

American Economic Association

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Reviewed work(s):

Source: *The American Economic Review*, Vol. 74, No. 4 (Sep., 1984), pp. 650-659

Published by: [American Economic Association](#)

Stable URL: <http://www.jstor.org/stable/1805130>

Accessed: 24/02/2012 10:17

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Two Agency-Cost Explanations of Dividends

By FRANK H. EASTERBROOK*

The economic literature about dividends usually assumes that managers are perfect agents of investors, and it seeks to determine why these agents pay dividends. Other literature about the firm assumes that managers are imperfect agents and inquires how managers' interests may be aligned with shareholders' interests. These two lines of inquiry rarely meet.¹ Yet logically any dividend policy (or any other corporate policy) should be designed to minimize the sum of capital, agency, and taxation costs. The purpose of this paper is to ask whether dividends are a method of aligning managers' interests with those of investors. It offers agency-cost explanations of dividends.

I. The Dividend Problem

Businesses find dividends obvious. Boards declare them regularly and raise them from time to time or face disquiet from investors, or so they think. Many managers are sure that higher dividends mean higher prices for their shares. There is a substantial body of law that controls when boards may (sometimes must) declare dividends, in what amount, and using what procedures.² Firms enter into complicated contracts with creditors and preferred stockholders that govern

the permissible rates of payouts.³ Dividends are paid (and regulated) at considerable cost to the firms involved.

Economists find dividends mysterious. The celebrated articles by Merton Miller and Franco Modigliani declared them irrelevant because investors could home brew their own dividends by selling from or borrowing against their portfolios. Meanwhile the firms that issued the dividends would also incur costs to float new securities to maintain their optimal investment policies.⁴ Dividends are, moreover, taxable to many investors, while firms can reduce taxes by holding and reinvesting their profits. Although dividends might make sense in connection with a change in investment policy—when, for example, the firms are disinvesting because they are liquidating or, for other reasons, shareholders can make better use of the money than managers—they are all cost and no benefit in the remaining cases of invariant investment policies.⁵

Dividends are hard enough to explain when they occur in isolation; a combination of dividends and simultaneous raising of new capital is downright inexplicable.⁶ Yet the simultaneous or near-simultaneous payment of dividends and raising of new capital are common in business. Sometimes firms issue new stock at or around the time they pay

*University of Chicago Law School, 1111 East 60th Street, Chicago, IL 60637. I thank Douglas Baird, Walter Blum, Dennis Carlton, Harry DeAngelo, Eugene Fama, Daniel Fischel, Michael Jensen, William Landes, Saul Levmore, Merton Miller, Myron Scholes, and Alan Schwartz for helpful comments on earlier drafts.

¹One meeting place is Michael Rozeff (1982), who suggests that dividends and agency costs are related and offers a test showing that dividends depend in part on the fraction of equity held by insiders. He does not provide any mechanism, however, by which dividends and the consequent raising of capital control agency costs. I discuss some mechanisms of this sort below.

²See Bayless Manning (1981), for a description of the legal rules. Compare Victor Brudney (1980) calling for more legal regulation with Daniel Fischel (1981) offering economic support for current legal rules.

³See Clifford Smith and Jerold Warner (1979); Kose John and Avner Kalay (1982).

⁴See Miller and Modigliani (1961); also Modigliani and Miller (1958); Joseph Stiglitz (1974).

⁵See Modigliani (1982), for an argument to this effect that modifies the M-M irrelevance model by considering taxes and uncertainty. Compare Miller and Myron Scholes (1982), applying their earlier analysis (1978) to extend the irrelevance hypothesis to a world with taxes. Miller and Scholes argue that taxes need not, and do not appear to, determine dividend policy; all the same, their analysis does not show why there are dividends in a world of costly flotation.

⁶For example, Miller and Kevin Rock: "It would be uneconomic as well as pointless" for firms to pay dividends and raise capital simultaneously (1982, p. 13).

dividends. More frequently they issue new debt, often in the form of bank loans that are almost invisible to finance economists. Why does this occur?

