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Free Cash Flows and Corporate Buybacks: A Study of Indian Firms

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ABSTRACT

The present research examined the effects of cash flow volatility on the buyback decisions of Indian firms. The sample constitutes 179 Indian companies listed on the Bombay Stock Exchange from 2012-2020. Firms have been divided into two sets, i.e., permanent and volatile cash flow firms. Across these two sets, the study determines the major factors affecting their buyback decisions. The results of ordinary least square regression suggested that when firms have fluctuating cash flows each year, they prefer to opt for repurchases than dividend payments. Further, stock undervaluation is the key determinant of repurchases decisions. Thus, firms with constant cash flows are not highly motivated for buyback decisions. Further, the study explored that larger the size of the firm, lower is the tendency to repurchase shares. Large, manufacturing and mature firms with consistent cash funds are more strongly tended towards repurchases. Correspondingly, such companies engaged in buybacks because of their low market-to-book ratios and high information asymmetry. As cash based firms become more old, their propensity to purchase equity reduces.

JEL Classification: G14, G32

Keywords: Free cash flow; stock repurchases; undervaluation; market-to-book ratio; firm size

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INTRODUCTION

Free cash flow theory proposes that firms with considerable cash flows prefer to use funds for repurchases and shareholders gain benefits from it instead of using the funds for other purposes (Yook and Gangopadhyay, 2010). Thus, buybacks are generally considered to increase shareholder's wealth through the distribution of free cash flows. More frequent repurchases are also preferred by companies with large cash piles but low investment opportunities (Jena et al., 2020).

The discussion held above called attention to understand the relevance of cash flow volatility and the buyback decisions of Indian firms. The issue identifies the importance of cash holdings that motivate firms to opt for buyback decisions. In many situations, firms have permanent/continuous free cash flows, whereas in other instances, they face volatile or temporary cash flows. The study tries to explore the nature of cash holdings that shapes buyback decision. For the purpose, firms have been divided into two sets, i.e., permanent and volatile free cash flow firms. Across these two sets (permanent and temporary free cash flows), the study determines the major factors affecting buyback decisions. This cash flow division would help to understand how firms behave and are motivated by specific factors when they have excess cash flows or restricted/volatile cash flow. This matter is important as the major research evidences concentrated on buyback announcement reactions for a whole set of firms (Jena et al., 2017, Andriosopoulos and Hoque, 2013, Varma et al., 2018; Jagannathan and Stephens, 2003, Dittmar, 2000). The present study distinguishes by focusing on the cash flow division and classifies firms as permanent and volatile cash flow firms to derive deep insights related to the motivations of buybacks.

The study contributes significantly to the buyback and cash flow literature. First, the major focus of studies, especially in the Indian context (Chavali and Shemeem, 2011; Gupta, 2016; Mishra, 2005), has been on the repurchase announcements catching the signaling effect. The present work distinguishes by emphasizing on the role and importance of cash flows in shaping buyback decisions. The findings would help academicians and practitioners in understanding how cash flows presence enable firms to opt for repurchases. Second, Jena et al. (2017) examined different theories related to buybacks in the Indian context. The study deviates with core focus on the cash flow division of firms which provides deep insights related to the motivational behavior of Indian firms.

REVIEW OF LITERATURE

A plethora of literature evidences covered the aspects related to equity repurchases and the free cash flow hypothesis. The literature signified several financial options which firms used to benefit their shareholders. This created the dominance of various options of disbursing cash (Bagwell and Shoven, 1989; Vafeas and Joy, 1995; Ikenberry et al., 1995; Vafeas, 1997). Firms often chose to buyback equity due to varied reasons (Drousia et al., 2019) and equity repurchases were considered to be a flexible approach due to distributing cash among shareholders (Chan et al., 2004). Firms were motivated to engage themselves in equity buybacks due to extensive cash reserves, substantial cash flows and fewer investment opportunities (Jena et al., 2020). Contrary to this Opler et al. (1999), noted that companies with volatile cash flows along with higher growth opportunities possess high cash reserves. Thus, free cash flow is a key driver of equity buybacks (Evans et al., 2003) as the large cash holdings have positive association with the equity repurchases (Grullon and Michaely, 2004) and hence, firms with high cash flows tend to buy back more equity. Therefore, the present study proposed the following hypothesis:

H1: Firms with high and permanent cash flows tend to repurchase more equity.

