

Effects of Monthly Dividend Payments: The Case of Realty Income Corporation

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In this paper, we examine the effects of dividend payment frequency on Real Estate Investment Trusts (REITs). Specifically, we investigate if a clientele effect exists for monthly dividend payments by REITs. Results suggest that monthly dividend payments reduce the institutional ownership of outstanding common stock of a REIT, meaning that individual ownership is relatively higher. In addition, we examine if there are any agency cost effects of dividend payment frequency. The results of these tests indicate that monthly dividend paying REITs are likely to have lower agency costs than REITs that pay in other frequency forms. Finally, we compare Realty Income Corporation, a REIT with a long history of monthly dividend payments, to REITs with similar property investment focus. Results of these comparisons are consistent with the aggregate evidence.

INTRODUCTION

In this paper, we examine the effects of dividend payment frequency on Real Estate Investment Trusts (REITs). Specifically, we investigate if a clientele effect exists for monthly dividend payments by REITs.

Cash distributions to owners in the form of regular dividends are an important part of shareholder returns for many corporations. The debate on the relevance of dividend payments goes as far back as the 1960s when Miller and Modigliani (1961) first proposed the dividend irrelevance hypothesis. The Miller and Modigliani (1961) theorem implies that in a market where there are no imperfections such as transaction costs and taxes, the dividend policy of the firm would be irrelevant. This conclusion is reached because shareholders could obtain a desired payout policy on their own given the policy of the corporation.

There have been several studies making a case for relevancy of dividend payments since Miller and Modigliani (1961) based on agency costs, information effects and investor preferences. Large dividend payments may increase managerial discipline by forcing managers to undergo market monitoring because limited retained earnings would require equity issuance. According to information effects of dividends, management can use dividend policy to convey private information about the future prospects of the firm to investors. Investor preference is another reason why dividend policy may matter. For example, according to Elton and Gruber (1970), investors with high marginal tax rates display preference toward capital gains rather than dividend income. Allen, Bernardo and Welch (2000) suggest that dividend

paying firms attract more institutional investors because institutions are likely to avoid dividend taxation and perform better monitoring of firms, leading to higher valuation. Graham and Kumar (2006) show that retail investors prefer dividend yields as age and income increase. Jain (2007) establishes that individual investors prefer to invest in stocks with high dividend yield while institutional investors with low tax burden prefer low dividend yield stocks. Becker, Ivković and Weisbenner (2011) relate dividend initiations and payments to demographic characteristics (proportion of seniors) of counties in which they are located. These are consistent with the notion that firms follow dividend policies to meet their shareholders' demand.

Most corporations make their dividend payments on a quarterly basis. Among these dividend paying corporations, Real Estate Investment Trusts (REITs) have a unique place in that a REIT is required to pay at least ninety percent of its taxable income to shareholders each year to be exempt from corporate income tax. This distribution requirement results in relatively high dividend yields for REITs. REITs can choose to make dividend payments on a monthly, quarterly, semi-annual or annual basis. Most corporations distribute their dividends on a quarterly basis and this is indeed the most common approach among US based REITs. Even though there are not many, there are also US REITs that pay their dividends on a monthly basis. In Canada, however, the most common dividend payment frequency is monthly. According to SNL Financial data between 1985 and 2011 about 92 percent of all dividend payments were part of a quarterly dividend payment frequency while only about 7 percent were part of a monthly dividend payment frequency. These percentages are almost reversed for dividend payments by Canadian REITs.

In this study, we attempt to explain why a corporation would follow a monthly payment frequency as oppose to more traditional quarterly dividend payments. The finance literature does not offer any direct guidance on the effects of dividend payment frequency. However, monthly dividend payments may be due to an effect similar to "dividend clientele." Firms set their dividend payment frequency in response to the investors' preference. Even though it is difficult to establish what type of investor would prefer monthly dividends, it is likely that individuals would prefer dividends on a monthly basis to cover their living expenses. In addition, firms may use dividend payment frequency to attract that type of investors. If retired investors who need regular income are the group that management targets, then dividend payment frequency may be used to attract them. These arguments suggest that there should be an association between ownership structure and dividend payment frequency.

