### Leveraging Organizational Capital for Firm Emergence: Evidence from U.S. Chapter 11 Filings

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#### Abstract

This study investigates the role of organizational capital (OC)—intangible assets encompassing knowledge, processes, and corporate culture—in facilitating firms' emergence from Chapter 11 bankruptcy. Using 1,054 firm-year observations spanning 1981–2020, we find that higher OC significantly increases the likelihood of successful reorganization. This positive effect remains robust after addressing endogeneity concerns through entropy balancing and instrumental variable analysis. Notably, the impact of OC is more pronounced prior to the Sarbanes–Oxley Act of 2002 and under lower economic uncertainty. Although financially constrained firms and those with low R&D investment might appear vulnerable, such conditions do not necessarily impede their emergence when OC is high. In addition, CEO turnover at the time of filing further supports reorganization success. Overall, these findings underscore OC's strategic value in enhancing resilience during bankruptcy and highlight the importance of intangible assets in shaping corporate outcomes under financial distress.

**Keywords:** Organizational Capital, Firm Emergence, Financial Constraints, Bankruptcy, Chapter 11

EFM Classification: 130; 150; 210

Data Availability: As mentioned in the paper, all data are publicly available.

#### **1. Introduction**

Chapter 11 of the U.S. Bankruptcy Code provides a formal avenue for financially distressed firms to reorganize, rather than liquidate, under judicial supervision (Delaney, 1992; Kang et al., 2020). Contrary to the perception that bankruptcy exclusively signifies failure, Chapter 11 highlights rehabilitation by enabling companies to restructure debts while retaining ongoing operations (Jaggia & Thosar, 2019; Mengden, 2021). This process differs markedly from liquidation under Chapter 7, where business activities cease entirely. By preserving organizational continuity, Chapter 11 safeguards both tangible and intangible assets—particularly organizational capital (OC)—throughout the restructuring. As Lev (2001) observes, intangible assets often constitute a hidden yet influential source of enterprise value, necessitating rigorous approaches to both measurement and governance. Among these intangibles, OC, which encompasses accumulated knowledge, processes, and relational networks, holds considerable promise for enhancing reorganization outcomes. However, the degree to which such capabilities foster a firm's successful emergence from bankruptcy remains insufficiently understood.

Despite these theoretical advantages, outcomes under Chapter 11 remain highly variable. High-profile restructurings—such as Lehman Brothers, General Motors, and Enron—underscore the formidable challenge of valuing intangible resources in periods of acute distress, often determining whether a firm successfully reorganizes or instead transitions to liquidation (Bogan & Sandler, 2012; Fisher et al., 2019; Lin et al., 2020). Recent developments further highlight this uncertainty: over 7,000 Chapter 11 filings occurred in 2021—a 17.3% increase from the previous year (see Figure 1 – Appendix A). This is partly attributable to the expiration of COVID–19–related government support (Bénassy-Quéré et al., 2020; Didier et al., 2021; Skeel, 2020). These trends underscore the need to identify firm-level factors that enhance resilience during reorganization. The present study addresses this gap by examining whether OC—encompassing the knowledge, processes, and networks that constitute a firm's intangible core—functions as a potential driver of successful emergence from bankruptcy. In tandem with OC, Debtor-in-Possession (DIP) financing represents another vital component of the Chapter 11 landscape (Bris et al., 2006; Dahiya et al., 2003; James, 2016; Li & Wang, 2016). DIP financing underpins daily operations by providing liquidity when conventional funding is constrained, thereby influencing whether a reorganization preserves or erodes value. While DIP financing is contingent on creditor confidence, this confidence may partly derive from a firm's intangible strengths: robust OC can signal organizational adaptability and effective governance, potentially increasing the likelihood of securing favorable financing terms. Hence, both financial resources and intangible assets appear to shape a firm's trajectory under bankruptcy protection.

Building on prior evidence that firms with robust intangible resources are better positioned to manage uncertainty and preserve stakeholder confidence (Berk et al., 2010; Gao et al., 2021; Lim et al., 2020), we measure OC in the Chapter 11 context by capitalizing Selling, General, and Administrative (SG&A) expenses using the perpetual inventory method (Eisfeldt & Papanikolaou, 2013; Peters & Taylor, 2017). Because OC represents the accumulated knowledge, routines, and relational assets within a firm, it may function as a stabilizing force that mitigates operational and financial complexities, thereby enhancing the likelihood of successful emergence from bankruptcy. Analyzing a sample of U.S. firms from 1981 to 2020, we find that a 1% increase in OC raises the probability of firm emergence by a factor of 2.35. These results hold under various measures of OC and remain robust after addressing potential endogeneity concerns—such as observable selection bias (via entropy balancing) and reverse causality (through instrumental variable analysis and Lewbel (2012) two-stage least squares regression approach). Additional tests using the debt-to-equity (D/E) ratio as an alternative proxy for financial distress confirm that higher-OC firms exhibit lower leverage, suggesting that intangible resources help reduce vulnerability and foster resilience throughout the reorganization process.

Our cross-sectional analyses indicate that the positive effect of organizational capital (OC) on firm emergence is especially pronounced during the periods leading up to the Global Financial Crisis (GFC) and the enactment of the Sarbanes-Oxley Act of 2002. These episodes were marked by comparatively stable financial markets and regulatory frameworks, enabling firms with higher OC to leverage their accumulated knowledge, processes, and relational assets more effectively in navigating bankruptcy. Furthermore, this beneficial effect persists even under heightened economic policy uncertainty (EPU), underscoring the resilience conferred by robust OC. In volatile market conditions, firms lacking strong intangible resources often struggle to adapt and maintain stakeholder confidence, whereas those with substantial OC remain better positioned to manage disruptions. The Consumer Price Index (CPI) also plays a salient role in this relationship, as inflationary pressures can pose costmanagement challenges; however, firms endowed with stronger OC appear more capable of implementing cost-saving measures in inflationary environments.

The advantages associated with OC persist even during periods of financial constraints and reduced R&D spending, a testament to the capacity of such firms to optimize existing resources. In these scenarios, high-OC firms frequently engage in incremental innovation, preserving competitive advantage without requiring substantial new investments. Governance factors further shape the link between OC and successful reorganization, including the number of employees, leadership transitions (e.g., CEO turnover), and the expertise contributed by female directors. These governance practices reinforce the positive association between OC and firm emergence by fostering accountability, creativity, and strategic cohesion. Finally, the interaction between OC and reorganization outcomes is intricately connected to a firm's strategic orientation, particularly in financial distress and firm-level political risks. Firms adopting proactive and analytical strategies adapt more readily to changing regulatory and market conditions, allowing OC to serve as a buffer against shocks and a conduit for recovery. By integrating OC with these strategic approaches—and remaining cognizant of firm-level political risks—companies can mitigate bankruptcy hazards, ultimately heightening their likelihood of a successful emergence under Chapter 11.

