Are capital expenditures, R&D, advertisements and acquisitions positive NPV?

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Abstract

The focus of this paper is on the effect of conservatism on the relation between firm market values and accounting fundamentals. We extend the work of Easton and Pae (2004) who provide evidence that accounting conservatism has two sources: the delayed recognition of economic returns from positive net present value investments, and the under/overstatement of currently recognized net operating assets. The literature on the value relevance of investment classes has referred to differences in their GAAP treatment – capitalizing vs. expensing, for example, to explain differences in accounting conservatism across firms. This literature has not, as yet, provided empirical evidence on the distinct, net present value effect of different types of investment on accounting conservatism. We document that different types of investment exhibit differences in accounting conservatism that are specifically attributable to the delayed recognition of economic returns.

Introduction

The focus of this paper is on the effect of accounting conservatism on the association between firm market values and accounting fundamentals. We extend the work of Easton and Pae (2004) who provide evidence that accounting conservatism has two sources: the delayed recognition of economic returns from positive net present value investments, and the under/overstatement of currently recognized net operating assets. The literature on the value relevance of the accounting for different investment classes has focused on their GAAP treatment – capitalizing vs. expensing, to explain variations in accounting conservatism across firms. This literature has not provided empirical evidence on the differences in the net present value of these different investment classes as reflected in their recognition under GAAP. We document that different investment classes exhibit differences in accounting conservatism that are specifically attributable to the delayed recognition of economic returns.

Easton and Pae (2004) extend Easton and Harris (1991) and Feltham and Ohlson (1996) to show that conservatism in the measurement of book values arises from recording past investments at historic cost rather than market values and from non-zero NPV conservatism, which captures the notion that non-negative NPV investments will not be captured in the financial statements until the future benefits of the investment are realized. Easton and Harris (1991) model price as a linear function of book value and earnings based on the model in Ohlson (1995). Easton and Harris (1991) do not, however, model the effects of conservative accounting on either earnings or book values. Easton and Pae (2004) address this shortcoming by estimating an earnings-return regression specification that not only recognizes the balance sheet (with which the income statement articulates), but also conservatism in the income statement (with which conservatism in the balance sheet articulates).

Easton and Pae (2004) identify two forms of conservative accounting and modify the Easton and Harris (1991) regression accordingly. The first is conservatism that arises because accounting does not record the payoffs from non-zero net present value projects until the associated future sales have occurred. It follows that the benefits of non-zero net present value projects will not be captured in contemporaneous book value and earnings. Easton and Pae (2004) measure this form of conservatism by adding changes in cash

investments to a return-earnings regression. The second form of conservatism arises because accounting rules, choices and procedures (such as an aggressive depreciation policy and expensing R&D), may lead to an understatement of book value and accounting earnings in prior periods, in the current period and in future periods. They argue that this form of conservatism suggests that lagged operating assets should be added to the pricing model and, hence, deflated lagged change in operating assets should be added to the return-earnings regression. Since lagged operating assets capture the cumulative effects of conservatism at the beginning of the fiscal period, they also capture the effect of conservatism on other variables in the valuation model – earnings and book value.

Easton and Pae (2004) further show that their model is consistent with Feltham and Ohlson's (1996) model of the relation between the market value of operating assets and the book value of these assets (*V/oa*), which is a common, unlevered measure for accounting conservatism. The correspondence between this *levels* measure of accounting conservatism – *V/oa*, and the *changes* measure of accounting conservatism in the returns-earnings regression, addresses a key concern of Penman and Zhang (2002) about studies examining the effect of investment classes on conservatism. They argue that studies that use *levels* measures for investments to measure conservatism ignore the opportunity that management has to manage earnings by manipulating the timing of investments. They show that using a model based on *changes* in investments addresses this experimental bias.

Prior literature on the value-relevance of investments identified at least four classes of expenditures with a potential for future benefit – capital expenditures, research and development, advertising and acquisitions (e.g., Penman and Zhang, 2002; Richardson, 2006). In this paper we decompose cash investments from the Easton and Pae (2004) model into four investment classes to document how each contributes to conservatism from non-zero net present value. Through this disaggregation, we are able to determine how a class of investment contributes to accounting conservatism. Further, Easton and Pae (2004) argue that accounting conservatism varies across firms with different market-to-book values, across firms in different industries, and across loss/profit firms. We investigate how each investment class contributes to non-zero net present

value conservatism within firms differentiated by these conservatism proxies and across firms with different financial leverage while controlling for conservatism arising from past investments.

Our analysis contributes to a better understanding of conservatism in two ways. First, it extends Easton and Pae (2004) by detailing the sources of accounting conservatism that arise from non-recognition of net present value. Second, it addresses the debate on capitalization across investment classes by differentiating between measurement conservatism, and non-zero net present value conservatism. The former follows from different accounting treatment across investment classes and the latter arises with non-zero net present value irrespective of whether an investment is capitalized under GAAP.

The paper proceeds as follows. The model is discussed in the next section. Data and descriptive statistics follow in Section 2. The results for the overall sample are presented in Section 3. Section 4 follows with tests to determine how investment classes drive NPV conservatism across firms with different market to book, across industries and, finally, across profit and loss firms, and across firms with different financial leverage. Section 5 concludes.

1. The empirical model

A review of Easton and Pae's (2004) model

As the main argument in this paper revolves around the articulation between measurement and NPV conservatism, we first review the development of Easton and Pae's (2004) model. Easton and Pae (2004) start with a simple model that is pervasive in the empirical literature on the value relevance of accounting. The model expresses price p_{jt} as a linear function of book value b_{jt} and earnings x_{jt}.

$$P_{jt} = \alpha_0 + \alpha_1 b_{jt} + \alpha_2 x_{jt} + e_{jt} \quad (1)$$

Easton and Harris (1991) and Easton (2001) provide intuitive arguments (supported by the theoretical model in Ohlson (1995)) that suggest that weights α_1 and α_2 depend on the

persistence/transitoriness of earnings. If earnings are permanent, the weight, α_1, on book value is low and the weight, α_2, on earnings is high. If earnings are transitory, the weight on book value is high and the weight on earnings is low. Neither Easton and Harris (1991) nor Ohlson (1995) permit conservative accounting.

Easton and Pae (2004) identify two forms of conservative accounting and modify equation (1) accordingly. The first form of conservatism arises because accounting rules, choices, and procedures (such as an aggressive depreciation policy) may lead to an understatement of book value and accounting earnings in prior periods, in the current period, and in future periods. Since these conservative accounting rules tend to affect operating assets much more than financial assets (which tend to be valued at close to their market value), they focus on conservatism in the valuation of operating assets and add lagged book value of operating assets oa_{jt-1} to equation (1). Conservatism in the valuation of operating assets at the beginning of the period suggests that earnings of the current period and book value at the end of the current period will be understated and hence we would expect a positive weight on operating assets. On the other hand, if operating assets at the beginning of the period are over-valued, it is likely that earnings of the current period and book value at the end of the period will be overstated and the weight on operating assets will be negative.

The second form of conservatism arises because accounting does not record the payoffs from non-zero net present value projects until the associated future sales have occurred. It follows that the benefits of new cash investments in non-zero net present value projects will not be captured in book value and earnings. Thus, cash investments ci_{jt} should be added to the pricing model to obtain:

$$P_{jt} = \beta_0 + \beta_1 b_{jt} + \beta_2 x_{jt} + \beta_3 oa_{jt} + \beta_4 ci_{jt} + e_{jt} \qquad (2)$$

Feltham and Ohlson (1996) present a model that supports the preceding arguments.[1] The two forms of conservatism are discussed in detail in Easton (2001) who

[1] See Easton and Pae (2004) Appendix A.

shows that, respectively, they capture "accounting value added" and "economic value added".

Extending Easton and Pae's (2004) model

The focus of our paper is on outlays that are either formally recognized by GAAP as investments – capital investments and acquisitions, or that the literature argues to be a source of future economic benefit – R&D and advertising expenses (e.g. Richardson, 2006). Hence, we extend equation (2) by disaggregating ci_{jt} to obtain:

$$P_{jt} = \beta_0 + \beta_1 b_{jt} + \beta_2 x_{jt} + \beta_3 oa_{jt} + \beta_5 cpx_{jt} + \beta_6 rd_{jt} + \beta_7 adv_{jt} + \beta_8 acq_{jt} + e_{jt} \quad (3)$$

where cpx_{jt} is capital expenditure for firm j in year t, rd_{jt} is research and development expenditure for firm j for year t, adv_{jt} is advertising expense for firm j for year t, and acq_{jt} is expenditure on acquisitions by firm j in year t. Following from Easton and Pae (2004), most of our analyses are based on regressions that are an empirical analogue of equation (3). Taking first differences, invoking clean surplus (in other words, defining x_{jt} as comprehensive income), re-arranging, and dividing by beginning-of-period price, we obtain:

$$ret_{jt} = \beta_0 + \beta_1 \frac{x_{jt}}{p_{jt-1}} + \beta_2 \frac{\Delta x_{jt}}{p_{jt-1}} + \beta_3 \frac{d_{jt-1}}{p_{jt-1}} + \beta_4 \frac{\Delta oa_{jt-1}}{p_{jt-1}} + \beta_5 \frac{\Delta cpx_{jt}}{p_{jt-1}} + \beta_6 \frac{\Delta rd_{jt}}{p_{jt-1}} + \beta_7 \frac{\Delta adv_{jt}}{p_{jt-1}} + \beta_8 \frac{\Delta acq_{jt}}{p_{jt-1}} + \varepsilon_{jt} \quad (4)$$

where $ret_{jt} = (p_{jt} + d_{jt} - p_{jt-1})/p_{jt-1}$ and Δ represents first differences. The subscript j denotes an observation for firm j. β_{5-8} capture the effect of conservatism due to future non-zero NPV projects from the respective investment classes, and β_4 captures the effect of conservatism due to accounting rules. The coefficients on earnings levels, earnings changes, and lagged dividends are all predicted to be positive.

For comparison, we replicate Easton and Pae (2004) empirical tests which are based on the relation:

$$ret_{jt} = \beta_0 + \beta_1 \frac{x_{jt}}{p_{jt-1}} + \beta_2 \frac{\Delta x_{jt}}{p_{jt-1}} + \beta_3 \frac{d_{jt-1}}{p_{jt-1}} + \beta_4 \frac{\Delta ci_{jt}}{p_{jt-1}} + \beta_5 \frac{\Delta oa_{jt-1}}{p_{jt-1}} + \varepsilon_{jt} \qquad (5)$$

2. Data Selection and Sample Description

Initially, we collect all Compustat firm-year observations from fiscal years 1988 through 2005 for which we have complete data for the following items. Return (ret_t) is obtained from CRSP by compounding monthly returns during the fiscal period. Comprehensive income (x_t) is net income (#172) minus preferred dividends (#19) plus the change in value of marketable securities (#238) plus the change in the cumulative foreign currency translation adjustment (#230). Dividends (d_t) are the sum of dividends to common shareholders (item #21) and net capital contributions. Net capital contributions are purchases of common and preferred stock (item #115) minus sales of common and preferred stock (item #108). Operating assets (oa_t) are book value of equity (b_t) minus financial assets (fa_t). Book value of equity (b_t) is common equity (#60) plus preferred treasury stock (#227) minus preferred dividends in arrears (#242). Financial assets (fa_t) are cash and short-term investments (#1) plus investments and advances-others (#32) minus debt in current liabilities (#34) minus long term debt (#9) minus preferred stock (#130) plus preferred treasury stock (#227) minus preferred dividends in arrears(#343) minus minority interests(#38).

