Executive Pensions and Debt Restructuring Choice

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January 2019

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Abstract

We examine whether inside creditors who have executive pensions and/or deferred compensation plans systematically influence a firm's choice between a Chapter 11 reorganization and an out-of-court debt restructuring workout. Using a sample of 345 U.S. financially distressed firms that either filed for Chapter 11 or conducted a workout, we find that firms with executive pension plans were more likely to choose Chapter 11 than a workout. In addition, we find that the preference for Chapter 11 over a workout is weaker after the implementation of the Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 (BAPCPA), which severely restricts payments of executive pension plans for firms undertaking a Chapter 11 reorganization, indicating that BAPCPA effectively restricts the payments of executive pensions under Chapter 11.

JEL classification: G32; G33; M40
Keywords: Executive pension; Inside debt; Bankruptcy Act; Workout; Chapter11.

Introduction

A financially distressed firm that must restructure its debt can choose either a Chapter 11 reorganization or an out-of-court debt restructuring workout.[1] Although both alternatives are intended to revive a bankrupt firm by allowing it to restructure its debt, Chapter 11 generally entails higher direct restructuring costs, such as administrative costs and legal costs for complicated legal processes, than a workout (Jensen, 1989; Gilson et al., 1990). However, despite the higher restructuring costs of Chapter 11, many firms choose Chapter 11 instead of a workout. One explanation for this choice is that firms with outside creditors, who have diverse interests, prefer formal Chapter 11 to a workout because outside creditors often hold out for more favorable terms on their contracts during the workout process (Roe, 1987; Coffee and Klein, 1991; Gertner and Scharfstein, 1991; Schartz, 1993; Chatterjee et al., 1995). This potential "hold-out problem" could make a workout even costlier than Chapter 11 if it fails to resolve the financial difficulties. Interestingly, prior research has not considered whether "inside" creditors, who have executive pensions and deferred compensation plans (hereafter EPDCP), influence a financially distressed firm's choice between a formal Chapter 11 reorganization and an out-of-court debt restructuring workout. Since managers usually make the corporate restructuring choice, it is important to examine how their self-interest influences their bankruptcy resolution choice decision. We attempt to do so in this study. In addition, we

[1] As an alternative to Chapter 11 and a workout, financially distressed firms could also undertake either a Chapter 7 or a prepackaged bankruptcy. We do not focus on these alternatives in this study. Chapter 7 liquidation is not a process of debt restructuring but is a liquidation of the firm. A prepackaged bankruptcy plan is a hybrid of Chapter 11 and a workout; it allows negotiation or acceptance of debt restructuring contracts prior to the beginning of a formal bankruptcy proceeding. Gilson, John and Lang (1990), based on the interview with a professional bankruptcy consultant, report that only 5% to 10% of the largest bankruptcies begin as prepackaged filings, and less than half of those are successful. Only one firm in their sample made a prepackaged Chapter 11 filing. Given that our focus is on management's choice between Chapter 11 and a workout, we exclude firms filing for Chapter 7 or a prepackaged bankruptcy plan from our sample. In addition, we require sample firms to restructure their debt for the first time. These restrictions allow us to examine managements' discretionary choice of restructuring methods by excluding firms that inevitably file for Chapter 11 after failing a workout.

examine whether the Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 (BAPCPA), which significantly limits payments of EPDCP for firms undertaking a Chapter 11 reorganization, altered the choice between Chapter 11 and a workout.

We reason that the choice between Chapter 11 and a workout will be affected by management's incentives to maximize the value of EPDCP because the value depends heavily on the choice of debt restructuring. Consistent with this reasoning, Kalyta (2009) shows that CEOs with EPDCP engage in upward earnings management in the pre-retirement period to maximize the value of their EPDCP, while CEOs without such plans do not manage earnings before retirement.

EPDCP are common and sizable in practice.[2] They are generally characterized as unfunded and unsecured debt claims against the firm in bankruptcy and, accordingly, the beneficiaries of EPDCP must stand in line with other unsecured creditors. Based on the unique characteristics of EPDCP, many expect that these arrangements align managers' interests with those of (unsecured) debt holders, which results in EPDCP being considered as 'inside debt' (Bebchuk and Jackson, 2005; Sundaram and Yermack, 2007; Wei and Yermack, 2011; Cassell et al., 2012). Prior studies find that managers with 'inside debt' manage their firms more conservatively than managers without such plans in order to reduce the risk of defaulting on debt, thus providing support for viewing EPDCP as inside debt.

[2] Three anecdotal examples in Bebchuk and Jackson (2005) show that the amounts of executive pensions are sizable. They report that the estimated actuarial value of Henry A. McKinnell Jr.'s (Pfzer's CEO since 2001) pension plan as of 2003 was approximately $83 million greater than his past three years of total estimated compensation ($67 million). Second, they find that William W. McGuire (UnitedHealth Group's CEO since 1999) had $45 million under his pension plan as of 2003, which far exceeded his total compensation of $10 million. Third, they estimate the present value of Nolan D. Archibald's (Black and Decker's CEO) pension plan to be almost $40 million, about 0.65% of the total equity value of the firm. This large amount is even more surprising, considering that he had served as CEO for only three years.

However, as the use of EPDCP has substantially increased since 1995 (Skeel, 2003; Barath et al., 2007), many scholars and practitioners have cast doubt on the nature of EPDCP as inside debt (Bebchuk and Fried, 2005; Bebchuk and Jackson, 2005; Alces and Galle, 2012). For example, based on interviews with lawyers and consultants, Bebchuk and Jackson (2005) argue that many firms filing for Chapter 11 treat EPDCP as an administrative expense, which has top priority for payout under Chapter 11. Specifically, before the passage of BAPCPA, Section 503 of the (pre-amended) bankruptcy law allowed debtors to confer administrative expense status on the "actual and necessary costs and expenses of preserving the estate, including wages, salaries, or commissions for services rendered after the commencement of the case." Although Section 503 allowed administrative expense status only for post-bankruptcy accrued EPDCP, in practice, it was hard for courts to distinguish between pre- and post-accrued EPDCP. Therefore, courts were practically admitting administrative expense status for both pre- and post- accrued EPDCP (Cornell et al. 2010). In addition, Shearman & Sterling LLP (2005) reports that, utilizing Section 503, many debtor companies could obtain a bankruptcy court's approval for payments of EPDCP, based on the argument that these payments were necessary to retain management, which is regarded as essential to facilitating the firm's reorganization. For example, Bebchuk and Jackson (2005) cite the cases of *Comdisco* and *Harvard Industries* as examples of bankruptcy cases that underwent Chapter 11 reorganizations and fully assumed these obligations through Section 503. Also, Bebchuk and Fried (2005) use the cases against *Enron* as evidence that executives collected their EPDCP during the pre-BAPCPA period by choosing to file via Chapter 11. Lastly, Alces and Galle (2012) explain that U.S. tax law gives firms strong incentives to pay the pre- and post-accrued EPDCP because it ensures that promises of future payments to their CEOs are paid from general corporate funds rather than from separate funds of creditors. On the other hand, the value of

EPDCP in a workout is determined through negotiation with creditors, which may reduce managers' bargaining power as well as the value of their EPDCP. Therefore, we hypothesize that firms with EPDCP prefer Chapter 11 to a workout.

Consistent with our expectation, the empirical results show that financially distressed firms with EPDCP are more likely to choose Chapter 11 than a workout. In addition, we examine the effect of the power of the Chief Executive Officer (CEO) on our hypothesized relation and find that firms with EPDCP are more likely to choose Chapter 11 than a workout when the CEO also serves as board chairman.

Next, we consider the passage of BAPCPA, which is one of the most comprehensive amendments to U.S. federal bankruptcy law,[3] as a natural experiment for treatment of EPDCP in the choice between Chapter 11 and a workout. The primary purpose of BAPCPA, implemented on October 17, 2005, is to strengthen creditors' rights in their customers' bankruptcies. BAPCPA significantly impacts business entities, as well as individuals, by increasing creditors' influence over the Chapter 11 reorganization process. Specifically, BAPCPA severely restricts retention and severance payments to insiders by amending Section 503 to impose a higher standard for conferring administrative expense status on payments to managers for retention and severance. Cornell et al. (2010) argue that BAPCPA makes it difficult for debtors to justify payments of EPDCP in bankruptcy courts, although the benefits of EPDCP were typically assumed before BAPCPA. Hotchkiss et al. (2008) also argue that

[3] An additional regulatory change regarding EPDCP around 2005 is Section 409A, which was added to the Internal Revenue Code effective January 1, 2005, under Section 885 of the American Jobs Creation Act of 2004. Section 409A was enacted in response to Enron executives' entrenched behaviors before the bankruptcy. These executives accelerated the payments of their deferred compensation plans in order to access the firm's cash before it went bankrupt. Section 409A prohibits such entrenched behaviors by setting higher standards for the timing of deferrals and distributions of EPDCP. The penalty for non-compliance with the rule is severe, in that all amounts deferred under the plan for the current year and all previous years become immediately taxable, plus a 20% penalty tax, to the extent the compensation is not subject to a "substantial risk of forfeiture" and has not previously been included in gross income. Therefore, we believe that Section 409A, along with the BAPCPA, will weaken the managerial incentives to file for Chapter 11 in order to protect their pension plans.

BAPCPA severely limits the use and amount of EPDCP. Accordingly, we posit that the preference for Chapter 11 over a workout for firms with EPDCP is weaker following BAPCPA. We find results consistent with this expectation.

Our study contributes to the literature in several ways. First, it shows that the incentives of insiders as well as the characteristics of outside creditors are important factors in a firm's choice between Chapter 11 and a workout. Prior literature focuses mainly on the characteristics of outside debt to explain a debt restructuring firm's choice between Chapter 11 reorganization and a workout. Second, our study sheds light on the implications of BAPCPA. We document that the preference for Chapter 11 over a workout is weakened after BAPCPA. This change implies that BAPCPA effectively restricts the payments of EPDCP under Chapter 11 and protects creditors, in accordance with its intended purpose.

The remainder of this paper is organized as follows. Section 2 reviews prior research and develops our main hypotheses. In Section 3 we describe sample selection procedures and the research design used to test our hypotheses. We discuss the results and additional issues in Sections 4 and 5, respectively. We conclude in Section 6.

Literature review and hypothesis development

Chapter 11 versus Workout

A financially distressed firm that must restructure its debt has two choices: It can either file for a formal Chapter 11 reorganization or conduct an out-of-court debt restructuring workout. Although both alternatives are economically equivalent because the firm's fixed claims are either renegotiated or replaced with new claims (Gilson and Vetsuypens, 1994), they proceed differently. A Chapter 11 reorganization proceeds with the bankruptcy court's powerful arbitration, while a workout proceeds without such a legal force. Once a firm files for Chapter

11, either voluntarily or involuntarily, the bankruptcy court imposes an "automatic stay" to prevent creditors from collecting their debts or foreclosing on collateral until the firm exits bankruptcy. The bankruptcy court then orders initiation of Chapter 11 reorganization if (a) the filing firm is generally and continuously unable to pay its matured debts, or (b) its debts exceed its assets. After the court initiates Chapter 11 reorganization, managers have the sole right to propose a reorganization plan within 120 days. All debts are discharged except the debts to be partially or fully paid in the reorganization plan. If the debtor's proposed reorganization plan is not accepted by its creditors within 60 days after the initial 120 days, creditors can propose their own reorganization plan. A reorganization plan is accepted if a majority of the creditors (two thirds in value and one half in number) approve the proposed plan through an affirmative vote. However, if the reorganization plan is not approved by the creditors' vote, the bankruptcy court can impose a plan to break the deadlock. Nevertheless, to avoid the time-consuming process and the sizable bankruptcy costs, creditors often accept the debtor's reorganization plan before a court unilaterally imposes the debtor's plan. In addition, regardless of whether the plan includes covenants related to the payment of EPDCP, the payment of EPDCP was traditionally well-protected by Section 503 of (the pre-BAPCPA) Chapter 11. After the bankruptcy court confirms the accepted reorganization plan, the filing firm implements the plan. Unlike Chapter 11, workout procedures do not involve any judicial intervention. Once a firm informs creditors of its intention to perform a workout, creditors bargain with the firm over whether a workout might be possible. Without any stay period, the firm privately negotiates with creditors in preparing a reorganization plan. After the creditors unanimously agree to the reorganization plan, the plan is initiated under the creditors' monitoring.

Even though the choice between Chapter 11 and a workout could be determined by shareholders or the board of directors or creditors, managers usually make the final choice, in

practice. Jensen (1991) criticizes Chapter 11 because it allows managers the sole right to choose during the process of reorganization. Regardless of who makes the decision, it should be an economically efficient choice between Chapter 11 and a workout that minimizes restructuring costs, because restructuring costs are often a severe burden for financially distressed firms.