Finally, we demonstrate that the positive relationship between OC and firm emergence is not a mere artifact of firm size, profitability, or other confounding factors that could mechanically drive higher OC and successful reorganizations. One concern, for example, is that well-performing firms might naturally spend more on SG&A activities, leading to higher measured OC, and also be more likely to emerge from bankruptcy for reasons unrelated to intangible assets. By confirming that the association holds robustly under these methods, we provide compelling evidence that OC genuinely enhances a firm's resilience rather than simply reflecting a spurious correlation.

This study contributes to the literature on bankruptcy and organizational capital (OC) in several key respects. First, it advances our understanding of how intangible assets can shape corporate reorganization outcomes. Although prior research has examined various determinants of firm emergence—such as CEO turnover, signaling effects, and macroeconomic factors (Lin et al., 2020; Xia et al., 2016; LoPucki & Doherty, 2015; Antill, 2021)—our findings highlight OC as an essential yet underexplored driver of successful Chapter 11 resolutions. By documenting that higher OC improves a distressed firm's likelihood of emergence, we underscore the strategic importance of accumulated knowledge, processes, and relational assets in mitigating the operational and financial uncertainties that arise during bankruptcy.

Second, our analysis extends the growing literature on OC by positioning it squarely in the context of bankruptcy proceedings. Beyond confirming that high-OC firms are more likely to emerge from Chapter 11, we also find that such firms maintain lower debt-to-equity ratios, suggesting diminished financial distress. These empirical results reinforce those intangible capabilities— spanning human capital investments, process efficiencies, and stakeholder relations—can be harnessed systematically to negotiate favorable credit terms, bolster financial reporting quality (Panta & Panta, 2023), and build consensus among creditors and regulators. The significance of OC remains robust even during critical economic and regulatory intervals, such as the Global Financial Crisis and the period following the Sarbanes-Oxley Act, reflecting the enduring value of intangible resources in volatile environments.

Third, the study provides a holistic view of the reorganization process by incorporating firmlevel governance structures, macroeconomic indicators (including the Consumer Price Index and Economic Policy Uncertainty Index), and financial constraints. This integrated approach illuminates how intangible assets interact with governance practices and economic conditions to influence Chapter 11 outcomes. As a result, our research enriches the broader dialogue on corporate distress by showing that OC stabilizes operations and fosters accountability and strategic focus during tumultuous periods.

#### 2. Literature review and hypothesis development

To understand how intangible assets influence reorganization under Chapter 11, we focus on established theoretical frameworks to clarify why organizational capital (OC) may be pivotal for distressed firms seeking successful emergence from bankruptcy. The resource-based view (RBV) of the firm provides a foundational lens through which to examine the role of intangible resources— particularly organizational capital (OC)—in shaping competitive advantage and performance outcomes, including successful emergence from bankruptcy (Barney, 1991; Wernerfelt, 1984). OC has been conceptualized as a valuable, rare, inimitable, and non-substitutable (VRIN) resource, reflecting accumulated knowledge, processes, and the capacity to adapt and innovate (Lev et al., 2009). Such intangible strengths can be especially critical when firms face financial distress, as they promote resilience and support strategic decision-making in the reorganization process (Gao et al., 2021; Hasan et al., 2021).

Building on the RBV, the dynamic capabilities perspective offers additional insights into how OC facilitates resource reconfiguration in rapidly shifting environments, such as those encountered during Chapter 11 proceedings (Teece et al., 1997; Eisenhardt & Martin, 2000). Firms endowed with robust OC are better positioned to identify and seize opportunities and integrate and transform their operations under significant financial pressure (Lin et al., 2020; Nishi & Peabody, 2019). This adaptability is essential for designing viable reorganization plans that can satisfy the legal and operational demands of Chapter 11, aligning with prior evidence that dynamic capabilities are instrumental in achieving strategic renewal during episodes of corporate distress (Bogan & Sandler, 2012; Daily, 1994).

The firm's knowledge-based view (KBV) further clarifies how intangible assets, including knowledge and expertise, drive value creation (Grant, 1996; Kogut & Zander, 1992). By embedding critical knowledge within routines, processes, and employee competencies, OC enables more effective problem-solving and decision-making—attributes particularly valuable in bankruptcy contexts (Daily, 1994; Gao et al., 2021). OC thus provides the firm with the cognitive and organizational infrastructure needed to address complex legal, operational, and financial challenges that often arise under Chapter 11 protection.

Moreover, stakeholder theory underscores the importance of sustained engagement with creditors, employees, investors, and other relevant parties for a successful reorganization (Freeman, 1984; Mitchell et al., 1997). Firms with stronger OC can better communicate strategic objectives, demonstrate operational progress, and build trust, thereby securing the support needed to implement reorganization measures (Daily, 1994; Nishi & Peabody, 2019). This stakeholder alignment grounded in transparent governance and reliable information flows—helps maintain operational stability, which is crucial throughout the Chapter 11 process.

At the same time, complexity theory reminds us that the relationship between OC and firm emergence is not necessarily linear or straightforward (Anderson, 1999; Schneider & Somers, 2006). The intangible nature of OC can complicate its valuation during bankruptcy proceedings, potentially provoking stakeholder disagreements about its true worth (Belgraver & Verwaal, 2018; Dessein & Prat, 2022). In addition, a sole focus on long-term intangible benefits may detract from immediate financial restructuring imperatives, such as debt renegotiations, cost reductions, or strategic asset sales (Xing & Yan, 2023). Therefore, balancing OC's long-term value-enhancing potential with near-term survival tactics is central to maximizing the benefits of organizational assets during reorganization.

Drawing on the RBV, dynamic capabilities, KBV, stakeholder theory, and complexity theory, this study posits the following:

H1: Organizational capital is positively associated with a firm's successful emergence from Chapter 11 bankruptcy, contingent on effectively managing OC's intangible characteristics and reconciling them with immediate restructuring demands.

#### 3. Data and sample selection

Consistent with prior research on large public firms undergoing Chapter 11 reorganization (Altieri & Nicodano, 2023; Kang et al., 2020; Lin et al., 2020), the initial sample comprises 1,189 firms obtained from the Florida–UCLA–LoPucki Bankruptcy Research Database (BRD), formerly known as the UCLA–LoPucki Bankruptcy Research Database. This repository focuses on firms with annual assets exceeding \$100 million (in constant 1980 dollars) at the time of filing, thus aligning with the scope of high-asset bankruptcies relevant to our analysis. To refine the sample, we exclude 37 repeated filings by the same firm and remove 24 observations with missing data. The resulting dataset, when merged with financial information from Compustat, yields 1,054 Chapter 11 filings. We additionally incorporate Economic Policy Uncertainty (EPU) data from the policy uncertainty database to capture macro-level effects that may influence a firm's reorganization prospects.