The problem with the irrelevance proposition is that dividends are costly yet ubiquitous. Something causes them. Even if most investors are irrational most of the time, dividends would go away if their costs exceeded their benefits to investors. Firms that reduced payouts would prosper relative to others; investors who figured out the truth also would prosper relative to others; and before long—certainly before now in light of the large costs of floating new capital issues and the large differences between income and capital gains tax rates—dividends would be infrequent occurrences characterizing failing or disinvesting firms.

The existence of dividends despite their costs has inspired a search for explanations. Some of the efforts have been obvious failures. Take the argument that investments are risky and that dividends hedge against the possibility that the firms will go bankrupt before distributing the saved-up assets to the shareholders. The argument goes: investors value a steady stream of dividends over the uncertain prospect of a large return when the firms liquidate or are sold as going concerns and the investors are cashed out, and firms pay dividends to cater to that preference. The problem here is that dividends are matched by reinvestments: so long as dividends do not affect firms' investment policies, they do not represent any withdrawal of capital from risky ventures. New investors bear the risk that the dividend-receiving investors avoid, and these new investors must be compensated. The new investors may well turn out to be the old ones; shareholders do not usually use the dividends for consumption or to purchase Treasury bills. If they reinvest the proceeds in the same or a different firm, they commit their cash (less taxes paid) to the same risks as if there had been no dividends. In sum, there is no bird-in-the-hand effect unless the firm also changes its investment policy.⁷

⁷Compare M. J. Gordon (1959), with Michael Brennan (1971) and Suddipto Bhattacharya (1979). It is some-

Other arguments are only slightly more plausible. Consider the argument that dividends "signal" the well-being of the firm to investors and so promote confidence (and, one supposes, higher stock prices and a flow of investment capital).⁸ The problem here is that it is unclear just what dividends signal, how they do so, or why dividends are better signals than apparently cheaper methods. Firms could and do issue disclosures of their prospects and profits. True, investors may be disinclined to believe the self-serving statements of managers about the firms' endeavors, but managers' usual response to this is to hire outsiders who examine the firms' books and other materials and opine on whether the managers are telling the truth. These outsiders work for many firms and acquire reputational capital so large that they become unbribeable. No firm could offer them enough for a false (or slipshod) verification to make up for their losses on business with other firms. Auditors serve this function yearly or more often;⁹ even judges may serve this function in suits charging the managers with making false statements or omitting material facts.

Dividends would be desirable only if they added to the efficacy of these methods of disclosure. The beauty of a "signal" is that it is self-verifying. People believe the signal because sending the message is rational for the signaller only if the message is or is believed to be accurate. Thus one could say that a Ph.D. from the University of Chicago is a good signal of intelligence and diligence (two notoriously hard-to-verify qualities) be-

times said that the bird-in-the-hand argument fails because one may get cash for consumption (or to put in the bank) by selling stock as well as by waiting for dividends. This is not a good refutation, because if the lack of dividends puts invested dollars at unacceptable risk, shares will fetch less in the market on a no-dividend policy than otherwise, and investors will be poorer than they would be if dividends were plentiful.

⁸See, for example, Bhattacharya; Nils Hakansson (1982); Steven Ross (1977). Compare Miller and Rock: in this model, dividends may permit inference of sources and uses of funds; this achieves many of the effects of a signalling model but by direct revelation or inference.

⁹See Linda DeAngelo (1981): using the auditor's "reputational bond" to show that larger auditors provide better quality.

cause persons of inferior intellect could not obtain one. But dividends do not directly reveal the prospects of the firms, so the message they convey may be ambiguous.¹⁰ Unless the cost of issuing dividends is uniformly lower for prosperous firms, no signal is possible.

Prosperous firms may withhold dividends because internal financing is cheaper than issuing dividends and floating new securities. Worse, dividends do not distinguish well-managed, prospering firms from others. They are not irrational for poorly managed or failing firms. Quite the contrary, such firms should disinvest or liquidate, and their managers may choose dividends as a method of accomplishing this. Someone who observes an increase in the dividend has no very good way to tell whether this signals good times or bad. (This is consistent with both the finding that dividends are poor predictors of future net earnings and the finding that stock prices are poor predictors of future dividends.)¹¹ Doubtless only a prospering firm can continue to pay dividends year in and year out, but a firm with a long record of prosperity also would not need the verification available from the dividend signal. The persistent reports of auditors and securities dealers, its securities' prices, and the apparent marketing success of the firm would do as well in verifying the managers' tales.