The variables of interest are capital expenditure, research and development, advertising and acquisitions. Capital expenditure is capital expenditures (#128) less sales of property, plant and equipment (#107) less investing activities (#310). Research and development is research and development expense (#46) plus in-process research and development expense (#388). Acquisitions and advertisements are collected directly as single items (#129, #45 respectively).

The ratio of the market value of operating assets to the book value of operating assets (*V/oa*) is the market value of common equity minus financial assets (fa_t) divided by the book value of common equity ($(p_t - fa_t)/oa_t$). All variables except the market value of equity (p_t), annual stock returns (ret_t), and the ratio of market value of operating assets to the book value of operating assets (*V/oa*) are deflated by the beginning market value of

equity (p_{t-1}). Observations with negative book value of equity or negative (estimated) book value or market value of operating assts are excluded. We exclude utilities (SIC 4900-4999) and financial institutions (SIC 6000-6411). We delete observations in the top and bottom one percent for any of the following variables: annual returns, earnings levels, earnings changes, lagged dividends, change in lagged operating assets and book value of operating assets in order to mitigate the effect of extreme values. Further, we delete the top and bottom 2 percent of observations of changes in capital expenditures, R&D expense, and acquisition expenditure.

The final sample has 57,034 firm-year observations for firms trading on NYSE, AMEX, and NASDAQ between 1988 and 2005. The sample consists of 39,108 that report a profit and 17,926 firms that report a loss. The lack of data necessary to measure cash investments (ci_t) and the disaggregated classes of investments restricts our analysis to the post-1987 period.

Panel A of Table 1 reports descriptive statistics for the sample of 57,034 firm-year observations from 1988 to 2005. The median market value of equity is $120.83 million. Over 18 years, the mean and median annual raw stock returns are 13.8% and 3.7%. Median net comprehensive income and the median change in net comprehensive income are, respectively, 4.5% and 0.7% of the beginning market value of equity. Median lagged dividends are zero. The decomposition of book value of equity into operating assets and financial assets shows that firms have, on average, net financial obligations; hence operating assets are greater than book value of equity. The positive change in operating assets (median of 3.2% of price) implies that operating assets are, on average, increasing. The ratio of the market value of operating assets to the book value of operating assets is generally greater than one; although, for about 34% of the sample the market value of operating assets is less than their book value.

Descriptive statistics for the profit and for the loss sub-samples are reported in Panels B and C of Table 1. Profit making firms are, on average, bigger than loss firms. The median market values of equity for profit and loss firms are $181.28 million and $54.65 million, respectively. Loss firms have, on average, higher market to book (*P/B* and *V/oa*) ratios than profit firms. This is due to both higher market value of equity for profit firms and lower book value of equity for loss firms.

Table 2 reports and the Spearman correlations among key variables. The correlations between the returns and each of the independent variables are significant at, at least, the 0.01 level. The correlations between change in lagged operating assets and both earnings changes and changes in acquisitions are high (-0.161and -0.142) suggesting that multicollinearity may affect the stability of the estimates of the coefficients on these variables.

3. Empirical Results

3.1 Conservatism in the Entire Sample

We first replicate, in Table 3, the analysis in Easton and Pae (2004) based on equation (5) for the extended period 1988 to 2005. Consistent with the results in Easton and Pae (2004), all coefficients are significantly positive except for changes in operating assets. The magnitudes of the coefficients are also similar except that coefficients for lagged changes in earnings, lagged dividends and changes in cash investments are smaller. The adjusted R-squared is 0.111 which is marginally higher than in Easton and Pae (2004).

Table 4 reports the results from the regression based on equation (4) for the years 1988 to 2005 together with Fama and Macbeth estimates. Conservatism associated with investment is evident in the data in all four classes. However, the magnitude varies with R&D registering the highest levels at 0.461 and acquisitions lowest at 0.127. Consistent with Kothari, LaGuerre and Leone (2002), the high level of correlation between changes in R&D and returns is accompanied by a lower level of significance, being the least among the four investment classes. Conservatism due to accounting rules is even lower than that found in Easton and Pae (2004) who record a coefficient of -0.028 but more significant (*t*-statistic of -2.756). Later, we find higher measurement conservatism in some sub-samples.

The estimate of the coefficient on change in each of the investment classes is positive in most annual regression. The estimates of the coefficient on changes in capital expenditure are positive across all years except in 1988, when it is insignificant. The estimates of the coefficient on changes in R&D show more variation in magnitude and

are negative in four years but only the estimate in year 2003 is significantly negative. Coefficients for changes in advertisements vary less in magnitude but are only significant in five of the 18 years. The estimates of the coefficients on changes in acquisitions have lower magnitudes and these are more consistent than those for changes in R&D and advertisements. Again, the estimates of the coefficients on acquisitions are only significant in five of the 18 years.

The mean of the estimates of the coefficient on change in lagged operating assets is significant in 8 of the 18 years. The statistical significance of conservatism due to accounting is consistent across the sample period, particularly on the downside of the 1998 to 2005 business cycle after 2002.

The mean adjusted R^2 is 0.5% higher than the model that aggregates investments as a single variable in Table 3. The estimates of the coefficients on earnings, earnings changes and lagged dividends are all positive as predicted. The *t*-statistics are marginally higher for changes in earnings and lagged dividends from those reported in Table 3 for the model with disaggregated cash investments.

3.2 A Comparison with Easton and Pae (2004)

In Table 5, we investigate the effect of disaggregating the Easton and Pae (2004) change in cash investments variable into four investment classes on the model's capacity to explain market returns. The estimate of the coefficient on changes in cash investments and lagged change in operating assets in the Easton and Pae (2004) replication – Model M0 are 0.172 and -0.021. While the coefficients are marginally smaller the *t*-statistics are higher at 7.199 and -2.566 respectively. The adjusted *R* squared is also marginally higher at 0.112.

We then add each investment class starting with capital expenditures. Excluding the other three investment classes, changes in capital expenditure does not increase the adjusted *R* squared. Adding changes in R&D also does not increase the adjusted *R* squared. With both changes in capital expenditure and R&D in model M3, the adjusted *R* squared is highest at 0.116. When either changes in acquisitions or changes in

advertisements are considered in isolation – models M4 and M6, the adjusted *R* squared drops to 0.110.

3.3 The Current Market to Book Ratio as a Proxy for Conservatism

Easton and Pae (2004) argue that each of the forms of accounting conservatism (conservatism due to accounting rules and failure to capture investment in positive NPV projects) result in understatement of book value. Hence, they suggest that one would expect to see more evidence of conservatism when the ratio of the market value of equity to the book of equity is high. Conservatism, however, is likely to be less prevalent in the valuation of financial assets due to less conservative accounting rules and because investments in financial assets are generally viewed as a means of holding reserves for future investments in operations and are thus unlikely to be positive net present value. It follows that the ratio of the market value of net operating assets to the book value of net operating assets (as opposed to the ratio of the market value of common equity to the book value of common equity) may be a more appropriate *a priori* indicator of distinguishing conservatism amongst investment classes.

We partition the sample each year into deciles based on the ratio of the market value of net operating assets measured as the market value of equity minus the book value of financial assets (that is, $p_t - fa_t$) to book value of operating assets (that is, oa_t), and we examine whether the estimates of the coefficients on the variables that are chosen to capture the positive NPV form of accounting conservatism – Δcpx_t, Δrd_t, Δadv_t, and Δacq_t, vary across these sub-samples. We expect that the higher the ratio of market value of net operating assets to book value of net operating assets, the more significant the coefficients on these variables.

Table 6 summarizes the results from the regression based on relation (4) conducted within deciles of market value of net operating assets to book value of net operating assets. Decile 1 includes firms with the lowest ratios of market value of net operating assets to book value of net operating assets, and decile 10 includes firms with the highest ratios. If the current market to book ratio is a good proxy for accounting conservatism, the coefficients on the change in either investment and change in lagged operating assets will increase as we move from decile 1 to decile 10.

Table 6 reports that the median market to book (*V/oa*) ratio is less than one for deciles 1 to 3, implying that accounting is more likely to be aggressive. For deciles 4 and higher, the median market to book (*V/oa*) ratios are greater than one, implying that accounting is more likely to be conservative. The estimates of the coefficient on the change of each class of investment increase monotonically as the market to book ratio increases. The change in capital expenditure coefficients ranges from 0.098 to 1.326 for Deciles 1 to 10 with a small dip in Decile 10. The estimate of the coefficient on R&D is less consistent but still increases generally from 0.085 in Decile 2 to 2.815 in Decile 10. For changes in advertisement and changes in acquisitions, the coefficients are even less consistent but the higher *V/oa* decile firms exhibit a marked change in the size of the coefficient. The positive NPV coefficients are significant only in the higher decile V/oa firms although that for capital expenditure is significant in Deciles 6 to 10. The trend in the measurement conservatism, identified by the coefficient for $\Delta oa_{t-1,}$ is consistent with that reported in Easton and Pae (2004). In summary, evidence of positive NPV conservatism is present in higher *V/oa* across the four investment classes, particularly that for changes in capital expenditure.

3.4 Conservatism across investments and industry

Since accounting methods differ considerably across industries and investment in either class varies by industry, we expect to see differences in the degree of conservatism and differences in the explanatory power of lagged change in operating assets and change in either investment for returns. We partition the sample into 10 industries using the primary SIC code. Table 7 reports the industry composition of the sample. The classification scheme is similar to Barth et al. (1998) and Easton and Pae (2004). However, agricultural firms, Insurance and Real Estate, Services and Others are excluded. The Agriculture sector, also excluded in Barth et al (1998), is too thinly populated. The application of the four investment classes in the businesses of Insurance and Real Estate and Services differs from that in the other industries.

Table 8 reports medians of key variables by industry. As in Easton and Pae (2004), utilities and firms in the chemicals and transportation industries have larger

market values of equity. The median annual stock returns are positive in all industries other than the mining and construction and computer industries. The median net income is positive in all industries other than the pharmaceutical industry. The median market to book ratio is greater than one for all industries. The pharmaceutical industry has the highest median market to book ratio followed by the computer industry. Easton and Pae (2004) report a positive median change in cash investments for all industries. We find the positive change is limited to capital expenditures. For the other three investment classes, median, positive change is recorded only for R&D investments by pharmaceutical firms. The change in capital expenditures is reflected in a median, lagged change in operating assets across all industries as in Easton and Pae (2004). Financial leverage is highest in transportation then in "food and chemicals" with pharmaceuticals and computers recording the lowest financial leverage. Cash intensity, denominated by the market value of operating assets, is highest in pharmaceuticals and computers reflecting their highest ranking in price to book. Cash intensity is limited to a stricter range in firms in other industries.

