Institutional Investors and Payout Policy Trends

Ricky W. Scott. PhD
Assistant Professor of Finance
Saint Leo University
Donald R. Tapia School of Business
Department of Accounting
Economics and Finance
Florida
USA

Abstract

This paper seeks to determine if institutional investors influence corporate payout policies. Specifically, this study tests whether institutional investors contribute to a growth in stock repurchases as a percentage of total payout. Firm and year fixed effect regressions and difference-GMM regressions examining the effect of changes in institutional investor levels to subsequent changes in dividend, stock repurchase, and total payout levels are used. An increase in institutional ownership leads to an increase in the proportion of total payout going towards repurchases and consequently a decrease in the proportion of payout going towards dividends. The rise in institutional ownership of corporations appears to be one of the causes of the rising preference for using stock repurchases as a means of shareholder payout. The results in this paper indicate that institutional shareholders are a significant impetus behind the growing preference of U.S. corporations for using repurchases as a payout method.

Keywords: Corporate Finance, Corporate Governance, Institutional investors, Payout policy, Repurchases, Dividends

1. Introduction

Corporate policies on payouts (dividends and stock repurchases) have been a subject of interest to researchers, corporate managers, and investors for decades. This is true despite research such as that of (Miller & Modigliani, 1961)who theorize that payouts should not affect shareholder wealth in perfect and complete capital markets. Moreover, shareholders should be indifferent between repurchases and dividends except as to how it affects their taxes. (Black, 1976)is puzzled as to why firms pay dividends at all.

Since then, much research has been done in an effort to determine the answer to this question and also why firms choose to make repurchases and how do they decide payout quantities and methods. Institutional investors appear to have an influence on corporate management decisions. (Becht, Bolton, & Röell, 2003) discuss the raft of evidence that institutional investors influence corporate decisions in many areas. This is important because Institutional investor ownership in US firms has risen from 24% in 1980 to over 70% today(Gaspar, Massa, Matos, Patgiri, & Rehman, 2013).Institutional investors are also an important force internationally.

For example, institutional investors hold 50 to 60 percent of large listed European companies (Brossard, Lavigne, & Sakinç, 2013). Thispreponderance of institutional investors should allow institutional investors to have a sizable influence on corporate financial policies such as payouts.

All institutional investors do not have an incentive that is powerful enough to impel them to engage in costly monitoring of management. (Elyasiani & Jia, 2010) conclude that institutional investors are likely to either actively or passively monitor management, cooperate with management to the detriment of other shareholders or participate in a combination of these methods.(Shleifer & Vishny, 1986) conclude that institutions are likely to be more capable and more incentivized owners than other shareholders, thus raising the value of their monitoring efforts in improving firm performance.

(Grullon & Michaely, 2002) document a rising trend in repurchases beginning in 1982 with the adoption of safe harbor provisions which removed regulatory constraints against repurchases. They state that from 1980 to 2000, repurchases grew at an average annual rate of 26.1% while dividends grew at a 6.8% rate. As a result, share repurchases as a percentage of total dividends increased from 13% to 113%.(Fama & French, 2001) also document an increase in repurchases during a similar time period. (Skinner, 2008) reports that repurchases continue to increase until the end of his study in 2004. Because of this trend, in 1998, for the first time in history, U.S. corporations distributed more cash to shareholders through repurchases than through dividends (Grullon & Ikenberry, 2000). (Fama & French, 2001) also provide evidence that the number of firms paying dividends declined dramatically during the period studied.

They conclude that repurchases do not explain the decline in dividends as the primary effect of increases in the use of repurchases was to increase the payout of dividend payers. In contrast, (Grullon & Michaely, 2002) find evidence consistent with a substitution effect. They argue that firms are increasingly using funds for repurchases that would have otherwise been used for dividends. They note that their results differ from those of Fama and French's because the measure of repurchases used by Fama and French includes not only repurchase activity, but also stock options used for payment to labor and new equity issuance. If institutional investors prefer repurchases to dividends and they therefore encourage repurchases over dividends as a percentage of total payouts in the firms they own, institutional investors may be the impetus behind the increase in repurchases as a percentage of total payout documented in (Grullon & Michaely, 2002).

