypothesis), to avoid unwanted takeovers (takeover deterrence hypothesis), to make use of stock options as a motivator for employees and managers (management incentive hypothesis), to increase shareholders' wealth (wealth transfer hypothesis), and to stabilize price movements (signaling hypothesis). For a thorough explanation of these hypotheses, we refer to Baker *et al.* (2003).

Though Turkish firms argue that the main reason is undervaluation, it is hard to believe in that they are the only ones whose stocks have been undervalued so far. Hence, we argue why firms repurchase stocks and why others do not in *order* both to differentiate firms from each other and to understand the implied motivations behind repurchases in the aftermath of the new regulations.

In that respect, the paper is structured as follows. We provide a brief literature review in Section 2. Then, in Section 3 we present our data and methodology. Section 4 discusses our findings and Section 5 concludes.

2. Literature Review

Existing literature contains a rich amount of studies on the subject matter, however, a variety of answers under several hypotheses are produced depending on the given market characteristics and repurchase methods used, yet none of them hitherto have produced the best answer.

In this regard, studies based on excess capital hypothesis generally intend to measure the level of cash held in companies using balance sheet and income statement items as variables and discuss the relationship between this level and the likelihood of repurchase. Dittmar (2000), for instance, argues that companies that have high levels of cash in hand or generate high levels of cash inflows have tendency to repurchase their stocks.

This approach also provides a basis for studies looking for whether repurchases are used as a substitute for cash dividends. According to Andriosopoulos and Hoque (2013), repurchase plays an important role in managerial decisions, as it is more advantageous than cash dividends. Grullon and Michaely (2002), simply pointing out that stock returns of firms repurchased their stocks after discountinuing cash dividends were greater than those of the ones did not repurchase, show the market preceived repurchases as substitutes for cash dividends.

Scholars that try to find support for free cash flow hypothesis are also interested in cash level, however they often focus on an idle cash level that is projected by regression models. On the other hand, relevant financial ratios are accepted as proxy for idle cash in some studies as well. Fenn and Liang (2001), for example, use "EBIT/Capital Expenditures" and "Market Value/Book Value" as proxy variables. In another study, Grullon and Michaely (2004) find that market reacts positively towards repurchasing firms that are exposed to inefficiency risk due to diminishing investment opportunities. Similar firms, in which managers and institutional investors are shareholders at the same time, also distribute idle cash through repurchasing (Oswald and Young, 2008).

Strong candidates for stock repurchases are the companies with low leverage ratios (Chen, 2006), the companies which are more exposed to being acquired (Doan et al., 2012), and the companies in which managers are entitled to receive stock options (Dittmar, 2000) under optimal leverage hypothesis, takeover deterrence hypothesis and management incentive hypothesis, respectively.

Supporters of wealth transfer hypothesis state that bondholders' losses depend on the size of the repurchase program and the probability of a bond rating downgrade increases when a repurchase announcement is made (Maxwell and Stephens, 2003). Furthermore, those losses are larger in companies possessing a low level of investor protection (Jun *et al.*, 2009).

Lastly, stock repurchase plays a role in sending a signal to the market through two

channels. First is based on the assumption of undervaluation of stocks due to the information asymmetry problem associated with insider positions of managers (Keown *et al.,* 2004). Second, however, is based on the assumption of positive impact of good news about the company where managers tend to send a strong signal to the market in that stocks repurchased are positive net present value investments (Lie, 2005). Studies regarding signaling hypothesis show that low return (Vermaelen, 1981; Stephens and Weisbach, 1998; Oswald and Young, 2008; Chen, 2006) and low market value/book value (Ikenberry et al., 1995; Chen, 2006) big (Chen, 2006; Andriosopoulos and Hoque, 2013) companies repurchase their own stocks. Some studies, comparing pre- and post- repurchase operating profit levels, also find that operating performance is enhanced following repurchases (McNally, 1999; Lie, 2005). Earnings per share (EPS) is another metric to measure the signaling power of repurchases. Research reveals that companies repurchase their stocks so as to meet or exceed analysts' EPS expectations (Hribar et al., 2006), to provide a sustainable growth in EPS (Myers *et al.*, 2007), to preserve the EPS growth rate (Bens *et al.,* 2003) or to use them in EPS-based management compensation plans (Young and Yang, 2011).