The explanations based on clientele effects also are unsatisfactory. It is easy enough to see that if some investors are in different tax positions from others (for example, some hold tax-sheltered funds while others are taxed at ordinary rates), the different groups will have different preferences for dividends. The taxed group would prefer to take profits as capital gains; the untaxed group would be indifferent. Some equilibrium would develop in which firms adopted different payout

policies to cater to the different clienteles.¹² It is much harder, though, to use clientele effects to demonstrate why the current dividend structure exists. Why do most firms pay significant dividends, given the costs of paying them (and raising new capital), and given that all investors either prefer capital gains or are indifferent between dividends and capital gains?¹³

II. Two Explanations

The dividend puzzle has been stated as: "what is the effect of a change in cash dividends paid, *given the firm's capital-budgeting and borrowing decisions*?"¹⁴ This statement of the problem makes it insoluble, because the irrelevance hypothesis and the growing body of evidence say that dividends do not matter so long as the firm's financing and investment policy is unaffected. The existence of dividends in the face of this, and despite the costs of paying them out and raising new money, suggest that it is appropriate to ask a different question: "what is the effect of a *consistent* policy of paying dividends?" This question leads to what could be called a naive explanation of dividends. Dividends exist *because* they influence the firms' financing policies, *because* they dissipate cash and induce firms to float new securities.

Let us suppose that managers are not perfect agents of the other participants in the corporate venture, but that they pursue their own interests when they can. Because the managers are not the residual claimants to the firm's income stream, there may be a substantial divergence between their interests and those of the other participants. Man-

¹⁰Only "may be" instead of "is" because the message may be self-justifying, as in the Miller and Rock model.

¹¹Stephen Penman (1983) finds that knowledge of dividends adds little or nothing to earnings forecasts as predictors of future earnings. See also, for example, Robert Shiller (1981).

¹²See Fischer Black and Scholes (1974) and Alan Auerbach (1982). But see Miller and Scholes (1982).

¹³Martin Feldstein and Jerry Green (1983) do not overcome this problem with clientele models. They use a two-firm, two-holder model in which portfolio diversification, without steady trading, depends on differential dividend policies. The two-firm assumption drives the model. With large numbers of firms an investor can get plenty of diversification without differential dividend policies.

¹⁴Richard Brealey and Stewart Myers (1981, p. 324, italics in original).

agers, investors, and other participants will find it advantageous to set up devices, including monitoring, bonding, and *ex post* readjustments that give managers the incentive to act as better agents. The costs of monitoring, bonding, and the residual losses from slippage are agency costs borne by investors.¹⁵

One form of agency cost is the cost of monitoring of managers. This is costly for shareholders, and the problem of collective action ensures that shareholders undertake too little of it.¹⁶ Although a monitor-shareholder would incur the full costs of monitoring, he would reap gains only in proportion to his holdings. Because shares are widely held, no one shareholder can capture even a little of the gain. Shareholders would be wealthier if there were some person, comparable to the bondholders' indenture trustee, who monitored managers on shareholders' behalf.

A second source of agency costs is risk aversion on the part of managers.¹⁷ The investors, with diversified portfolios of stocks, will be concerned only about any nondiversifiable risk with respect to any one firm's ventures. Managers, though, have a substantial part of their personal wealth tied up in their firms. If the firms do poorly or, worse, go bankrupt, the managers will lose their jobs and any wealth tied up in their firms' stock. Managers therefore will be concerned about total risk, and their personal risk aversion will magnify this concern.