Consequently, I test asubstitution hypothesis that institutional investors encourage a higher level of repurchases as related to dividends in the total payout composition. My results provide support for the substitution hypothesis. I find evidence that higher institutional ownership leads to a higher percentage of the total payout composition going to repurchases. Consequently, this leads to a lower percentage of the total payout mix going to dividends. This offers support for the substitution hypothesis and suggests that institutional ownersare at least partially responsible for the increase of repurchases in relationship to dividends found in (Fama & French, 2001) and (Grullon & Michaely, 2002).

The empirical results on the relationship between institutions and dividends are not shown because,as in(Grinstein & Michaely, 2005), I do not find any evidence that institutional investors influence dividends. Therefore, the positive effect which I find that institutional owners have on total payout is entirely attributable to their positive effect on repurchase levels. Institutional investors have become the dominant ownership class of U.S. public corporations. During a similar time frame, the level of stock repurchases has increased in relation to the level of dividend payouts. In this paper, I investigate empirically the relationship between institutional investors and payout policy trends. The primary contribution of this paper is that I determine that institutional investors are a driving force behind the increased use of stock repurchases by U.S. corporations as a means of payout and as a percentage of total payout.

2. Literature Review

Institutional investors can use shareholder proposals, proxy votes, and the threat of "voting with their feet" to influence management to change corporate policies. (Graham, Harvey, & Rajgopal, 2005)find that CFOs believe that institutional investors are important because they can affect stock price and cost of capital. (Carleton, Nelson, & Weisbach, 2002) show how one institution, TIAA-CREF, had a high degree of success in influencing management through private negotiations. In a study of companies from 23 countries, (Aggarwal, Erel, Ferreira, & Matos, 2011) find that higher institutional ownership increases the likelihood that poorly performing Chief Executive Officers (CEOs) will be terminated and that firm valuation will improve. Institutional investors also help to control earnings management (Hadani, Goranova, & Khan, 2011).

Research has demonstratedthat management alters payout policies as a result ofthe presence of institutional investors. (Lie & Lie, 1999) contend that managers are more sensitive to shareholders' tax situations if institutions own a higher percentage of the firm's shares indicating that institutions have more influence on management than other owners. (Renneboog & Trojanowski, 2011) find that tax-exempt financial institutions in the U.K. prefer repurchases over dividends despite the lack of a tax advantage to repurchases. (Moser, 2007) demonstrates that firms vary the percentage of payouts that go towards repurchases based on the tax status of institutional investors.

(Hankins, Flannery, & Nimalendran, 2008) document that institutions have reduced their holdings in dividend-paying stocks as the "prudent investor" rule replaced the more-stringent "prudent man" rule in most states during the 1990s. (DeAngelo, DeAngelo, & Skinner, 2000) assert that increased institutional ownership has led to a decline in special dividends because institutional investors realize that special dividends are usually economically equivalent to regular dividends.(Bartov, Krinsky, & Lee, 1998) find that firms with higher levels of institutional holdings repurchase more shares.

They argue that this is because some institutional investors recognize the tax advantage to their clients that repurchases offer over dividends.(Desai & Jin, 2011) offer evidence that management alters dividend policy to cater to institutional shareholders. The 1982 adoption of safe harbor provisions in the U.S. which made it considerably easier for firms to repurchase larger quantities of their own shares led to an upsurge in repurchases. Because of the increase in repurchases, the amount of funds dispersed to shareholders in the U.S. through repurchases now supersedes the amount of funds paid out through dividends. Dividends also seem to be declining, but the evidence on this has been the subject of some debate.