Table 9 reports the regression results based on relation (4) and conducted at the industry level. The estimates of the coefficients on the four classes of investments are positive in all but six instances. None of the investment coefficients with a negative sign are significant. The estimates of the coefficients for changes in lagged operating assets are negative in all industries except for two, high *V/oa* industries – pharmaceuticals and computers (4.817 and 2.407 respectively). These results are consistent with those in Table 6.

3.5 Profit vs. Loss, Investments and Conservatism

Hayn (1995) focuses on the news in earnings rather than the news in returns to motivate an analysis of the returns/earnings relation for firms reporting losses compared with firms reporting profits. In order to examine the effects of losses on accounting conservatism, we partition the sample into profit and loss firms.

Consistent with Hayn (1995), Table 10 reports that the estimate of the coefficient on earnings in the simple regression of returns on earnings for profit firms is significantly positive (0.745) at, at least, the 0.001 level (*t*-statistic of 13.364). Table 11 reports that

the estimate of this coefficient for loss firms is significantly negative (-0.142) at, at least, the 0.001 level (*t*-statistic of -2.812). The estimate for the coefficient on earnings changes is significant for both profit and loss firms and is twice in profit firms than in loss making firms (0.247 for profit and 0.133 for loss firms).

The coefficient estimates for changes in capital expenditures are significantly positive for both profit and loss firms (*t*-statistics of 6.626 and 6.192, respectively). The evidence suggests that positive net present value from changes in capital expenditures in loss firms is twice that in profit making firms (0.236 and 0.139, respectively). The estimates for changes in R&D are significantly positive in profit making firms but not significant in loss making firms (*t*-statistic of 3.817 in profit firms). The estimates for changes in advertisements are significantly positive in loss making firms but not in profit firms (*t*-statistic of 2.37). In contrast, the estimates for changes in cash-acquisitions are significantly positive in both profit and loss making firms (*t*-statistics of 1.846 and 3.817, respectively). However, the coefficient for changes in cash-acquisitions in loss making firms is four times that in profit-making firms (0.274 vs. 0.066).

The coefficient estimates on changes in lagged operating assets are significantly negative in profit making firms but insignificant in loss firms (*t*-statistic of -5.879 for profit firms). Without loss firms, the estimate of changes in lagged operating assets is twice that for the whole sample in Table 4 (-0.056 and -0.022, respectively).

3.6 Financial leverage, Investments and Conservatism

In this subsection, we examine the relation between the level of financial leverage and conservatism associated with positive NPV from either class of investments. Myers (1977) and Smith and Warner (1979) argue that a conflict exists between bond-holders and stock-holders whereby firms with more risky debt are less likely to make positive NPV investments. The prediction that follows is that accounting conservatism associated with positive NPV from changes in either class of investments will decrease as financial leverage increases.

We define financial leverage after Penman (2007) as net financial obligations divided by book value of equity. Firms with net surplus cash, or marketable securities,

over financial obligations are assigned negative values and are ranked separately into terciles, with tercile D-3 firms holding the largest amount of net surplus cash relative to the book value of their equity. Firms with positive, net financial obligations are ranked into septiles, with the lowest positive net financial obligations allocated to septile D0.

Table 12 reports that the estimates of the coefficients for changes in capital expenditures are significantly positive in all but septile D1. The size of the coefficients for changes in capital expenditures decreases from tercile D-3 to D1 (from 0.705 to 1.159) and then maintains a consistent level at approximately 0.17. This means that changes in capital expenditures are more likely to be positive NPV in firms with negative net financial obligations. The estimates for the coefficients of changes in R&D are significant only in firms with negative, or minimal, financial leverage (median FLEV in septile D0 is 0.154). Within firms in D-3 to D0, an inverse relation appears between the proportion of cash or marketable securities relative to the book value of equity, and the size of the coefficient for changes in R&D.

The estimates for coefficients of lagged changes in operating assets are significantly negative in only septiles D1, D2 and D3 and then only at the less than 10% and less than 5% levels. There is little evidence that financial leverage discriminates between different levels of accounting conservatism due to measurement. The estimates of the coefficients for earnings are positively significant across the ten sub-samples in all but firms with the largest, negative financial leverage. The coefficient estimates for earnings are higher in less levered firms (0.893, 0.640, 0.749 in D-2, D-1 and D0, respectively) and more consistent with the estimates for the whole sample reported in Table 4 (0.497). The estimates for the coefficients for changes in earnings are significantly positive for all but septile D5 and show an inverse relation to the level of financial leverage.

3. Summary

We extend the work of Easton and Pae (2004) to investigate how conservatism associated with net present value from changes in current investments varies with the class of investments. We disaggregate cash-investments into four classes – capital

expenditures, R&D, advertisements and cash acquisitions to document variations in positive NPV conservatism. We then investigate how positive NPV conservatism varies with firm-level conditions associated with differences in accounting conservatism. We rank firms by *V/oa*, industry and profit vs. loss to test for firm-level, measurement and positive NPV conservatism. We also rank by net financial leverage for conservatism specific to positive net present value investments.

In general, we find evidence that investment classes contribute differently to conservatism associated with net present value. Changes in capital expenditures are generally more persistent in the significance of their contribution to positive NPV conservatism but at lower levels relative to other investment classes. R&D investments are less persistent but estimates of their coefficients are larger. We find that changes in advertisements and changes in cash-acquisitions also contribute to positive NPV conservatism but less consistently than either changes in capital expenditures or changes in R&D.

When we divide the sample according to proxies for firm-level conservatism, we find that positive NPV conservatism varies with *V/oa*, industry membership and profit versus loss. In profit firms, we find that changes in capital expenditures contribute less to positive NPV conservatism than in loss making firms. However, we find that changes in R&D contribute more to positive NPV conservatism in profit firms than in loss making firms. Consistent with arguments around conflicts between bondholders and stockholders, we also find that conservatism associated with positive NPV due to changes in capital expenditures and changes in R&D is more present in negatively levered firms than in positively levered firms.

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Table 1. Descriptive Statistics
Panel A: Full Sample
#obs.= 57,034

Variable	Mean	Std. Dev.	25th perc.	Median	75th perc.	Min	Max
MV_{Eq}	1,526.33	9,783.78	29.25	120.83	551.95	0.12	542,675.00
ret_t	0.138	0.684	-0.261	0.037	0.363	-1.225	8.061
x_t	0.041	0.316	-0.028	0.045	0.115	-5.838	8.865
Δx_t	0.026	0.326	-0.038	0.007	0.057	-5.180	13.166
d_{t-1}	0.006	0.137	-0.009	0.000	0.028	-1.663	3.668
b_t	1.038	1.731	0.355	0.680	1.192	0.000	192.962
fa_t	-0.459	1.843	-0.548	-0.084	0.115	-112.857	6.626
oa_t	1.497	3.030	0.309	0.800	1.673	0.000	289.038
Δoa_t	0.078	0.755	-0.040	0.027	0.152	-22.155	53.893
Δoa_{t-1}	0.055	0.886	-0.030	0.032	0.147	-91.945	48.608
V/oa	26.724	1,060	0.938	1.470	3.077	0	186,872
P/B (lev.)	24.264	1,734	0.915	1.591	2.994	0.003	337,275
Cash	0.629	46.631	0.017	0.065	0.204	-0.043	10,984.000
FLEV	6.644	683.985	0.224	1.090	2.480	-0.999	160,921.250
cpx	0.127	0.365	0.013	0.051	0.141	-5.102	37.856
rd	0.051	0.196	0.000	0.000	0.048	-0.000	33.680
adv	0.031	0.174	0.000	0.000	0.004	0.000	18.737
acq	0.029	0.094	0.000	0.000	0.005	0.000	4.639
Δci_t	0.008	0.211	-0.038	0.001	0.052	-1.968	2.087
Δcpx_t	0.006	0.185	-0.024	0.001	0.035	-1.714	1.750
Δrd_t	0.002	0.044	0.000	0.000	0.002	-1.201	1.899
Δadv_t	0.001	0.051	0.000	0.000	0.000	-2.634	4.774
Δacq_t	0.002	0.099	0.000	0.000	0.000	-0.856	0.861

Table1. (continued)

Panel B: Profit firms						Panel C: Loss firms				
	# obs.	*39,108*				#obs.	*17,926*			
Variable	Mean	Std. Dev.	25th perc.	Median	75th perc.	Mean	Std. Dev.	25th perc.	Median	75th perc.
MV_{Eq}	1,970.71	11,199.08	42.27	181.28	783	556.85	5,437.54	15.20	54.65	212
ret_t	0.233	0.629	-0.129	0.125	0.430	-0.068	0.752	-0.504	-0.223	0.131
x_t	0.148	0.256	0.041	0.083	0.160	-0.193	0.308	-0.229	-0.095	-0.034
Δx_t	0.068	0.276	-0.009	0.018	0.071	-0.065	0.400	-0.158	-0.042	0.014
d_{t-1}	0.020	0.140	-0.005	0.001	0.041	-0.026	0.126	-0.022	-0.002	0.000
b_t	1.191	1.952	0.453	0.783	1.320	0.704	1.025	0.178	0.452	0.889
fa_t	-0.461	1.916	-0.568	-0.109	0.129	-0.454	1.675	-0.494	-0.043	0.091
oa_t	1.653	3.308	0.415	0.913	1.795	1.157	2.273	0.135	0.520	1.356
Δoa_t	0.149	0.764	-0.007	0.057	0.201	-0.078	0.712	-0.153	-0.014	0.039
Δoa_{t-1}	0.087	0.928	-0.020	0.043	0.165	-0.014	0.781	-0.064	0.009	0.106
V/oa	8.681	333	0.932	1.423	2.643	66.087	1,824	0.956	1.634	5.332
P/B (lev.)	4.866	232	0.907	1.516	2.606	66.584	3,074	0.933	1.844	4.637
Δci_t	0.020	0.212	-0.031	0.006	0.066	-0.018	0.207	-0.051	-0.002	0.023
Δcpx_t	0.015	0.182	-0.018	0.004	0.043	-0.014	0.188	-0.037	-0.002	0.017
Δrd_t	0.004	0.037	0.000	0.000	0.002	-0.001	0.055	-0.000	0.000	0.002
Δadv_t	0.002	0.053	0.000	0.000	0.000	-0.001	0.049	0.000	0.000	0.000
Δacq_t	0.005	0.106	0.000	0.000	0.000	-0.004	0.081	0.000	0.000	0.000

'MVEq is the market value of equity (CRSP end of month price end at end of financial year x CRSP "SHROUT"). Return (rett) is obtained from CRSP by compounding monthly returns over the fiscal period. Comprehensive income (xt) is net income (#172) minus preferred dividends (#19) plus the change in value of marketable securities (#238) plus the change in the cumulative foreign currency translation adjustment (#230). Dividends (dt) are the sum of dividends to common shareholders (item #21) and net capital contributions. Net capital contributions are purchases of common and preferred stock (item #115) minus sales of common and preferred stock (item #108). Operating assets (oat) are book value of equity (bt) minus financial assets (fat). Book value of equity (bt) is common equity (#60) plus preferred treasury stock (#227) minus preferred dividends in arrears (#242). Financial assets (fat) are cash and short-term investments (#1) plus investments and advances-others (#32) minus debt in current liabilities (#34) minus long term debt (#9) minus preferred stock (#130) plus preferred treasury stock (#227) minus preferred dividends in arrears(#343) minus minority interests(#38). Capital expenditure (cpxt) is capital expenditures (#128) less sales of property, plant and equipment (#107) less investing activities (#310). Research and development (rdt)is research and development expense (#46) plus in-process Research and development expense (#388). Acquisitions (acqt) and advertisements (advt)are collected directly as single items (#129, #45 respectively). The ratio of the market value of operating assets to the book value of operating assets (V/oa) is the market value of common equity minus financial assets (MVeqt - fat) divided by the book value of common equity ((pt – fat)/oat). All variables except the market value of equity (pt), annual stock returns (rett), and ratio of market value of operating assets to the book value of operating assets (V/oa) are deflated by the beginning market value of equity (pt-1).

