# Corporate-Sponsored Foundations and Earnings Management

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**Abstract**

In the wake of recent corporate governance scandals, corporate philanthropy has received increased attention. This paper examines whether managers strategically use contributions to meet financial reporting objectives. Specifically, corporate-sponsored private foundations allow firms to maintain stable levels of giving to charitable causes while providing substantial discretion as to the amount of contribution expense recorded on the income statement in any given period. I find that firms with small positive reported earnings changes made large income-increasing discretionary foundation funding choices. In particular, this result is associated with firms that have greater equity market incentives to manage earnings. I also find evidence consistent with firms using their foundations to create cookie jar reserves.

# Corporate-Sponsored Foundations and Earnings Management

## 1. Introduction

This paper examines whether firms manage earnings using their corporate philanthropy programs. Specifically, I seek to determine if firms strategically time the funding of their corporate-sponsored foundations (1) to increase earnings in order to report small positive earnings changes or (2) to create cookie jar reserves. I also investigate whether firms with higher stock price sensitivity to earnings news are more inclined to engage in such behavior. A firm records contribution expense when it transfers resources to its corporate-sponsored foundation ("payins"). The foundation then makes grants ("payouts") to public charities. Because the economic effect, payouts, is separate from the financial reporting effect, payins, corporate foundations offer an opportunity for managers to exercise discretion to influence reported earnings.

Scrutiny from legislators and regulators related to ineffective corporate governance extends to corporate philanthropy, making the study of earnings management in this setting particularly timely. Recently proposed corporate governance legislation was motivated by the belief that corporate philanthropy can be an opportunistic use of shareholder resources which should be curbed. For example, at the time Sarbanes-Oxley was being formulated, Congressional staff considered an amendment which would have brought corporate-sponsored foundations under the jurisdiction of the SEC by requiring corporations to disclose the activities of their foundations. In addition, the first version of the Sarbanes-Oxley Act of 2002 passed by the House required firms to disclose all corporate contributions.[1] While this paper does not directly address the question of whether contributions are made by management for opportunistic reasons, it is the first study to examine whether contributions are used by management to meet financial reporting objectives. Thus, it provides empirical evidence relevant to the current public

[1] Neither of these requirements was included in the final version of Sarbanes-Oxley. The fact that these proposals were unsuccessful does not necessarily mean that Congress did not view contributions as a managerial perquisite. The proposals more likely failed because lawmakers are hesitant to interfere with corporate expenditures perceived to have positive social value. Former SEC chairman Richard Breeden (1997) said, "If I were still in government, I would not want to touch the issue of 'regulating' corporate philanthropy with a 500 foot pole. The risk of being labeled Scrooge at the SEC by even discussing the question would be too great."

policy debate on the governance of corporate philanthropy and to the regulatory question concerning disclosure of direct corporate giving.

In order to measure manipulation of corporate foundation payins, I develop a model of expected payins in the absence of discretion. The model makes no assumptions about the motives for payouts other than that the level of payouts is exogenously determined by management and, thus, payins are discretionary with respect to timing, not amount. The discretionary payin measure equals the difference between actual payins and expected payins from the model. I predict that firms with reported earnings slightly above prior year earnings made lower discretionary payins (i.e., greater income-increasing behavior) than firms that just missed this benchmark. In addition, I predict that firms with reported earnings well above prior period earnings made income-decreasing discretionary payins, consistent with reserve creation. Furthermore, I predict that firms with high stock price sensitivity to earnings news, as measured by the length of a firm's string of non-negative earnings changes through year t-1, will engage in these types of earnings management behaviors to a greater extent than less sensitive firms.

Empirical results are consistent with the above predictions. Firms appear to time foundation payins to meet or slightly beat prior year earnings, particularly when they have a strong equity market incentive to do so. Firms with small increases in earnings record lower discretionary contribution expense than firms with small decreases in earnings. In addition, my results provide evidence that firms with large increases in reported earnings make large discretionary payins to their foundations, creating cookie jar reserves.

Although, for many firms, contributions are not large enough in and of themselves to achieve a specific earnings objective, I present evidence that suggests, more generally, that foundation payins are one device in a portfolio of discretionary choices that firms use. Thus, this study contributes to the earnings management literature by offering evidence of a previously unexamined earnings management tool available to managers, as well as offering further evidence on the importance of equity market incentives for earnings management.

To date, much of the empirical research on corporate philanthropy has been focused on determining the motive for corporate giving (Johnson, 1966; Schwartz, 1968; Fry, Keim and Meiners, 1982; Navarro, 1988; Boatsman and Gupta, 1996; Helland and Smith, 2003). However,

results are still inconclusive. While understanding motivation is important, many other aspects of corporate giving remain unexamined. Regardless of the question of whether firms should engage in corporate giving, the fact remains that they do. In order to understand the larger issue of how a firm integrates corporate philanthropy into its overall strategy it is also necessary to address basic research questions, such as how philanthropy influences or is influenced by a firm's financial reporting.

The next section provides an overview of corporate philanthropy with an emphasis on giving via a company-sponsored foundation. Section 3 develops my hypotheses. Section 4 describes the data employed in the empirical tests. Section 5 presents a model of discretionary contribution expense. Section 6 reports the results and implications of the earnings management tests. Conclusions are offered in Section 7.

## 2. Corporate Philanthropy

### *2.1 Methods of Corporate Philanthropy*

Corporations contributed over $12.2 billion to charity in 2002 (Giving USA, 2003), including an estimated $3.4 billion from corporate-sponsored foundations (Renz and Lawrence, 2003).[2] As indicated in Figure 1, firms support charitable organizations through corporate foundations, direct giving programs, or both. A company-sponsored private foundation is a separate legal entity that is exempt from paying federal income tax. Although legally independent, these foundations maintain close ties with their parent companies. A corporate foundation's board and staff are almost always directors or employees of the parent company. Usually the parent company and its subsidiaries provide the only source of funding ("payins") for the foundation. The foundation then makes grants for charitable purposes ("payouts"), normally to public charities. Corporate foundations generally do not have the large endowments that university and family-sponsored foundations have, but instead act as a channel for corporate giving. Normally the parent company records contribution expense for tax and book purposes in

[2] Education garners the largest fraction, approximately 30%, of corporate giving. Health and human service organizations receive the second greatest amount. Arts and cultural, environmental, international and community and civic causes also receive corporate support.

the period that it funds (or pledges to fund) the foundation, not in the period when the ultimate gift is made from the foundation to the outside public charity.

A private foundation must follow certain regulations to maintain its tax-exempt status, including filing a Form 990-PF with the IRS annually, paying a 2% excise tax on its investment income, and paying out to qualifying nonprofits at least 5% of the average market value of its investment assets every year. The 990-PFs are a matter of public record. Foundations are required to disclose on the 990-PF from whom they received contributions aggregating $5,000 or more during the year. Consequently, the amount of the parent company's gifts to its foundation can be determined by reviewing the 990-PF. In addition, foundations are required to provide a detailed account of the amount and purpose of each grant to each recipient.

The advantages of having a corporate foundation include: foundations can insulate corporate executives from outside pressures; foundations allow firms to maintain stable levels of giving which are not affected by the business cycle; and foundations allow firms to optimally time tax deductions for charitable giving (Smith, 1993). The main disadvantage of corporate foundations is required full disclosure of giving activity.[3]

Firms can also give directly to public charities. Because there is no intermediary foundation, contribution expense for direct giving is recorded in the period the gift is made to the outside public charity. Direct giving includes both cash and non-cash contributions, such as inventory, land, stock, and employee time. Corporate direct giving programs are not separate legal entities and do not adhere to the regulations governing foundations. It is often difficult to get information on direct giving programs because no public disclosure is required.

It is common for firms to maintain both a corporate foundation and a separate direct giving program. Figure 2 provides a longitudinal comparison of foundation and direct giving. This figure graphs median payouts, payins, and direct giving as a percentage of pretax income for firms with at least 11 years of giving data and positive pretax income from 1989 to 2000. Corporate foundation payouts have remained relatively stable at a rate of between 0.5 to 0.7 percent of pretax income over the last decade. On the other hand, direct giving fluctuates from a high of over 1.0 percent of pretax income in 1991 to a low of less than 0.6 percent of pretax

[3] A more detailed discussion of the reasons for establishing a corporate foundation is provided in Appendix A.

income in 1997. In every year the median payin is less than the median payout, which is expected because payouts will include some investment income earned on foundation assets. The difference between payouts and payins widens in the late 1990s, coinciding with higher investment returns. The strong return on foundation assets allowed firms to reduce the amount of funding to their foundations, and therefore, record less contribution expense while maintaining the same level of giving to outside charitable causes. Of course, in market downturns firms will have to increase payins, and thus record higher contribution expense, to maintain a stable level of payouts.[4] A comparison of payouts and payins by firm indicates that payins are significantly more variable than payouts over the sample period ($p < 0.01$).

*2.2 Motives for Corporate Philanthropy*

The most widely cited reason for corporate philanthropy is that firms are profit-motivated and will choose an optimal amount of giving to maximize profits (Johnson, 1966; Schwartz, 1968; Clotfelter, 1985; Navarro, 1988a). Corporate giving can increase the firm's name recognition and reputation among consumers. Research has consistently found a positive association between advertising and corporate giving (Schwartz, 1968; Navarro, 1988; Boatsman and Gupta, 1996). Williams and Barret (2000) find that, while a firm's reputation is diminished by OSHA and EPA violations, the extent of decline is reduced by charitable giving. In support of a cost side motive, Navarro (1988) finds that the level of contributions rises with labor intensity. In addition, corporate philanthropy can be used to appease special interest groups and regulators. Baron (2001) provides a theory of private politics where one reason for a corporation to redistribute wealth is a threat by activists. Neiheisel (1994) finds that firms use contributions as a political currency to gain access to politicians and influence policy.

Prior research suggests two additional motives for corporate philanthropy, managerial opportunism and altruism. Corporate philanthropy can result from ineffective corporate governance. Jensen and Meckling (1976) note that the type and amount of charitable contributions can create non-pecuniary utility for management. A manager may contribute

[4] While the sample period in this paper ends in 2000, The Foundation Center reports that corporate foundation assets declined in 2001 for the first time since it began tracking corporate foundations in 1987. They also report a 4.8% increase in payins in 2001, following a 12.4% decrease in payins in 2000 (Renz and Lawrence, 2003).

corporate resources to achieve a higher social status, to gain favor with board members by contributing to their pet charities or to further his own ideological preferences (Barnard, 1997). Useem and Kutner (1984), Galaskiewicz (1997) and Boatsman & Gupta (1996) provide evidence consistent with management exerting significant influence over corporate contributions. In addition, Helland and Smith (2003) show that firms with larger boards give more to charity which they interpret as evidence that corporate philanthropy is an agency cost in the form of a managerial or board perquisite. Alternatively, individual investors may be altruistic and use the corporation as an intermediary because of potential tax advantages of giving via the firm. Corporate contributions are tax-deductible while dividends are not, so individual investors can increase the amount of giving at no cost by giving through the corporation. Similarly motivated, managers may believe that firms have a social responsibility to address societal problems via an implicit social contract.