Stock Undervaluation

Contradicting the above evidences, Chan et al. (2004) found that the underpricing of stocks turns out to be a major reason of buybacks**.** Such decisions are made to signal the market about future expectations regarding stock and its undervaluation (Mitchell et al., 2001; Li and McNally, 2007). Due to this, repurchases support in enhancing the price of stocks as it serves as a signalling tool (Chee et al., 2021). Regardless of robust operating performance, the buyback decisions are undertaken when firms have low returns (Hovakimian, 2004).

Generally, equity buybacks are considered favorable but occasional buybacks are viewed more strongly by the investors (Jagannathan and Stephens, 2003; Barclay and Smith, 1988). These evidences enthused our interest in examining whether undervaluation turns out to be the dominating factor of repurchase decisions across permanent and temporary cash flow firms. The present study proposed the following hypothesis:

H2: Stock undervaluation significantly motivates the buyback decision.

Other Factors Affecting Buybacks

Along with the other factors mentioned above, there are certain other reasons affecting firms repurchase decision. For instance, managers sometime take repurchase decisions in order to manage the earnings per share of a firm (Bens et al., 2003). Another factor - liquidity also plays a significant role in the buyback decisions; the firm managers undertake repurchase decision in situations of appropriate market liquidity (Brockman et al., 2008). Ginglinger and Hamon (2007) are of the view that repurchase price paid by firms is low in comparison to the price paid by investors. This reduces liquidity in the market. Some other firms follow buyback decisions in order to adjust their capital structure and this is considered as a value-enhancing driver of low valued and low debt firms (Dixon et al., 2008). This encourage firms for more frequently buybacks (Bonaime et al., 2014). Likewise, Aramonte (2020) noted that firms largely engage in buying back equity in order to meet their debt targets. Thus, firms opting for buybacks generally have low debt ratios to have an optimal capital structure (Hovakimian, 2004). The present study proposed the following hypothesis:

H3: Earnings and cash are expected to be positively associated with repurchase for firms intending to distribute excess capital.

Despite the factors mentioned above, there are additional factors which influence the repurchase decisions of firms, such as firm size, age and dividends. Andriosopoulos and Hoque (2013) observed that firm size, cash dividends and the financial structure of firms considerably impact repurchase announcements.

Varma et al. (2018) indicated a positive relationship between the firm size and buy back intention of firms. Some large firms prefer to issue huge dividends due to their low operating revenues. They also prefer to announce buybacks. On the other side, small firms generally prefer less repurchases because they experience more volatility in the operational revenues. Moreover, they have low market-to-book ratios and experience higher information asymmetry issues (Vermaelen,1981; Jagannathan and Stephens, 2003). Contradictory to this, Drousia et al. (2019) noticed that small firms prefer to go for repurchases due to undervaluation. Firms with high market-to-book ratios prefer buybacks. Likewise, growing firms also prefer buybacks due to low stock valuation (Liang et al., 2013) whereas mature firms prefer repurchases as a means of distributing surplus cash funds. The present study proposed the following hypothesis:

H4: Owing to information asymmetry issues, small and growing firms were expected to have undervalued stock and thus prefer to repurchase such an asset.

In the Indian context, there has been a significant increase in the number of buybacks in the past few years. However, the reaction by investors to the buyback announcements is insignificant (Chatterjee and Mukherjee, 2015). A major chunk of studies which focused on buyback announcements indicated weak signalling effects on the prices of stocks (Bhama, 2021; Gupta, 2018; Gupta et al., 2014; Rajlaxmi, 2013; Chavali and Shemeem, 2011; Thirumalvalavan and Sunitha, 2006; Mishra, 2005). Among several buyback hypotheses tested in the past, those on free cash flows and stock undervaluation have been extended the greatest attention. Based on the above discussion, the literature has been silent on the significance of buybacks decisions among firms with permanent and volatile cash flows. The scant literature has not covered the aspect related to the relevance of high or low cash with the repurchase decision. This deficiency is addressed in the current work through an analysis of various factors.