Table 1d

Descriptive Statistics - Loss firms

Panel C: Loss firms

#obs. *17,926*

Variable	Mean	Std. Dev.	25th perc.	Median	75th perc.	Min	Max
MV_{Eq}	556.85	5,437.54	15.20	54.65	212.01	0	542,675
ret_t	-0.068	0.752	-0.504	-0.223	0.131	-1.225	8.061
x_t	-0.193	0.308	-0.229	-0.095	-0.034	-5.838	2.177
Δx_t	-0.065	0.400	-0.158	-0.042	0.014	-5.180	7.227
d_{t-1}	-0.026	0.126	-0.022	-0.002	0.000	-1.650	3.668
b_t	0.704	1.025	0.178	0.452	0.889	0.000	38.879
fa_t	-0.454	1.675	-0.494	-0.043	0.091	-72.615	4.082
oa_t	1.157	2.273	0.135	0.520	1.356	0.000	89.549
Δoa_t	-0.078	0.712	-0.153	-0.014	0.039	-13.835	33.911
Δoa_{t-1}	-0.014	0.781	-0.064	0.009	0.106	-23.494	30.502
V/oa	66.087	1,824	0.956	1.634	5.332	0	186,872
P/B (lev.)	66.584	3,074	0.933	1.844	4.637	0.016	337,275
Δci_t	-0.018	0.207	-0.051	-0.002	0.023	-1.881	1.507
Δcpx_t	-0.014	0.188	-0.037	-0.002	0.017	-1.714	1.507
Δrd_t	-0.001	0.055	-0.000	0.000	0.002	-1.201	1.120
Δadv_t	-0.001	0.049	0.000	0.000	0.000	-1.424	2.881
Δacq_t	-0.004	0.081	0.000	0.000	0.000	-0.796	0.818

Table 2

Spearman Correlations

	# obs.	*57,034*									
	MV_{Eq}	ret_t	x_t	Δx_t	d_{t-1}	$\Delta\ oa_{t-1}$	Δcpx_t	Δrd_t	Δadv_t	Δacq_t	*V/oa*
MV_{Eq}	1	0.233	0.194	0.030	0.124	0.056	0.065	0.081	0.076	0.034	0.337
		<.0001	*<.0001*	*<.0001*	*<.0001*	*<.0001*	*<.0001*	*<.0001*	*<.0001*	*<.0001*	*<.0001*
ret_t		1	0.428	0.284	0.166	-0.010	0.118	0.053	0.053	0.043	0.139
			<.0001	*<.0001*	*<.0001*	*0.0143*	*<.0001*	*<.0001*	*<.0001*	*<.0001*	*<.0001*
x_t			1	0.489	0.282	0.158	0.166	0.087	0.092	0.045	-0.213
				<.0001	*<.0001*	*<.0001*	*<.0001*	*<.0001*	*<.0001*	*<.0001*	*<.0001*
Δx_t				1	-0.021	-0.161	0.045	-0.066	-0.008	0.020	0.015
					<.0001	*<.0001*	*<.0001*	*<.0001*	*0.0452*	*<.0001*	*0.0002*
d_{t-1}					1	-0.045	-0.023	-0.037	0.005	0.001	-0.253
						<.0001	*<.0001*	*<.0001*	*0.2277*	*0.8826*	*<.0001*
$\Delta\ oa_{t-1}$						1	-0.088	0.070	0.074	-0.142	-0.145
							<.0001	*<.0001*	*<.0001*	*<.0001*	*<.0001*
Δcpx_t							1	0.101	0.060	0.040	0.022
								<.0001	*<.0001*	*<.0001*	*<.0001*
Δrd_t								1	0.067	0.063	0.066
									<.0001	*<.0001*	*<.0001*
Δadv_t									1	0.022	0.006
										<.0001	*0.1436*
Δacq_t										1	0.033
											<.0001
V/oa											1

MVEq is the market value of equity (CRSP end of month price end at end of financial year x CRSP "SHROUT"). Rett is the annual stock return obtained by compounding CRSP monthly returns over the fiscal period. Comprehensive income (xt) is net income (#172) minus preferred dividends (#19) plus the change in value of marketable securities (#238) plus the change in the cumulative foreign currency translation adjustment (#230). Dividends (dt) are the sum of dividends to common shareholders (item #21) and net capital contributions. Net capital contributions are purchases of common and preferred stock (item #115) minus sales of common and preferred stock (item #108). Operating assets (oat) are book value of equity (bt) minus financial assets (fat). Book value of equity (bt) is common equity (#60) plus preferred treasury stock (#227) minus preferred dividends in arrears (#242). Financial assets (fat) are cash and short-term investments (#1) plus investments and advances-others (#32) minus debt in current liabilities (#34) minus long term debt (#9) minus preferred stock (#130) plus preferred treasury stock (#227) minus preferred dividends in arrears(#343) minus minority interests(#38). Capital expenditure (cpxt) is capital expenditures (#128) less sales of property, plant and equipment (#107) less investing activities (#310). Research and development (rdt)is research and development expense (#46) plus in-process Research and development expense (#388). Acquisitions (acqt) and advertisements (advt) are collected directly as single items (#129, #45 respectively). The ratio of the market value of operating assets to the book value of operating assets (V/oa) is the market value of common equity minus financial assets (MVeqt - fat) divided by the book value of common equity ((pt – fat)/oat). All variables except the market value of equity (pt), annual stock returns (rett), and ratio of market value of operating assets to the book value of operating assets (V/oa) are deflated by the beginning market value of equity (pt-1).

Table 3

Regression - return on earnings and Total Investments as in Easton Pae 2004

$$ret_{jt} = \beta_0 + \beta_1 \frac{x_{jt}}{p_{jt-1}} + \beta_2 \frac{\Delta x_{jt}}{p_{jt-1}} + \beta_3 \frac{d_{jt-1}}{p_{jt-1}} + \beta_4 \frac{\Delta ci_{jt}}{p_{jt-1}} \beta_5 \frac{\Delta oa_{jt-1}}{p_{jt-1}} + \varepsilon_{jt}$$

Year	Av. #obs	Int.		x_t		Δx_t		d_{t-1}		Δci_t		$\Delta\ oa_{t-1}$		Adj R-Sq
1988	2,625	-0.017	***0.063***	0.716	-	-0.109	***0.002***	0.173	***0.001***	-0.054	*0.126*	-0.072	-	0.191
1989	2,741	0.097	-	0.464	-	0.097	***0.005***	0.303	-	0.044	*0.174*	-0.003	*0.642*	0.157
1990	2,730	-0.143	-	0.634	-	-0.055	***0.091***	-0.023	*0.706*	0.102	***0.002***	0.004	*0.673*	0.165
1991	2,741	0.265	-	0.458	-	0.120	***0.003***	0.199	***0.021***	0.127	***0.017***	-0.026	***0.016***	0.080
1992	2,801	0.155	-	0.503	-	0.060	*0.133*	-0.020	*0.811*	0.273	-	-0.051	***0.002***	0.095
1993	2,878	0.159	-	0.609	-	0.158	***0.001***	0.118	*0.188*	0.261	***0.000***	-0.028	*0.177*	0.110
1994	3,083	-0.039	***0.000***	0.529	-	0.191	***0.000***	0.174	***0.008***	0.236	-	0.011	*0.572*	0.125
1995	3,333	0.155	-	0.582	-	0.384	-	-0.021	*0.824*	0.122	***0.042***	0.003	*0.864*	0.109
1996	3,603	0.092	-	0.683	-	0.103	***0.062***	0.153	***0.056***	0.252	-	-0.009	*0.688*	0.109
1997	3,692	0.091	-	0.735	-	0.189	***0.001***	0.337	-	0.327	-	-0.017	*0.346*	0.163
1998	3,818	-0.042	***0.000***	0.776	-	0.140	***0.006***	0.256	***0.001***	0.123	***0.014***	-0.013	*0.374*	0.110
1999	3,732	0.203	-	0.180	***0.012***	0.564	-	0.012	*0.925*	0.207	***0.002***	0.003	*0.879*	0.029
2000	3,544	0.080	-	0.671	-	0.094	*0.220*	-0.420	***0.000***	0.293	***0.000***	-0.042	*0.195*	0.058
2001	3,349	0.093	-	0.237	-	0.212	-	0.525	-	0.058	*0.241*	-0.012	*0.444*	0.071
2002	3,248	-0.063	-	0.404	-	-0.039	*0.108*	0.500	-	0.092	***0.036***	-0.091	-	0.100
2003	3,155	0.486	-	-0.216	***0.000***	0.605	-	0.211	*0.152*	0.235	***0.006***	0.059	-	0.087
2004	3,096	0.259	-	0.352	-	0.327	-	0.101	*0.245*	0.234	***0.002***	-0.043	***0.013***	0.112
2005	2,757	0.053	-	0.806	-	-0.072	*0.227*	0.021	*0.819*	0.170	***0.003***	-0.043	***0.037***	0.152
Mean (tvalue)	3,163	0.105	*3.042*	0.507	*8.498*	0.165	*3.501*	0.144	*2.840*	0.172	*7.199*	-0.021 -	*2.566*	0.112
total #obs.	56,926		***		***		***		***		***		**	

Coefficients are means of annual regressions over the period 1988-2005, and *t*-values are based on the standard error of the mean (Fama and MacBeth, 1973; Bernard, 1987). The dependent variable Rett is the annual stock return obtained by compounding CRSP monthly returns over the fiscal period. Comprehensive income (xt) is net income (#172) minus preferred dividends (#19) plus the change in value of marketable securities (#238) plus the change in the cumulative foreign currency translation adjustment (#230). Dividends (dt) are the sum of dividends to common shareholders (item #21) and net capital contributions. Net capital contributions are purchases of common and preferred stock (item #115) minus sales of common and preferred stock (item #108). Operating assets (oat) are book value of equity (bt) minus financial assets (fat). Book value of equity (bt) is common equity (#60) plus preferred treasury stock (#227) minus preferred dividends in arrears (#242). Financial assets (fat) are cash and short-term investments (#1) plus investments and advances-others (#32) minus debt in current liabilities (#34) minus long term debt (#9) minus preferred stock (#130) plus preferred treasury stock (#227) minus preferred dividends in arrears(#343) minus minority interests(#38). Capital expenditure (cpxt) is capital expenditures (#128) less sales of property, plant and equipment (#107) less investing activities (#310). Research and development (rdt)is research and development expense (#46) plus in-process Research and development expense (#388). Acquisitions (acqt) and advertisements (advt) are collected directly as single items (#129, #45 respectively). The ratio of the market value of operating assets to the book value of operating assets (V/oa) is the market value of common equity minus financial assets (MVeqt - fat) divided by the book value of common equity ((pt – fat)/oat). All variables except the market value of equity (pt), annual stock returns (rett), and ratio of market value of operating assets to the book value of operating assets (V/oa) are deflated by the beginning market value of equity (pt-1).