Prior literature has traditionally classified the costs of restructuring as direct and indirect costs. Direct costs are out-of-pocket administrative costs, such as legal and investment banking service fees that increase with the length of the restructuring period; indirect costs are all other costs. A typical example of indirect costs is the cost of managers' time spent on restructuring. Managers' incentive distortion is another example of an indirect cost. For example, managers of restructuring firms may forgo positive net present value projects in order to increase cash holdings in response to the demands of creditors or bankruptcy courts.

Prior studies have tried to compare the relative costs of Chapter 11 and a workout (Jensen, 1989; Gilson et al., 1990). These studies generally conclude that both direct and indirect costs are higher for Chapter 11 than for a workout because Chapter 11 demands more complicated procedures and legal work. Moreover, procedure time for Chapter 11 is often prolonged because bankruptcy lawyers have incentives to delay in order to earn more fees, which are guaranteed top priority for payout under Chapter 11 (Gilson et al., 1990). For example, Gilson, John, and Lang (1990) report that firms that restructure their debt privately require an average of 15.4 months to complete the restructuring while firms that file for Chapter 11 spend an average of 8.1 months attempting to restructure their debt before seeking bankruptcy protection, and an average of 20.4 additional months in Chapter 11. Indirect costs are also higher for Chapter 11 than for a workout. The longer a Chapter 11 procedure lasts, the more time managers spend handling the restructuring. In addition, Chapter 11 affects managers' incentives more strongly than a workout.

Due to the higher costs associated with Chapter 11, prior theory suggests that financially distressed firms should choose a workout over Chapter 11 to restructure debt. For example, Coase (1960) argues that firms and their creditors should choose a workout rather than Chapter 11 to restructure debts because Chapter 11 is much more costly. Mooradian (1994) also models the choice and shows that filing for Chapter 11 is generally not an efficient solution for financially distressed firms. Hotchkiss (1995) provides empirical evidence supporting the theoretical views. She reports that firms filing for Chapter 11 continue to perform more poorly than firms conducting a workout, due to the higher restructuring costs of Chapter 11.

Despite the theoretical predictions and empirical evidence, many firms choose Chapter 11. One explanation for this choice proposed in the literature is the hold-out problem, which makes a workout very costly if it is the wrong vehicle to resolve the problems associated with financial distress (e.g., Roe, 1987; Coffee and Klein, 1991; Gertner and Scharfstein, 1991; Schartz, 1993; Chatterjee et al., 1995). The hold-out problem arises when creditors have incentives to hold out for more favorable treatment during negotiation of a workout. The severity of this problem depends on the voting rules regarding whether to accept the plan, the number of creditors who participate in the plan, and the type of debt that is restructured. For example, Gilson et al. (1990) find that firms with fewer bank loans, more lenders, and fewer intangible assets are more likely to file for Chapter 11. Asquith et al. (1994) report that firms with more secured and collateralized debts prefer Chapter 11 to a workout. Using a German sample, Jostarndt and Sautner (2010) document that firms with lower leverage, more public debt, and lower going concern values are more likely to choose Chapter 11.

Notably, most of the prior studies investigating the choice between Chapter 11 and a workout focus on outside creditors. To our knowledge, prior research has not studied the implications of inside creditors' incentives for the choice between Chapter 11 and a workout.

Given that inside creditors (managers) play a major role in the choice and have the sole right to choose during the process of reorganization (Jensen, 1991), investigating the implications of inside creditors for this choice clearly is important. Accordingly, we focus on the role of insider creditors in the choice between Chapter 11 and a workout.

Executive Pensions and Deferred Compensation Plans (EPDCP)

Many firms provide sizable executive pensions and deferred compensation plans, called "Supplementary Employee Retirement Plan" (SERP).[4] Bebchuk and Jackson (2005) report that in their sample of Standard and Poor's (S&P) 500 firms, the median actuarial value of CEO pension plans is $15 million and the median ratio of CEO pension value to total compensation is 34%. Sundaram and Yermack (2007) find that 78% of Fortune 500 firms provide executive pension plans to their CEOs, that CEO pensions make up about 17% of CEOs' total equity value, and that the annual increase in CEO pension plan value is 9% of CEO total compensation.

Unlike other forms of executive compensation, EPDCP are unsecured and unfunded debt claims against the firm; thus, the beneficiaries of the claims must stand in line with other unsecured debt holders in formal bankruptcy proceedings. These characteristics imply that, like other unsecured debt holders, executives with pension plans may not recover their debt claims in the case of bankruptcy. Frisby (2007) reports that more than 90% of unsecured creditors in the United Kingdom did not recover any of their debt claims in the post-Enterprise Act procedures in 2002. Gilson and Vetsuypens (1993) find that 14 of their 77 publicly traded firms that either filed for Chapter 11 or conducted a workout terminated pension plans or capped pension plan benefits.

[4] EPDCP are also called as Key Employee Retirement Plans (KERP) or Supplementary Key Employee Retirement Plans (SKERP) or by many other names.

The unique characteristics of EPDCP have led many scholars to regard them as a form of "inside debt" (a term coined by Jensen and Meckling (1976)). Regarding the unsecured debt status of EPDCP in bankruptcy, studies examine whether inside debt aligns managers' incentives with those of outside debt holders. These studies generally conclude that CEOs with inside debt manage their firms conservatively to reduce the default risk of debt, thus aligning CEO interests with those of (unsecured) debt holders. For example, Sundaram and Yermack (2007) find that CEOs with high executive pension value manage their firms conservatively, as evidenced by longer "distance to default." Cassell et al. (2012) report a negative association between CEO inside debt holdings and firms' future stock return volatility, research and development expenses, and financial leverage, as well as a positive association between CEO inside debt holdings and the extent of diversification and asset liquidity. Further, these studies find that investors are aware of the impact of the inside debt on manager behavior. Wei and Yermack (2011) find that bond prices rise, equity prices fall, and the volatility of both securities is reduced for firms that initially report that their CEOs have sizable defined benefit pensions or deferred compensation plans. Anantharaman et al. (2014) examine whether private debt lenders are aware of the debt-like compensation in the debt contracts with the firm. They find that the actuarial amounts of executive pension plans are negatively associated with promised yield and covenant usage. In particular, Edmans and Liu (2011) model the impact of inside debt on manager effort in financially distressed firms. They demonstrate that inside debt is a superior solution to solvency-contingent bonuses and salaries to increase manager effort and mitigate agency costs of debt, because its payoff depends on not only the incidence of bankruptcy but also the firm value in bankruptcy.

However, several scholars and practitioners still cast doubt on the argument that EPDCP should be considered inside debt. They insist that EPDCP cannot induce debt-like incentives

for managers because these commitments are traditionally paid in full during the process of Chapter 11 reorganization. For example, Skeel (2003) and Bharath et al. (2007) report that the number of EPDCP in bankruptcy has substantially increased since 1995. According to Bebchuk and Jackson's (2005) interview with a compensation-specialist lawyer, firms undergoing a Chapter 11 reorganization often assume executive pension obligations in full, even when other creditors' claims are left unpaid. In addition, Bebchuk and Fried (2005) find that firms often use outside insurance companies to guarantee executive pensions in the event of looming insolvency.[5] Especially before BAPCPA, firms could treat (unvested) executive pensions or deferred compensation plans as administrative expenses under Section 503 of the (pre-amended) Bankruptcy Act, which conferred administrative expense status on the "actual, necessary costs and expenses of preserving the estate, including wages, salaries, or commissions for services rendered after the commencement of the case." Shearman & Sterling LLP (2005) reports that payment of executive pension plans and severance were commonly allowed under Chapter 11 before 2005, based on Section 503.[6] Meanwhile, EPDCP are negotiable under the workout process. Analyzing senior executive compensation policies of 77 public firms that filed for bankruptcy or restructured their debt out of court during the 1980s, Gilson and Vetsuypens (1993, 1994) provide several examples of creditors' committees being given control over executive compensation policies. For example, creditors' committees can terminate severance agreements with CEOs, reduce, and postpone payments to CEOs (Gilson and Vetsuypens, 1994, Table II, Panel B). Thus, it would not be as easy for management conducting an out of court

[5] Some firms secure EPDCP payments through insurance companies. If this is a common practice, EPDCP should not affect the choice between Chapter 11 and workouts because managers do not need to choose Chapter 11 to protect their EPDCP. However, it is not common in practice and we expect that the exclusion will strengthen our main results.

[6] It is noteworthy that the studies regarding EPDCP as "inside debt" generally use samples after 2006, due to electronic accessibility to the *ExecuComp* Database.

workout restructuring to maintain their pension value as it would under Chapter 11. Even worse, they could lose their bargaining power in the negotiation of EPDCP with creditors. Therefore, we hypothesize that firms with EPDCP prefer Chapter 11 to a workout.

> **Hypothesis 1:** *Ceteris paribus, financially distressed firms with executive pensions and deferred compensation plans are more likely to choose a Chapter 11 reorganization than an out-of-court debt restructuring workout.*

Bankruptcy Abuse Prevention and Consumer Protection Act (BAPCPA)

The introduction of BAPCPA in 2005 could affect managers' preference for Chapter 11 over a workout. BAPCPA was initially drafted in 1997 and introduced to the U.S. Congress in 1998, but had a history of controversy until the 109th Congress passed it on April 14, 2005 and President George W. Bush signed it into law on April 20, 2005, effective for cases filed on or after October 17, 2005. BAPCPA aims primarily to protect creditors and consumers from their debtor's strategic choice of formal bankruptcy. One of the bill's key supporters, Congressman F. James Sensenbrenner Jr., said "This bill will help restore responsibility and integrity to the bankruptcy system by cracking down on fraudulent, abusive, and opportunistic bankruptcy claims."

BAPCPA affects both personal and corporate debtors by significantly increasing creditors' influence in the reorganization process (Sherman & Sterling LLP, 2005). Particularly, it severely restricts payment of nonqualified plan benefits such as EPDCP by bankrupt companies. Under BAPCPA, debtor companies that want to confer administrative expense status to EPDCP must justify (a) why such transfer or obligation is "essential to the retention of the insiders" and (b) why the services of those insiders are "essential to the survival of the business." Even if a firm passes the above justification bar, the maximum transfer or obligation permitted under BAPCPA cannot be greater than 10 times the mean transfer or obligation of a similar kind given to non-management employees ("mean test"). Regarding the effect of BAPCPA on payment of

executive pensions, Cornell et al. (2010) argue that although bankruptcy courts often approved the transfer of the status of executive pension plans to administrative expenses before BAPCPA, bankruptcy courts rarely accept payment of EPDCP after the amendments to the Bankruptcy Act in 2005. Hotchkiss et al. (2008) also argue that BAPCPA imposes severe restrictions on the use and amount of executive pension plans. Overall, BAPCPA makes it difficult for bankrupt companies to pay EPDCP to their executives under Chapter 11. Therefore, we hypothesize that the preference is weakened after BAPCPA.

Hypothesis 2: *Ceteris paribus, the difference in the likelihood of financially distressed firms with executive pensions and deferred compensation plans choosing a Chapter 11 reorganization and an out-of-court debt restructuring workout is smaller after BAPCPA.*

Data and research design

Sample and Data

We follow the sample selection procedure of Gilson (1989, 1990), Gilson et al. (1990), and Demiroglu and James (2015). From 2001 to 2013, we first identify financially distressed firms whose three-year cumulative calendar year-end returns on ordinary shares (*Center for Research in Security Prices* (*CRSP*) share codes 10 and 11) are in the bottom 10% of the *CRSP* database for each calendar year.[7] If a firm has missing values of returns for the calendar year, we replace the missing values with zero return. We exclude financial and utility firms (i.e., firms with standard industrial classification (SIC) codes of 4000–4999 and 6000–6999 in CRSP). To hand-collect debt restructuring cases by searching for the news, we also exclude firms whose book value of assets is less than $100 million for the entire three years when we

[7] Unlike Gilson (1989, 1990), Gilson et al. (1990), and Demiroglu and James (2015) who use bottom 5% to identify financially distressed firms, we expand the line to 10% to increase sample size. If we use "bottom 5%" cut-off, the results are qualitatively similar to those reported later.

measure stock returns because the firms are too small to attract media attention. Consistent with Demiroglu and James (2015), we also exclude firms whose leverage ratios are less than 30% and firms whose earnings before interest, taxes, depreciation, and amortization (EBITDA) to interest expense ratio is greater than 3, for the entire three years when we measure stock returns, because these firms are not likely to be financially distressed. This sampling procedure yields 809 firms that are financially distressed.