*2.3 Corporate Foundations and Earnings Management*

Whether managers use the firm's foundations to manipulate earnings through the timing of payins is an open question. On one hand, St. John (2000) reports the justification for using a corporate foundation made by one foundation official: "Duke Power established the foundation 15 years ago for two reasons: to give back to the communities in which we operate and because of the tax benefits that the company derives from giving. A private foundation is a powerful earnings management tool." A corporate foundation can be a powerful earnings management tool because, unlike most earnings management tools that are constrained by GAAP, managers have complete discretion over the timing of foundation payin expense without necessarily incurring an immediate cash flow effect.[5] On the other hand, there is significant debate over the legitimacy of corporate philanthropy and giving is closely scrutinized. This scrutiny may preclude firms from using foundation payins as an earnings management device.

[5] Although not explicitly aimed at corporate foundations, SFAS No. 136, "Transfers of Assets to a Not-for-Profit Organization or Charitable Trust That Raises or Holds Contributions for Others" sets GAAP for foundation payins. SFAS No. 136 states that if a resource provider (the firm) controls the recipient organization (the foundation), then the transfer should not be recorded as an expense but rather an asset should stay on the firm's balance sheet (i.e., a prepaid). However, the FASB intentionally declined to define 'control'. Thus, firms can and do expense contributions when the resources are transferred to the foundation (even though it is difficult to believe that a firm doesn't ultimately 'control' the foundation's resources given the fact the corporate foundations are most often run by corporate employees). SFAS No. 136 was not in effect during the sample period.

Most prior research on earnings management examines the use of accounting methods and estimates. A few papers have analyzed real earnings management, the use of operating, investing, or financing decisions for the purpose of affecting reported earnings, i.e., Hand (1989) and Bartov (1993). The timing of foundation payins is also a real earnings management tool in the sense that a firm makes an irrevocable commitment of resources to the foundation. It is important to note, however, that this decision does not necessarily have an immediate cash flow effect. In 1995, firms adopted SFAS No. 116, "Accounting for Contributions Received and Contributions Made." SFAS No. 116 requires that unconditional pledges be recorded as an expense in the period that the pledge is made. Thus, SFAS No. 116 allows a firm to manipulate its contributions expense and therefore its earnings in the current period while deferring the actual cash flow effects to a subsequent period.[6]

Anecdotally, Fannie Mae's contributions have been extensively criticized. In 1995 Fannie Mae made a $350 million pledge to its foundation, reducing 1995 earnings per share from $2.14 to $1.95 (the firm's 1994 earnings per share were, coincidentally, $1.94). Fannie Mae noted in its 10-K that this "commitment to contribute…was intended to fund foundation activities beyond the turn of the century." In 1996, Fannie Mae actually transferred resources to the foundation, receiving a large up front tax deduction for activities "beyond the turn of the century." Fannie Mae is a particularly interesting example because it is able to run its entire advertising campaign out of its foundation.[7] Thus, by pledging to give to the foundation, it was essentially able to expense several years of advertising costs in 1995.

Examining the timing of foundation payins is a single account approach to analyzing earnings management, similar to McNichols and Wilson (1988) and Petroni (1992). However, unlike previous single account approaches which normally focus on one specific industry, this paper looks at a broad cross-section of firms. While the optimal level of payouts may vary by

[6] Data constraints prevent an analysis of accrued contributions prior to 1998. Full-text versions of each corporate foundation's 990-PF are available starting in 1998. The full-text includes the amount of pledges receivable that the foundation has recorded. The parent corporation must have a corresponding pledges payable on its book. Most firms do not make pledges to their foundation but instead record the contribution expense at the time the gift is made. I examined the full-text 990-PF for 335 corporate foundations, of which only 30 foundations reported pledges receivable.

[7] For example, in 2001, the Fannie Mae Foundation spent $48 million on advertising and $35 million on grants to nonprofit groups (McKinnon, 2002).

industry, there is no reason to believe that different industries have different timing mechanisms for channeling gifts through the foundation. The benefit of the single account approach is that, based on a specific understanding of corporate foundations, a more precise proxy for earnings management than total accruals can be developed. The traditional concern about this approach for detecting earnings management more generally is that a single account is only one possible tool in a portfolio of options to manage earnings. That is, earnings management may occur but it may not be detected if the researcher restricts attention to a single account. The typical concern is of less consequence in this study because I am specifically interested in the question of whether this potentially sensitive component of income is among the instruments used by management to manipulate earnings. Nevertheless, I also examine whether there is a relation between discretionary payins and aggregate unexpected accruals to establish whether management makes consistent use of the portfolio of tools available to achieve a particular reporting objective.

## 3. Hypothesis Development

This section develops the hypothesis that firms deliberately time foundation payins to achieve earnings objectives. Possible incentives for engaging in earnings management include signaling private information and managerial opportunism.[8] The following hypotheses are not necessarily based on the assumption that anyone is fooled by management's foundation funding choices. Determining management's motive for strategically timing foundation payins is beyond the scope of this paper.

The earnings management literature makes three general predictions about the use of discretion relevant to a particular benchmark (Healy, 1985; Hwang and Ryan, 2000; Abarbanell and Lehavy, 2003). First, if pre-managed earnings are above a relevant benchmark, firms will make income-decreasing choices that result in reported earnings that are still above the

[8] Freddie Mac provides evidence that different parties may view the same use of foundation payins differently. In 2002, Freddie Mac made a $225 million cash contribution to its foundation, reducing 4th quarter earnings by 21 cents per share. Freddie Mac announced that it expected this grant to cover the foundation's expenses for the next six to eight years, eliminating the need to make additional contributions, and to record contribution expense on the financial statements, during that period. When it announced the $225 million contribution, an analyst at Morgan Stanley considered it a signal, noting that making a large contribution "is not something you do if you are on the verge of failing your capital-adequacy test" (Barta, 2002). However, it was similar income-decreasing accounting choices to reduce earnings volatility that caused problems for Freddie Mac with auditors and regulators in 2003 and forced restatement of 2000, 2001, and 2002 earnings.

benchmark while creating accounting reserves that can be exploited at a later date. Next, if pre-managed earnings are below a benchmark but reserves are available to meet the benchmark, firms will draw from accounting reserves or borrow from future earnings to report earnings at or slightly above benchmark. Finally, if pre-managed earnings and available reserves are insufficient to meet any benchmark firms will engage in extreme, income-decreasing behavior that pays back prior borrowings or creates reserves for use in the future.

I use prior year earnings per share as the benchmark that managers consider when choosing the current period level of foundation payins. Management has incentive to report increased earnings in several settings. Barth, Elliott and Finn (1999) demonstrate that prior year earnings are an important benchmark to the equity market and Murphy (1999) shows that prior year accounting performance is a common standard by which current performance is judged in executive bonus contracts.

*3.1 Earnings Management Around Zero Change in Earnings*

Burgstahler and Dichev (1997) and Degeorge et al. (1999) find unusually low frequencies of small decreases in earnings and small losses and unusually high frequencies of small increases in earnings and small positive income. They interpret these results as evidence that firms manage earnings to meet or slightly beat a relevant benchmark. However, Beaver, McNichols and Nelson (2003a) suggest that the discontinuity at zero in the distribution of earnings and earnings changes may, in part, be attributed to nondiscretionary earning components. Thus, it is important to tie the *ex post* discontinuity results to a specific measure of discretionary behavior.

By examining earnings changes immediately above zero, I am attempting to pinpoint the firms that most likely engaged in income-increasing behavior.[9] In principle, firms with reported earnings at or slightly above a relevant benchmark may have engaged in income-increasing or

[9] This analysis is not an attempt to calculate the absolute magnitude by which earnings are managed but rather to determine if manipulation of foundation payins is associated with beating the bright line of prior year earnings per share. The difficulty with a single account approach to testing earnings management is developing a functional estimate of unobservable pre-managed earnings because there is no reason to believe that firms rely on only a single account to manage earnings. With the exception of Beatty et. al. (2002), few papers compare pre-managed and reported earnings to determine if firms were able to meet prior year earnings with a single account. The inability to develop a reasonable estimate of pre-managed earnings is amplified when the single account is relatively small, as is the case with foundation payins. Thus, I analyze reported rather than pre-managed earnings, assuming that firms that just beat prior year earnings used a portfolio of earnings management techniques, which includes foundation payins.

income-decreasing behavior depending on the level of pre-managed earnings. However, Abarbanell and Lehavy (2003) offer a theoretical reason for why firms that meet or beat a relevant earnings benchmark are more likely to engage in income-increasing than income-decreasing earnings management.[10] Growing empirical evidence is consistent with their argument. Beaver, McNichols, and Nelson (2003b) examine discretionary loss reserve accruals for insurers around a benchmark of zero earnings. They find that firms with small positive reported earnings engage in greater income-increasing behavior relative to firms with small negative reported earnings and, although not predicted, relative to the rest of the earnings distribution. Abarbanell and Lehavy (2003) find an association between income-increasing earnings management and a higher than expected ratio of positive to negative analyst forecast errors around zero, indicating an increased likelihood of income-increasing earnings management for firms with reported earnings immediately above forecast. The above discussion motivates tests of the following hypothesis, stated in the alternative:

H1: Firms that slightly beat the benchmark of prior period earnings record lower discretionary contribution expense (i.e., greater income-increasing behavior) than firms that just miss this earnings benchmark.

It should be noted that H1 runs contrary to conventional wisdom that firms give a fixed percentage of earnings every year (i.e., firms make higher contributions to their foundations in years of high profits and fewer contributions in years of low profit). It also runs contrary to the argument that firms with earnings increases face increased tax rates compared to firms with earnings decreases, and therefore will be expected to make higher payins in order to minimize taxes.

I consider equity market incentives for earnings management (Dechow and Skinner, 2000) to produce a refinement of H1. Barth et al. (1999) find that firms reporting strings of increased earnings are priced at a premium, that the premium increases almost monotonically

[10] The prediction from their model is based on the fact that income-increasing earnings management will always result in a reported earnings number that the meets or slightly beats a relevant benchmark, but some income-decreasing earnings management will move reported earnings well below the benchmark (i.e., when a firm chooses to take an earnings bath). All else equal, therefore, income-increasing earnings management is more likely than income-decreasing earnings management conditional on reported earnings that meet or slightly beat a relevant benchmark.

with the length of the string, and that the premium is reduced when the string is broken. Investigating whether firms achieve such strings through manipulation, Meyers and Skinner (2002) find some evidence that firms with strings of quarterly earnings increases manage earnings to avoid breaking those strings. I expect that firms with long strings of consecutive earnings growth have higher stock price sensitivity to earnings news than other firms and are, therefore, more likely than other firms to manage earnings upward to meet or beat expectations in order to avoid a disproportionately large market reaction to bad news (see, e.g., Abarbanell and Lehavy [2003]). This discussion leads to the following hypothesis, stated in the alternative:

H2: Among firms that slightly beat the benchmark of prior period earnings, negative discretionary contribution expense (i.e., income-increasing behavior) increases in the firm's stock price sensitivity to earnings news as measured by the firm's prior string of non-negative earnings changes.