Table 4

Regression - return on earnings and split investments: All firms

$$ret_{jt} = \beta_0 + \beta_1 \frac{x_{jt}}{p_{jt-1}} + \beta_2 \frac{\Delta x_{jt}}{p_{jt-1}} + \beta_3 \frac{d_{jt-1}}{p_{jt-1}} + \beta_4 \frac{\Delta oa_{jt-1}}{p_{jt-1}} + \beta_5 \frac{\Delta cpx_{jt}}{p_{jt-1}} + \beta_6 \frac{\Delta rd_{jt}}{p_{jt-1}} + \beta_5 \frac{\Delta adv_{jt}}{p_{jt-1}} + \beta_6 \frac{\Delta acq_{jt}}{p_{jt-1}} + \varepsilon_{jt}$$

Coefficient estimates, t-statistics in parentheses and significance levels below t-statistics

Year	Av. #obs	Int.		x_t		Δx_t		d_{t-1}		$\Delta\ oa_{t-1}$		Δcpx_t		Δrd_t		Δadv_t		Δacq_t		Adj R-Sq
1988	2,622	-0.016	***0.071***	0.721	***0.000***	-0.112	***0.002***	0.173	***0.001***	-0.071	-	-0.061	*0.146*	-0.116	*0.635*	-0.138	*0.502*	-0.031	*0.642*	0.190
1989	2,738	0.097	***0.000***	0.467	***0.000***	0.097	***0.006***	0.293	***0.000***	-0.003	*0.687*	0.054	*0.129*	-0.278	***0.082***	0.194	*0.287*	-0.010	*0.894*	0.158
1990	2,727	-0.143	***0.000***	0.630	***0.000***	-0.046	*0.169*	-0.014	*0.821*	0.004	*0.656*	0.095	***0.008***	0.238	*0.250*	-0.175	***0.019***	0.162	***0.057***	0.167
1991	2,738	0.262	***0.000***	0.436	***0.000***	0.117	***0.004***	0.169	***0.051***	-0.044	***0.000***	0.134	***0.017***	0.992	***0.000***	0.356	*0.169*	-0.048	*0.757*	0.084
1992	2,798	0.148	***0.000***	0.459	***0.000***	0.106	***0.008***	-0.002	*0.982*	-0.049	***0.003***	0.306	***0.000***	1.819	***0.000***	0.248	*0.334*	0.135	*0.480*	0.112
1993	2,875	0.157	***0.000***	0.582	***0.000***	0.183	***0.000***	0.138	*0.124*	-0.024	*0.244*	0.295	***0.000***	0.674	***0.014***	0.231	*0.477*	0.055	*0.715*	0.112
1994	3,080	-0.040	***0.000***	0.522	***0.000***	0.195	***0.000***	0.176	***0.007***	0.010	*0.597*	0.223	***0.000***	0.171	*0.445*	-0.056	*0.679*	0.261	***0.011***	0.125
1995	3,330	0.155	***0.000***	0.554	***0.000***	0.406	***0.000***	-0.006	*0.948*	0.006	*0.721*	0.145	***0.034***	0.600	***0.005***	-0.312	***0.027***	0.046	*0.706*	0.112
1996	3,600	0.090	***0.000***	0.679	***0.000***	0.114	***0.040***	0.163	***0.042***	-0.010	*0.627*	0.237	***0.000***	0.368	***0.068***	0.216	*0.271*	0.254	***0.003***	0.109
1997	3,689	0.090	***0.000***	0.723	***0.000***	0.220	***0.000***	0.350	***0.000***	-0.016	*0.359*	0.323	***0.000***	0.540	***0.006***	0.211	*0.320*	0.304	***0.000***	0.164
1998	3,815	-0.043	***0.000***	0.746	***0.000***	0.179	***0.001***	0.280	***0.000***	-0.010	*0.459*	0.163	***0.008***	0.700	***0.001***	0.780	***0.007***	0.006	*0.941*	0.114
1999	3,729	0.202	***0.000***	0.142	***0.052***	0.610	***0.000***	0.015	*0.908*	0.004	*0.841*	0.144	***0.075***	1.136	***0.001***	0.333	*0.396*	0.302	***0.008***	0.031
2000	3,541	0.070	***0.000***	0.635	***0.000***	0.160	***0.037***	-0.373	***0.002***	-0.055	***0.089***	0.273	***0.001***	3.176	***0.000***	0.067	*0.893*	0.178	*0.161*	0.074
2001	3,346	0.093	***0.000***	0.228	***0.000***	0.217	***0.000***	0.530	***0.000***	-0.012	*0.450*	0.045	*0.420*	0.420	*0.158*	-0.136	*0.392*	0.097	*0.379*	0.071
2002	3,245	-0.063	***0.000***	0.400	***0.000***	-0.034	*0.185*	0.500	***0.000***	-0.090	-	0.104	***0.034***	0.165	*0.497*	-0.063	*0.778*	0.026	*0.815*	0.099
2003	3,152	0.481	***0.000***	-0.118	***0.011***	0.525	***0.000***	0.212	*0.147*	0.051	-	0.261	***0.006***	-2.622	***0.000***	0.449	*0.436*	0.282	*0.177*	0.105
2004	3,093	0.256	***0.000***	0.340	***0.000***	0.342	***0.000***	0.091	*0.297*	-0.044	***0.012***	0.254	***0.005***	-0.202	*0.634*	2.102	***0.000***	0.154	*0.292*	0.118
2005	2,754	0.052	***0.000***	0.806	***0.000***	-0.062	*0.305*	0.036	*0.696*	-0.044	***0.034***	0.203	***0.004***	0.515	*0.138*	0.555	***0.022***	0.117	*0.255*	0.154
	3,160	0.103	*3.005*	0.497	*8.893*	0.179	*3.886*	0.152	*3.103*	- 0.022	- *2.756*	0.178	*7.214*	0.461	*1.754*	0.270	*2.139*	0.127	*4.580*	0.117
			***		***		***		***		***		***		**		**		***	

Coefficients are means of annual regressions over the period 1988-2005, and t-values are based on the standard error of the mean (Fama and MacBeth, 1973; Bernard, 1987). The dependent variable Rett is the annual stock return obtained by compounding CRSP monthly returns over the fiscal period. Comprehensive income (xt) is net income (#172) minus preferred dividends (#19) plus the change in value of marketable securities (#238) plus the change in the cumulative foreign currency translation adjustment (#230). Dividends (dt) are the sum of dividends to common shareholders (item #21) and net capital contributions. Net capital contributions are purchases of common and preferred stock (item #115) minus sales of common and preferred stock (item #108). Operating assets (oat) are book value of equity (bt) minus financial assets (fat). Book value of equity (bt) is common equity (#60) plus preferred treasury stock (#227) minus preferred dividends in arrears (#242). Financial assets (fat) are cash and short-term investments (#1) plus investments and advances-others (#32) minus debt in current liabilities (#34) minus long term debt (#9) minus preferred stock (#130) plus preferred treasury stock (#227) minus preferred dividends in arrears(#343) minus minority interests(#38). Capital expenditure (cpxt) is capital expenditures (#128) less sales of property, plant and equipment (#107) less investing activities (#310). Research and development (rdt)is research and development expense (#46) plus in-process Research and development expense (#388). Acquisitions (acqt) and advertisements (advt) are collected directly as single items (#129, #45 respectively). The ratio of the market value of operating assets to the book value of operating assets (V/oa) is the market value of common equity minus financial assets (MVeqt - fat) divided by the book value of common equity ((pt – fat)/oat). All variables except the market value of equity (pt), annual stock returns (rett), and ratio of market value of operating assets to the book value of operating assets (V/oa) are deflated by the beginning market value of equity (pt-1).

Table 5

Regression - return on earnings and split investments: All firms

$$ret_{jt} = \beta_0 + \beta_1 \frac{x_{jt}}{p_{jt-1}} + \beta_2 \frac{\Delta x_{jt}}{p_{jt-1}} + \beta_3 \frac{d_{jt-1}}{p_{jt-1}} + \beta_4 \frac{\Delta oa_{jt-1}}{p_{jt-1}} + \beta_5 \frac{\Delta cpx_{jt}}{p_{jt-1}} + \beta_6 \frac{\Delta rd_{jt}}{p_{jt-1}} + \beta_5 \frac{\Delta adv_{jt}}{p_{jt-1}} + \beta_6 \frac{\Delta acq_{jt}}{p_{jt-1}} + \varepsilon_{jt}$$

Coefficient estimates, t-statistics in parentheses and significance levels below t-statistics

Year	Av. #obs	Int.		x_t		Δx_t		d_{t-1}		$\Delta\ oa_{t-1}$		Δcpx_t		Δrd_t		Δadv_t		Δacq_t		Adj R-Sq
Model M7	3,160	0.103	*3.005*	0.497	*8.893*	0.179	*3.886*	0.152	*3.103*	- 0.022	- *2.756*	0.178	*7.214*	0.461	*1.754*	0.270	*2.139*	0.127	*4.580*	0.117
			***		***		***		***		***		***		**		**		***	
Model M1	3,158	0.106	*3.090*	0.521	*8.306*	0.156	*3.146*	0.125	*2.578*	- 0.043	- *3.429*	0.175	*7.074*							0.112
			***		***		***		***		***		***							
Model M2	3,158	0.106	*3.095*	0.537	*9.178*	0.154	*3.266*	0.122	*2.586*	- 0.054	- *4.694*			0.505	*1.918*					0.113
			***		***		***		***		***				**					
Model M3	3,157	0.104	*3.052*	0.513	*8.912*	0.170	*3.583*	0.134	*2.911*	- 0.044	- *3.850*	0.173	*7.126*	0.489	*1.864*					0.116
			***		***		***		***		***		***		**					
Model M4	3,158	0.107	*3.115*	0.541	*8.503*	0.143	*2.892*	0.114	*2.302*	- 0.049	- *3.824*							0.137	*4.878*	0.110
			***		***		***		**		***								***	
Model M5	3,156	0.104	*3.035*	0.509	*8.847*	0.173	*3.633*	0.136	*2.941*	- 0.040	- *3.413*	0.173	*7.161*	0.470	*1.801*			0.124	*4.489*	0.116
			***		***		***		***		***		***		**				***	
Model M6	3,158	0.107	*3.128*	0.543	*8.444*	0.141	*2.840*	0.112	*2.262*	- 0.053	- *4.193*					0.300	*2.324*			0.110
			***		***		***		**		***						**			