RESEARCH METHODOLOGY

The study initially tried using panel regression model, however due to change in the set of firms each year, the fixed effect (FE) and random effect (RE) results were non-significant. Therefore, pooled OLS method seemed to be more appropriate as per the need of the study. The study tested buyback proposition using pooled OLS regression model for the given repurchase year. The model is expressed as follows:

$$REP_{it} = \alpha_{it} + \beta_1 MKBK_{i(t-1)} + \beta_2 EARNINGS_{i(t-1)} + \beta_3 DPR_{i(t-1)} + \beta_4 LEVERAGE_{i(t-1)} + \beta_5 CASH_{i(t-1)} + \beta_6 LOG\ AGE_{i(t-1)} + \beta_7 LOG\ ASSETS_{i(t-1)} + e_{it} \quad (1)$$

where *i* represents the year at which a firm engages in buybacks, *t* denotes the time measured on the basis of the firm's financial year-end. REP, the dependent variable, is the Rupee volume of repurchases divided by market value of equity in the previous year. The various predictors given in the Equation (1) were used to test the repurchase proposition. The $MKBK_{i(t-1)}$, is the market-to-book ratio of a firm *i* at the end of the year prior to repurchase. This is to test valuation factor of repurchases and covers the stock valuation examination. $EARNINGS_{i(t-1)}$ refers to the profits to assets of a firm *i* and $CASH_{i(t-1)}$ stands for the cash and cash equivalent to assets of the firm at the end of the year prior to repurchases; $DPR_{i(t-1)}$ is the dividend payout ratio, the ratio of dividend payments to net profits in the year before repurchase. $LEVERAGE_{i(t-1)}$, the total debt-to-asset ratio in the year prior to repurchase. $LOG\ AGE_{i(t-1)}$ was measured by the natural log of the number of years and $LOG\ ASSETS_{i(t-1)}$, was the natural log of total assets at the end of the year prior to buyback.

Data and Sample

The sample constituted 179 firms listed on the Bombay Stock Exchange (BSE) and having non-significant abnormal returns after the buy-back announcements. The data was extracted from the Prowess database of the Centre for Monitoring Indian Economy (CMIE). Initially, the sample constituted 260 repurchases from 2012 to 2020. Prior to this period, the number of successful buybacks in India was negligible and the data was also incoherent. Using the filtering criterion related to announcements, 194 firms were selected. Remaining 15 companies were removed due to missing values. Finally, 179 firms were selected and these represented 69% of the buybacks occurring during the sample period.

The main approach of the study was to examine the importance of cash holdings that motivate firms to opt for buyback decisions. The study tries to explore the nature of cash holdings that shapes buyback decision. For the purpose, firms have been divided into two sets, i.e., permanent and volatile free cash flow firms. Across these two sets (permanent and temporary free cash flows), the study determines the major factors for buyback decisions. This cash flow division would help to understand how firms behave and are motivated by specific factors when they have excess cash flows or restricted/volatile cash flow.

For the purpose of this research, the cash flow statements of the companies were evaluated. Operational cash flow was derived from the net cash flow associated with operating activities. Non-operational cash was defined as the sum of net cash flows from investment and financing activities. The values of operating and non-operating cash flow were taken as a fraction of total assets. Data on the previous three years of operating and non-operating cash flows were used as bases in categorizing the firms in the manner stated above. Companies with continuous positive operating cash flows in the last three years were assigned to group 1, and those with positive and negative operating cash flows in the last three years were classified under group 2. Among the selected companies, 110 reported positive operating but volatile non-operating cash flow and 69 indicated having both volatile and non-operating cash flows.