Table 1 presents a breakdown of the sample by year and industry classification. Panel A indicates that between 1981 and 2020, 732 firms (69.45% of the sample) successfully emerged from bankruptcy, while 322 did not. This panel also highlights annual trends in organizational capital (OC), reinforcing the central premise of this study that intangible resources can be critical for firm survival under financial distress. Panel B displays the two-digit Standard Industrial Classification (SIC) codes for the sample, revealing that firms in Construction exhibit the highest emergence rate (90%), whereas those in Finance, Insurance, and Real Estate show the lowest rate (33.93%). These distributions suggest that both industry-specific factors and firm-level OC may interact with broader economic conditions, an observation consistent with our theoretical framework on how intangible resources influence Chapter 11 outcomes).

#### [INSERT TABLE 1]

#### 3.1 Measures of organizational capital

We adopt the approach of Peters and Taylor (2017) to measure organizational capital (OC) by capitalizing Selling, General, and Administrative (SG&A) expenses. Because SG&A covers a broad range of non-production expenditures, it reflects key intangible investments that enhance a firm's internal capabilities and brand. Such costs typically include spending on information technology, employee training, brand building, consultancy (systems and strategy), and the development or maintenance of internet-based supply and distribution channels (Lev & Radhakrishnan, 2005). Consistent with previous work (Eisfeldt & Papanikolaou, 2013; Peters & Taylor, 2017), we implement the perpetual inventory method to estimate each firm's OC stock by capitalizing SG&A expenses over time. Formally, the following model is used to compute the annual stock of OC:<sup>1</sup>

$$OC_{i,t} = (1 - \delta_{oc}) OC_{i,t-1} + (SG\&A_{i,t} \ge \lambda_{oc})$$
(1)

We estimate the initial stock of overall OC is as follows:

$$OC_{i,t} = \frac{SG\&A_{i,t}}{g + \delta_{oc}} \tag{2}$$

where  $OC_{i,t}$  represents OC of firm *i* at time *t*, and  $SG\&A_{i,t}$  denotes the SG&A expenses of firm *i* at time *t*. The parameter  $\lambda_{oc}$  is the percentage of SG&A expenditure invested in OC ( $\lambda_{oc} = 30\%$ ), and  $\delta_{oc}$  is the depreciation rate of OC stock, which is set at 20% following Peters & Taylor (2017). The average growth rate of firm-level SG&A expenses is denoted by *g*. We scale OC by total assets (*OC/TA*), property, plant and equipment (*OC/PPE*), and depreciation (*OC/DP*).

#### 3.2 Measure of firms' emergence

Following LoPucki and Doherty (2015), we define a firm's successful emergence from bankruptcy as continuing in its primary operational interests indefinitely after the case's resolution. This conceptualization is consistent with prior research on post-bankruptcy outcomes (Gupta & Krishnamurti, 2018; Lin et al., 2020; LoPucki, 2012). In operational terms, we create and indicator equal to one for firms that successfully emerge and 0 to firms that do not. As a complementary

<sup>&</sup>lt;sup>1</sup> Gao et al (2021) and Eisfeldt and Papanikolaou (2013), use =  $\delta_{oc}$  15%; Hasan et.al (2021) use  $\delta_{oc}$  = 30% and 20%

measure, we adopt the debt-to-equity (D/E) ratio, in line with Brooks and Yang (2012). Since Chapter 11 reorganization relies on the valuation and adjustment of both debt and equity (Broadie et al., 2007), the D/E ratio serves as an additional indicator of the extent to which a firm can realign its capital structure toward successful emergence.

#### 3.3 Empirical model

We estimate the following logistics regression model to test the relationship between organizational capital and the likelihood of firms' emergence (H1):

$$Pr (EMERGE)_{i,t}$$

$$= \beta_0 + \beta_1 OC / TA_{i,t} + \beta_2 PREPACK_{i,t} + \beta_3 SALEINTENDED_{i,t}$$

$$+ \beta_4 MANUFACTURING_{i,t} + \beta_5 INVOLUNTARY_{i,t}$$

$$+ \beta_6 PRIME1YEARBEF_{i,t} + \beta_7 PRIME2YEARBEF_{i,t}$$

$$+ \beta_8 SALES\_SCALED_{i,t} + \beta_9 LEVERAGE_{i,t} + \beta_{10} COMSIZE_{i,t}$$

$$+ \beta_{11} COMMCREDINDICATOR_{i,t} + \beta_{12} DIPLOANINDICATOR_{i,t}$$

$$+ \beta_{13} EBITPOSITVE_{i,t} + \sum Year fixed effects_{i,t}$$

$$+ \sum Industry fixed effects + \varepsilon_{i,t}$$
(3)

Where *EMERGE* is the dependent variable, which is discussed in Section 3.2, OC/*TA* is the organizational capital discussed in Section 3.1. All variables are defined in Appendix B.

We incorporate several control variables identified in previous research as influential for predicting whether a firm will emerge from bankruptcy (Gupta & Krishnamurti, 2018; Lin et al., 2020; LoPucki, 2012). The PREPACK indicator captures the presence of a formal reorganization plan, which requires a written disclosure statement under 11 U.S.C. §§ 1121 and 1125 and often entails substantial costs (Berk et al., 2010). SALESINTENDED reflects a firm's intent to liquidate its business or assets, typically signaling a lower probability of a successful emergence (LoPucki & Doherty, 2015). We also include MANUFACTURING, given the complexity of operations in this sector, which tends to involve multiple ongoing projects with potential effects on reorganization outcomes (LoPucki & Doherty, 2015; Schwartz, 2005). INVOLUNTARY bankruptcy filings—

commonly initiated by creditors—indicate a heightened liquidation risk due to insufficient strategic planning (Kang et al., 2020). The variables PRIME1YEARBEFFILE and PRIME2YEARBEFFILE capture prevailing prime interest rates one and two years, respectively, before the filing since elevated rates can escalate borrowing costs and exacerbate repayment challenges (Jaggia & Thosar, 2019). We include SALES\_SCALED to account for firm performance and revenue-generating capacity (Kalay et al., 2007) and LEVERAGE to address the possibility that highly leveraged firms may still reorganize effectively if their assets exceed total liabilities (Denis & Rodgers, 2007).

