DOI: 10.20472/IAC.2015.015.112

VEERANUCH LEELALAI

National Institute of Development Administration, Thailand

HOW TALENTED MANAGERS MAKE DIVIDEND DECISION: EVIDENCE FROM U.S. MARKET

Abstract:

Wealth maximization is the main objective of a business firm. One of the instruments to achieve that goal is dividend policy. However, dividend policy is also considered to be timelessly complicated as managers have to alternate between new investment decisions and wealth distribution to shareholders. In addition, firms should have stable income level in order to payout the dividend. Subsequently, it is controversial about how much a firm, led by a group of professional managements, should pay the dividend. This paper approached the question by investigating the relationship between managerial talent and dividend decision. The hypothesis was that talented managers choose to pay more dividends, because manager with greater ability supposedly make better corporate decisions, which in turns, can improve company's earning quality. Managerial ability measure (hereafter "MA-score") used herein is motivated by the work of Demerjian et al. (2012), which gauged genuine managerial ability rather than firm efficiency. The results supported the earning quality hypothesis as dividend policy was positively associated with managerial ability. Specifically, managers with higher ability was associated with higher possibility to approve dividend payment to shareholder and tended to pay at a higher rate than less talented managers. Using industry mean MA-score as instrumental variable, this paper employed the two-stage least square method to address possible endogeneity and still obtained the consistent results. The implication was that managerial talent has substantial impact on critical corporate decisions such as dividend policy. More talented managers can improve corporate earning quality (or sustainability), which encourage to pay more dividend.

Keywords:

Dividend policy, Managerial ability, Managerial talent

JEL Classification: G35

Introduction

While previous literatures on managerial ability have found large numbers of its association with firm performance and corporate strategy & policy, this study try to gain insight on its relation with dividend policy, one of the key corporate strategies. The motivation behind this study is motivated by the following deliberation. First, dividends is known as one of the classical strands in financial & accounting research but limited theoretical and empirical evidences on how it be explained by the extent of managerial ability. Second, new managerial ability measure, which is developed by Demerjian et al. (2012), has been used in various studies but not in the relation with dividend policy. The measure is simply explained by first using data envelopment analysis (hereafter, DEA) to estimate firm efficiency within the industry year. Finally, the genuine managerial contribution will be separated and use in the study.

This empirical study is conducted on 23,394 firm-year observations of U.S. listed firms reported by annual Compustat/CRSP merged database from 1990 to 2011. The results from logistic regression display that managerial ability and propensity to pay dividend are positively correlated. It is in agreement with earnings quality hypothesis. All else equal, more able manager can build up company in much sustainable fashion and result to pay higher dividends, which is known as a long-term commitment to shareholders.

Background Theory

Dividends is known as a classical corporate policy for many centuries as a profit distribution mechanism. It is known as an important key decision in relation between investing and financing decisions. It continues to be one of the famous debated area by scholars for almost a century and counting.

Thereafter, numerous research papers have been highlighted on the importance and the relevance of dividends. Subsequent research papers counter the key assumption made by Miller and Modigliani (1961). They introduce assumption on imperfection of capital market and irrational investors. Hence, the issues of dividends becomes more complicated as its possible linkage of dividends to other decision made by firm regarding investment and financing. Dividends is perceived as the “bird-in-hand” and considered as firm value booster. The more assumption was made on tax treatment between dividends and capital gains. Tax treatment and time horizon of payment are advantageous to capital gains. Clientele effect is used to explain perception of dividends since it is varied on the difference class of investors. Dividend is also known as an informative signal of corporate performance. Dividend policy is argued to be an agency conflict alleviator. Excessive cash in hand bring possibility of managers to spend for their private benefit or careless investments rather than maximizing value of shareholders.

Academic researches on corporate policy and decision making are in association with managerial trait. A principal perception is that decisions are varied on the difference style and ability of managers. More able managers are tend to be risk takers (Kulatilaka & Marcus, 1994). Ability of managers is found to be positively associated to corporate

performance since their decisions are reflected on organizations (Hambrick & Mason, 1984). The relation is also extended to demographic characteristic, educational background, specific behavior, tenure, and reputation.

As discussed above, rich existing literatures on both of dividends and managerial ability. However, there is a small number of academic research exploring their relation. Dividends is only found to be negatively associated to managerial overconfidence (Deshmakh, Goel, and Howe, 2013). In this study, I aim to make valuable contribution to financial literature by examining the relation between managerial ability and dividend policy to shed light on how corporate decision vary upon managerial ability.