We identify debt restructuring firms that entered into either Chapter 11 or a workout from *Lopucki's Bankruptcy Research Database*, *Capital IQ*, *Audit Analytics*, 10-K filings, Google, and Factiva, during the (–2, +2) calendar year window. To analyze managements' choice between Chapter 11 and a workout, we exclude firms filing for a Chapter 7 liquidation or undertaking a prepackaged bankruptcy in our sample. Because Chapter 11 reorganization starts with formal filing at a bankruptcy court, we can easily identify Chapter 11 filing firms. However, it is difficult to identify workouts because there is no such formal filing. Following the definition of workout in Gilson (1989, 1990), Gilson et al. (1990), and Demiroglu and James (2015), we identify a workout if a financially distressed firm changes its debt contracts and one or more of the following conditions are contained in the debt contract: (a) required principal or interest payments on the debt are reduced; (b) maturity of debt is extended; and (c) common stock or convertible securities are issued to debt holders. In identification of Chapter 11 and a workout, we require our sample firms to restructure their debt for the first time in order to examine managements' initial choice between Chapter 11 and a workout. We also exclude firm-years in which there was CEO turnover to alleviate concerns about mixed

incentives of managers.[8] Of the 809 financially distressed firms, we find that 345 firms eventually filed for Chapter 11 (193 firms) or conducted a workout (152 firms).[9]

Next, we collect evidence of executive pensions and (cash) deferred compensation plans by searching proxy statements during the (–2, +2) calendar year window centered on the year of debt restructuring. If a firm provides nonqualified retirement plans, such as a supplementary executive retirement plan or a deferred cash compensation plan, other than a tax-qualified 401-K retirement plan, we assume that the executives' choice between Chapter 11 and a workout is affected by the EPDCP. In our sample, 141 (40.9%) of the 345 debt restructuring firms provide EPDCP.

Research Model

We estimate the following logit regression model to test our hypotheses:[10]

[8] Although CEOs may retire to protect their EPDCP by exercising the lump-sum option in anticipation of their firms' bankruptcy, we assume that the cases are rare because 1) firms often provide lump-sum options of EPDCP with discounts to the fair actuarial value (in general, up to 25% of their pensions' fair actuarial value or less than 1.5 times their final salary) and 2) even worse, those taking the lump-sum of EPDCP right before bankruptcy will be severely penalized by Section 409A of the Internal Revenue Code (see footnote 3 for details). In our sample, we exclude 66 firm-years experiencing CEO turnovers within two years prior to bankruptcy. Of the 66 CEO turnovers, 17 (25%) of the departing CEOs had EPDCP and two of them exercised the lump-sum option.

[9] Due to lack of data relating to debt restructuring, testing a small sample is common in studies of the choice between Chapter 11 and a workout. For example, Gilson et al. (1990) have a sample of 169 financially distressed firms either filing for Chapter 11 or conducting an out-of-court debt restructuring workout in the period 1978–1987. Franks and Torous (1994) identify a total of 45 private debt restructurings and 37 Chapter 11 reorganizations. Chatterjee et al. (1996) test 70 Chapter 11 filing firms and 65 workout firms in 1989–1992. More recently, Jostarndt and Sautner (2010) investigate debt restructurings in Germany for a sample of 116 financially distressed companies in 1997–2004. Demiroglu and James (2015) identify 262 unique firms that either filed for Chapter 11 or conducted an out-of-court debt restructuring workout in the period, 2001–2011.

[10] Since logit regression models with few observations and many fixed effects can be both inconsistent and biased (see, e.g., Greene, 2004), we also use an ordinary least squares (OLS) regression model. The untabulated OLS regression results are very similar to our main results reported in Table 4.

$$
\begin{aligned}
&Chapter11_{it} \\
&= \beta_0 + \beta_1 EPDCP_{it} + \beta_2 LNAT_{it-1} + \beta_3 CASHHOLD_{it-1} + \beta_4 CASHFLOW_{it-1} \\
&+ \beta_5 TANGIBILITY_{it-1} + \beta_6 LEV_{it-1} + \beta_7 PROFITABILITY_{it-1} + \beta_8 DEBTCOV_{it-1} \\
&+ \beta_9 INTCOV_{it-1} + \beta_{10} TobinQ_{it-1} + \beta_{11} CAPEXP_{it-1} + \beta_{12} RDEXP_{it-1} + \beta_{13} RDDUM_{it-1} \\
&+ \beta_{14} BTM_{it-1} + \beta_{15} BANKLOAN_{it-1} + \beta_{16} SECUREDLOAN_{it-1} + \beta_{17} LEASE_{it-1} \\
&+ \beta_{18} NOLs_{it-1} + \beta_{19} UNION_{it-1} + IndustryFixedEffects + YearFixedEffects \\
&+ \varepsilon_{it}
\end{aligned}
$$

where the dependent variable, $Chapter11_{it}$, is an indicator variable that equals 1 if a firm files for Chapter 11, and 0 otherwise. Since our sample includes only debt restructuring cases of Chapter 11 and workouts, the dependent variable represents the probability of Chapter 11, given that the firm chooses either Chapter 11 or a workout. $EPDCP_{it}$ is an indicator variable that equals 1 if a firm has EPDCP, and 0 otherwise. If EPDCP are treated as administrative expenses under Chapter 11 and thus executives choose Chapter 11 to keep the value before BAPCPA, then, consistent with H1, the coefficient on $EPDCP_{it}$ will be positive.

Following prior studies (e.g., Roe, 1987; Gilson et al., 1990; Coffee and Klein, 1991; Gertner and Scharfstein, 1991; Schartz, 1993; Asquith et al., 1994; Chatterjee et al., 1995; Jostarndt and Sautner, 2010; Rauh and Sufi, 2010; Demiroglu and James, 2015), we include the following control variables that could affect a firm's choice between Chapter 11 and a workout: *LNAT* (+), *CASHHOLD* (–), *CASHFLOW* (–), *TANGIBILITY* (+), *LEV* (+), *PROFITABILITY* (–), *DEBTCOV* (–), *INTCOV* (–), *TobinQ* (–), *CAPEXP* (–), *RDEXP* (–), *RDDUM* (–), *BTM* (–), *BANKLOAN* (–), *SECUREDLOAN* (+), *LEASE* (+), *NOLs* (–), and *UNION* (+). The predicted signs of the coefficients on these variables are in parentheses. *LNAT* equals the natural logarithm of total assets. *CASHHOLD* is cash and cash equivalents divided by total assets. *CASHFLOW* is operating income before depreciation divided by lagged assets. *TANGIBILITY* is the net amount of property, plant, and equipment divided by total assets. *PROFITABILITY* is operating income before depreciation divided by total assets. *DEBTCOV* is debt coverage calculated as operating income before depreciation divided by total debt.

INTCOV is interest coverage, calculated as operating income before depreciation divided by interest expense.[11] *TobinQ* represents the Tobin's Q-ratio to capture the value of intangible assets. *CAPEXP* is capital expenditure divided by lagged property, plant, and equipment. *RDEXP* is research and development expense (R&D) divided by lagged total assets. *RDDUM* is a dummy variable that equals one if annual R&D expense is missing. *BTM* is the book value of equity to market value of equity ratio. *BANKLOAN* is the bank loans divided by total debt. *SECUREDLOAN* is secured loans divided by total debt. We hand collect the information about bank loans and secured loans from the debt note of the 10-K. *LEASE* is the firm's aggregate lease obligations for the next five years. *NOLs* is a dummy variable that equals one if the firm reports domestic net operating loss carry forwards in the notes to the 10-K. *UNION* is a dummy variable that equals one if the industry-year level unionization rate exceeds 24.3%.[12] More detailed definitions of the variables are available in the Appendix A. We obtain data for the control variables from the *Compustat* database and hand-collect missing control variable information from 10-K filings.[13] We measure the control variables at the end of the last fiscal year before the year of debt restructuring. To reduce the influence of extreme values, we winsorize all continuous variables at the top and bottom one percent of their respective distributions. We also control for both industry and year fixed effects.

Additionally, we control for CEO related characteristics: CEO age (*CEOAGE*), CEO tenure (*CEOTENURE*), CEO equity ownership (*OWNERSHIP*), and CEO other compensation

[11] If *DEBTCOV* and *INTCOV* have a negative value, we replace them with zero. The results with the original numbers of *DEBTCOV* and *INTCOV* are not statistically different from the results on Table 4.

[12] We obtain the industry-year level unionization rate from the website, http://www.unionstats.com that provides private and public sector labor union membership estimates compiled from the Current Population Survey, a monthly household survey conducted by the Bureau of Labor Statistics. In addition, according to Demiroglu and James (2015), if a firm's unionization rate is greater than 24.3%, the firm is considered a highly unionized firm.

[13] If we cannot find the values of capital expenditure (*CAPEXP*) even after manually searching the 10-K, we replace it with zero.

(*CASHCOMP*, *STOCKCOMP*, and *OPTIONCOMP*) to make sure that our results are attributable to EPDCP, and not to other forms of managerial compensation and CEO characteristics.[14] We make no predictions regarding the direction of the relations between the other CEO variables and our dependent variable.

Results

Descriptive Statistics

Panel A of Table 1 presents the sample distribution by year. Our sample period includes some debt restructuring cases that occurred in 1999 and 2000, 2014, and 2015. This is because we searched for debt restructurings during the (–2, +2) calendar year window centered on the year during which the firm was identified as a financially distressed firm from 2001 to 2013.[15] In the yearly distribution, we do not find a systematic time-series pattern of debt restructurings but we do find that debt restructurings are higher during the economic recessions (2001–2003 and 2008–2010). We also find that the frequencies of Chapter 11 and workouts are similar over time.

Panel B of Table 1 shows the sample distribution by industry. Debt restructurings seem to be distributed across industries, with more cases found in the information and technology industry (code 6).

Panel C of Table 1 presents summary statistics of variables used in model (1). The mean value of Chapter11 is 0.559, indicating that about half of our sample firms choose Chapter 11 to restructure their debt. This ratio is very similar to those reported in Gilson (1989, 1990),

[14] Instead of CEO other compensation, we also use all named executives' other compensation. Untabulated results are qualitatively the same as the results controlling for CEO other compensation.

[15] In a sensitivity test, we examine our hypotheses using a sample from 2001–2013. The untabulated results are qualitatively the same as reported later.

Gilson et al. (1990), and Demiroglu and James (2015). The mean value of *EPDCP* is 0.406. This ratio is much smaller than 0.7 in Sundaram and Yermack (2007), likely because our sample firms are smaller and less financially sound than those of Sundaram and Yermack (2007).[16]

[Insert Table 1 about here]

Table 2 presents Pearson (upper triangle) and Spearman (lower triangle) correlations among the variables included in our tests. *EPDCP* is positively associated with *Chapter11* and the association is statistically significant. The association between the control variables and *Chapter11* are similar to previous studies (Roe, 1987; Gilson et al., 1990; Coffee and Klein, 1991; Gertner and Scharfstein, 1991; Schartz, 1993; Asquith et al., 1994; Chatterjee et al., 1995; Jostarndt and Sautner, 2010). That is, firms with lower cash flows (*CASHFLOW*), more tangible assets (*TANGIBILITY*), lower profitability (*PROFITABILITY*), lower debt coverage (*DEBTCOV*), lower interest coverage (*INTCOV*), lower capital expenditures (*CAPEXP*), lower R&D expense (*RDEXP* and *RDDUM*), lower bank loans (*BANKLOAN*), lower secured loans (*SECUREDLON*), lower lease contracts (*LEASE*), and less frequent net operating loss carry forwards (*NOLs*) are more likely to choose Chapter 11 than a workout to restructure debts. All relationships are statistically significant. However, *LNAT*, *CASHHOLD*, *LEV*, *TobinQ*, *BTM*, and *UNION* are not reliably different between Chapter 11 and a workout. There do not appear to be serious multicollinearity problems between the independent variables except for the relations among *CASHFLOW*, *PROFITABILITY*, *DEBTCOV*, *INTCOV*, and *RDEXP*.

[Insert Table 2 about here]

Univariate Analysis

[16] Sundaram and Yermack (2007) show that only one-fourth of small capitalization firms, one-third of mid-sized firms, but more than half of S&P 500 firms award defined benefit pensions to their CEOs.

Table 3 reports the results of various univariate tests. In Panel A, with different sample periods, we compare the probability of choosing Chapter 11 over a workout for firms with and without EPDCP. For the full sample period from 1999 to 2015 the results in row (1) show that the probability is higher for firms with EPDCP (62.1%) than for firms without such plans (51.7%) and the difference is statistically significant at the 0.10 level (two-sided). For the subsample before BAPCPA (in row (2)), the probability is higher for firms with EPDCP (65.0%) than for firms without such plans (48.0%), with the difference significant at the 0.05 level (two-sided). The preference for Chapter 11 by firms with EPDCP changes dramatically after BAPCPA. The results in row (3) show that the probability decreases to 60.0% for firms with EPDCP, while the probability increases to 53.8% for firms without such plans, and the difference is no longer statistically significant. In sum, the results of the univariate analysis are generally consistent with our hypotheses.