Our results suggest that monthly dividend payments reduce the institutional ownership of outstanding common stock of a REIT meaning that individual ownership is relatively higher. This supports the notion that a REIT can use its dividend payment frequency to cater to its owners.

In addition, we examine if there are any agency cost effects of dividend payment frequency. The results of these tests indicate that monthly dividend paying REITs are likely to have lower agency costs than REITs that pay their dividends in other frequency forms. Finally, we compare Realty Income Corporation, a REIT with a long history of monthly dividend payments, to REITs with similar property investment focus. Results of these comparisons are consistent with the aggregate evidence.

The rest of the paper is organized as follows. The next section provides the literature review and develops the test hypothesis. Section three describes data and methodology. Section four presents results. Section five provides evidence on the effects of monthly dividends on agency costs. Section six illustrates the case of Realty Income Corporation and lastly section seven concludes the paper.

LITERATURE REVIEW AND HYPOTHESIS

Our current knowledge about dividend payments suggests that they matter because of agency costs, information effects and investor preferences. Among the reasons, investor preference is the most closely related to this study. Elton and Gruber (1970) relate high marginal tax rates to investors' preference toward capital gains rather than dividend income. Kalay (1982) suggests that transaction costs may be responsible of this tax clientele effects, however, the dividend clientele effect still remains despite making

adjustment for market frictions. Allen, Bernardo and Welch (2000) find that dividend paying firms attract more institutional investors because institutions are likely to avoid dividend taxation and perform better monitoring of firms leading to higher valuation. Allen, Bernardo and Welch (2000) argue that firms can create an ownership clientele dominated by institutions if they pay dividends. Bell and Jenkinson (2002) confirm the existence of the tax clientele effect in the United Kingdom by examining the effects of the Finance Act of 1997, which dramatically increased the tax burden of dividends received by tax-exempt institutions. Baker and Wurgler (2004) suggest that firms prefer to pay dividends when investors are willing to pay premium for dividends. This premium induces firms to initiate dividend payments to capture the premium. Graham and Kumar (2006) show that retail investors have greater preference toward dividend yield as their age and income increase, suggesting age and tax clienteles. Becker, Ivković and Weisbenner (2011) provide evidence that firms' propensity to pay dividends and initiate dividend payments are related to the fraction of seniors living in the county where firms are headquartered. This finding is consistent with the view that firms set their dividend policies in response to preferences of its shareholders.

There are several studies examining clientele effects for REIT dividends, however, no studies on dividend payment frequency could be found. Hardin, Liano, and Huang (2002) evaluate ex-dividend stock price changes of REITs and suggest that tick restrictions in REIT price changes might cause the appearance of dividend tax clientele. In a later study, Hardin, Liano, Huang and Nagel (2007) examine ex-dividend day pricing of REITs before and after decimalization and find that ex-dividend day market response is related to transaction costs and the dividend amount rather than the dividend yield as predicted by dividend clientele explanation. Whitworth and Carter (2010) suggest that overnight declines in REIT prices reflect transaction costs and tick size, but trading during the ex-dividend day is related to tax preferences of individual investors. This finding clearly establishes the existence of tax clientele effects for REITs. A review of literature did not find a study on the effects of dividend payment frequencies. Given the evidence of Graham and Kumar (2006) and Becker, Ivković and Weisbenner (2011), we test a hypothesis that there is no statistical difference in individual ownership between monthly and non-monthly dividend paying REITs.

DATA AND METHODOLOGY

We primarily use SNL Financial data to test the hypothesis. Cross-sectional data on REIT characteristic are based on the most recent annual filings together with market price information at the time. Fiscal year end for most REITs (about 89 percent of all observations) in the sample is also calendar year end, December 31, 2011. There are 167 REITs from the U.S. and Canada in the sample. In addition, there are 33 monthly and 134 non-monthly dividend payers in the sample. The classification of REITs into monthly and non-monthly dividend payers is based on SNL Financial, which tracks frequency of dividend payments.