Coefficients are means of annual regressions over the period 1988-2005, and t-values are based on the standard error of the mean (Fama and MacBeth, 1973; Bernard, 1987). The dependent variable Rett is the annual stock return obtained by compounding CRSP monthly returns over the fiscal period. Comprehensive income (xt) is net income (#172) minus preferred dividends (#19) plus the change in value of marketable securities (#238) plus the change in the cumulative foreign currency translation adjustment (#230). Dividends (dt) are the sum of dividends to common shareholders (item #21) and net capital contributions. Net capital contributions are purchases of common and preferred stock (item #115) minus sales of common and preferred stock (item #108). Operating assets (oat) are book value of equity (bt) minus financial assets (fat). Book value of equity (bt) is common equity (#60) plus preferred treasury stock (#227) minus preferred dividends in arrears (#242). Financial assets (fat) are cash and short-term investments (#1) plus investments and advances-others (#32) minus debt in current liabilities (#34) minus long term debt (#9) minus preferred stock (#130) plus preferred treasury stock (#227) minus preferred dividends in arrears(#343) minus minority interests(#38). Capital expenditure (cpxt) is capital expenditures (#128) less sales of property, plant and equipment (#107) less investing activities (#310). Research and development (rdt)is research and development expense (#46) plus in-process Research and development expense (#388). Acquisitions (acqt) and advertisements (advt) are collected directly as single items (#129, #45 respectively). The ratio of the market value of operating assets to the book value of operating assets (V/oa) is the market value of common equity minus financial assets (MVeqt - fat) divided by the book value of common equity ((pt – fat)/oat). All variables except the market value of equity (pt), annual stock returns (rett), and ratio of market value of operating assets to the book value of operating assets (V/oa) are deflated by the beginning market value of equity (pt-1).

Table 6

Regression - return on earnings and split investments by *V/oa* deciles

$$ret_{jt} = \beta_0 + \beta_1 \frac{x_{jt}}{p_{jt-1}} + \beta_2 \frac{\Delta x_{jt}}{p_{jt-1}} + \beta_3 \frac{d_{jt-1}}{p_{jt-1}} + \beta_4 \frac{\Delta oa_{jt-1}}{p_{jt-1}} + \beta_5 \frac{\Delta cpx_{jt}}{p_{jt-1}} + \beta_6 \frac{\Delta rd_{jt}}{p_{jt-1}} + \beta_5 \frac{\Delta adv_{jt}}{p_{jt-1}} + \beta_6 \frac{\Delta acq_{jt}}{p_{jt-1}} + \varepsilon_{jt}$$

Coefficient estimates, t-statistics in parentheses and significance levels below t-statistics

Decile	Median *V/oa*	Av. #obs	Int.		x_t		Δx_t		d_{t-1}		Δoa_{t-1}		Δcpx_t		Δrd_t		Δadv_t		Δacq_t		Adj R-Sq
1	0.239	98	-0.113	*-3.210* ***	0.420	*7.389* ***	-0.059	*-1.319*	0.664	*8.927* ***	-0.046	*-1.961* **	0.098	*1.956* **	0.775	*1.692* *	0.091	*0.403*	-0.348	*-1.203*	0.444
2	0.587	306	-0.088	*-2.903* ***	0.569	*13.011* ***	-0.021	*-0.629*	0.542	*8.670* ***	-0.051	*-4.253* ***	0.028	*0.814*	0.085	*0.450*	-0.007	*-0.031*	0.001	*0.022*	0.363
3	0.831	333	-0.050	*-1.489* *	0.639	*8.616* ***	0.041	*0.688*	0.367	*4.913* ***	-0.057	*-3.026* ***	0.031	*0.559*	0.165	*0.411*	0.343	*1.490* *	0.030	*0.498*	0.286
4	1.018	339	-0.010	*-0.325*	0.753	*8.739*	0.033	*0.615*	0.360	*5.064* ***	-0.057	*-2.566*	0.048	*1.344*	0.143	*0.353*	0.106	*0.210*	-0.001	*-0.030*	0.237
5	1.223	340	0.039	*1.395* *	0.795	*7.554* ***	0.013	*0.241*	0.270	*4.444* ***	-0.016	*-0.659*	0.054	*1.037*	0.614	*1.670* *	0.394	*0.590*	0.058	*1.081*	0.181
6	1.508	346	0.069	*2.355* **	0.935	*6.332* ***	0.262	*2.452* **	0.182	*1.573* *	0.055	*1.135*	0.286	*3.785* ***	0.072	*0.188*	-0.595	*-0.916*	0.194	*2.309* **	0.215
7	1.975	347	0.116	*3.685* ***	0.821	*11.207* ***	0.402	*3.467* ***	0.008	*0.119*	0.087	*1.609* *	0.307	*3.528* ***	0.160	*0.378*	0.246	*0.353*	0.001	*0.013*	0.167
8	2.886	342	0.145	*4.255* ***	0.772	*4.238* ***	0.828	*4.787* ***	0.112	*0.778*	0.369	*3.521* ***	0.691	*4.919* ***	1.160	*2.762* ***	0.252	*0.386*	0.710	*6.100* ***	0.203
9	5.561	339	0.200	*3.985* ***	0.739	*4.520* ***	0.980	*5.277* ***	0.086	*0.523*	0.590	*3.189* ***	1.326	*6.086* ***	0.941	*3.322* ***	2.794	*2.082* **	1.191	*5.266* ***	0.172
10	21.983	296	0.283	*3.597* ***	0.416	*1.744* **	0.939	*3.547* ***	0.003	*0.030*	0.053	*0.216*	0.963	*2.481* **	2.815	*3.625* ***	2.467	*1.218*	1.433	*1.573* *	0.084

Table 6: (cont.)

Coefficients are means of annual regressions over the period 1988-2005, and t-values are based on the standard error of the mean (Fama and MacBeth, 1973; Bernard, 1987). The dependent variable Rett is the annual stock return obtained by compounding CRSP monthly returns over the fiscal period. xt is a comprehensive income calculated Return (rett) is obtained from CRSP by compounding monthly returns during the fiscal period. Comprehensive income (xt) is net income (#172) minus preferred dividends (#19) plus the change in value of marketable securities (#238) plus the change in the cumulative foreign currency translation adjustment (#230). Dividends (dt) are the sum of dividends to common shareholders (item #21) and net capital contributions. Net capital contributions are purchases of common and preferred stock (item #115) minus sales of common and preferred stock (item #108). Operating assets (oat) are book value of equity (bt) minus financial assets (fat). Book value of equity (bt) is common equity (#60) plus preferred treasury stock (#227) minus preferred dividends in arrears (#242). Financial assets (fat) are cash and short-term investments (#1) plus investments and advances-others (#32) minus debt in current liabilities (#34) minus long term debt (#9) minus preferred stock (#130) plus preferred treasury stock (#227) minus preferred dividends in arrears(#343) minus minority interests(#38). Capital expenditure (cpxt) is capital expenditures (#128) less sales of property, plant and equipment (#107) less investing activities (#310). Research and development (rdt)is research and development expense (#46) plus in-process Research and development expense (#388). Acquisitions (acqt) and advertisements (advt) are collected directly as single items (#129, #45 respectively). The ratio of the market value of operating assets to the book value of operating assets (V/oa) is the market value of common equity minus financial assets (MVeqt - fat) divided by the book value of common equity ((pt – fat)/oat). All variables except the market value of equity (pt), annual stock returns (rett), and ratio of market value of operating assets to the book value of operating assets (V/oa) are deflated by the beginning market value of equity (pt-1).

Table 7. Identity of industry sub-samples

Industry	Primary SIC codes	# firm-years	% of obs.
1. Mining and Construction	1000-1999, excluding 1300-1399	2,077	3.65
2. Food	2000-2111	1,592	2.80
3. Textiles and printing	2200-2790	3,242	5.69
4. Chemicals	2800-2824, 240-2899	1,498	2.63
5. Pharmaceuticals	2830-2836	2,727	4.79
6. Extractive Industries	2900-2999, 1300-1399	2,874	5.05
7. Durable Manufacturers	3000-3999, excluding 3570-3579 and 3670-3679	15,254	26.78
8. Computers	7370-7379, 3570-3579, 3670-3679	8,069	14.17
9. Transportation	4000-4899	2,846	5.00
11. Retail	5000-5999	7,360	12.92
12. Agriculture	1-999	208	0.37
Non-classified		9,204	16.16
Total		56,951	100.00
Mean		4,746	8.33

Table 8. Median key variables by Industry

Industry	MV_{Eq}	ret_t	x_t	Δx_t	d_{t-1}	$\Delta\ oa_{t-1}$	Δci_t	*V/oa*	Δcpx_t	Δrd_t	Δadv_t	Δacq_t	*FLEV*	*Cash*
1. Mining and Construction	130.99	-0.007	0.024	0.005	0.000	0.045	0.001	1.275	0.001	0.000	0.000	0.000	1.349	0.060
2. Food	167.67	0.109	0.072	0.006	0.023	0.042	0.001	1.359	0.002	0.000	0.000	0.000	1.678	0.035
3. Textiles and printing	192.69	0.066	0.071	0.006	0.020	0.036	0.002	1.167	0.002	0.000	0.000	0.000	1.586	0.030
4. Chemicals	319.14	0.095	0.062	0.006	0.020	0.025	0.002	1.442	0.002	0.000	0.000	0.000	1.651	0.045
5. Pharmaceuticals	163.87	-0.032	-0.016	0.003	-0.005	0.012	0.001	4.817	0.001	0.004	0.000	0.000	0.125	0.127
6. Extractive Industries	224.98	0.083	0.042	0.007	0.000	0.043	0.014	1.387	0.011	0.000	0.000	0.000	1.410	0.035
7. Durable Manufacturers	85.41	0.042	0.050	0.008	0.000	0.032	0.001	1.363	0.001	0.000	0.000	0.000	1.011	0.069
8. Computers	115.68	-0.036	0.016	0.009	-0.005	0.019	0.002	2.407	0.001	0.001	0.000	0.000	0.331	0.162
9. Transportation	273.81	0.080	0.056	0.008	0.000	0.058	0.005	1.281	0.006	0.000	0.000	0.000	2.218	0.046
11. Retail	102.46	0.037	0.064	0.009	0.000	0.057	0.003	1.210	0.003	0.000	0.000	0.000	1.420	0.046
12. Agriculture	125.38	0.017	0.033	-0.001	0.000	0.031	0.000	1.468	0.001	0.000	0.000	0.000	1.326	0.034
Other	116.23	0.030	0.045	0.006	0.000	0.027	0.000	1.626	0.000	0.000	0.000	0.000	1.196	0.057

'MVEq is the market value of equity (CRSP end of month price end at end of financial year x CRSP "SHROUT"). Return (rett) is obtained from CRSP by compounding monthly returns over the fiscal period. Comprehensive income (xt) is net income (#172) minus preferred dividends (#19) plus the change in value of marketable securities (#238) plus the change in the cumulative foreign currency translation adjustment (#230). Dividends (dt) are the sum of dividends to common shareholders (item #21) and net capital contributions. Net capital contributions are purchases of common and preferred stock (item #115) minus sales of common and preferred stock (item #108). Operating assets (oat) are book value of equity (bt) minus financial assets (fat). Book value of equity (bt) is common equity (#60) plus preferred treasury stock (#227) minus preferred dividends in arrears (#242). Financial assets (fat) are cash and short-term investments (#1) plus investments and advances-others (#32) minus debt in current liabilities (#34) minus long term debt (#9) minus preferred stock (#130) plus preferred treasury stock (#227) minus preferred dividends in arrears(#343) minus minority interests(#38). Capital expenditure (cpxt) is capital expenditures (#128) less sales of property, plant and equipment (#107) less investing activities (#310). Research and development (rdt)is research and development expense (#46) plus in-process Research and development expense (#388). Acquisitions (acqt) and advertisements (advt)are collected directly as single items (#129, #45 respectively). The ratio of the market value of operating assets to the book value of operating assets (V/oa) is the market value of common equity minus financial assets (MVeqt - fat) divided by the book value of common equity ((pt – fat)/oat). All variables except the market value of equity (pt), annual stock returns (rett), and ratio of market value of operating assets to the book value of operating assets (V/oa) are deflated by the beginning market value of equity (pt-1).