Other research also supports the view that repurchases are replacing dividends. (Grullon & Michaely, 2002)argue for this view andfind that the stock market reaction to dividend cuts is much less negative for firms that are repurchasing shares. (Li & Zhao, 2008) find that firms are less likely to increase dividends if they repurchase more. (Brockman, Howe, & Mortal, 2008)contend that managers prefer repurchases to dividends because of tax and flexibility advantages, and rising stock market liquidity has enabled them to make repurchases their payout method of choice. Also, (Gaspar et al., 2013) find that firms with more short-term oriented investors favor stock repurchases over dividends.

They provide evidence that this plays a role in the increase of stock repurchases in relation to dividends. (Banerjee, Gatchev, & Spindt, 2007)propose that stock market liquidity and dividends are viewed as substitutes by investors. Therefore, the decline in the propensity to pay dividends can largely be explained by rising stock market liquidity. Notably, they find that changes in repurchase and institutional ownership are not responsible for the decline in dividends. Other arguments have been offered that either repurchases are not replacing dividends or institutional owners should inhibit stock repurchases. (Fama & French, 2001) argue that repurchases are not replacing dividends because repurchases are primarily being used to increase the payout of dividend payers.The information advantage enjoyed by institutional owners reduces opportunities for companies to repurchase stock at bargain prices(De Cesari, Espenlaub, Khurshed, & Simkovic, 2012).

3. Hypothesis

If institutional investors prefer repurchases to dividends as predicted by the adverse selection theory, institutional investors may be the driving force behind the gradual substitution of repurchases for dividends found by (Grullon & Michaely, 2002). As a result, institutional investors may encourage repurchases over dividends as a method of payout. This substitution hypothesis predicts that an increase in institutional ownership will lead to an increase in repurchases as a percentage of total payout.

H1: Higher institutional investor ownership leads to a higher percentage of total payout going toward repurchases and a lower percentage of total payout going towards dividends.

An endogenous relationship exists between institutional investors and payout policy so simply showing a relationship between institutional investors and payout policy will not provide sufficient evidence to support my hypothesis. Causality is also important. The causal relationship in the substitution hypothesis requires that, all else being equal, institutional investors have a positive influence on the percentage of total payout which is made up of stock repurchases.

4. Data, Methods, and Summary Statistics

4.1 Data

I use yearly ownership data for each firm from CDA / Spectrum Compact Disclosure for the years 1990 - 2005. Utilities and financial firms are excluded because they are highly regulated. I then merge this data with accounting and other data acquired from Compustat. This sample consists of 10,668 firms and 79,890 firm-years. Firms with missing data or not enough years of data are excluded from analysis where that data is required. Annual dividends and stock repurchasesare calculated bydividing their dollar value amount by the dollar book value of assets. Stock repurchases are defined as the dollar amount of repurchases minus the dollar amount of issues.

If stock issues exceed stock repurchases, the stock repurchase amount is set to zero.

The reasoning here is that there is no such thing as a negative stock repurchase. Changes in stock repurchases are calculated by subtracting repurchases of the previous yearfrom the repurchases of the current year an then dividing by the previous year's book value of assets. Dividend changes are measured similarly. Total payout is calculated by adding the dollar value of repurchases and common dividends. (Fama & French, 2001) find that dividends trend through time and that firm profitability, size and growth opportunities are related to dividends. Consequently, I use variables representing these relationships to control for differences across firms.

Earnings before interest and taxes scaled by total assets are used to control for profitability. Log of market value and log of revenue are used to control for firm size. I use *q* to control for growth opportunities. Following (Dlugosz, Fahlenbrach, Gompers, & Metrick, 2006), *q*is calculated as the market value of assets dividedby the book value of assets where market value is calculated as the sum of the book value of assets and the market value of common stock less the book value of common stock and deferred taxes. Time effects on the relationship between institutional ownership and payouts are controlled for using yearly dummy variables. (DeAngelo, DeAngelo, & Stulz, 2006) report a strong association between the life-cycle stage of a company and dividends.