Further, SIZE reflects the notion that larger firms with more substantial asset bases are typically better positioned to manage debts (Zikri et al., 2024; Ivashina et al., 2016; Kurshev & Strebulaev, 2015). The presence of a creditors' committee (COMMCREDINDICATOR) can also shape reorganization negotiations, as this committee may propose converting a Chapter 11 case into Chapter 7 if it perceives insufficient prospects for rehabilitation (LoPucki & Doherty, 2015). Additionally, DIPLOANINDICATOR indicates whether the firm has secured debtor-in-possession financing, which can help maintain operations during bankruptcy (Dahiya et al., 2003). Finally, we incorporate EBITPOSITIVE, recognizing that firms reporting positive earnings before interest and taxes generally have a more substantial capacity to cover expenses and debt obligations, thereby improving their likelihood of successful emergence (Jaggia & Thosar, 2019). All regressions, based on two-digit SIC codes, include year and industry-fixed effects to control for macroeconomic fluctuations and sector-specific variations.

#### 4. Main results

#### 4.1 Descriptive statistics

Table 2 reports the descriptive statistics for all variables employed in our analysis. Panel A focuses on the entire sample of Chapter 11 filings, indicating that 69.5% of these firms successfully emerge from bankruptcy—a proportion comparable to the 66.7% rate documented by Lin et al. (2020). The average ratio of organizational capital to total assets (OC/TA) stands at 15.1%, consistent with the findings of Marwick et al. (2020). Regarding bankruptcy characteristics, 12.3% of filings are

prepackaged, while 17% declare no intent to sell their assets; only 29.6% of the sample consists of manufacturing firms, and 4% are involuntary filings. The prime interest rate averages 6.74% one year before filing and 7.12% two years before filing, highlighting a slight increase over time.

The mean scaled sales (SALES\_SCALED) is 0.99, signifying moderate revenue-generating capacity relative to total assets, whereas the average leverage ratio (LEVERAGE) is 1.01, suggesting relatively high financial distress. Firm size (SIZE) has a mean of 7.33, implying that the typical firm in the sample possesses substantial resources to potentially finance a reorganization. Moreover, 80.3% of these firms have an assigned creditors' committee (COMMCREDINDICATOR), 54.9% secure debtor-in-possession (DIP) financing (DIPLOANINDICATOR), and 49% report positive EBIT (EBITPOSITIVE). Collectively, these statistics underscore the diverse range of bankruptcy conditions within our sample, as well as the varying degrees to which firms may capitalize on intangible resources and external financing to facilitate emergence.

#### [INSERT TABLE 2]

Table 2, Panel B provides the mean and median test of variables used in the regression analysis based on high and low organizational capital. We compute high and low organizational capital based on the ample median. Specifically, we compute HIGH\_OC as an indicator variable that takes a value of 1 if a firm's organizational capital is higher than the sample median and zero otherwise. The results suggest that firms with higher organizational capital have higher emergence (EMERGE), prepackaged (PREPACK), operate in a manufacturing division (*MANUFACTURING*), higher DIP loan (*DIPLOANINDICATOR*), and positive EBIT (*EBITPOSITIVE*). On the other hand, higher organizational capital firms have lower intentions to sell or liquidate assets by the debtor at the time of filing and a lower probability that creditors file the case. The median tests produce similar results.

#### 4.2 Correlation analysis

Table 4 reports the Pearson correlation between our main variables. The correlation between OC/TA and EMERGE is positively significant, suggesting that firms with high OC/TA are more likely to

emerge during bankruptcy Chapter 11 proceedings. This is consistent with earlier findings that such firms, which embed OC/TA into their innovation and management strategies, are more likely to emerge successfully after bankruptcy (Evans & Green, 2000; James, 2016)Empirical examples include firms like Toys R Us, Hertz, and American Airlines, which have emerged after filing for bankruptcy. We also independently examined the variance inflation factor (VIF) values to test for multicollinearity, revealing no potential issues. The mean VIF value is 1.52, and all variables had VIF values less than 10.

#### [INSERT TABLE 3]

#### 4.3 Baseline results

Table 4 presents the baseline regression results examining the relationship between organizational capital (OC) and firm emergence. Panel A uses the emergence indicator as the dependent variable, whereas Panel B relies on the debt-to-equity (D/E) ratio as an alternative proxy for successful reorganization. Model (1) in Panel A shows that the coefficient for OC-to-total assets (OC/TA) is positive and statistically significant, suggesting that a one-percentage-point increase in OC/TA enhances the likelihood of a firm emerging from bankruptcy by approximately 2.35 times. Models (2) and (3) split the sample into high- and low-OC firms, reinforcing the primary finding; notably, Model (2) indicates that for high-OC firms, a similar one-percentage-point increase in OC/TA raises the emergence probability by about 2.56 times. These findings align with our hypothesis (H1) and corroborate previous research demonstrating that intangible assets can stabilize operations and bolster reorganization prospects (Gupta & Krishnamurti, 2018; James, 2016; Li & Wang, 2016).

From a theoretical perspective, this evidence supports the resource-based view (RBV), which posits that a firm's valuable, rare, inimitable, and non-substitutable (VRIN) resources—such as accumulated knowledge and relational assets—contribute to performance differentials (Barney, 1991; Wernerfelt, 1984). It also resonates with the dynamic capabilities perspective (Teece et al., 1997; Eisenhardt & Martin, 2000), whereby firms leveraging stronger intangible resources can adapt more effectively to financial distress by realigning processes, communicating value to stakeholders,

and implementing strategic decisions quickly. Moreover, the knowledge-based view (Grant, 1996; Kogut & Zander, 1992) further helps explain how organizational knowledge embedded within OC facilitates better decision-making and enhances stakeholder confidence, thereby improving the chances of successful emergence under Chapter 11.

Panel B reports regression results using the D/E ratio as a proxy for financial health during bankruptcy, given that higher liabilities relative to equity may impede a firm's capacity to reorganize. Model (1) again considers the full sample, while Models (2) and (3) differentiate between high- and low-OC firms. In both the full sample and the high-OC subsample, the estimated coefficient for OC is negative and statistically significant, indicating that firms with higher OC generally maintain lower levels of leverage. This finding is consistent with the results from Panel A, suggesting that intangible resources not only facilitate operational stability but also contribute to healthier capital structures conducive to successful emergence.

Overall, these results underscore the importance of OC as a strategic asset in the bankruptcy context, aligning with stakeholder theory (Freeman, 1984; Mitchell et al., 1997) by illustrating how effective communication, resource coordination, and trust-building are central to reorganization success. At the same time, they are mindful of complexity theory (Anderson, 1999; Schneider & Somers, 2006), acknowledging that while high OC provides considerable advantages, its intangible nature can entail valuation uncertainties. Nonetheless, the empirical evidence across both measures of emergence supports the notion that firms with robust OC are better positioned to navigate Chapter 11 requirements and ultimately achieve a successful reorganization.