Table 1 reports descriptive statistics of variables used in this study. The average institutional ownership of REITs in the sample is 69.59 percent of shares outstanding. The average operating partner ownership is 6.45 percent with a median value of 0.73 percent. Even though there are similarities among Tobin's q, NAV q, price to book and price to NAV, the ranges are much larger for Tobin's q and price to book measures.

We use parametric and non-parametric univariate tests of comparisons between monthly and non-monthly dividend paying REITs. In a multivariate setting, we use a regression analysis to examine the effects of monthly dividend payments on the institutional ownership levels of REITs. The regression model is based on the following:

$$(ITO)_i = \alpha + \beta_1(MD)_i + \beta_2(INS)_i + \beta_3(OPO)_i + \beta_4(US)_i + \beta_5(PNAV)_i + \beta_6(TDR)_i + \beta_7(REV)_i + \beta_8(AGE)_i + \varepsilon_i$$

Where, ITO is fraction of common shares outstanding owned by institutions. MD is a dummy variable that has a value of 1 if the REIT pays dividends on a monthly basis; 0 otherwise. INS and OPO represent the fraction of shares owned by insiders and operating partners, respectively. US is a dummy variable and is set to 1 if a REIT is based in the US; 0 otherwise. PNAV is the market price per share divided by consensus NAV estimate. TDR is a ratio of total debt to total assets, REV is the natural log of revenues in US dollar terms and AGE is the natural log of age of a REIT since becoming public.

TABLE 1
DESCRIPTIVE STATISTICS

The data is provided by SNL Financial. Cross-sectional data on REIT characteristic are based on most recent annual filings together with market price information at the time. Fiscal year end for most REITs (about 89 percent of all observations) in the sample is also calendar year end, December 31, 2011. There are 167 REITs from the U.S. and Canada in the sample. In addition, there are 33 monthly and 134 non-monthly dividend payers in the sample. The classification of REITs into monthly and non-monthly dividend payers is based on SNL Financial which tracks frequency of dividend payments. G & A refers to General & Administrative.

Variable	Mean	Median	Standard Deviation	Min	Max	N
Panel A. All REITs						
Institutional ownership	0.6959	0.8079	0.3580	0.0000	1.2675	167
Insider ownership	0.0980	0.0409	0.1523	0.0000	0.9250	144
Operating partner ownership	0.0645	0.0073	0.1293	0.0000	0.7855	163
Number of institutional investors	200	178	154	1	700	165
Total revenue / Total assets	0.1626	0.1293	0.1207	0.0000	1.0600	162
Operating expense / Total revenue	0.2800	0.3276	0.1636	0.0000	0.8696	157
G & A expense / Total revenue	0.0902	0.0584	0.1491	0.0017	1.2097	158
Total debt / Total assets	0.5403	0.5142	0.2443	0.0000	2.6503	162
Tobin's q	1.2604	1.1667	0.4339	0.5068	3.3959	162
NAV q	0.9377	0.9276	0.1485	0.4257	1.4205	145
Price / Book	1.8274	1.5070	1.0706	0.1225	5.5664	153
Price / NAV	1.0015	0.9930	0.1392	0.6358	1.4183	149
Age	17	17	13	1	59	142

We expect MD to have a negative association with the level of institutional ownership since monthly dividend payments are more likely to be preferred by individual investors. INS is likely to have a negative effect on institutional ownership because larger insider ownership may create control problems for institutional investors. OPO may have a positive effect on institutional ownership if institutions believe that operating partners may contribute to the monitoring of managerial actions. The coefficient of TDR is likely to be negative since greater leverage is likely to deter institutional ownership while the coefficient of REV is expected to be positive since institutions are likely to prefer larger firms.