Table 9: Conservatism and industry

$$ret_{jt} = \beta_0 + \beta_1 \frac{x_{jt}}{p_{jt-1}} + \beta_2 \frac{\Delta x_{jt}}{p_{jt-1}} + \beta_3 \frac{d_{jt-1}}{p_{jt-1}} + \beta_4 \frac{\Delta oa_{jt-1}}{p_{jt-1}} + \beta_5 \frac{\Delta cpx_{jt}}{p_{jt-1}} + \beta_6 \frac{\Delta rd_{jt}}{p_{jt-1}} + \beta_5 \frac{\Delta adv_{jt}}{p_{jt-1}} + \beta_6 \frac{\Delta acq_{jt}}{p_{jt-1}} + \varepsilon_{jt}$$

Coefficient estimates, t-statistics in parentheses and significance levels below t-statistics

Industry	Av. #obs	Int.		x_t		Δx_t		d_{t-1}		$\Delta\ oa_{t-1}$		Δcpx_t		Δrd_t		Δadv_t		Δacq_t		Adj R-Sq
Mining and Construction																				
	106	0.088	*1.720058*	0.472	*6.866362*	0.107	*2.183659*	0.108	*1.156425*	-0.029	*-1.50772*	0.224	*2.061487*	5.011	*1.112814*	2.168	*0.864789*	0.104	*0.818*	0.151
			*		***		**				*		**							
Food																				
	79	0.054	*1.881352*	0.851	*5.533808*	-0.127	*-0.70785*	0.231	*1.309146*	-0.077	*-1.271*	-0.012	*-0.1262*	10.691	*2.796865*	-0.550	*-0.81805*	-0.063	*-0.392*	0.265
			**		***										***					
Textiles and printing																				
	171	0.055	*2.110146*	0.715	*5.316633*	-0.089	*-0.91103*	0.161	*0.992089*	-0.097	*-2.85564*	0.090	*1.838528*	0.345	*0.243742*	0.695	*1.602096*	0.082	*0.752*	0.224
			**		***						***		**				*			
Chemicals																				
	74	0.071	*2.053272*	0.537	*2.85166*	0.268	*1.497577*	0.234	*1.460519*	-0.098	*-1.03558*	0.112	*1.389477*	0.632	*0.865348*	0.369	*0.752874*	0.057	*0.383*	0.220
			**		***		*		*				*							
Pharmaceuticals																				
	143	0.124	*1.699867*	0.284	*1.654805*	0.600	*2.665683*	0.297	*1.903864*	0.161	*1.572146*	0.441	*2.133078*	0.388	*1.041095*	-1.322	*-1.08569*	0.198	*0.870*	0.122
			*		*		***		**		*		**							
Extractive Industries																				
	151	0.119	*2.184387*	0.637	*6.835887*	0.156	*1.088582*	0.047	*0.313451*	-0.085	*-2.18786*	0.102	*1.517348*	8.102	*2.485646*	-3.502	*-0.47312*	-0.130	*-0.839*	0.200
			**		***						**		*		**					
Durable Manufacturers																				
	838	0.110	*2.92985*	0.462	*8.878484*	0.256	*4.872017*	0.206	*3.58583*	-0.031	*-1.47167*	0.209	*3.969302*	0.656	*1.792754*	0.194	*1.082326*	0.161	*3.468*	0.122
			***		***		***		***		*		***		**				***	
Computers																				
	439	0.113	*2.039031*	0.494	*5.621266*	0.408	*5.619459*	0.051	*0.507581*	0.020	*0.5799*	0.374	*3.053155*	0.757	*1.779107*	0.401	*0.508976*	0.224	*2.137*	0.112
			**		***		***						***		**				**	
Transportation																				
	149	0.115	*2.591952*	0.384	*3.212291*	0.187	*1.677876*	0.269	*2.452969*	-0.051	*-1.42775*	0.056	*1.376583*	1.427	*0.969259*	3.311	*1.65852*	0.091	*0.917*	0.217
			***		***		*		**		*		*				*			
Retail																				
	400	0.078	*2.791611*	0.745	*5.867293*	-0.032	*-0.28781*	0.081	*0.909597*	-0.104	*-2.67573*	0.106	*1.063576*	1.265	*1.36516*	0.312	*1.843216*	0.118	*1.645*	0.154
			***		***						***				*		**		*	

Table 9: (cont.)

Coefficients are means of annual regressions over the period 1988-2005, and t-values are based on the standard error of the mean (Fama and MacBeth, 1973; Bernard, 1987). The dependent variable Rett is the annual stock return obtained by compounding CRSP monthly returns over the fiscal period. xt is a comprehensive income calculated Return (rett) is obtained from CRSP by compounding monthly returns during the fiscal period. Comprehensive income (xt) is net income (#172) minus preferred dividends (#19) plus the change in value of marketable securities (#238) plus the change in the cumulative foreign currency translation adjustment (#230). Dividends (dt) are the sum of dividends to common shareholders (item #21) and net capital contributions. Net capital contributions are purchases of common and preferred stock (item #115) minus sales of common and preferred stock (item #108). Operating assets (oat) are book value of equity (bt) minus financial assets (fat). Book value of equity (bt) is common equity (#60) plus preferred treasury stock (#227) minus preferred dividends in arrears (#242). Financial assets (fat) are cash and short-term investments (#1) plus investments and advances-others (#32) minus debt in current liabilities (#34) minus long term debt (#9) minus preferred stock (#130) plus preferred treasury stock (#227) minus preferred dividends in arrears(#343) minus minority interests(#38). Capital expenditure (cpxt) is capital expenditures (#128) less sales of property, plant and equipment (#107) less investing activities (#310). Research and development (rdt)is research and development expense (#46) plus in-process Research and development expense (#388). Acquisitions (acqt) and advertisements (advt) are collected directly as single items (#129, #45 respectively). The ratio of the market value of operating assets to the book value of operating assets (V/oa) is the market value of common equity minus financial assets (MVeqt - fat) divided by the book value of common equity ((pt – fat)/oat). All variables except the market value of equity (pt), annual stock returns (rett), and ratio of market value of operating assets to the book value of operating assets (V/oa) are deflated by the beginning market value of equity (pt-1).

Table 10

Regression - return on earnings and split investments: Profit Firms

$$ret_{jt} = \beta_0 + \beta_1 \frac{x_{jt}}{p_{jt-1}} + \beta_2 \frac{\Delta x_{jt}}{p_{jt-1}} + \beta_3 \frac{d_{jt-1}}{p_{jt-1}} + \beta_4 \frac{\Delta oa_{jt-1}}{p_{jt-1}} + \beta_5 \frac{\Delta cpx_{jt}}{p_{jt-1}} + \beta_6 \frac{\Delta rd_{jt}}{p_{jt-1}} + \beta_5 \frac{\Delta adv_{jt}}{p_{jt-1}} + \beta_6 \frac{\Delta acq_{jt}}{p_{jt-1}} + \varepsilon_{jt}$$

Coefficient estimates, t-statistics in parentheses and significance levels below t-statistics

	Av. #obs	Int.		x_t		Δx_t		d_{t-1}		$\Delta\ oa_{t-1}$		Δcpx_t		Δrd_t		Δadv_t		Δacq_t		Adj R-Sq
Model M7	2,134	0.106	*3.394* ***	0.745	*13.364* ***	0.247	*3.840* ***	0.016	*0.281* ***	- 0.056	- *5.879* ***	0.139	*6.192* ***	0.720	*3.817* ***	0.142	*0.621*	0.066	*1.846* **	0.141
Model M1	2,137	0.108	*3.431* ***	0.765	*13.551* ***	0.224	*3.581* ***	0.003	*0.048* ***	- 0.058	- *6.065* ***	0.141	*6.223* ***							0.137
Model M2	2,137	0.107	*3.423* ***	0.765	*13.391* ***	0.229	*3.664* ***	0.003	*0.045* ***	- 0.065	- *6.640* ***			0.749	*3.879* ***					0.138
Model M3	2,136	0.107	*3.404* ***	0.746	*13.285* ***	0.243	*3.783* ***	0.013	*0.231* ***	- 0.058	- *6.052* ***	0.139	*6.141* ***	0.736	*3.816* ***					0.139
Model M4	2,137	0.108	*3.440* ***	0.782	*13.638* ***	0.212	*3.470* ***	- 0.007	- *0.121* ***	- 0.062	- *6.440* ***							0.082	*2.278* **	0.135
Model M5	2,135	0.106	*3.396* ***	0.744	*13.272* ***	0.245	*3.796* ***	0.013	*0.236* ***	- 0.056	- *5.757* ***	0.139	*6.175* ***	0.724	*3.794* ***			0.067	*1.920* **	0.139
Model M6	2,137	0.108	*3.449* ***	0.785	*13.652* ***	0.212	*3.486* ***	- 0.005	- *0.088* ***	- 0.065	- *6.808* ***					0.166	*0.728*			0.136

Coefficients are means of annual regressions over the period 1988-2005, and t-values are based on the standard error of the mean (Fama and MacBeth, 1973; Bernard, 1987). The dependent variable Rett is the annual stock return obtained by compounding CRSP monthly returns over the fiscal period. Comprehensive income (xt) is net income (#172) minus preferred dividends (#19) plus the change in value of marketable securities (#238) plus the change in the cumulative foreign currency translation adjustment (#230). Dividends (dt) are the sum of dividends to common shareholders (item #21) and net capital contributions. Net capital contributions are purchases of common and preferred stock (item #115) minus sales of common and preferred stock (item #108). Operating assets (oat) are book value of equity (bt) minus financial assets (fat). Book value of equity (bt) is common equity (#60) plus preferred treasury stock (#227) minus preferred dividends in arrears (#242). Financial assets (fat) are cash and short-term investments (#1) plus investments and advances-others (#32) minus debt in current liabilities (#34) minus long term debt (#9) minus preferred stock (#130) plus preferred treasury stock (#227) minus preferred dividends in arrears(#343) minus minority interests(#38). Capital expenditure (cpxt) is capital expenditures (#128) less sales of property, plant and equipment (#107) less investing activities (#310). Research and development (rdt)is research and development expense (#46) plus in-process Research and development expense (#388). Acquisitions (acqt) and advertisements (advt) are collected directly as single items (#129, #45 respectively). The ratio of the market value of operating assets to the book value of operating assets (V/oa) is the market value of common equity minus financial assets (MVeqt - fat) divided by the book value of common equity ((pt – fat)/oat). All variables except the market value of equity (pt), annual stock returns (rett), and ratio of market value of operating assets to the book value of operating assets (V/oa) are deflated by the beginning market value of equity (pt-1).

