firm-year to one of three groups. Firms in the bottom three deciles (Low *q*) have poor investment opportunities, those in the next four deciles (Medium *q*) have moderate investment opportunities, and those in the highest three deciles (high *q*) have good investment opportunities.

I then execute regressions using the firm and year fixed effects model 1 that show the effect that an institutional ownership change has on the subsequent year’s total payout to assets ratio (*Payout*). I add a new control variable, free cash flow (*CashFlow*), to the model because of its importance to the agency-based theory. Regressions are performed on the low *q*, medium *q*, and high *q* groups separately based on which group a firm is in during year *t* – 1. The results are shown in Table 5.

The first and second regressions include only firms with poor and moderate investment opportunities, respectively. Both regressions have a significantly positive coefficient for the variable *Inst*. This indicates that an increase in institutional ownership leads to an increase in payouts for these groups. The third regression indicates that institutional owners do not have a significant effect on payouts in firms with good investment opportunities. This pattern is consistent with the agency-based theory.

Agency-based theory also predicts that institutional investors should encourage higher payouts primarily in firms with high free cash flow. I test this prediction by assigning each firm-year to one of three groups: low cash flow (bottom three deciles), moderate cash flow (middle four deciles), and high cash flow (top three deciles). Once again, I use the firm and year fixed effects model 3 to access the impact institutional ownership has on payouts in the subsequent year. The results are shown in Table 6.

Table 7. Payouts and Time Periods

|  |  |  |
| --- | --- | --- |
| *Inst q* | (1) | (2) |
| 1990 - 1997 | 1998 - 2005 |
| *Payout* | *Payout* |
| 0.0118\*\* | 0.0138\*\* |
| (2.21) | (2.43) |
| 0.0000 | -0.0007\*\*\* |
| (0.30) | (5.14) |
| *Debt* | -0.0501\*\*\* | -0.0080\*\* |
|  | (3.60) | (2.47) |
| *Turnover* | -0.0000\* | -0.0012\*\*\* |
|  | (1.77) | (2.87) |
| *LifeCycle* | 0.0000 | -0.0000 |
|  | (1.27) | (1.14) |
| *MktCap* | 0.0040\* | 0.0098\*\*\* |
|  | (1.88) | (6.74) |
| *ROA* | -0.0034\*\* | -0.0018\*\*\* |
|  | (2.07) | (2.94) |
| *Insider* | -0.0243 | -0.0184 |
|  | (1.39) | (1.24) |
| *Insider2* | 0.0281 | 0.0037 |
|  | (1.64) | (0.23) |
| *Revenue* | 0.0005 | -0.0014 |
|  | (0.36) | (0.89) |
| Observations | 17682 | 27251 |
| Firms | 4809 | 6128 |
| R-squared | 0.13 | 0.22 |

Absolute value of t statistics in parentheses

\* significant at 10%; \*\* significant at 5%; \*\*\* significant at1%

This table reports estimates of firm and year fixed effect regressions of changes (from year *t* - 1 to *t*) in total payout divided by book value of assets (*Payout*) by time period. All independent variable values are calculated as changes in that independent variable from year *t* - 2 to *t* - 1. Regression 1 includes the years from 1990 to 1997. Regression 2 includes the years from 1998 to

2005.

The first regression shows that institutional owners have no effect on payouts in firms with low free cash flow. Higher payouts are encouraged by institutional owners in firms with moderate cash flow. In the group of firms with the highest cash flow, institutional investors have the strongest positive influence on total payouts. Consistent with agency-based theory, the pattern indicates that an increase in institutional ownership leads to a stronger increase in payouts as free cash flow increases.

The results in Table 7, Table 8, and Table 9 provide robustness and support for the agency-based theory. Table 7 provides evidence that an increase in institutional ownership leads to an increase in total payout for the first eight (1990

- 1997) and the last eight years of the sample.