3. Data and Methodology

Data set, i.e. financial reports, e.g. financial statements, annual reports or audit reports pertaining to repurchasing firms, for this research is primarily retrieved from Borsa Istanbul (BIST), but Bloomberg, Datastream and Thomson Reuters databases are used as well when necessary.

The sample period extends from the third quarter of year 2010 to the last quarter of year 2013. Total volume of repurchase transactions has experienced a ten-fold increase within this period. On the other hand, the most important reason behind stock repurchases in Turkey is disclosed to be avoiding undervaluation (Pirgaip and Karacaer, 2015).

We focus on open market repurchases as they prove to be the most popular method used in almost all markets. We follow excess capital hypothesis, free cash flow hypothesis, optimal leverage hypothesis and signaling hypothesis only. We are not interested in takeover deterrence/management entrenchment hypothesis, management incentive hypothesis, or wealth transfer hypothesis since majority of shares are generally held by controlling parties, share-based payments have never been experienced yet, and debt issuance have not been common to date in Turkey.

We base our hypotheses on various financial indicators that may have potential impact on stock repurchases. Table 1 provides a brief discussion and expected signs of these variables. In this regard, *CASH* variable is a proxy for free cash flow hypothesis. Our first hypothesis is that "**H_1.** Firms having a high cash level are likely to repurchase stock when compared to the ones having a low cash level", so we expect that *CASH* coefficient has a positive sign.

We utilize *EPS* data in order to test signaling hypothesis which is "**H_2.** Firms having low EPS are likely to repurchase stock when compared to the ones having high EPS" and we expect a negative sign this time. Furthermore, *MKBK* variable indicates undervaluation, thus we expect a negative relationship between this variable and stock repurchase under "**H_3.** Firms having low MV/BV are likely to repurchase stock when compared to the ones having high MV/BV". *SIZE* variable, on the other hand, provides evidence for information asymmetry, which is a root cause for unfair pricing of small firms. Hence we test for "**H_4.** Firms having small firms are likely to repurchase stock when compared to the big ones". *INTNG* variable is associated with information asymmetry that leads to undervaluation as well (Barth and Kasznik, 1999). So, "**H_5.** Firms having a high level of intangibles are likely to repurchase stock when compared to the ones having a low level of intangibles". Lastly, high performance firms would signal to the market that their performance is not temporary in that "**H_6.** Firms having a high level of operating income are likely to repurchase stock when compared to the ones having a low level of operating income".

We also look for whether repurchase is a substitute for cash dividends by means of another variable, i.e. *DIVY*, and hypothesize that "**H_7.** Firms having low dividend yield are likely to repurchase stock when compared to the ones having high dividend yield".

DEBT variable plays an important role in determining leverage level and would let us know whether firms repurchase in order to achieve an optimal capital structure. Our hypothesis

is "**H_8.** Firms having low leverage ratios are likely to repurchase stock when compared to the ones having high leverage ratios".

We divide all of the variables, except for *EPS*, *DIVY* and *MKBK* which themselves are already ratios, by total assets so as to control for scale effects and to avoid heteroscedasticity.

We employ a conditional logistic regression model, which is literally the same for fixed-effects logit for panel data, in this study. Conditional logistic regression model is more appropriate than classic logistic regression model (Young and Yang, 2008), since the latter would provide seriously biased predictions when matched data is analyzed (Selvin, 2004).

