Money for nothing? Using loss persistence information from tax accounts to examine bonus compensation in loss-making firms

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Abstract:
We examine compensation practices in loss firms by investigating the role of anticipated loss persistence in determining the amount of CEO cash compensation. In loss years when current observable measures of performance are less indicative of both current manager effort and future performance, we anticipate boards reward CEOs' performance using private information regarding loss persistence. Drawing from the methodology from Dhaliwal, Kaplan, Laux, and Weisbrod (2013), we develop proxies that capture the firm's assessment of expected loss persistence using information underlying deferred income tax valuation allowance disclosures. We identify a compensation premium for positive expected future performance in firms with anticipated transitory losses. Among firms with anticipated persistent losses, we identify a growth premium for firms with long-term growth prospects, and a career risk premium for executives facing persistent losses. However, among CEOs with short horizons from termination or firm collapse, we note no compensation premium. We validate the nature of the career risk premium is highest among high ability managers and those with the greatest personal firm-related wealth. Lastly, we explore differences in bonus target measures and find differences in target setting among our firms. Overall, our study provides some of the first large-scale evidence about executive compensation practices in loss-making entities. Although losses arise for a variety of reasons, we argue that using information about the expected loss persistence using information underlying tax disclosures to categorize loss firms provides meaningful insight into boards' compensation decisions.

Keywords: Executive compensation, loss firms, loss persistence, valuation allowance

JEL Codes: J3, M41, H25

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1. Introduction

Shareholder activists and the popular press frequently draw attention to the contracting practices of public firms, often highlighting a disconnect between compensation and performance when firm experience financial losses. Conversely, while the academic literature examining executive compensation practices in profitable public firms is quite large, contracting practices in loss-making entities are less well studied. A limited number of accounting studies examine cash compensation practices across specific facets of underperforming firms (e.g., negative returns, nonrecurring items, or financial distress) (e.g., Gaver and Gaver 1998; Leone, Wu, and Zimmerman 2006). Our study takes a more comprehensive approach to provide insight into the contracting practices of loss-making firms. We use a sample of 3,740 firms experiencing losses over the period from 1993 to 2015 to investigate the role of anticipated loss persistence, an important underlying characteristic of losses, in determining the amount and nature of cash compensation in loss firms. We argue that information about loss persistence from tax accounts provides insight into how boards differentially reward executives for actions that benefit the firm in future periods but may not be reflected in current firm performance.

The existing contracting literature documents that various characteristics of earnings influence the use of earnings in compensation contracts (e.g., Banker and Datar 1989; Bushman and Indjejikian 1993; Baber, Kang, and Kumar 1998). To better understand the informativeness of earnings for contracting in the loss domain, we draw on the valuation literature. In particular, this literature provides evidence that the relation between earnings and shareholder value diminishes when a firm records a loss (e.g., Hayn 1995; Burgstahler and Dichev 1997; Collins, Pincus, and Xie 1999). Losses are less informative than profits about a firm's future performance

because of less value relevant transitory components (Joos and Plesko 2005), or the possibility that losses signal that future performance will be sufficiently low to make the abandonment option desirable (Hayn 1995; Joos and Plesko 2005). Existing research also documents that loss firms are not homogenous and that loss characteristics, such as persistence, are important determinants of the market's assessment of losses (e.g., Darrough and Ye 2007; Dhaliwal et al. 2013). While the stewardship and valuation uses of earnings are not likely to be perfectly aligned (Bushman, Engel, and Smith 2006), as with firm valuation, we expect boards infer information about managerial performance based on the nature of, and anticipated persistence of, an accounting loss.

Confirming the notion that financial performance measures are less informative of manager effort in the loss domain, Matejka, Merchant, and Van der Stede (2009) document a greater use of non-financial performance measures to evaluate loss firm managers. Similarly, Hayes and Schaefer (2000) suggest that when observable performance measures are less informative of the relation between current managerial effort and future performance, firms may rely on contract terms unobservable to outsiders to better assess and reward current manager effort. Specifically, Hayes and Schaefer (2000) provide evidence that the portion of cash compensation not related to current observable outcomes reflects a reward for unobservable current effort expected to result in improved future performance. In loss firms, we argue that expectations of loss persistence reflect information about the anticipated long-term success of the manager's current efforts. We posit that the current cash compensation of loss-firm executives reflects this information and varies depending on expectations of the persistence of reported losses.

We draw from the work of Dhaliwal et al. (2013) (henceforth DKLW) to develop a measure of anticipated loss persistence that captures both the public and private information available to the board at the time of the compensation payout. This is an important distinction from other measures of persistence, which capture only the ex post realized loss persistence. Because firms determine contracting and payout decisions before persistence is realized, boards base compensation decisions on firms' expectations of persistence, a unique performance dimension we are able to identify in the loss domain. DKLW find that loss firms' income tax disclosures, specifically the valuation allowance (VA) and current tax expense, provide information about the expected loss persistence incremental to other financial statement disclosures. When assessing the need to record a VA, management uses all available public and private information to assess the likelihood of future profitability.[1] We argue then that firms' reported tax information may provide valuable insight into the broad set of information the board uses to evaluate a manager's current period effort and assess how this effort will translate to future profitability. While DKLW's focus is on the incremental information content to investors about future performance inferred from VA disclosures, we are interested in the insights about expected loss persistence from the VA because the firm's assessment of future performance underlying the VA is likely highly correlated with the set of public and private information used by boards in managerial performance measurement.

To examine how differences in anticipated loss persistence affect executive compensation, we use a modified DKLW classification scheme to distinguish between loss years with expected short-window future positive income (*TransitoryLoss*) and those with anticipated

[1] Accounting Standards Codification (ASC) Topic 740 (formerly SFAS 109) requires that a firm records a VA to the extent management anticipates it is more likely than not that the benefits of deferred tax assets will not be realized.

persistent losses (*PersistentLoss*).[2] We hypothesize transitory loss firms, relative to baseline loss firms, will reward managers with greater cash compensation in the loss year because the board assesses that current managerial actions will improve future performance – a positive expectation premium.

We draw insights from Matejka et al. (2009) about differences among loss-making entities. Specifically, we consider three categories of persistent loss firms. First, we identify persistent loss growth firms investing in long-term strategic opportunities (*PersistentLoss-Growth).* We anticipate that, despite expected persistent losses, boards will reward these executives with greater compensation for unobservable current effort anticipated to result in observable future performance – a positive expectation premium similar to that in the *TransitoryLoss* firms. Next, we identify firms that terminate or anticipate terminating their CEO (*PersistentLoss-Termination)* and expect no difference in cash compensation, relative to baseline loss firms, because these firms do not seek to retain the CEO or reward current efforts with longer-term rewards. Finally, following recent research which suggests that executives demand a career risk premium as the likelihood of forced turnover increases (Chang, Hayes, and Hillegeist 2016; Peters and Wagner 2014) we identify firms concerned with retaining their CEOs (*PersistentLoss-CareerRisk*). For these firms, we anticipate boards will reward managers with additional current-year cash compensation in order to retain the manager's services and reward him for assuming the career risk of employment at a persistent loss firm. Overall, whether and how executive compensation reflects differential loss persistence information remains an empirical question.

[2] We classify observations not identified as either *TransitoryLoss* or *PersistentLoss* as our *BaselineLoss* observations. These categories correspond with DKLW's GN_TI, BN, and GN_VA groups, respectively.

Our initial tests investigate differences in CEO compensation characteristics for loss firms based on anticipated loss persistence. Univariate statistics suggest significant differences in both the total level and components of cash compensation across our loss-firm categories. In multivariate tests, we examine the level of cash compensation, and its components, granted to loss-firm CEOs. Consistent with our predictions, we document a positive expectation premium for both *TransitoryLoss* and *PersistentLoss-Growth* firms, as well as evidence of a career risk premium paid to *PersistentLoss-CareerRisk* managers. Further, but also consistent with our expectations, we do not document a premium paid to *PersistentLoss-Termination* executives relative to our *BaselineLoss* observations. We note the premiums we observe are of substantive economic magnitude. For example, we document that the positive expectation bonus premium paid to *TransitoryLoss* firm executives results in a bonus more than double that paid to our baseline loss firm managers. The increased bonus we identify for *PersistentLoss-Growth* firm managers is 70 percent higher than that of baseline loss executives. Lastly, we find that the bonus compensation paid to persistent loss firm managers with high career risk is 39 percent higher than that paid to our baseline loss-firm managers with less persistent losses.

Further investigating these findings, we validate our assertion that the premiums paid to transitory loss firm and persistent loss growth firm executives is a function of the positive expectations of future performance in these firms. Specifically, using the methodology from Hayes and Schaefer (2000), we document an association between current period cash payouts and future firm performance in both the transitory and persistent loss growth firms. However, consistent with our intuition that the premium paid to *PersistentLoss-CareerRisk* CEOs relates to a manager's career risk and not anticipated future firm performance, we do not find an

association between current cash payouts and future performance in the *PersistentLoss-CareerRisk* group.

To determine whether the premium paid to *PersistentLoss-CareerRisk* managers relates to a manager's career risk, we test whether the premium is associated with higher manager ability and CEO firm-related wealth, factors that increase a manager's career risk. Consistent with our intuition, we find that the premium paid to *PersistentLoss-CareerRisk* managers is significantly greater in both the high ability and high firm-related wealth subsamples, capturing executives with the greatest personal and professional career risks.

Prior research suggests that firms alter the objective performance measures included in the bonus contract to tailor the contract to characteristics of both the manager and firm. For example, Matejka et al. (2009) document a shift toward nonfinancial measures of performance in the contracts of loss-making executives; while Gaver and Gaver (1998) imply a shift in underlying contract measures in their finding of executive compensation shielded from non-recurring items. To investigate whether the types of targets included in executive bonus plans varies both across our loss-firm categories and in the year of and year after the current loss, we utilize data on actual performance measures underlying bonus contracts supplied by ISS Incentive Lab. First, we find significant differences in both the number and types of targets included in plans across our loss-firm categories. For example, we note a significantly smaller number of objective targets employed in the bonus contracts of *PersistentLoss-CareerRisk* managers, consistent with the notion that the board would like to continue to employ these managers and may need flexibility in contracting not provided by objective bonus targets. Additionally, we note a tradeoff between below and above the line earnings targets between profitable firms and all of our loss firm categories. Relatedly, we note in the year following a

loss that for all loss firm categories (except *BaselineLoss*) firms add additional targets. We also note a shift toward more bottom line earnings measures for the subsets of firms we identify as closest to future profitability. Overall, we identify significant differences in the number and type of performance measures included in loss firm bonus contracts, providing evidence of boards' discretion in identifying measures that are most informative of current manager effort.

We contribute to the executive compensation literature by providing some of the first large-sample evidence of the contracting practices of loss-making entities. By classifying loss firms based on anticipated loss persistence, we consistently identify patterns in the level and nature of cash compensation. Our study also documents the use of alternate measures of performance in bonus contracts based on the anticipated loss persistence. Lastly, we also add to the recent literature documenting that the career risk premium for CEOs in underperforming firms outweighs the effect of the current loss on compensation.

Moreover, our findings highlight that information about future performance underlying income tax disclosures provides useful information beyond the tax domain. A number of studies focus on how tax-based fundamentals provide information about earnings quality to investors (e.g., Lev and Nissim 2004; Hanlon 2005). Other studies examine executive compensation for tax performance (e.g., Phillips 2003; Armstrong, Blouin, and Larcker 2012; Brown, Drake, and Martin 2016). Our study uses tax information as a means to understand management's expectations about future income and the compensation outcomes to loss persistence.

2. Related Literature

2.1 Compensation in Firms with Losses

The literature on level, mix, and determinants of executive compensation is vast, but focuses primarily on profitable firms. While numerous studies document an association between

accounting performance and compensation in a broad sample of both profitable and loss firms, (e.g., Lambert and Larcker 1987; Sloan 1993), in general, researchers fail to identify a relation between accounting earnings and cash compensation in loss years. Examining asymmetric differences in compensation for unrealized gains and losses, Leone et al. (2006) find that CEO cash compensation is significantly more sensitive to negative stock returns (their proxy for unrealized losses) than positive stock returns (unrealized gains). Relatedly, Shaw and Zhang (2010) fail to find evidence of asymmetry of cash compensation around positive and negative stock returns although they do document that CEO cash compensation is less sensitive to poor earnings performance than strong earnings performance. While both of these studies focus on events that are adverse to shareholders, neither directly examines loss firms.

Focusing on accounting measures of performance, Gaver and Gaver (1998) explore the impact of nonrecurring income items on CEO cash compensation. They document that, in cases of positive income, cash compensation is positively related to income before extraordinary items and discontinued operations. Additionally, they find that CEO cash compensation is sensitive to "below the line" gains, but not to nonrecurring losses. Although they do not specifically consider the nature of the loss, their findings suggest that firms experience losses for a number of reasons with differing compensation outcomes. Our study expands from the notion of the specific source of the loss to consider a broader set of loss firms and how anticipated loss persistence affects CEO compensation.