*3.2 Earnings Management to Create Reserves*

As discussed above, certain firms are predicted to engage in income-decreasing behavior to create accounting reserves that can be used to achieve financial reporting objectives in a later period. Firms with pre-managed earnings above all relevant benchmarks are expected to create cookie jar reserves. Ideally, to test this prediction, I would identify firms whose *pre-managed* earnings exceed their relevant earnings benchmark by large amounts. Given pre-managed earnings are unobservable, I focus on firms whose current reported earnings exceed prior year earnings by large amounts as a proxy for the incentive to create reserves. This discussion motivates the following hypothesis, stated in the alternative:

H3: Firms with reported earnings well above the benchmark of prior period earnings record high discretionary contribution expense (i.e., income-decreasing behavior).

Note that this prediction is also consistent with the notion that firms make higher contributions to their foundations in years of high profits and when faced with high tax rates. Therefore, I control for both economic performance and marginal tax rates in my empirical design.

Considering stock price sensitivity to earnings news produces a refinement of H3. Firms with long strings of consecutive earnings increases have greater incentive to create reserves which can be used in subsequent periods to avoid breaking those strings when pre-managed

earnings are low and, consequently, stave off a price decline. This discussion leads to the following hypothesis, stated in the alternative:

> H4: Among firms with reported earnings well above the benchmark of prior period earnings, discretionary contribution expense (i.e., income-decreasing behavior) increases in the firm's string of prior non-negative earnings changes.

Finally, prior studies in the contracting literature have hypothesized that firms with low pre-managed earnings and insufficient reserves to meet a relevant benchmark will take an earnings bath. However, Abarbanell and Lehavy (2003) suggest that firms that perform poorly may not take a bath when the firm's stock price remains sensitive to the level and/or composition of reported earnings. Furthermore, because foundation payins, or pledges to payin, represent a real commitment to transfer resources from the firm, concern about investor backlash may make management reluctant to increase payins as part of a big bath when the firm is performing poorly. For example, Boeing was criticized for incurring a loss of $178 million while spending $51.3 million on charitable contributions in 1997 (Jenning and Cantoni, 1998). Thus, stock price sensitivity and maintaining good investor relations, work against finding evidence of bath behavior. The preceding discussion does not lead to a clear prediction as to whether firms that perform poorly will manipulate foundation payins as part of an earnings bath; therefore I offer no formal hypothesis. However, the results presented later are inconsistent with the use of foundation payins in connection with earnings baths taken by firms with poor earnings performance.

## 4. Sample Selection and Data

I obtained corporate foundation data from the foundation's 990-PF using a two-step process. First, I identified firms with corporate philanthropy programs using the Taft Group's Corporate Giving Directory (2001). The Taft Group publishes information annually on corporate philanthropy, primarily for use by fundraisers and nonprofit executives. Each company profiled makes contributions of at least $200,000 annually. I furthered limited the sample to firms with at least three consecutive years of giving data that were included on Compustat. The Taft profiles

include the type of giving (direct giving, foundation giving, or both), some data on the amount of giving, information on decision makers, and the EIN for the corporate foundation sponsored by each corporation. The EIN enabled me to match particular private foundations with specific firms.

Using the EIN, 990-PF data for each corporate foundation was obtained from the National Center for Charitable Statistics (NCCS) Core Trend Private Foundation Data Extract. This database reports corporate foundation payins, payouts and asset values as well as limited other information from the 990-PF.[11] Thirty-six firms have different fiscal year ends for their corporate financial statements and their corporate foundations. Results are qualitatively unchanged when these firms are removed. Eleven firms have more than one associated foundation. Amounts from both foundations' 990-PFs were added together and included in the sample. If two companies merged and their foundations did likewise, I did not include the transfer of assets from one foundation to the other as part of the payin. Finally it is possible that gifts received by the corporate foundation are not from the parent company. When non-parent contributions were identified, they were deducted from the payin amount because I am attempting to measure the expense recorded on the parent's books. Based on a review of full-text versions of the 990-PFs where it is possible to see the name of substantial contributors and some details listed in the Taft directory, material payins from an entity other than the parent corporation are rare.

Compustat provided all corporate financial data. Earnings are measured as earnings per share before extraordinary items. All prior period per share amounts are adjusted for stock splits. Marginal tax rates were obtained from John Graham (http://www.duke.edu/~jgraham) and are based on income after interest expense has been deducted. Graham (1996a, 1996b) provides a detailed description of the simulation procedure used to estimate the marginal tax rates.

[11] Because the NCCS data is relatively new, the NCCS recommends error checking procedures. Beginning with the calendar year 1998, full text versions of the 990-PFs are available at Guidestar (http://www.guidestar.org). When possible the NCCS data was compared to numbers reported in either the Taft Directory or from Guidestar. One particular problem with the NCCS Core Trend Private Foundation file is that it contains no data for 990-PFs filed in 1994. For most foundations, 990-PFs for fiscal year 1993 were filed in 1994. The Taft directory was used to supplement the NCCS data for 1993.

Sample selection procedures are detailed in Table 1. From the Taft directory, 505 corporate philanthropy programs were identified over the period 1989 - 2000. Of these, 100 firms had direct giving programs only and were removed from the sample. In addition, 26 utilities were removed because regulation creates potentially different financial reporting objectives. Thirteen firms did not make a payin to their foundations during the entire sample period. These firms were eliminated because it is more likely that their foundations were established by someone other than the firm (i.e., the founder).[12] Lack of additional data further reduces the sample to 321 firms (approximately 1,700 firm year observations) for the main earnings management tests.

Panel A of Table 2 reports descriptive statistics on all observations used in the main earnings management tests. Untabulated results indicate that all major industries are represented in the sample, with durable manufacturing comprising the largest fraction (29.9%). Firms with corporate foundations are relatively larger than the entire population of public companies, with 61.2% in the S&P 500.

Twenty-seven percent of the firms in this sample give only through their corporate foundation while 73% give both through a direct giving program and a foundation. The mean (median) total giving to external charities is $0.06 ($0.02) per share. Mean (median) foundation assets per share equals $0.09 ($0.03). The average payout (payin) is 1.52% (0.87%) of pretax income for firm years with positive pretax income. While the absolute dollar value of payouts, payins, and direct giving increased during the sample period, giving as a percentage of pretax income declined. For example, the average payouts dropped from 2.16% of pretax income in the period 1990-1994 to 1.11% of pretax income in the period 1995-1999.

In order to demonstrate the extent to which the firm and the corporate foundation are aligned, information on which individuals run the foundation was collected from the Taft directory. The CEO of the firm is a foundation decision maker 48% of time. The CEO or CFO is a foundation decision maker 64% of the time. In fact, for almost 97% of the foundations at least

[12] For example, one of the eliminated foundations was the Kellogg Company Twenty-Five Year Employees Fund, which was created in 1944 around the same time as the W. K. Kellogg Foundation. In 1997, the Kellogg Employees Fund's book value of investment assets equaled $175,000 while the market value equaled $95 million, all in Kellogg stock. The difference in book value and market value indicates that this foundation was probably established with a one-time endowment and is not being used by the Kellogg Company as a channel for giving.

one foundation decision maker listed the firm as his current employer.[13] Given this frequency, it is doubtful that foundations are effective in minimizing the use of contributions as a managerial perquisite by insulating executives from external pressures.

The fact that the individuals who run the foundation are employed by the firm explains why foundation officers' compensation equals zero in most cases and an immaterial amount in the remaining few cases. This distinguishes corporate foundations from other types of foundations where determining appropriate compensation for nonprofit officers is a key issue. Another major issue facing private foundations is the minimum foundation payout rate which has been the subject of recent debates in Congress (Deep & Frumkin, 2001; Yetman and Sansing, 2002). Because most corporate foundations act as a channel rather than as an endowment, the minimum payout ratio constraint is generally not binding for corporate foundations as evidenced in Table 2. Even the lowest quartile has an estimated payout ratio (calculated as payout divided by the average of beginning and ending total foundation assets) equal to 18.7%, which is well above the mandated 5% floor.

## 5. Estimating Discretionary Contribution Expense

In order to determine if managers strategically time foundation payins, an estimate of discretionary contribution expense must be developed. Using a research design similar to McNichols and Wilson (1988), I first develop a model of expected corporate foundation payins in the absence of discretion. Discretionary contribution expense is then defined as the difference between total payins and expected payins from the model.

As discussed in Section 2 the flow of resources through a corporate foundation is as follows:

$$FNA_{t-1} + Payin_t - Payout_t + Investment\ Income_t - Excise\ Tax_t - Administrative\ Expenses_t = FNA_t \quad (1)$$

[13] In addition to the CEO and CFO, the most commonly listed individuals making foundation decisions are from the public affairs/communications and corporate counsel offices. The chief operating officer, human resources personnel and corporate board members were also mentioned frequently.

where FNA is the corporate foundation's net asset value at the end of the period, Payin is the expense recorded on the parent company's books, and Payout is the amount given to external charitable causes. Expected payins for a given firm in period t are modeled as a function of the variables in equation (1) as well as the marginal tax rate and a measure of capacity:

$$\text{Payin}_t = \alpha_0 + \alpha_1 \text{Payout}_t + \alpha_2 \text{Payout}_{t+1} + \alpha_3 \text{FNA}_{t-1} + \alpha_4 \text{Other}_t + \alpha_5 \text{MTR}_t + \alpha_6 \text{ROA}_t + e_t \quad (2)$$

where Other is the sum of investment income, excise taxes, administrative expenses, and any other nonparent transfers to the foundation, MTR is the marginal tax rate, and ROA is net income before payins scaled by lagged total assets. DPayin, the discretionary contribution expense, equals the residual $e_t$.