Table 8. Payouts, Investment Opportunities, and Free Cash Flow

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | (1)  High*CashFlow*Low | (2) High | (3) Low | (4) Low |
| *q* | *CashFlow*  High *q* | *CashFlow*  Low *q* | *CashFlow*  High *q* |
| *Payout* | *Payout* | *Payout* | *Payout* |
| *Inst* | 0.0305\*\* | 0.0059 | 0.0033 | 0.0080 |
|  | (2.00) | (0.61) | (0.54) | (1.20) |
| *CashFlow* | -0.0005 | 0.0122\*\* | -0.0039 | 0.0019\* |
|  | (0.53) | (2.50) | (1.63) | (1.72) |
| *q* | 0.0038 | -0.0021\*\*\* | 0.0005 | -0.0004 |
|  | (0.87) | (4.21) | (0.42) | (1.54) |
| *Debt* | -0.0638\* | -0.1122\*\*\* | -0.0075 | 0.0000 |
|  | (1.82) | (5.66) | (1.46) | (0.01) |
| *Turnover* | -0.0054 | -0.0016\*\*\* | 0.0000 | -0.0010\* |
|  | (1.30) | (3.07) | (0.52) | (1.90) |
| *LifeCycle* | -0.0000 | 0.0000 | 0.0000 | 0.0000 |
|  | (0.95) | (0.29) | (0.39) | (0.11) |
| *MktCap* | 0.0128\*\* | 0.0225\*\*\* | 0.0062\* | 0.0043\*\* |
|  | (2.37) | (7.20) | (1.96) | (2.09) |
| *ROA* | -0.0156 | -0.0356\*\*\* | 0.0043 | -0.0022\*\* |
|  | (0.93) | (2.76) | (0.73) | (2.09) |
| *Insider* | -0.0082 | -0.0134 | 0.0047 | 0.0027 |
|  | (0.53) | (0.73) | (0.17) | (0.18) |
| *Insider2* | 0.0087 | 0.0016 | -0.0043 | -0.0006 |
|  | (0.51) | (0.07) | (0.16) | (0.04) |
| *Revenue* | -0.0010 | 0.0055 | -0.0071\* | -0.0003 |
|  | (0.18) | (1.45) | (1.73) | (0.21) |
| Observations | 10924 | 13122 | 11558 | 8632 |
| Number of Firms | 3757 | 3831 | 4565 | 3496 |
| R-squared | 0.49 | 0.20 | 0.42 | 0.77 |

Robust t statistics in parentheses

\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

This table reports estimates of firm and year fixed effect regressions of changes (from year *t* - 1 to *t*) in total payout divided by book value of assets (*Payout*). All independent variable values are calculated as changes in that independent variable from year *t* - 2 to *t* - 1. Sample firms used in regressions1, 2, 3, and 4 include only firms that are in the High *CashFlow* and Low *q*, High *CashFlow* and High *q*, Low *CashFlow* and Low *q*, and Low *CashFlow* and High *q* groups, respectively. Low *CashFlow* and High *CashFlow* groups include the lowest five and highest five *CashFlow* deciles, respectively. Low *q* and High *q* groups include the lowest five and highest five *q* deciles from year *t* - 1, respectively. Deciles are formed on a yearly basis.

For the analysis displayed in Table 8, I separate the firms into four groups: High *CashFlow* and Low *q*, High *CashFlow* and High *q*, Low *CashFlow* and Low *q*, and Low *CashFlow* and High *q*. The Low *CashFlow* and High *CashFlow* groups include the lowest five and highest five *CashFlow* deciles, respectively. Low *q* and High *q* groups include the lowest five and highest five *q* deciles from year *t* - 1, respectively. Deciles are formed on a yearly basis.

Table 8 indicates that an increase in institutional investors leads to a stronger increase in payouts in firms with poor investment opportunities and high free cash flow. Institutional investors do not have an effect on payouts in firms with good investment opportunities or low free cash flow.