Matejka et al. (2009) specifically address compensation practices in loss-making firms. They use survey, field, and archival data to investigate the effects of employment horizon on performance measure choice in bonus contracts of loss-making firms. Using a limited sample of publicly available Execucomp data and hand-collected compensation contract target data, they

document greater use of non-financial performance measures in the bonus contracts of loss-making entities. Their findings are consistent with the broader intuition of both Bushman, Indjejikian, and Smith (1996) and Ittner, Larcker, and Rajan (1997) who document that boards use alternate measures in compensating executives when performance measures are noisy or less reflective of current manager efforts. Our study complements these studies by considering compensation for both anticipated future performance as well as manager career risk in loss firms.

Other studies consider compensation in extreme loss settings (e.g., Eckbo, Thorburn, and Wang 2016; Gilson and Vetsuypens 1993; Henderson 2007). Henderson (2007) finds little change in compensation when firms reorganize under Chapter 11, despite the increased oversight and monitoring. Similarly, Eckbo et al. (2016) find that CEOs who continue employment after Chapter 11 have, on average, no change in compensation. Following the notion that firms rely on alternative performance measures in loss years, Gilson and Vetsuypens (1993) fail to identify a significant association between CEO cash compensation and both market and earnings performance measures among a small sample of significantly distressed firms. Because these studies focus on extreme loss firms, it is difficult to disentangle the separate effects of accounting losses and financial distress on contracting technology. Our study considers loss firms more broadly and thus offers greater insight into the broader array of compensation practices in loss-firms.

While the limited prior research on contracting in firms with poor performance focuses on particular facets of underperforming firms (e.g., negative returns, nonrecurring items and financial distress), our focus is on current cash compensation in loss firms, and how it varies with expectations of future performance. We argue that considering the firm's expectations of future

losses and the executive's career risks, rather than simply the realized loss, offers a more holistic view of compensation contracting in loss firms. Our focus is on all firms experiencing accounting losses, which make up more than 40 percent of the Compustat universe, and thus offers additional insights into managerial compensation in a significant portion of the population.

2.2 Contracting on Observable and Unobservable Measures of Performance

Theoretical literature examining the choice of performance measures in executive compensation contracts highlights boards' demand for performance measures that capture how managers' current actions influence future firm value (Dutta and Reichelstein 2002, 2005; Sabac 2007). The theory on relational or implicit contracting suggests that, to allow for intertemporal matching between managerial effort and pay, optimal contracts may be based on relevant performance measures observable only to the contracting parties (Hayes and Schaefer 2000). Arguing that firms contract on performance measures that are both observable and unobservable (to outsiders) and unobservable measures are informative about future performance, Hayes and Schaefer (2000) posit that the portion of current cash compensation not associated with current performance should be reflective of boards' private information about the expectations of future performance. Using publicly available data on CEO compensation, Hayes and Schaefer (2000) provide empirical evidence of a positive relation between the portion of CEO cash pay unexplained by current performance and future firm performance. Similarly, Ederhof (2010) documents a positive association between the discretionary component of bonus compensation and non-contractible performance measures related to future firm performance.

The relation between future performance and the portion of current pay unrelated to current performance is of particular interest in the loss domain when many traditional observable contracting terms are less reflective of current manager effort. Thus, because observable

measures of current performance (earnings) are less informative about managerial effort and thus are less useful for contracting in loss years, boards rely more heavily on unobservable measures to reward managers. The result is a diminished association between current performance and current pay but a stronger association between current compensation and future performance.

Overall, we expect that when firms anticipate that the current period managerial effort will result in increased future performance, boards will compensate managers at a level above that predicted by current economic determinants (a "positive expectation premium"). We employ a classification scheme similar to that used by DKLW, which uses publicly disclosed tax information to infer the firm's otherwise unobservable expectations of future performance. We use this classification scheme to examine the relation between expectations of performance and current CEO cash compensation payouts.

2.3 Compensation Contracting for Executives with Significant Career Risk

In addition to the predictions suggested by a pay-for-performance relation, recent research highlights the importance of expanding the scope of the agency relationship to include the prominent career concerns for public firm executives in poorly performing firms. Examining a wide cross-section of firms, Fee and Hadlock (2004) document that after turnover,[3] CEOs have not only a low likelihood of obtaining another public CEO position, but those that obtain new positions do so at smaller firms and at lower levels of compensation. In addition to the costs associated with impaired future employment, CEOs facing forced turnover may suffer financial losses on equity and inside debt holdings, and significant long-run managerial reputational costs (Chang et al. 2016). Building on the notion that executives face significant costs upon dismissal, more recent research attempts to quantify the effect of this career risk on compensation

[3] Studies evaluating career risk broadly define forced CEO turnover as either dismissal of the executive for poor performance or dismissal due to the termination of the firm.

contracting. Peters and Wagner (2014) document a significant premium paid to managers in volatile industries when their risk of forced turnover, and thereby career risk, is high. Additionally, examining the appointment of new CEOs at financially distressed firms, Chang et al. (2016) find evidence of a compensation career risk premium paid to new managers. Taken together, this evidence suggests that managers demand a career risk premium to compensate for the potential negative outcomes of a forced turnover.

A CEO's career risk premium is especially relevant in loss firms. Prior research suggests that turnover associated with prolonged poor performance or firm failure is especially detrimental to a manager's future career prospects (Chang et al. 2016; Fee and Hadlock 2004; Eckbo et al. 2016). We expect that a manager's career risk is increasing in the expectation of poor future performance and that firms anticipating poor future performance will provide additional remuneration to compensate the CEO for assuming the risk of managing an underperforming firm. However, firms that have determined that executive turnover is imminent, either because the executive is held responsible for the firm's current economic position or the board does not believe the executive can return the firm to profitability, may be less willing to provide the executive with a career risk premium.

Our discussion above suggests two different forces shaping the portion of CEO pay not determined by current performance. On one hand, the positive expectation premium suggests that *ceteris paribus* the compensation of loss-firm managers increases (decreases) as expectations of future performance increase (decrease). On the other hand, the career risk premium suggests that *ceteris paribus* the compensation of loss-firm managers increases (decreases) as expectations of future performance decrease (increase). Although it is likely both forces affect compensation in loss firms, we suggest it is unclear how firms trade off the premiums for positive expectations

and career risk across the loss domain. We use publicly available disclosures to infer both the ex ante expectations of loss persistence and the manager's career risk to partition the universe of loss firms and allow us to further investigate this tradeoff.

3. Sample Selection and Categorizing Loss Firms

We focus on loss firms because observable measures of performance are less informative of manager's current period efforts in loss firms, and unobservable private information about expectations of future income is especially important for contracting. We use the information underlying firms' valuation allowance decisions to gain insight into boards' private information about expectations of future performance. As DKLW argue that the tax signal in loss firms offers insight into firms' expectations of future earnings, we suggest these disclosures may also help in understanding loss-firm compensation decisions, particularly through the positive expectation and career risk premiums.

Prior literature suggests that tax-based fundamentals provide information about future earnings growth, stock returns, and earnings persistence (e.g., Lev and Nissim 2004; Hanlon 2005). However, most studies tend to focus on profitable firms. Our study builds from the findings in DKLW, who examine whether a firm's current tax expense and management's decisions regarding recognition of a VA for deferred tax assets provide information about anticipated loss persistence. DKLW document that the information in the VA is incrementally informative to other publicly available information about the persistence of the loss.

SFAS 109, codified as ASC 740, requires firms to record a VA when management determines it is more likely than not that the future benefits of deferred tax assets (most often net operating losses and tax credit carryforwards) will not be realized (ASC 740-10-30-5 e). Management's determination of the likelihood of realizability is based on expectations of future

taxable income, tax-planning strategies, reversals of existing taxable temporary differences, and taxable income in prior carryback years (ASC 740-10-30-18 a-d). We focus on the VA because it captures management's anticipation of future (taxable) income and conveys information available through other public sources as well as private information about firm operations and forward-looking information about future profitability (DKLW). While managers use discretion in establishing a VA, auditors evaluate the reasonableness of management's assertions relating to the realizability of deferred tax assets. If managers use the VA as an earnings management tool, noise in the tax disclosures may not be informative of future profitability. Although prior research finds mixed evidence that managerial discretion affects VA reporting (Frank and Rego 2006; Schrand and Wong 2003), the findings in DKLW suggest that, even with the potential for managerial manipulation, the VA provides information about the anticipated loss persistence beyond that from other publicly available information sources. While DKLW's focus is on the incremental information content to investors about future performance inferred from the VA disclosures, we are interested in the insights about expected loss persistence from the VA because the firm's assessment of future performance underlying the VA is likely highly correlated with the set of public and private information used by boards in managerial performance measurement.

3.1 Sample Selection

We gather our sample of CEO-years from the intersection of Compustat, Execucomp, and CRSP for the period 1993-2015. Because we follow DKLW and use the tax accounts to identify anticipated loss persistence, we begin our sample in 1993 when SFAS 109 and the current VA reporting requirements became effective. We first identify and categorize all loss-years using the modified DKLW methodology (discussed below) and then require firms to have all continuous

variables used in our regression analyses. These data requirements yield 3,740 CEO firm-years from 1,407 unique firms.

3.2 Classifying Loss Firm-Years

DKLW identify a loss year as any year having negative income before extraordinary items (Compustat item IB) and not reporting positive U.S. pretax income (PIDOM). While their methodology ensures a sample of firms with domestic losses, we argue that because firms compensate executives for worldwide firm performance, our interest is in firms with worldwide losses. As such, we identify loss years as any firm-year with negative income before extraordinary items (IB) and firms not reporting positive *worldwide* pretax income (PI). Using this classification, we identify 3,740 loss-year observations out of 26,363 firm-year observations in a broad sample of Execucomp firms (14 percent). We note that 52.7 percent of firms report a loss in at least one year, which is a significantly lower loss frequency than in the DKLW sample. However, our sample is limited to Execucomp firms, which are notably larger and better performing, on average, than the Compustat universe, and therefore less likely to experience frequent losses.

3.3 Valuation Allowance Classification Scheme

As noted above, we modify the loss-year classification scheme from DKLW to account for firm-years with a worldwide loss. DKLW identify loss firms using domestic income, the authors consider the information content of tax expense based on the accounting for current domestic tax expense (TXFED) and deferred domestic tax expense (TXDFED). Our interest is in firms with a worldwide loss; thus, we adapt DKLW's firm classification approach to use worldwide current tax expense and world deferred tax expense. We extend the methodology in Dyreng and Lindsey (2009) to generate a set of worldwide tax variables and use these measures

to categorize loss firms consistent with the intuition and classification approach in DKLW as follows:[4]

> ***TransitoryLoss*:** We categorize loss years in which worldwide deferred tax expense is negative and taxable income is positive (indicated by a positive current worldwide tax expense) as *TransitoryLoss* years.[5] Although *TransitoryLoss* firms report a current-year worldwide accounting loss, they report positive taxable income, suggesting that the accounting loss is likely due to an accounting construct with different tax treatment, and not an ongoing operating issue. We identify 31 percent of our sample as *TransitoryLoss* firm-years.
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> ***PersistentLoss*:** We categorize loss firm-years with a material increase in their VA as *PersistentLoss* years. While VA data is not readily available in a machine-readable format, one innovation from DKLW is an estimation of a material VA using the sign of the deferred tax expense. If a firm generates a deferred tax asset via an operating loss and reports a non-negative deferred tax expense, DKLW consider this a material VA. Using their methodology, we classify a loss year when the total worldwide deferred tax expense is non-negative as a *PersistentLoss* year. We identify 53 percent of our sample as *PersistentLoss* firm-years.
>
> ***BaselineLoss*:** Following DKLW and using our worldwide tax measures, we classify loss-year observations as our baseline loss years when worldwide deferred tax expense is negative and current worldwide tax expense is non-

[4] To maximize our sample size, we follow the methodology in Dyreng and Lindsey (2009) to fill in missing values for tax-related variables and we extend their methodology to deferred tax accounts (*WWDTAX*, sum of TXDFED and TXDFO). We outline these additional steps in Appendix B.

[5] Our classification scheme is consistent with the approach and intuition of that in DKLW. For comparison, our *TransitoryLoss* firms are comparable to the GN-TI classification in DKLW, our *BaselineLoss* firms map into the GN-VA category and our *PersistentLoss* firms are consistent with the BN group in DKLW.

positive. Our baseline loss firms communicate a positive signal about future taxable income because these firms do not record a material VA, but because they do not have positive taxable income, the transitory nature or persistence of the loss is less clear. We identify 16 percent of our sample as *BaselineLoss* firm-years.

3.4 Validation of Loss Firm Classification

DKLW use their loss classification scheme to evaluate whether investors differentially interpret loss-firm signals based on the loss persistence information in the tax expense. They first establish that their classification scheme captures differences in future income by testing earnings persistence across their three categories of loss firms. Since we modify their classification scheme to capture worldwide (not only domestic) taxable income and tax expense, we begin by conducting tests analogous to those in DKLW to validate our tax-loss category construction and find, similar to their results, that loss persistence is greatest for *PersistentLoss* observations, and weakest for our *TransitoryLoss* observations. We tabulate these tests in Appendix C.