#### [INSERT TABLE 4]

#### 4.4 Endogeneity test

A potential concern in our regression models is the endogenous relationship between organizational capital and firm emergence. Specifically, higher OC might directly affect a firm's probability of successful reorganization, but it could also be that firms already poised to emerge invest more in

intangible resources. This dual possibility raises issues of observable heterogeneity and reverse causality. To address these concerns, we employ two primary methods. First, we conduct an entropy balancing analysis, which reweights observations to ensure that the distribution of observable characteristics is comparable between firms with high and low OC. This procedure helps mitigate selection bias by making the treated and control groups more similar on key covariates. Second, we implement an instrumental variable (IV) analysis, which exploits exogenous variation in OC to disentangle its causal impact on emergence. By using a valid instrument that is correlated with OC but not directly with the likelihood of firm emergence, the IV approach alleviates the risk that our results merely reflect reverse causality. Together, these methods bolster the robustness of our findings, indicating that the positive association between OC and Chapter 11 emergence is not simply an artifact of unobserved confounding factors.

#### 4.4.1. Entropy balancing

Our findings could be subject to observable heterogeneity bias and functional misspecification bias, both of which may introduce endogeneity. To mitigate this concern, we employ the entropy balancing technique proposed by Hainmueller (2012). By reweighting the control group across the covariates used in our baseline model, entropy balancing ensures that high and low OC observations achieve comparable distributions in terms of mean, variance, and skewness, as shown in Table 5 Panel A. This approach has been widely utilized to distinguish treatment from control firms more rigorously, and we apply it here to refine our baseline estimates. Iin Table 5, Panel B, after implementing entropy balancing, the estimated coefficient for OC remains positive and statistically significant, echoing our original baseline results. This outcome indicates that the observed relationship between OC and firm emergence persists even after accounting for potential sample selection bias.

#### [INSERT TABLE 5]

#### 4.4.2. Instrumental Variables Analysis

Beyond observable heterogeneity, our findings may be affected by reverse causality, wherein firms experiencing poor performance or an increased risk of failure invest more heavily in organizational capital (OC) to signal resilience to creditors, investors, and potential collaborators. Such a strategic response, aimed at improving the firm's attractiveness for financial support, could inflate the observed association between OC and emergence. To address this endogeneity concern, we employ an instrumental variable (IV) approach that identifies exogenous sources of variation in OC. Following prior studies (Carlin et al., 2012; Hasan et al., 2021; Hasan & Cheung, 2018; Li et al., 2018), we use two instruments: state-level unemployment insurance (UI) benefits and industry-level organizational capital (PEER\_OC). The rationale for including UI benefits is that enhanced financial security (e.g., higher maximum weekly benefits) may encourage firms in relevant industries to make more extensive OC investments, as retaining skilled employees becomes comparatively easier (Devos & Rahman, 2018; Hasan et al., 2021; Matsa, 2018; Shapiro & Stiglitz, 1984). We capture UI benefits by taking the natural logarithm of the capped weekly benefit amount (WBA) over 26 weeks and merge these data with each firm's state-year observations (Hasan et al., 2021). Meanwhile, PEER\_OC reflects the average OC of other firms in the same industry, measuring peer effects that may shape a given firm's intangible capital investment.

Table 6 shows the results of the IV analysis using two stages. In the first stage (Model 1), both UI and PEER\_OC are positive and significant determinants of OC/TA. In the second stage (Model 2), we replace the original OC/TA with the fitted values (OC/TA\_FITTED) derived from the first stage. The coefficient for OC/TA\_FITTED remains positive and significant, affirming our baseline conclusion that higher OC fosters a higher likelihood of successful emergence from Chapter 11. The Wald test of exogeneity produces a p-value of 0.00, confirming the endogeneity of OC/TA and validating the necessity of our IV strategy.

To further corroborate our findings, we implement the novel two-stage least squares (2SLS) technique proposed by Lewbel (2012), which generates internal instruments based on higher-order moments of the data. This method is especially pertinent when external instruments may be weak or

unavailable (Schlueter et al., 2015; Hasan et al., 2021). Model (4) in Table 6 presents the Lewbel 2SLS regression results, where the instrumented OC/TA again exhibits a positive and significant coefficient. Diagnostic tests indicate that these newly generated instruments do not suffer from weak identification, under-identification, or over-identification biases. Collectively, these IV analyses confirm that the observed relationship between OC and successful emergence is not merely a product of reverse causality, thereby reinforcing the robustness of our central findings.

#### [INSERT TABLE 6]

#### 4.5 Alternative measurement of organizational capital

We consider several alternative proxies to examine the robustness of our organizational capital measures. Table 7, Panel A reports the regression results. Model (1) reports organizational capital measures following Eisfeldt & Papanikolaou (2013). Model (2) reports organizational capital measures following Ewens et al. (2020), while Model (3) OC/TA is scaled by depreciation (OC/DP), and Model 4 OC/TA is scaled by Property, Plant, and Equipment (OC/PPE). These results are significant and positive, consistent with our baseline in Table 5 Panel A. While Panel B reports alternative measures of OC on alternative measures of firms' emergence. Models (1) and (2) are not significant, while Models (3) OC/DP and (4) OC/PPE are negative and significant. These results are consistent with our baseline Table 5 Panel B.

#### [INSERT TABLE 7]

#### 4.6 Cross-sectional analysis

#### 4.6.1 The Role of GFC and Sarbanes-Oxley Act 2002

Prior research indicates that the Global Financial Crisis (GFC) precipitated a significant rise in bankruptcy filings, exacerbating pressures on firms' financial resources (Chen et al., 2018; Zhou et al., 2011). In recognition of these heightened constraints, we investigate whether the association between organizational capital (OC) and firm emergence differs before and after the GFC. Specifically, we split the sample into two periods—pre-GFC (year < 2007) and post-GFC (year  $\geq$ 

2007)—and re-estimate Equation (1). The results, shown in Panel A of Table 8, reveal a positive and statistically significant coefficient on OC/TA in both intervals; however, the coefficient is larger in the pre-GFC period, and the difference between the two coefficients is itself statistically significant. This pattern suggests that the beneficial impact of OC on reorganization success was more pronounced during relatively stable economic conditions prior to the GFC.

In addition, we examine the influence of the Sarbanes–Oxley Act of 2002 (SOX), which introduced stricter corporate governance and financial reporting requirements in response to high-profile accounting scandals (Sharma, 2011). We again split the sample into pre-SOX (year < 2002) and post-SOX (year  $\geq$  2002) periods and re-run our baseline analysis, reporting results in Panel B of Table 8. Although OC/TA remains a statistically significant predictor of firm emergence in both periods, its coefficient is larger before SOX's enactment. Moreover, the difference between the two coefficients is statistically significant. This finding indicates that while OC continues to bolster firms' likelihood of reorganizing successfully in the post-SOX governance structures, which may have been less constrained, allowing firms to make bolder strategic decisions to reassure investors (Bhagat & Bolton, 2013; Dey, 2010). Overall, these results underscore how broader institutional factors—ranging from economic crises to enhanced regulatory oversight—can shape the extent to which OC supports reorganization efforts.

