

The Perception of Dividends By Management

George Frankfurter, Arman Kosedag, Hartmut Schmidt and Mihail Topalov

The “dividend puzzle,” i.e., the love stockholders have for dividends, has always been one of the great mysteries of modern finance/financial economics. Six classes of dividend theories have been advanced during the last five decades, almost all using the logic of the economic person. Unfortunately, all these models suffer from either a lack of verifiability or contradicting empirical evidence. This paper takes an approach that has been largely ignored so far by dividend research. Instead of analyzing large volumes of market data based on yet another “rational” model, we study the perception of dividends by top corporate decision-makers. The respondents’ answers to a survey instrument are then analyzed and compared with accounting, economic, and market data. The results are surprising in terms of both similarity and dissimilarity of perception. We hope that our results and this type of research will open up new ways of looking at this puzzle.

Value is the most invincible and impalpable of ghosts, and comes and goes unthought of while the visible and dense matter remains as it was.

—W. Stanley Javons

Introduction

Why shareholders want dividends is perhaps the greatest enigma of modern finance. We performed a survey-based research project to ascertain why shareholders want dividends, and to examine the practice of paying dividends to keep them happy. Our approach differs from traditional dividend research because it is based on the belief that one cannot understand the motivation and perception of people by simply analyzing market data. We believe the only way to understand the dividend enigma is to ascertain people’s perceptions of the issue by asking for their candid opinions. We did exactly that. This paper presents the results of our survey of the chief financial officers (CFOs) of all publicly listed German firms as of September 2000.

Why do firms pay dividends? Is there, or should there be, a corporate “dividend policy”? These questions have been at the center of inquiry of modern finance/financial economics since the proposition of the so-called “bird-in-the-hand”¹ dividend theory of Gor-

don and Shapiro [1956], Gordon [1963] and Walter [1963]. This theory may have come about to rationalize Graham and Dodd’s [1934] book (which ultimately became the professional investors’ bible). Graham and Dodd argued that the sole purpose for the existence of the corporation is to pay dividends. They also argued that if two firms are identical except that one pays less dividends than the other, then the latter must sell for a higher price/earnings multiple.

In all fairness to Gordon, here is a segment of his e-mail to us, commenting on an earlier draft of this article:

I have never characterized my theory of dividend policy as the “bird in hand” theory. It may be a good summary statement of the theory. I argue that the value of a share, like any other asset, is the p.v. of its payment EXPECTATIONS, i.e., its EXPECTED future dividends. Under certain conditions, that EXPECTATION can be represented by the current dividend and its EXPECTED growth rate.

I have argued further that dividend policy can have the objective of (1) adopting a payout and growth rate that maximizes share price earnings, investment opportunities, etc., and (2) getting investors to arrive at an expectation on the basis of the dividend record and other information.

Serious doubt about the economic rationality of the bird-in-the-hand models began to surface with the indifference proposition by Miller and Modigliani [1961]², and later with the work of Black [1976]. Black called shareholders’ preference for dividends “the dividend puzzle.” Since then, five more classes of dividend models/explanations have been posited by financial economists without much success in empirically verifying either the positive effect of dividend announcement on the stock price (which is the “puzzle”), or the

George Frankfurter is Lloyd F. Collette Professor Emeritus from Louisiana State University and Network Professor at Sabanci University.

Arman Kosedag is a professor at Sabanci University in Turkey.

Hartmut Schmidt is a professor at the University of Hamburg.

Mihail Topalov is a Ph.D. candidate at the University of Hamburg.

Requests for reprints should be sent to: George Frankfurter Professor Emeritus, Louisiana State University, 60 Sargis Cove, Destin, FL 32550. Email: pitypalaty@cox.net

practice per se. Because the literature on these classes is voluminous, and because our aim here is not to review “traditional” dividend papers, we summarize the five additional classes as:

- The tax effect explanation (see, for example, Miller and Scholes [1978], Litzenberger and Ramaswamy [1982], Lakonishok and Vermaelen [1983], and Masulis and Trueman [1988]).
- The clientele effect explanation, which is closely related to the tax effect (see Elton and Gruber [1970], Pettit [1977], Fung [1981], Booth and Johnston [1984], and Bajaj and Vijh [1990]). As this explanation goes, shareholders become “clients” of firms according to whether receiving dividends would expose them to tax liabilities. So high-tax bracket individuals would invest in low- or no-dividend-paying firms, and vice versa.
- The agency theory explanation (see Rozeff [1982], Easterbrook [1984], Jensen [1986], Crutchley and Hansen [1989], and Dempsey and Laber [1992]). This conjecture is based on the notion that the market will oversee otherwise not perfectly enforceable contracts. Therefore, taking “excess cash” (whatever that might be) out of the firm will force management to go to the marketplace and compete for funds. The idea is then to siphon out as much cash as possible in the form of dividends.
- The signaling model explanation (see Bhat-tacharya [1979, 1980], John and Williams [1985], Asquith and Mullins [1986], and Bar-Yosef and Huffman [1986]). At one time, this was the most burgeoning literature in financial economics, and not just as it applied to the dividend puzzle. Everything management did or didn’t do turned into signals, because signals (in the minds of the creators of these models) had more credibility than the spoken word or publicly available information. Increasing dividends, then, was seen as a positive signal, communicating to the financial world that the firm had a strong future and could afford the necessary increase in cash outflows.
- The psychological/sociological explanation (see Shefrin and Statman [1984], Shiller [1986], and Frankfurter and Lane [1992]). These explanations are not based on mathematics, but on the psychology that “hard cold cash” has more power than anything else. Also, that the dividend payment is a ritual meant to strengthen the bond between the owners and the stewards of the firm, a reinforcement necessary because of the separation of ownership from management.

Common among these theories (with the exception of the last) is the intention of their propagators to explain the dividend puzzle by the logic of the homo

economicus.³ Also common to these models is their failure to show empirically that their respective reasoning is the dialectic that makes the investor want dividends in the first place, and that a partial liquidation of the firm (which is what dividend payments, de facto, amount to) increases the value of the share.

Kalay and Michaely [2000] is a recent paper in the tax effect genre. After an untold number of weekly (why weekly is beyond our understanding, because dividends are usually paid on a quarterly basis) regressions with the “usual” variables, the authors conclude (p. 73):

Our empirical evidence —time-series return variations and no cross-sectional return variations—is not explained by the known tax models. It could very well be that these empirical findings are somehow related to a more *complex* [emphasis added] theory of tax effects, yet to be developed.

This is because Kalay and Michaely’s study, like so many others before it, failed to link the changes in tax laws to changes in the dividend policies of firms. The tax effect on dividends, perhaps the most economically rational exogenous effect, again could not be shown as a significant determinant of corporate dividend policy. On this point, Harry Markowitz (commenting on an earlier draft of this paper) called to our attention the Michelson-Morley experiment:⁴

In connection with the quote from them [Kalay and Michaely], you could point out that their negative results are due to their trying the wrong kind of hypothesis rather than, as they suggest, not a sufficiently complex one of the type.... This way you have greater chance of persuading them and others who might be moved to spring to their defense. After all, negative results can be important and should be reported. The most outstanding example of this is the Michelson-Morley experiment, which failed to find ether drift and thereby helped stimulate the discovery of relativity.

We agree with Markowitz that negative results are important (albeit rarely published), and that the Michelson-Morley experiment is a classic example. Yet financial economics does not have the precise, physical instruments used by Michelson. Thus, financial economists still tend to look for the *raison d’être* of the homo economicus by fishing for increasingly more complex statistical models, to show that the logic of the homo economicus is indisputable.