3.5 Persistent Loss Firm Classifications

While DKLW assess the valuation implications of loss persistence, we acknowledge that there is likely variation in the contracting implications of persistent losses depending on the nature of the firm, its leadership and the loss itself. Not all persistent losses provide similar insight about managers' current effort and expected future firm performance. As a result, we further partition our *PersistentLoss* classification to consider different types of persistent loss-making firms. We draw insights from Matejka et al. (2009) about the nature of loss-making firms. We consider three categories of persistent loss firms: 1) growth firms investing in long-

term strategic opportunities, 2) firms that terminate or anticipate terminating their CEO and 3) firms concerned about retaining their CEOs. We use these loss-firm categories to examine differences in cash compensation across different types of loss firms. We discuss each of these categories below.

***PersistentLoss-Growth*:** We first identify persistent loss firms that are currently pursuing a long-term growth strategy. Following Cadman, Klasa, and Matsunaga (2010b), we compute an investment opportunity set (IOS) factor score that captures the firm's investment opportunity set based on investment intensity, market-to-book value of assets, asset growth rate and research and development expenditures. We categorize persistent loss firm-years with an IOS factor score greater than zero as *PersistentLoss-Growth.* Firms with significant growth opportunities may experience persistent losses for a number of reasons, including expenses related to investments in either research and development or advertising, and scale or margins effects of entering new markets. These firms might be early stage firms or established firms in industries with changing technologies or new market opportunities. We expect that, despite anticipated persistent losses, firms with long-term growth strategies will reward their executives with greater compensation for unobservable current efforts that are expected to result in eventual positive future performance.

***PersistentLoss-Termination*:** We also separately identify persistent loss firms that terminate or anticipate terminating their CEOs. We categorize persistent loss firm-years as those with an IOS factor score less than zero and when the firm remains in existence in Compustat in periods *t+1* and *t+2* but the executive is

terminated in either *t* or *t+1* as *PersistentLoss-Termination.* There is an extensive literature documenting that executive turnover is more likely to occur in poorly performing firms. In particular, Matejka et al. (2009) document that firms with consecutive losses experience high levels of executive turnover. In these instances, boards either place responsibility for the loss on the CEO or determine that the current CEO is not the best person to restore the firm to a profitable state. We do not expect that boards of these firms will reward their executives with significant loss-year bonuses as they anticipate termination of the executive's employment.

***PersistentLoss-CareerRisk*:** Lastly, we identify persistent loss firms desiring to retain their CEOs. We categorize persistent loss firm-years with an IOS factor score less than zero and without an executive termination in *t* or *t+1* as *PersistentLoss-CareerRisk.* Boards of these firms either do not attribute the persistent loss situation to the actions of the executive or signal their belief that the current CEO is best able to lead the firm to ultimately correct the persistent loss outcome. As discussed above, these executives are exposed to greater career risk due to potential personal costs associated with reputation effects, impaired future employment opportunities, and reductions in personal wealth associated with firm. We expect that an executive's career risk is increasing in the severity or expected persistence of the loss. For these firms, we anticipate that the board will award the manager with a career risk premium in order to retain him and reward him for assuming the increased employment and financial risk.

4. Methodology

4.1 Cash Compensation Measures

We focus our attention on cash compensation for a number of reasons. Cash compensation, and particularly bonuses, provide the board with a unique ability to reward current manager effort even when that effort is focused on objectives unobservable to firm outsiders. While equity compensation may provide incentives to broadly increase firm value or take measured risks, it does not allow for an immediate reward for undertaking costly effort that is unobservable to market participants. As such, we argue that cash compensation is uniquely suited to investigate how the board rewards unobservable manager effort not yet compounded into current observable firm performance. This is especially important in the loss domain where current manager effort is likely not observable in current accounting performance. Ederhof (2010) validates this idea by developing and testing a model of discretionary bonus compensation and finds that discretionary bonuses are more likely to occur when performance is either very strong or very poor. In addition, recent research highlights the important role of cash compensation, and particularly bonuses, in effectively contracting with public firm managers (Guay, Kepler, and Tsui 2016).

We use several measures of cash compensation designed to capture differences in contracting technology. We measure total cash compensation (*CashComp*) as the sum of compensation from salary, bonuses, and long-term incentive plans. We also separately investigate components of CEO cash compensation including salary (*Salary*), bonus (*Bonus*), and long-term incentive plans (*LTIP*).[6] In addition to the individual components of cash

[6] Consistent with Cadman, Carter, and Hillegeist (2010a) we use the natural log of (1+ compensation variable). To validate our design choice, we rerun our tests using log(compensation variable) and our inferences remain unchanged.

compensation, we also consider the percentage of cash compensation subject to performance (*PctBonus*). We provide full variable descriptions in Appendix A.

4.2 CEO Compensation Model

To investigate whether executive compensation reflects firms' expectations of loss persistence, we expand the economic predictors of a standard compensation model to include indicator variables to capture our loss firm categories. Specifically, building from existing compensation models (e.g., Leone et al. 2006; Core, Guay, and Larcker 2008; Graham, Li, and Qiu 2012; Gaertner 2014) we model cash compensation in loss firms as follows:[7]

$$\begin{aligned} CashCompensation_{i,t} = {} & \alpha + \beta_1 TransitoryLoss_{i,t} + \beta_2 PersistentLoss\text{-}Growth_{i,t} \\ & + \beta_3 PersistentLoss\text{-}Termination_{i,t} + \beta_4 PersistentLoss\text{-}CareerRisk_{i,t} \\ & + \beta_j \sum EconomicPredictors_{i,t} + \beta_k \sum YearFixedEffects \\ & + \beta_l \sum IndustryFixedEffects + \varepsilon \end{aligned} \quad (1)$$

where *CashCompensation* refers to one of the cash compensation measures above, either the level of total cash compensation (*CashComp*), the level of an individual cash compensation component (*Salary, Bonus, LTIP*), or the mix of fixed and performance-based cash compensation (*PctBonus*). We argue above that firms may compensate loss-firm managers beyond the level suggested by current performance for either positive expectations or career risk. We include four separate indicator variables, excluding the indicator for *BaselineLoss* firms,[8] to examine compensation differences across the loss-firm categories. If, as we suggest, both *TransitoryLoss*

[7] For comparison purposes, we also test Equation (1) without including our loss-firm indicators on a sample of profitable firms over the same period and find the R-squared is 15 percent greater than testing the same model in our sample of loss firms. In addition, we note that several common predictors of cash compensation in profitable firms, including ROA, are not associated with cash compensation in the loss-firm sample.

[8] Because we test Equation (1) in a set of loss-firm years, we cannot separately include indicators for all five loss-firm categories. Our baseline group captures loss firms with a current tax loss, but without a significant VA, which DKLW suggest signal neither a transitory loss, nor a persistent loss. We use the baseline observations for comparison and thus allow them be subsumed by the intercept and interpret significant coefficients on the other loss-firm categories as differences relative to the baseline group.

and *PersistentLoss-Growth* firms reward managers based on expectations of positive future performance we expect a positive and significant coefficient on these indicators. Further, if boards reward managers for the level of career risk they are willing to bear, we expect a positive and significant coefficient on *PersistentLoss-CareerRisk.* However, we expect neither a positive expectation nor career risk premium for the *PersistentLoss-Termination* group.

In addition to our variables of interest, we include traditional economic predictors of compensation including size (*Size*), return on assets (*ROA*), annual returns (*AnnRet*), market-to-book ratio (*MTB*), variability in annual returns (*Var_Return*), cash flow shortfall (*CFShortfall*), the tenure of the CEO (*Tenure*), the gender of the CEO (*Female_Ind*), and CEO duality (*CEO_COB*). We provide full variable descriptions in Appendix A. In addition, we include both year and industry fixed effects and cluster standard errors by firm.[9]

4.3 Validating Compensation Premiums

Above, we hypothesize that premiums paid to managers in several loss-firm categories, but for differing underlying causes. Specifically, we expect a positive expectation premium for managers of transitory and persistent loss growth firms. We also hypothesize a significant premium for persistent loss firm managers facing high career risk. We conduct additional tests to evaluate whether the positive expectation premiums are associated with positive future performance and that the career risk premiums are associated with factors linked with greater career risk.

To validate our assertion that the positive expectation premium is in fact related to positive future performance, we design tests relying on the methodology presented in Hayes and

[9] Although recent compensation studies advocate including firm and/or manager level fixed effects (i.e., Graham et al. 2012), the lack of firms/managers with repeated losses in our sample precludes the inclusion of these variables in our setting.

Schaefer (2000). This methodology relies on the intuition that the unexplained variation in cash compensation, if it is related to future performance, suggests that managers are rewarded today for effort unobservable to firm outsiders. Thus, we estimate the following model from Hayes and Schaefer (2000) on our sample partitioned on our loss-firm categories:

$$\Delta ROE_{i,t+1} = \alpha + \beta_1 \Delta CashComp_{i,t} + \beta_2 \Delta CashComp_{i,t-1} + \beta_3 \Delta AnnRet_{i,t} + \beta_4 \Delta ROE_{i,t} + \beta_5 \Delta SALE_{i,t} + \beta_6 \Delta AnnRet_{i,t-1} + \beta_7 \Delta AnnRet_{i,t-2} + \beta_8 \Delta AnnRet_{i,t-3} + \beta_9 \Delta ROE_{i,t-1} + \beta_{10} \Delta SALE_{i,t-1} + \beta_l \sum YearFixedEffects + \beta_m \sum IndustryFixedEffects + \varepsilon \quad (2)$$

If the portion of current cash compensation not associated with current performance is associated with future earnings, as suggested by Hayes and Schaefer (2000), we anticipate the coefficient on $\Delta CashComp_t$ will be positive and significant for the *TransitoryLoss* subsample.[10] Likewise, while the information from the tax accounts suggests anticipated persistent losses, a premium paid to *PersistentLoss-Growth* executives may be associated with future earnings. However, because we either do not hypothesize a premium (*BaselineLoss* and *PersistentLoss-Termination*) or because we do not anticipate the hypothesized premium to be the results of positive future expectations (*PersistentLoss-CareerRisk*) we do not expect any association between current compensation and future earnings in these categories.

We also hypothesize a premium paid to persistent loss-firm managers exposed to significant career risk. Because we design our initial tests to identify the existence of a premium, we further evaluate whether the hypothesized premium is, in fact, related to the underlying career risk of the manager. We identify two cross-sectional variables, managerial ability and firm-

[10] As Hayes and Schaefer note, this one-step specification is equivalent to a three-step approach in which 1) future performance is regressed on current performance, 2) current compensation is regressed on current performance and 3) the residual from step 1 is regressed on the residual from step 2. The latter step documents the relation between future performance and current compensation, controlling for the effect of current performance on both future performance and current compensation. This effect is captured by the coefficient on $\Delta CashComp_t$ in Equation (2) above.

related wealth, which we argue capture settings in which the manager's career risk is likely to vary significantly. For example, Chang et al. (2016) suggest that boards reward executives for assuming the risks of managing a distressed firm including detrimental reputational effects and personal financial losses. Because we anticipate the career risk for high ability managers, with greater career opportunities and a greater reputational risk, to be higher we expect a larger premium for this subsample. Using the manager ability measure from Demerjian, Lev, and McVay (2012), we split our full sample based on the level of ability. We identify managers with an ability score above zero as *High_Ability* and below zero as *Low_Ability*, and estimate Equation (1) separately for each manager ability subsample.[11]

Likewise, we anticipate a career risk premium will be higher for executives with significant personal wealth invested in the firm. Thus, we test whether the *PersistentLoss-CareerRisk* premium varies with the level of firm-related wealth. Following the methodology in Coles, Daniel, and Naveen (2006) to measure firm-related wealth, we partition our full sample separating the top quartile of executives based on the CEO's firm-related wealth and estimate Equation (1) separately on the subsamples of *High_FirmWealth* and *Low_FirmWealth*. As the career risk, particularly in terms of potential financial loss, varies across these subsamples, we expect the premium paid to managers across these subsamples to vary as well. Because we do not expect the premium paid to other loss firm managers is associated with their career risk, we do not anticipate differences in their payouts related to the level of career risk.

5. Results

[11] To test whether the coefficients on the *PersistentLoss-CareerRisk* group are the same across these subsamples we separately run an interacted model (interacting the group indicator and the ability indicator) and use the level of significance on the interaction coefficient to interpret the significance of this difference.

5.1 Descriptive Statistics

In Table 1 Panel A, we present descriptive statistics for the measures of cash compensation components in our loss-firm sample and by tax-loss-firm category. We note the average cash payout to loss-firm CEOs is $980K (compared to $1.7M in profitable firms, untabulated). Bonus payouts are largest in the transitory loss subsample, consistent with our expectations. We note the lowest levels of cash compensation in the *PersistentLoss-Growth* group, which may suggest that these firms rely more heavily on equity compensation to motivate future growth and reward current effort toward that growth.[12]

In Panel B, we present CEO characteristics both for our full loss-year sample and across our loss-firm categories. Our results indicate that the average CEO in our sample serves for approximately 7.5 years (7.7 years in profitable firms, untabulated) and serves as the chairman of the board of directors 46 percent of the time (56 percent in profitable firms, untabulated). Consistent with prior evidence in profitable firms, in our sample only two percent of the CEOs are female. We do not note many significant differences in CEO characteristics across our loss-firm categories with the exception of CEO duality, which is significantly lower in *PersistentLoss-Growth* firm-years.