The risk-averse managers may choose projects that are safe but have a lower expected return than riskier ventures. Shareholders have the opposite preference. Riskier ventures enrich shareholders at the expense of creditors (because shareholders do not pay any of the gains to bondholders, yet bondholders bear part of the risk of failure), and shareholders would want managers to behave

as risk preferrers.¹⁸ Of course, creditors recognize this and try to control it in advance through bond indentures and other instruments; they also adjust the rate of interest they demand. Debtholders assume that given the limits set by their contracts, shareholders prefer to take the maximum advantage. But the question is not whether the riskiness of projects can be controlled through indentures or other legal devices. It is, rather, whether costs of control (including the costs of control and residual agency costs) can be reduced by a method that includes dividends.

Managers can change the risk of the firm not only by altering its mix of projects, but also by altering its debt-equity ratio. The lower the ratio of debt to equity, the lower the chance of bankruptcy of the firm. Once again, debtholders consider this in deciding what rate of interest to demand. Once again, given the existence of debt, managers can control the amount of risk. One way they can do this is by picking a dividend policy. If managers first issue debt and then finance new projects out of retained earnings, the debt-equity ratio will fall. The lower it falls, the lower the managers' risk and the greater the boon bestowed on the debtholders, who receive their contracted-for interest but escape the contracted-for risk. Financing projects out of retained earnings—if unanticipated by bondholders—transfers wealth from shareholders to debtholders. Just as bondholders want to limit dividends, to prevent advantage-taking by shareholders once a rate of interest has been set, so shareholders want to increase dividends to the extent possible in order to avoid being taken advantage of by bondholders.¹⁹

Shareholders therefore would like to induce managers to take more risks, so that

¹⁵Michael Jensen and William Meckling (1976); Eugene Fama (1980); Bengt Holmstrom (1982); *JLE* Symposium (1983).

¹⁶See my articles with Fischel (1982, 1983a) for discussions of the extent to which legal rules address this problem.

¹⁷See Jensen and Meckling (pp. 349–50, 352–53), Steven Shavell (1979), and Alan Marcus (1982).

¹⁸This is one possible argument for permitting insider trading, if other compensation schemes are too costly. Compare Henry Manne (1966) and Dennis Carlton and Fischel (1983), with my article (1981, pp. 330–38).

¹⁹John and Kalay also stress this. See also George Handjinicolaou and Kalay (1982): stressing role of dividends in adjusting risk between bondholders and stockholders; concluding that dividends do not appear to cause unanticipated losses to bondholders.

they do not give away wealth to bondholders. The shareholders would prefer that managers go to the limit authorized by contract in imposing risks on the firm's creditors. Yet it is hard to give managers the right incentives to do this. There is little one can do to get rid of their risk aversion. They will remain undiversified, because of the nature of their human capital, no matter what; indeed, the lack of diversification in managers' holdings has other benefits.²⁰ Unless there is some form of *ex post* settling up with managers, which will be difficult (costly) to achieve, shareholders' payoffs will be lower, with consequences for the level of investment.

Both the monitoring problem and the risk-aversion problem are less serious if the firm is constantly in the market for new capital. When it issues new securities, the firm's affairs will be reviewed by an investment banker or some similar intermediary acting as a monitor for the collective interest of shareholders, and by the purchasers of the new instruments. The same occurs when the firm issues new debt, including bonds, commercial paper, and syndicated bank loans. Managers who need to raise money consistently are more likely to act in investors' interests than managers who are immune from this kind of scrutiny. Moreover, when it issues new securities, the firm can adjust the debt-equity ratio (and obtain a new rate of interest for its debt) so that neither shareholders nor bondholders are taking advantage of the other group. (It can, of course, make this adjustment in other ways, including making more frequent trips to financial markets for smaller sums of new cash, but because flotation costs decrease with the size of the offering, such alternatives may be more costly than combining infrequent flotation with dividends.)

The principal value of keeping firms constantly in the market for capital is that the

contributors of capital are very good monitors of managers. The firm's existing investors can influence the managers' actions only by voting (which suffers from a collective choice problem) and by selling. Purchasers of stock will pay no more than the value of future profits under current management unless they are prepared to wage a takeover contest of some sort, which can be very costly. Managers of firms with fixed capital structures may well have substantial discretion to be slothful, consume perquisites, or otherwise behave in their own interests rather than the investors' interests.