Instead of ratcheting the complexity up a notch, Kalay and Michaely’s study, and others before it, should ponder why dividend policies do not follow the rationality exclusively assumed in financial economics. Or, as Markowitz suggests, test the right hypothesis.

This popular rationality is broadly based on the expected utility maxim (EUM) and Friedmanian instru-

mentalism (Friedman [1953]). And, of course, just because no empirically supportable rational model has been found in forty years to explain the seeming irrationality of dividends (the “dividend puzzle” of Black [1976]) is no proof that such a model doesn’t exist. But common sense suggests that, in order to find a plausible alternative *modus operandi*, it would be logical to proceed with studying the perception of dividends by those who decide when and how much to pay, rather than following the Kalay and Michaely route.

This is precisely the course we take. We analyze and report the results of a survey-based research project, conducted in Germany, in which CFOs were asked to express their perception of dividends by responding to twenty-six statements. Although several management surveys on dividends have been conducted in the past (most notably Lintner [1956]), none is on a scale comparable to ours. However, it is certainly easier for the proverbial rich man to get to heaven than for an author to publish a survey-based paper in a leading finance or economics journal. So if such research does exist, it is not public knowledge. Baker and Powell [1999], despite many dissimilarities, is perhaps the most similar recent study to ours. Readers are invited to refer to Baker and Powell and draw their own conclusions.

In the next section, we describe how the survey instrument was constructed, state our hypotheses, and outline the technical issues in relation to the logistics involved in carrying out the study. The section after that reports our method of analysis and the results. The final section is a blueprint for further research and a summary of our understanding of the dividend enigma.

Survey Construction, Hypotheses and Other Technicalities

Survey Design

The research design for this study and the survey instrument were developed in fall 1999 at the *Institut für Geld- und Kapitalverkehr*, at the University of Hamburg. Our objective was to gain insight into investors’ attitudes toward dividends, *as perceived* by chief corporate financial decision-makers. To this end, we crafted a survey instrument to objectively measure these perceptions and, at the same time, either validate or disprove the academic hypothesis/explanation of the practice of paying dividends.

To minimize the amount of time required to respond to the survey, we purposely narrowed the number of statements in the instrument. In constructing these 26 statements, we also tried to minimize direct reference to (and the jargon of) the academic theories. To achieve this, we not only scattered statements that pertained to a particular hypothesis/explanation, but also “planted” statements that were the direct opposite of other statements. This latter device served to gauge the consis-

tency of responses for a given respondent and to ascertain, to the degree possible, whether the survey was completed in a rushed, haphazard fashion, or by an unknowledgeable underling.

The survey was developed in English (see Appendix) and translated into German. We took extra care to verify the correctness of the translation in terms of capturing the spirit of the English version. We then pre-tested the instrument with financial executives who found the survey statements understandable.

The name of each firm to which the survey was sent was printed at the bottom of the survey, along with a guarantee of complete confidentiality. But, by including the firm’s name, we made it clear that the survey was not anonymous. Knowing the name of the firm made it possible for us to independently retrieve any financial, accounting, or market data necessary for full analysis of responses, thus keeping the number of questions about the firm to an absolute minimum. Identification of the respondent also allowed us to track responses for a second mailing (in case there was no initial response), and increased the probability that the survey would be completed by a top financial decision-maker.

Hypotheses in the Survey

From the academic finance literature, we identified nine hypotheses/explanations that fit into one of the five classes described earlier. We left out the bird-in-the-hand models either because they are subsumed in other theories or because they do not amount to either an explanation or a theory.⁵

Table 1 shows, for each hypothesis or explanation, whether the expected response is “agree” or “disagree” if the hypothesis were true. We mark with an “X” statements where there would not be an *a priori* expected response, yet the statement pertains to, or is relevant to, a hypothesis/theory/explanation.

Selection of Firms and the German Stock Market Structure

All firms included in the survey are listed on at least one of the eight stock exchanges in Germany: Berlin, Bremen, Düsseldorf, Frankfurt, Hamburg, Hannover, München, and Stuttgart.⁶ The Frankfurt Stock Exchange — the largest, and a unit of Deutsche Börse AG — operates the electronic trading system Xetra and a trading floor.

The stocks listed on the eight exchanges relate to three market segments: Amtlicher Handel, Geregelter Markt, and Freiverkehr. These segments differ with respect to listing requirements. The requirements are most stringent for the Amtlicher Handel stocks (for instance, the thirty DAX stocks), which represent the highest capitalization and in general are the most liquid. As of December 31, 2000, there were 366 German

Table 1. *Statements Grouped By Dividend Models/Hypotheses/Theories/Explanations*

Number	Statement	Tax Effects	Clientele	Agency Theory	Signaling	Social Contract	Lintner [1956]	Irrelevance Theory	Pecking Order Hypothesis	Liquidity Effect
1	Stockholders like to receive a regular dividend.			agree		agree	agree			
6	We don't believe our stockholders are interested in dividends.		X	disagree		disagree	disagree			
13	Paying cash dividends is necessary, because stockholders expect it.					agree				
19	Any reduction of dividends would adversely affect our stock price.				agree	agree	agree			
7	When we want to save cash we give a stock dividend.								agree	
12	Paying cash dividends creates a costly cash drain for our firm.								agree	
24	Paying no or as little dividends as possible is important.								agree	
8	A dividend gives us favorable free publicity in the financial press.				agree					
9	Dividends help keep the stock price up within a range we think is optimal.				disagree					X
11	There is a short-term positive price reaction to the announcement of a dividend.				disagree			agree		
14	An increase of dividends is a sign that we are doing well.				agree					
20	Once a firm starts paying dividends, it must continue to pay dividends.				agree		agree			
21	Substituting a stock dividend for a cash dividend is a sign that we are doing poorly.				agree					
22	Many investors believe that an increase of dividends is a sign that we don't have anything better to do with our capital.			agree	disagree					
25	Money talks!				agree					
15	Only firms with increasing stock price should pay a dividend.						agree			
16	We increase dividends only if we can maintain it on the long-term.				disagree		agree			
3	Institutional investors always prefer a cash dividend.	X	X	disagree						
4	Our firm would like to see a large portion of its shares owned by institutions.			agree						X
5	Increasing the number of stockholders in our firm is one of our important objectives.			disagree						X
10	Dividends have no effect on the inherent value of our stock.							agree		
2	Some stockholders prefer a stock dividend instead of a cash dividend.	agree	X							X
26	The forthcoming change in taxation will not affect our dividend policy.	disagree								
17	Individual investors have no understanding of the real economic value of dividends.									
18	Institutional investors know what effect a dividend will have on the stock price.									
23	Many of our stockholders do not trade the stock.		X							X

and 179 non-German firms listed for the Amtlicher Handel on the Frankfurt exchange.⁷

The Geregelter Markt, in operation since 1987, was established by federal legislation and trades the stocks of smaller companies that may not meet the strict requirements of the Amtlicher Handel. As of December 31, 2000, there were 95 German and 10 non-German firms listed on the Frankfurt Geregelter Markt.

The Freiverkehr has just a few formal admission requirements. As of December 31, 2000, there were 161 German and 4,544 non-German companies traded on this market.