RESULTS

The results of univariate tests are presented in Table 2. There appears to be significant differences between monthly and non-monthly dividend paying REITs. It is clear that monthly dividend paying REITs have significantly lower institutional ownership than non-monthly dividend paying REITs. More specifically, the average institutional ownership among monthly dividend paying REITs is 31.6 percent, while it is more than twice as much for non-monthly dividend paying REITs at 78.94 percent. However,

insider and operating partner ownership between the two groups appears to be similar. This evidence supports the notion that monthly dividend paying stocks are avoided by institutional investors which means that individual investors invest more in monthly dividend paying stocks.

TABLE 2
UNIVARIATE ANALYSIS OF INSTITUTIONAL OWNERSHIP

This table reports univariate test statistics on ownership related variables across monthly and non-monthly dividend paying REIT groups. The data is provided by SNL Financial. Cross-sectional data on REIT characteristic are based on most recent annual filings together with market price information at the time. Fiscal year end for most REITs (about 89 percent of all observations) in the sample is also calendar year end, December 31, 2011. There are 167 REITs from the U.S. and Canada in the sample. In addition, there are 33 monthly and 134 non-monthly dividend payers in the sample. The classification of REITs into monthly and non-monthly dividend payers is based on SNL Financial which tracks frequency of dividend payments.

Variable	Dividend Frequency	Mean	Median	Standard Deviation	Min	Max	N
Institutional ownership	Non-monthly	0.7894	0.9077	0.3243	0.0000	1.2675	134
	Monthly	0.3160	0.2771	0.2059	0.0034	0.8197	33
	p-value	0.0000	***	0.0000	***		
Insider ownership	Non-monthly	0.1032	0.0413	0.1583	0.0012	0.9250	130
	Monthly	0.0505	0.0280	0.0615	0.0000	0.2280	14
	p-value	0.0192	**	0.2333			
Operating partner ownership	Non-monthly	0.0624	0.0103	0.1234	0.0000	0.7855	130
	Monthly	0.0729	0.1523	0.1523	0.0000	0.7198	33
	p-value	0.6786		0.2535			
Number of institutional investors	Non-monthly	230.96	210.00	154.00	1.00	700.00	132
	Monthly	73.91	69.00	68.15	1.00	297.00	33
	p-value	0.0000	***	0.0000	***		

The results of multivariate analysis are reported in Table 3. Across alternative models, monthly dividend coefficient is negative and highly significant. This suggests that institutional investment in REITs declines if dividend payments are made on a monthly basis. This supports the notion that REITs can use dividend payment frequency to respond to the preferences of its owners. Institutional ownership also declines with greater insider ownership and older REITs, while it increases with firm's size measured by total revenue.

AGENCY COSTS AND MONTHLY DIVIDENDS

In this section, we examine if there is any association between monthly dividend payments and agency costs. Dividend policy may be used to discipline management. Dividend payments may reduce the possibility of investing in negative net present value investments. Moreover, if the corporation is in need of additional funding then it would be subject market monitoring. This effect would not be as strong if a corporation does not pay out dividends or retains most of its earnings. In addition, monthly dividend payments may require better cash flow management and greater managerial discipline.

We examine number of dividend cuts by REIT given frequency of dividend payments. We argue that firms with better managerial discipline would not be forced to cut dividend payments even though in some cases dividend cuts may be associated with opportunities that require significant capital deployment. We use historical dividend payments by REITs from SNL Financial. There are 18,317

dividend payments between 1983 and 2012. Table 4 reports dividend cuts by REITs and dividend payment frequencies.

TABLE 3
INSTITUTIONAL OWNERSHIP

This table reports regression results on ownership related variables. The regression model is based on the following:

$$(ITO)_i = \alpha + \beta_1(MD)_i + \beta_2(INS)_i + \beta_3(OPO)_i + \beta_4(US)_i + \beta_5(PNAV)_i + \beta_6(TDR)_i + \beta_7(REV)_i + \beta_8(AGE)_i + \varepsilon_i$$

Where, ITO is fraction of common shares outstanding owned by institutions. MD is a dummy variable that has a value of 1 if REIT pays dividends on a monthly basis; 0 otherwise. INS and OPO represent the fraction of shares owned by insiders and operating partners, respectively. US is a dummy variable and is set to 1 if a REIT is based in the US; 0 otherwise. PNAV is the market price per share divided by consensus NAV estimate. TDR is a ratio of total debt to total assets, REV is the natural log of revenues in US dollar terms and AGE is the natural log of age of a REIT since becoming public. The data is provided by SNL Financial and includes 167 REITs from the U.S. and Canada.