New investors do not suffer under the collective choice disabilities of existing investors. They can examine managers' behavior before investing, and they will not buy new stock unless they are offered compensation (in the form of reduced prices) for any remediable agency costs of management. Managers who are in the capital market thus have incentives to reduce those agency costs in order to collect the highest possible price for their new instruments. New investors are better than old ones at chiseling down agency costs.

Of course, new investors need information, and that may be hard to come by. Neither auditors nor the managers themselves are perfectly reliable unless there is a foolproof legal remedy for fraud.²¹ Other forms of information gathering, such as shareholders' inquiries and stock brokers' studies, suffer from the problem that none of the persons making inquiry can capture very much of the gain of this endeavor, and thus there will be too little information gathered. There would be savings if some information gatherers had larger proportionate stakes, and if the verification of information could be accomplished at lower cost. Underwriters of stock and large lenders may supply the lower-cost verification. These firms put their own money on the line, and any information inferred from this risk-taking behavior by third parties may be very valuable to other investors. This form of verification by acceptance of

²⁰Douglas Diamond and Robert Verrecchia (1982). Fama and Jensen (1983a) offer a substantially different treatment, in which they do not employ the artifact of the firm as risk-averse "principal." Managers then bear risk in the form of undiversified portfolios in order to induce reductions in other agency costs.

²¹See Stanford Grossman (1981); myself and Fischel (1983b).

risk is one of the savings that arise when dividends keep firms in the capital market.²²

The role of dividends in starting up the monitoring provided by the capital market is easy to see. An example of the role of dividends in making risk adjustments may help. Suppose a firm has an initial capitalization of 100, of which 50 is debt and 50 equity. It invests the 100 in a project. The firm prospers, and earnings raise its holdings to 200. The creditors now have substantially more security than they started with, and correspondingly the residual claimants are paying the creditors a rate of interest unwarranted by current circumstances. They can correct this situation by paying a dividend of 50 while issuing new debt worth 50. The firm's capital continues to be 200, but the debt-equity ratio has been restored, and the interest rate on the original debt is again appropriate to the creditors' risk.²³

Expected, continuing dividends compel firms to raise new money in order to carry out their activities. They therefore precipitate the monitoring and debt-equity adjustments that benefit stockholders. Moreover, even when dividends are not accompanied by the raising of new capital, they at least increase the debt-equity ratio so that shareholders are not giving (as much) wealth away to bondholders. In other words, dividends set in motion mechanisms that reduce the agency costs of management and that prevent one group of investors from gaining, relative to another, by changes in the firm's fortunes after financial instruments have been issued.²⁴ The future is always anticipated

imperfectly in these contracts, so there will always be some need for *ex post* adjustments and supervision, and dividends play a role in these adjustments.

This obviously is not altogether different from information or signalling explanations of dividends. One could recharacterize part (but not all) of this treatment as an assertion that investment bankers and other financial intermediaries send signals to investors by putting their reputations (and, in underwritten offerings, money) on the line and certifying that the new securities are backed by the represented earnings potential. The information interpretation of this agency-cost treatment at least offers a plausible explanation why dividends (rather than, say, earnings announcements) carry essential information.

There is a further problem because the explanations I have offered are not unique explanations of *dividends*. Nothing here suggests that repurchases of shares would not do as well as or better than dividends. The issuance of debt instruments in series, so that payments and refinancings are continuous, serves the same function as dividends. I have "explained" only mechanisms that keep firms in the capital market in ways that instigate consistent monitoring and consistent re-adjustment of the risk among investors.

The explanation I have offered also is open to the objection, along the lines of Fischer Black (1976), that shareholder-creditor conflicts may be resolved by negotiation after any change in the fortunes of the firm. The investors could agree to new payoffs or shares of control rather than to a dividend policy. This may well be true, but such *ex post* negotiation raises a bilateral monopoly problem, and the costs of the negotiation could be substantial even if (contrary to my assumption) there were no agency problems. Unless *ex post* negotiation is very costly, the

²²One thus cannot treat it as paradoxical that in raising capital firms use investment bankers at a cost greater than the firm would incur in raising capital via rights offerings or other non-intermediated devices. Compare Robert Hansen and John Pinkerton (1982).