Table 1. Financial variables indicating motivation for repurchases

Variable	Represents	Signaling			Optimal Leverage	Free Cash Flow
		Excess Capital	Undervaluation	Positive Information		
CASH	Cash Level					$\frac{Cash_{i(t-1)}}{Assets_{i(t-1)}}$ **(+)**
EPS	Earnings Per Share			$\left(\frac{Net\ Income}{Share\ Price}\right)_{it-1}$ **(-)**		
MKBK	Market Value/Book Value		$\left(MV/BV\right)_{i(t-1)}$ **(-)**			
DIVY	Dividend Yield	$\left(\frac{Dividend\ per\ share}{Share\ price}\right)_{it-1}$ **(-)**				
SIZE	Total Assets		$ln(Assets)_{i(t-1)}$ **(-)**			
DEBT	Leverage ratio				$\left(\frac{Financial\ Debt}{Assets}\right)_{it-1}$ **(-)**	
INTNG	Intangible Assets		$\frac{Intangibles_{i(t-1)}}{Assets_{i(t-1)}}$ **(+)**			
OPERF	Profitability			$\frac{Operating\ Income_{i(t-1)}}{Assets-Cash_{i(t-1)}}$ (+)		

Source: Dittmar (2000), Oswald and Young (2008), Young and Yang (2011), Andriosopoulos and Hoque (2013), Chen (2006), Lie (2005), Pacheco and Raposo (2009)

In the analysis, we first 1-1 and 1-k match each repurchasing firm in any quarter within the sampling period of 2010/3-2013/12 with similar non-repurchasing firms with respect to industry, size and market value. We match repurchasing and non-repurchasing firms' data with certain thresholds, i.e. 10%, 20% and 25%. For instance, in size matching, we look for a corresponding non-repurchasing firm, which has a total asset size within the range of ±10% of the total asset size of a repurchasing firm. If we do not have any matching firm, then we apply ±20% and ±25% margins respectively. If no firms exist in any range, then we exclude the repurchasing firm from our sample.

In this regard, industry match is made in accordance with the industries in which firms are operated. Size and market value match are made accounting for total assets and market value/book value ratio, respectively. In this way, we are able to analyze the impact of financial indicators on stock repurchase by comparing each repurchasing and non-repurchasing firm.

This approach, in which repurchasing firms (case group) are matched with non-repurchasing ones (control group), is a common one in the previous literature. Andriosopoulos and Hoque (2013), Pacheco and Raposo (2009), Lie (2005), Jagannathan and Stephens (2003), Bartov et al. (1998) provide examples for 1-1 match. However, we make 1-k match as well, where repurchasing firms are matched with all possible non-purchasing equivalents for robustness purposes.

After matching is completed, we employ univariate and multivariate analysis in sequence. In the univariate analyses, we perform tests for differences of means between matched firms assuming that the variances of observations in case and control groups are not equal. In the multivariate analyses, we try to find support for the results of our univariate analyses by means of the following model:

$$REP_{it} = \beta_1 CASH_{i(t-1)} + \beta_2 EPS_{i(t-1)} + \beta_3 MKBK_{i(t-1)} + \beta_4 DIVY_{i(t-1)} + \beta_5 SIZE_{i(t-1)} + \beta_6 DEBT_{i(t-1)} + \beta_7 INTNG_{i(t-1)} + \beta_8 OPERF_{i(t-1)} \quad (1)$$

In the model (1), dependent variable, i.e. REP_{it}, denotes for the likelihood of stock repurchase in a quarter *(t)*, which is driven by the independent variables that belong to the previous quarter *(t-1)*.

4. Results

Table 2 displays matching results. As repurchasing firms are matched with the most similar non-repurchasing firm in 1-1 matching, number of observations that belongs to case and control groups are equal in each of the industry, size, and market value criteria. This is not the case, as expected, in the 1-k matching, in which number of observations for non-repurchasing firms overweighs the number of observations for repurchasing ones.