Dependent Variable	Institutional ownership					
Variable	Model 1	Model 2	Model 3	Model 4	Model 5	
Intercept	-0.2425	-0.2684	-0.48748 *	-0.08835	0.64079 ***	
	-0.9200	1.0400	-1.92	-0.34	3.19	
MD	-0.3384 ***	-0.3312 ***	-0.3063 **	-0.33793 ***	-0.4604 ***	
	-3.5800	-3.5100	-3.17	-3.48	-4.69	
INS	-0.4548 ***	-0.3768 ***		-0.57941 ***	-0.7446 ***	
	-2.7400	-2.5700		-3.56	-4.43	
OPO	0.1927		-0.02671 ***	0.32816 *	0.34973 *	
	1.0900		-0.16	1.89	1.89	
US	0.2099 *	0.2174 *	0.2316	0.18842	0.17272	
	1.8500	1.9200	1.99	1.62	1.4	
PNAV	0.0785	0.0645	0.0881	0.04957	0.20952	
	0.6100	0.5100	0.67	0.38	0.1173	
TDR	-0.1719 *	-0.1637	-0.12691	-0.23327 **	-0.16924	
	-1.6700	1.6100	-1.21	-2.26	-1.56	
REV	0.0873 ***	0.0903 ***	0.10411 ***	0.06977 ***		
	4.7600	5.0300	5.84	3.98		
AGE	-0.0579 **	-0.0615 ***	-0.07552 ***			
	-2.6000	2.9100	-3.44			
Adjusted R ²	0.5413	0.5297	0.513	0.5164	0.4493	

The entire sample of dividend cuts suggests that more frequent dividend payments have lower likelihood of cuts. For example, monthly dividend cuts represent 2.43 percent of total monthly dividend

payments, while quarterly dividend cut rate is 3.68 percent. Most dividend payments in the US are made on a quarterly basis and the dividend cut rate is 3.62 percent while the monthly dividend cut rate is 1.39 percent. In Canada, most dividends payments are monthly and the monthly dividend cuts represent 2.72 percent of all monthly dividends, while the quarterly dividend cut rate is 2.44 percent. On aggregate, fewer dividend cuts by monthly dividend paying REITs supports the notion that monthly dividend payments may improve managerial discipline.

TABLE 4
REIT DIVIDEND CUTS AND DIVIDEND PAYMENT FREQUENCIES

Historical dividend payments by REITs are provided by SNL Financial. There are 18,317 dividend payments by REITs between 1983 and 2012.

Dividend Frequency	All dividends			U.S. REITs			Canada REITs		
	Cut	Total	Fraction	Cut	Total	Fraction	Cut	Total	Fraction
Monthly	110	4,531	2.43%	14	1,004	1.39%	96	3,527	2.72%
Quarterly	499	13,568	3.68%	474	13,101	3.62%	8	328	2.44%
Semi-Annual	32	159	20.13%	10	99	10.10%	22	60	36.67%
Annual	10	59	16.95%	10	59	16.95%			
Total	651	18,317	3.55%	508	14,263	3.56%	126	3,915	3.22%

