Journal of Corporate Finance 27 (2014) 345–366

Contents lists available at ScienceDirect

Journal of Corporate Finance

journal homepage: www.elsevier.com/locate/jcorpfin

Declining propensity to pay? A re-examination of the lifecycle theory

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ARTICLE INFO

Article history:
Received 10 September 2013
Received in revised form 10 June 2014
Accepted 14 June 2014
Available online 22 June 2014

JEL classification:
G35

Keywords:
Dividends
Repurchases
Payout policy
Earned equity
Lifecycle theory

ABSTRACT

Our results indicate that the declining propensity to pay is a function of the changing composition of firms over time and not a declining propensity in individual firms themselves. In particular, the propensity to pay is greater than expected following the 2003 dividend tax cut. The decade a firm went public is also a major determinant of its initial payout policy. Finally, while the strength of the relation between earned/contributed capital and payout propensity declines across IPO decades, there is still a lifecycle effect — within a given IPO cohort, the likelihood of payout increases as firms age.

1. Introduction

Since Fama and French (2001), numerous papers have attempted to explain the declining propensity to pay dividends. DeAngelo et al. (2006) propose a lifecycle theory of dividends, in which the probability that a firm pays dividends is positively related to its mix of earned and contributed capital. They suggest that firms with low retained earnings as a proportion of total equity (RE/TE) or total assets (RE/TA) tend to be in the capital infusion stage of their lifecycle and are less likely to pay dividends, whereas firms with high RE/TE (or RE/TA) are more mature and profitable, and thus are more likely to pay dividends. Their results are consistent with this hypothesis, but also indicate that firms whose earned equity makes them reasonable candidates to pay dividends have a reduction in the propensity to pay that is twice that found in Fama and French (2001). But has the propensity to pay declined?

We begin by examining whether the DeAngelo et al. (2006) results hold not only for dividends, but also for repurchases. Julio and Ikenberry (2004) document a pronounced shift away from dividends and towards repurchases beginning in 1992, and show that by 1997, the percentage of earnings paid out as repurchases exceeds the percentage paid out as dividends. Consistent with this shift, we find a positive and monotonic relation between earned/contributed capital and both the fraction of firms that pay dividends and the fraction that repurchase.

We next examine the influence of earned/contributed capital on payouts according to the decade in which the firm went public. Even though DeAngelo et al. (2006) find that the earned/contributed capital mix is positively related to the payment of dividends, this

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http://dx.doi.org/10.1016/j.jcorpfin.2014.06.001
0929-1199/

relation might not hold equally for all firms. Brown and Kapadia (2007) find that the increase in idiosyncratic risk in the U.S. stock market is due to new listings by riskier firms. Other papers (Fama and French, 2001; Grullon and Michaely, 2002; Julio and Ikenberry, 2004; Skinner, 2008) provide evidence that these newly listed firms are less likely to pay dividends and more likely to repurchase. Consequently, the relation between earned/contributed capital and dividends might decline in the 1980s and 1990s due to the influx of recent IPOs, which are not only less profitable and riskier but whose managers are also less inclined to initiate dividends (Brav et al., 2005). Consistent with this hypothesis, we find that a firm's "starting point" matters. The relation between earned/contributed capital and the likelihood of dividend payment remains constant over time for those firms that went public in the 1970s or earlier. However, the more recently a firm has gone public, the less likely it is to pay dividends in its initial years and the weaker the relation between RE/TA and dividend payment. Our results on repurchases and total payout show similar trends.

We also examine the joint effects of IPO cohort and time on the relation between RE/TA and the fraction of firms that make shareholder payouts. Our results indicate that while repurchases replace dividends as the preferred form of payout for firms that went public in the 1980s or later, repurchases supplement the dividend policy of older firms. Further, we find that in spite of the fact that RE/TA is not a good measure of lifecycle in recent IPO cohorts, a lifecycle effect does exist: within a given IPO cohort, the likelihood of making shareholder payouts increases as firms age.