In Panel B, we examine the differences in independent variables between Chapter 11 and workout firms. 45.1% of Chapter 11 firms provide executive pension plans and 34.9% of workout firms provide executive pension plans. The difference is statistically significant at the 0.10 level (two-sided). The associations between the other control variables and *Chapter11* are generally consistent with those reported in Table 2. Namely, cash flows (*CASHFLOW*), leverage (*MKTLEV*), profitability (*PROFITABILITY*), debt coverage (*DEBTCOV*), interest coverage (*INTCOV*), Tobin's Q ratio (*TobinQ*), capital expenditures (*CAPEXP*), R&D expenditure (*RDDUM*), bank loans (*BANKLOAN*), secured loans (*SECUREDLON)*, leases (*LEASE*), and loss carry forwards (*NOLs*) are lower for Chapter 11 firms than for workout firms, and the means of *LNAT*, *CASHJOLD*, *TANGIBILITY*, *LEV*, *RDEXP*, *BTM*, and *UNION* are not reliably different between Chapter 11 and workout firms.

[Insert Table 3 about here]

Multivariate Analysis

Table 4 presents our main regression results. The model in the first column does not control for CEO characteristics while the model in the second column does. The coefficients on *EPDCP* in both models (1) and (2) are significantly positive at the 0.05 level, implying that firms that award EPDCP to their CEOs are more likely to choose a Chapter 11 reorganization than an out-of-court workout. These results support hypothesis H1. The difference in likelihood of choosing a Chapter 11 reorganization over an out-of-court workout is also economically significant as indicated by the odds ratio estimates on *EPDCP*, which are 1.795 and 1.907, respectively, in models (1) and (2). In other words, the probability of choosing a Chapter 11 reorganization over a workout is about 80% higher for firms with EPDCP than for firms without.

The signs of the coefficients on control variables are generally consistent with prior literature. That is, *LNAT* is positively related to Chapter 11 while *PROFITABILITY*, *CAPEXP*, *RDEXP*, *RDDUM*, and *LEASE* are negatively associated with *Chpater11* (Gilson et al., 1990; Rauh and Sufi, 2010; Demiroglu and James, 2015). However, the coefficients on *CASH*, *TANGIBILITY*, *LEV*, *DEBTCOV*, *INTCOV*, *TobinQ*, *RDEXP*, *BTM*, and *SECUREDLOAN* are not statistically significant. The relations between the other components of CEO compensation and corporate bankruptcy choice are generally insignificant, except for option-based compensation.

[Insert Table 4 about here]

Propensity score matching and Heckman two-stage regression approaches

To alleviate concerns about the systematic differences in the observable variables and selection bias in our sample, we perform additional tests using the propensity score matching approach and Heckman's two stage procedure (Lennox et al. 2012; Shipman et al. 2017). First, we match firms having EPDCP with firms that do not have such plans using the propensity-

score matching model developed by Rosenbaum and Rubin (1983). If there are systematic differences between firms with and without EPDCP and those differences change after BAPCPA, then the results could be spurious. In the application of the propensity score matching approach, we first use a logit regression model to estimate the probability that a firm has EPDCP. Following Li and Prabhala (2007), we consider many attributes used in our main logit regression model (1) when estimating the propensity score. The regression results of this first stage are presented in the first column of Panel B in Table 5. They show that larger and more profitable firms are more likely to provide EPDCP to their executives. We then match firms that hav EPDCP with firms that do not have such plans without replacement, to arrive at the closest predicted value between the two matched scores.[17] The matching results are presented in Panel A of Table 5. The table shows that our matched sample reduces the statistical difference among the observable variables, except for *LNAT*. In the second stage, we re-estimate the logistic regression model (1) with the matched sample from the first stage. We present the second stage regression results in the second and third columns of Panel B in Table 5. They show that the coefficients on *EPDCP* in the models with and without CEO specific control variables remain significantly positive at the 0.05 significance level, indicating that our results are not driven by systematic differences in the observable variables.

[Insert Table 5 about here]

Second, we use the Heckman (1979) two-stage procedure to alleviate sample selection bias. Since our sample excludes financially distressed firms that successfully avoid bankruptcy, it is possible that the bankrupt firms in our sample are more likely to have EPDCP. In this case,

[17] We match samples to have a maximum difference of 0.01 between the two matched scores. Additionally, we also use 0.03 as the maximum difference. Through this matching process, we match approximately 70% of the total sample. Untabulated results are qualitatively very similar to the results from the matched sample with the closest predicted value between the two matched scores.

the effect of EPDCP on the choice of debt restructuring could be overestimated. In addition, there also exists sample selection bias between firms with and without EPDCP. To address these problems, we first compute the inverse Mills ratio (*IMR*) from a model explaining the probability of bankruptcy of financially distressed firms. We include earnings volatility as an exogenous instrumental variable in the model. Following Waymire (1985) and Kross et al. (2011), we measure earnings volatility as the standard deviation of return on assets estimated over the three years ending with year t-1. Prior literature indicates that earnings volatility is highly correlated with a firm's probability of bankruptcy (Titman, 1984; Trueman and Titman, 1988). However, it is not related to the choice between Chapter 11 and a workout (the dependent variable in the second stage regression). The regression results of this first stage procedure are presented in the first column of Panel A in Table 6. They show that the probability of bankruptcy is negatively related to cash holdings (*CASHHOLD*), profitability (*PROFITABILITY*), R&D expenditure (*RDEXP*), and bank loans (*BANKLOAN*), and positively related to Tobin's Q ratio (*TobinQ*) and earnings volatility (*EVOL*). Then, we include *IMR* from the first stage as an independent variable in the second stage model of choice between Chapter 11 and a workout. The regression results of the second stage are reported in the second and third columns of Panel A in Table 6. The coefficients on *EPDCP* in both models are positive and significant at the 0.05 significance level, indicating that our results are not sensitive to sample selection bias. We repeat the analyses using return volatility and Altman's Z-score as alternative instrumental variables to earnings volatility. The untabulated results are qualitatively similar to those obtained using earnings volatility as an instrumental variable.

Similarly, we also perform the Heckman two-stage procedure using *EPDCP* as the first-stage dependent variable. We use CEO age (*CEOAGE*), CEO tenure (*CEOTENURE*), and CEO's cash based compensation such as salary and bonus (*CASHCOMP*) as the instrumental

variables, following Sundaram and Yermack (2007), who show that they are positively related to the occurrence and amounts of EPDCP. Therefore, consistent with the argument of Lennox et al. (2012), we exclude the CEO characteristics in the second stage regression model to avoid misspecification of the Heckman two-stage procedure. The first- and second-stage regression results are presented in Panel B of Table 6. The first stage results show that EPDCP is positively related to firm size (*LNAT*) and profitability (*PROFITABILITY*). The second stage results show significantly positive coefficients on *EPDCP* in both models at the 0.10 significance level, indicating that our results are not sensitive to sample selection bias, which may arise between firms with and without EPDCP.

[Insert Table 6 about here]

Additional Issues

Impact of BAPCPA

To examine the impact of BAPCPA, we create an indicator variable, $BAPCPA$ that equals 1 for years after the BAPCPA (i.e., after 2005), and 0 otherwise.[18] Then, we interact *BAPCPA* with *EPDCP* to examine whether BAPCPA weakened the preference between Chapter 11 and a workout, as hypothesized in H2. Under H2, we expect the coefficient on the interaction term, $EPDCP_{it}$*BAPCPA* to be negative. In addition, to alleviate concerns over the use of interaction terms in nonlinear models such as logit and probit regression models (Norton et al., 2004; Powers, 2005), we also estimate separate models using the before and after BAPCPA subsamples.

[18] Although BAPCPA was implemented in October 2005, we assume that firms were not affected by BAPCPA during the entire year of 2005. Thus, *BAPCPA* equals one if a firm's fiscal year end is after December 31, 2005, and zero if it is before January 1, 2006. As described in a later section, we perform a sensitivity test after excluding observations from 2005. The results remain qualitatively the same.

Table 7 presents the logit regression results. The first and second columns report the results for the pre-BAPCPA subsamples. The coefficients on *EPDCP* in columns (1) and (2) are both significantly positive at the 0.05 level, implying that firms awarding EPDCP to their CEOs are more likely to choose a Chapter 11 reorganization than an out-of-court workout before BAPCPA. The odds ratios of the coefficient estimates on *EPDCP* (4.198 and 5.091) are much greater than those reported in Table 4 (1.795 and 1.907), suggesting that the effect of EPDCP on corporate bankruptcy choice was considerably greater before BAPCPA than after BAPCPA. Specifically, the ratios suggest that before BAPCPA, the probability of choosing a Chapter 11 reorganization over a workout was about 3 times higher for firms with EPDCP than for firms without.

However, this preference disappears after BAPCPA. The third and fourth columns report results for the post-BAPCPA subsamples. The coefficients on *EPDCP* in columns (3) and (4) are no longer significantly different from zero, implying that the positive relation between *EPDCP* and *Chapter11* is weaker after BAPCPA. Similarly, the odd ratios of the coefficients on *EPDCP* (1.197 and 1.495) are not reliably greater than one, implying no significant difference in corporate bankruptcy choice between firms with and without EPDCP after BAPCPA.

To formally test whether the choice between Chapter 11 and a workout changed after BAPCPA, we estimate a single model that pools both subsamples and includes the indicator variable *BAPCPA* and its interactions, where *BAPCPA* indicates whether the observation is from before or after BAPCPA. To control for systematic changes in the relations between those variables and the debt restructuring choice around BAPCPA, we interact all control variables

and industry dummies with *BAPCPA*.[19] These results are reported in columns (5) and (6) of Table 7. First, the coefficients on *EPDCP* are all significantly positive at the 0.05 level, consistent with H1. Second, the coefficients on the interaction term *EPDCP* BAPCPA* are significantly negative at the 0.10 level, providing evidence that the likelihood of choosing Chapter 11 over a workout after BAPCPA is significantly lower than it is before BAPCPA for firms that have EPDCP. In terms of odds ratios, the estimates on *EPDCP*BAPCPA* are 0.285 and 0.294 respectively, implying that the decrease in the probability of choosing Chapter 11 since the implication of BAPCPA is about 3.4 (=1/0.29) times more for firms with EPDCP than for firms without. These results indicate that BAPCPA significantly altered the debt restructuring method choice of firms whose CEOs have EPDCP and are consistent with hypothesis H2.

[Insert Table 7 about here]

CEO Duality

To test the implications of CEO power on the relation between EPDCP and corporate debt restructuring choice, we test our hypotheses on subsamples where the CEO also serves in the dual role of chairman of the board of directors. Although the choice between Chapter 11 and a workout can be made by shareholders, board members, or creditors, CEOs make the final decision in most cases. Therefore, we expect that the effect of EPDCP on the choice of debt restructuring method is more pronounced if the CEO has both EPDCP and a powerful voice in the boardroom.

[19] For brevity, we do not discuss the coefficients on the control variables.

By manually searching proxy statements, we find that 180 CEOs (about 52%) of our 345 sample firms also serve as board chairman. This is not surprising, as prior literature reports that holding the dual positions of board chairman and CEO is commonplace (Kwak et al., 2012).

To test whether CEO chairmanship affects the relation between EPDCP and corporate bankruptcy choice, we add a new indicator variable, *Chairmanship*, which equals one if a CEO is also a chairman, and zero otherwise, as well as its interactions with *EPDCP*. If CEO chairmanship intensifies the preference of CEOs with EPDCP for a Chapter 11 reorganization, the coefficients on *EPDCP* Chairmanship* should be positive.

Table 8 reports the results. Consistent with our expectation, the coefficients on *EPDCP* Chairmanship* are positive and significant at the 0.05 significance level. These results strengthen our argument that inside debt holders' incentives affect firms' debt restructuring choice.

[Insert Table 8 about here]

Estimated EPDCP amounts

If EPDCP affects executives' incentives to keep their pension value from bankruptcy, the incentives should be stronger for managers with larger amounts of EPDCP. In addition, although BAPCPA sets a much higher standard for managers to receive their EPDCP under Chapter 11 reorganization, large amounts of EPDCP increase the likelihood that managers receive their pensions. Therefore, we expect that the magnitude of EPDCP is positively related to the choice of Chapter 11 before and after BAPCPA.