Because the foundation is a channel for corporate contributions, the amount that the foundation gives to outside charitable causes, $\text{Payout}_t$ and $\text{Payout}_{t+1}$, should explain the amount that the firm gives to its foundation.[14] $\text{Payout}_{t+1}$ is used as a proxy for management's expectation of future payouts under the assumption that managers have perfect foresight of future profit-maximizing payouts.[15] I predict that $\alpha_1$and $\alpha_2$ will be positive because more foundation funding will be required as the foundation makes more gifts to external charities increases. As the level of foundation assets already in place increases, less need exists for the firm to make additional payins. Thus, I predict that payins will be decreasing in $\text{FNA}_{t-1}$ ($\alpha_3 < 0$). Similarly, $\alpha_4$ should be negative as investment income is the dominant component of $\text{Other}_t$. As seen in Figure 2, when foundation assets earn strong investment returns, firms can make lower payins and still maintain an optimal level of payouts. As discussed in Clotfelter (1985), changes in corporate tax rates will affect the timing of gifts but not the long-run level of corporate giving. Foundations allow firms to time payins to maximize the corporate tax deduction. Thus, I also expect payins to be increasing in $\text{MTR}_t$ ($\alpha_5 > 0$).

[14] This model is consistent with the profit maximizing, the managerial perquisite and the altruism motives for corporate giving because, under any of these motives, the payout is still exogenously determined by management.

[15] Perfect foresight is a reasonable assumption in this case because corporate foundations normally fund the same programs for several years and often make multi-year commitments of resources. In fact, there is a specific section on the 990-PF for firms to report grants approved for future payment.

It is often suggested that firms give more to charity when they have more capacity to give. Although it seems more likely that firms with temporary additional capacity to give would do so via a direct giving program, rather than with a foundation payout, it is possible that firms who have performed well mechanically make greater payouts. If payouts increase mechanically with improved performance, then an omitted correlated variable, capacity to give, exists. This is a potential problem if capacity is correlated with the partitioning variable, change in earnings per share, in the earnings management tests. Discretionary payins could mistakenly be attributed to the earnings management partition rather than capacity to give. The preceding argument parallels concerns about misclassifying accruals as discretionary when using unexpected accrual models, as discussed in McNichols and Wilson (1988) and Dechow, Sloan and Sweeney (1995). In order to control for capacity, ROA before payins is included in the model.[16]

Table 3 presents the results from estimating equation (2) using OLS where the coefficients are assumed to be constant across firms. To control for cross-sectional differences in the level of giving all variables except MTR and ROA are scaled by $Payout_{t-1}$. As the second row of Table 3 indicates, the coefficients on every foundation variable are significant in the predicted direction. The coefficient on MTR is positive and marginally significant while the coefficient on ROA is positive and significant.[17] The adjusted R-squared is 24.9%, indicating that a relatively large amount of the variation in foundation payins is discretionary.[18] Equation (2) was also estimated in two subperiods, from 1990 – 1994 and from 1995 – 1999. These subperiods were chosen for two reasons. First, in 1995 many nonprofit organizations adopted

[16] This discussion addresses the possibility that *payouts* are mechanically determined. However, controlling for capacity to give also addresses the possibility that firms choose heuristically to make higher *payins* in years of high profitability. To the extent that ROA and the partitioning variable are correlated, including the former variable in the model to measure capacity will reduce the power to detect cookie jar reserving behavior and earnings management to loosen debt covenant constraints when these behaviors actually exist.

[17] The first row, which does not include ROA, was provided to address concerns that ROA drives all explanatory power. In fact, inclusion of ROA has virtually no effect on the adjusted $R^2$ or on the coefficients of the other exogenous variables, with the exception of MTR. Cash flow from operations (CFO) was included as an alternative measure of capacity. The explanatory power was lower when CFO was used, the coefficient on CFO was significant only in the second subperiod and the sample size was reduced by 82 observations.

[18] Alternatively, the model is not well specified. The model may also be estimated firm by firm. The problem with a time series approach for a single firm is the assumption that there is no earnings management in the estimation period. In addition, the lack of a long enough time series for a sufficient number of firms makes this approach infeasible. As a comparison, Jones (1991) reports an average adjusted R-squared of 23.2% for her time-series model of unexpected accruals. The explanatory power of single account estimation ranges from 90% (McNichols and Wilson, 1988) to 10% (Beatty et. al., 2002).

SFAS No. 116, "Accounting for Contributions Received and Contributions Made" and SFAS No. 124, "Accounting for Certain Investments Held by Not-for-Profit Organizations," which may have affected the level of reported foundation assets. In addition, as discussed in connection with Figure 2, payins appear to drop off in 1995, coinciding with strong market performance. For the period 1990 – 1994 all of the coefficients have the predicted sign except for the coefficient on $Other_t$. It is not surprising that $Other_t$ is not an important explanatory variable during this subperiod because investment earnings were not as large as in the next subperiod. For the 1995-1999 period, all coefficients are significant in the predicted direction except for the marginal tax rate. Because the coefficients do vary by subperiod and explanatory power improves, the residual from estimating Equation (2) by subperiod is used as an estimate of discretionary payin, DPayin, in the main tests of earnings management. An example of expected foundation payins for AT&T is presented in Appendix B.

## 6. Empirical Results

### *6.1.1 Earnings Management Around Zero Change in Annual Earnings*

To test H1 and H2, observations are placed in portfolios based on the sign and magnitude of the change in annual reported earnings per share. These portfolios can be formed in either of two ways: by setting an equal width of change in earnings per share or by setting an equal number of observations. The advantage of equal width portfolios, used by Burgstahler and Dichev (1997) and Degeorge et al. (1999), is that they focus attention on the frequency with which earnings changes of a particular sign and magnitude occur. Specifically, equal width portfolios are useful in determining whether there are unusual frequencies of reported earnings numbers that are consistent with earnings management, e.g., in the densely populated middle of the distribution.

The histogram in Figure 3, which is based on equal width portfolios, confirms that the Burgstahler and Dichev (1997) result of a higher frequency of small earnings increases than small earnings decreases holds for the sample of firms with corporate foundations. Consistent with prior research (Degeorge et. al., 1999; Beatty et. al., 2002; Beaver et. al., 2003b), the

portfolio width used in constructing the histogram is twice the interquartile range times the negative cube root of sample size. This portfolio width formula produces a bin width of 17.86 cents, rounded down to 15 cents.[19] The portfolio immediately above zero change in earnings per share includes observations in the interval [.01, .15] while the portfolio immediately below zero change in earnings per share includes observations in the interval [-.15, -.01].[20] The frequency of small increases is significantly larger than the frequency of small decreases, indicating that the region of the earnings change distribution immediately above zero is a potentially fruitful region to explore earnings management.

One disadvantage of using equal width portfolios to test for *direct* evidence of earnings management is that it is difficult to make inferences beyond the shoulders of the distribution of earnings changes because there are a small number of observations in any given portfolio and outliers have a dominating impact. Portfolios with an equal number of observations, used by Beaver et al. (2003b), allow an analysis across the entire earning changes distribution. I use portfolios formed with an equal number of observations in the initial test of earnings management and portfolios of equal width in a robustness test to ensure the method of portfolio formation doe not affect results.

In Table 4 portfolios are formed with an equal number of observations relative to zero change in annual earnings per share. Similar to Beaver et. al. (2003b), the number of observations in each portfolio approximately equals the number of observations in the first interval immediately above zero in Panel A of Figure 3. In this case, there are approximately 157 observations in each portfolio formed using annual changes in earnings per share.

Table 4 reports results consistent with the first hypothesis that firms which slightly beat prior year earnings have lower discretionary contribution expense (i.e., greater income-increasing behavior) than firms that just missed this benchmark. The second and third columns of Table 4 provide the mean and median discretionary payin (DPayin) across the distribution of

[19] This portfolio width is larger than prior research because the number of observations in this sample is smaller than those used in other studies. The portfolio width is decreased in robustness tests that follow.

[20] The tests in this section focus on firms with small increases in earnings per share. As such, firms with zero change in earnings are excluded. An alternative hypothesis is that firms that meet or slightly beat prior year earnings are more likely to make income-increasing foundation payins. There are only 4 observations with zero change in annual earnings per share. When these observations are included in the same portfolio as observations with small increases in earnings, results are qualitatively unchanged.

annual earnings changes. The portfolio immediately above zero change, which includes the interval [.01, .15], has a mean DPayin equal to -.249 and a median DPayin equal to -.185. The portfolio immediately below zero change, which includes the interval [-.01, -.29], has a mean DPayin equal to -.071 and a median DPayin equal to -.084. If no earnings management takes place, DPayins will equal zero. In fact, mean DPayins in the portfolio immediately above zero earnings change are significantly different from zero ($p < .01$) while mean DPayins in the portfolio immediately below zero earnings change are not different from zero ($p = .184$). In addition, a one-sided hypothesis test of the difference between the means (medians) of these two portfolios yields a p-value of 0.014 (0.075). This result runs contrary to real economic growth driving payins where firms that performed better would be expected to payin more. The portfolio containing firms that slightly beat prior year earnings has not only significantly lower discretionary payins (i.e., greater income-increasing behavior) than the portfolio immediately below zero, but also lower mean and median DPayins than any other portfolio in the distribution. Finally, the frequency of firms reporting negative discretionary contribution expense in the portfolio immediately above zero change (59.28%) is greater than in any other portfolio, although the portfolio immediately below zero earnings change also has a high frequency of firms engaging in income-increasing earnings management.

Figure 4 provides additional evidence consistent with H1. This figure shows the 1$^{st}$ through 100$^{th}$ percentiles of DPayins for firms in the portfolio immediately above zero change in annual earnings and for firms in the portfolio immediately below zero change in earnings. The percentiles of the distribution of DPayins for firms with small earnings increases are systematically lower (i.e., slightly more income-increasing) than the percentiles of the distribution of DPayins for firms with small earnings decreases. The difference in DPayins between these portfolios is consistent throughout the entire distribution, rather than being driven by a small number of firms in any one part of the distribution.

Table 4 also reports mean and median unexpected accruals across the same change in annual earnings portfolios. Unexpected accruals, scaled by lagged total assets, are estimated from a cross-sectional Jones (1991) model, using all relevant firms in Compustat for the estimation. Similar to discretionary payins, the most income-increasing median unexpected

accruals (0.006) occur in the portfolio immediately above zero change in earnings per share. The Pearson correlation of DPayins and unexpected accruals for the entire sample is small (-.049) and marginally significant.[21] The Spearman correlation is also small (-.054) but significant at conventional levels. (The fact that income-increasing DPayins have a negative sign while income-increasing accruals have a positive sign accounts for the negative correlation). This evidence is consistent with managers' use of payins as one tool in a portfolio of discretionary choices to report small increases in earnings.