The growth segment, Neuer Markt, is a special trading segment of the Frankfurt exchange. It caters to investors with a high-risk tolerance, and enables young and innovative firms to enter the capital market. Firms on the Neuer Markt must also be listed on the Geregelter Markt and comply with some additional requirements. In a short time, the Neuer Markt has evolved into the most liquid growth market in Europe. At the end of 2000, there were 283 German and 56 non-German firms on the Neuer Markt.

Tax Considerations

The German tax reform that became partially effective on January 1, 2001, brought substantial changes in the taxation of dividends. The corporate tax rate has been reduced from 40% on retained earnings and 30% on distributed dividends to a uniform 25% for both categories. The other major change was replacement of the Anrechnungsverfahren with the Halbeinkünfteverfahren.

Under the Anrechnungsverfahren, enacted in 1977, the corporate tax on dividends accounted for the income tax. This avoided double taxation of the firm's dividends at the company and investor levels. If a firm paid dividends, they were taxed at 30% at the firm. The recipient of the dividend declared on his/her annual tax return the gross dividend as income and claimed as a tax credit the tax paid on dividends by the firm. So the dividend was taxed one time, with the personal income tax of the investor. Capital gains were not taxed if the stock was held for more than one year.

Under the new law, Halbeinkünfteverfahren, dividends are subject to a flat rate of 25% at the firm. There is no tax credit. The total tax burden is the corporate tax on the gross dividend, plus the investor's income tax on the half of the residual paid to the shareholder. In effect, this means that shareholders subject to a personal income tax of 40% have the same tax burden under both regimes.⁸ But shareholders with an income tax rate above 40% pay less tax on dividends than previously, and shareholders with an income tax rate below 40% pay more.⁹

Under the old regime, there was a tax incentive to pay dividends for companies with clientele in the lower tax bracket. But under the new regime, these compa-

nies may consider retaining their earnings and repurchasing their shares.¹⁰

Method of Analysis and Results

Basic Statistics Pertaining to All Responses

We mailed 954 survey forms to the listed firms, each accompanied by a cover letter addressed to the CFO.¹¹ 420 forms were returned (44%), which is an exceptionally good rate for studies of this sort. Responses on the returned forms were coded with 0 for a neutral response, and adding or subtracting 1 and 2 for each mark to the right or left. A "no response" to a statement was coded -3 in order to calculate the $(n^2 - n)/2 = 325$ unique correlation coefficients.¹² The correlation coefficients verified that responses were provided by a professional who understood the statement, and that responses were not random. The correlation matrix was also used as the primary input to a factor analysis, which is discussed later.

The 420 responses were tabulated and the results calculated and summarized—including the percent response of disagreement, neutrality, and agreement; the ratio of agreement to disagreement (which we call **RATIO**); and the means, medians, and modes for each statement. The results are presented in Table 2. For convenience, each statement is also included in the table, along with the z-value of a test of no difference in the population between agreement and disagreement.

It is convenient to interpret the numbers in Table 2 by considering the **RATIO** variable (column 6). Small and large values for this variable indicate consensus (on either side of the agreement-disagreement scale), while numbers in the vicinity of unity indicate discord among survey respondents. If we consider a **RATIO** of 2.0 or greater as large enough and 0.50 or less as small enough to indicate consensus, then the following picture of perception emerges.¹³

Consensus (**RATIO** ≥ 2.00 or 0.50 ≥ **RATIO** ≥ 0.00)

According to our criteria, two types of statements fall into the consensus category: agreement with the statement, and disagreement, meaning agreement with the reverse of the statement. Of the twenty-six statements, eighteen are in the consensus category. And of these eighteen, there are eight "agree" cases—1, 11, 13, 14, 16, 18, 19, and 20. The consensus, here, is that:

- Stockholders like to receive regular dividends.
- Paying a cash dividend is necessary because stockholders expect it.

Table 2. *Summary Statistics*

	Statement	Disagree (%)	Neutral (%)	Agree (%)	Total Responses	Ratio	Mean	Median	Mode	z-Value
1	Stockholders like to receive a regular dividend.	16.86	8.67	74.45	415	4.41	1.02	2	2	12.26**
2	Some stockholders prefer a stock dividend instead of a cash dividend.	50.64	22.48	26.87	387	0.53	-0.38	-1	-2	-5.33**
3	Institutional investors always prefer a cash dividend instead of a stock dividend.	31.81	25.00	43.18	352	1.36	0.17	0	0	2.47*
4	Our firm would like to see a large portion of its shares owned by institutions.	39.13	27.53	33.33	414	0.85	-0.08	0	0	-1.38
5	Increasing the number of stockholders in our firm is one of our important objectives.	35.50	18.84	45.65	414	1.28	0.16	0	2	2.29*
6	We don't believe our stockholders are interested in dividends.	79.57	5.77	14.66	416	0.18	-1.20	-2	-2	-13.64**
7	When we want to save cash we give a stock dividend, because stockholders don't know the difference.	71.76	16.32	11.92	386	0.17	-1.05	-2	-2	-12.85**
8	A dividend gives us favorable free publicity in the financial press.	31.08	20.48	48.43	415	1.56	0.24	0	1	3.97**
9	Dividends help keep the stock price up within a range we think is optimal.	41.19	23.57	35.23	403	0.86	-0.09	0	-1	-1.40
10	Dividends have no effect on the inherent value of our stock.	29.20	14.11	56.68	404	1.94	0.46	1	1	5.96**
11	There is only a short-term positive price reaction to the announcement of a cash dividend.	14.99	14.25	70.76	407	4.72	0.90	1	2	12.14**
12	Paying cash dividends creates a costly cash drain for our firm.	70.94	11.86	17.19	413	0.24	-0.89	-1	-2	-11.64**
13	Paying cash dividends is necessary because stockholders expect it.	21.39	9.13	69.47	416	3.25	0.70	1	2	10.12**
14	An increase of cash dividends is a sign that we are doing well.	13.94	10.57	75.48	416	5.41	1.00	1	2	13.28**
15	Only firms with increasing stock price should increase a cash dividend.	75.24	14.21	10.54	408	0.14	-1.08	-1	-2	-14.12**
16	We increase cash dividends only if we can maintain it on the long-term.	14.28	12.07	73.64	406	5.16	0.96	1	2	12.77**
17	Individual investors have no understanding of the real economic value of cash dividends.	57.79	22.04	20.16	372	0.35	-0.59	-1	-1	-8.26**
18	Institutional investors know what effect a dividend will have on the stock price.	5.00	8.75	86.25	400	17.25	1.32	2	2	17.05**
19	Any reduction of cash dividends would adversely affect our stock price because we have a policy of dividend continuity.	23.66	15.27	61.07	393	2.58	0.56	1	2	8.03**
20	Once a firm starts paying dividends, it must continue to pay dividends, because otherwise the stockholders will think that something is wrong with the firm.	19.08	9.66	71.25	414	3.73	0.79	1	1	11.20**
21	Substituting a stock dividend for a cash dividend is a sign that we are doing poorly.	65.45	23.37	11.17	385	0.17	-0.86	-1	-2	-12.16**
22	Many investors believe that an increase of cash dividends is a sign that we don't have anything better to do with our capital.	74.39	11.59	14.01	414	0.19	-1.06	-2	-2	-13.15**
23	Many of our stockholders do not trade the stock at all whether the price is going up or down.	64.46	14.70	20.83	408	0.32	-0.80	-1	-2	-9.55**
24	Paying no or as little cash dividends as possible is important because it allows us to convert retained earnings into permanent equity capital.	56.39	20.05	23.56	399	0.42	-0.57	-1	-2	-7.36**
25	Money talks! The more cash dividends we pay the more investors believe that we are doing well.	39.27	24.39	36.34	410	0.92	-0.16	0	1	-0.68
26	Tax reform will not affect the dividend policy of our firm.	40.15	16.46	43.39	401	1.08	0.05	0	2	0.71

Ratio for each statement is computed as follows: Number of Agreeing Respondents/Number of Disagreeing Respondents.

z-value is the test statistic for the hypothesis that the proportions of agreeing and disagreeing respondents for each statement are equal.