In Panel C, we present descriptive statistics for various firm characteristics in both our full loss-firm sample and across our loss-firm category partitions. Our results provide evidence consistent with our intuition about loss firms. While our sample firms are relatively large, the average ROA is -12.7 percent and the average annual return is 2.1 percent. We note the lowest levels of *ROA* (-25.1 percent) but the highest levels of *MTB* (3.86) in the *PersistentLoss-Growth* group. Additionally, consistent with our intuition about *TransitoryLoss* firms, we note that mean

[12] In our additional analysis section, we test and find that both the *TransitoryLoss* and the *PersistentLoss-Growth* executives receive greater equity compensation. See discussion below.

ROA_{t-1} is zero, suggesting a number of these firms were profitable in the previous year. Finally, consistent with our expectation of anticipated positive future performance in both the *TransitoryLoss* and *PersistentLoss-Growth* firms, we note positive annual returns.

INSERT TABLE 1

5.2 Tests of Cash Compensation

To test whether the level and mix of cash compensation vary across our loss-firm categories, in Table 2 Panel A we present the results of estimating Equation (1) using known economic predictors of cash compensation separately for each component of compensation. In Column (1), we present the results of estimating the total level of cash compensation. The results suggest that *TransitoryLoss* firm executives receive a significantly higher level of cash compensation, than their *BaselineLoss* counterparts, consistent with *TransitoryLoss* firms rewarding managers for positive expectations of future performance. Our results suggest that *TransitoryLoss* CEOs receive a bonus more than double ($392K) that paid to our baseline CEOs. We also document a bonus premium paid to *PersistentLoss-Growth* firm CEOs amounting to approximately $260K (70 percent greater than baseline executives). Additionally, consistent with the notion of a premium for executives assuming the career risk of remaining at a loss firm, we note that the *PersistentLoss-CareerRisk* executives also receive higher total cash compensation, and a bonus premium approximately $144K above baseline CEOs. However, we do not observe a premium paid to the *PersistentLoss-Termination* executives. Recall, that by design, the *Termination* executives are those we note with termination in subsequent periods. As such, we do not expect a premium for either career risk or positive expectations of future performance.

Additionally, we note a salary premium only the *PersistentLoss-CareerRisk* group, consistent with CEOs of these firms demanding more guaranteed pay for assuming the career

risk of managing a distressed firm. We also note a greater percentage of performance-based cash compensation in each of these groups relative to *BaselineLoss* firms. Finally, and consistent with a longer-term anticipated return to profitability in *PersistentLoss-Growth* firms we note a premium in the long-term incentive plan payouts. Overall, we interpret the results of Table 2 to suggest that boards adjust executive cash compensation based on the anticipated loss persistence and that boards reward persistent loss-firm executives for their career risk with a premium for assuming the risks of managing a loss firm with anticipated persistent losses.

INSERT TABLE 2

5.3 Tests of the Positive Expectation Premium

In Table 3, we seek to provide evidence that the premiums noted above in both the *TransitoryLoss* and *PersistentLoss-Growth* firms are a function of the manager's reward for current unobservable effort likely to result in increased future performance. In this test, we follow Hayes and Schaefer (2000) and model future changes in ROE on changes in cash compensation to test whether current compensation is associated with future firm performance. We estimate this regression separately for each loss-firm category in which we predict a compensation premium. In Table 3, we find that the current cash compensation of *TransitoryLoss* and *PersistentLoss-Growth* firms is associated with future performance. We interpret these results as support for our intuition that the premium paid to CEOs in these groups is related to positive expectations of future performance. We also note that while we document a premium paid to *PersistentLoss-CareerRisk* managers in Table 2, we do not find evidence that this premium is related to future performance. This finding is consistent with our expectation that the premium observed in the career risk group is related to the increased career risk borne by these managers.

INSERT TABLE 3

5.4 Tests of the Career Risk Premium

In Table 4, we next validate our intuition regarding the predicted premium for *PersistentLoss-CareerRisk* managers. Specifically, we argue that the career risk to high ability managers who likely have better career prospects, and thus a higher reservation wage, have a greater career risk associated with remaining at a failing firm. Our results in Columns (1) and (2) of Table 4 document a significantly larger premium paid to high ability managers of *PersistentLoss-CareerRisk* firms suggesting an increased reward for the increased career risk they bear. Additionally, we expect that an executive's career risk is increasing in a manager's firm-related wealth at risk. The results in Columns (3) and (4) of Table 4 document a significantly larger premium paid to CEOs with greater firm-related wealth. Interestingly, we do not see a significant difference in the premium paid to managers in any other loss-firm category across these partitions further supporting our hypothesis that the premium in the *PersistentLoss-CareerRisk* group relates to the manager's career risk. Taken together, the results in Table 4 suggest the premium paid to *PersistentLoss-CareerRisk* managers is associated with the career risk they face.

INSERT TABLE 4

5.5 Performance Measures in Bonus Contracts

Above we document that cash compensation differs across our loss-firm categories and we argue that these differences arise from differences in either unobservable current effort or career risk. While we expect unobservable measures of performance play an important role in loss-firm contracting, we also expect a shift in the informativeness of other signals of manager effort, consistent with prior research (e.g., Gaver and Gaver 1998; Matejka et al. 2009). To

examine whether boards rely on differing underlying performance measures in managers' bonus contracts across our loss-firm categories, we examine both cross-sectional and time-series differences in bonus target measures. We use data on the individual targets included in CEO's compensation contracts provided by ISS IncentiveLab.[13] This database provides granular detail on all target measures identified in firms' annual proxy statements. Further, ISS classifies target measures as market-based, accounting-based, or other. Within the accounting category, we further divide targets into earnings and non-earnings based measures. We provide evidence both on the number of target measures of each type (accounting, market, and other) included in the bonus contract as well as an indicator for whether any measures of that type is included in the contract. In Table 5 Panel A, we present the means of the number of targets and the types of targets used in contracts and in Panel B, we present t-tests of differences between firm categories. The results in Table 5 show that *PersistentLoss-Growth* firms use a significantly greater total number of targets in executive compensation contracts, while *PersistentLoss-CareerRisk* firms use a fewer total number of targets. These findings are consistent with the intuition that growth firm boards may use several observable measures of performance to capture the manager's performance; however, boards of chronically poor-performing firms seeking to retain a manager may use less objective measures to assess and reward performance. However, we do not identify significant differences in the absolute number of accounting, market, or other targets across our various loss-firm categories. We note a tradeoff between bottom line and above the line targets between profitable and loss firms and we further note that the likelihood of including an above the line earnings target (below the line) increases (decreases) across our loss-

[13] Matching our sample with ISS data reduces the sample size for this analysis.

firm categories. Moreover, we note an increased likelihood of including vague measures of accounting performance across our loss-firm categories.

INSERT TABLE 5

In Table 6, we expand our analysis of the ISS target data and consider year-over-year changes in bonus targets to consider how loss firms change their targets in response to a loss year. We expect that the anticipated loss persistence will affect how the firm changes performance targets. The results in this table suggest that across all loss firm categories (excluding *BaselineLoss* firms) we document a significant increase in the overall number of targets used in the bonus contract in the year after a loss. Further, we provide evidence of an increase in the likelihood of including a bottom line earnings measure in the subset of non-persistent loss firms, where the loss has likely overturned in the following year. Additionally, in the year following the loss, when the CEO has been replaced in the *PersistentLoss-Termination* group, we note a significant increase in the likelihood of including an above the line earnings measure and a significant decrease in the likelihood of including vague measures of accounting performance in the bonus contract. Taken together, these results suggest that firms tailor the targets used in bonus contracting to their expectations of loss persistence and adjust contracts after the year of the loss.

INSERT TABLE 6

5.6 Robustness Tests

While losses occur for any number of reasons, we posit that our classification of loss firms offers a succinct and comprehensive way to identify systematic differences in contracting practices across loss firms. To verify that our results are not driven by other loss-firm characteristics, we investigate differences in our loss-firm categories using the level of financial

distress and above or below the line accounting losses (i.e., loss before or after extraordinary items). As prior literature has shown a relation between the level of financial distress and compensation (Chang et al. 2016) and between the type of accounting loss and compensation (Gaver and Gaver 1998), we first ensure that our loss-firm classification scheme does not simply map into these categories. Our results in Table 7 Panel A suggest that the proportion of firms in the above and below the line loss groups is similar across our loss-firm categories (approximately 97 percent above the line and 3 percent below the line) with the exception of the *PersistentLoss-Termination* and *PersistentLoss-CareerRisk* groups which have slightly higher proportion of firms in the below the line category. In addition, in Panel B we document similar proportions of loss-firm categories in each level of financial distress, measured using Z-score (low, medium, high), with the exception of the *PersistentLoss-Growth* firms which have a greater percent in the low financial distress group. In addition, we note a significantly higher proportion of *PersistentLoss-Termination* firms in the high financial distress risk category. Overall, the results in Table 7 results suggest that the loss categorization based on the information in tax disclosures results in firm groupings that contain both above and below the line losses as well as firms with differing levels of financial distress and that our tax-based groupings capture different aspects of loss firms relevant for contracting.

INSERT TABLE 7

Additionally, other loss-firm characteristics and other characteristics of the loss during the loss year may affect contracting decisions. Thus, we expand the traditional compensation model in Equation (1) to include several additional loss-related controls variables (*Z_Score, KZ_Index, Surp_Cash*), life cycle stage controls (excluding maturity) from Dickinson (2011) (*IntroStage, GrowthStage, ShakeoutStage*, *DeclineStage*), the industry profitability

(*Ind_Adj_ROA),* an indicator for *Recession* years, and other manager and loss characteristics (*CEO_First_Year, SeqLoss, BigLoss, FirstLoss, and SalesGrowth*). The results in Table 8 Panel A suggest that, even after including additional loss-related control variables, our inferences regarding cash compensation premiums across our loss-firm categories still hold. Additionally, in Panel B we further examine whether our loss-firm classifications are robust to alternative firm classifications by interacting our loss-firm categories with indicators for high variability in earnings (*HighSD_ROA),* whether or not the loss occurred in a recession year (*Recession*), and a split on the level of board co-option (a governance and entrenchment proxy). The results in Table 8 Panel B do not suggest significant differences across these partitions suggesting that our loss-firm categories are robust to alternative loss classifications.

We argue above that cash compensation is uniquely suited to reward managers for current effort unobservable to outsiders. In addition, recent research has shown that the use of cash and equity compensation do not necessarily act as substitutes (Brown et al. 2016; Guay et al. 2016). However, to ensure our inferences are robust given equity payouts, we re-estimate Equation (1) using equity compensation as the dependent variable. The results in Table 8 Panel C continue to document a significantly greater level of equity compensation for both *TransitoryLoss* and *PersistentLoss-Growth* firms. Specifically, and consistent with our intuition above, we show that the level of equity compensation not suggested by current economic predictors for the *PersistentLoss-Growth* firms is more than double that of the *TransitoryLoss* group suggesting that equity pay may be especially important in incentivizing these growth firm managers. We do not document an equity premium in the *PersistentLoss-CareerRisk* firms, suggesting that managers may prefer to be shielded from the uncertain market performance of a

persistent loss firm. Overall, we provide evidence, consistent with prior research, that in this domain cash and equity compensation do not appear to be substitutes.

INSERT TABLE 8

Finally, DKLW use their tax loss classification categories to evaluate whether investors differentially interpret the loss persistence signal based on the information in the tax accounts. Because we modify their classification scheme to capture worldwide (not only Federal) tax expense and taxable income, we replicate our analyses using their domestic only firm classification and our inferences remain unchanged (untabulated).

6. Conclusions

Our study extends the limited research on compensation practices in loss-making firms, when observable performance measures are less informative of the manager's current efforts and how those efforts map into future profitability. We argue that in this setting, boards use other information, including anticipated loss persistence, to reward executives. Using information underlying the tax accounts to classify loss firms based on the level of ex ante expected loss persistence, we provide evidence that boards reward CEOs of transitory loss firms with a premium for the positive expectations of future firm performance relative to their baseline loss peers, suggesting that boards understand the anticipated loss persistence and adjust compensation accordingly. Relatedly, we document a similar positive expectation premium for CEOs of high growth persistent loss firms. Moreover, recent research suggests a significant career risk premium for CEOs of distressed firms. Loss firm boards may punish persistent loss executives for anticipated permanent losses or reward them for assuming the risk of managing a persistent loss firm. Thus, we isolate a group of persistent loss firm CEOs with continuing employment, and provide evidence that boards reward persistent loss-firm managers for their career risk

premium. Despite anticipated persistent losses, we consistently document increased compensation for some persistent loss CEOs, particularly in high growth and high career risk firms, relative to their baseline loss counterparts.