There are several alternative measures of agency costs. These measures include undistributed cash flow, operating expense to annual sales, total revenue to total assets, general and administrative expense (G & A expense) to total revenue, Tobin's q and NAV q. Lehn and Poulsen (1989) define undistributed cash flow as operating income less income taxes, interest expense, preferred and common stock dividends. Ang, Cole and Lin (2000) measure agency costs based on operating expense to annual sales. Ang, Cole and Lin (2000) and McKnight and Weir (2009) use some form of total revenue to total assets ratio. Singh and Davidson (2003) introduce an alternative measure based on selling, general, and administrative expenses scaled by sales. These three measures relate agency costs to some form of efficiency metric and do not incorporate market views. Henry (2010) uses Tobin's q ratio to measure agency costs. Tobin's q is computed as market value of equity plus book value of debt and preferred stock divided by total assets. We also use NAV q based on Gentry and Mayer (2003). Gentry and Mayer (2003) suggest that Tobin's q computed as mentioned before has errors that can be corrected by using aggregate NAV. NAV q is computed as market value of equity plus book value of debt and preferred stock divided by aggregate NAV plus book value of debt and preferred stock. Tobin's q and NAV q incorporate market valuation into agency costs and therefore may capture perceived agency costs better than the former three measures. Generally, agency costs are inversely associated with total revenue to total assets, Tobin's q and NAV q and positively associated with operating expense to total revenue and general and administrative expense to total revenue ratios.

Tests of agency costs are based on univariate comparisons and multivariate regressions. We use both parametric and non-parametric tests of comparisons between monthly and non-monthly dividend paying REITs. In a multivariate setting, we use regression models similar to that of Ang, Cole and Lin (2000). The regression model is based on the following:

$$(AC)_i = \alpha + \beta_1(MD)_i + \beta_2(INS)_i + \beta_3(OPO)_i + \beta_4(US)_i + \beta_5(TDR)_i + \beta_6(REV)_i + \beta_7(AGE)_i + \varepsilon_i$$

Where, AC is a measure of agency costs and includes total revenue to total assets, operating expense to total revenue, general and administrative expense to total revenue, Tobin's q and NAV q. INS represents the fraction of shares owned by institutions. The other variables are as defined before.

We expect MD to lower agency costs because more frequent dividend payments may lead to better cash flow management and greater managerial discipline. The expected sign of MD coefficient depends on the agency cost measure. The sign of MD should be positive when using total revenue to total assets, Tobin's q and NAV q as measures of agency costs. If operating expense to total revenue or general and administrative expense to total revenue is used as a measure of agency costs then the MD coefficient should have a negative sign.

TABLE 5
UNIVARIATE ANALYSIS OF AGENCY COSTS

This table reports univariate test statistics on agency cost measures across monthly and non-monthly dividend paying REIT groups. The data is provided by SNL Financial. Cross-sectional data on REIT characteristic are based on most recent annual filings together with market price information at the time. Fiscal year end for most REITs (about 89 percent of all observations) in the sample is also calendar year end, December 31, 2011. There are 167 REITs from the U.S. and Canada in the sample. In addition, there are 33 monthly and 134 non-monthly dividend payers in the sample. The classification of REITs into monthly and non-monthly dividend payers is based on SNL Financial which tracks frequency of dividend payments.

Variable	Dividend Frequency	Mean	Median	Standard Deviation	Min	Max	N
Total revenue / Total assets	Non-monthly	0.1667	0.1362	0.1033	0.0000	0.6666	130
	Monthly	0.1456	0.1084	0.1757	0.0524	1.0600	32
	p-value	0.5175	0.0008	***			
Operating expense / Total revenue	Non-monthly	0.2608	0.3066	0.1568	0.0000	0.6020	125
	Monthly	0.3547	0.3842	0.1707	0.0000	0.8696	32
	p-value	0.0035	***	0.0003	***		
G & A expense / Total revenue	Non-monthly	0.1004	0.0612	0.1648	0.0017	1.2097	126
	Monthly	0.0502	0.0409	0.0318	0.0085	0.1619	32
	p-value	0.0017	***	0.0018			
Tobin's q	Non-monthly	1.2699	1.1339	0.4605	0.5068	3.3959	130
	Monthly	1.2216	1.1888	0.3056	0.5567	2.1667	32
	p-value	0.4762	0.9447				
NAV q	Non-monthly	0.9258	0.9105	0.1535	0.4257	1.4205	115
	Monthly	0.9832	0.9787	0.1190	0.7682	1.2693	30
	p-value	0.0592	*	0.0234	**		

The results of the effects of monthly dividend payments on agency cost are not conclusive in terms of whether or not monthly dividend payments reduce agency costs. Table 5 reports the results of univariate analysis across alternative measures of agency costs. These results are contradictory to what is expected in terms of relative levels of agency cost measures between the two groups except for general and administrative expense to total revenue and NAV q. The general and administrative expense to total revenue ratio is lower for monthly dividend paying stocks while NAV q is higher.