**Significant at 1% level and *significant at 5% level.

- Once a firm starts to pay dividends, the practice must continue. Otherwise, stockholders assume the firm is doing badly.
- Firms increase cash dividends only when they know they can maintain the increased level.
- An increase in cash dividends is a sign that the firm is doing well.
- There is only a short-term positive price reaction to an increase in dividends, and institutional investors know what that effect will be.
- Stockholders know the difference between a cash dividend and a stock dividend.
- Investors do not believe that an increase in cash dividends is a sign that the firm does not have anything better to do with the cash (e.g., reinvest it).

Ten statements belong to the other type of consensus (disagreement)—2,¹⁴ 6, 7, 12, 15, 17, 21, 22, 23, and 24. The consensus here is that:

- Stockholders do not prefer a stock dividend to a cash dividend.
- Stockholders are interested in dividends.
- Firms do not “save” cash by substituting a stock dividend for a cash dividend.
- Paying a cash dividend is not a costly cash outflow for the firm.
- All firms—not just those with an increasing stock price—should pay dividends.
- Non-professional stockholders do understand the economic value of dividends.
- Substituting a stock dividend for a cash dividend is not a sign that the firm is doing poorly.
- An increase in cash dividends is not a sign that the firm has nothing better to do with the cash.
- Shareholders do trade the stock regardless of whether the price goes up or down.
- A firm does not pay a little cash dividend just for the sake of converting retained earnings to permanent capital.

All responses for either type of consensus category are significant at the 0.01 level. This is a rejection of the null hypothesis of no difference between agreement and disagreement for any of the statements.

Discord

The remaining eight statements reflect discord. There are two explanations for this:

1. Neutrality—in other words, the respondents did not have strong feelings either way about the statement, in which case we expect to find a high percentage of total responses in the middle of the scale; or
2. Strong disagreement among respondents.

Statement 4 (regarding institutional ownership) drew the highest percentage of responses in the discord category (27.53%). But even with this statement, the extremes are fairly even (39.13% disagree and 33.33% agree). Virtually the same extremes occur for three others: Statement 9 (dividends as a means of keeping the stock price within a desirable range), Statement 25 (the more cash dividends, the more investors believe the firm is doing well, i.e., “money talks”), and Statement 26 the tax [reform] effect. Note that all statements for which the null hypothesis of equal agreement and disagreement cannot be rejected at the 0.01 level are in the discord category (Statements 4, 9, 25, and 26).

The respondents’ agreement is significantly higher than their disagreement with regard to three statements (although the neutral responses are still high): Statement 3 (regarding the institutional investor’s thirst for cash), Statement 5 (increasing the number of shareholders in the firm), and Statement 8 (dividends as a means of free publicity).

Statement 10 is a borderline response. The RATIO for this statement is just below the 2.00 threshold (1.97). Practically speaking, this should place Statement 10 in the consensus category. But, upon closer examination, we see that about 57% of the respondents agree that dividends have no effect on the intrinsic value of the stock. At the same time, roughly the same percent (57.79%) disagree with Statement 17, which posits that shareholders have no understanding of the economic value of dividends. So, if dividends have no effect on the inherent value of the stock, and if shareholders understand the economic value of dividends, then what is the value of dividends?

On the surface, it seems that the “money talks” response is inconsistent with the strong belief that shareholders like and want dividends. But if we consider that CFOs perceive shareholders as sophisticated and understanding, this response may be interpreted as a sign that they cannot be “paid off” with dividends. Accordingly, we can conclude that CFOs do not believe that “dividends are hush money to the shareholder” (unless they are just reluctant to admit it).

The discord group is perhaps the best indication that there are no universally accepted perceptions regarding dividends. Many responses show ambivalence, or diametrically opposite perceptions, which is credible testimony that “rational” models cannot describe observed dividend policy.

Lack of Concern

We define “lack of concern” as no response to a statement. As Table 2 shows, only Statements 3 and 17 fall into this category. Statement 17 concerns the CFO’s understanding of the perception of dividends by shareholders. Statement 3 concerns the CFO’s understanding of institutional investors’ preference for

cash dividends. It is hard to tell whether these responses reflect a genuine lack of concern, or a misreading of the statement, or some other variable. However, note that the lowest response (for Statement 3) is not less than 84% of all survey forms returned, and the response for Statement 17 is very close to our arbitrary threshold.

Grouping

To explore the apparent differences of perception within the sample, we use factor analytical and grouping techniques. The idea was to separate the sample population based on the survey into two distinctly heterogeneous populations and observe the differences/similarities between the two groups. We also wanted to determine whether the differences in opinion show up in data independent of the responses to our survey. To this end, principal component factor analysis was performed on the calculated correlation matrix with VARIMAX rotation. Just twelve factors out of the twenty-six explained 69.24% of the variation in responses. These twelve factor scores were calculated for each of the 420 valid responses, with the objective of eliminating all possible cross-correlations and preventing double-counting the influence of any given factor.

We then applied hierarchical clustering with the minimum squared Euclidian distance method and Ward's algorithm to the factor scores to obtain just two groups. Group A had 367 respondents, and Group B had the remaining 53.¹⁵ For the majority of statements, sharp differences were found between the two groups. Table 3 shows the respective percentage figures for DISAGREE, NEUTRAL, and AGREE, the between-group differences, and the missing responses.

For each statement we tested the hypothesis of differences between proportions coming from two distinct populations. The test statistic is:¹⁶

$$z = \frac{p_1 - p_2}{\sqrt{\frac{p_c(1-p_c)}{n_1} + \frac{p_c(1-p_c)}{n_2}}}$$

where:

p_1 is the proportion of disagree, neutral, and agree, respectively, from Group A,

p_2 is the proportion of disagree, neutral, and agree, respectively, from Group B,

n_1 is the number of Group A responses (367),

n_2 is the number of Group B responses (53), and

p_c is $(x_1 + x_2)/(n_1 + n_2)$,

where x_1 and x_2 are the number of disagree, neutral, and agree from Groups A and B, respectively.

The critical value of z in a two-tailed test is |2.58| or less at the 0.01 level of significance of error Type I (adjusted for the respective number of degrees of freedom). If the null is rejected, the alternative hypothesis is that the proportions came from two distinct populations. Differences for the twenty-six statements in the three categories (DISAGREE, NEUTRAL, AGREE) for which the null cannot be rejected at the 0.01 level of confidence are marked with ^a.

Table 3 shows that differences in the vicinity of 14% or less cannot be rejected by the null hypothesis.¹⁷ As for neutrality, with the exception of Statement 1 (stockholders like to receive a regular dividend), Statement 6 (stockholders are interested in receiving dividends — which is a statement to verify responses to Statement 1), and Statement 14 (an increase of dividends is a sign of well-being), all other statements are not rejected by the null hypothesis. In all cases of rejection, Group B is the predominantly neutral.

