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## Heterogeneous beliefs and the choice between private restructuring and formal bankruptcy \*



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#### ABSTRACT

We present a theory for the puzzling issue regarding why certain firms in financial distress, prefer a costlier formal bankruptcy procedure over direct renegotiations. We show that claimholders' heterogeneous beliefs about the results of a formal plan and about judicial discretion may lead to such a preference. The proposed model predicts which resolution would be chosen under claimholders' beliefs about the determinants driving the outcome of a formal procedure, such as the extent to which firm value is affected by bankruptcy, the likelihood of deviation from the absolute priority rule, and the probability of the court adopting a reorganization plan.

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#### 1. Introduction

A firm that must restructure its debt during financial distress faces a choice between two alternatives. It can privately renegotiate the debt claims in an informal process<sup>1</sup> or file for formal bankruptcy to resolve its creditor disputes through an in-court proceeding ('litigation'). The mere presence of deadweight costs suggests that it is in the best interest of debtholders and equityholders to agree on an informal reorganization of the firm (Haugen & Senbet, 1978, 1988; Jensen, 1991; Roe, 1987). Nevertheless, empirical studies show that a substantial percentage of firms file for bankruptcy through formal procedures. Franks and Torous (1994) and Gilson, John, and Lang (1990), and Yost (2002) report that the percentage of firms that complete a distressed exchange offer (an informal process) approximately equals the percentage of firms that file for bankruptcy under Chapter 11 – the chapter of the U.S. bankruptcy code that governs corporate reorganization (a formal procedure). In the more recent study by Jacobs, Karagozoglu, and Layish (2012), the percentage of firms filing for bankruptcy is higher than 70%.

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<sup>&</sup>lt;sup>1</sup> Throughout the paper, we use the terms private workout, informal process, or out-of-court renegotiation interchangeably.

In response to these empirical findings, the theoretical financial literature explains the preference for more costly formal bankruptcy procedures over informal processes by the presence of at least one of the following frictions: asymmetric information, agency problems and creditor conflicts. In this paper, we provide an additional possible explanation for this puzzle. We show that the decision to choose a formal bankruptcy procedure may result from the heterogeneous beliefs of different claimholders with respect to the predicted outcomes of such formal bankruptcy procedures.

As documented by Bris, Welch, and Zhu (2006) and Chang and Schoar (2013), the final outcome of formal bankruptcy procedures is subject to judicial discretion.<sup>2</sup> Posner (2005) notes that judges may unconsciously interpret the evidence – or even disregard certain inconvenient truths – through the lens of their experiences. Moreover, under many legislative systems the bankruptcy code itself may allow for judicial discretion, i.e., the judge may have the right to force a resolution (even if previously rejected by a claimant) and/or to stop negotiations altogether.

The effect of judicial discretion on formal bankruptcy procedures can be channeled in two ways to generate heterogeneous beliefs among different claimholders. In the first approach, one group of claimholders receives private signals, and these investors are thus more informed than the second group of claimholders (Duffie & Lando, 2001; Grossman & Stiglitz, 1980; Hellwig, 1980; Shefrin & Statman, 1994 & Wang, 1993). In the second approach, different claimholders "agree to disagree" about certain matters and do not learn from one another's behavior (Basak, 2000; Cecchetti, Lam, & Mark, 2000; David, 2008; Duffie, Garleanu, & Pedersen, 2002; Dumas, Kurshev, & Uppal, 2009; Harris & Raviv, 1993; Veronesi, 1999 & Zapatero, 1998). Consistent with the second approach, we consider a setting in which claimholders have different estimates about the possible outcomes of formal bankruptcy procedures because of their heterogeneous beliefs about the importance of factors that affect the payoff under such procedures. Such factors include (i) the probability of the court accepting a liquidation procedure (Chapter 7) versus a reorganization (Chapter 11), (ii) the evolution of firm value through the bankruptcy procedure until reorganization, and (iii) the extent to which the absolute priority rule (APR) is violated upon reorganization (i.e., the share that the equityholders will receive in a reorganization procedure).

We argue that each claimholder decides whether to negotiate informally or formally by calculating the value of her claim in a formal procedure – based on the factors presented above – and being aware of the assessments that are made by other claimholders regarding the values of their claims. We predict that informal processes are preferred only when the total value of all claims in a formal bankruptcy procedure – as perceived by the holders of such claims – is less than the total value of the firm in an informal process. Under such a condition, claimholders may choose an informal process because all parties are better off as a result of the positive surplus that can be divided according to their bargaining power.<sup>3</sup> The condition presented requires that each claimholder perceives the informal restructuring process as a Pareto improvement compared to the formal bankruptcy procedure.

The heterogeneous beliefs approach yields a set of new insights regarding the design of bankruptcy law. First, we argue that strict enforcement of the APR upon reorganization discourages claimholders from considering formal bankruptcy as a potentially more beneficial alternative to private renegotiations.

Second, we show that although claimholders' disagreement about their recovery payoff upon reorganization could be a strong incentive to file for bankruptcy, the recent sharp decline in Chapter 11 APR violations (documented in particular by Bharath, Panchagesan, & Werner, 2014) leaves little room for such disagreement. Therefore, heterogeneity in beliefs must apply to other bankruptcy characteristics to have a material impact on the decision to file for bankruptcy.

Third, in several jurisdictions, the court must rule that the reorganization being imposed is "fair and equitable", meaning the share of the debtholder must be at least as large as her share would have been under a liquidation procedure (Brown, 1989). We show that enforcing a fair and equitable plan reduces the scope for heterogeneous beliefs and therefore makes formal bankruptcy a less attractive alternative.

Fourth, we show that the uncertainty surrounding the evolution of firm value during bankruptcy can be a major incentive for the formal procedure. It is noteworthy that empirical studies offer mixed evidence about what happens to firm value after reorganization under Chapter 11. We therefore argue that claimholders might strongly disagree about the ability of the court-supervised procedure to restructure efficiently and enhance firm value. Our approach predicts that the bankruptcy procedure will attract those firms where creditors are particularly optimistic about firm value improvement upon reorganization.

Finally, additional source for disagreement between claimholders can be simply the probability that the court will force a liquidation procedure (Chapter 7) or a reorganization (Chapter 11). We show that if the formal bankruptcy leaves firm value unchanged and if the court can enforce a fair and equitable plan then a private workout will always be preferred in case that the only source for disagreement is the probability of reorganization.

The remainder of the paper is organized as follows. Section 2 reviews the relevant literature. In Section 3, we develop and calibrate the basic model, and derive its implications regarding the resolution of corporate financial distress. Concluding remarks are found in Section 4.

<sup>&</sup>lt;sup>2</sup> Bris et al. (2006) and Chang and Schoar (2013) document that the percentages paid out to creditors, the duration of Chapter 11 negotiations and violations of the absolute priority rule differ significantly among judges. This evidence is supported by Hotchkiss (1995), who shows that cases filed in the Southern District of New York have a higher probability of subsequently entering a second bankruptcy or distressed restructuring.

<sup>&</sup>lt;sup>3</sup> Analyzing the outcome of the restructuring process is beyond the scope of this paper. Fan and Sundaresan (2000), François and Morellec. (2004), and Broadie et al. (2007) determine that the outcome results from a cooperative game between debtholders and stockholders. Annabi, Breton, and François (2012) argue that a non-cooperative game is more appropriate to model Chapter 11 negotiations.

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