Research Methodology

Two hypotheses that could explain the association between managerial ability and dividend payout are:

(1)The Earnings Quality Hypothesis which points out that more able managers are expected to be more knowledgeable about the company and the business, as well as ability to utilize information on hands for the accurate forward-looking estimation and higher earning quality (Libby and Luft, 1993). This will relieve the reluctance of increasing dividends. Therefore, this hypothesis predicts that managerial ability and dividend policy are positively correlated.

(2) The Signaling Hypothesis argues that dividends is known as tool to signify earnings quality. It can be used to alleviate agency problem (Jensen, 1986). However, more able managers are able to promote earnings quality by themselves. It does not necessitate for more able managers to pay dividends. This lead to the postulation that “Ceteris paribus, a company with more able manager tend to pay lessor dividend that that of that of less able manager”.

To answer the research question that “does managerial ability matter to dividend payout policy?”, this study test the aforementioned hypotheses by computing multivariate regression model of managerial ability on dividend policy, controlling for other variable[1] on year and industry fixed effect, as specified in equation (1). Table 1 displays the definition of each variables in the equation (1).

$$Div_t = \alpha_0 + \sum_j \alpha_j \, Control_{j,t} + \beta_0 MA_t + \sum_t \alpha_t Year_t + \sum_m \alpha_m Industry_{m,t} + \varepsilon_t \quad (1)$$

Where;

Control is control variables comprise size, leverage, growth, profitability, capital expenditure, R&D, corporate Income, retained earnings, cash holdings, repurchase dummy

Table 1: Definition of Each Control Variable in Equation 1

Variable name	Definition
Div	Dividend Dummy (1= pay dividends, 0 = not pay)
MA	Managerial Ability Score (thereafter "MA-score")
Size	Logarithmic of total assets
Leverage	Long-term debt divided by total assets
Growth	% sales revenue growth
Profitability	The ratio of net income to total sales
Capital Exp	The ratio of capital expenditure to total assets
R&D	The ratio of R&D to total assets
Corporate Income	The ratio of corporate income tax to total assets
Retained Earnings	The ratio of retained earnings to total equity
Cash Holdings	The ratio of cash and short-term securities to net assets
Repurchase Dummy	(1= firm repurchases common stock, 0 = No)
Industry	Industry dummies based on the 4-digit SIC code
Year	Year dummies

This study use the measure of managerial ability, which is developed by Demerjian et al. (2012). The process is done by first using data envelopment analysis (hereafter, DEA) to estimate firm efficiency within the industry. Specifically, it can be computed by scaling the sales generated by each firm by Cost of Goods Sold, Selling and Administrative Expenses, Net PP&E, Net Operating Leases, Net Research and Development, Purchased Goodwill, and Other Intangible Assets. Demerjian et al. (2012) use DEA to solve the following optimization problem:

$$max_v \theta = \frac{Sales}{v_1 CoGS + v_2 SG\&A + v_3 PPE + v_4 OpsLease + v_5 R\&D + v_6 Goodwill + v_7 OtherIntan} \quad (2)$$

Where;

CoGS is Cost of Goods Sold

SG&A is Selling, General and Administrative Expenses

PPE is Net Property, Plant, and Equipment

OpsLease is the present value of required operating lease payments over the next five years. This information is available in the firm's footnotes to the financial statements and also on Compustat. The inclusion increases the input comparability among firms that generate the identical operations but either lease or buy their production assets.

R&D is the Net Research and Development (R&D). Since net R&D is not reported as an asset on the balance sheet, Demerjian et al. (2012)

use five-year capitalization period of R&D expense to calculate net value.

Goodwill is the premium paid over the fair value of a business acquisition. Generally, purchased goodwill is reported on the balance sheet.

OtherIntan is other acquired and capitalized intangibles, apart from purchased goodwill. This includes items such as client lists, patents, and copyrights. Again, this is also reported on the balance sheet.

However, the total firm efficiency is attributed by both the manager and the firm. For example, a more able manager will possess better business acumens and make better critical decision, while a manager in a larger firm, regardless of his/her quality, can take advantage from its bargaining power over suppliers and customers to have the better commercial terms. Therefore, Demerjian et al. (2012) remove key firm-specific characteristics, which may support or hinder managerial ability, including firm size, firm age, market share, positive cash flow, complexity from multi-segment, and international operations. They estimate the Tobit regression model by industry. Then, the residual from the estimation attribute to the management team. This is considered as the MA-Score.