Table 2. Matching results

Period	Industry Match		Size Match		Market Value Match	
	1-1	1-k	1-1	1-k	1-1	1-k
$2011q_3$	6	61	6	31	6	73
$2011q_4$	6	52	6	32	6	41
$2012q_1$	10	93	10	54	10	63
$2012q_2$	8	74	8	32	8	81
$2012q_3$	4	38	6	24	6	56
$2012q_4$	12	113	14	46	14	137
$2013q_1$	10	120	12	44	12	137
$2013q_2$	16	148	14	76	16	167
$2013q_3$	12	130	14	57	14	155
$2013q_4$	10	127	10	41	12	143
Case Group	**47**	**47**	**50**	**50**	**52**	**52**
Control Group	**47**	**919**	**50**	**437**	**52**	**1.053**
Total	**94**	**966**	**100**	**487**	**104**	**1.105**

4.1. Univariate Analyses

Test results for differences of means between matched firms are reported in Table 3. *SIZE* variable in size matching and *MKBK* variable in market value matching are not reported as they are already controlled for the relevant criteria. Table 3 portrays the mean values of each variable in the first row, and p-values of mean difference tests (t-test) and median difference tests *(Wilcoxon rank sum test/Mann-Whitney test)* together one under the other in the second row. Our tests show that:

- Repurchasing firms have lower EPS ratio *(EPS)*, more intangibles *(INTNG)* and higher operating income *(OPERF)* when compared to non-repurchasers in industry matching,
- Repurchasing firms have a higher level of cash *(CASH)*, lower dividend yield *(DIVY)*, more intangibles *(INTNG)* and higher operating income *(OPERF)* in size matching,
- Repurchasing firms have a higher level of cash *(CASH)*, lower EPS ratio *(EPS)*, lower dividend yield *(DIVY)*, more intangibles *(INTNG)* and higher operating income *(OPERF)* in market value matching.

These findings point out that firms repurchase their stocks in order to utilize their idle cash. Further, stock repurchase appears to be a substitute for dividends due to low level of dividend yields in repurchasing firms. In this regard, cash level may play a deterministic role in deciding on repurchasing stocks or distributing dividends.

Results also reveal that firms having lower EPS levels may prefer repurchasing their stocks so as to increase EPS and to send positive signals to the market. Another indicator for signaling effect is the high level of operating income that repurchasing firms possess. Firms may

send a signal meaning that financial performance will be sustained and firm shares will be lucrative investments in the future.

That repurchasing firms have more intangible assets imply for undervaluation. Hence, asymmetric information leading to price misvaluation may play a role in stock repurchase as well.

Table 3. Univariate test results

Variable	Industry Match				Size Match				Market Value Match			
	1-1		1-k		1-1		1-k		1-1		1-k	
	Case	Control	Case	Control	Case	Control	Case	Control	Case	Control	Case	Control
N	47	47	47	919	50	50	50	437	52	52	52	1.053
CASH	0.109	0.11	0.109	0.112	0.13	0.076	0.13	0.083	0.127	0.081	0.127	0.091
		(0.970)		(0.882)		**(0.028)****		**(0.037)****		(0.109)		**(0.093)***
		(0.765)		(0.667)		**(0.03)****		**(0.001)****		**(0.01)****		**(0.008)*****
EPS	0.011	0.076	0.011	0.159	0.02	0.123	0.02	-1.338	0.0173	0.192	0.0173	0.172
		(0.213)		**(0.000)*****		(0.242)		(0.354)	**(0.027)****	**(0.009)*****		**(0.029)****
		(0.258)		**(0.049)****		(0.323)		(0.103)				**(0.024)****
MKBK	1.61	2.289	1.61	1.225	1.709	-1.674	1.709	1.838				
		(0.158)		(0.221)		(0.252)		(0.732)				
		(0.115)		(0.69)		(0.136)		(0.113)				
DIVY	0.762	1.069	0.762	1.01	0.755	1.924	0.755	1.488	0.74	1.371	0.74	1.393
		(0.408)		(0.32)		**(0.026)****		**(0.006)*****		(0.113)		**(0.007)*****
		(0.172)		(0.128)		**(0.079)***		(0.127)		(0.108)		**(0.058)***
SIZE	8.502	8.273	8.502	8.466					8.356	8.448	8.356	8.485
		(0.20)		(0.749)						(0.58)		(0.281)
		(0.133)		(0.705)						(0.948)		(0.482)
DEBT	0.278	0.186	0.278	0.268	0.25	0.366	0.25	0.257	0.251	0.167	0.251	0.203
		(0.122)		(0.857)		(0.495)		(0.900)		(0.112)		(0.321)
		(0.044)**		(0.178)		(0.772)		(0.889)		(0.129)		(0.552)
INTNG	0.131	0.015	0.131	0.026	0.124	0.049	0.124	0.028	.148	0.028	0.148	0.026
		(0.000)***		**(0.000)*****		**(0.048)****		**(0.000)*****	**(0.000)*****	**(0.000)*****		**(0.000)*****
		(0.003)***		**(0.002)*****		(0.209)		**(0.074)*****				**(0.000)*****
OPERF	0.021	-0.008	0.021	-0.323	0.026	-0.004	0.026	0.0177	0.0248	-0.0496	0.0248	0.011
		(0.04)**		(0.136)		**(0.002)*****		(0.314)		(0.215)		**(0.014)****
		(0.033)**		**(0.001)****		**(0.007)*****		**(0.007)*****		**(0.058)***		**(0.02)****