We further validate the documented loss-firm compensation premiums using models of actual future performance and find that the premium paid to transitory loss and high growth persistent loss firms is related to future performance. We interpret this evidence as support for our hypothesis that the premiums in these groups relate to unobservable current manager effort the board expects will translate to increased future performance. Additionally, we document that the career risk premium is greatest for managers with significant reputational and financial risks, high ability managers and those with significant firm wealth. Notably, we do not find the career risk premium is associated with future performance, nor do we find the positive expectation premium varies across proxies for career risk. Our results are robust to alternate classifications of loss-firm categories and the inclusion of multiple additional loss-specific control variables.

Overall, our study provides some of the first large-scale evidence about executive compensation practices in loss-making entities. Although losses arise for any number of reasons, resulting in a variety of compensation outcomes, we argue that using information about the anticipated loss persistence gathered from tax disclosures to categorize loss firms provides meaningful insight into boards' compensation decisions. The anticipated loss persistence information we use may also be used in the future to better understand other aspects of loss-firm performance evaluation including turnover decisions, pay-for-performance sensitivity, and relative performance evaluation in loss firms.

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Appendix A

Variable	Definition (Compustat and CRSP mnemonics in parentheses)
Income Tax News Categories:	
TransitoryLoss	Transitory loss firm observations. Modified measure from Dhaliwal et al. (2013) defined as a loss firm (IB <0 and non-positive PI) with negative total deferred tax expense (TXDI < 0) and positive total current tax expense (TXC > 0).
BaselineLoss	Baseline loss firm observations. Modified measure from Dhaliwal et al. (2013) defined as a loss firm (IB <0 and non-positive PI) with negative total deferred tax expense (TXDI < 0) and non-positive total current tax expense (TXC ≤ 0).
PersistentLoss	Persistent loss firm observations. Modified measure from Dhaliwal et al. (2013) defined as a loss firm (IB <0 and non-positive PI) with non-negative total deferred tax expense (TXDI ≥ 0).
PersistentLoss-Growth	Persistent loss firm observations with an investment opportunity set (IOS) factor score (following Cadman et al. 2010b) greater than zero.
PersistentLoss-CareerRisk	Persistent loss firm-years in which the executive is not terminated in t, t+1, or t+2 and the IOS factor score is less than zero.
PersistentLoss-Termination	Persistent loss firm-years in which the executive is terminated in either t or t+1 and the firm remains in existence in Compustat in periods t+1 and t+2 and the IOS factor score is less than zero.
Compensation Variables:	
CashComp	Natural log of (1+ SALARY+BONUS+NONEQ_INCENT).
Salary	Natural log of (1+(SALARY)).
Bonus	Natural log of (1+(BONUS + NONEQ_INCENT)), following Cadman et al. (2010).
LTIP	Natural log of (1+LTIP).
BonusPct	The ratio of the incentive based cash compensation ((BONUS+NONEQ_INCENT+LTIP) to total *CashComp*.
EquityComp	Natural log of (1+option compensation + stock compensation) where option compensation is measured as either (OPTION_AWARDS_BLK_VALUE) in the pre-SFAS 123R period or (OPTION_AWARDS_FV) in the post-SFAS 123R period as reported in Execucomp and stock compensation is measured as either (RSTKGRNT) in the pre-SFAS 123R period or (STOCK_AWARDS_FV) in the post-SFAS 123R period as reported in Execucomp.
Firm Characteristics:	
Size	Natural log of total assets (AT).
ROA	Net income (IB) divided by total assets (AT).

AnnRet	The one year buy-and-hold dividend reinvested return compounded from the CRSP monthly file.
MTB	Market-to-book ratio as measured as market value of equity (CSHO*PRCC_F) divided by book value of equity (CEQ).
Var_Return	Standard deviation of monthly returns over the prior twelve months.
CFShortfall	The three-year average of [(Common and Preferred Dividends (DVC+DVP) + cash flows from investing (IVNCF) + cash flows from operations (OANCF))/Total Assets (AT)] as defined in Eckbo et al. (2016).
CEO Characteristics:	
Tenure	The length of time the executive has been with the current firm. Measured as (DATADATE-JOINEDCO).
Female_Ind	Indicator variable taking the value of one if the CEO is female.
CEO_COB	Indicator variable taking the value of one if the executive is both the firm CEO and Chairman of the Board during the current period.
Tests of Performance Expectation and Career Risk Premiums	
ROE	Return on equity (IB_t/CEQ_{t-1}) as defined in Hayes and Schaefer (2000).
High_Ability	Indicator set equal to one if the manager is of high ability (ability score greater than zero) as measured in Demerjian et al. (2012), zero otherwise.
Low_Ability	Indicator set equal to one if the manager is of low ability (ability score less than zero) as measured in Demerjian et al. (2012), zero otherwise.
High_FirmWealth	Indicator set equal to one if the manager's firm-related wealth is in the top quartile of our sample, zero otherwise.
Low_FirmWealth	Indicator set equal to one if the manager's firm-related wealth is not in the top quartile of our sample, zero otherwise.
Sensitivity Analysis Variables:	
Z_Score	Categories of Altman Z-score defined as zero if Z-score > 2.99, one if 1.81 > Z-score < 2.99, and two if Z-score < 1.81; Z-score is measured as (1.2*WCAP/AT) + (1.4*RE/AT) + (3.3*EBIT/AT) + (0.6*CSHO*PRCC_F/LT) + (0.999*SALE/AT).
KZ_Index	K-Z index measured as 1.001909*((IB+DP)/lag_PPENT) + 0.2826389*((AT+(CSHO*PRCC_C)-CEQ-TXDB)/AT) + 3.139193*((DLTT+DLC)/(DLTT+DLC+SEQ)) - 39.3678*((DVC+DVP)/lag_PPENT)-1.31759*(CHE/lag_PPENT).
Surp_Cash	Measured as (-1*DEPC+OANCF+RDIP)/AT.
IntroStage	An indicator variable taking the value of one if the firm year is classified as an Introduction year using the life cycle model in Dickinson (2011), zero otherwise.
GrowthStage	An indicator variable taking the value of one if the firm year is classified as an Growth year using the life cycle model in Dickinson (2011), zero otherwise.

MatureStage	An indicator variable taking the value of one if the firm year is classified as an Mature year using the life cycle model in Dickinson (2011), zero otherwise.
ShakeoutStage	An indicator variable taking the value of one if the firm year is classified as an Shakeout year using the life cycle model in Dickinson (2011), zero otherwise.
DeclineStage	An indicator variable taking the value of one if the firm year is classified as an Decline year using the life cycle model in Dickinson (2011), zero otherwise.
Ind_Adj_ROA	The industry (2 digit SIC code) adjusted Return on Assets (IB_t/AT_{t-1})
Recession	An indicator variable taking the value of one if the year is defined as a recession year by the National Bureau of Economic Research.
CEO_First_Year	An indicator variable taking the value of one if the current year is the CEO's first full year in office, zero otherwise.
SeqLoss	A count variable expressing the number of years in sequence the firm has been classified as a loss firm.
BigLoss	An indicator variable taking the value of one if the loss was in the largest 10 percent of losses in our sample, following Dhaliwal et al. (2013).
FirstLoss	An indicator variable taking the value of one if the year prior to the loss was profitable, zero otherwise.
SalesGrowth	The percentage growth in sales between year *t* and *t-1*.
HighSD_ROA	An indicator variable taking the value of one if the standard deviation of ROA over prior five year period is above the median and zero otherwise.
Co_Option	An indicator variable taking the value of one if the fraction of directors hired after the CEO is great than 50 percent, zero otherwise.

Appendix B

In addition to the financial variables required in all regressions, we require firms to have non-missing values of worldwide current tax expense (*TXT- TXDI*), federal current tax expense (*TXFED*), foreign current tax expense (*TXFO*), federal deferred tax expense (*TXDFED*), and foreign deferred tax expense (*TXDFO*). We identify these variables as *TXWW, TXFED, TXFO, TXDFED,* and *TXDFO,* respectively. We also require worldwide pretax income (*PI*), domestic pretax income (*PIDOM*), and foreign pretax income (*PIFO*). We identify these variables as *PI*, *PIDOM*, and *PIFO*, respectively. Following Dyreng and Lindsey (2009), and to increase our sample size, we replace missing values as follows:

1) If *TXFO* is missing and *TXFED* is equal to *TXWW*, then we set *TXFO* to 0.
2) If *TXFO* is missing and *PIDOM* is equal to *PI*, then we set *TXFO* to 0.
3) If *PIFO* is missing and *PIDOM* is equal to *PI*, then we set *PIFO* to 0.
4) If *PIFO* is missing and *TXFED* is equal to *TXWW*, then we set *TXFO* to 0.
5) If *PIFO* is missing and *PIDOM* and *PI* are not missing, then we set *PIFO* to *PI - PIDOM*.
6) If *PIDOM* is missing and *PIFO* and *PI* are not missing, then we set *PIDOM* to *PI - PIFO*.
7) If *PI* is missing and *PIFO* and *PIDOM* are not missing, then we set *PI* to *PIDOM + PIFO*.
8) If *TXFED* is missing and *TXFO* and *TXWW* are not missing, we set *TXFED* to *TXWW - TXFO*.
9) If *TXFO* is missing and *TXFED* and *TXWW* are not missing, we set *TXFO* to *TXWW - TXFO*.
10) If *TXWW* is missing and *TXFED* and *TXFO* are not missing, then we set *TXWW* to *TXFED + TXFO*.

Because we also require deferred tax expense items to be populated (both foreign and domestic) we expand the methodology in Dyreng and Lindsey (2009) as follows:

11) If *TXDFO* is missing and *TXDFED* is equal to *TXDI*, then we set *TXDFO* to 0.
12) If *TXDFO* is missing and *PIDOM* is equal to *PI*, then we set *TXDFO* to 0.
13) If *TXDFED* is missing and *TXDFO* is equal to *TXDI*, then we set *TXDFED* to 0.
14) If *TXDFED* is missing and *TXDFO* and *TXDI* are not missing, then we set *TXDFED* to *TXDI-TXDFO*.
15) If *TXDFO* is missing and *TXDFED* and *TXDI* are not missing, then we set *TXDFO* to *TXDI-TXDFED*.
16) If *TXDI* is missing and *TXDFED* and *TXDFO* are not missing, then we set *TXDI* to *TXDFED+TXDFO*.

Appendix C

DKLW Validation Using Execucomp Sample with Worldwide Tax Measures

Because we alter the methodology in DKLW to capture worldwide losses, and as such worldwide valuation allowances, and because we are limited to the Execucomp sample which is notably different than the full Compustat universe used in DKLW, we provide validation of our methodology and sample using tests from DKLW. Our loss-firm categories are consistent with DKLW and map into their variable names as follows: GN_TI → *TransitoryLoss*, GN_VA → *BaselineLoss*, BN → *PersistentLoss*. First, we document the frequency of loss years occurring in each loss year category categorized by the current worldwide deferred tax and current worldwide tax expenses.

Appendix C Table 1: Categorizing Loss firms by Tax Status

	Worldwide Current Tax Expense			
	Negative	Zero	Positive	Total
Worldwide Deferred Tax Expense				
Negative	***Baseline***	***Baseline***	***Transitory***	1,773
	512	96	1,165	(47.41%)
	(13.69%)	(2.57%)	(31.15%)	
Zero	***Persistent***	***Persistent***	***Persistent***	1,174
	201	623	350	(31.39%)
	(5.37%)	(16.66%)	(9.36%)	
Positive	***Persistent***	***Persistent***	***Persistent***	793
	414	31	348	(21.20%)
	(11.07%)	(0.83%)	(9.30%)	
Total	1,127	750	1,863	3,740
	(30.13%)	(20.05%)	(49.81%)	(100.00%)

We note a much larger percentage of our loss years in the *TransitoryLoss* category, consistent with our Execucomp sample, which are typically larger and more profitable than average Compustat firms. The categorization across current and deferred tax expense groups in the *BaselineLoss* and *PersistentLoss* are inferentially similar.

Next, we present descriptive statistics on the frequency of loss year observations by loss firm category.