Table 1 provides the mean values of operating and non-operating cash flows in the permanent and temporary situations. The mean values convey that the average permanent operational cash flows seem to be 0.16, which is higher than the temporary operating cash flows having a mean value of only 0.04. Interestingly, the non-operating cash flows are negative (with a mean value of -0.13 and -0.03) for firms with permanent and temporary operating cash flows. This finding indicates the fact that the firms (across both groups) have less net cash availability. The maximum value of operating permanent cash is 0.62 and 0.47 for temporary cash firms. It would be interesting to explore the options taken by the two groups of companies in increasing buybacks under volatile cash flows.

Table 1 Mean values of cash flows

	Permanent operating cash		**Temporary operating cash**	
	Operating Cash	Non-operating cash	Operating Cash	Non-operating cash
Mean	0.16	-0.13	0.04	-0.03
Median	0.13	-0.11	0.03	-0.02
Min	0.00	-0.51	-0.28	-0.49
Max	0.62	0.15	0.47	0.44
SD	0.10	0.10	0.15	0.17

RESULTS AND DISCUSSION

Table 2 indicates the descriptive statistics of permanent and volatile cash flow firms. The mean values of repurchases, market-to-book ratio and profitability are statistically significant in the companies with permanent and volatile cash flow firms. The repurchases seem to be more among volatile cash flow firm (the mean value was 0.14) whereas market-to-book ratio and profitability means values are high for permanent cash flow firms (the mean values were 3.35 and 0.13). This confirms the argument that the volatile cash firms intended to engage more in buybacks upon experiencing volatility in their cash flows. The dividend mean value (0.31) also confirms the fact that when firms experience volatility in their cash flows and the cash funds are not constant each year, they prefer to opt for repurchases than dividend payments. This rejects our first hypothesis that firms with high and permanent cash flows tend to repurchase more equity. Rather cash seems to have a minimal role to play.

Table 2 Mean Statistics

	Mean	**Median**	**Minimum**	**Maximum**	**SD**	**T- stat**
Repurchases						
Firms with permanent cash	0.09	0.05	0.00	0.55	0.09	5.63 (0.00)***
Firms with volatile cash	0.14	0.09	0.00	0.43	0.13	
MKBR						
Firms with permanent cash	3.35	2.67	0.20	13.56	3.26	4.66 (0.00)***
Firms with volatile cash	2.07	0.71	0.14	6.20	1.56	
Profitability						
Firms with permanent cash	0.13	0.12	0.03	0.63	0.10	5.96 (0.00)***
Firms with volatile cash	0.04	0.04	-0.18	0.23	0.00	
Dividend						
Firms with permanent cash	0.37	0.35	0.00	2.06	0.46	1.237 (0.40)
Firms with volatile cash	0.31	0.15	0.00	1.89	0.42	
Leverage						
Firms with permanent cash	0.13	0.10	0.00	0.53	0.14	2.90 (0.09)*
Firms with volatile cash	0.09	0.08	0.00	0.42	0.10	
Cash						
Firms with permanent cash	0.03	0.00	-0.06	0.27	0.07	-0.95
Firms with volatile cash	0.04	0.00	-0.09	0.40	0.10	(0.283)

Note: *** and * indicate statistical significance at 1 and 10 percent.

Table 3 shows the mean differences across the subsets such as manufacturing and service, firms with open and tender offers, large and small firms and growing and mature firms. The values convey mean differences between firms with permanent and temporary cash flows. It seems that both service and manufacturing firms have higher permanent cash flows (the mean values are 0.15 and 0.16) than volatile cash flows. Likewise, across other subsets too, the firms have constant cash flows greater than the volatile one. Equally interesting to note that small and growing firms have more cash flows which might have motivated firms to opt for repurchases.

Tables 4 and 5 show the correlation matrix of variables of the study. The values convey no multicollinearity among variables; the correlation values did not exceed 70% in any of the cases. The correlation values were significant at the 1% level for the market-to-book ratio with repurchases under permanent operational cash flows.