To test the relationship, we collect information about the amount of EPDCP by searching proxy statements. Not all firms disclose the details of their EPDCP, especially before the U.S. Securities and Exchange Commission (SEC) implemented enhanced compensation disclosure regulations in 2006. Therefore, our test is restricted to a sample of 150 observations

in the period 2006–2013, 58 of which have EPDCP. The mean present value of EPDCP for the 58 firms is 1.3 million dollars (approximately 61% of total compensation).

In addition, we estimate the amount of EPDCP before and after 2006, following the approach of Cassell et al. (2012). They use the present value of expected future cash compensation as a proxy for the magnitude of inside debt (EPDCP). Specifically, they estimate the present value of expected future cash compensation by using estimated CEO's expected decision horizon (= (Industry Median Tenure –CEO tenure) + (Industry Median Age- CEO Age)), that was first introduced by Antia, Pantzalis, and Park (2010). If the value is negative, the PV of future cash compensation is assumed to be the most recent salary and bonus. On the other hand, if the expected decision horizon is positive, the PV of future cash compensation is the product of the most recent cash compensation and the expected decision horizon.[20] To verify the estimation, we use estimated and hand-collected amounts of inside debt for the sample after 2006 and find qualitatively similar results. To reduce the effect of extreme observations, we use deciles of estimated pension amounts (*PAMT*) as the main independent variable instead of a binary pension variable (*EPDCP*). Also, to examine the effect of the magnitude of EPDCP given that a firm provides positive EPDCP, we restrict our sample to firms that award EPDCP (*EPDCP*=1).

Table 9 represents the results. It shows that for total sample (EPDCP=1), the coefficient on *PAMT* is significantly positive at the 0.10 level. Interestingly, the coefficient on *PAMT* is not statistically significant for the pre-BAPCPA period and significantly positive at the 0.10 level for the post-BAPCPA period, implying that before BAPCPA, managers prefer Chapter 11 over workouts regardless of the amounts of EPDCP, but their preference remains

[20] This approach assumes that the growth in CEO cash compensation offsets the effect of the discount rate.

after BAPCPA only for firms with large amounts of EPDCP. However, we interpret these results with caution, because there may be significant measurement error in the estimated amount of executive pension given the unavailability of data before 2006. Since we restrict the sample to EPDCP=1, we have 60/80 observations before/after BAPCPA. Thus, we cannot control for year and industry fixed effects.

[Insert Table 9 about here]

Other Sensitivity Tests

We conduct several other sensitivity tests but do not tabulate the results. First, we searched for evidence of debt restructuring during the (–2, +2) calendar year window centered on the year at the end of which the firm was identified as a financially distressed firm from 2001 to 2013. Our search identified a small number of restructurings in 1999, 2000, 2014, and 2015. We repeat our test of H1 after excluding these sample years. The coefficient on *EPDCP* in model (1) remains significantly positive for this restricted sample. Second, we estimate model (1) after excluding observations from 2005 because BAPCPA was implemented in October 2005. Again, the coefficient on *EPDCP* remains significantly positive.

Conclusion

Unlike the literature on the choice between Chapter 11 and a workout that focuses on the motivations of outside creditors, we focus on the incentives of inside creditors and find that inside debt (in the form of executive pensions and deferred compensation plans) is related to managements' choice between Chapter 11 and a workout. Specifically, we find that financially distressed firms' managements with inside debt are more likely to choose Chapter 11 than a workout. These results persist even after controlling for management's equity ownership and

other forms of compensation. We also perform tests to alleviate concerns about model misspecification and selection bias and find that our results remain robust. Additional analyses show that the BAPCPA and the power of the CEO also affect the choice, consistent with our hypothesis. Overall, the results imply that when managers have EPDCP, their incentives to keep their pension value affects their choice between Chapter 11 and a workout.

Our study has some limitations. There were additional regulation changes in 2006 around the implementation of BAPCPA, including Regulation S-K), which requires organized disclosures of EPDCP, and Section 409 (a) of the Internal Revenue Code, which significantly restricts executives' lump-sum option of EPDCP. Thus, CEOs' debt restructuring choice could change around 2005 due to the confounding effect of other regulation changes as well as BAPCPA. Kalyta and Magnan (2008) argue that mandatory disclosure of EPDCP around 2006 reduced managerial incentives for "excessive stealth compensation". Therefore, if EPDCP is a result of CEO power rather than optimal compensation contracting before the implementation of mandatory disclosure regulation, CEOs' incentives to protect their pension plans by choosing a Chapter 11 reorganization would be stronger than those after the regulation. Also, we do not consider the lump-sum option of EPDCP before the implementation of Section 409 (a) of the Internal Revenue Code. As in the case of Enron, entrenched executives could exercise their lump-sum option just before their firm goes into bankruptcy. If it was commonplace before it became strictly prohibited under Section 409 (A) of the Internal Revenue Code, executives' corporate bankruptcy choice is less likely to be affected by EPDCP. In addition, we do not measure how much of the debt restructuring firms' litigation value is damaged by the inefficient choice of managers with EPDCP. Before BAPCPA, firms with EPDCP were more likely to choose costly Chapter 11 than a workout. The choice would decrease the firm's litigation value that could be taken by outside creditors.

Appendix A. Variable definitions

Variable	Definition
Chapter11	Our main dependent variable; it equals one if a firm files for Chapter 11, and zero otherwise.
EPDCP	Our main independent variable; it equals one if a firm has executive pension plans or (cash) deferred compensation plans during the (–2, +2) calendar year window centered on the year in which the firm is identified as financially distressed, and zero otherwise.
BAPCPA	An indicator variable that equals one if a firm's fiscal year ends after the implementation of BAPCPA, and zero otherwise.
Chairmanship	An indicator variable that equals one if the CEO is also chairman of the board, and zero otherwise.
LNAT	Natural logarithm of total assets (AT)
CASHHOLD	Cash and cash equivalents (CHE) divided by lagged total assets (AT)
CASHFLOW	Operating income before depreciation (OIBDP) divided by lagged assets (AT)
TANGIBILITY	Net property, plant, and equipment (PPENT) divided by lagged total assets (AT)
LEVE	Total debts (debt in current liabilities (DLC) + long-term debt (DLTT)) divided by lagged total assets (AT)
PROFITABILITY	Operating income before depreciation (OIBDP) divided by lagged total assets (AT)
DEBTCOV	Operating income before depreciation (OIBDP) divided by total debt (DLC + DLTT).
INTCOV	Operating income before depreciation (OIBDP) divided by interest and related expense (XINT).
TobinQ	Market value of equity (Share price at the end of fiscal year (PRCC_F) * Common shares outstanding (CSHO)) plus total assets (AT) minus book value of equity (CEQ) divided by total assets (AT)
CAPEXP	Capital expenditures (CAPX) divided by lagged net property, plant, and equipment (PPENT)
RDEXP	Research and development expense (XRD) divided by lagged total assets (AT)
RDDUM	An indicator variable that equals one if annual R&D expense (XRD) is missing.
BTM	Book (CEQ) to market (PRCC_F * CSHO) ratio
BANKLOAN	Total bank loans divided by total liabilities (LT)
SECUREDLOAN	Total secured debt divided by total liabilities (LT)

LEASE	A firm's aggregated lease obligation for next five years (MRC5)
NOLs	An indicator variable that set to one if we find the domestic net operating loss carry forwards from footnotes in form annual reports describing the firm's tax and liabilities
UNION	An indicator variable that equals one if the industry-year level unionization rates from http://www.unionstats.com/ exceed 24.3% in the year of interest.
CEOAGE	CEOs' age.
CEOTENURE	Number of years the CEO has held the CEO title at the current firm.
OWNERSHIP	CEOs' equity ownership.
CASHCOMP	Natural logarithm of CEOs' cash-based compensation.
STOCKCOMP	Natural logarithm of CEOs' equity-based compensation.
OPTIONCOMP	Natural logarithm of CEOs' option-based compensation.

Note. This appendix provides detailed definitions of the variables used in our main regression model (1). The control variables are measured at the end of (or during) the last fiscal year immediately before the beginning date of debt restructuring unless indicated otherwise. Data for the control variables are obtained from the *Compustat* Database (all names in parentheses refer to the item names used in the *Compustat* Database). Missing information is collected by searching 10-K reports in the SEC's Electronic Data-Gathering, Analysis, and Retrieval system (*EDGAR*).

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Table 1
Sample distribution and descriptive statistics

Panel A: Sample distribution by year

Year	Total	Chapter11	Workout
1999	3	0	3
2000	4	2	2
2001	19	10	9
2002	45	24	21
2003	38	25	13
2004	24	13	11
2005	16	7	9
2006	19	10	9
2007	21	13	8
2008	27	17	10
2009	57	33	24
2010	25	11	14
2011	13	9	4
2012	8	6	2
2013	12	7	5
2014	5	1	4
2015	9	5	4
Total	345	193	152

Panel B: Sample distribution by industry

Code	Fama-French industry classification	# of Observations
1	Consumer non-durables: Food, Tobacco, Textiles, Apparel, Leather, Toys	23
2	Consumer durables: Cars, TVs, Furniture, Household Appliances	21
3	Manufacturing: Machinery, Trucks, Planes, Office Furniture, Paper	41
4	Oil, Gas, and Coal Extraction and Products	14
5	Chemicals and Allied Products	10
6	Business Equipment: Computers, Software, and Electronic Equipment	49
7	Telephone and Television Transmission	42
9	Wholesale, Retail, and Some Services (Laundries, Repair Shops)	45
10	Healthcare, Medical Equipment, and Drugs	20
12	Other: Mines, Construction, Transportation, Hotels, Bus Service, Entertainment	80
	Total	345

Panel C: Descriptive statistics

Variables (N=345)	Mean	Median	S.D.	25%	75%
Chapter 11	0.559	1.000	0.497	0.000	1.000
EPDCP	0.406	0.000	0.492	0.000	1.000
CEOAGE	53.794	54.000	8.524	48.000	60.000
CEOTENURE	6.762	5.000	5.750	2.000	10.000
OWNERSHIP	0.062	0.020	0.123	0.005	0.057
CASHCOMP	12.588	13.171	2.895	12.733	13.710
STOCKCOMP	4.267	0.000	6.154	0.000	11.963
OPTIONCOMP	7.296	10.820	6.229	0.000	12.612
LNAT	5.905	5.699	1.415	5.051	6.663
CASHHOLD	0.092	0.047	0.140	0.015	0.104
CASHFLOW	0.025	0.000	0.119	0.000	0.062
TANGIBILITY	0.316	0.250	0.248	0.095	0.481
LEV	0.537	0.486	0.431	0.230	0.743
PROFITABILITY	-0.052	0.029	0.303	-0.082	0.088
DEBTCOV	-0.161	0.056	2.122	-0.031	0.178
INTCOV	-1.454	0.649	19.880	-0.977	1.928

TOBINQ	-33.258	0.639	139.699	0.282	0.894
CAPEXP	0.154	0.042	0.434	0.000	0.137
RDEXP	0.037	0.000	0.120	0.000	0.010
RDDUM	0.301	0.000	0.460	0.000	1.000
BTM	1.520	0.000	23.317	-1.213	1.165
BANKLOAN	0.275	0.229	0.258	0.003	0.431
SECURED	0.229	0.064	0.282	0.000	0.423
LEASE	0.125	0.000	0.146	0.000	0.303
NOLs	0.226	0.000	0.419	0.000	0.000
UNION	0.087	0.000	0.282	0.000	0.000

Note. Table 1 presents sample distributions and descriptive statistics. Panels A and B present sample distributions by year and industry, respectively. Panel C presents descriptive statistics of variables used in our main regression analysis. All variables are defined in the Appendix A.