The two groups' differences are uniformly not significant at the 0.01 level with respect to Statements 2, 16, 18, 19, 20, 21, and 26. Thus, there appears to be a consensus between the two groups regarding:

- The lack of preference for a stock dividend.
- An increase in dividends only if the increase can be maintained for the long term — a serious blow to signaling and a reconfirmation of Lintner [1956].
- The understanding of the dividend effect by institutional investors (professionals know best).
- The adverse effect of a reduction in dividends.
- Continuity of dividends.
- Disagreement with the substitution of a stock dividend for a cash dividend as a sign that the firm is doing poorly.
- Agreement with the irrelevance of the tax effect on dividend policy (perhaps a "signal" for "traditionalists" to stop and think before ratcheting up the complexity of models that would "verify" the rationale of the homo economicus).

But the real significance is in the diametrically opposite perceptions of Statements 1, 3, 4, 6, 7, 9, 10, 11, 12, 13, 14, 15, 17, 22, 23, 24, and 25. Consequently, Group B:

- Does not believe that stockholders are interested in dividends (verified by the reverse response to Statement 6).
- Does not believe that institutional investors prefer a cash dividend to a stock dividend.
- Would like to see a substantial proportion of the shares owned by institutions.

Table 3. Group Responses And Differences

STATEMENT	DISAGREE (%)			NEUTRAL (%)			AGREE (%)			MISSING RESPONSES	
	GROUP A	GROUP B	DIFFERENCE	GROUP A	GROUP B	DIFFERENCE	GROUP A	GROUP B	DIFFERENCE	GROUP A	GROUP B
1	9.90	64.20	−54.30	6.90	20.80	−13.90	83.20	15.00	68.20	5	0
2	51.90	41.70	10.20 ^a	21.20	31.30	−10.10 ^a	26.80	27.00	−0.20 ^a	28	5
3	29.50	46.80	−17.30	24.30	29.80	−5.50 ^a	46.20	23.40	22.80	62	6
4	42.90	13.20	29.70	26.60	34.00	−7.40 ^a	30.50	52.80	−22.30	6	0
5	37.40	22.60	14.80	18.30	22.60	−4.30 ^a	44.30	54.70	−10.40 ^a	6	0
6	88.70	17.00	71.70	3.60	20.80	−17.20	7.70	62.20	−54.50	4	0
7	75.60	46.00	29.60	15.80	20.00	−4.20 ^a	8.70	34.00	−25.30	31	3
8	28.50	49.10	−20.60	21.80	11.30	10.50 ^a	49.70	39.60	10.10 ^a	5	0
9	36.00	75.50	−39.50	25.10	13.20	11.90 ^a	38.90	11.30	27.60	17	0
10	31.60	13.20	18.40	14.20	13.20	1.00 ^a	54.10	73.60	−19.50	16	0
11	16.90	1.90	15.00	14.70	11.30	3.40 ^a	68.40	86.80	−18.40	13	0
12	74.40	47.20	27.20	11.40	15.10	−3.70 ^a	14.20	37.70	−23.50	7	0
13	12.70	81.10	−68.40	8.50	13.20	−4.70 ^a	78.80	5.70	73.10	4	0
14	9.40	45.30	−35.90	8.50	24.50	−16.00	82.10	30.20	51.90	4	0
15	78.00	56.60	21.40	14.10	15.10	−1.00 ^a	7.90	28.30	−20.40	12	0
16	14.10	15.70	−1.60 ^a	12.70	7.80	4.90 ^a	73.20	76.50	−3.30 ^a	12	2
17	61.40	33.30	28.10	22.80	16.70	6.10 ^a	15.80	50.00	−34.20	43	5
18	5.80	0.00	5.80 ^a	8.90	7.50	1.40 ^a	85.30	92.50	−7.20 ^a	20	0
19	22.10	36.40	−14.30 ^a	16.00	9.10	6.90 ^a	61.80	54.50	7.30 ^a	18	9
20	18.30	24.50	−6.20 ^a	10.00	7.50	2.50 ^a	71.70	67.90	3.80 ^a	6	0
21	66.00	62.00	4.00 ^a	23.00	26.00	−3.00 ^a	11.00	12.00	−1.00 ^a	32	3
22	79.50	39.60	39.90	10.50	18.90	−8.40 ^a	9.90	41.50	−31.60	6	0
23	62.00	81.10	−19.10	16.10	5.70	10.40 ^a	21.90	13.20	8.70 ^a	12	0
24	59.60	34.00	25.60	19.50	24.00	−4.50 ^a	20.90	42.00	−21.10	18	3
25	34.10	75.00	−40.90	26.30	11.50	14.80 ^a	39.60	13.40	26.20	9	1
26	41.40	31.40	10.00 ^a	16.60	15.60	1.00 ^a	42.00	53.00	−11.00 ^a	17	2

Differences for which the null hypothesis cannot be rejected are marked with ^a.

- Believes that individual investors do know the difference between a cash dividend and a stock dividend.
- Believes that dividends are not an instrument to keep the stock price within a desired range.
- Believes that dividends have no effect on the inherent value of the stock.
- Believes that there is only a short-term positive effect from dividend announcements.
- Believes that paying cash dividends is not costly.
- Believes that stockholders do not expect a cash dividend; therefore, it is not necessary to pay a cash dividend.
- Believes that an increase in cash dividends is not a sign of well-being (another blow to signaling).
- Does not believe that an increase in stock price is a precondition for paying a dividend.
- Believes that non-professional investors do not understand the real economic value of dividends (verifies and complements well the response to Statement 10).
- Believes that an increase in cash dividends is a sign that the firm has nothing better to do with cash.
- Believes that many shareholders do trade a lot, regardless of whether the price goes up or down (disagreement with the original statement is particularly strong in Group B because Group B stocks are primarily growth stocks, and investors in these stocks are concerned with capital gains).
- Believes that paying little cash dividends is a means to convert retained earnings into permanent equity capital (however, the agreement is weak—with a RATIO of 1.23), and
- Believes that money does not talk (verifying and complementing the response to Statement 14).

That is, investors do not believe that paying more cash dividends is a signal the firm is doing well.

The grouping is strictly the result of the CFO responses, and so is independent of any market, industry, or accounting data. The idea is to explore whether the responses that reflect on the perception of dividends by CFOs correspond to either accounting or market data. We are also interested in finding a correspondence of perception—or lack of it—regarding industries or other economic commonalities.

Industry, Accounting, and Market Characteristics

To explore the exogenous differences/similarities of the two groups, we aggregated the following data for each group and tested the hypotheses of no difference between the two groups.

The two tables are identical except that Table 4.1 does not include preferred stock in equity as Table 4.2 does. We present both tables for the sake of good housekeeping and accountability. We selected the variables in Tables 4.1 and 4.2 because of availability of data for the largest number of firms that responded to the survey. Missing data are mostly from firms in Group A; because of the large number of observations, their effect can be safely disregarded.

The tables compare the two groups with respect to seven variables. For each variable, we show the number of respective observations, the group means, and the standard deviations, as well as the F-value and the respective probabilities of the Levene test for equality of variances.