I follow them by using the earned/contributed equity mix defined as retained earnings to the book value of total equity is used to control for firm life-cycle stage. (Banerjee et al., 2007) find that firm stock turnover is related to dividends so I include this firm characteristic as a control. (Jensen, 1986) proposes debt can substitute for dividends as managerial incentive, so firm debt to asset ratio is included to control for firm leverage.

Payouts are typically made from a firm's free cash flow. I use net income plus depreciation and amortization minus capital expenditures as a measure of free cash flow. I do not subtract dividends or repurchases from my measure of free cash flow as many others do because this simplifies the analysis of how free cash flow affects payouts. I divide my free cash flow measure by total book value of assets to provide scale. Detailed variable definitions are shown in Table 1.

Table 1: Variable Definitions – Payouts

Variable	Description	Definition
Panel A: Summary Statistics and Correlation Table Variables		
N	Number of Firms	The number of firms.
Inst	Institutional Ownership	The fraction of shares owned by institutions.
MktCap	Market Capitalization	The dollar market value of common stock in millions.
LifeCycle	Firm Life-cycle	The ratio of retained earnings to total equity.
q	Investment Opportunities	Market value of assets to the book value of assets
CashFlow	Free Cash Flow	Free cash flow to total assets.
Div	Dividend Ratio	Dividends to book value of assets.
Payout	Payout Ratio	Total payout divided by book value of assets.
Repurch	Stock Repurchase Ratio	Stock repurchases to book value of assets.
PayIncr	Payout Increases	The percentage of firms which increased their total payout per share.
PayDecr	Payout Decreases	The percentage of firms which decreased their total payout per share.
RepIncr	Stock Repurchase Increases	The percentage of firms which increased their repurchases per share.
RepDecr	Stock Repurchase Decreases	The percentage of firms which increased their repurchases per share.
Panel B: Regression Dependent Variables (Measured as changes in values from year t – 1 to t.)		
PayComp	Payout Composition Ratio	Ratio of (Repurch – Div) to (Repurch + Div), equal to -1 if entire payout consists of dividends and +1 if entire payout consists of stock repurchases.
Panel C: Regression Independent Variables (Measured as changes in values from year t – 2 to t - 1.)		
Inst	Institutional Ownership	The fraction of shares owned by institutions.
q	Investment Opportunities	Market value of assets to the book value of assets
Debt	Debt Ratio	Debt to assets.
Turnover	Stock Turnover	Firm common stock turnover.
LifeCycle	Firm Life-cycle	The ratio of retained earnings to total equity.
MktCap	Market Capitalization	The dollar market value of common stock in millions.
ROA	Return on Assets	Earnings before interest and taxes divided by total assets.
Insider	Insider Ownership	The fraction of shares owned by insiders.
Insider2	Insider Ownership Squared	The squared value of Insider.
Revenue	Revenue	The logarithm of firm revenue.

4.2 Methods

To prove my hypothesis, it is not enough to establish a relationship between institutional investors and payout trends. I must demonstrate that institutional investors influence payout trends. Therefore, I must use a methodology which establishes causality. Additionally, my methodology must control for endogeneity. Others have used two-stage least squares' regressions to overcome these problems, but I was unable to findstatistically and conceptually sound instrumental variables to use with my data sample. I establish causality by runningfixed effects regressions on changes in dependent variables from year $t - 1$ to t on changes in independent variables from $t - 2$ to $t - 1$. Firm fixed effect regressions control for all stable characteristics of a firm including industry and unmeasured characteristics.

The combination of firm fixed effects and the use of yearly dummy variables to control for time-varying omitted characteristics limit endogeneity problems in my analysis. The use of yearly dummy variables and fixed effects creates what is effectively an intercept for each year. The intercepts in fixed effects regressions are an average value of the unobserved fixed effects for each firm. The yearly and fixed effects intercept values are not relevant to my analysis. Therefore, they are not reported in my results.