Note: ***, ** and * denote for 0.01, 0.05 and 0.1 significance levels, respectively. Numbers in parentheses in the first and second rows of each variable are p-values of mean difference tests (t-test) and median difference tests (Wilcoxon rank sum test/Mann-Whitney test), respectively.

4.2. Multivariate Analysis

Multivariate analyses results are reported in Table 4. For each variable, first row indicates the coefficient value, the second row indicates the odd ratio, and the third row indicates the p-value.

Results imply that the companies having the following features are more likely to repurchase their stocks:

- Companies with low EPS *(EPS)*, low dividend yield *(DIVY)*, more intangibles *(INTNG)* and more operating income *(OPERF)* in industry matching,
- Companies with more cash *(CASH)*, low MV/BV *(MKBK)*, more intangibles *(INTNG)* and more operating income *(OPERF)* in size matching,
- Companies with more cash *(CASH)*, low EPS *(EPS),* low dividend yield *(DIVY)*, low total assets *(SIZE)*, high leverage *(DEBT)*, more intangibles *(INTNG)* and more operating income *(OPERF)* in market value matching.

These findings not only justify univariate test results but also follow the ones revealed by existing literature. Thus, the main motivation of repurchase in Turkey is signaling in terms of undervaluation *(INTNG, MKBK)* and positive information dissemination *(OPERF, EPS)*. We also have some clues that excess cash is distributed via repurchases rather than cash dividends *(DIVY)*.

On the other hand, though *SIZE* and *DEBT* variables have not been indicative in univariate tests, they appear to have potential impact on repurchase in market value matching. The negative sign of *SIZE* variable shows that small firms tend to repurchase more. Its odd ratio *(0.677)* implies that size decreases the likelihood of repurchase by 32%. We think that small firms would like to repurchase in order to avoid misvaluation due to information asymmetry. The positive sign of *DEBT* variable and its high odd ratio *(6.255)*, however, indicate that high leverage firms are more likely to repurchase in contrast to the literature. In this respect, firms do not have to repurchase their stocks so as to achieve an optimal capital structure; probably due to the fact that capital requirements of firms are different from country to country. Andriosopoulos and Hoque (2013), for instance, put that high leverage firms in UK and France are more likely to repurchase than others in a market value match setting, which is not the case in Germany.

Another interesting finding is that *EPS* and *DIVY* variables show somewhat contradictory outcomes in that the coefficient of *EPS* variable is negative in 1-1 match and positive in 1-k match; while the coefficient of *DIVY* variable is positive in 1-1 match and negative in 1-k match. However, we think that these are not contradicting; rather they have some further implications. For example, negative sign of the *EPS* variable means that low EPS firms would like to repurchase in order to increase this ratio, but its positive sign may indicate that firms would repurchase in order to maintain the EPS in accordance as an earnings management tool. Similarly, negative sign of the *DIVY* variable provides evidence for the substitutive role of repurchases against dividends; however, its positive sign may also mean that it has a complementary tool in dividend policy as a whole.