The last two columns of the tables are the t-values (and the probabilities of differences in the means) for both equal and unequal variances. In the discussion

Table 4.1. *Univariate Tests for Equality of Group Means of Market/Accounting Data*

Variable	Group	N	Mean	Standard Deviation	F ^a value	t ^b value	t ^c value
Total Assets (in EURO MM)	A	301	9837.487	62721.766	1.388	0.696	1.228
	B	52	3697.566	24923.790	<i>0.239</i>	<i>0.487</i>	<i>0.221</i>
Insider Ownership	A	301	0.147	0.227	2.153	−4.527	−4.147
	B	52	0.304	0.257	<i>0.143</i>	<i>0.000</i>	<i>0.000</i>
Ownership by Institutions	A	301	0.404	0.360	16.462	3.343	4.034
	B	52	0.229	0.275	<i>0.000</i>	<i>0.001</i>	<i>0.000</i>
Age	A	301	62.645	57.220	75.561	5.369	8.074
	B	52	18.942	30.947	<i>0.000</i>	<i>0.000</i>	<i>0.000</i>
Market to Book Ratio	A	283	6.344	13.618	15.953	−3.135	−1.761
	B	47	15.207	34.051	<i>0.000</i>	<i>0.002</i>	<i>0.085</i>
Market Value of Equity (in EURO MM) on 27/10/2000	A	301	1710.423	6886.836	0.384	−0.279	−0.232
	B	52	2012.902	8935.608	<i>0.536</i>	0.780	<i>0.817</i>
Price to Earnings Ratio	A	228	77.184	256.071	4.452	−1.713	−1.642
	B	24	171.808	269.865	<i>0.036</i>	<i>0.088</i>	<i>0.112</i>

^aLevene's test for equality of group variances (p-values in italics).

^bt statistics for equality of group means assuming equal variances (p-values in italics).

^ct statistic for equality of group means assuming unequal variances (p-values in italics).

Note: Preferred stocks are not included in equity calculations.

Table 4.2. *Univariate Tests for Equality of Group Means of Market/Accounting Data*

Variable	Group	N	Mean	Standard Deviation	F ^a value	t ^b value	t ^c value
Total Assets (in EURO MM)	A	331	9663.674	60031.550	1.348	0.707	1.249
	B	52	3697.566	24923.790	<i>0.246</i>	<i>0.480</i>	<i>0.214</i>
Insider Ownership	A	331	0.141	0.223	3.005	-4.815	-4.344
	B	52	0.304	0.257	<i>0.084</i>	<i>0.000</i>	<i>0.000</i>
Ownership by Institutions	A	331	0.398	0.355	14.237	3.282	3.946
	B	52	0.229	0.275	<i>0.000</i>	<i>0.001</i>	<i>0.000</i>
Age	A	331	64.384	56.458	67.785	5.668	8.580
	B	52	18.942	30.947	<i>0.000</i>	<i>0.000</i>	<i>0.000</i>
Market to Book Ratio	A	313	6.139	13.088	18.250	-3.356	-1.806
	B	47	15.207	34.051	<i>0.000</i>	<i>0.001</i>	<i>0.077</i>
Market Value of Equity (in EURO MM) on 27/10/2000	A	331	2086.917	7749.366	0.003	0.063	0.056
	B	52	2012.902	8935.608	0.959	0.950	0.955
Price to Earnings Ratio	A	256	85.603	313.644	2.214	-1.302	-1.474
	B	24	171.808	269.865	<i>0.138</i>	<i>0.194</i>	<i>0.151</i>

^aLevene's test for equality of group variances (p-values in italics).

^bt statistics for equality of group means assuming equal variances (p-values in italics).

^ct statistic for equality of group means assuming unequal variances (p-values in italics).

Note: Preferred stocks are included in equity calculations.

that follows, we refer to those t-values for which the F-value was significant at the 0.05 level or less.

The only material difference between Tables 4.1 and 4.2 is that the price/earnings ratio is significantly different for Table 4.1, implying that Group B has a significantly higher P/E ratio than Group A when preferred stock is not included at the 0.10 or less level. Other than that, Group B has a higher insider ownership and market-to-book ratio, is younger, and has lower ownership by institutions.¹⁸ Group B firms are predominantly from the Neuer Markt, although the table does not reflect it.

The contrast between the predominant trading activities is remarkable. 54% of Group A firms are traded in the Amtlicher Handel, as opposed to just 13% of Group B firms, while 68% of Group B firms are traded in the Neuer Markt versus 13% of Group A firms.

With respect to size (proxied by total assets), price-to-earnings ratio, and market value of equity, the two groups are not statistically significantly different at the 0.10 level. Thus, the perception of dividends and a dividend policy that may be formulated as a result of these seven factors/variables is not universal. Differences of perceptions among the 420 CFOs who responded to the survey do exist, and the same divergence of perception is likely to exist among security analysts and shareholders. Accordingly, one cannot apply models to explain the value of dividends the same way one can measure, say, barometric pressure at sea level around the globe. The differences may be both intra- and inter-societal, but no current academic hypothesis can be considered valid within a single country or across countries. It is safe to say, therefore, that the manufacture of such models would not withstand Occam's razor.

Straightforward economic rationality is against dividends because of their dissipative nature. Indeed, in the U.S., where the double taxation of dividends is the law, Internal Revenue Code Sections 531-A and -B force closely held corporations to pay dividends. It is logical, then, that where ownership is concentrated in the hands of insiders, where the influence of institutional owners is small, and where growth opportunities are dominant, the perception is for no or little dividends. Yet, the perception is quite different in Group A firms, which constitute the majority of the sample. Can we argue, then, that the managers of these firms do not maximize shareholder wealth, and that the shareholders are happy and content with economically irrational behavior?

Conclusions and Opportunities For Future Research

The dividend "puzzle," both as a share value-enhancing feature and as a matter of policy, is one of the most challenging topics of modern finance/financial economics. Forty years of research based almost entirely on the logic of the homo economicus has not been able to resolve it. How is value added to wealth by changing its location and form of accumulation? Or, equivalently, why is a firm's stratagem of partial liquidation (as opposed to, say, share buy-back, or green mail) a move that makes investors stand up and cheer?¹⁹

With a few exceptions, academic dividend models are based on the EUM. These models are either at variance with observed dividend practices, or cannot be empirically verified. Nevertheless, the market rewards dividend payments because, all other things

equal, the share price increases over the present value of the payment. The majority of corporate financial decision-makers, then, believe that shareholders expect to receive dividends, so that they must therefore be paid. It follows that our study casts a dark cloud of skepticism on all the “rational” hypotheses listed in Table 1.

A few researchers (e.g., Frankfurter and Lane [1992], Shefrin and Statman [1984], and Shiller [1986]) argue for sociopsychological explanations. These papers, naturally, cannot follow the commonly used research regimen of neoclassical economics. Yet indirect verification of their hypotheses is possible through instruments broadly used in other branches of the social sciences, such as sociology and psychology.

One such instrument is the survey method we use here. Surveys have been criticized in the literature for their many obvious weaknesses. For instance, as Baker and Powell [1999, pp. 24–25] mention, limitations include having the opinion of just one person, length, misinterpretation of statements, and non-response bias. We can add also the risk of “loaded” statements, statements that obviate an answer (perhaps ones that are close to the heart and convictions of the researcher), and not being able to verify the identity of the respondents. Some of these problems certainly apply here, but we made a genuine effort to eliminate or reduce their effects.

However, we still believe a survey is the only way to open a new direction for discussion. And to seek this new direction, we obtain a preliminary idea about both the perception of dividends that is already “out there” and the motivation for the practice in the corporation. This mode of research is in sharp contrast to the conformist approach of yet another new model, based on the EUM of the homo economicus.