Data & Results

This study aim to understand how managerial ability affects dividends policy. The original sample includes all firms reported by annual Compustat /CRSP merged database from 1990 to 2011(23,394 firm-year observations). As discussed earlier, managerial ability is based on the measure presented by Demerjian, Lev and McVay (2012). Then, the sample is narrowed down by eliminating firms whose financial and accounting data do not exist on the CRSP or Standard & Poor's Compustat databases. This is insufficient to calculate the DEA efficiency estimation (and eventually managerial ability measure). If there are not reported, this study set the amount of capital expenditure expenses and research and development (R&D) expenses to zero.

The descriptive statistics for the discussed controlled variables and MA-score are set forth in Table 2. I present the number of observations, mean, median, standard deviation, and the 25th and the 75th percentiles. The mean of MA-score is -0.0036, with standard deviation of 0.18, while the 25th percentile is -0.1223 and the 75th percentile value is 0.1017.

Table 2: Descriptive Statistics

Firm Characteristics	Obs	Mean	Median	Standard Deviation	25th	75th
Ln(Total Assets)	23,394	5.2226	5.2942	2.4757	3.8631	6.7643
Leverage	23,394	0.7211	0.1667	26.3063	0.0056	0.4203
ROE	23,394	-0.6774	0.0127	170.9383	-0.2298	0.0923
EBITDAR	23,394	-1.4871	0.0754	156.973	-0.1066	0.1469
R&D Ratio	23,394	0.1149	0.0033	1.3368	0	0.0917
Advertising Ratio	23,394	0.0215	0	0.1405	0	0.0064
Capital Exp.	23,394	0.0658	0.0348	0.1136	0.015	0.0771
Growth	23,394	3.7038	0.1508	114.1036	-0.0162	0.4695
Corporate Income Tax	23,394	0.0112	0.0016	0.1038	0	0.0203
Cash holding	23,394	0.2604	0.1541	0.2635	0.0426	0.4286
Retain Earnings	23,394	-4,189.7	-0.1796	452603	-1.4341	0.1093
Managerial Ability	Obs	Mean	Median	Standard Deviation	25th	75th
MA-score	23,394	-0.0036	-0.0217	0.1800	-0.1223	0.1017

The results from the logistic regression analysis are shown in Table 3. Like Demerjian et al. (2012), this study cluster standard errors by industry as well as by year. The first two models are logistic regressions where the dependent variable is a dummy variable representing propensity to pay dividends. It is equal to one if the firm of any size pay dividends. This study seek to determine how the managerial ability influences the propensity for firms to pay dividends. The variable of interest is MA-score. As the result, the coefficient of this variable is positive and highly significant (P-value <0.01), suggesting that firm with more able managers exhibit a higher probability to pay dividends. Non-monotonic relation can be formed, which means change of managerial ability of firms with more able managers and those with less able managers will effect dividend policy differently. Model 3 and 4 use an alternative measure of managerial ability, MA-score powered by two, to address possible non-monotonic relation with propensity to pay dividend. The results are positive but insignificant. The empirical evidence is therefore consistent with the earnings quality hypothesis, where managerial ability does have substantial impact on critical corporate decisions such as dividend policy. More able managers can help to improve corporate earning quality (or sustainability), which encourage to pay more dividend.

Table 3: The likelihood of dividend payouts and managerial ability

	Model 1	Model 2	Model 3	Model 4
Intercept	-1.3975*	-1.3918*	-1.4200*	-1.4188*
	(-1.74)	(-1.74)	(-1.77)	(-1.77)
MA-score	0.2671***	0.2718***		
	(2.65)	(2.69)		
MA-score^2			0.3337	0.3860
			(0.90)	(1.04)
Ln(Total Assets)	0.2713***	0.2638***	0.2734***	0.2659***
	(29.47)	(28.29)	(29.71)	(28.52)
Leverage	0.0039	0.0038	0.0043	0.0042
	(0.76)	(0.75)	(0.82)	(0.79)
ROE	0.0001	0.0001	0.0001	0.0001
	(0.44)	(0.44)	(0.39)	(0.39)
EBITDAR	-0.0002	-0.0002	-0.0002	-0.0002
	(-0.54)	(-0.53)	(-0.52)	(-0.51)
R&D Ratio	0.0045	0.0041	0.0049	0.0044
	(0.20)	(0.18)	(0.22)	(0.19)
Advertising Ratio	0.5089***	0.5073***	0.5250***	0.5231***
	(3.59)	(3.59)	(3.66)	(3.65)
Capital Exp.	-0.6219***	-0.6000***	-0.6341***	-0.6126***
	(-3.00)	(-2.9)	(-3.06)	(-2.96)
Growth	0.0001	0.0001	0.0001	0.0001
	(0.83)	(0.87)	(0.84)	(0.88)
Corporate Income	1.5250***	1.4628***	1.6937***	1.6282***
Ratio	(4.15)	(4.00)	(4.64)	(4.48)
Cash Holding	-0.3868***	-0.3927***	-0.4107***	-0.4180***
	(-4.37)	(-4.43)	(-4.63)	(-4.71)
Retain Equity	-1.3975*	0.0001	0.0001	0.0001
	(-1.74)	(0.38)	(0.44)	(0.41)
Repurchase		0.1972***		0.1974***
Dummy		(4.83)		(4.83)
Industry Dummy	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes
Pseudo R^2	0.1833	0.1841	0.1831	0.1839
Wald $X^2(23)$	5004.29***	5027.49***	4998.10***	5021.30***
No. of observations	22,892	22,892	22,892	22,892