Table 4. Multivariate test results

Variable	**Industry Match**		**Size Match**		**Market Value Match**	
	1-1	**1-k**	**1-1**	**1-k**	**1-1**	**1-k**
CASH	-2.085	0.273	1.35	4.39	1.712	2.744
	0.124	1.313	3.857	80.599	5.539	15.541
	(0.607)	(0.902)	(0.642)	**(0.006)*** **	(0.625)	**(0.018)** **
EPS	-4.963	-0.318	-1.136	0.008	-3.668	-0.416
	0.007	0.728	0.321	1.008	0.026	0.66
	(0.01) **	**(0.013)** **	**(0.073)***	**(0.000)*** **	**(0.039)** **	**(0.036)** **
MKBK	-0.012	-0.017	-0.107	0.007		
	0.888	0.984	0.899	1.007		
	(0.446)	(0.586)	**(0.032)** **	(0.591)		
DIVY	-0.376	-0.036	0.635	-0.181	-0.368	-0.038
	0.687	0.965	0.996	0.834	0.692	0.963
	(0.081)*	(0.600)	**(0.042)** **	**(0.021)** **	**(0.057)***	(0.607)
SIZE	1.998	-0.050			-0.152	-0.39
	7.371	0.951			0.859	0.677
	(0.136)	(0.786)			(0.718)	**(0.034)** **
DEBT	3.369	-0.097	0.003	-0.032	2.463	1.833
	29.051	0.908	1.372	0.969	11.744	6.255
	(0.241)	(0.602)	(0.865)	(0.898)	(0.179)	**(0.001)*** **
INTNG	2.032	1.115	0.276	0.882	0.597	0.959
	7.629	3.049	1.318	2.416	1.817	2.609
	(0.000)* **	**(0.000)*** **	(0.100)	**(0.000)*** **	**(0.021)*** **	**(0.000)*** **
OPERF	4.303	0.656	6.38	-0.071	2.283	0.11
	73.915	1.926	589.91	0.931	9.809	1.116
	(0.017) **	**(0.006)*** **	**(0.008)*** **	(0.255)	**(0.091)***	0.175
N	94	961	99	487	102	1.89
Pseudo R2	0.656	0.238	0.50	0.225	0.453	0.253
Prob > chi2	**0.009*** **	**0.000*** **	**0.000*** **	**0.000*** **	**0.017** **	**0.000*** **
Wald chi2	20.30	91.67	26.94	49.67	17.11	91.91
Likelihood Ratio	-11.207	-105.283	-17.199	-84.97	-19.349	-112.666

Note: ***, ** and * denote for 0.01, 0.05 and 0.1 significance levels, respectively. Second row indicates the odd ratio and numbers in parentheses in the third row of each variable are p-values.

5. Conclusion

Most countries have adapted their regulations in order to allow stock repurchases and provide flexibility for companies lest they be forced to sticky dividends. Turkey is one of those countries, which have recently ended up with a legal infrastructure that paves the way for stock repurchases. In this regard, our study aims at making inferences about why Turkish firms make stock repurchase transactions.

A vast majority of studies try to answer this question based on fundamental assumptions under the caption of free cash flow hypothesis, excess capital hypothesis, takeover deterrence hypothesis, wealth transfer hypothesis, optimal leverage hypothesis, management incentive hypothesis and signaling hypothesis (Baker *et al.* 2003).

We employ a conditional logistic regression model where we match companies that repurchase their stocks with non-repurchasing companies with respect to several criteria. We find evidence for signaling hypothesis in that repurchase transactions in Turkey are made primarily in order to avoid undervaluation and send positive signals to the market about the company. Moreover, firms having excess cash tend to repurchase more, which indicates that excess capital and free cash flow hypotheses also hold for firms in Turkey as an emerging market.

Taken together, stock repurchase appears to be a strategic tool for outstanding firms employing good corporate governance in Turkey. This is congruent with the viewpoint of investment guru, Warren Buffet, who agrees that the most appropriate action for investors of such firms in periods of undervaluation would be investing in their own stocks (Voss, 2012).

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