From our survey, we have gained some important insights into the perception of dividends by corporate decision-makers. It is clear, however, that we should forge ahead with other methods that both complement and buttress the survey method. Detailed taped interviews with subsamples of the two groups we identified would be in order, followed by a careful contextual analysis. Cross-cultural comparative analysis, like that used in anthropological and cultural psychology studies, is applicable here as well, to explore the intra- and inter-societal differences among firms in one country and different countries.

What we suggest here is both expensive and time-consuming. But if we agree that the role of physical or social sciences is discovery, one must follow the path explored here. The old practices of creating laboratory models based on accepted logic, and then verifying (or rejecting) them by manipulating large volumes of data or by ratcheting up the statistical complexity just keeps us guarding what we already know, and does not assist us in exploring what we don’t know. Therefore, one

must seriously consider the results of this paper and the course we chart here.

Notes

1. This metaphor refers to the folksy maxim that cash in the hand now is better than the promise of capital gain in the future.
2. Miller and Modigliani [1961] go so far as to call the bird-in-the-hand theory a “fallacy,” and state that if Graham and Dodd’s [1934] claim regarding the price/earnings multiple were true, “there would be only one way to account for it; namely, as a result of systemic irrationality on the part of the investing public” (p. 431).
3. We use the American spelling here. In Europe the more common spelling is *oeconomicus*.
4. In 1887, two American scientists, Albert A. Michelson and Edward W. Morley, performed a classic experiment that contributed to the downfall of the concepts of absolute space and the ether and was a precursor of the general theory of relativity. The experiments were conducted with the help of an instrument called the interferometer, which was invented by Michelson.
5. It is not our intention here to criticize the bird-in-the-hand theory, though we find its logic highly questionable. The theory is based on two opportunity rates: one for the firm, and one for the investor. When the two rates are the same, the theory is identical to that of Miller and Modigliani [1961]. When they are not, as in the case of imperfect capital markets, there are two possibilities. One is when the opportunity rate of the investor is higher than that of the firm. In that case, why demand 100% dividend payout instead of liquidating the shares in the firm and investing elsewhere? When the opposite is true, a 0% payout does not amount to much of a policy.
6. There is also an options and futures exchange in Frankfurt, called Eurex Deutschland (previously Deutsche Terminbörse).
7. See Deutsche Börse AG [2001, p. 9].
8. Before tax reform, the personal income tax rate ranged from 22.9% to 51%; after reform, it is 19.9% to 48.5%. For the sake of simplicity, the income tax surcharge and the local business income tax are disregarded.
9. Von Rosen [1999, p. 655]. The first DM 3,000 (DM 6,000 for married couples) of dividend, interest, and related income is tax-exempt.
10. Under the new law, the dividend is not taxed at the corporate level if the recipient is a corporation. Before tax reform, a corporation obtained a tax credit. If it paid the dividend through a shareholder, the tax and the tax credit canceled each other out. If the dividend was retained, the higher tax rate on retained earnings resulted in taxes higher than the tax credit. The major difference between the two systems is the treatment of capital gains. Before the new tax law, capital gains of firms were taxed. If a capital gain reflected retained earnings of the firm whose shares were sold, this implied double taxation. In this sense, it was more favorable for a firm to receive dividends than to realize capital gains by selling the shares. Under the new law, capital gains of firms are tax-free, so the firm is indifferent with regard to dividends or capital gains.
11. Names of the CFOs were obtained from the web pages of the firms, by direct mail inquiry, and by phone calls. In cases where the CFO could not be clearly identified, the cover letter and form were mailed to either the CEO or the comptroller.
12. To save space, we do not present here the table of correlation coefficients and their respective p-values. This information is available from the authors upon request.
13. At the moment, we simply follow the ascending order of statement numbers.

14. Strictly speaking, the RATIO for this statement is 0.53, which for all practical purposes is so close to 0.50 that we consider it as meeting our subjective criteria.
15. Because of the confidentiality assurance to the firms that agreed to participate in the survey, a list of these firms is not available at present.
16. Mason, Lind, and Marchal [1999, pp. 329–330].
17. Because of missing responses, degrees of freedom are different. This is the reason the absolute percent difference is not the same for all statements in each of the categories regarding the acceptance or rejection of the null.
18. Ownership by institutions includes holding companies and other industrial firms—in addition to investment funds, banks, and insurance companies (all of which are referred to as institutional investors).
19. There are investment advisors, in fact, who rank stocks by the amount of dividends they pay (sometimes with an additional filter) and advise their clients to invest in the top twenty. See also www.netfolio.com on dividend yields.