#### [INSERT TABLE 8]

#### 4.6.2 The Role of the Economic Environment

Existing research highlights the crucial role of macroeconomic conditions in bankruptcy outcomes (Agarwal et al., 2011; Harada & Kageyama, 2011). Additionally, Chen et al. (2018) and Zhou et al. (2011) document that the Global Financial Crisis (GFC) significantly increased bankruptcy filings, exacerbating financial pressures on resource-constrained firms. Building on these insights, we examine whether organizational capital (OC) continues to positively influence the likelihood of

emergence under varying levels of Economic Policy Uncertainty (EPU) and inflation, as measured by the Consumer Price Index (CPI).

Table 9, Panel A presents regression results for high- versus low-EPU environments, where EPU is operationalized using the index from Baker et al. (2016). The estimates show that OC/TA maintains a positive and statistically significant association with firm emergence in both subsamples. These findings align with Matousek et al. (2020) and Jory et al. (2020), who argue that high EPU may reduce trade credit availability and increase future capital shortages, making intangible resources especially valuable. Furthermore, Dey (2010), Martínez-Sola et al. (2013), and Feng et al. (2023) suggest that organizational capabilities allow firms to adjust strategic planning processes and remain resilient amid policy shifts. In line with Hillmann and Guenther (2021), the ability of high-OC firms to pivot in response to regulatory uncertainty underscores the dynamic capabilities perspective, which posits that VRIN (valuable, rare, inimitable, non-substitutable) resources enable more effective adaptation in volatile contexts (Barney, 1991; Teece et al., 1997).

Turning to Table 9, Panel B, we split the sample by high versus low CPI, capturing inflationary pressures that may lower consumer purchasing power (Jaravel & O'Connell, 2020; Kaplan & Schulhofer-Wohl, 2017). Even under these conditions, OC/TA remains positively linked to firm emergence in both high- and low-CPI environments. Notably, the effect appears more pronounced when CPI is low, potentially reflecting the advantages of lower borrowing costs and more robust consumer demand (Schwert, 2020). These results are consistent with Bloom et al. (2014), who argue that firms adept at deploying technological efficiencies and internal innovations can navigate shifts in cost structures and market demand more successfully. Consequently, our findings affirm that high-OC firms leverage their intangible strengths to mitigate adverse macroeconomic pressures and exploit favorable environments, reinforcing the notion that OC serves as a key determinant of resilience and successful reorganization under Chapter 11.

#### [INSERT TABLE 9]

### 4.6.3 The role of financial constraints and R&D

Understanding how financial constraints and Research & Development (R&D) spending shape the influence of organizational capital (OC) on firm emergence is critical in the context of Chapter 11 bankruptcy. When entering bankruptcy proceedings, firms often rely on debtor-in-possession (DIP) loans to continue operations, thereby improving their prospects for emergence. Indeed, evidence indicates that firms facing lower financial constraints exhibit greater financial stability (Ahamed et al., 2023), while those under more severe constraints resort to strategic asset sales or other liquidity measures (Almeida & Campello, 2007).

We capture financial constraints using the KZ index (Chan et al., 2017), where a high score signals increased reliance on external financing and heightened liquidity risk. Table 10, Panel A, presents results for firms with high versus low KZ indices. Model (1) demonstrates that even for firms facing elevated constraints, OC maintains its positive association with emergence—an outcome partly attributed to mechanisms like DIP financing that alleviate liquidation pressures and enhance procedural efficiency (Elayan & Meyer, 2001). These findings suggest that organizational capital serves as an asset, enabling constrained firms to reconfigure resources more effectively and secure the necessary financing to navigate bankruptcy.

By contrast, R&D investment typically reflects a firm's commitment to innovation and longterm competitiveness. During severe financial distress, however, R&D can be viewed as a nonessential expenditure; thus, firms often reduce R&D intensity to stabilize core operations (Hud & Hussinger, 2015). Table 10, Panel B, compares firms with high and low R&D spending, showing that lower R&D firms (Model 2) exhibit higher emergence rates. This pattern aligns with prior work indicating that distressed firms adopt defensive measures—such as slashing discretionary spending to ensure immediate survival (Rico et al., 2021; Schweizer & Nienhaus, 2017). Indeed, costcontainment strategies that include reduced R&D allow firms to manage bankruptcy-related expenses more efficiently (Jindal, 2020).

By integrating the KZ index and R&D expenditures into our analysis, we gain further insight into how distressed firms calibrate resource allocations under varying degrees of liquidity risk and strategic investment priorities. High KZ index values highlight the role of external funding mechanisms, such as DIP loans, while R&D spending (or its reduction) underscores the firm's immediate versus long-term focus. Taken together, these considerations underscore OC's capacity to facilitate timely and effective reorganization decisions, ultimately boosting a distressed firm's likelihood of emergence from Chapter 11.

#### [INSERT TABLE 10]

#### 4.6.4 The role of governance

In addition to financial and macroeconomic factors, governance attributes may substantially influence a firm's capacity to capitalize on organizational capital (OC) and emerge successfully from bankruptcy. Prior literature indicates that robust governance practices, along with well-defined strategic roles, can bolster firm performance and operational efficiency, particularly in financial distress. For instance, Chen et al. (2021) show that human capital and higher ex-ante employment mobility favor firm outcomes, while Cao and Rees (2020) and Garicano et al. (2016) note that larger workforces can enhance efficiency and productivity through diverse skills.

Moreover, leadership changes and board composition can exert a pronounced effect on reorganization outcomes. Lin et al. (2020) demonstrate that CEO replacement increases the probability of emergence from Chapter 11, whereas Bonsall et al. (2017) report that CEOs with superior ability enhance firm performance. Additionally, Cvijanović et al. (2023) emphasize that CEO turnover and succession planning influence a range of performance sensitivities. In terms of board diversity, Sila et al. (2016) find that female directors are associated with superior firm accomplishments, and Papangkorn et al. (2019) identify links between female board membership and lower agency costs, stronger resource availability, and better corporate performance. These insights build on Bapna et al. (2013), who argue that targeted training and investment in human capital can further elevate employee quality and boost overall productivity. Recognizing these findings, we extend our analysis by incorporating firm characteristics and governance measures, namely employee count, CEO replacement, female directorships, and a qualification index that captures workforce

expertise. Table 11 summarizes how these governance and human capital dimensions interact with OC to affect firms' emergence from Chapter 11.