The results are similar for firms with volatile operational cash flows. An equally interesting finding is that cash has no significant relationship with repurchases in either group of firms (the correlation values are 0.045 and 0.052), reflecting that undervaluation seem to be the major factor influencing repurchases (the values are -0.423 and 0.426). This corroborate the fact that cash seem to have no influence on buyback decisions. In fact, except asset size of the firm, no other factor has significant relation with the buyback decision. However, in the case of asset size, it can be said that large the size of the firms, lower are the repurchases among firms and vice-versa.

The regression results are presented in Table 6. The coefficient values convey the statistical significance of market-to-book ratio on firm repurchases; the value is -0.42 for both groups. This indicates that whether firms have constant or volatile cash flows, stock undervaluation is the key determinant of repurchases decisions. These findings accept our second hypothesis of the study that stock undervaluation significantly motivates the buyback decision.

Table 3 Mean values across different firm subsets

		Manufac--turing	Service	T-stat	Open Market	Tender offer	T-stat
Permanent operating cash	Operating Cash	0.15	0.16	0.915 (-4.236)***	0.13	0.15	5.729 (-2.666)
	Non-operating cash	-0.11	-0.15	0.067 (5.763)***	-0.12	-0.14	0.216 (3.239)**
Temporary operating cash	Operating Cash	0.04	0.03	7.236 (0.186)	0.01	0.05	0.042 (-2.890)
	Non-operating cash	-0.04	-0.02	3.379 (-0.446)	0.02	-0.06	0.970 (0.894)

Note: *** and ** indicate statistical significance at 1 and 5 percent.

Table 3 Cont.

		Small firms	Large firms	T-stat	Growing firms	Mature	t-stat
Permanent operating cash	Operating Cash	0.15	0.13	0.672 (2.076)**	0.15	0.13	0.555 (4.356)***
	Non-operating cash	-0.14	-0.12	0.506 (-2.378)	-0.13	-0.11	0.053 (-3.875)***
Temporary operating cash	Operating Cash	0.02	0.04	0.672 (0.522)	0.05	0.04	6.345 (0.367)
	Non-operating cash	0.01	-0.05	0.036 (0.876)	-0.01	-0.02	0.506 (-0.345)

Note: *** and ** indicate statistical significance at 1 and 5 percent.

Table 4 Correlation Matrix of permanent operating cash flow firms

Variables	Repurchase	MTB	Earnings	Dividend	Leverage	Cash	Age
MTB	-0.423 (0.000)***						
Earnings	-0.163 (0.203)	0.667 (0.000)***					
Dividend	0.032 (0.916)	0.012 (0.309)	0.050 (0.473)				
Leverage	0.042 (0.817)	-0.273 (0.031)**	-0.432 (0.000)***	0.146 (0.592)			
Cash	0.045 (0.756)	-0.069 (0.495)	-0.010 (0.869)	-0.171 (0.428)	-0.073 (0.732)		
Age	0.145 (0.344)	-0.289 (0.031)**	-0.247** (0.041)	0.072 (0.306)	0.270 (0.0521)**	-0.082 (0.925)	
Assets	-0.301** (0.026)	0.074 (0.066)	0.025 (0.816)	0.258 (0.230)	0.192 (0.101)	-0.192 (0.390)	0.196 (0.103)

Note: *** indicates significance level at 1 percent.

Table 5 Correlation matrix of volatile operating cash flow firms

Variables	Repurchase	MTB	Earnings	Dividend	Leverage	Cash	Age
MTB	-0.426 (0.018)***						
Earnings	-0.161 (0.567)	0.020 (0.882)					
Dividend	-0.283 (0.106)	-0.063 (0.467)	0.180 (0.294)				
Leverage	-0.152 (0.553)	-0.009 (0.723)	-0.243 (0.079)	0.174 (0.284)			
Cash	0.052 (0.285)	0.057 (0.627)	-0.073 (0.436)	-0.035 (0.651)	0.081 (0.542)		
Age	0.116 (0.679)	-0.053 (0.634)	0.045 (0.799)	-0.162 (0.201)	0.293 (0.112)	0.079 (0.610)	
Assets	-0.382 (0.029)**	0.323* (0.049)	0.096 (0.666)	0.356** (0.039)	0.523 (0.001)***	-0.232 (0.083)*	0.092 (0.535)

Note: *** indicates significance level at 1 percent.