Table 2
Correlations between dependent, independent, and control variables

#	Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	*Chapter 11*		0.10	-0.03	-0.05	-0.12	0.09	0.00	-0.21	-0.13	-0.12	-0.13	-0.21	0.04	-0.32	-0.03	-0.18	-0.13	-0.37	-0.09	-0.06
			(0.06)	(0.62)	(0.40)	(0.02)	(0.11)	(0.97)	(0.00)	(0.01)	(0.03)	(0.01)	(0.00)	(0.42)	(0.00)	(0.59)	(0.00)	(0.02)	(0.00)	(0.09)	(0.29)
2	*EPDCP*	0.10		0.38	-0.12	0.08	0.12	0.04	0.24	0.12	0.16	0.06	-0.03	-0.17	-0.05	-0.02	0.14	-0.07	0.11	-0.05	0.10
		(0.06)		(0.00)	(0.03)	(0.13)	(0.02)	(0.49)	(0.00)	(0.03)	(0.00)	(0.28)	(0.64)	(0.00)	(0.32)	(0.65)	(0.01)	(0.21)	(0.04)	(0.34)	(0.06)
3	*LNAT*	0.02	0.36		-0.12	0.08	0.09	0.05	0.32	0.22	0.26	0.15	0.07	-0.30	0.08	-0.10	0.15	-0.08	0.31	-0.01	0.18
		(0.71)	(0.00)		(0.03)	(0.12)	(0.10)	(0.37)	(0.00)	(0.00)	(0.00)	(0.01)	(0.19)	(0.00)	(0.12)	(0.05)	(0.01)	(0.12)	(0.00)	(0.85)	(0.00)
4	*CASHHOLD*	-0.06	-0.07	-0.03		-0.25	-0.23	-0.03	-0.26	-0.13	-0.24	0.07	0.25	0.42	-0.13	0.07	0.01	-0.10	0.04	-0.05	-0.04
		(0.24)	(0.22)	(0.56)		(0.00)	(0.00)	(0.56)	(0.00)	(0.02)	(0.00)	(0.22)	(0.00)	(0.00)	(0.02)	(0.17)	(0.85)	(0.06)	(0.49)	(0.33)	(0.46)
5	*CASHFLOW*	-0.25	0.10	0.12	-0.19		0.03	0.18	0.35	0.10	0.13	0.05	-0.09	-0.18	0.32	0.02	0.05	0.14	0.25	0.01	0.06
		(0.00)	(0.07)	(0.03)	(0.00)		(0.52)	(0.00)	(0.00)	(0.06)	(0.02)	(0.33)	(0.10)	(0.00)	(0.00)	(0.73)	(0.39)	(0.01)	(0.00)	(0.92)	(0.29)
6	*TANGIBILITY*	0.10	0.15	0.12	-0.17	0.07		0.11	0.08	0.02	-0.01	0.06	-0.10	-0.12	0.02	-0.03	0.14	0.14	0.02	0.00	0.18
		(0.07)	(0.00)	(0.02)	(0.00)	(0.17)		(0.04)	(0.15)	(0.73)	(0.88)	(0.30)	(0.06)	(0.03)	(0.66)	(0.63)	(0.01)	(0.01)	(0.76)	(0.97)	(0.00)
7	*LEV*	-0.03	0.06	0.14	-0.10	0.16	0.20		0.14	0.06	0.06	0.10	-0.06	-0.08	0.19	0.03	-0.16	0.14	0.11	-0.07	-0.05
		(0.60)	(0.26)	(0.01)	(0.08)	(0.00)	(0.00)		(0.01)	(0.29)	(0.24)	(0.06)	(0.28)	(0.12)	(0.00)	(0.55)	(0.00)	(0.01)	(0.04)	(0.18)	(0.37)
8	*PROFITABILITY*	-0.22	0.26	0.25	-0.21	0.55	0.14	0.13		0.57	0.64	0.04	-0.09	-0.67	0.27	-0.05	0.07	-0.03	0.30	0.00	0.10
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.02)		(0.00)	(0.00)	(0.50)	(0.11)	(0.00)	(0.00)	(0.39)	(0.20)	(0.57)	(0.00)	(0.96)	(0.08)
9	*DEBTCOV*	-0.19	0.21	0.22	-0.20	0.51	0.10	-0.09	0.89		0.59	-0.07	0.04	-0.60	0.12	0.04	0.08	-0.02	0.13	0.02	0.05
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.07)	(0.10)	(0.00)		(0.00)	(0.22)	(0.42)	(0.00)	(0.03)	(0.46)	(0.16)	(0.71)	(0.02)	(0.72)	(0.40)
10	*INTCOV*	-0.23	0.25	0.28	-0.19	0.52	0.09	-0.01	0.89	0.91		-0.04	0.02	-0.61	0.13	0.00	0.03	-0.10	0.15	-0.03	0.06
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.11)	(0.90)	(0.00)	(0.00)		(0.48)	(0.69)	(0.00)	(0.02)	(0.96)	(0.59)	(0.08)	(0.01)	(0.55)	(0.31)
11	*TOBINQ*	-0.06	0.20	0.32	-0.08	0.30	0.07	0.44	0.41	0.28	0.30		0.09	0.00	0.15	0.02	0.26	0.20	0.21	-0.03	0.06
		(0.31)	(0.00)	(0.00)	(0.16)	(0.00)	(0.20)	(0.00)	(0.00)	(0.00)	(0.00)		(0.11)	(0.99)	(0.00)	(0.76)	(0.00)	(0.00)	(0.00)	(0.56)	(0.26)
12	*CAPEXP*	-0.48	0.04	0.23	0.14	0.28	-0.03	0.10	0.30	0.23	0.29	0.15		0.13	0.08	-0.09	0.11	0.02	0.14	0.10	-0.06
		(0.00)	(0.50)	(0.00)	(0.01)	(0.00)	(0.57)	(0.07)	(0.00)	(0.00)	(0.00)	(0.00)		(0.02)	(0.15)	(0.09)	(0.04)	(0.75)	(0.01)	(0.08)	(0.27)
13	*RDEXP*	-0.11	-0.09	-0.14	0.40	-0.17	-0.14	-0.17	-0.32	-0.28	-0.28	-0.14	0.17		-0.20	0.02	-0.04	-0.05	-0.12	-0.03	-0.09
		(0.04)	(0.10)	(0.01)	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)		(0.00)	(0.74)	(0.45)	(0.33)	(0.02)	(0.53)	(0.09)
14	*RDDUM*	-0.32	-0.05	0.11	-0.08	0.40	0.03	0.24	0.28	0.23	0.26	0.19	0.36	-0.42		0.01	0.03	0.18	0.47	-0.02	0.11
		(0.00)	(0.32)	(0.03)	(0.13)	(0.00)	(0.56)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)		(0.83)	(0.64)	(0.00)	(0.00)	(0.67)	(0.04)
15	*BTM*	-0.03	-0.02	-0.08	0.06	0.16	-0.02	0.25	0.20	0.16	0.17	0.33	-0.05	-0.04	0.02		0.07	0.09	0.03	-0.05	0.04
		(0.53)	(0.72)	(0.16)	(0.26)	(0.00)	(0.66)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.36)	(0.47)	(0.76)		(0.22)	(0.09)	(0.62)	(0.36)	(0.47)
16	*BANKLOAN*	-0.26	0.13	0.14	0.06	0.19	0.15	-0.11	0.15	0.15	0.13	0.15	0.49	0.13	0.10	-0.06		0.22	0.31	0.09	0.10
		(0.00)	(0.01)	(0.01)	(0.23)	(0.00)	(0.00)	(0.05)	(0.00)	(0.01)	(0.01)	(0.00)	(0.00)	(0.01)	(0.07)	(0.27)		(0.00)	(0.00)	(0.12)	(0.05)
17	*SECURED*	-0.17	-0.08	-0.01	-0.09	0.16	0.13	0.16	0.06	-0.02	-0.03	0.19	0.21	-0.07	0.21	0.07	0.37		0.02	0.08	0.00
		(0.00)	(0.12)	(0.81)	(0.11)	(0.00)	(0.01)	(0.00)	(0.27)	(0.66)	(0.62)	(0.00)	(0.00)	(0.22)	(0.00)	(0.18)	(0.00)		(0.73)	(0.13)	(0.99)
18	*LEASE*	-0.39	0.12	0.28	0.10	0.46	0.06	0.15	0.32	0.29	0.34	0.23	0.61	0.01	0.49	0.00	0.40	0.10		0.00	0.04
		(0.00)	(0.03)	(0.00)	(0.08)	(0.00)	(0.28)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.88)	(0.00)	(0.94)	(0.00)	(0.08)		(0.93)	(0.50)
19	*NOLs*	-0.09	-0.05	0.03	0.02	-0.02	0.00	-0.04	-0.03	-0.03	-0.04	0.02	0.05	0.03	-0.02	0.01	0.08	0.07	0.00		-0.02

	(0.09)	(0.34)	(0.64)	(0.72)	(0.72)	(0.95)	(0.49)	(0.58)	(0.62)	(0.52)	(0.67)	(0.40)	(0.53)	(0.67)	(0.78)	(0.15)	(0.20)	(0.99)		(0.72)
20 *UNION*	-0.06	0.10	0.13	0.02	0.00	0.19	-0.03	0.06	0.04	0.09	0.05	-0.02	-0.10	0.11	-0.05	0.13	0.03	0.04	-0.02	
	(0.29)	(0.06)	(0.02)	(0.67)	(0.94)	(0.00)	(0.60)	(0.31)	(0.42)	(0.09)	(0.39)	(0.73)	(0.06)	(0.04)	(0.36)	(0.02)	(0.62)	(0.45)	(0.72)	

Note. Table 2 presents Pearson (upper triangle) and Spearman (lower triangle) correlations among the variables used in our main regression analysis. The sample size is 345. All variables are defined in the Appendix A. Figures in parentheses are p-values.

Table 3
Univariate analysis

Panel A: Probability of Chapter 11 between firms with and without EPDCP

Sample description	EPDCP = **1**			EPDCP = **0**			Difference		
	N	Mean	Median	N	Mean	Median	**1-0**	(t-stat)	(z-stat)
(1) Full sample	140	0.621	1.000	205	0.517	1.000	0.104	(1.92)*	(1.91)*
(2) Subsample before BAPCPA	60	0.650	1.000	73	0.480	0.000	0.171	(1.98)**	(1.96)**
(3) Subsample After BAPCPA	80	0.600	1.000	132	0.538	1.000	0.062	(0.88)	(0.88)

Panel B: Chapter 11 vs workout

	Chapter 11			**W**orkout			Difference	
Variables	N	Mean	Median	N	Mean	Median	**C-W**	(t-stat)
EPDCP	193	0.451	0.000	152	0.349	0.000	0.102	(1.92)*
LNAT	193	5.872	5.631	152	5.948	5.724	-0.077	(-0.50)
CASHHOLD	193	0.087	0.042	152	0.100	0.052	-0.013	(-0.85)
CASHFLOW	193	0.012	0.000	152	0.042	0.033	-0.030	(-2.32)**
TANGIBILITY	193	0.335	0.276	152	0.292	0.224	0.043	(1.60)
LEV	193	0.538	0.485	152	0.536	0.489	0.002	(0.04)
MKTLEV	193	0.087	0.000	152	0.316	0.304	-0.229	(-9.56)***
PROFITABILITY	193	-0.108	0.003	152	0.019	0.051	-0.127	(-3.96)***
DEBTCOV	193	-0.408	0.000	152	0.153	0.103	-0.562	(-2.46)**
INTCOV	193	-3.574	0.039	152	1.238	1.029	-4.812	(-2.24)**
TobinQ	193	-49.517	0.659	152	-12.613	0.630	-36.904	(-2.45)**
CAPEXP	193	0.074	0.000	152	0.256	0.099	-0.182	(-3.95)***
RDEXP	193	0.042	0.000	152	0.031	0.000	0.010	(0.81)
RDDUM	193	0.171	0.000	152	0.467	0.000	-0.296	(-6.26)***
BTM	193	0.919	0.000	152	2.284	-0.003	-1.365	(-0.54)

BANKLOAN	193	0.235	0.140	152	0.326	0.307	-0.092	(-3.32)***
SECURED	193	0.197	0.003	152	0.270	0.163	-0.073	(-2.40)**
LEASE	193	0.078	0.000	152	0.186	0.303	-0.108	(-7.35)***
NOLs	193	0.192	0.000	152	0.270	0.000	-0.078	(-1.72)*
UNION	193	0.073	0.000	152	0.105	0.000	-0.033	(-1.07)

Note. Table 3 presents the results of univariate tests. Panel A compares the probability of choosing Chapter 11 instead of a workout between firms with and without executive pensions and deferred compensation plans. The sample used in Panel A covers (1) the entire sample period from 1999–2015 and subsamples (2) before and (3) after BAPCPA, respectively. Panel B compares means and medians of variables used in our main regression analysis. All variables are defined in the Appendix A. N represents the number of firm-year observations. Differences in means are tested using a *t*-tests and differences in medians using a Wilcoxon rank-sum test. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table 4
Multivariate analysis