For my robustness checks, I use a difference generalized method of moments (GMM) methodology derived from the methodology described in(Holtz-Eakin, Newey, & Rosen, 1988). This methodology helps to combat endogeneity issues in my analysis. I also usedmethodology and validity tests created in(Arellano & Bond, 1991). In my analysis, I use the Stata command xtabond2 which is described by its developer in (Roodman, 2009).
My sample includes a limited number of time periods (a maximum of 16 years) and a large number of firms (over 10,000). The difference GMM methodology is particularly useful in such samples. The results in (Almeida, Campello, & Galvao, 2010)support the assertion that difference GMM conforms to theoretical expectations in regressions using sample data that contains firm-fixed effects and heteroskedasticity (such as mine).

Since difference GMM uses lagged endogenous regressors as instruments, each firm's data loses one year in my analysis. Dependent variables rely on past realizations because current payout composition policy is largely dependent on past payout composition policy. Independent variables are assumed to be endogenous. The difference GMM robustness checks control for the likely endogenous relationship between payout composition policy and institutional ownership. The difference GMM model is shown in model (1) below.

$$\Delta Policy_{it} = \Delta Policy_{it-1} + \Delta Inst_{it-1} + \beta \bullet \Delta Control_{it-1} + \Delta \varepsilon_{it} \qquad (1)$$

In this model, $Policy_{it}$ represents the change in the firm payout composition policy. $Policy_{it-1}$ represents the change in firm payout composition policy in the previous year. The independent variable $Inst_{it-1}$ represents the change in institutional ownership percentage in the previous year. $Control_{it-1}$ represents a vector of time-varying firm level control variables. Year dummies are included as control variables to remove time-related trends that affect all firms. Time-varying observation-specific errors are represented byε_{it}. Time invariant firm-fixed effects are removed by the difference GMM methodology through the use of first-differences. (Roodman, 2009) recommends the Hansen-Sargan *J*-test and the Arellano-Bond test for second-order autocorrelation in differenced residuals to offer support for model validity.In both tests, *p*-values of less than 0.10 indicate an invalid model.

4.3 Summary Statistics

Selected properties of firms included in my sample are displayed in Table 2. Panel A includes all firms and panel B includes only firms that have a payout (either dividends or stock repurchases or both). Statistics are shown for all years and for an early period, 1990 – 1997, and late period, 1998 – 2005. Means are shown with medians in parentheses below. There are some notable patterns in the characteristics for all firms and for firms with a payout. Institutional investors (Inst) percentage ownership increases over time. Firm size (MktCap) and qalso increase from the early period to the late period. Retained earnings to total equity (LifeCycle), a proxy for firm life-cycle, indicates that the firms in the late period are less mature than firms in the early period. Firms with a payout are

Larger, have a lower q and have higher institutional ownershipthan firms without a payout.
Table 2 also includes summary statistics for payout-related variables in Panels C and D. Medians are zero for almost all of the variables, so only means are presented. The data is consistent with (Fama & French, 2001) in that dividends to assets (Div) goes down over time as repurchases to assets (Repurch) goes up. Firms are more likely to increase total payouts (PayIncr) rather than decrease total payouts (PayDecr). Similarly, increases in repurchases (RepIncr) outnumber decreases in repurchases (RepDecr).