### *6.1.2 Robustness Tests of Earnings Management Around Zero Change in Annual Earnings*

Equal Width Portfolios

Table 5 reports robustness tests of H1. Panel A examines the sensitivity of results to the method of portfolio formation. The left side reports DPayins in the two portfolios of equal width (15 cents) immediately around zero change in earnings per share. The portfolio immediately above zero change, which includes 167 observations, has a mean DPayin equal to -.249 and a median DPayin equal to -.185. The portfolio immediately below zero change, which includes 87 observations, has a mean DPayin equal to -.037 and a median DPayin equal to -0.052. Note that the number of observations is almost halved in the lower portfolio when equal width portfolios are used. Nevertheless, consistent with H1, mean DPayins for the two portfolios are significantly different, with the portfolio immediately above zero engaging in greater income-increasing behavior. The median DPayin in the small positive earnings change portfolio is also more income-increasing than in the small negative earnings change portfolio, although the difference is not significant. As noted earlier, the portfolio width of 15 cents is larger than prior research because the number of observations in this sample is smaller. The right side of Panel A reports results when the portfolio width is reduced to 10 cents. Results using portfolio widths of 10 cents are qualitatively similar to those discussed for portfolio widths of 15 cents.

[21] When observations with payins equal to zero are removed, the Pearson correlation increases slightly to -0.0698 and becomes more significant (p = .023). Further discussion of payins equal to zero is included in the next section.

Controlling for Censored Data

As indicated in Figure 1, resources flow in one direction between the firm and its foundation. A corporate foundation can not legally give funds back the corporation. Thus, payins are censored at zero. Twenty percent of the observations in this sample (356 firm years) have zero payins. To ensure that the results are not affected by using OLS on censored data, Panel B of Table 5 reports the results of estimating expected foundation payins (Equation 2) using a model suggested by Tobin (1958).[22] Similar to the OLS model, coefficients on all of the foundation variables and ROA are significant in the predicted direction. In addition, the coefficient on MTR is positive and significant. Indicator variables are next included in the estimation in order to test the first hypothesis. The indicator variable 'Above' equals 1 if the observation falls in the portfolio immediately above zero earnings change, and zero otherwise. The indicator variable 'Below' equals 1 if the observation falls in the portfolio immediately below zero earnings change, and zero otherwise. The portfolios are formed using an equal number of observations and are the same portfolios listed in Table 4. If no earnings management takes place, the coefficients on the two indicator variables should equal zero. The coefficient on Above (-.408) is significantly negative, indicating that firms in this portfolio are more likely making income-increasing foundation choices. The coefficient on Below (-.169) is also negative but much smaller in magnitude than the coefficient on Above. Using a likelihood ratio test (Allison, 1995), the difference between these two coefficients is significant ($p = .019$), consistent with H1.

Portfolios Formed Around Zero Change in Fourth Quarter Earnings

The relatively small size of contribution expense means that earnings management tests potentially have low power, and thus, it is important to identify precisely the earnings benchmark toward which earnings are managed. Previous research indicates an increased frequency of real earnings management in the fourth quarter (Hand, Hughes and Sefcik, 1990; Bartov, 1993).

[22] A Tobit model was not used in the main tests of the first hypothesis because it is useful to examine discretionary payins across the entire distribution. This would not be possible with a Tobit model because residuals calculated using the censored distribution are meaningless. In addition, previous research (Navarro, 1999b) reports that Tobit estimation of total contribution expense produces virtually identical results to OLS.

While corporate contribution data is only available on an annual basis, it is possible to view the schedule of contributors in the full-text versions of the 990-PF available after 1998. Even though there is no requirement to report the date that contributions are received, a limited number of foundations do include the date received on the schedule of contributors. Of 197 firm years where it was possible to determine in what quarter the payins were made, 139 (71%) of the observations made payins in the fourth quarter. For this reason, I also examine discretionary payins over the distribution of changes in fourth quarter earnings, assuming all discretion was exercised in the fourth quarter.

Panel C of Table 5 reports results for DPayins in portfolios formed using changes in fourth quarter earnings per share. Fourth quarter earnings changes are calculated as fourth quarter earnings per share in the current year less fourth quarter earnings per share from the previous year. The same portfolio width formula discussed above was used to produce a bin width of 6 cents, rounded down to 5 cents. The mean (median) DPayin in the portfolio immediately above zero change, which includes the interval [.01, .05], is -.209 (-.210) and is significantly lower (i.e., more income-increasing) than the mean (median) DPayin in the portfolio immediately below zero. Again, this portfolio has a greater income-increasing mean and median DPayin than any other portfolio in the distribution. In addition, the frequency of income-increasing DPayins in the portfolio immediately above zero (64.7%) is much higher than in the rest of the distribution and is significantly different from the frequency of income-increasing DPayins in the portfolio immediately below zero. Untabulated results show that robustness tests similar to those performed in Panels A and B using portfolios based on fourth quarter earnings changes yield differences in mean and median DPayins between firms with small earnings increases and small earnings decreases that are highly significant in the predicted direction.

*6.1.3 Earnings Management Around Zero Earnings Changes and Strings of Earnings Increases*

Table 6 reports statistical tests of whether the discretionary payin made by a firm that slightly beat earnings is associated with the firm's stock price sensitivity to earnings news. In Panel A, I classify firms that reported at least five years of non-negative changes in earnings per

share through year t-1 as more sensitive to earnings news.[23] Specifically, examining the portfolio of firms with small earnings increases, firms with strings of consecutive earnings growth lasting at least five years have a mean (median) DPayin equal to -.424 (-.426) while firms without long strings of consecutive earnings growth have a mean (median) DPayin equal to -.099 (-.192). Consistent with H2, one-sided hypothesis test of the difference between the means (medians) of these two portfolios yields a p-value of 0.023 (<.01). In addition, firms that had long strings were more likely to report negative DPayins (71.43%) compared to other firms (55.2%). Thus firms with small positive earnings changes were more likely to arrive at post-managed earnings using income-increasing earnings management if there was a long string of consecutive earnings growth through year t-1. Results for the portfolio of firms with small earnings decreases are also included in Panel A. Note that there is no significant difference in the magnitude of DPayins or the frequency of income-increasing behavior based on the length of the prior earnings string for these firms.

Instead of arbitrarily establishing a cut-off at five years, Panel B examines if DPayins are decreasing (i.e., become more income-increasing) in the length of the earnings string for firms that reported a small increase in earnings. The dependent variable is Payins and the model includes all the variables discussed in Table 3. The indicator variable 'Above' equals 1 if the observation falls in the portfolio immediately above zero earnings change, and zero otherwise. String equals the number of years of consecutive growth in earnings per share through year t-1, up to a maximum of nine years. Similar to Table 5, the coefficient on Above is significantly negative in the first model. The second model indicates that the length of the prior earnings string does not explain payins for the overall sample. However, as seen in the third model, the length of the string is important for firms in the Above portfolio. The coefficient on the interaction between Above and String is significantly negative while the coefficient on Above is now insignificant. This means that the income-increasing DPayins exhibited by firms in the small increase portfolio can be attributed to firms with high stock price sensitivity as measured

[23] Five years is consistent with the string length that Barth et al. (1999) used in their main tests and roughly equals the 17 quarters used by Meyers and Skinner (2002).

by the length of the string of prior earnings increases and that the magnitude of these DPayins increases with the length of the string.

*6.2.1 Earnings Management to Create Reserves*

Table 7 reports tests of whether firms use foundation payins to create reserves that can be used in a later period. Portfolios were collapsed into terciles in order to focus on high and low changes in earnings. The terciles contain an approximately equal number of observations and are formed using annual changes in earnings. Firms with the highest change in earnings had the highest mean and median DPayins (i.e., the most income-decreasing behavior) even after controlling for ROA. Consistent with H3, the difference in the mean DPayins for the highest tercile (.089) and the mean DPayins for the middle tercile (-.047) is significant ($p<.01$). The difference in medians between the highest tercile and the middle tercile is marginally significant ($p = .056$). One possible explanation for the relatively weaker median results is that the typical well-performing firm may reserve all the way down to the relevant benchmark and, thus, these firms will not be included in the highest tercile of post-managed earnings changes. Nevertheless, since DPayins are estimated with a control for ROA, the mean results indicate that some firms create cookie jar reserve beyond what would be expected by mechanically increasing payins when economic performance is strong. The percentage of income increasing DPayins is also consistent with H3 (i.e., firms in the highest tercile are least likely to engage in income-increasing earnings management), although the difference in frequency between the high and middle terciles is not significant at conventional levels ($p = .085$).

Table 7 also reports that firms with the lowest earnings changes made negative DPayins (i.e., income-increasing behavior). There is no significant difference between the lowest and middle terciles. It should be noted that these results are not consistent with bath behavior using foundation payins by firms with poor earnings performance. The lowest tercile begins with an earnings decrease of 7 cents, which is not particularly low earnings change. When this tercile is partitioned further, there is still no evidence of bath behavior among the poorest performers.

*6.2.2 Reserve Creations and Strings of Earnings Increases*

Table 8 reports tests of whether, among firms with large increases in annual earnings, discretionary contribution expense is greater for firms with strings of non-negative earnings changes lasting at least five years. Observations are broken out by tercile of change in earnings per share and by the number of years of consecutive growth in earnings. Consistent with H4, in the highest tercile of earnings changes, the mean and median DPayin for firms with long strings of earnings increases are greater (i.e., more income-decreasing) than the mean and median DPayin for firms without long strings of earnings increases. In fact, across the entire distribution, the only firms that report a positive median DPayin are the firms in the high earnings change portfolio with high sensitivity to earnings news. In addition, those same firms have the lowest frequency of income-increasing earnings management (47.73%). This evidence is all consistent with these firms creating cookie jar reserves, although results are insignificant. The evidence is ultimately inconclusive because the tests have low power. Not surprisingly, firms with strings of consecutive earnings increases lasting at least five years tend to report earnings changes that place them in the middle tercile, and thus, there are only 44 observation in the highest tercile that have high sensitivity to earnings news, as measured by strings of earnings growth.

## 7. Conclusion

In this paper I present evidence that managers manipulate earnings by strategically timing payins to their corporate foundations. Results indicate that firms which reported small increases in earnings, particularly firms with high stock price sensitivity to earnings news, made the most income-increasing foundation funding choices. I addition, results suggest that firms with large increases in earnings made income-decreasing foundation funding choices, consistent with cookie-jar reserving. I find no evidence that firms use discretionary payins as part of an earnings bath. Because firms have many tools available to manage earnings, the ability to detect earnings management in a single account is low. Nevertheless, results suggests that foundation payins are one device in a portfolio of discretionary choices that firms use

Documenting the use of corporate foundations to meet financial reporting objectives contributes to the earnings management literature, as well as to cross-disciplinary research on

whether and how management incorporates corporate philanthropy into its overall strategies. It is important to note that tests in this paper do not address whether earnings management is undertaken for opportunistic reasons or whether the manipulation of foundation payins to meet financial reporting objectives has adverse affects on corporate grants to outside charities. Recognizing the ways in which firms exploit their corporate philanthropy programs does not necessarily negate the positive impact that corporate giving can have on shareholder welfare and social welfare. Thus, evidence in this paper is one piece of a larger puzzle that must be considered when formulating public policy concerning corporate philanthropy.