Variables	Coeff. Est.	(t-stat.)	Coeff. Est.	(t-stat.)
Intercept	-1.96	(-1.58)	-2.51	(-1.41)
EPDCP	0.59	(2.06)**	0.65	(1.98)**
LNAT	0.27	(2.13)**	0.25	(1.87)*
CASHHOLD	1.85	(1.34)	2.26	(1.58)
CASHFLOW	1.31	(0.80)	1.26	(0.74)
TANGIBILITY	1.21	(1.68)*	1.11	(1.50)
LEV	0.63	(1.63)	0.63	(1.56)
PROFITABILITY	-3.54	(-3.27)***	-3.61	(-3.22)***
DEBTCOV	-0.12	(-0.97)	-0.10	(-0.77)
INTCOV	0.01	(0.58)	0.01	(0.69)
TobinQ	0.00	(-1.04)	0.00	(-0.93)
CAPEXP	-1.43	(-2.98)***	-1.40	(-2.93)***
RDEXP	-4.86	(-2.14)**	-4.34	(-1.88)*
RDDUM	-0.78	(-1.90)*	-0.75	(-1.76)*
BTM	0.00	(-0.64)	0.00	(-0.56)
BANKLOAN	-0.62	(-0.90)	-0.60	(-0.84)
SECUREDLOAN	-0.89	(-1.54)	-0.94	(-1.56)
LEASE	-5.84	(-4.14)***	-6.24	(-4.30)***
NOLs	-0.29	(-0.81)	-0.29	(-0.80)
UNION	-0.67	(-1.18)	-0.63	(-1.09)
CEOAGE			0.02	(1.05)
CEOTENURE			-0.05	(-1.46)
OWNERSHIP			1.37	(0.95)
CASHCOMP			0.02	(0.41)
STOCKCOMP			0.02	(0.55)
OPTIONCOMP			-0.06	(-2.28)**
Year fixed effect	Yes		Yes	
Industry fixed effect	Yes		Yes	
N	345		345	
Adj. R^2	0.480		0.310	

Note. Table 4 presents results for our main cross-sectional logit regressions. The dependent variable, *Chapter11*, is an indicator variable whose value equals one if a firm files for Chapter 11, and zero otherwise. Our main independent variable is *EPDCP*, which equals one if a firm has executive pensions or deferred compensation plans, and zero otherwise. We control for firm characteristics known to affect the corporate bankruptcy choice and also for CEO related characteristics. All variables are defined in the Appendix A. All independent variables are measured at the end of the last fiscal year before debt restructuring. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table 5

Propensity score matching

Panel A: Differences in Characteristics between firms with and without CEO pension plan

	Unmatched Sample					Propensity Score Matched Sample				
	EPDCP=1		*EPDCP*=0		Mean difference	*EPDCP*=1		*EPDCP*=0		Mean difference
Variables	N	Mean	N	Mean	P-value	N	Mean	N	Mean	P-value
LNAT	140	6.557	205	5.460	0.000***	118	6.238	118	5.909	0.034**
CASHHOLD	140	0.072	205	0.106	0.025**	118	0.071	118	0.077	0.697
CASHFLOW	140	0.037	205	0.018	0.132	118	0.031	118	0.040	0.560
TANGIBILITY	140	0.353	205	0.291	0.023**	118	0.347	118	0.326	0.512
LEV	140	0.557	205	0.524	0.489	118	0.548	118	0.553	0.918
PROFITABILITY	140	0.036	205	-0.113	0.000***	118	0.014	118	0.011	0.882
TobinQ	140	-23.446	205	-39.959	0.282	118	-28.006	118	-34.682	0.694
CAPEXP	140	0.141	205	0.163	0.641	118	0.142	118	0.137	0.906
BTM	140	0.828	205	1.992	0.450	118	1.208	118	0.436	0.782
CEOAGE	140	53.993	205	53.659	0.721	118	53.958	118	54.271	0.776
CEOTENURE	140	6.821	205	6.722	0.875	118	7.305	118	6.568	0.332
CEOOWN	140	0.057	205	0.066	0.471	118	0.063	118	0.075	0.469
CASHCOMP	140	12.976	205	12.323	0.040**	118	12.931	118	12.507	0.243
STOCKCOMP	140	5.472	205	3.445	0.003***	118	4.871	118	3.705	0.148
OPTIONCOMP	140	7.053	205	7.462	0.550	118	7.036	118	7.121	0.917

Panel B: Regression results of first and second stages

	Dependent variable:					
	(1st stage)		(2nd stage)		(2nd stage)	
Variables	*EPDCP*		*Chapter 11*		*Chapter 11*	
Intercept	-4.07	(-3.53)***	-5.40	(-2.77)***	-5.24	(-2.05)**
EPDCP			0.75	(1.87)*	0.85	(2.02)**
LNAT	0.56	(4.88)***	0.60	(3.03)***	0.68	(3.13)***
CASHHOLD	-1.23	(-1.08)	0.48	(0.21)	0.40	(0.17)
CASHFLOW	-1.19	(-0.94)	1.60	(0.52)	1.96	(0.59)
TANGIBILITY	0.62	(1.23)	2.36	(2.37)**	2.41	(2.36)**
LEV	-0.03	(-0.09)	0.76	(1.16)	0.91	(1.34)
PROFITABILITY	2.32	(2.93)***	-8.35	(-3.00)***	-8.65	(-2.95)***
DEBTCOV			-0.04	(-0.17)	-0.03	(-0.13)
INTCOV			0.05	(1.02)	0.05	(0.86)
TobinQ	0.00	(-0.04)	0.00	(-1.39)	0.00	(-1.33)
CAPEXP			-3.89	(-2.47)**	-4.37	(-2.62)***
RDEXP			-8.00	(-0.95)	-8.36	(-0.98)
RDDUM			-0.90	(-1.55)	-0.96	(-1.61)
BTM	0.00	(0.10)	-0.01	(-0.87)	-0.01	(-0.98)
BANKLOAN			-0.36	(-0.35)	-0.25	(-0.22)
SECUREDLOAN			-1.41	(-1.72)*	-1.68	(-1.96)**
LEASE			-5.25	(-2.62)***	-5.51	(-2.67)***
NOLs			-0.47	(-1.03)	-0.52	(-1.13)
UNION			-0.98	(-1.29)	-1.07	(-1.33)
CEOAGE	0.00	(-0.05)			-0.01	(-0.52)
CEOTENURE	0.01	(0.58)			-0.01	(-0.18)
OWNERSHIP	-1.06	(-0.94)			1.47	(0.77)
CASHCOMP	0.03	(0.72)			0.05	(0.67)
STOCKCOMP	0.02	(0.69)			-0.03	(-0.78)
OPTIONCOMP	-0.02	(-1.09)			-0.03	(-0.89)
Year fixed effect	No		Yes		Yes	
Industry fixed effect	No		Yes		Yes	
N	345		236		236	

Adj. R^2	0.261	0.607	0.616

Note. Table 5 presents the results from propensity score matching analysis. Panel A shows the matching results by comparing the differences in characteristics between firms with and without CEO pension plan. Panel B presents the first- and second- regression results. In the first stage, we obtain propensity scores by regressing *EPDCP* on CEO and firm characteristics. Then, by using the propensity scores from the first stage, we match firms having *EPDCP* with firms that do not using the closest propensity score and a maximum distance of 0.03. In the second stage, we estimate our main regression analysis using the matched samples. The dependent variable, *Chapter11*, is an indicator variable whose value equals one if a firm files for Chapter 11, and zero otherwise. Our main independent variable is *EPDCP*, which equals one if a firm has executive pensions or deferred compensation plans, and zero otherwise. We control for firm characteristics known to affect the corporate bankruptcy choice and also for CEO related characteristics. All variables are defined in the Appendix A. All independent variables are measured at the end of the last fiscal year before debt restructuring. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table 6
Heckman two-stage procedure

Panel A: Heckman two stage procedure to alleviate the sample selection problem in bankruptcy sample						
	Dependent variable:					
	(1st stage)		(2nd stage)		(2nd stage)	
Variables	Bankruptcy		Chapter 11		Chapter 11	
Intercept	6.42	(0.02)	-0.67	(-0.60)	-0.84	(-0.51)
EPDCP			0.65	(1.99)**	0.67	(1.98)**
LNAT	-0.03	(-0.64)	0.19	(1.57)	0.21	(1.56)
CASHHOLD	-0.93	(-1.96)*	1.38	(0.98)	1.71	(1.16)
CASHFLOW			0.22	(0.14)	-0.08	(-0.05)
TANGIBILITY	0.31	(0.96)	1.15	(1.80)*	0.99	(1.51)
LEV	0.17	(0.49)	-0.04	(-0.10)	-0.07	(-0.17)
PROFITABILITY	-1.69	(-3.55)***	-1.91	(-1.94)*	-1.85	(-1.79)*
DEBTCOV	-0.01	(-0.63)	-0.15	(-1.03)	-0.14	(-0.98)
INTCOV	0.00	(1.50)	0.00	(-0.12)	0.00	(0.02)
TobinQ	1.05	(4.68)***	0.00	(-0.94)	0.00	(-0.77)
CAPEXP	0.00	(0.02)	-1.02	(-2.12)**	-0.95	(-2.03)**
RDEXP	-2.91	(-2.33)**	-4.56	(-2.09)**	-3.72	(-1.64)
RDDUM			-0.68	(-1.76)*	-0.68	(-1.73)*
BTM	0.00	(0.84)	-0.01	(-1.13)	-0.01	(-0.92)
BANKLOAN	-1.12	(-2.59)***	0.57	(0.82)	0.54	(0.74)
SECUREDLOAN	-0.10	(-0.36)	-1.21	(-2.16)**	-1.26	(-2.17)**
LEASE			-2.41	(-1.77)*	-2.60	(-1.84)*
NOLs			-0.82	(-2.31)**	-0.82	(-2.27)**
UNION			-1.17	(-2.18)**	-1.16	(-2.11)**
CEOAGE					0.02	(0.99)
CEOTENURE					-0.02	(-0.75)
OWNERSHIP					0.32	(0.22)
CASHCOMP					-0.01	(-0.20)
STOCKCOMP					0.01	(0.30)
OPTIONCOMP					-0.06	(-2.44)**
EVOL	0.64	(2.39)**				
IMR			-2.17	(-4.95)***	-2.16	(-4.79)***
Year fixed effect	Yes		Yes		Yes	
Industry fixed effect	Yes		Yes		Yes	
N	632		345		345	
Adj. R^2	0.462		0.481		0.501	

Panel B: Heckman two stage procedure to alleviate the sample selection bias in EPDCP sample						
	Dependent variable:					
	(1st stage)		(2nd stage)		(2nd stage)	
Variables	EPDCP		Chapter 11		Chapter 11	
Intercept	-3.98	(-4.16)***	2.18	(1.23)	2.25	(1.25)
EPDCP			0.57	(1.79)*	0.59	(1.83)*
LNAT	0.42	(5.35)***	-0.05	(-0.33)	0.00	(-0.01)
CASHHOLD	-0.17	(-0.22)	0.81	(0.64)	0.96	(0.73)
CASHFLOW	-0.78	(-0.83)	2.34	(1.51)	2.16	(1.35)
TANGIBILITY	0.41	(1.08)	1.05	(1.68)*	0.91	(1.42)
LEV	0.11	(0.53)	0.42	(1.13)	0.41	(1.07)
PROFITABILITY	1.33	(2.69)***	-4.07	(-3.59)***	-4.00	(-3.39)***
DEBTCOV			-0.09	(-0.75)	-0.08	(-0.66)
INTCOV			0.00	(0.01)	0.00	(0.04)
TobinQ	0.00	(-0.40)	0.00	(-0.82)	0.00	(-0.80)
CAPEXP	0.00	(0.71)	-1.36	(-3.02)***	-1.40	(-3.13)***
RDEXP			-4.33	(-2.02)**	-3.99	(-1.85)*

RDDUM			-0.82	(-2.18)**	-0.86	(-2.25)**
BTM	0.00	(0.71)	-0.01	(-0.94)	-0.01	(-0.81)
BANKLOAN			-0.78	(-1.24)	-0.67	(-1.04)
SECUREDLOAN			-1.12	(-2.04)**	-1.21	(-2.15)**
LEASE			-4.82	(-3.83)***	-4.84	(-3.78)***
NOLs			-0.40	(-1.18)	-0.41	(-1.22)
UNION			-0.74	(-1.44)	-0.79	(-1.49)
CEOAGE	0.00	(-0.17)				
CEOTENURE	0.03	(1.64)				
OWNERSHIP	-0.72	(-0.99)			0.66	(0.53)
CASHCOMP	0.02	(0.80)				
STOCKCOMP	0.01	(0.95)			0.00	(0.07)
OPTIONCOMP	-0.01	(-0.96)			-0.05	(-2.09)**
IMR			-1.01	(-2.08)**	-0.91	(-1.82)*
Year fixed effect	Yes		Yes		Yes	
Industry fixed effect	Yes		Yes		Yes	
N	345		345		345	
Adj. R^2	0.389		0.422		0.437	