Thus, firms those have continuous cash flow is not motivated with the cash itself for buyback decisions. The results contradict those derived by Grullon and Michaely (2004), who found a positive association between large cash holdings and buybacks. This rejects the third hypothesis of the study that earnings and cash are expected to be positively associated with repurchase for firms intending to distribute excess capital.

Further, age of the firms appeared to has a negative relationship (-0.25) with constant operational cash firms. This fact conveys that as the cash based firms become more old, their tendency to purchase equity reduces. Likewise, small firms with consistent cash funds more strongly tended towards repurchase. Correspondingly, such companies engaged in buybacks because of their low market-to-book ratios and high information asymmetry (Jagannathan and Stephens, 2003). Here, the last hypothesis that owing to information asymmetry issues, small and growing firms were expected to have undervalued stock and thus prefer to repurchase such an asset is accepted.

The results pertaining to the repurchases of various set of firms such as manufacturing vs. services, open vs tender repurchases, small vs. large, and growing vs. mature firms are presented in Tables 7 and 8. Table 7 shows the results of permanent/continuous cash flows firms and Table 8 presents the results of volatile cash flow firms. The findings of permanent cash firms across various firm set-ups strongly confirm the evidence that stock undervaluation is the major reason of buyback; the coefficient values of market-to-book ratio are statistically higher among large, manufacturing and mature firms (the values are -0.93, -0.62, -0.51). These findings indicate that despite having continuous cash, the motivation to redeem equity is the low prices of stock. As the market-to- book ratio falls, the repurchases tend to rise. Thus, in order to boost the stock prices, these set of firms (dominated by bigger asset size, mature and manufacturing sectors) utilize funds to enhance their stock value. However, in the case of firms with volatile or inconsistent cash flows, the results seem to be statistically significant in the case of service firms. The repurchase decision is largely impacted by leverage capacity of a firm, as the debt-to-asset ratio decreases, buybacks become more robust in the firms (the coefficient value is -0.89). Further the results are also supported by the firm profitability and market-to-book ratio values; the coefficient values are -0.56 and -0.47. For the other set of firms, the high beta values indicate market-to-book ratio followed by leverage and asset size to be the rationale for repurchases**.**

Table 6 Regression Results of varying cash flow firms

Variables	**Permanent Operating cash Flow**	**Volatile Operating cash flow**
Intercept	0.133 (0.112)	0.173 (0.395)
MKBK	-0.423*** (0.002)	-0.416** (0.042)
Profitability	0.113 (0.420)	-0.132 (0.327)
Dividend	0.083 (0.463)	-0.161 (0.427)
Leverage	0.012 (0.833)	-0.182 (0.521)
Cash	-0.019 (0.793)	0.021 (0.827)
Log assets	0.123 (0.278)	0.092 (0.747)
Log age	-0.256 (0.013)***	-0.082 (0.691)
R square	0.27	0.30
No of observations	110	69

Note: *** and ** indicate statistical significance at 1 and 5 percent.

Table 7 Regression results of permanent cash flow firms across different firm subsets