Table 11

Regression - return on earnings and split investments: Loss Firms

$$ret_{jt} = \beta_0 + \beta_1 \frac{x_{jt}}{p_{jt-1}} + \beta_2 \frac{\Delta x_{jt}}{p_{jt-1}} + \beta_3 \frac{d_{jt-1}}{p_{jt-1}} + \beta_4 \frac{\Delta oa_{jt-1}}{p_{jt-1}} + \beta_5 \frac{\Delta cpx_{jt}}{p_{jt-1}} + \beta_6 \frac{\Delta rd_{jt}}{p_{jt-1}} + \beta_5 \frac{\Delta adv_{jt}}{p_{jt-1}} + \beta_6 \frac{\Delta acq_{jt}}{p_{jt-1}} + \varepsilon_{jt}$$

Coefficient estimates, t-statistics in parentheses and significance levels below t-statistics

Year	Av. #obs	Int.	x_t	Δx_t	d_{t-1}	$\Delta\ oa_{t-1}$	Δcpx_t	Δrd_t	Δadv_t	Δacq_t	Adj R-Sq
Model M7	1,012	0.085	*2.079*	0.142	*2.812*	0.133	*3.384*	0.066	*1.256*	0.013	*0.607*	0.236	*6.626*	0.255	*0.830*	0.360	*2.397*	0.274	*3.817*	0.027
			**		***		***						***				**		***	
Model M1	1,015	0.084	*2.106*	0.136	*2.397*	0.116	*2.648*	0.056	*1.047*	0.018	*0.815*	0.236	*6.466*							0.021
			**		**		***						***							
Model M2	1,015	0.083	*2.064*	0.104	*2.100*	0.097	*2.496*	0.050	*0.954*	0.038	*1.861*			0.319	*1.023*					0.022
			**		**		**				**									
Model M3	1,014	0.084	*2.068*	0.131	*2.610*	0.121	*3.061*	0.067	*1.276*	0.021	*1.033*	0.233	*6.492*	0.303	*0.978*					0.026
			**		***		***						***							
Model M4	1,015	0.084	*2.105*	0.115	*2.026*	0.097	*2.238*	0.037	*0.669*	0.027	*1.198*							0.289	*3.889*	0.018
			**		**		**												***	
Model M5	1,013	0.084	*2.071*	0.136	*2.683*	0.126	*3.156*	0.064	*1.205*	0.012	*0.607*	0.236	*6.580*	0.256	*0.833*			0.275	*3.823*	0.027
			**		***		***						***						***	
Model M6	1,015	0.084	*2.111*	0.116	*2.085*	0.098	*2.293*	0.041	*0.746*	0.037	*1.615*					0.377	*2.401*			0.017
			**		**		**				*						**			

Coefficients are means of annual regressions over the period 1988-2005, and t-values are based on the standard error of the mean (Fama and MacBeth, 1973; Bernard, 1987). The dependent variable Rett is the annual stock return obtained by compounding CRSP monthly returns over the fiscal period. Comprehensive income (xt) is net income (#172) minus preferred dividends (#19) plus the change in value of marketable securities (#238) plus the change in the cumulative foreign currency translation adjustment (#230). Dividends (dt) are the sum of dividends to common shareholders (item #21) and net capital contributions. Net capital contributions are purchases of common and preferred stock (item #115) minus sales of common and preferred stock (item #108). Operating assets (oat) are book value of equity (bt) minus financial assets (fat). Book value of equity (bt) is common equity (#60) plus preferred treasury stock (#227) minus preferred dividends in arrears (#242). Financial assets (fat) are cash and short-term investments (#1) plus investments and advances-others (#32) minus debt in current liabilities (#34) minus long term debt (#9) minus preferred stock (#130) plus preferred treasury stock (#227) minus preferred dividends in arrears(#343) minus minority interests(#38). Capital expenditure (cpxt) is capital expenditures (#128) less sales of property, plant and equipment (#107) less investing activities (#310). Research and development (rdt)is research and development expense (#46) plus in-process Research and development expense (#388). Acquisitions (acqt) and advertisements (advt) are collected directly as single items (#129, #45 respectively). The ratio of the market value of operating assets to the book value of operating assets (V/oa) is the market value of common equity minus financial assets (MVeqt - fat) divided by the book value of common equity ((pt – fat)/oat). All variables except the market value of equity (pt), annual stock returns (rett), and ratio of market value of operating assets to the book value of operating assets (V/oa) are deflated by the beginning market value of equity (pt-1).

***Table* 12**

Regression - return on earnings and split investments by FLEV (NFO / BVEQ)

$$ret_{jt} = \beta_0 + \beta_1 \frac{x_{jt}}{p_{jt-1}} + \beta_2 \frac{\Delta x_{jt}}{p_{jt-1}} + \beta_3 \frac{d_{jt-1}}{p_{jt-1}} + \beta_4 \frac{\Delta oa_{jt-1}}{p_{jt-1}} + \beta_5 \frac{\Delta cpx_{jt}}{p_{jt-1}} + \beta_6 \frac{\Delta rd_{jt}}{p_{jt-1}} + \beta_5 \frac{\Delta adv_{jt}}{p_{jt-1}} + \beta_6 \frac{\Delta acq_{jt}}{p_{jt-1}} + \varepsilon_{jt}$$

Coefficient estimates, t-statistics in parentheses and significance levels below t-statistics

Med. Cash	Med. FLEV		Av. #obs	Int.		x_t		Δx_t		d_{t-1}		Δoa_{t-1}		Δcpx_t		Δrd_t		Δadv_t		Δacq_t		Adj R-Sq
		FLEV D-3																				
0.082	-0.941		169	0.124	*2.050*	0.255	*0.860*	1.044	*3.749*	0.187	*1.513*	-0.005	*-0.018*	0.705	*2.067*	2.245	*3.190*	4.374	*2.003*	1.907	*1.660*	0.147
					**				***		*				**		***		**		*	
		FLEV D-2																				
0.245	-0.405		175	0.106	*2.094*	0.893	*4.208*	0.598	*2.800*	-0.077	*-0.468*	-0.116	*-0.720*	0.321	*1.550*	1.450	*3.327*	0.505	*0.563*	0.165	*0.334*	0.150
					**		***		***						*		***					
		FLEV D-1																				
0.055	-0.113		175	0.124	*2.503*	0.640	*4.193*	0.494	*2.343*	0.209	*1.268*	0.045	*0.506*	0.388	*1.794*	1.119	*2.002*	1.390	*0.890*	0.071	*0.378*	0.159
					**		***		**						**		**					
		FLEV D0																				
0.127	0.154		358	0.108	*2.850*	0.749	*5.455*	0.404	*3.347*	-0.028	*-0.291*	-0.037	*-0.510*	0.238	*2.558*	1.159	*2.993*	0.007	*0.012*	0.156	*1.099*	0.160
					***		***		***						**		***					
		FLEV D1																				
0.088	0.521		384	0.101	*3.419*	0.505	*4.863*	0.379	*3.649*	0.217	*2.686*	-0.040	*-1.364*	0.107	*1.071*	0.294	*0.659*	1.161	*1.838*	0.139	*1.387*	0.143
					***		***		***		***		*						**		*	
		FLEV D2																				
0.053	0.940		358	0.093	*3.123*	0.596	*6.648*	0.312	*4.445*	0.023	*0.229*	-0.064	*-2.382*	0.171	*2.522*	0.579	*1.481*	1.192	*2.163*	0.047	*0.809*	0.185
					***		***		***				**		**		*		**			
		FLEV D3																				
0.038	1.434		358	0.074	*2.341*	0.596	*8.009*	0.269	*4.117*	0.111	*0.901*	-0.033	*-0.950*	0.153	*2.325*	0.614	*1.147*	0.098	*0.418*	0.178	*2.134*	0.176
					**		***		***						**						**	
		FLEV D4																				
0.029	2.069		358	0.079	*2.527*	0.594	*9.259*	0.048	*0.770*	0.068	*0.808*	-0.059	*-1.650*	0.174	*4.278*	0.338	*0.966*	-0.281	*-0.770*	0.085	*1.154*	0.153
					**		***						*		***							
		FLEV D5																				
0.026	3.139		384	0.070	*2.261*	0.417	*5.195*	0.113	*1.722*	0.274	*3.228*	-0.029	*-1.193*	0.092	*1.785*	0.383	*1.055*	0.074	*0.264*	0.123	*2.542*	0.135
					**		***		*		***				**						**	
		FLEV D6																				
0.026	7.039		358	0.052	*1.507*	0.370	*6.336*	0.106	*2.503*	0.218	*4.134*	-0.011	*-1.185*	0.176	*3.681*	0.042	*0.143*	0.910	*1.740*	0.179	*2.044*	0.117
					*		***		**		***				***				*		**	

Coefficients are means of annual regressions over the period 1988-2005, and t-values are based on the standard error of the mean (Fama and MacBeth, 1973; Bernard, 1987). The dependent variable Rett is the annual stock return obtained by compounding CRSP monthly returns over the fiscal period. xt is a comprehensive income calculated Return (rett) is obtained from CRSP by compounding monthly returns during the fiscal period. Comprehensive income (xt) is net income (#172) minus preferred dividends (#19) plus the change in value of marketable securities (#238) plus the change in the cumulative foreign currency translation adjustment (#230). Dividends (dt) are the sum of dividends to common shareholders (item #21) and net capital contributions. Net capital contributions are purchases of common and preferred stock (item #115) minus sales of common and preferred stock (item #108). Operating assets (oat) are book value of equity (bt) minus financial assets (fat). Book value of equity (bt) is common equity (#60) plus preferred treasury stock (#227) minus preferred dividends in arrears (#242). Financial assets (fat) are cash and short-term investments (#1) plus investments and advances-others (#32) minus debt in current liabilities (#34) minus long term debt (#9) minus preferred stock (#130) plus preferred treasury stock (#227) minus preferred dividends in arrears(#343) minus minority interests(#38). Capital expenditure (cpxt) is capital expenditures (#128) less sales of property, plant and equipment (#107) less investing activities (#310). Research and development (rdt)is research and development expense (#46) plus in-process Research and development expense (#388). Acquisitions (acqt) and advertisements (advt) are collected directly as single items (#129, #45 respectively). The ratio of the market value of operating assets to the book value of operating assets (V/oa) is the market value of common equity minus financial assets (MVeqt - fat) divided by the book value of common equity ((pt – fat)/oat). All variables except the market value of equity (pt), annual stock returns (rett), and ratio of market value of operating assets to the book value of operating assets (V/oa) are deflated by the beginning market value of equity (pt-1).