****,**,* indicate statistical significance at the 0.01, 0.05 and 0.10 level, respectively.*

Table 4 shows the investigation of the impact of managerial ability on the magnitude of dividend payouts, measured by ratio of dividends paid to total assets. Only dividend-paying firms are included in the execution of this regression analysis. Table 5 shows the ordinary least squares (OLS) regression results with standard errors adjusted for clustering at the firm level. MA-score display positive and significant coefficients in both cases (control and do not control share repurchase). Firms with superior managers pay larger dividends. This is consistent with the earlier findings. Superior managerial ability is associated with higher propensity to pay dividends and, among dividend payers, with larger dividends.

Table 4: Dividend payouts and managerial ability

	Dividend-paying firms only	
Dependent Variable	Model 1	Model 2
Intercept	0.2304	0.2296
	(1.06)	(1.05)
MA-score	0.0866**	0.0866***
	(2.19)	(2.19)
Ln(Total Assets)	-0.0398***	-0.0398***
	(-11.2)	(-11.19)
Leverage	0.0364***	0.0362***
	(5.93)	(5.90)
ROE	-0.0001	-0.0001
	(-0.15)	(-0.17)
EBITDAR	-0.0150***	-0.0151***
	(-3.31)	(-3.33)
R&D Ratio	-0.0682**	-0.0681**
	(-2.54)	(-2.53)
Advertising Ratio	0.9069***	0.9051***
	(15.61)	(15.58)
Capital Exp.	-0.2149***	-0.2142***
	(-2.77)	(-2.76)
Growth	-0.0001	-0.0001
	(-0.45)	(-0.45)
Corporate Income Ratio	0.8578***	0.8483***
	(5.68)	(5.61)
Cash Holding	0.0695*	0.0710*
	(1.82)	(1.86)
Retain Equity	-0.0001	-0.0001
	(-1.38)	(-1.38)
Repurchase Dummy		0.0906
		(1.19)
Industry Dummy	Yes	Yes
Year Dummy	Yes	Yes
F-statistics	27.56***	27.48***
Adjusted R^2	0.5736	0.5737
No. of Observations	6,516	6,516

****,**,* indicate statistical significance at the 0.01, 0.05 and 0.10 level, respectively.*

It could be argued that the findings here are affected by reverse causality. Specifically, dividends policy and managerial ability are endogenously determined. If so, dividend payouts might effect on managerial ability and vice versa. Although not impossible, this postulation is unlikely. It is unclear why dividend policy would lead managers in a given firms to show a particular degree of outstanding ability. Although sticky in the short run, dividends are subject to more managerial discretion than to influence managerial ability. Thus, it is much more probable that the direction of causality run from managerial ability to dividends.

In this case, the possible reverse causality can be addressed by the following robustness test. The two-stage least squares (2SLS) approach is used in this section. This approach requires an instrumental variable, which is correlated with managerial ability, but does affect dividend payout except through managerial ability. This study employ industry median of MA-score as my instrumental variable. Although the dividends of a given firm might influence the same firm's managerial ability, it is

improbable to be related to industry-level managerial ability. It is what industry-level managerial ability should function as a valid instrumental variable.

The results from 2SLS are shown in table 5. Model 1 is the first-stage regression, where managerial ability is the dependent variable. Industry-median of MA-score is included as an independent variable and display a positive and significant coefficient. Not surprisingly, calculation of MA-score is on the basis of comparing DEA within the industry. Therefore, Industry-median of MA-score must have strong explanatory power for MA-score of a firm in that industry. Model 2 is the second-stage regression, where dividend paid to total assets is included as dependent variable. Predicted MA-score instrumented from the first-stage is an independent variable. The coefficient of instrumented MA-score is positive and significant. Therefore, the results from 2SLS substantiate the earlier findings that dividend policy is effected by managerial ability.