REFERENCES

- Asquith, Paul, and David W. Mullins. "Signalling with Dividends, Stock Repurchases, and Equity Issues." *Financial Management*, 15, Autumn (1986), pp. 27–44.
- Bajaj, Mukesh, and Anand M. Vijh. "Dividend Clientele and the Information Content of Dividend Changes." *Journal of Financial Economics*, 26, (1990), pp. 193–219.
- Baker, H. Kent, and Garry E. Powell. "How Corporate Managers View Dividend Policy." *Quarterly Journal of Economics and Business*, 38, (1999), pp. 17–35.
- Bar-Yosef, Sasson, and Lucy Huffman. "The Information Content of Dividends: A Signalling Approach." *Journal of Financial and Quantitative Analysis*, 21, (1986), pp. 47–58.
- Bhattacharya, Sudipto. "Imperfect Information, Dividend Policy, and 'the Bird in the Hand' Fallacy." *Bell Journal of Economics*, 10, (1979), pp. 259–270.
- Bhattacharya, Sudipto. "Nondissipative Signaling Structures and Dividend Policy." *Quarterly Journal of Economics*, 95, (1980), pp. 1–24.
- Black, Fischer. "The Dividend Puzzle." *Journal of Portfolio Management*, 2, (1976), pp. 5–8.
- Booth, L.D., and D.J. Johnston. "The Ex-Dividend Day Behavior of Canadian Stock Prices: Tax Changes and Clientele Effects." *Journal of Finance*, 39, (1984), pp. 457–476.
- Crutchley, Claire E., and Robert S. Hansen. "A Test of the Agency Theory of Managerial Ownership, Corporate Leverage, and Corporate Dividends." *Financial Management*, 18, (1989), pp. 36–46.
- Dempsey, Stephen J., and Gene Laber. "Effects of Agency and Transaction Costs on Dividend Payout Ratios: Further Evidence of the Agency-Transaction Cost Hypothesis." *Journal of Financial Research*, 15, (1992).
- Deutsche Börse AG. *Factbook 2000*. Frankfurt am Main, 2001.
- Eades, Kenneth M. "Empirical Evidence on Dividends as a Signal of Firm Value." *Journal of Financial and Quantitative Analysis*, 17, (1982), pp. 471–500.
- Easterbrook, Frank H. "Two Agency-Cost Explanations of Dividends." *American Economic Review*, 74, (1984), pp. 650–659.
- Elton, Edward J., and Martin J. Gruber. "Marginal Stockholder Tax Rates and the Clientele Effect." *Review of Economics and Statistics*, 52, (1970), pp. 68–74.
- Frankfurter, George M., and William R. Lane. "The Rationality of Dividends." *International Review of Financial Analysis*, 1, (1992), pp. 115–129.
- Friedman, Milton M. "The Methodology of Positive Economics." In Milton M. Friedman, ed., *Essays in Positive Economics*. Chicago: The University of Chicago Press, 1953.
- Fung, William K.H. "Taxes, Clientele Effect of Dividend and Risk, Return Linearity." *Journal of Banking and Finance*, 5, (1981), pp. 405–424.
- Gordon, Myron J. "Optimal Investment and Financing Policy." *Journal of Finance*, 28, (1963), pp. 264–272.
- Gordon, Myron J. *Finance, Investment and Macroeconomics: The Neoclassical and a Post Keynesian Solution*. Hunts, U.K.: Edward Elgar Publishing Company, 1994.
- Gordon, Myron J., and Eli Shapiro. "Capital Equipment Analysis: The Required Rate of Profit." *Management Science*, 3, (1956), pp. 102–110.
- Graham, Benjamin, and David L. Dodd. *Security Analysis*. New York: McGraw-Hill Company, 1934.
- Jensen, Michael C. "Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers." *American Economic Review*, 76, (1986), pp. 323–329.
- John, Kose, and Joseph Williams. "Dividends, Dilution, and Taxes: A Signalling Equilibrium." *Journal of Finance*, 40, (1985), pp. 1053–1070.
- Kalay, Avner, and Roni Michaely. "Dividends And Taxes: A Re-Examination." *Financial Management*, 29, (2000), pp. 55–75.
- Lakonishok, Josef, and Theo Vermaelen. "Tax Reform and Ex-Dividend Day Behavior." *Journal of Finance*, 38, (1983), pp. 1157–1179.
- Lintner, John. "The Distribution of Incomes of Corporations Among Dividends, Retained Earnings and Taxes." *American Economic Review*, 46, (1956), pp. 153–185.
- Litzenberger, Robert H., and Krishna Ramaswamy. "The Effects of Dividends on Common Stock Prices Tax Effects or Information Effects." *Journal of Finance*, 37, (1982), pp. 429–443.
- Mason, D. Robert, Douglas A. Lind, and William G. Marchal. *Statistical Techniques in Business and Economics*. Boston: McGraw-Hill, 1999.
- Masulis, Ronald W., and Brett Trueman. "Corporate Investment and Dividend Decisions Under Differential Personal Taxation." *Journal of Financial and Quantitative Analysis*, 23, (1988), pp. 369–386.
- Miller, Merton H., and Franco Modigliani. "Dividend Policy, Growth and the Valuation of Shares." *Journal of Business*, 34, (1961), pp. 411–433.
- Miller, Merton H., and Myron S. Scholes. "Dividends and Taxes." *Journal of Financial Economics*, 6, (1978), pp. 333–364.
- Pettit, R. Richardson. "Taxes, Transaction Costs, and the Clientele Effects of Dividends." *Journal of Financial Economics*, 5, (1977), pp. 419–436.
- Rozeff, Michael S. "Growth, Beta and Agency Costs as Determinants of Dividend Payout Ratios." *Journal of Financial Research*, 5, (1982), pp. 249–259.
- Shefrin, Hersh M., and Meir Statman. Solomon "Explaining Investor Preference for Cash Dividends." *Journal of Financial Economics*, 13, (1984), pp. 253–282.
- Shiller, Robert J. "The Marsh-Merton Model of Managers' Smoothing of Dividends." *American Economic Review*, 76, (1986), pp. 499–503.
- Von Rosen, Rüdiger. "Reform der Dividendenbesteuerung und ihre Folgen für die Aktienkultur." *Wirtschaftsdienst*, 79, (1999), pp. 653–659.
- Walter, James E. "Dividend Policy: Its Influence on the Value of the Enterprise." *Journal of Finance*, 18, (1963), pp. 270–291.

APPENDIX
Dividend Survey

Please indicate the extent to which you agree or disagree with each of the following statements by placing an “X” on the scale provided. The scale should be treated as a continuous range from “strongly disagree” to “strongly agree.” If you have no opinion about a statement, or if that statement does not pertain to your situation, leave that scale blank. Placing an “X” in the middle, on “Neutral,” indicates that your opinion is balanced, neither agreeing nor disagreeing with the statement.

1. Stockholders like to receive a regular dividend.

_____	_____	_____	_____	_____
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

2. Some stockholders prefer a stock dividend instead of a cash dividend.

_____	_____	_____	_____	_____
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

3. Institutional investors always prefer a cash dividend instead of a stock dividend.

_____	_____	_____	_____	_____
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

4. Our firm would like to see a large portion of its shares owned by institutions.

_____	_____	_____	_____	_____
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

5. Increasing the number of stockholders in our firm is one of our important objectives.

_____	_____	_____	_____	_____
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

6. We don't believe our stockholders are interested in dividends.

_____	_____	_____	_____	_____
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

7. When we want to save cash we give a stock dividend, because stockholders don't know the difference.

_____	_____	_____	_____	_____
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

8. A dividend gives us favorable free publicity in the financial press.

_____	_____	_____	_____	_____
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

9. Dividends help keep the stock price up within a range we think is optimal.

_____	_____	_____	_____	_____
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

10. Dividends have no effect on the inherent value of our stock.

_____	_____	_____	_____	_____
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

11. There is only a short-term positive price reaction to the announcement of a cash dividend.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
-------------------	----------	---------	-------	----------------

12. Paying cash dividends creates a costly cash drain for our firm.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
-------------------	----------	---------	-------	----------------

13. Paying cash dividends is necessary because stockholders expect it.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
-------------------	----------	---------	-------	----------------

14. An increase of cash dividends is a sign that we are doing well.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
-------------------	----------	---------	-------	----------------

15. Only firms with increasing stock price should increase a cash dividend.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
-------------------	----------	---------	-------	----------------

16. We increase cash dividends only if we can maintain it on the long-term.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
-------------------	----------	---------	-------	----------------

17. Individual investors have no understanding of the real economic value of cash dividends.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
-------------------	----------	---------	-------	----------------

18. Institutional investors know what effect a dividend will have on the stock price.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
-------------------	----------	---------	-------	----------------

19. Any reduction of cash dividends would adversely affect our stock price because we have a policy of dividend continuity.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
-------------------	----------	---------	-------	----------------

20. Once a firm starts paying dividends, it must continue to pay dividends, because otherwise the stockholders will think that something is wrong with the firm.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
-------------------	----------	---------	-------	----------------

21. Substituting a stock dividend for a cash dividend is a sign that we are doing poorly.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
-------------------	----------	---------	-------	----------------

22. Many investors believe that an increase of cash dividends is a sign that we don't have anything better to do with our capital.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
-------------------	----------	---------	-------	----------------

THE PERCEPTION OF DIVIDENDS

- 23. Many of our stockholders do not trade the stock at all whether the price is going up or down.**

|_____||_____||_____||_____||
Strongly Disagree Disagree Neutral Agree Strongly Agree

- 24. Paying no or as little cash dividends as possible is important because it allows us to convert retained earnings into permanent equity capital.**

|_____||_____||_____||_____||
Strongly Disagree Disagree Neutral Agree Strongly Agree

- 25. Money talks! The more cash dividends we pay the more investors believe that we are doing well.**

|_____||_____||_____||_____||
Strongly Disagree Disagree Neutral Agree Strongly Agree

- 26. Tax reform will not affect the dividend policy of our firm.**

|_____||_____||_____||_____||
Strongly Disagree Disagree Neutral Agree Strongly Agree

SEND US RESULTS

YES ☐ NO ☐

Copyright of Journal of Psychology & Financial Markets is the property of Lawrence Erlbaum Associates and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.