TABLE 6
AGENCY COSTS

This table reports regression results on agency cost measures. The regression model is based on the following:

$$(AC)_i = \alpha + \beta_1(MD)_i + \beta_2(INS)_i + \beta_3(OPO)_i + \beta_4(US)_i + \beta_5(TDR)_i + \beta_6(REV)_i + \beta_7(AGE)_i + \varepsilon_i$$

Where, AC is measure of agency costs and includes total revenue to total assets, operating expense to total revenue, general and administrative expense to total revenue, Tobin's q and NAV q. INS represents the fraction of shares owned by institutions. MD is a dummy variable that has a value of 1 if REIT pays dividends on a monthly basis; 0 otherwise. INS and OPO represent the fraction of shares owned by institutions and operating partners, respectively. US is a dummy variable and is set to 1 if a REIT is based in the US; 0 otherwise. PNAV is the market price per share divided by consensus NAV estimate. TDR is a ratio of total debt to total assets, REV is the natural log of revenues in US dollar terms and AGE is the natural log of age of a REIT since becoming public. The data is provided by SNL Financial and includes 167 REITs from the U.S. and Canada.

Dependent Variable	Operating		G & A expense / Total revenue	Tobin's q	NAV q
	Total revenue / Total assets	expense / Total revenue			
Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	-0.0894 -1.0700	0.5107 *** 2.7900	0.3303 *** 6.4300	0.1375 0.3000	0.5459 *** 2.9500
MD	-0.0375 -1.0900	-0.0978 -1.3000	-0.0095 -0.4500	0.2553 1.3500	0.2082 *** 2.7200
INS	-0.0828 ** -2.4400	0.1726 ** 2.3200	0.0195 0.9300	0.0372 0.2000	0.0943 1.2500
OPO	-0.0010 -0.0200	0.1750 1.5200	-0.0450 -1.3900	-0.3938 -1.3700	-0.0043 -0.0400
US	0.0124 0.3300	-0.2746 *** -3.3600	0.0375 1.6300	0.1043 0.5100	0.0374 0.4500
TDR	0.0160 0.4400	0.1306 1.6200	-0.0154 -0.6800	0.0602 0.3000	-0.1501 * -1.8400
REV	0.0246 *** 3.5300	-0.0177 -1.1500	-0.0233 *** -5.4000	0.0530 1.3800	0.0243 1.5700
AGE	-0.0084 -1.0600	0.0103 0.6000	-0.0011 -0.2300	0.1156 *** 2.6800	0.0112 0.6400
Adjusted R ²	0.0754	0.1129	0.2971	0.1165	0.0896

Table 6 reports results of multivariate analysis of alternative agency cost measures and monthly dividend payments. Coefficients of dummy variables for monthly dividend paying REITs have the correct signs except for Model 1 where dependent variable is total revenue to total assets. These coefficients are mostly statistically insignificant except for Model 5. If argument of Gentry and Mayer (2003) on accuracy of Tobin's q for REITs is valid then dependent variable, NAV q, used in Model 5 may be a more reliable measure of agency costs. This supports the notion that monthly dividend payments may contribute to the reduction in agency costs since higher NAV q suggests that agency costs are lower or management is creating value for the shareholders.

REALTY INCOME CORPORATION AND MONTHLY DIVIDENDS

In this section, we offer a micro view on monthly dividend payments based on Realty Income Corporation (RIC) experience in paying monthly dividends for an extended period of time. We compare RIC to similar REITs within its property type group, but the comparison in this section is not designed to draw scientific conclusions on the effects of monthly dividends. According to SNL Financial, RIC is a REIT investing in single-tenant retail properties. This identifies its competitors as Agree Realty Corporation, Getty Realty Corp., National Retail Properties, Inc. and One Liberty Properties, Inc. None of RIC's competitors make monthly dividend payments. In terms of market capitalization, RIC is twice as large as its largest competitor, National Retail Properties, Inc. RIC's market capitalization was about \$4.6 billion while the market capitalization of National Retail Properties, Inc. stood at \$2.8 billion at the end of 2011.