Table 9. Payouts, Investment Opportunities and Free Cash Flow (GMM)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | (1)  All Firms | (2) Low *q* | (3) High *q* | (4) Low *CashFlow* | (5) High *CashFlow* |
| *Payout* | *Payout* | *Payout* | *Payout* | *Payout* |
| *Inst* | 0.0199\*\* | 0.0150\*\* | 0.0205 | 0.0127 | 0.0266\*\* |
|  | (2.37) | (2.19) | (1.56) | (1.48) | (2.33) |
| *Payout* | 0.0755 | 0.0585 | 0.0809\*\*\* | 0.0492 | 0.1196\*\*\* |
|  | (2.35) | (1.35) | (2.56) | (1.38) | (3.30) |
| *q* | -0.0009 | 0.0004 | -0.0005 | -0.0006 | 0.0006 |
|  | (0.49) | (0.11) | (0.30) | (0.32) | (0.23) |
| *Debt* | -0.4795 | -0.0518 | -0.0003 | 0.0343 | -0.0848 |
|  | (1.05) | (1.18) | (0.01) | (0.83) | (1.43) |
| *Turnover* | 0.0000 | -0.0000 | -0.0041\* | 0.0000 | -0.0000 |
|  | (0.15) | (0.24) | (1.70) | (0.61) | (0.51) |
| *LifeCycle* | -0.0001 | -0.0000 | -0.0001 | -0.0001 | -0.0001 |
|  | (0.93) | (0.87) | (0.93) | (1.11) | (0.84) |
| *MktCap* | -0.0069 | -0.0164\* | 0.0041 | -0.0122 | 0.0050 |
|  | (0.62) | (1.66) | (0.28) | (1.37) | (0.33) |
| *ROA* | 0.0301 | 0.0318 | 0.0026 | 0.0408 | 0.0050 |
|  | (1.26) | (0.94) | (0.14) | (1.01) | (0.17) |
| *Insider* | -0.1504\*\* | -0.0754 | -0.1278 | -0.0221 | -0.1984 |
|  | (1.99) | (1.26) | (1.21) | (0.25) | (2.05) |
| *Insider2* | 0.1619 | 0.0703 | 0.1386 | -0.0092 | 0.2234\* |
|  | (1.50) | (1.01) | (0.82) | (0.08) | (1.77) |
| *Revenue* | -0.0544\*\*\* | -0.0102 | -0.0374\*\*\* | -0.0218 | -0.0986 |
|  | (4.07) | (0.91) | (3.04) | (0.89) | (4.29) |
| Observations | 35255 | 18203 | 17052 | 16320 | 20387 |
| Number of Firms | 6796 | 4897 | 4532 | 5393 | 5129 |
| Chi2 (*p*-value) | 0.000 | 0.000 | 0.000 | 0.000 | 0.049 |
| *J p*-value | 0.161 | 0.899 | 0.106 | 0.530 | 0.182 |
| AR(2) *p*-value | 0.190 | 0.296 | 0.161 | 0.187 | 0.585 |
| *Inst* lag limits | None | None | None | 3 | None |
| *Payout* lag limits | None | None | None | None | None |

Robust z stats in parentheses

\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

This table reports estimates generated by difference GMM of changes (from year *t* - 1 to *t*) in total payout divided by book value of assets (*Payout*). All independent variable values are calculated as changes in that independent variable from year *t* - 2 to *t* - 1. Sample firms used in regressions 2 and 3 include only Low and High *q* firms (the lowest and highest five q deciles from year t - 1), respectively. Sample firms used in regressions 4 and 5 include only Low and High *CashFlow* firms (the lowest and highest five CashFlow deciles from year t - 1), respectively. *J* is the Hansen-Sargan test of overidentifying restrictions. AR(2) is the Arellano-Bond test of second-order autocorrelation in errors. Independent variables *Inst* and *Payout* are instrumented using GMM-type instrument lags. All available lags are used unless validity tests are rejected, in which case lags are restricted to the highest number of lags which produce a valid model.

I employ the Arellano and Bond (1991) difference linear GMM dynamic panel data methodology to obtain the results shown in Table 9. The results indicate that an increase in institutional shareholders leads to an increase in payouts, especially in firms with poor investment opportunities and high free cash flow.

My results provide evidence that an increase in institutional investors leads to a subsequent increase in total payout. Additionally, the evidence demonstrates that institutional investors use their influence to encourage higher payouts primarily in firms that are the most prone to agency problems, those with poor investment opportunities and high free cash flow. The results support the agency-based theory prediction that institutional owners encourage higher payouts to prevent management from misusing discretionary funds.

**6. Discussion**

Institutional investors own over 70% of public U.S. corporations. They have an informational advantage and the capability to be better monitors of corporate management than individual investors. Agency-based theory predicts that informed investors will prefer ownership of firms that choose to make payouts to shareholders rather than invest in value-destroying projects (Jensen, 1986). I find that higher institutional ownership leads to increases in total payouts, especially in firms with high free cash flow and poor investment opportunities as proxied by *q* offering support for agency-based free cash flow theory.

This study is limited to U.S. listed stocks and thus is only directly applicable to U.S. firms and the institutional investors that invest in them. Further research is required to see if the findings here can be expanded to include firms from other countries.

My finding that institutional owners influence payout policy is consistent with previous studies (De Cesari et al., 2012; Desai & Jin, 2011). My results provide evidence that institutional investors positively influence corporate payout policy by mitigating empire building by managers in firms with high free cash flow and poor investment opportunities. This should improve firm value and benefit all stockholders. Determining if firm value actually increases from the influence of institutional investors on payout policy is a subject for future research.