Appendix C Table 2: Frequency of Losses by Year

	PersistentLoss		*BaselineLoss*		*TransitoryLoss*		All loss firms	
Year	n	%	n	%	N	%	n	%
1993	62	(0.02%)	21	(0.56%)	52	(1.39%)	135	(1.97%)
1994	63	(1.68%)	10	(0.27%)	26	(0.70%)	99	(2.65%)
1995	92	(2.46%)	32	(0.86%)	40	(1.07%)	164	(4.39%)
1996	79	(2.11%)	27	(0.72%)	32	(0.86%)	138	(3.69%)
1997	81	(2.17%)	24	(0.64%)	43	(1.15%)	148	(3.96%)
1998	94	(2.51%)	35	(0.94%)	62	(1.66%)	191	(5.11%)
1999	64	(1.71%)	20	(0.53%)	40	(1.07%)	124	(3.32%)
2000	72	(1.93%)	25	(0.67%)	45	(1.20%)	142	(3.80%)
2001	128	(3.42%)	70	(1.87%)	102	(2.73%)	300	(8.02%)
2002	175	(4.68%)	47	(1.26%)	44	(1.18%)	266	(7.11%)
2003	122	(3.26%)	26	(.70%)	64	(1.71%)	212	(5.67%)
2004	91	(2.43%)	17	(0.45%)	37	(0.99%)	145	(3.88%)
2005	67	(1.79%)	17	(0.45%)	36	(0.96%)	120	(3.21%)
2006	70	(1.87%)	9	(0.24%)	43	(1.15%)	122	(3.26%)
2007	91	(2.43%)	12	(0.32%)	65	(1.74%)	168	(4.49%)
2008	135	(3.61%)	52	(1.39%)	117	(3.13%)	304	(8.13%)
2009	135	(3.61%)	58	(1.55%)	84	(2.25%)	277	(7.41%)
2010	70	(1.87%)	27	(0.72%)	38	(1.02%)	135	(3.61%)
2011	69	(1.84%)	19	(0.51%)	39	(1.04%)	127	(3.40%)
2012	72	(1.93%)	21	(0.56%)	53	(1.42%)	146	(3.90%)
2013	62	(1.66%)	21	(0.56%)	46	(1.23%)	129	(3.45%)
2014	67	(1.79%)	14	(0.37%)	52	(1.39%)	133	(3.56%)
2015	6	(0.16%)	4	(0.11%)	5	(0.13%)	15	(0.40%)
Total	1,967	(52.59%)	608	(16.26%)	1,165	(31.15%)	3,740	(100.00%)

Consistent with DKLW, our results show consistent frequencies of each loss-firm category by year. Additionally, we document an increased frequency of all categories of loss years in recession years (2001, 2007-2009). However, as predicted, we document a higher likelihood of *TransitoryLoss* loss firms in our Execucomp sample than the DKLW sample.

Next, we document the distribution of loss years by loss-firm category across the distribution of the number of sequential losses as well as the distribution of the magnitude of the loss.

Appendix C Table 3: Distribution of Sequential Losses by Tax Category

	PersistentLoss		*BaselineLoss*		*TransitoryLoss*	
	n	%	n	%	n	%
LOSSEQ						
1	893	45.40%	363	59.70%	807	69.27%
2	424	21.56%	151	24.84%	204	17.51%
3	253	12.86%	52	8.55%	68	5.84%
4	145	7.37%	23	3.78%	31	2.66%
5	92	4.68%	5	0.82%	19	1.63%
>5	160	8.13%	14	2.30%	36	3.09%
Total	1,967	100.00%	608	100.00%	1,165	100.00%

LOSSEQ is defined as the number of sequential losses (negative IB and non-positive PI).

Appendix C Table 4: Distribution of magnitude of *ROA* by Tax Category

	PersistentLoss		*BaselineLoss*		*TransitoryLoss*	
	n	%	n	%	n	%
ROA						
(-3%,0]	489	24.86%	194	31.91%	460	39.48%
(-8%,-3%]	454	23.08%	192	31.58%	368	31.59%
(-15%,-8%]	345	17.54%	120	19.74%	163	13.99%
(-25%,-15%]	303	15.40%	59	9.70%	79	6.78%
(-50%,-25%]	278	14.13%	33	5.43%	78	6.70%
≤ -50%	98	4.98%	10	1.64%	17	1.46%
Total	1,967	100.00%	608	100.00%	1,165	100.00%

ROA is defined as income before extraordinary items (IB) scaled by total assets (AT).

The results in these tables suggest that, using our modified tax categories and Execucomp sample, the distribution of loss years across loss-firm categories and number of sequential losses is similar to DKLW with the notable exception that our sample contains a much smaller proportion of firms with multiple consecutive losses. In addition, our sample firms are less likely to experience large losses. However, the distribution across loss categories appears consistent with DKLW.

Next, we examine whether the predictors of loss firm tax categories differ from DKLW.

Appendix C Table 5:
Ordered Logistic Regression of Tax Categories on Control Variables

	dv=$TAXCATG_t$	
	Coeff. Estimate	*p-value*
EARNINGS	0.693	0.000
Earnings Quality		
CASHFLOW	0.298	0.000
|ΔEARNINGS|	0.032	0.521
Transitory Items		
NEGSPIW	0.493	0.000
NEGNOP	0.129	0.020
NEGGLIS	0.008	0.947
NEGGLCF	-0.003	0.956
Growth Prospects		
SALESGROWTH	0.057	0.174
AGE	-4.899	0.000
R&D	0.090	0.089
Frequency of Losses		
FIRSTLOSS	0.316	0.000
LOSSEQ	0.079	0.387
BIGLOSS	-0.126	0.217
RECESSYEAR	0.026	0.863
Financial Stability		
SIZE	0.247	0.000
DIVDUM	0.078	0.191
DIVSTOP	0.028	0.803
Pseudo R^2	8.24%	
Number of Observations	3,740	

TAXCATG is an ordinal variable that equals 0, 1 or 2, depending on whether the loss firm-year is in the *PersistentLoss*, *BaselineLoss*, or *TransitoryLoss* category, respectively. All other variables are computed following DKLW.

These results suggest that the predictors of tax loss category are consistent with DKLW with a few notable exceptions. First, we note a significant positive coefficient on *|ΔEARNINGS|*, consistent with predictions in DKLW but a finding they were unable to document. In addition, we fail to identify a significant coefficient on either *NEGGLCF* or *SALESGROWTH*, as in DKLW. We also document a significantly larger coefficient on age, consistent with the increased average age of an Execucomp firm. Interestingly, we document a positive association between

R&D and loss-firm tax category in our sample suggesting that increased *R&D* leads to a greater likelihood of a transitory loss.

Finally, and perhaps of greatest importance for our study, we document the loss persistence by tax category using the methodology in DKLW.

Appendix C Table 6: Loss Persistence by Tax Category

	(1)	(2)	(3)
	t+1	*t+2*	*t+3*
EARNINGS	0.422***	0.266***	0.251***
	(13.07)	(7.06)	(5.22)
BaselineLoss	0.109***	0.147***	0.098**
	(2.66)	(3.66)	(2.32)
TransitoryLoss	0.185***	0.170***	0.209***
	(5.18)	(4.40)	(6.48)
EARNINGS**BaselineLoss*	-0.189***	-0.218***	-0.153**
	(-3.00)	(-3.81)	(-2.37)
EARNINGS**TransitoryLoss*	-0.236***	-0.222***	-0.286***
	(-4.89)	(-4.70)	(-5.98)
Intercept	0.282***	0.359***	0.367***
	(10.26)	(10.52)	(10.04)
N	3,521	3,170	2,855
Adjusted R^2	0.125	0.0480	0.0446
F-test $\beta_4<\beta_5$	14.382***	10.526***	7.654***

Following DKLW, EARNINGS is defined as income before extraordinary items scaled by total assets (IB/AT).

Consistent with DKLW, our results show that loss persistence varies predictably by tax category. Specifically, *TransitoryLoss* losses are less persistent than *BaselineLoss* losses that are less persistent that *PersistentLoss* (intercept) losses. Taken together, these results suggest that while the difference between Execucomp and Compustat firms creates some differences in our samples, the application of the DKLW methodology using both worldwide taxes as well as the Execucomp sample yields expected results.

Table 1
Descriptive Statistics - Univariate Statistics
Panel A: Compensation Characteristics

	N	Mean	Median	Std. Dev.	P25	P75
CashComp($)	3,740	978.96	657.81	1,474.52	421.06	1,064.42
CashComp	3,740	6.544	6.490	0.799	6.045	6.971
Salary	3,740	6.199	6.217	0.658	5.892	6.588
Bonus	3,740	3.394	4.564	2.958	0.000	6.003
LTIP	3,740	0.154	0.000	0.962	0.000	0.000
BonusPct	3,740	0.235	0.194	0.243	0.000	0.429

	(1) *Transitory Loss*	(2) *Baseline Loss*	(3) *Persistent Loss-Growth*	(4) *Persistent Loss-Termination*	(5) *Persistent Loss-CareerRisk*	(1) v. (2)	(1) v. (3)	(1) v. (4)	(1) v. (5)	(2) v. (3)	(2) v. (4)	(2) v. (5)	(3) v. (4)	(3) v. (5)	(4) v. (5)
	N = 1,165	N = 608	N = 846	N = 227	N = 894										
CashComp($)	1,160.98	878.41	610.39	1,163.44	1,112.09										
CashComp	6.744	6.469	6.207	6.699	6.613	***	***		***	***	***	***	***	***	
Salary	6.329	6.180	5.932	6.352	6.256	***	***		***	***	***	**	***	***	**
Bonus	3.867	2.895	3.266	3.323	3.255	***	***	***	***	***	*	**			
LTIP	0.227	0.123	0.007	0.229	0.200	**	***			**			***	***	
BonusPct	0.273	0.200	0.208	0.236	0.233	***	***	**	***		**	***		**	

Panel B: CEO Characteristics

	N	Mean	Median	Std. Dev.	P25	P75
Tenure(Years)	3,740	7.481	5.167	7.114	2.393	10.255
Female_Ind	3,740	0.021	0.000	0.145	0.000	0.000
CEO_COB	3,740	0.464	0.000	0.499	0.000	1.000

	(1) *Transitory Loss*	(2) *Baseline Loss*	(3) *Persistent Loss-Growth*	(4) *Persistent Loss-Termination*	(5) *Persistent Loss-CareerRisk*	(1) v. (2)	(1) v. (3)	(1) v. (4)	(1) v. (5)	(2) v. (3)	(2) v. (4)	(2) v. (5)	(3) v. (4)	(3) v. (5)	(4) v. (5)
Tenure(unlogged)	7.632	7.424	7.477	7.949	7.207										
Female_Ind	0.021	0.025	0.015	0.004	0.029						*			**	**
CEO_COB	0.502	0.487	0.365	0.502	0.481		***			***			***	***	

Panel C: Firm Characteristics

	N	Mean	Median	Std. Dev.	P25	P75
Size	3,740	6.468	6.397	1.618	5.332	7.530
ROA_t	3,740	-0.127	-0.061	0.247	-0.153	-0.024
ROA_{t-1}	3,740	-0.063	-0.006	0.334	-0.099	0.039
$AnnRet_t$	3,740	0.021	-0.143	0.878	-0.435	0.211
$AnnRet_{t-1}$	3,740	0.035	-0.107	0.880	-0.395	0.211
MTB_{t-1}	3,740	2.531	1.569	5.936	1.014	2.711
Var_Return	3,740	0.173	0.155	0.081	0.117	0.208
CFShortfall	3740	-0.039	-0.013	0.145	-0.093	0.038

	(1) *Transitory Loss*	(2) *Baseline Loss*	(3) *Persistent Loss-Growth*	(4) *Persistent Loss-Termination*	(5) *Persistent Loss-CareerRisk*	(1) v. (2)	(1) v. (3)	(1) v. (4)	(1) v. (5)	(2) v. (3)	(2) v. (4)	(2) v. (5)	(3) v. (4)	(3) v. (5)	(4) v. (5)
Size	7.073	6.616	5.259	6.827	6.631	***	***	**	***	***	*		***	***	*
ROA_t	-0.093	-0.091	-0.251	-0.077	-0.090		***			***			***	***	
ROA_{t-1}	0.000	-0.013	-0.223	-0.029	-0.035		***		***	***			***	***	
$AnnRet_t$	0.015	-0.062	0.161	-0.044	-0.031	*	***			***			***	***	
$AnnRet_{t-1}$	0.062	-0.025	0.121	0.074	-0.051	**			***	***				***	*
MTB_{t-1}	2.484	1.869	3.863	1.709	1.993	**	***	*	*	***			***	***	
Var_Return	0.153	0.164	0.219	0.156	0.166	***	***		***	***			***	***	
CFShortfall	-0.008	-0.017	-0.128	-0.011	-0.020		***		**	***			***	***	

This table presents descriptive statistics using the full sample of loss firm-years for all compensation variables (Panel A), and executive (Panel B) and firm (Panel C) characteristics collected from COMPUSTAT, EXECUCOMP, and CRSP and t-tests of the differences in means across our loss firm categories. See Appendix A for variable definitions. *, **, *** indicates statistical significance at 10 percent, 5 percent, and 1 percent levels, respectively.