Note. Table 6 presents the regression results using the Heckman (1979) procedures to control for sample selection bias. Panels A and B use the probability of bankruptcy (*Bankruptcy*) and CEO pension (*EPDCP*) as the first-stage dependent variable, respectively. *IMR* is the inverse Mills' ratio obtained from the first-stage bankruptcy prediction model. Earnings volatility (*EVOL*) is used an exogenous variable in the first-stage regression of Panel A. We include IMR from the first stage as an independent variable in the second stage model of choice between Chapter 11 and a workout. The dependent variable, *Chapter11*, is an indicator variable whose value equals one if a firm files for Chapter 11, and zero otherwise. Our main independent variable is *EPDCP*, which equals one if a firm has executive pensions or deferred compensation plans, and zero otherwise. We control for firm characteristics known to affect the corporate bankruptcy choice and also for CEO related characteristics. All variables are defined in the Appendix A. All independent variables are measured at the end of the last fiscal year before debt restructuring. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table 7
The impact of the Bankruptcy Abuse Prevention and Consumer Protection Act (BAPCPA)

Variables	Before BAPCPA				After BAPCAP				Full			
	(1)		(2)		(3)		(4)		(5)		(6)	
Intercept	-2.74	(-1.34)	-1.31	(-0.45)	-2.39	(-1.50)	-4.16	(-1.40)	-2.74	(-1.34)	-1.31	(-0.45)
EPDCP	1.43	(2.01)**	1.63	(2.05)**	0.18	(0.38)	0.40	(0.79)	1.43	(2.01)**	1.63	(2.05)**
BAPCPA									0.35	(0.13)	-2.85	(-0.68)
*EPDCP*BAPCPA*									-1.25	(-1.77)*	-1.23	(-1.70)*
LNAT	0.18	(0.71)	0.17	(0.64)	0.30	(1.62)	0.27	(1.27)	0.18	(0.71)	0.17	(0.64)
CASHHOLD	-0.48	(-0.18)	-0.60	(-0.20)	3.39	(1.61)	4.07	(1.82)*	-0.48	(-0.18)	-0.60	(-0.20)
CASHFLOW	-0.73	(-0.23)	-0.35	(-0.10)	4.66	(1.89)*	4.65	(1.81)*	-0.73	(-0.23)	-0.35	(-0.10)
TANGIBILITY	3.72	(2.65)***	3.66	(2.41)**	-0.15	(-0.14)	-0.44	(-0.38)	3.72	(2.65)***	3.66	(2.41)**
LEV	1.09	(1.35)	1.14	(1.37)	0.90	(1.61)	0.79	(1.31)	1.09	(1.35)	1.14	(1.37)
PROFITABILITY	-7.88	(-1.79)*	-7.69	(-1.69)*	-3.43	(-2.02)**	-3.24	(-1.80)*	-7.88	(-1.79)*	-7.69	(-1.69)*
DEBTCOV	0.80	(1.31)	0.82	(1.24)	-0.22	(-1.26)	-0.16	(-0.85)	0.80	(1.31)	0.82	(1.24)
INTCOV	0.04	(0.58)	0.02	(0.36)	0.01	(0.75)	0.01	(0.89)	0.04	(0.58)	0.02	(0.36)
TobinQ	0.00	(-0.23)	0.00	(-0.33)	0.00	(-1.26)	0.00	(-1.21)	0.00	(-0.23)	0.00	(-0.33)
CAPEXP	-0.62	(-0.94)	-0.61	(-0.80)	-5.32	(-2.81)***	-5.22	(-2.75)***	-0.62	(-0.94)	-0.61	(-0.80)
RDEXP	5.92	(0.95)	6.13	(0.87)	-7.42	(-2.20)	-5.96	(-1.61)	5.92	(0.95)	6.13	(0.87)
RDDUM	-0.05	(-0.06)	-0.20	(-0.25)	-0.94	(-1.47)	-1.03	(-1.50)	-0.05	(-0.06)	-0.20	(-0.25)
BTM	-0.01	(-0.32)	0.00	(-0.12)	0.00	(-0.53)	0.00	(-0.22)	-0.01	(-0.32)	0.00	(-0.12)
BANKLOAN	-0.61	(-0.37)	-0.70	(-0.41)	-1.03	(-1.06)	-1.14	(-1.05)	-0.61	(-0.37)	-0.70	(-0.41)
SECUREDLOAN	-2.98	(-2.36)**	-3.15	(-2.40)**	0.32	(0.38)	0.47	(0.50)	-2.98	(-2.36)**	-3.15	(-2.40)**
LEASE	-5.94	(-2.26)**	-5.75	(-2.15)**	-6.80	(-3.21)***	-8.12	(-3.44)***	-5.94	(-2.26)**	-5.75	(-2.15)**
NOLs	-0.41	(-0.60)	-0.40	(-0.58)	0.10	(0.20)	0.27	(0.52)	-0.41	(-0.60)	-0.40	(-0.58)
UNION	-1.70	(-1.95)*	-1.76	(-1.95)*	0.33	(0.31)	0.54	(0.47)	-1.70	(-1.95)*	-1.76	(-1.95)*
CEOAGE			-0.02	(-0.56)			0.03	(1.11)			-0.02	(-0.56)
CEOTENURE			-0.01	(-0.14)			-0.08	(-1.84)*			-0.01	(-0.14)

OWNERSHIP			0.50	(0.19)			1.83	(0.78)			0.50	(0.19)
CASHCOMP			-0.04	(-0.45)			0.10	(1.06)			-0.04	(-0.45)
STOCKCOMP			0.01	(0.21)			0.01	(0.28)			0.01	(0.21)
OPTIONCOMP			0.02	(0.43)			-0.09	(-2.31)**			0.02	(0.43)
Year fixed effect	Yes		Yes		Yes		Yes		Yes		Yes	
Industry fixed effect	Yes		Yes		Yes		Yes		Yes		Yes	
*Controls*BAPCPA*	No		No		No		No		Yes		Yes	
N	133		133		212		212		345		345	
Adj. R^2	0.575		0.579		0.574		0.610		0.574		0.598	

Note. Table 7 presents results for the impact of BAPCPA on the relation between EPDCP and the choice between Chapter 11 and a workout. Columns (1) and (2) present regression results for the pre-BAPCPA subsample, and Columns (3) and (4) present regression results for the post-BAPCPA subsample Columns (5) and (6) present the regression results for the full sample while permitting the estimated coefficients to differ across the pre- and post-BAPCPA periods. The dependent variable, *Chapter11*, is an indicator variable whose value equals one if a firm files for Chapter 11, and zero otherwise. Our main independent variable is *EPDCP*, which equals one if a firm has executive pensions or deferred compensation plans, and zero otherwise. *BAPCPA* is an indicator variable that equals one for observations after BAPCPA, and zero otherwise. We control for firm characteristics known to affect the corporate bankruptcy choice and also for CEO related characteristics. All variables are defined in the Appendix A. All independent variables are measured at the end of the last fiscal year before debt restructuring. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table 8
CEO chairmanship

Variables	Model (1)		Model (2)	
Intercept	0.20	(0.27)	-0.04	(-0.03)
EPDCP	0.19	(0.47)	0.27	(0.65)
Chairmanship	-0.09	(-0.27)	0.00	(0.01)
*EPDCP*Chairmanship*	1.20	(2.19)**	1.10	(1.97)**
LNAT	0.11	(1.06)	0.13	(1.07)
CASHHOLD	0.41	(0.36)	0.93	(0.77)
CASHFLOW	1.05	(0.84)	0.88	(0.69)
TANGIBILITY	0.96	(1.68)*	0.88	(1.50)
LEV	0.39	(1.16)	0.34	(0.99)
PROFITABILITY	-2.89	(-3.00)***	-2.77	(-2.82)***
DEBTCOV	-0.09	-(0.82)	-0.08	(-0.73)
INTCOV	0.00	-(0.11)	0.00	(0.08)
TobinQ	0.00	(-0.78)	0.00	(-0.61)
CAPEXP	-1.35	(-2.97)***	-1.32	(-2.86)***
RDEXP	-5.11	(-2.55)**	-4.33	(-2.10)**
RDDUM	-0.65	(-1.93)	-0.67	(-1.93)*
BTM	0.00	(-0.41)	0.00	(-0.28)
BANKLOAN	-0.47	(-0.80)	-0.58	(-0.95)
SECUREDLOAN	-0.86	(-1.69)*	-0.83	(-1.57)
LEASE	-4.16	(-3.60)***	-4.37	(-3.67)***
NOLs	-0.44	(-1.39)	-0.42	(-1.29)
UNION	-0.80	(-1.71)*	-0.79	(-1.65)*
CEOAGE			0.01	(0.88)
CEOTENURE			-0.05	(-1.63)
OWNERSHIP			0.11	(0.09)
CASHCOMP			0.01	(0.12)
STOCKCOMP			0.00	(-0.08)
OPTIONCOMP			-0.05	(-2.28)**
Year fixed effect	Yes		Yes	
Industry fixed effect	Yes		Yes	
N	345		345	
Adj. R^2	0.383		0.407	

Note. Table 8 presents results for the effect of CEO chairmanship on the relation between EPDCP and choice between Chapter 11 and a workout. The dependent variable, *Chapter11*, is an indicator variable whose value equals one if a firm files for Chapter 11, and zero otherwise. Our main independent variable is *EPDCP*, which equals one if a firm has executive pensions or deferred compensation plans, and zero otherwise. *Chairmanship* is an indicator variable that equals one if the CEO is also the chairman of the board, and zero otherwise. We control for firm characteristics known to affect the corporate bankruptcy choice and also for CEO related characteristics. All variables are defined in the Appendix A. All independent variables are measured at the end of the last fiscal year before debt restructuring. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table 9
The effect of pension amounts

Variables	Total		Before BAPCPA		After BAPCAP	
Intercept	9.37	(0.05)	256.00	(0.16)	16.52	(1.72)*
PAMT	0.25	(1.94)*	3.14	(0.06)	0.49	(1.75)*
LNAT	0.02	(0.08)	-2.30	(-0.05)	0.08	(0.29)
CASHHOLD	13.04	(2.22)**	8.10	(0.01)	12.56	(1.75)*
CASHFLOW	-1.12	(-0.16)	-29.55	(-0.10)	4.13	(0.71)
TANGIBILITY	3.81	(1.85)*	117.90	(0.32)	1.25	(0.56)
LEV	2.44	(1.53)	-0.28	(0.00)	-2.29	(-1.35)
PROFITABILITY	-8.81	(-1.54)	-79.08	(-0.19)	4.01	(0.87)
DEBTCOV	1.18	(0.88)	-4.51	(-0.03)	-2.53	(-1.49)
INTCOV	0.09	(0.87)	2.98	(0.18)	0.00	(0.05)
TobinQ	-0.41	(-0.86)	-0.19	(-0.16)	-0.05	(-0.17)
CAPEXP	-9.95	(-2.65)***	2.38	(0.01)	-14.48	(-2.15)**
RDEXP	-9.65	(-0.78)	-331.20	(-0.14)	-8.75	(-0.76)
RDDUM	-0.12	(-0.11)	-7.63	(-0.07)	-0.23	(-0.20)
BTM	-0.03	(-1.20)	-0.25	(-0.10)	0.01	(0.64)
BANKLOAN	-0.30	(-0.13)	-4.08	(-0.02)	-1.73	(-0.97)
SECUREDLOAN	-1.44	(-0.86)	-8.26	(-0.06)	-0.32	(-0.18)
LEASE	-5.42	(-1.45)	153.80	(0.18)	-5.03	(-1.38)
NOLs	0.59	(0.61)	14.35	(0.23)	0.54	(0.47)
UNION	-0.84	(-0.67)	0.82	(0.01)	-0.16	(-0.11)
CEOAGE	-0.04	(-0.70)	1.53	(0.24)	0.04	(0.85)
CEOTENURE	-0.12	(-1.29)	-0.40	(-0.07)	-0.11	(-0.98)
OWNERSHIP	0.71	(0.18)	-36.64	(-0.10)	-3.64	(-0.55)
CASHCOMP	-0.62	(-1.09)	-29.83	(-0.30)	-1.17	(-1.80)*
STOCKCOMP	-0.10	(-1.29)	1.08	(0.29)	-0.10	(-1.16)
OPTIONCOMP	-0.06	(-0.90)	-0.14	(-0.01)	-0.14	(-2.00)**
Year fixed effect	Yes		No		No	
Industry fixed effect	Yes		No		No	
N	140		60		80	
Adj. R^2	0.739		0.995		0.594	

Note. Table 9 presents results for the effect of CEO pension amounts on the choice between Chapter 11 and a workout. Particularly, we restrict the testing sample to include firms with EPDCP=1. The dependent variable, *Chapter11*, is an indicator variable whose value equals one if a firm files for Chapter 11, and zero otherwise. The main independent variable, PAMT, is the decile of CEO pension amounts. First regression results examine the full sample. Second and third regression results are for the pre-BAPCAP and post-BAPCPA, respectively. We control for firm characteristics known to affect the corporate bankruptcy choice and also for CEO related characteristics. All variables are defined in the Appendix A. All independent variables are measured at the end of the last fiscal year before debt restructuring. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.