## Appendix A

Corporate foundations did not originate necessarily as a means for firms to make charitable grants. Hall (1989) reports that foundations initially provided a way to maintain family control over corporations while avoiding the burden of estate taxes. Corporate foundations held assets free of taxes, faced no public disclosure requirement, and were unrestricted as to the type of disbursements made. For example, when Henry Ford died in 1947 the Ford Foundation acquired 90% of the shares of the firm. The greatest increase in corporate foundations occurred during the Korean War, specifically 1952 – 1953, when firms sought to avoid excess profit taxes as a high as 80% (Webb, 1992). In the 1960s, corporate foundations came under scrutiny for their close relationships with their parent companies, for avoiding taxes, and for their ideological positions. The Tax Reform Act of 1969 disciplined private foundations by establishing spending requirements, imposing an excise tax on investment income, improving reporting, and prohibiting self-dealing transactions between the foundations and disqualified persons.

Today corporate foundations have a more stable, long-term commitment to philanthropy and are considered the bellwether of the corporate giving strategy. Because foundations normally publish giving guidelines and report detailed information on payouts, grant decisions by foundations are perceived to be more closely tied to the business objectives of the firm and less haphazard than contributions via a direct giving program. In addition, firms are allowed to deduct contributions, up to 10% of taxable income, at the time they give to their foundation. Thus, firms can optimally time giving to minimize taxes. Also, gifts to non-charities (e.g., individual scholarship recipients) or to international charities do not qualify for a charitable deduction under tax laws if they are made directly. However, the same funds are tax deductible, if certain detailed procedures and expenditure responsibilities are followed, when given to a corporate foundation that, in turn, gives to the non-charity or the non-US charity. Finally, it may be less expensive for firms to give through a foundation because earnings on foundation assets, which can be paid out, are only taxed at 2% whereas investment earnings at the corporate level are taxed at higher rates.

There are some disadvantages to operating a foundation, notably that firms must disclose giving activity on the foundation's 990-PF. Firms may be hesitant to disclose contribution

information for a number of reasons. For example, in a comment letter to the SEC on a proposal to require disclosure of corporate philanthropy, Tandy Corp. argued that any requirement to disclose corporate giving could be used by its competitors to undermine important customer relationships. Firms may also choose to give directly because gifts of inventory lose their charitable deduction if funneled through the foundation. Also, some firms may realize more effective giving if decisions are handled at local sites rather than by a centralized foundation. Finally, foundations have start-ups costs and require additional personnel or legal counsel.

## Appendix B

The following table lists foundation inflows and outflows for AT&T from 1990 through 1994. While payouts remained fairly stable, payins were more erratic. This table also lists expected payins which were calculated using the model described in Section 5. 1990 is a particularly interesting year because AT&T made no payin to its foundation but made $30 million in grants. The model predicted that AT&T would payin $24.36 million. By forgoing a payin in 1990, AT&T increased earnings by $24.36 million or $0.02 per share. In 1990, AT&T reported an increase in earnings per share of $0.01. Thus, all else equal, the choice not to make a payin resulted in AT&T reporting a positive earnings change. AT&T's foundation activities are renowned for being well-aligned with AT&T's business objectives (Smith, 1994). However, from a reporting standpoint, the "revenue" generated from the foundation (i.e., the ultimate value reaped by the firm for making a payout) is not well matched with the cost (i.e., payins).

| Year | Payins ($ mil) | Payouts ($ mil) | Expected Payin ($ mil) | Chg. in EPS | |
|---|---|---|---|---|---|
| 1990 | 0.00 | 30.13 | 24.36 | 0.01 | * |
| 1991 | 15.00 | 31.94 | 22.92 | -2.11 | |
| 1992 | 50.00 | 31.54 | 27.77 | 2.46 | |
| 1993 | 24.95 | 32.16 | 24.53 | 0.08 | |
| 1994 | 50.11 | 34.6 | 31.31 | 0.07 | |

* AT&T increased earnings by $24.36 ($0.02)

**FIGURE 1**
**Types of Corporate Philanthropy**

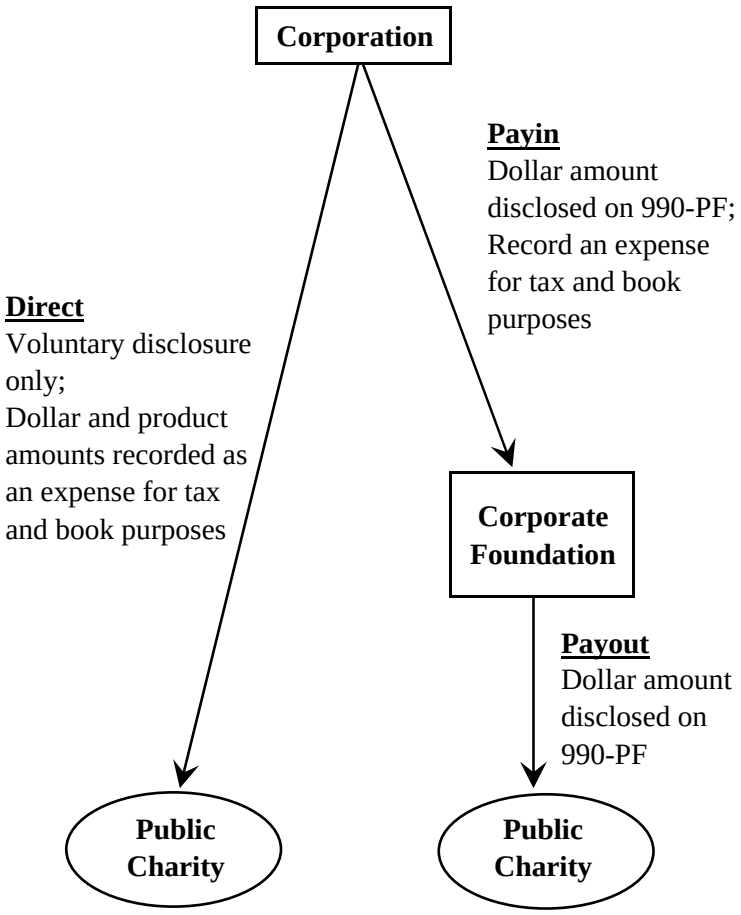
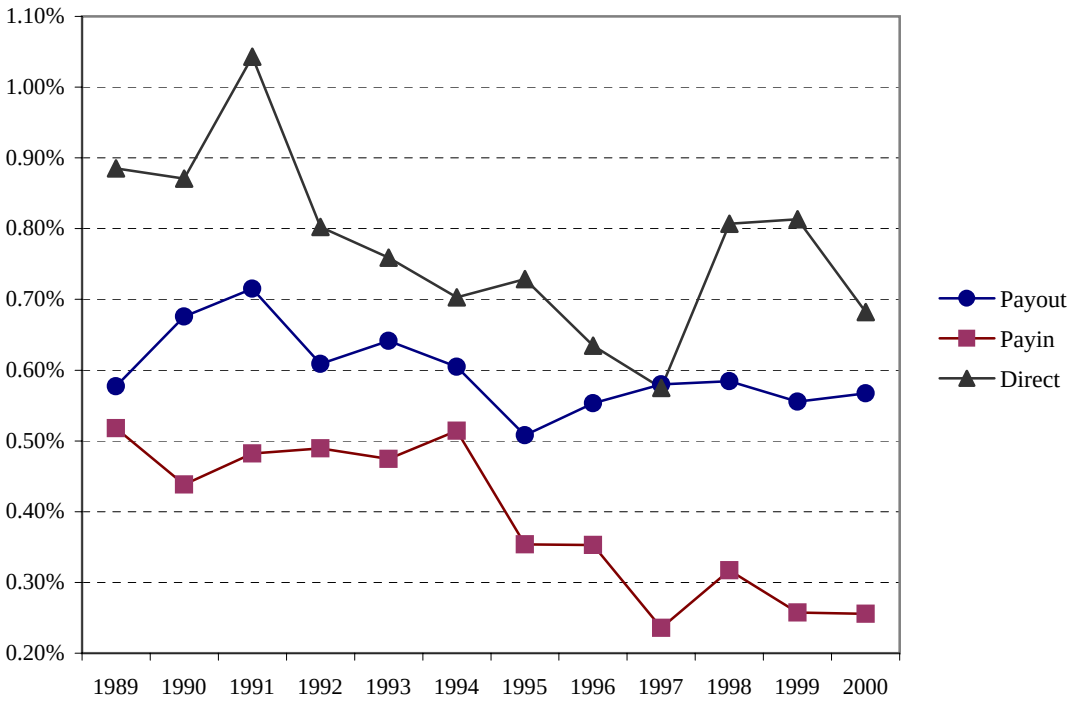