In Table 11, Panel A, we split the sample into high- and low-employee groups, with Model 1 focusing on firms that retain a greater workforce and Model 2 capturing those with fewer employees. Although distressed firms often reduce headcount to control costs, the results suggest that higher-employee firms maintain a marginally stronger likelihood of emergence. These findings are broadly consistent with our baseline analysis and indicate that even under cost pressures, a larger workforce can offer the diverse skills and operational breadth needed to leverage OC in the recovery process.

In Panel B, we compare firms that replaced their CEOs (Model 1) against those that did not (Model 2); the results reveal that CEO turnover exerts a positive and significant effect on the likelihood of emergence. This supports the assertion by Lin et al. (2020) that leadership changes may introduce fresh managerial capabilities and strategic renewal, thereby facilitating more decisive action during bankruptcy proceedings (Bonsall et al., 2017; Cvijanović et al., 2023). In Panel C, we then examine how the presence of female directors affects the emergence from bankruptcy. Model 1 documents a positive and statistically significant relationship between female board membership and higher emergence rates, suggesting that diverse governance teams may be better positioned to reduce indebtedness, navigate financial restructuring, and enhance firm value (López-Delgado & Diéguez-Soto, 2020; Lucas et al., 2021). In line with Shams et al. (2023), female directors often possess extensive professional networks, engage more diligently with ethical and legal risk management, and display heightened risk aversion (Faccio et al., 2006), collectively reinforcing more prudent oversight during reorganization.

Finally, we differentiate firms in Panel D based on a qualification index that captures workforce education and expertise. Model 1 (high qualification) reports a stronger effect of OC on emergence compared to Model 2 (low qualification). This result is consistent with Ghannam et al. (2019), suggesting that skilled workforces can leverage intangible resources more effectively in stabilizing operations, meeting Chapter 11 requirements, and restoring creditor confidence.

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These analyses underscore the pivotal role of governance and firm-level characteristics, spanning employee size, leadership, board composition, and workforce quality, in realizing the benefits of organizational capital during bankruptcy. By integrating these governance dimensions into our models, we provide more nuanced evidence that the presence of a robust internal structure amplifies OC's positive impact, further enhancing a distressed firm's probability of successful emergence.

#### [INSERT TABLE 11]

#### 4.6.5 The Role of Strategy Orientations and Firm-level Political Risk

A considerable body of research indicates that strategy orientations play a pivotal role in shaping firm performance (Slater et al., 2006) and that embedding these orientations into monitoring structures can enhance overall governance quality (Cheung et al., 2017). Within bankruptcy contexts, particularly high-risk political environments, firms with a primarily defensive (cost-efficiency) orientation may struggle to emerge. By contrast, adopting a proactive, analytical stance can signal resilience to creditors, thus increasing the firm's likelihood of Chapter 11 emergence.

Table 12, Panel A compares defender (Model 1) and non-defender (Model 2) strategy orientations. Defender firms prioritize maintaining a stable market position through cost efficiency and risk minimization (Bentley-Goode et al., 2019). Consistent with Díaz-Fernández et al. (2014) and Yuan et al. (2020), our findings reveal that non-defender firms exhibit a higher emergence probability, suggesting that while cost-focused strategies can stabilize operations, they may suppress innovation and profitability under distressed conditions (Chen & Keung, 2019).

Table 12, Panel B shifts the lens to analyzer strategies, contrasting analyzer (Model 1) and nonanalyzer (Model 2) firms. Analyzer orientations balance stability with exploration and innovation (Aragón-sánchez & Sánchez-marín, 2005; Tang & Tang, 2012). Results show that analyzer firms enjoy a greater propensity to emerge successfully, pointing to the value of flexible strategic behavior that can accommodate both core operational continuity and novel initiatives—an especially salient feature during bankruptcy proceedings. Finally, Table 12, Panel C investigates the moderating role of firm-level political risk, using highrisk (Model 1) and low-risk (Model 2) classifications. Elevated political risk can exacerbate earnings opaqueness, reduce transparency, and complicate the process of creditor approval for reorganization plans (Huang et al., 2023; Hoang et al., 2023). Our results indicate that firms operating in lower-risk political environments face fewer governmental or regulatory impediments (Chen et al., 2017) and, therefore, benefit from more straightforward negotiation processes, ultimately enhancing their likelihood of emergence.

These analyses underscore that firms employing non-defensive, analytically oriented strategies are better positioned to leverage organizational capital in distressed contexts. Moreover, lower political risk environments magnify this strategic advantage, facilitating more transparent stakeholder engagement and reinforcing the firm's capacity to formulate and implement viable reorganization plans.

#### [INSERT TABLE 12]

#### 4.6.6 The role of firm size and free cash flow

Prior research has established that firm size, free cash flow, and strategic orientation can critically affect a firm's overall performance (Brush et al., 2000; Farooq et al., 2021; Lau, 2011). In the context of Chapter 11, these factors may also determine how effectively a firm capitalizes on its organizational capital (OC) to facilitate emergence. Larger firms often benefit from more abundant resources, diverse business operations, and stronger access to external funding, which can insulate them from adverse economic shocks (Enikolopov et al., 2014). Conversely, smaller firms, while more vulnerable to liquidity pressures, can implement operational adjustments more nimbly and respond rapidly to crises (Daskalakis et al., 2017).

Table 13, Panel A explores the impact of firm size on bankruptcy emergence, contrasting highmarket-capitalization (Model 1) and low-market-capitalization (Model 2) firms. Contrary to the common assumption that larger entities are more resilient in bankruptcy, the findings indicate that smaller firms—despite potential liquidity limitations—may be more likely to emerge (Brunnermeier & Krishnamurthy, 2020). This result is consistent with Darrat et al. (2016), who suggest that operational flexibility and quicker strategic pivots can confer advantages to smaller organizations during distress. Such outcomes underscore the nuanced role of firm size: although ample resources can cushion downturns, large-scale operations may also slow the implementation of turnaround strategies.

Table 13, Panel B focuses on free cash flow, comparing firms with high (Model 1) versus low (Model 2) levels of internal liquidity. The results show positive effects of free cash flow on the likelihood of emergence, reinforcing the idea that ample cash availability enables firms to seize strategic opportunities, mitigate immediate financial pressures, and fund essential reorganization activities (Carpenter & Guariglia, 2008; Biddle et al., 2022). Nevertheless, some studies continue to note mixed effects of earnings management on bankruptcy outcomes (Fisher et al., 2019), highlighting that while free cash flow can promote smoother reorganization, its effectiveness may also depend on broader managerial and reporting practices.