Table 2
Panel A: Tests of Cash Compensation by Loss Firm Category

	Dependent Variable				
	(1)	(2)	(3)	(4)	(5)
	CashComp	*Salary*	*Bonus*	*LTIP*	*BonusPct*
TransitoryLoss	0.128***	0.043	0.721***	0.093	0.051***
	(3.30)	(1.26)	(4.90)	(1.60)	(4.25)
PersistentLoss-Growth	0.075*	0.034	0.530***	0.085*	0.033**
	(1.73)	(0.94)	(2.75)	(1.84)	(2.19)
PersistentLoss-Termination	0.071	0.070	-0.052	0.138	-0.002
	(1.23)	(1.48)	(-0.23)	(1.51)	(-0.13)
PersistentLoss-CareerRisk	0.130***	0.063*	0.329**	0.075	0.031**
	(3.45)	(1.91)	(2.03)	(1.34)	(2.46)
Size	0.269***	0.191***	0.395***	0.081***	0.039***
	(22.50)	(16.87)	(8.77)	(4.48)	(10.33)
ROA_t	0.011	-0.040	0.307	-0.023	0.027**
	(0.31)	(-1.16)	(1.55)	(-0.82)	(2.01)
ROA_{t-1}	-0.077*	0.011	-0.181	-0.029	-0.026
	(-1.72)	(0.38)	(-0.98)	(-1.35)	(-1.38)
$AnnRet_t$	0.091***	0.027***	0.518***	0.015	0.045***
	(6.70)	(2.96)	(7.40)	(1.29)	(7.57)
$AnnRet_{t-1}$	0.048***	0.023**	0.267***	0.016	0.020***
	(3.83)	(2.45)	(4.48)	(1.22)	(3.79)
MTB_{t-1}	0.001	-0.004	0.023***	-0.001	0.002***
	(0.39)	(-1.43)	(3.65)	(-0.83)	(3.48)
Var_Return	-0.417*	-0.408**	-1.107	-1.259***	-0.082
	(-1.93)	(-2.48)	(-1.29)	(-5.16)	(-1.10)
CFShortfall	0.360***	0.208**	0.038	-0.051	0.031
	(3.56)	(2.02)	(0.10)	(-0.64)	(1.02)
Tenure	0.036*	0.081***	-0.271***	-0.021	-0.031***
	(1.95)	(4.99)	(-3.67)	(-0.95)	(-5.02)
Female_Ind	0.071	0.024	-0.018	-0.097**	-0.008
	(0.85)	(0.21)	(-0.05)	(-2.39)	(-0.27)
CEO_COB	0.047	0.058**	-0.130	0.074	-0.002
	(1.59)	(2.27)	(-1.09)	(1.64)	(-0.17)
Constant	4.337***	4.578***	0.588	0.313	-0.030
	(33.77)	(43.43)	(0.97)	(1.02)	(-0.61)
Year FE	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes
Clustered SE	Yes	Yes	Yes	Yes	Yes
N	3,740	3,740	3,740	3,740	3,740
Adjusted R^2	44.4%	34.3%	18.6%	7.8%	20.8%

Table 2 presents the results of estimating Model (1) in our full sample of loss firms. We include indicator variables taking the value of one if the firm year belong to the loss category and zero otherwise. We exclude the indicator for baseline loss firms (subsumed in intercept). Variable descriptions are presented in Appendix A. *, **, *** indicates statistical significance at 10 percent, 5 percent, and 1 percent levels, respectively.

Table 3
Tests of the Performance Expectation Premium

	dv=ΔROE_{t+1}		
	(1) *TransitoryLoss*	(2) *PersistentLoss-Growth*	(3) *PersistentLoss-CareerRisk*
$\Delta CashComp_t$	0.012**	0.036**	0.007
	(2.06)	(2.17)	(0.73)
$\Delta CashComp_{t-1}$	0.002	-0.002	0.017**
	(0.37)	(-0.13)	(2.06)
$\Delta AnnRet_t$	0.013	0.022	0.086***
	(0.89)	(0.71)	(2.79)
ΔROE_t	-0.441**	-0.303***	-0.892***
	(-2.44)	(-3.05)	(-24.45)
$\Delta SALE_t$	0.118**	0.058	0.110**
	(2.41)	(1.11)	(2.33)
$\Delta AnnRet_{t-1}$	0.080	0.015	0.080**
	(1.46)	(0.42)	(2.47)
$\Delta AnnRet_{t-2}$	0.062	0.013	0.034
	(1.41)	(0.53)	(1.02)
$\Delta AnnRet_{t-3}$	0.018	-0.011	-0.020
	(0.83)	(-0.54)	(-0.78)
ΔROE_{t-1}	-0.355**	0.005	-0.526***
	(-2.15)	(0.51)	(-2.94)
$\Delta SALE_{t-1}$	-0.013	-0.004	-0.045
	(-0.27)	(-0.07)	(-0.62)
Constant	0.022	-0.277	0.275**
	(0.23)	(-0.56)	(2.12)
Year FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Robust SE	Yes	Yes	Yes
N	923	615	708
Adjusted R^2	46.0%	35.2%	93.6%

Table 3 presents the results of estimating the future performance tests as specified in Hayes and Schaefer (2000) by loss-firm category. Variable descriptions are presented in Appendix A. *, **, *** indicates statistical significance at 10 percent, 5 percent, and 1 percent levels, respectively.

Table 4
Career Risk Premium Test

	dv=CashComp			
	(1)	(2)	(3)	(4)
	High_Ability	*Low_Ability*	*High_FirmWealth*	*Low_FirmWealth*
TransitoryLoss	0.120**	0.098**	0.148	0.110***
	(2.12)	(2.13)	(1.38)	(3.54)
PersistentLoss-Growth	0.054	0.051	0.041	0.062
	(0.85)	(1.00)	(0.43)	(1.43)
PersistentLoss-Termination	0.035	0.054	0.135	0.045
	(0.29)	(0.98)	(0.88)	(0.98)
PersistentLoss-CareerRisk	0.210***††	0.087**	0.274***††	0.079**
	(3.00)	(2.09)	(2.63)	(2.34)
Size	0.251***	0.282***	0.270***	0.267***
	(13.29)	(22.26)	(11.07)	(23.54)
ROA_t	0.020	-0.142**	0.007	0.019
	(0.54)	(-2.04)	(0.06)	(0.54)
ROA_{t-1}	0.089	-0.120**	-0.096	-0.063
	(1.09)	(-2.33)	(-1.39)	(-1.26)
$AnnRet_t$	0.081***	0.103***	0.127***	0.074***
	(4.78)	(5.91)	(5.21)	(4.84)
$AnnRet_{t-1}$	0.024	0.087***	0.045*	0.063***
	(1.40)	(5.21)	(1.87)	(5.41)
MTB_{t-1}	-0.001	0.001	-0.005	0.004*
	(-0.28)	(0.35)	(-0.55)	(1.90)
Var_Return	-0.709*	-0.235	-0.852**	-0.156
	(-1.86)	(-1.03)	(-2.27)	(-0.69)
CFShortfall	0.495***	0.167	0.528**	0.252***
	(2.82)	(1.57)	(2.25)	(2.76)
Tenure	0.060*	0.026	0.027	0.032*
	(1.75)	(1.34)	(0.69)	(1.81)
Female_Ind	0.155	0.062	0.210*	0.049
	(1.50)	(0.61)	(1.94)	(0.54)
CEO_COB	0.022	0.052	-0.028	0.080***
	(0.41)	(1.64)	(-0.45)	(2.90)
Constant	3.995***	4.227***	4.517***	4.293***
	(10.92)	(32.42)	(12.59)	(34.32)
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Clustered SE	Yes	Yes	Yes	Yes
N	1,283	2,457	1,137	2,603
Adjusted R^2	44.2%	46.4%	38.0%	50.9%

Table 4 presents the results of estimating Equation (1) using *CashComp* as the dependent variable across partitions on proxies for the level and effect of career risk the manager faces. Specifically, in Columns (1) and (2) we partition the sample using manager's ability, as defined in Demerjian et al. (2012). We define *High_Ability* as a manager ability score above zero, and *Low_Ability* as below zero. In Columns (3) and (4) we partition using the CEO's firm-related wealth. We define *High_FirmWealth* as the top quartile of wealth and *Low_FirmWealth* as the remaining

sample. Variable descriptions are presented in Appendix A. *, **, *** indicates statistical significance at 10 percent, 5 percent, and 1 percent levels, respectively. †, ††, ††† indicates significant differences across partitions (Columns (1) and (2) or Columns (3) and (4)) at 10 percent, 5 percent, and 1 percent levels, respectively.

Table 5
Panel A: Comparison of Bonus Compensation Target Measures by Loss Firm Category

	(1) Profitable	(2) Transitory Loss	(3) Baseline Loss	(4) Persistent Loss Growth	(5) Persistent Loss Termination	(6) Persistent Loss CareerRisk
	n=4,974	n=207	n=78	n=70	n=34	n=115
Number of Performance Measures:						
TotalNumberofTargets	6.996	7.232	7.641	9.429	6.618	6.017
TotalAccountingTargets	2.259	2.348	2.462	3.157	2.147	1.861
TotalMarketTargets	2.237	2.372	2.436	2.743	2.088	1.913
TotalOtherTargets	2.259	2.348	2.462	3.157	2.147	1.861
Type of Performance Measures:						
AccountingTargetIndicator	0.989	0.986	0.987	0.986	0.971	0.983
MarketTargetIndicator	0.062	0.092	0.103	0.071	0.118	0.070
OtherTargetIndicator	0.542	0.565	0.667	0.586	0.529	0.574
BottomLineEarningsIndicator	0.572	0.425	0.346	0.400	0.265	0.383
AboveLineEarningsIndicator	0.475	0.560	0.628	0.443	0.618	0.557
CashFlowIndicator	0.207	0.290	0.179	0.129	0.235	0.200
ReturnMeasureIndicator	0.265	0.203	0.090	0.114	0.147	0.183
SalesIndicator	0.349	0.353	0.282	0.443	0.294	0.243
VagueAccountingIndicator	0.021	0.024	0.038	0.086	0.118	0.000
OtherAccountingIndicator	0.386	0.415	0.564	0.529	0.441	0.461

Panel B: Tests of Differences

	(1) v. (2)	(1) v. (3)	(1) v. (4)	(1) v. (5)	(1) v. (6)	(2) v. (3)	(2) v. (4)	(2) v. (5)	(2) v. (6)	(3) v. (4)	(3) v. (5)	(3) v. (6)	(4) v. (5)	(4) v. (6)	(5) v. (6)
Number of Performance Measures															
TotalNumberofTargets	**	***	***	*	***	*	***		**						
TotalAccountingTargets			***		***		***		***	*		***	***	***	
TotalMarketTargets			**		***				***			***	*	***	
TotalOtherTargets			***		***		***		***	*		***	***	***	
Type of Performance Measures					***			***	***		**	**			
AccountingTargetIndicator	**	*		*	**										
MarketTargetIndicator		**									*	*			
OtherTargetIndicator	***	***	***	***	***			*							*
BottomLineEarningsIndicator	***	***					***			***				**	
AboveLineEarningsIndicator	*		**				***						*	*	
CashFlowIndicator	***	***	***	**	**										
ReturnMeasureIndicator					***	*			***	**				***	
SalesIndicator			***	***	*		***	***		*	**	*		***	***
VagueAccountingIndicator		***				**						*			
OtherAccountingIndicator	**	***	***	*	***	*	***	**	**						

Table 5 Panel A presents mean values of the disclosed target variables using ISS Incentive Lab data. Panel B provides tests of the difference in means between each loss firm category. Variable classifications (Accounting, Market, Other, Bottom Line, etc.) are provided directly by ISS. Each target variable in the represents either the number of targets classified within that category by ISS (Number of Performance Measures) or the mean value of an indicator variable taking the value of one when the target contract contains at least one measure of that type (Type of Performance Measures). *, **, *** indicates statistical significance at 10 percent, 5 percent, and 1 percent levels, respectively.

Table 6
Year-over-year Changes in Bonus Compensation Target Measures

	(1)	(2)	(3)	(4)	(5)
	Transitory Loss	Baseline Loss	Persistent Loss Growth	Persistent Loss Termination	Persistent Loss CareerRisk
	n=207	n=78	n=70	n=34	n=115
Number of Performance Measures:					
TotalNumberofTargets	0.278***	0.060	0.145*	0.514**	0.205**
TotalAccountingTargets	-0.108	-0.202	-0.171	0.000	0.151
TotalMarketTargets	-0.116	-0.191	-0.171	0.098	0.123
TotalOtherTargets	-0.108	-0.202	-0.170	0.000	0.151
Types of Performance Measures:					
AccountingTargetIndicator	-0.021	-0.022	-0.012	-0.024	-0.041**
MarketTargetIndicator	0.000	0.000	0.000	-0.049	0.000
OtherTargetIndicator	0.025	0.056	0.012	-0.024	-0.068**
BottomLineEarningsIndicator	0.053**	0.102***	0.047	0.068	0.041
AboveLineEarningsIndicator	0.080***	-0.009	0.086**	0.203***	-0.017
CashFlowIndicator	-0.013	0.028	0.019	0.085	0.012
ReturnMeasureIndicator	0.030	0.019	-0.019	0.051	0.036*
SalesIndicator	-0.029	-0.022	0.085*	0.024	-0.007
VagueAccountingIndicator	0.004	0.000	0.000	-0.098**	0.000
OtherAccountingIndicator	-0.087***	0.000	-0.036	-0.073	-0.095*

Table 6 presents mean values of the disclosed target variables in year t (the year of the loss) and year t+1 (the year after the loss) using ISS Incentive Lab data. Variable classifications (Accounting, Market, Other, Bottom Line, etc.) are provided directly by ISS. Each target variable in the represents either the number of targets classified within that category by ISS (Number of Performance Measures) or the mean value of an indicator variable taking the value of one when the target contract contains at least one measure of that type (Type of Performance Measures). *, **, *** indicates statistical significance in the difference in each variable between time *t* and time *t+1* at 10 percent, 5 percent, and 1 percent levels, respectively.