²³Some cases contain an implicit recognition of this function of dividends. For example, *Randall v. Bailey*, 23 N.Y.S.2d 173 (N.Y. Sup. Ct. 1940), aff'd mem., 262 App. Div. 844, 29 N.Y.S.2d 512 (1st Dep't 1941), aff'd, 288 N.Y. 280, 43 N.E.2d 43 (1942) (permitting dividend out of unrealized appreciation, financed by new debt).

²⁴This explanation of dividends is closely related to the one Grossman and Oliver Hart (1982) offer for debt. They say that debt is desirable to equity holders precisely because it creates bankruptcy costs, thus inducing managers to take extra care. I say, in parallel fashion,

that dividends are beneficial to equity holders because they force managers constantly to obtain new capital in competitive markets. Fama and Jensen (1983b, pp. 13-15) also treat debt as a mechanism for regulating agency costs, although their argument is not the same as that of Grossman and Hart. See also Saul Levmore (1982, pp. 70-71). There is a family resemblance among all of these arguments.

existing pattern of complex bond indentures that provide for most contingencies makes little sense. I therefore think we must assume that in some decently large number of cases, accommodation through dividends and financing decisions set by the residual claimants is cheaper than accommodation through *ex post* negotiation. This is, however, an empirical matter, which raises the question whether the agency-cost explanations are testable.

III. Possible Tests

There have been a flurry of tests on the consequences of dividends. Some show that dividend changes are not related to the price of shares; others claim that increases in dividends are associated with decreases in the prices of shares.²⁵

These are hard to evaluate, for it is hard to obtain a measure of unanticipated changes in the level of dividends, and only unanticipated changes could change the prices of shares. The "level of dividends" is itself difficult to calculate for purposes of these studies. Earlier treatments of dividends seek to explain *net* dividends (payouts in excess of new flotation), and it is almost impossible to obtain data on net dividends. Moreover, because an increase in dividends could be caused either by an increase in the firm's profits (implying higher stock prices) or by the commencement of disinvestment as the firm has fewer profitable opportunities (implying lower stock prices), studies that aggregate dividend increases across the classes could show small effects even when studies separating the two reasons for increase would show large ones. The studies have other problems as well.

It is not my purpose to offer a critique of the available work. Any study of the implications of the hypotheses I offer here would be beset by many of the same difficulties. Because of the agency-cost explanations of dividends focus on constant payout policies rather than changes in dividends, new tests will raise difficult questions of anticipation.

²⁵For example, Robert Litzenberger and Krishna Ramaswamy (1982); Miller and Scholes (1982); Miller and Rock; all discussing earlier studies.

It should be possible to reexamine the data using as a new independent variable whether the firm had been in the capital market raising new money (whether debt or equity) at much the same time as it was paying dividends. The presence of new fund raising would indicate that dividends did not represent disinvestment. It also would isolate the set of firms whose managers were not able to rely wholly on internally generated funds and for which, therefore, dividends might reduce agency costs. The hypotheses I offer here suggest that the securities of firms simultaneously paying dividends and raising new money will appreciate relative to other securities. A test, however, will encounter substantial difficulty in identifying the time at which new capital is raised. Some syndicated loans are not announced to the public, and what is one to make of a firm's drawing against a line of credit arranged at an earlier time? A test also would face the problem of determining which payout policies were anticipated and which were not.