Table 2: Summary Statistics

Panel A: All Firms						
Years	***N***	***Inst***	***MktCap***	***LifeCycle***	***q***	***CashFlow***
1990 - 1997	37,492	28.9%	2,106	-0.69	2.81	-0.16
		(23.6%)	(163)	(0.29)	(1.85)	(0.01)
1998 - 2005	42,398	33.3%	4,891	-0.53	4.68	-0.39
		(25.8%)	(350)	(0.18)	(1.86)	(0.01)
Total	79,890	31.3%	3,603	-0.61	3.81	-0.28
		(24.6%)	(239)	(0.24)	(1.85)	(0.01)
Panel B: Firms with a Payout						
1990 - 1997	13,934	37.9%	4,858	0.46	2.07	0.03
		(38.0%)	(547)	(0.64)	(1.75)	(0.04)
1998 - 2005	15,716	42.8%	10,806	-1.49	2.22	0.02
		(43.9%)	(1,146)	(0.57)	(1.75)	(0.04)
Total	29,650	40.5%	8,030	-0.57	2.15	0.02
		(40.4%)	(816)	(0.61)	(1.75)	(0.04)
Panel C: All Firms						
Years	***Div***	***Repurch***	***PayIncr***	***PayDecr***	***RepIncr***	***RepDecr***
1990 - 1997	0.81%	0.60%	24.80%	18.70%	13.66%	12.79%
1998 - 2005	0.66%	1.04%	24.57%	20.65%	17.56%	16.58%
Total	0.73%	0.83%	24.67%	19.78%	15.82%	14.89%
Panel D: Firms with a Payout						
1990 - 1997	2.21%	1.64%	65.60%	33.06%	35.82%	21.84%
1998 - 2005	1.80%	2.82%	64.70%	34.83%	45.65%	26.90%
Total	2.00%	2.26%	65.10%	34.04%	41.29%	24.66%
Panels A and B, show means on the first row and medians in parentheses on the second row. In Panels C and D, means are shown.						

Table 3 presents a correlation table for selected firm variables. Correlations that are significant at the 5% level are marked with an asterisk.

Table 3: Correlations

	Payout	**Repurch**	**Inst**	**MktCap**	**LifeCycle**	**q**
Repurch	0.6528*					
Inst	0.0801*	0.0957*				
MktCap	0.0539*	0.0332*	0.0865*			
LifeCycle	0.0008	0.0004	0.0013	0.0009		
q	-0.0025	-0.0023	-0.0135*	-0.0019	0.0013	
CashFlow	0.0032	0.0024	0.0232*	0.0023	-0.0008	-0.4194*
* indicates two-tailed significance at 5%.						

5.The Effect of Institutional Owners on Payout Composition

(Grullon & Michaely, 2002) find that repurchases are gradually being substituted for dividends. The substitution hypothesis suggests that institutional shareholders are encouraging the trend towards increased repurchases in lieu of dividends. This hypothesis predicts that an increase in institutional ownership will lead to an increase in repurchases as a percentage of total payout. To test this prediction, I use a measure of payout composition that evaluates the contribution to total payout made by dividends and stock repurchases equally. The measure which is calculated for each firm for each year is represented by *PayComp* and is shown in equation (2).

$$PayComp = \frac{Rpurch - Div}{Rpurch + Div} \qquad (2)$$

In equation (2), Rpurch is the dollar value of stock repurchases and Div is the dollar value of common stock dividends. PayComp is undefined for firms with no payouts. It is equal to zero for firm-years with an equal dollar value of repurchases and dividends (this only occurs six times in my sample).

If the majority of a firm's payout in a given year is made through dividends, PayComp will be a negative number. If the majority of the payout is made through repurchases, PayComp will be a positive number. If the entire payout is made using dividends, PayComp will have a value of negative one.

If stock repurchases are the only means of payout, PayComp will have a value of positive one. In my sample, the median and mean for PayComp are -0.51 and -0.16 respectively. This indicates firms are more likely to use dividends over repurchases as their primary method of payout for the full sample period. I use the following firm and year fixed effects model (3) to estimate the influence that institutional owners have on a firm's choice between the use of repurchases or dividends in determining their payout composition.

$$PayComp_{it} = Year_t + Firm_i + Inst_{it-1} + \beta \bullet Control_{it-1} + \varepsilon_{it} \quad (3)$$