In multivariate logistic specifications, we continue to find that the impact of RE/TA on the likelihood of payout declines across IPO decades. Our results do not simply reflect firm age. When we jointly examine the effect of firm age vs. the decade in which the firm went public, we find that while the effect of RE/TA on payouts increases as firms age, indicating that older firms are more likely to return cash to shareholders than younger firms, this effect is mitigated in firms that went public in the 1990s or later. Thus even after controlling for age, the impact of RE/TA on payouts has declined in recent IPO cohorts. We also explore other factors that might drive the payout propensity differences among IPO cohorts, including different methods of accounting for repurchases, omitted risk variables, and executive compensation. However, none of these explanations fully resolves the issue.

Given the decrease in the impact of RE/TA on payouts over time and IPO decade, we next examine the effect of these issues on the predictive accuracy of payout models. We find that the predictive ability of our payout model also declines across IPO decades. While the model does a fairly good job of predicting the total number of dividend payers, it underpredicts the number of payers in the pre-1970s cohort but overpredicts payers in the 1990s cohort. Further, the model is increasingly less able to correctly identify which firms pay dividends. For example, whereas 82.1% of actual payers are predicted to pay in the pre-1970s cohort, only 49.9% of actual payers are predicted to pay in the 1990s cohort. Using an estimation period that occurs after the SEC enacted Rule 10b-18 improves the prediction accuracy, but within each RE/TA category, the accuracy of the model still declines across IPO decades.

Finally, given our finding that prediction accuracy improves when using an estimation period after the enactment of Rule 10b-18, we reexamine whether the conditional propensity to pay has decreased over time. Other researchers (Skinner, 2008; Grullon and Michaely, 2002; Grullon et al., 2011) find a declining propensity to pay dividends. However, these papers either examine an unconditional propensity to pay that does not allow for the changing composition of firms over time or model the conditional propensity to pay using an estimation period prior to the enactment of Rule 10b-18, when open market repurchases were less common and dividends the norm. After controlling for changing firm characteristics and using an estimation period after 1982, we find little evidence of a wide-spread deficit in the propensity to pay. These results hold for both dividends and total payouts and also hold not only over time but also by IPO decade, firm age, and tax regime. In fact, using our model, we find that the actual number of payers is greater than predicted after the 2003 dividend tax cut. Overall our results indicate that the declining propensity to pay found in earlier papers is largely a function of the change in the composition and characteristics of firms in the population, combined with regulatory and tax regimes that have altered payout preferences, and not a declining propensity in the individual firms themselves across time. Our finding that payout preferences have changed over time in response to regulatory and tax regimes is not inconsistent with the catering theory of Kulchania (2013) and Jiang et al. (2013). However, we still find strong evidence of a lifecycle effect in that the likelihood of payout increases as firms mature.

Our paper proceeds as follows. Section 2 provides a review of the relevant literature. Section 3 contains our sample selection and examines the impact of repurchase accounting method on RE/TE and RE/TA. Section 4 examines the effect of time and IPO decade on the ability of RE/TA to predict payout policy. Section 5 examines the prediction accuracy of our model and evaluates the propensity to pay across time, IPO decade, age quintiles, tax regimes, and option intensity. Section 6 concludes.

2. Literature review and hypotheses

2.1. The lifecycle theory

There is no formal model that relates a firm's lifecycle to its dividend policy. However, Grullon et al. (2002) suggest the following: as firms mature, their investment opportunity sets become smaller, resulting in a declining rate of reinvestment and a decrease in growth and risk. This declining reinvestment gives rise to excess cash that can be paid out to shareholders. Consistent with this hypothesis, they find that firms that increase (decrease) dividends experience significant decreases (increases) in systematic risk.

DeAngelo et al. (2006) use the lifecycle theory to examine the disappearing dividend phenomena of Fama and French (2001). They find that the fraction of firms that pays dividends is high when retained earnings comprise a large portion of total equity (or total assets) and falls to near zero when equity includes mostly contributed rather than earned capital. DeAngelo et al. conclude that their findings are consistent with a lifecycle theory in which the probability that a firm pays dividends is positively related to its mix of earned and contributed capital.