Finding a significant number of firms simultaneously (another problem of interpretation!) paying dividends and raising new money should offer substantial support for the agency-cost explanations, because other approaches to dividends imply that firms raise capital or pay dividends but do not do both. The agency-cost explanations also offer a plausible reason, other than clientele effects, why changes in dividend or financing policy may be associated with price reductions. It would be interesting to find out whether simultaneous dividend and financing changes produce the same negative residuals sometimes found when one changes but the other does not. One also could attempt to distinguish firms with high dividend/financing-to-asset ratios from firms with low dividend/financing-to-asset ratios. The hypotheses offered here suggest that there is some optimal ratio for each firm or set of firms.²⁶

The difficulty of designing an empirical test is formidable, which suggests resorting

²⁶Existing findings that new financings are associated with price reductions do not account for the possibility that rights offerings and below-market underwritten offerings will reduce the price of stock without diluting the current investors' interests (and thus without making them worse off).

to some less formal inquiries. The agency-cost explanations of dividends imply that dividends are worthless in themselves. Thus if firms are driven to the capital market by other conditions, we would expect to see less paid out in dividends. This is consistent with the observation that no-dividend (or low-dividend) stocks are usually "growth" firms, which are regularly in the capital market, and with the impression that such firms start paying dividends only when the rate of their growth (and thus the frequency of their trips to the capital market) has been reduced. The need to find some agency-cost control device increases as a firm becomes older and the original devices are less well adapted to the current form of business, and the initiation of dividends may supply such a device from the capital market.²⁷

The agency-cost explanations have implications for the stability of dividends over time as well. Because the first function of dividends is to keep firms in the capital markets, we would not expect to see a very strong correlation between short-term profits and dividends. This implication cries out for testing, but it is certainly consistent with the fact that most firms have consistent policies (for example, 20 cents per share per quarter) that are not changed very often. A consistent policy uncouples dividends from profits while maintaining a link to the capital market. One indirect way to examine whether consistent dividends are valued for their effect on agency costs is to examine whether prices appreciate more on an increase in the "regular" dividend than on an increase of the same present value in "extraordinary" dividends. Shareholders concerned only about payouts in hand value the two equally; if dividends contain agency costs, regular payouts are more valuable. Evidence indicates that the regular dividend is associated with greater increases in price (see James Brickley, 1983).

Profits would have some effect on the risk-adjustment function, but past profits (which inure to debtholders' benefit unless

dividends are increased) would be more important explanatory variables than current or anticipated profits. Anticipated profits can be handled by an adjustment of the terms on which money is raised; unanticipated past profits must be paid out to avoid windfalls to debtholders. The agency-cost treatment predicts that increases in dividends lag increases in profit and are uncorrelated with future profits. The lag may be substantial, because small increases (small changes of all sorts) in profits will be anticipated by debtholders, and there will be no need to make adjustments for these changes. Only the unanticipated (relatively large) changes call for adjustments in dividend policy.

Finally, because all forms of controlling agency costs are themselves costly, we would expect to see substitution among agency-cost control devices. One method of dealing with agency costs is for the managers to hold substantial residual claims in the firm. As such managers' claims increase, other things equal, dividends would be less valuable to investors and would decrease. Michael Rozeff suggests that this occurs. The same sort of substitution should accompany use of other devices.

The agency-cost explanations do not, however, yield unambiguous predictions about how bond prices will react to dividends. On the one hand, dividends favor investors and expose bondholders to more risk, thereby depressing bond prices. Of course, bondholders anticipate the use of dividends and the ensuing adjustment of risk, so it is not clear whether any price effects will be large. On the other hand, dividends keep managers' noses to the grindstone, conferring benefits on all investors. The net effect may be a wash, or it may not.²⁸

IV. Conclusion

The economics literature has yet to integrate the study of corporate finance and the theory of the firm. This paper is a small step toward understanding whether, and how, dividends may be useful in reducing the agency costs of management. I suggest that dividends may keep firms in the capital

²⁷Paul Asquith and David Mullins (1983) find that there is a significant appreciation in the price of stock when a firm initiates dividend payments. This offers some support for the thesis in the text. (Asquith and Mullins treat the increase as an information effect; they do not consider other explanations for their findings.)

²⁸Handjinicolaou and Kalay show ambiguous effects.

market, where monitoring of managers is available at lower cost, and may be useful in adjusting the level of risk taken by managers and the different classes of investors. Such an explanation offers a hope of understanding why firms simultaneously pay out dividends and raise new funds in the capital market. It does not, however, explain dividends (as opposed to the set of all devices that have the effect of keeping firms in the capital market), and it will be difficult to test.

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