Table 5: Two-stage least squares (2SLS) regressions for dividend payouts and managerial ability

	Model 1	Model 2
	First stage	Second stage
Dependent variable	MA-score	DIV/TA
Intercept	-0.0956	0.3220
	(-0.70)	(0.670)
MA-score (industry median)	0.8471***	-
	(37.99)	
Predicted MA-score	-	0.1824*
		(1.75)
Ln(Total Assets)	0.0094***	-0.0412***
	(8.82)	(-9.43)
Leverage	0.0036*	-0.0013***
	(1.88)	(-0.18)
ROE	0.0002	0.0218***
	(0.54)	(15.24)
EBITDAR	-0.0005	-0.0471***
	(-0.37)	(-8.10)
R&D Ratio	-0.0036	-0.0744**
	(-0.48)	(-2.53)
Advertising Ratio	0.0095	0.8196***
	(0.55)	(11.94)
Capital Exp.	-0.0333	-0.2753***
	(-1.37)	(-2.88)
Growth	0.0001*	-0.0001
	(1.65)	(-0.12)
Corporate Income Ratio	0.4870***	0.3799*
	(10.23)	(1.89)
Cash Holding	-0.0201	0.0836*
	(-1.63)	(1.71)
Retain Equity	0.0001*	0.0001
	(1.69)	(0.24)
Adjusted R^2	0.3962	0.6062
No. of Observations	5,269	5,269

****,**,* indicate statistical significance at the 0.01, 0.05 and 0.10 level, respectively*

Conclusion

The area of managerial trait has been intensively debated among the scholars for many years. For the recent years, the focus seems to be more on managerial ability of the firms. Its literature can be found in relation with various corporate activities and performance (i.e. earnings management, corporate tax avoidance, and financial performance.,etc.). However, none of them attempt to solve the puzzle of its impact on payout to shareholders.

This study shed light on its association with dividends, which is known as a classical corporate policy that can date back at least five hundred years ago. Hypothesis is developed under two contrary premises. Managerial ability can be posited as dividend driver as more able manager can improve earnings quality and encourage greater dividends payout. In contrary, firms with superior managers might not be necessary to use dividend mechanism to signify how good they are. Thereby, they are less likely to pay and pay less within those who pay dividends.

To measure managerial ability, this study apply new measurement technique, which is developed by Demerijian et al. (2012) on the back of DEA technique. This technique is widely accepted by researchers in the recent years to figure out the genuine contribution from managers.

The empirical findings here exhibits a positive and significant relation; that is, firms with more able managers display a stronger propensity to pay dividends and also within those that pay dividends pay at larger payout ratio. The results are robust to controlling for a large number of firm-specific characteristics, which are firm size, leverage, profitability, growth opportunities, possible tax effect, and also share repurchase activity. The evidence is in agreement with the prediction of earnings quality hypothesis, where more able managers are beneficial to the firms. They can manage resources more wisely and help to improve and sustain corporate financial performance (or earnings quality). Thereby, this will encourage firm to increase level of dividends, which constitute long-term commitment to shareholders. Non-monotonic relation is investigated in this study but show no significant results. To address the endogeneity concerns of the empirical findings, this study construct 2SLS equations using industry-median MA score as instrument variable. As a result, the inference seems to be unlikely mistaken by reverse causality.

Acknowledgements

I would like to express my gratitude to Dr. Pornsit Jiraporn for his valuable advices.

References

DEMERJIAN, P., B. LEV, and S. MCVAY. 2012. Quantifying managerial ability: A new measure and validity tests. *Management Science*, 58 (7): 1229–1248.

DESHMUKH, SANJAY and GOEL, ANAND M. and HOWE, KEITH M., CEO Overconfidence and Dividend Policy (January 27, 2013). *Journal of Financial Intermediation*, Forthcoming.

HAMBRICK, D. C., & MASON, P. A. 1984. Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review*, 9: 193-206.

JENSEN, M. C. (1986). Agency Cost of Free Cash Flow, Corporate Finance and Takeovers. *American Economic Review*, 76 (2), 326-329.

KULATILAKA, N. and A. J. MARCUS (1994): "Valuing Employee Stock Options," *Financial Analyst Journal*, 50(6): 46-56.

LIBBY, R., and J. LUFT. 1993. Determinants of judgment performance in accounting settings: Ability, knowledge, motivation and environment. *Accounting, Organizations and Society*, 18 (5): 425–450.

MILLER, MERTON H., and FRANCO MODILIANI, 1961, Dividend Policy, Growth, and the Valuation of Shares, *Journal of Business*, 34: 411-433.