**FIGURE 2**
**Corporate Giving as a Percentage of Pretax Income**




Source: Taft Directory and National Center for Charitable Statistics

**FIGURE 3**
**Histogram of Changes in Annual Earnings Per Share**
(Portfolio Width = 15 cents)

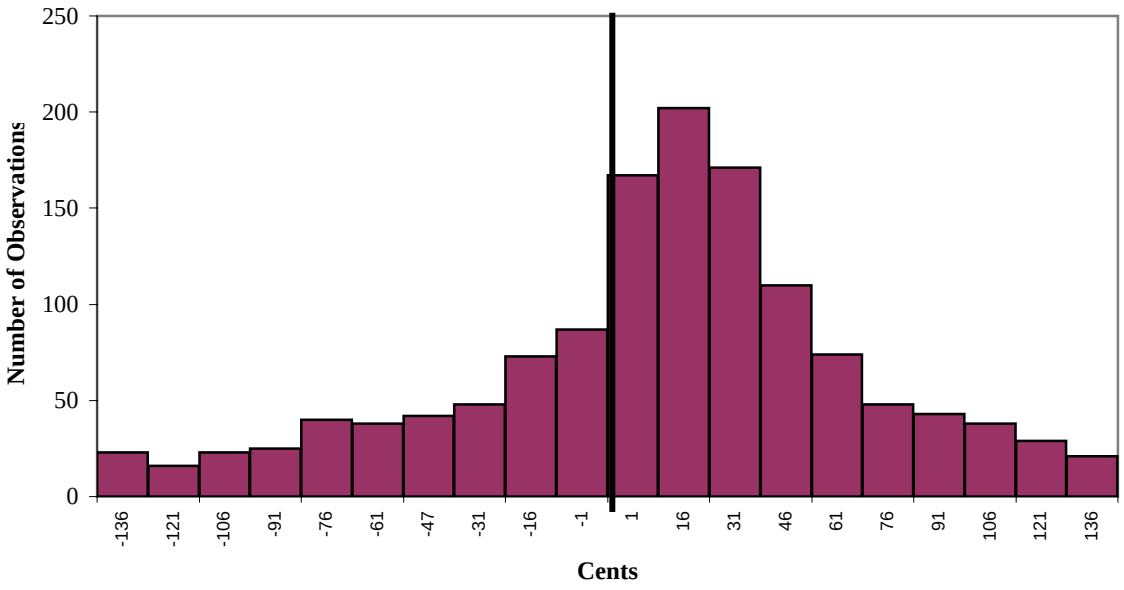


**FIGURE 4**
**Percentiles of Discretionary Payins for Firms with Small Increases and Decreases in Annual EPS**

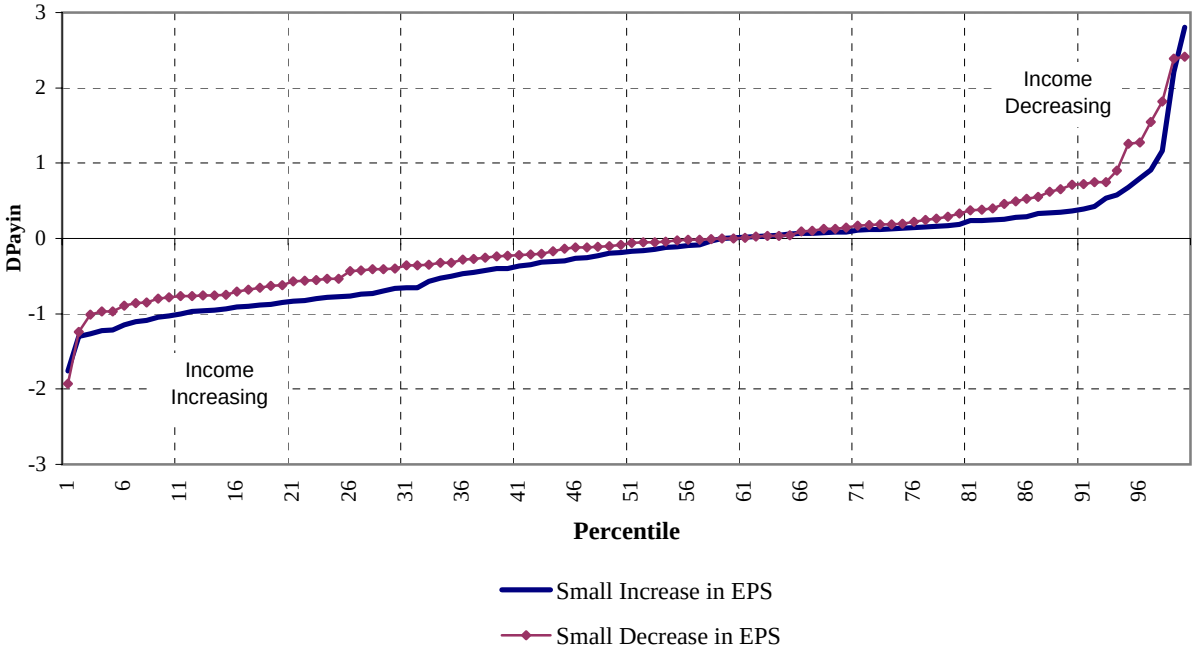


**TABLE 1**
**Sample Selection**

| | Firms | Firm Years |
|---|---|---|
| All firms from Taft Directory | 505 | 4,935 |
| Less firms with no foundation | 100 | 727 |
| Less utilities (SIC 4900 - 4999) | 26 | 285 |
| Less firms that did not make any payins during the sample period | 13 | 144 |
| | 366 | 3,779 |
| Less firm years with no marginal tax rate data | | 660 |
| Less firms years with no ROA data | | 35 |
| Less firm years with incomplete foundation data necessary to estimate expected payin | | 1,340 |
| Less firms years with no change in earnings per share data | | 14 |
| | 321 | 1,730 |

**TABLE 2**
**Statistics for Firms with Corporate Foundations**

*Panel A - Descriptive Statistics (n = 1,744)*

| | % | Mean | Q3 | Median | Q1 |
|---|---|---|---|---|---|
| **Firm Statistics** | | | | | |
| % in S&P 500 | 61.2% | | | | |
| Median BV of Equity ($ millions) | | 2,914 | 3,338 | 1,056 | 392 |
| String (years) | | 2.06 | 3.00 | 1.00 | 0.00 |
| **Corporate Giving Statistics** | | | | | |
| Total Contributions / Shares ($) | | 0.06 | 0.04 | 0.02 | 0.01 |
| Foundation Assets / Shares ($) | | 0.09 | 0.11 | 0.03 | 0.01 |
| Foundation Assets ($ millions) | | 10.52 | 10.30 | 2.24 | 0.47 |
| Payouts ($ millions) | | 3.60 | 3.72 | 1.36 | 0.60 |
| Payins ($ millions) | | 2.90 | 2.50 | 0.68 | 0.12 |
| Direct Giving ($ millions) | | 23.54 | 26.25 | 12.32 | 3.30 |
| Investment Income and Other Foundation Flows ($ millions) | | 1.24 | 0.94 | 0.14 | 0.01 |
| **Foundation Governance Statistics** | | | | | |
| CEO is a foundation decision maker | 47.6% | | | | |
| CEO or CFO is a foundation decision maker | 63.9% | | | | |
| Firm employee is a foundation decision maker | 96.5% | | | | |
| Estimated Payout Ratio | | 137.5% | 117.6% | 45.1% | 18.7% |
| Foundation Officers' Salary as % of Total Foundation Expenses | | 0.2% | 0.0% | 0.0% | 0.0% |
| Qualified Expenses as % of Total Foundation Expenses | | 99.6% | 100.0% | 99.5% | 97.5% |

**TABLE 2 (con'td)**
**Statistics for Firms with Corporate Foundations**

*Panel B - Pearson (Above Diagonal) / Spearman (Below Diagonal) Correlation*

| | Payin | Payout | Foundation Asset Reserve | MTR | ROA | String | Investment Income & Other |
|---|---|---|---|---|---|---|---|
| Payin | 1.000 | 0.343 | -0.048 | 0.044 | 0.119 | 0.069 | -0.136 |
| | | <.01 | 0.048 | 0.067 | <.01 | <.01 | <.01 |
| Payout | 0.292 | 1.000 | -0.017 | -0.002 | 0.059 | 0.050 | 0.052 |
| | <.01 | | 0.446 | 0.931 | 0.014 | 0.037 | 0.029 |
| Foundation Asset Reserve | -0.253 | 0.011 | 1.000 | 0.032 | 0.012 | -0.019 | 0.126 |
| | <.01 | 0.648 | | 0.185 | 0.615 | 0.430 | <.01 |
| MTR | 0.033 | 0.035 | 0.107 | 1.000 | 0.153 | 0.148 | 0.074 |
| | 0.163 | 0.141 | <.01 | | <.01 | <.01 | <.01 |
| Investment Income & Other | -0.328 | 0.111 | 0.692 | 0.108 | 0.094 | 0.0614 | 1.000 |
| | <.01 | <.01 | <.01 | <.01 | <.01 | 0.0105 | |
| ROA | 0.104 | 0.103 | 0.061 | 0.224 | 1.000 | 0.336 | 0.061 |
| | <.01 | <.01 | 0.011 | <.01 | | <.01 | 0.010 |
| String | 0.124 | 0.142 | 0.018 | 0.159 | 0.327 | 1.000 | 0.029 |
| | <.01 | <.01 | 0.458 | <.01 | <.01 | | 0.226 |

In the Panel B, Payin and Payout are scaled by the prior year payout and Foundation Assets are scaled by payout in the subsequent year. MTR is the marginal tax rate. ROA equals net income before payins scaled by lagged total assets. String equals the number of consecutive non-negative changes in annual eps through year t-1. Investment Income and Other equals foundation investment income plus any noncorporate transfers into the foundation minus foundation excise taxes minus foundation administrative expenses. The Estimated Payout Ratio equals payouts divided by the average of beginning and ending total foundation assets.

**TABLE 3**
**OLS Model of Expected Foundation Payin**

$$Payin_t = \alpha_0 + \alpha_1 Payout_t + \alpha_2 Payout_{t+1} + \alpha_3 FNA_{t-1} + \alpha_4 Other_t + \alpha_5 MTR + \alpha_6 ROA + e_t$$

| | Intercept | $Payout_t$ | $Payout_{t+1}$ | $FNA_{t-1}$ | $Other_t$ | $MTR_t$ | $ROA_t$ | Adj. $R^2$ | n |
|---|---|---|---|---|---|---|---|---|---|
| All | -0.045<br>(.490) | 0.364<br>(< 0.01) | 0.519<br>(< 0.01) | -0.029<br>(< 0.01) | -0.087<br>(< 0.01) | 0.369<br>(0.018) | | 0.241 | 1748 |
| All | -0.101<br>(0.124) | 0.359<br>(< 0.01) | 0.513<br>(< 0.01) | -0.029<br>(< 0.01) | -0.091<br>(< 0.01) | 0.260<br>( 0.097) | 0.016<br>(< 0.01) | 0.249 | 1748 |
| 1990 - 1994 | -0.191<br>(.071) | 0.028<br>(0.765) | 0.811<br>(< 0.01) | -0.026<br>(< 0.01) | 0.012<br>(0.748) | 0.406<br>( 0.117) | 0.020<br>(< 0.01) | 0.315 | 717 |
| 1995 - 1999 | 0.125<br>(.118) | 0.398<br>(< 0.01) | 0.350<br>(< 0.01) | -0.044<br>(< 0.01) | -0.092<br>(0.013) | 0.144<br>(0.400) | 0.011<br>(< 0.01) | 0.249 | 1027 |

p-values are reported in parentheses. Observations were identified as influential using abs (dffits) > 2 $(p/n)^{½}$ (Belsey, Kuh, and Welsch, 1980), resulting in the removal of 55 observations. Payin is the amount received from the parent company. Payout is the amount given by the foundation to external charitable causes. FNA is the corporate foundation's net asset value at the end of the period. Other is the sum of investment income, excise taxes, administrative expense and any other nonparent transfers to the foundation. MTR is the marginal tax rate. ROA equals net income before payins divided by lagged total assets. All foundation variables are scaled by $Payout_{t-1}$.