TABLE 7
REALTY INCOME CORPORATION AND COMPARABLE REITS

This table reports results of comparison between Realty Income Corporation (RIC) and REITs within RIC's property type group. According to SNL Financial, RIC is a REIT investing in single-tenant retail properties. This identifies its competitors as Agree Realty Corporation, Getty Realty Corp., National Retail Properties, Inc. and One Liberty Properties, Inc. None of RIC's competitors make monthly dividend payments. In terms of market capitalization, RIC is twice as large as the largest comparable REIT, National Retail Properties, Inc. The data is provided by SNL Financial.

Variable	RIC	Comparable REITs	
		Mean	Median
Institutional ownership	0.4880	0.5742	0.5172
Insider ownership	0.0130	0.1399	0.1570
Operating partner ownership	0.0000	0.0085	0.0000
Number of institutional investors	297	169	145
Total revenue / Total assets	0.0952	0.1315	0.1137
Operating expense / Total revenue	0.0177	0.0825	0.0798
G & A expense / Total revenue	0.0700	0.1234	0.1193
Total debt / Total assets	0.4650	0.3783	0.3979
Tobin's q	1.5966	1.2320	1.2336
NAV q	1.2693	0.8885	0.8608
Price / Book	2.5664	1.3722	1.4351
Price / NAV	1.3410	0.9462	0.9509
Age	18	29	29

Table 7 compares RIC to the mean and median of a group of similar REITs. Institutional ownership of RIC shares stand at 48.8 percent while the mean and median of comparable companies are both higher than that. This is consistent with an earlier suggestion that monthly dividend payments are likely to be preferred by individual investors. In terms of measures of agency costs, RIC clearly has lower agency costs than comparable REITs across alternative measures of agency costs except for total revenue to total assets measure. RIC's operating expense to total revenue and general and administrative expense to total

revenue measures are both lower suggesting lower agency costs. RIC's Tobin's q and NAV q are higher, consistent with lower agency costs.

We also compare PNAV of RIC and its competitors. NAV estimates are provided by SNL Financial and cover a time period from July 2001 to May 2011. There are a total 1,586 estimates of which 724 estimates are for RIC. The price component of PNAV reflects the price as of the date of an estimate. Medians of RIC and its competitors PNAVs are 1.15 and 1.05, respectively. A Wilcoxon signed-rank test on differences in medians rejects the null hypothesis that they are equal. This finding also suggests that RIC has been selling at a premium to its NAV at rate higher than that of its competitors.

We cannot generalize from a single firm experience; however, it is interesting to note that the anecdotal evidence from RIC is consistent with the aggregate evidence that paying dividends on a monthly basis may attract more individual investors and lower agency costs.

CONCLUSIONS

We investigate if there is any association between stock ownership and dividend payment frequency, by using SNL Financial data. Results suggest that monthly dividend payments reduce the institutional ownership of outstanding common stock of a REIT meaning that individual ownership is relatively higher. This supports the notion that a REIT can use its dividend payment frequency to cater to its owners.

In addition, we examine if there are any agency cost effects of dividend payment frequency. The results of these tests indicate that monthly dividend paying REITs are likely to have lower agency costs than REITs that pay dividends in other frequency forms. Finally, we compare Realty Income Corporation, a REIT with a long history of monthly dividend payments, to REITs with similar property investment focus. Results of these comparisons are consistent with the aggregate evidence.

The findings reported here open new directions for future studies. One such possibility is to consider the effects of monthly dividend payments over time. An alternative direction would be to examine market reaction to dividend cuts across different frequency types. The results of this study can be strengthened if there are differences in market reactions to quarterly and monthly dividend payment cuts.

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