Variables	Manuf--turing	Service	Open	Tender	Small	Large	Growing	Mature
Intercept	0.080 (0.854)	0.178 (1.160)	0.131 (0.987)	0.201 (1.974)	0.557 (3.159)***	0.002 (0.027)	-0.010 (-0.100)	0.289 (1.384)
MKBK	-0.618 (-2.954)***	-0.262 (-1.603)	-0.423 (-2.122)**	-0.388 (-2.342)**	-0.262 (-1.799)*	-0.930 (-2.896)***	-0.351 (-2.729)***	-0.516 (-2.077)**
Profitability	0.334 (1.579)	-0.065 (-0.354)	0.147 (0.622)	0.024 (0.133)	-0.154 (-0.941)	0.603 (1.879)*	-0.117 (-0.755)	0.245 (0.994)
Dividend	0.185 (1.238)	-0.075 (-0.508)	0.024 (0.129)	0.098 (0.719)	-0.015 (-0.113)	0.201 (1.410)	0.062 (0.526)	0.075 (0.473)
Leverage	0.043 (0.283)	-0.188 (-1.144)	0.170 (0.802)	0.017 (0.123)	-0.007 (-0.050)	-0.061 (-0.398)	-0.430 (-3.012)***	0.086 (0.542)
Cash	0.003 (0.019)	-0.034 (-0.228)	-0.033 (-0.189)	0.036 (0.285)	-0.124 (-0.937)	0.184 (1.287)	-0.021 (-0.164)	-0.018 (-0.119)
Log assets	-0.215 (-1.411)	-0.410 (-2.705)***	-0.376 (-2.037)**	-0.315 (-2.345)**	-0.504 (-3.524)	-0.130 (-0.900)	-0.313 (-2.579)***	-0.261 (-1.674)
Log age	0.084 (0.602)	0.119 (0.785)	0.068 (0.364)	-0.021 (0.154)	-0.110 (-0.752)	0.211 (1.491)	0.282 (2.417)**	-0.076 (-0.506)
R square	0.25	0.31	0.32	0.24	0.36	0.31	0.53	0.21
No of observations	50	41	33	58	46	45	43	48

Note: *** and ** indicate statistical significance at 1 and 5 percent.

Table 8 Regression results of volatile cash flow firms across different firm subsets

Variables	Manuf--turing	Service	Open	Tender	Small	Large	Growing	Mature
Intercept	0.078 (0.218)	0.226 (0.729)	0.360 (2.889)***	0.592 (1.276)	0.085 (0.201)	0.820 (1.718)	0.448 (0.971)	0.014 (0.022)
MKBK	-0.253 (-1.015)	-0.475 (-2.500)**	-0.760 (-3.476)***	-0.276 (-1.043)	-0.445 (-1.574)	-0.008 (-0.024)	-0.470 (-1.708)	-0.279 (-1.051)
Profitability	0.093 (0.386)	-0.567 (-2.645)**	-0.173 (-0.529)	0.020 (0.074)	-0.429 (-1.847)*	0.707 (1.728)	-0.401 (-1.224)	-0.045 (-0.136)
Dividend	-0.240 (-1.016)	-0.199 (-0.952)	-0.387 (-1.686)	-0.218 (-0.970)	-0.131 (-0.566)	-0.430 (-1.158)	-0.333 (-1.166)	-0.214 (-0.724)
Leverage	0.294 (0.803)	-0.891 (-3.306)***	-0.076 (-0.268)	0.100 (0.314)	0.040 (0.166)	0.554 (1.298)	-0.170 (-0.410)	-0.222 (-0.616)
Cash	-0.146 (-0.475)	0.021 (0.084)	-0.232 (-0.889)	-0.206 (-0.821)	0.088 (0.346)	0.023 (0.070)	-0.243 (-0.643)	0.102 (0.363)
Log assets	-0.256 (-0.916)	0.354 (1.060)	-0.151 (-0.656)	-0.403 (-1.108)	0.365 (1.368)	-0.468 (-1.340)	-0.107 (-0.248)	-0.278 (-0.793)
Log age	0.129 (0.474)	-0.028 (-0.131)	-0.584 (-2.173)	-0.090 (-0.331)	-0.059 (-0.206)	-0.497 (-1.338)	-0.073 (-0.267)	0.179 (0.594)
R square	0.28	0.74	0.73	0.39	0.46	0.34	0.31	0.37
No of observations	23	17	17	23	21	19	20	20

Note: *** and ** indicate statistical significance at 1 and 5 percent.