$PayComp_{it}$ represents the change in the payout composition measure for each firm in each year. $Year_t$ denotes yearly fixed effects. $Firm_i$ represents firm fixed effects. $Inst_{it-1}$is the percentage of the firm's shares owned by institutional investors. $Control_{it-1}$ is a vector of time-varying firm level control variables: *q*, debt, stock turnover, retained earnings to total equity, log of market capitalization, ROA, insider ownership, insider ownership squared, and log of revenue. The error term is ε_{it}. Independent variables are measured as the change from year $t-2$ to year $t-1$. The dependent payout composition variable is measured as the change from year t - 1 to year t.
Table 4 reports the influence that institutional ownership changes have on payout composition (*PayComp*) in the following year. The first regression uses only control variables as independent variables.

The statistically significant coefficients indicate that payout composition tilts toward dividends as *q*, debt, retained earnings to total equity (a proxy for firm maturity), and return on assets increase. Payouts tilt toward stock repurchases as market capitalization or revenue increases. In the second regression, I add a variable (*Inst*) for institutional ownership. The result indicates a significantly positive relationship between institutional owners and an ensuing tendency to use repurchases as a greater part of the total payout composition. This tendency holds regardless of whether the majority of the firm's payout was dividends or repurchases in the previous year.

The third regression shows that institutional owners encourage an increase in repurchases as part of total payout composition in firms that favored dividends as a means of payout in the previous year. The fourth regression provides evidence that institutional owners also encourage repurchases over dividends in firms that favored repurchases as a means of payout in the previous year. For robustness, I run regressions for different time periods and using difference GMM. The results, which are displayed in Table 5 and Table 6, provide support for the substitution hypothesis. In Table 5, support is shown for the hypothesis' primary prediction that an increase in institutional investors leads to a tendency to favor stock repurchase in lieu of dividends in both the 1990 – 1997 and 1998 – 2005 time periods, although the evidence is stronger and more convincing for the latter period.

The results for the earlier period are somewhat surprising since this time period is entirely included in (Fama & French, 2001) which finds a decrease in propensity to pay dividends and an increase in repurchases. A closer examination of their study indicates that during the 1990 – 1997 time period, the propensity to pay dividends changed very little (see Table 6 of their study). It also indicates that repurchases declined from the 1988 – 1992 period to the 1993 – 1998 period (see Table 12 of their study). My results for the 1990 - 1997 time period seem less surprising in light of this information.

Still, the contrast between my weak results in the early time period and exceptionally strong results in the latter time period raises a question. Why? It could just be a result of the vagaries of the trend noted in (Fama & French, 2001). (Jagannathan, Stephens, & Weisbach, 2000) showed that repurchases are very cyclical with firms increasing stock repurchases after poor stock market performances. They also found that dividend increases were more common following good performance. Their findings could explain the different results for the two time periods.

Table 6 displaysthe results for difference GMM regressions using payout composition as the dependent variable. The results indicate that institutional investors encourage an increased use of stock repurchases as a percentage of total payout, especially in firms which previously used stock repurchases for more than 50% of their total payout.
The substitution hypothesis is supported because institutional investors prefer repurchases over dividends and they use their influence to tilt payout composition towards repurchases. For robustness, I test this assertion using difference GMM and separately for the years 1990 – 1997 and 1998 – 2005. The results support the substitution hypothesis and indicate that institutional investors encouraged an increase in repurchases as a part of total payout more intensely during the latter period.

6. Conclusion

(Grullon & Michaely, 2002) argue that firms have been increasingly using funds that would have previously been used for dividends to make repurchases. My evidence that an increase in institutional ownership leads to an increase in the proportion of total payout going towards repurchases and consequently a decrease in the proportion of payout going towards dividends provides support for their argument.

Institutional investors have a large and growing position as owners of public corporations. My results provide evidence that institutional investors are at least partly responsible for the increased use of stock repurchases as a part of total payout to shareholders.

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