Table 7
Distribution of Loss years by Loss-Firm Category, Above and Below Line Losses, and Financial Distress

Panel A: Frequency of Loss-Firm Category by Above and Below Line Loss Type

Loss-Firm Category	Loss Type				
	Above-Line		Below-Line		Total
	N	%	N	%	
TransitoryLoss	**1,141**	(97.94%)	**24**	(2.06%)	**1,165**
%	(31.24%)		(27.27%)		
BaselineLoss	**596**	(98.03%)	**12**	(1.97%)	**608**
%	(16.32%)		(13.64%)		
PersistentLoss-Growth	**840**	(99.29%)	**6**	(0.71%)	**846**
%	(23.00%)		(6.82%)		
PersistentLoss-Termination	**217**	(95.59%)	**10**	(4.41%)	**227**
%	(5.94%)		(11.36%)		
PersistentLoss-CareerRisk	**858**	(95.97%)	**36**	(4.03%)	**894**
%	(23.49%)		(40.91%)		
Total	**3,652**	(97.65%)	**88**	(2.35%)	**3,740**

We define above the line losses as net income loss (Compustat Item IB<0 & NI < 0) and below the line losses as losses before extraordinary items (Compustat Items NI < 0 and IB >0).

Panel B: Frequency of Loss-Firm Category by Level of Financial Distress

Loss-Firm Category	Z-Score						
	Zero		One		Two		Total
	N	%	N	%	N	%	
TransitoryLoss	**362**	(31.07%)	**347**	(29.79%)	**456**	(39.14%)	**1165**
%	(29.92%)		(38.09%)		(28.17%)		
BaselineLoss	**198**	(32.57%)	**167**	(27.47%)	**243**	(39.97%)	**608**
%	(16.36%)		(18.33%)		(15.01%)		
PersistentLoss-Growth	**384**	(45.39%)	**110**	(13.00%)	**352**	(41.61%)	**846**
%	(31.74%)		(12.07%)		(21.74%)		
PersistentLoss-Termination	**48**	(21.15%)	**57**	(25.11%)	**122**	(53.74%)	**227**
%	(3.97%)		(6.26%)		(7.54%)		
PersistentLoss-CareerRisk	**218**	(24.38%)	**230**	(25.73%)	**446**	(49.89%)	**894**
%	(18.02%)		(25.25%)		(27.55%)		
Total	**1210**		**911**		**1619**		

Z-score is set to zero if Z-score > 2.99, one if 1.81 > Z-score < 2.99, and two if Z-score < 1.81. See full definitions in Appendix A.

Table 8
Sensitivity Tests
Panel A: Sensitivity Tests – Including Full Set of Loss Controls

	Dependent Variable				
	(1)	(2)	(3)	(4)	(5)
	CashComp	*Salary*	*Bonus*	*LTIP*	*BonusPct*
TransitoryLoss	0.135***	0.052	0.711***	0.068	0.050***
	(3.40)	(1.51)	(4.72)	(1.14)	(4.06)
PersistentLoss-Growth	0.077*	0.033	0.597***	0.072	0.037**
	(1.73)	(0.89)	(2.99)	(1.58)	(2.36)
PersistentLoss-Termination	0.166***	0.126**	0.293	0.069	0.024
	(2.75)	(2.54)	(1.27)	(0.74)	(1.27)
PersistentLoss-CareerRisk	0.151***	0.081**	0.383**	0.053	0.034***
	(3.78)	(2.37)	(2.34)	(0.92)	(2.65)
Size	0.292***	0.205***	0.461***	0.083***	0.044***
	(22.98)	(16.90)	(10.12)	(4.31)	(11.47)
ROA_t	0.021	-0.011	0.090	0.021	0.011
	(0.54)	(-0.31)	(0.46)	(0.69)	(0.81)
ROA_{t-1}	-0.072	0.026	-0.192	-0.023	-0.028
	(-1.36)	(0.83)	(-1.00)	(-1.20)	(-1.36)
$AnnRet_t$	0.090***	0.032***	0.452***	0.012	0.041***
	(6.51)	(3.30)	(7.34)	(1.09)	(7.57)
$AnnRet_{t-1}$	0.044***	0.020**	0.247***	0.010	0.018***
	(3.39)	(2.02)	(4.20)	(0.93)	(3.58)
MTB_{t-1}	-0.001	-0.005	0.015**	-0.000	0.002**
	(-0.21)	(-1.61)	(2.36)	(-0.19)	(2.42)
Var_Return	-0.458**	-0.526***	-0.835	-0.440***	-0.044
	(-2.22)	(-3.49)	(-1.08)	(-2.63)	(-0.67)
CFShortfall	0.634***	0.397***	0.879**	-0.080	0.095***
	(5.68)	(3.67)	(2.45)	(-0.95)	(3.09)
Z_Score	-0.004	0.013	-0.058	0.015	-0.005
	(-0.21)	(0.76)	(-0.82)	(0.83)	(-0.92)
KZ_Index	-0.001*	-0.000	-0.002**	-0.000	-0.000**
	(-1.94)	(-1.59)	(-2.06)	(-0.16)	(-2.13)
Surp_Cash	-0.143*	-0.094	0.092	-0.101	0.003
	(-1.72)	(-1.45)	(0.27)	(-1.27)	(0.09)
Tenure	0.030	0.066***	-0.203**	-0.041	-0.025***
	(1.45)	(3.66)	(-2.31)	(-1.58)	(-3.47)
Female_Ind	0.160**	0.086	0.231	-0.113***	0.011
	(1.98)	(0.78)	(0.67)	(-2.98)	(0.39)
CEO_COB	-0.025	0.002	-0.324***	0.115**	-0.015
	(-0.83)	(0.10)	(-2.71)	(2.53)	(-1.49)
IntroStage	-0.089**	-0.042	-0.512***	0.017	-0.031**

	(-2.57)	(-1.39)	(-3.02)	(0.37)	(-2.41)
GrowthStage	-0.032	-0.057**	-0.041	0.074	0.012
	(-1.14)	(-2.55)	(-0.32)	(1.64)	(1.14)
ShakeoutStage	-0.069**	-0.109***	-0.187	0.083	0.005
	(-2.10)	(-3.39)	(-1.20)	(1.52)	(0.37)
DeclineStage	-0.070	-0.040	-0.557***	0.064	-0.026*
	(-1.46)	(-1.01)	(-2.83)	(1.08)	(-1.73)
Ind_Adj_ROA	0.007***	0.005***	0.019*	-0.002	0.002*
	(3.86)	(3.88)	(1.83)	(-0.56)	(1.93)
Recession	0.105***	0.102***	0.049	-0.052	0.004
	(4.50)	(5.09)	(0.43)	(-1.46)	(0.38)
CEO_First_Year	-0.107***	-0.125***	0.044	-0.045	0.009
	(-3.41)	(-4.53)	(0.32)	(-1.04)	(0.79)
SeqLoss	0.038***	0.029***	0.086**	-0.001	0.006*
	(5.00)	(4.70)	(2.05)	(-0.27)	(1.96)
BigLoss	0.005	0.019	0.016	-0.029	-0.003
	(0.12)	(0.60)	(0.09)	(-1.25)	(-0.19)
FirstLoss	0.018	0.015	-0.137	0.068*	-0.009
	(0.65)	(0.58)	(-1.12)	(1.87)	(-0.92)
SalesGrowth	0.059**	0.003	0.440***	0.028	0.035***
	(2.42)	(0.21)	(3.37)	(1.10)	(3.26)
Constant	4.567***	4.721***	1.357**	-0.009	0.022
	(35.86)	(46.78)	(2.40)	(-0.03)	(0.47)
Year FE	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes
Clustered SE	Yes	Yes	Yes	Yes	Yes
N	3,740	3,740	3,740	3,740	3,740
Adjusted R^2	39.8%	31.9%	15.5%	5.2%	18.2%

Panel B: Sensitivity Tests - Cross-Sectional

	(1)	(2)	(3)
	Dependent Variable=CashComp		
VARIABLE =	*HighSD_ROA*	*Recession*	*Co_Option*
TransitoryLoss	0.121***	0.148***	0.164***
	(2.67)	(3.04)	(3.40)
PersistentLoss-Growth	0.079	0.090*	0.049
	(1.49)	(1.79)	(0.81)
PersistentLoss-Termination	0.044	0.079	0.008
	(0.58)	(1.23)	(0.10)
PersistentLoss-CareerRisk	0.121***	0.140***	0.098*
	(2.69)	(2.98)	(1.89)
VARIABLE	0.018	0.613***	-0.067
	(0.36)	(7.86)	(-0.89)
*VARIABLE*PersistentLoss-Termination*	0.066	-0.006	0.097
	(0.68)	(-0.04)	(0.77)
*VARIABLE*PersistentLoss-CareerRisk*	0.019	-0.033	0.117
	(0.29)	(-0.49)	(1.29)
*VARIABLE*PersistentLoss-Growth*	-0.006	-0.053	-0.027
	(-0.09)	(-0.71)	(-0.27)
*VARIABLE*TransitoryLoss*	0.015	-0.069	-0.048
	(0.25)	(-0.99)	(-0.55)
Size	0.270***	0.269***	0.268***
	(22.59)	(22.49)	(17.76)
ROA_t	0.023	0.013	0.014
	(0.64)	(0.36)	(0.29)
ROA_{t-1}	-0.077*	-0.078*	-0.031
	(-1.69)	(-1.74)	(-0.47)
$AnnRet_t$	0.091***	0.090***	0.118***
	(6.64)	(6.72)	(4.87)
$AnnRet_{t-1}$	0.049***	0.048***	0.047**
	(3.85)	(3.80)	(2.09)
MTB_{t-1}	0.001	0.001	-0.007
	(0.39)	(0.38)	(-0.74)
Var_Return	-0.440**	-0.417*	-0.298
	(-2.00)	(-1.93)	(-1.13)
CFShortfall	0.359***	0.361***	0.367**
	(3.53)	(3.54)	(2.14)
Tenure	0.038**	0.036*	0.023
	(2.01)	(1.94)	(0.83)
Female_Ind	0.069	0.071	0.135
	(0.83)	(0.85)	(1.42)
CEO_COB	0.047	0.046	0.038

	(1.59)	(1.57)	(1.00)
Constant	4.324***	4.328***	4.631***
	(33.51)	(33.52)	(27.50)
Year FE	*Yes*	*Yes*	*Yes*
Industry FE	*Yes*	*Yes*	*Yes*
Clustered SE	*Yes*	*Yes*	*Yes*
N	3,740	3,740	2,010
Adjusted R^2	44.3%	44.3%	42.2%

Panel C: Sensitivity Tests- Equity Compensation

	Dependent Variable
	EquityComp
TransitoryLoss	0.431***
	(2.93)
PersistentLoss-Growth	1.068***
	(5.46)
PersistentLoss-Termination	-0.473*
	(-1.93)
PersistentLoss-CareerRisk	0.178
	(1.16)
Size	0.744***
	(16.46)
ROA_t	-0.140
	(-0.58)
ROA_{t-1}	0.330
	(1.57)
$Annret_t$	0.158**
	(2.33)
$Annret_{t-1}$	0.085
	(1.07)
MTB_{t-1}	0.018*
	(1.70)
Var_Return	-0.966
	(-1.02)
CFShortfall	-1.399***
	(-3.33)
Tenure	-0.491***
	(-5.80)
Female_Ind	0.482
	(1.50)
CEO_COB	0.158
	(1.24)
Constant	0.866*
	(1.76)
Year FE	Yes
Industry FE	Yes
Clustered SE	Yes
N	3,740
Adjusted R^2	17.2%

Table 8 presents additional analysis tests. Panel A presents the results of estimating Equation (1) including additional loss controls (*Z_Score, KZ_Index, Surp_Cash)*, life cycle stage controls from Dickinson (2011), excluding maturity(*IntroStage, GrowthStage, ShakeoutStage, DeclineStage*), *Ind_Adj_ROA, Recession, CEO_First_Year, SeqLoss, BigLoss, FirstLoss,* and *SalesGrowth.* Panel B presents the results of estimating Equation (1) interacting our loss-firm categories indicators for above the median volatility of ROA (*HighSD_ROA), Recession* years, and high levels of firm *Co_option*, an indicator taking the value of one if more than 50 percent of directors were hired after the CEO. Panel C presents the results of estimating Equation (1) replacing the dependent variable with *EquityComp*. Variable descriptions are presented in Appendix A. *, **, *** indicates statistical significance at 10 percent, 5 percent, and 1 percent levels, respectively.