**TABLE 4**
**Discretionary Payins in Portfolios Formed by the Sign and Magnitude of Annual EPS Change**

| Annual EPS Change | Median DPayin | Mean DPayin | % Income Increasing | Median Unexpected Accruals | Mean Unexpected Accruals |
|---|---|---|---|---|---|
| > 1.93 | 0.039 | 0.150 | 47.44% | -0.009 | -0.031 |
| .98 to 1.93 | 0.022 | 0.066 | 48.41% | -0.007 | -0.039 |
| .58 to .98 | -0.056 | 0.058 | 56.21% | -0.012 | -0.026 |
| .40 to .57 | -0.071 | 0.042 | 56.77% | -0.006 | -0.039 |
| .28 to .39 | -0.022 | 0.090 | 51.57% | -0.012 | -0.026 |
| .16 to .27 | -0.032 | 0.013 | 53.50% | -0.006 | -0.012 |
| **.01 to .15** | **-0.185** | **-0.249** | **59.28%** | 0.006 | -0.009 |
| -.29 to -.01 | -0.084 | -0.071 | 59.12% | 0.000 | -0.007 |
| -.83 to -.30 | -0.095 | -0.116 | 56.95% | -0.007 | -0.025 |
| -1.97 to -.83 | 0.044 | 0.071 | 46.50% | -0.009 | -0.029 |
| < -1.97 | -0.019 | -0.042 | 52.26% | -0.003 | -0.025 |
| p-value | 0.075 | 0.014 | | | |

| | |
|---|---|
| Pearson Corr (DPayin, Unexpected Accruals) | -0.049 |
| p-value | 0.067 |
| Spearman Corr (DPayin, Unexpected Accruals) | -0.054 |
| p-value | 0.043 |

DPayin is the residual from estimating the following equation (see Table 3 for variable definitions):

$Payin_t = \alpha_0 + \alpha_1 Payout_t + \alpha_2 Payout_{t+1} + \alpha_3 FNA_{t-1} + \alpha_4 Other_t + \alpha_5 MTR + \alpha_6 ROA + e_t$

Annual unexpected accruals scaled by lagged total assets are calculated using the Jones (1991) model, estimated by two digit SIC code and year. The top and bottom 1% of unexpected accruals were removed. Portfolios are formed with an approximately equal number of observations (n = 157) relative to zero change in EPS. All p-values in the DPayin columns are one-sided tests of H1.

**TABLE 5**
**Robustness Tests of Discretionary Payins to Report Small Increases in Annual EPS**

*Panel A: Portfolios of Equal Width Formed by Annual EPS Change*

| n | EPS Change | Median DPayin | Mean DPayin | n | EPS Change | Median DPayin | Mean DPayin |
|---|---|---|---|---|---|---|---|
| 167 | .01 to .15 | -0.185 | -0.249 | 113 | .01 to .10 | -0.149 | -0.276 |
| 87 | -.15 to -.01 | -0.052 | -0.037 | 62 | -.10 to -.01 | -0.033 | -0.026 |
| | p-value | 0.178 | 0.022 | | p-value | 0.246 | 0.041 |

*Panel B: Tobit Estimation of Foundation Payins (1,726 observations)*

| | Coefficient | p-value | | Coefficient | p-value |
|---|---|---|---|---|---|
| Intercept | -0.240 | <.01 | | -0.193 | 0.016 |
| $Payout_t$ | 0.270 | <.01 | | -0.262 | <.01 |
| $Payout_{t+1}$ | 0.638 | <.01 | | 0.641 | <.01 |
| $FNA_{t-1}$ | -0.057 | <.01 | | -0.057 | <.01 |
| $Other_t$ | -0.108 | <.01 | | -0.106 | <.01 |
| $MTR_t$ | 0.370 | 0.041 | | 0.377 | 0.037 |
| $ROA_t$ | 0.017 | <.01 | | 0.019 | <.01 |
| Above | | | | -0.408 | <.01 |
| Below | | | | -0.169 | 0.050 |
| | | | Test: Above < Below | | 0.019 |

*Panel C: Portfolios Formed by the Sign and Magnitude of 4th Quarter EPS Change*

| 4th Quarter EPS Change | Median DPayin | Mean DPayin | % Income Increasing |
|---|---|---|---|
| > .76 | -0.033 | 0.003 | 53.1% |
| .31 to .76 | 0.029 | 0.130 | 47.0% |
| .16 to .30 | -0.063 | 0.021 | 54.2% |
| .10 to .15 | -0.068 | 0.032 | 55.3% |
| .06 to .09 | 0.024 | 0.144 | 48.0% |
| **.01 to .05** | **-0.210** | **-0.209** | **64.7%** |
| -.15 to -.01 | -0.026 | -0.044 | 52.5% |
| -.61 to -.16 | -0.025 | 0.043 | 52.7% |
| < -.61 | -0.015 | -0.057 | 52.0% |
| p-value | < 0.01 | < 0.01 | < 0.01 |

DPayin is the residual from estimating the following equation (see Table 3 for variable definitions): $Payin_t = \alpha_0 + \alpha_1 Payout_t + \alpha_2 Payout_{t+1} + \alpha_3 FNA_{t-1} + \alpha_4 Other_t + \alpha_5 MTR + \alpha_6 ROA + e_t$. In Panel B, Above = 1 if the observation falls in the portfolio immediately above zero change in EPS; otherwise Above = 0. Below = 1 if the observation falls in the portfolio immediately below zero change in EPS; otherwise Below = 0. The portfolios in Panel B are the same portfolios listed in Table 4. The restriction Above = Below is tested with a likelihood ratio test (Allison, 1995). In Panel C, portfolios are formed with an equal number of observations (n = 190) relative to zero change in fourth quarter EPS. All p-values are one-sided tests of H1.

**TABLE 6**
**Discretionary Payins and Strings of Consecutive Earnings Increases**
**For Firms With Small Earnings Increases**

*Panel A: DPayins and Strings Lasting 5 Years or Longer for Firms with Small Changes in Earnings*

| | Median DPayin | Mean DPayin | % Income Increasing | n |
|---|---|---|---|---|
| **Firms With Small Increases in EPS** | | | | |
| String ≥ 5 Years | -0.426 | -0.424 | 71.43% | 42 |
| String < 5 Years | -0.190 | -0.099 | 55.20% | 125 |
| p-value | <.01 | 0.023 | 0.033 | |
| **Firms With Small Decreases in EPS** | | | | |
| String ≥ 5 Years | -0.316 | -0.193 | 58.96% | 25 |
| String < 5 Years | -0.082 | -0.048 | 60.00% | 134 |
| p-value | 0.427 | 0.150 | 0.4624 | |

*Panel B: DPayins and String Length for Firms with Small Earnings Increases*

| | Dependent Variable = Payins | | | | | |
|---|---|---|---|---|---|---|
| (n = 1,726) | Model 1 | p-value | Model 2 | p-value | Model 3 | p-value |
| Intercept | -0.021 | (0.745) | -0.043 | (0.514) | -0.037 | (0.578) |
| $Payout_t$ | 0.219 | (<.01) | 0.226 | (<.01) | 0.221 | (<.01) |
| $Payout_{t+1}$ | 0.591 | (<.01) | 0.590 | (<.01) | 0.590 | (<.01) |
| $FNA_{t-1}$ | -0.037 | (<.01) | -0.037 | (<.01) | -0.037 | (<.01) |
| $Other_t$ | -0.066 | (<.01) | -0.067 | (<.01) | -0.065 | (<.01) |
| $MTR_t$ | 0.265 | (0.073) | 0.274 | (0.067) | 0.288 | 0.054 |
| $ROA_t$ | 0.015 | (<.01) | 0.015 | (<.01) | 0.015 | (<.01) |
| Above | -0.258 | (<.01) | | | -0.091 | (0.357) |
| String | | | -0.004 | (0.659) | 0.007 | (0.434) |
| Above*String | | | | | **-0.054** | (0.019) |
| Adj. $R^2$ | 0.265 | | 0.259 | | 0.266 | |

In Panel A, observations are classified as 'Small Increase in EPS' if they fall in the portfolio immediately above zero change in EPS as listed in Table 4. DPayin is the residual from estimating the following equation (see Table 3 for variable definitions): $Payin_t = \alpha_0 + \alpha_1 Payout_t + \alpha_2 Payout_{t+1} + \alpha_3 FNA_{t-1} + \alpha_4 Other_t + \alpha_5 MTR + \alpha_6 ROA + e_t$. String equals the number of consecutive non-negative changes in EPS through year t-1. % Income Increasing equals the percentage of observations that have negative DPayins.In Panel B, Above = 1 if the observation falls in the portfolio immediately above zero change in EPS; otherwise Above = 0.

**TABLE 7**
**Discretionary Payins and Reserve Creation**

| Annual EPS Change | | Median DPayin | Mean DPayin | % Income Increasing | n |
|---|---|---|---|---|---|
| High | > .43 | -0.017 | 0.089 | 51.29% | 581 |
| Middle | -.07 to .43 | -0.084 | -0.047 | 55.32% | 573 |
| Low | < -.07 | -0.037 | -0.044 | 53.82% | 576 |
| p-value High > Middle ("Cookie Jar") | | 0.056 | < 0.01 | 0.085 | |
| p-value High > Low | | 0.288 | 0.049 | 0.195 | |
| p-value Low >Middle ("Bath") | | 0.196 | 0.185 | 0.305 | |

DPayin is the residual from estimating the following equation (see Table 3 for variable definitions):

$Payin_t = \alpha_0 + \alpha_1 Payout_t + \alpha_2 Payout_{t+1} + \alpha_3 FNA_{t-1} + \alpha_4 Other_t + \alpha_5 MTR + \alpha_6 ROA + e_t$

All p-values are one-sided tests of H3.

**TABLE 8**
**Discretionary Payins and Strings of Consecutive Earnings Increases**
**By Tercile of Earnings Change**

| **HIGH EPS CHANGE** | n | Median DPayin | Mean DPayin | % Income Increasing |
|---|---|---|---|---|
| String ≥ 5 Years | 44 | 0.026 | 0.141 | 47.73% |
| String < 5 Years | 537 | -0.018 | 0.085 | 51.58% |
| p-value | | 0.373 | 0.447 | 0.312 |

| **MIDDLE EPS CHANGE** | n | Median DPayin | Mean DPayin | % Income Increasing |
|---|---|---|---|---|
| String ≥ 5 Years | 171 | -0.168 | -0.046 | 57.89% |
| String < 5 Years | 402 | -0.048 | -0.047 | 54.23% |
| p-value | | 0.064 | 0.278 | 0.210 |

| **LOW EPS CHANGE** | n | Median DPayin | Mean DPayin | % Income Increasing |
|---|---|---|---|---|
| String ≥ 5 Years | 63 | -0.193 | -0.185 | 61.90% |
| String < 5 Years | 513 | -0.032 | -0.026 | 52.83% |
| p-value | | 0.252 | 0.040 | 0.087 |

DPayin is the residual from estimating the following equation (see Table 3 for variable definitions):

$Payin_t = \alpha_0 + \alpha_1 Payout_t + \alpha_2 Payout_{t+1} + \alpha_3 FNA_{t-1} + \alpha_4 Other_t + \alpha_5 MTR + \alpha_6 ROA + e_t$

String equals the number of consecutive non-negative changes in annual EPS through year t-1.

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