Discussion

There has been a significant increase in the number of buybacks in India in the past few years. Majority of the studies focused on buyback announcements which indicated weak signalling effects on the prices of stocks (Bhama, 2021; Gupta, 2018; Gupta et al., 2014; Rajlaxmi, 2013; Chavali and Shemeem, 2011; Thirumalvalavan and Sunitha, 2006; Mishra, 2005). The scant literature has not covered the aspect related to the relevance of high or low cash with the repurchase decision. Therefore, the present study explores the importance of cash holdings and buyback decision of firms. This cash flow division (excess cash flows or restricted/volatile cash flow) test was important in order to understand how firms behave and are motivated by specific factors. Jena et al. (2020) indicated that firms were motivated to engage themselves in equity buybacks due to extensive cash reserves, substantial cash flows and fewer investment opportunities. However, the present study noted that cash had no significant relevance in the buyback decisions of firms. Large cash holdings have negative association with buybacks, supporting the argument that companies with high cash flows exhibit a low tendency to buy back shares.

Free cash flow theory seems to be very less supportive in the Indian case. These evidences are in contrast to the findings of Bagwell and Shoven (1989); Vafeas and Joy (1995); Ikenberry et al. (1995); Vafeas (1997). Equally interesting is the similarity in findings pertaining to permanent as well as temporary cash flows. This gave rise to the point that there are other dominating factors that motivate firms to pursue buyback decisions.

The examination of other contributory variables indicated that the major driver of repurchase by enterprise with constant and volatile cash flows was the low valuation of stocks. Buybacks merely served as a signalling tool designed to enhance the value of stocks that are potentially undervalued. The evidences are in sync with the findings presented by Chan et al. 2004; Mitchell et al., 2001; Li and McNally, 2007; Chee et al., 2021.

Andriosopoulos and Hoque (2013) noted that firm size and cash dividends considerably impact repurchase announcements. Likewise, Varma et al. (2018) indicated a positive relationship between the firm size and buy back intention of firms. Small firms generally prefer less repurchases because they experience more volatility in the operational revenues. In contrast, this study shows that age of the firms appeared to has a negative relationship with constant operational cash firms. This fact conveys that as the cash based firms become more old, their tendency to purchase equity reduces. Likewise, small firms with consistent cash funds more strongly tended towards repurchase. Correspondingly, such companies engaged in buybacks because of their low market-to-book ratios and high information asymmetry (Jagannathan and Stephens, 2003). Capital structure adjustments did not persuade the companies to make these decisions.

The discussion above brings an interesting fact that cash enrichment in firms is not the motivational factor for repurchase. In this regard, further studies can focus on the sectoral effects of excessive or low cash reserves on buybacks among Indian firms.

CONCLUSIONS

The present study tries to explore the nature of cash holdings that shapes buyback decision. For the purpose, firms have been divided into two sets, i.e., permanent and volatile free cash flow firms. Across these two sets (permanent and temporary free cash flows), the study determines the major factors affecting buyback decisions. Using an ordinary least regression model, the findings of the study suggests that across both groups, firms do not have substantial cash availability. The volatile cash firms intended to engage more in buybacks upon experiencing volatility in their cash flows. Thus when firms' cash funds are not constant each year, they prefer to opt for repurchases than dividend payments. Further, stock undervaluation is the key determinant of repurchases decisions. Thus, firms those have continuous cash flow are not motivated with the cash itself for buyback decisions.

Further, the study explored that larger the size of the firm, lower is the tendency to repurchase shares Small and growing firms have more cash flows which might have motivated firms to opt for repurchases. These firms with consistent cash funds are more strongly tended towards repurchases. Correspondingly, such companies engaged in buybacks because of their low market-to-book ratios and high information asymmetry. As cash based firms become more old, their propensity to purchase equity reduces. To conclude, buybacks merely served as a signalling tool designed to enhance the value of stocks that are potentially undervalued. These findings would help investors, academicians and practitioners in understanding how cash flows presence enable firms to opt for repurchases.

Finally, it should be acknowledged that there are few limitations in the study which need to be addressed. First, the study is restricted to the Indian firms only with a limited sample size; the buybacks were less in number during the initial years of the sample period which contributed to the overall low sample size. Second, the study covered the analysis of overall firms. The sectoral analysis could have been covered. Due to these limitations, future studies may extend their scope to more countries along with increased sample size and more numbers of years. The researchers may explore the findings using industry dummies and other regression models.

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