Finally, beyond size and liquidity, Kozachenko et al. (2021) emphasize the role of strategic orientation in driving firm performance across varying economic climates. Firms employing a defender strategy typically prioritize cost efficiency, while analyzers balance stability with innovation (Irresberger et al., 2015). In times of severe distress, defender strategies may help reduce operational risks but can limit adaptability. By contrast, analyzers leverage both efficiency and creative problem-solving, which can be especially beneficial for distressed firms seeking to capitalize on OC's capacity to innovate and restructure effectively. Overall, the findings in Table 13 confirm that smaller size, higher free cash flow, and an appropriately balanced strategic orientation can strengthen the link between OC and firm emergence under Chapter 11. These results enrich our understanding of how firm-specific characteristics interact with intangible resources, illustrating that even when facing liquidity constraints, certain organizational traits—bolstered by OC—can significantly enhance recovery prospects.

#### [INSERT TABLE 13]

#### 5. Conclusion

This study investigates the role of organizational capital (OC) in facilitating firm emergence from Chapter 11 bankruptcy within a comprehensive sample of U.S. firms spanning 1981–2020. Our empirical findings consistently demonstrate that high-OC firms exhibit a greater probability of successful reorganization, as well as lower debt-to-equity ratios—two indicators that underscore the stabilizing and value-enhancing capacities of OC during bankruptcy proceedings. These results are robust to a variety of methodological checks, including entropy balancing to address observable selection bias and instrumental variable analyses to mitigate reverse causality, and hold under alternative proxies for OC.

Beyond this baseline association, our investigation extends to various economic and regulatory contexts. We observe a more pronounced effect of OC prior to the Global Financial Crisis and the enactment of the Sarbanes–Oxley Act of 2002, suggesting that macro-level shocks and heightened regulatory scrutiny can mediate the effectiveness of intangible assets in facilitating emergence. The beneficial impact of OC also proves more salient for firms facing elevated financial constraints, implying that intangible capabilities may complement or substitute for scarce capital resources during distress. Notably, our findings indicate that firms curtailing R&D investments often exhibit a higher likelihood of emergence, suggesting strategic reprioritization when resources are limited. Additionally, better governance—reflected in managerial changes, board composition, and broader oversight mechanisms—further reinforces the positive influence of OC on reorganization outcomes.

In linking these empirical insights to established theoretical frameworks, we affirm the resource-based view (RBV) (Barney, 1991; Wernerfelt, 1984), dynamic capabilities perspective (Teece et al., 1997; Eisenhardt & Martin, 2000), and knowledge-based view (Grant, 1996; Kogut & Zander, 1992). Firms endowed with valuable, rare, inimitable, and non-substitutable resources—such as OC—demonstrate an enhanced ability to reconfigure assets and processes, navigate regulatory complexities, and maintain stakeholder confidence amidst financial distress. Our findings also offer

insights pertinent to stakeholder theory (Freeman, 1984; Mitchell et al., 1997) and complexity theory (Anderson, 1999; Schneider & Somers, 2006), illustrating how intangible resources help reconcile diverse stakeholder interests and mitigate systemic uncertainties.

By basing OC's strategic significance in bankruptcy contexts, this study enriches existing literature on CEO turnover, corporate social responsibility, earnings management, and strategic bankruptcy decisions. Our results underscore the critical importance of intangible assets, advocating that managers, creditors, policymakers, and courts explicitly account for OC when assessing both the viability of reorganization plans and the broader health of distressed enterprises. In doing so, we provide a novel perspective on how intangible assets contribute to successful recoveries under Chapter 11, offering both theoretical and practical guidance for navigating the complexities inherent in corporate reorganization.

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Figure 1. Bankruptcy Cases Chapter 11 Period 2008-2021

Source: US Courts - Bankruptcy Statistics Data Visualizations

Variable (s)	Explanation
Panel A: Dependent variabl	e
EMERGE	An indicator variable equals one if the firm emerges from Chapter 11 filings and zero if the firm does not. Following LoPucki and Doherty (2015), a firm is considered to have emerged from bankruptcy if it has continued operating in business indefinitely following the conclusion of its bankruptcy case.
Panel B: Variable of interes	st
OC/TA	Organizational capital scaled by total assets following Peter & Taylor (2017).
Panel C: Control Variables	
PREPACK	A case is considered prepackaged if the debtor created the plan, put it to a vote, and acquired acceptances for consensual confirmation before filing the case. The indicator variable equals one if the case is prepackaged and zero otherwise.
SALEINTENDED	The debtor intends to sell or liquidate assets at the time of filing. The indicator variable equals one if the debtor intends to sell its business as indicated in its 8-K or press release and zero otherwise.
MANUFACTURING	An indicator variable equals one if the debtor stated its Standard Industrial Classification (SIC) code as Division D (Manufacturing) and zero otherwise.
INVOLUNTARY	An indicator variable equals one if creditors and zero otherwise filed the case.
PRIMEIYEARBEFFILE	The prime rate of interest one year before the bankruptcy filing.
PRIME2YEARBEFFILE	The prime rate of interest two years before the bankruptcy filing.
SALES_SCALED	The amount of sales (in millions of dollars), scaled by total assets retrieved from the last 10-K filed prior to the Chapter 11 filing.
LEVERAGE	Calculated from the last 10-K filed before the Chapter 11 filing, it consists of CPI-indexed calculated total liabilities scaled by adjusted total assets that were retrieved from the last 10-K filed prior to the Chapter 11 filing.
COMSIZE	The natural logarithm of CPI index-adjusted total assets retrieved from the last 10-K filed before the Chapter 11 filing.
COMMCREDINDICATOR	An indicator variable equals one if the approved committee is assigned to represent the unsecured creditors prior to the case disposition and zero otherwise.
DIPLOANINDICATOR	An indicator variable equals one if the debtor has received at least one DIP loan and zero otherwise.
EBITPOSITIVE	An indicator variable equals one if earnings before interest and taxes are positive and zero otherwise.
Panel D: Other Variables	

### **Appendix B: Definitions of variables**

Panel D: Other Variables	
UI	State-level unemployment insurance benefits, calculated from maximum duration allowed and weekly benefit. We obtained this data from the U.S States Department of Labor.
PEER_OC	Organizational Capital (OC) from industry-year level median.
GFC	The Global Financial Crisis period in 2007. We classify before the crisis period from 1981-2006 (< 2007) and after the crisis 2007-2019 ( $\geq$ 2007).
SOX	The period of the Sarbanes-Oxley (SOX) Act of 2002. We classify before the SOX period from 1981-2002 (< 2002) and after SOX ( $\geq$ 2002).

EPU	Economic Policy Uncertainty Index. This is an index of search results from major newspapers' news coverage.
CPI	Consumer Pricing Index.
KZ	The Kaplan-Zingales Index measures financial constraints, as described in Lamont et al. (2001). KZ Index = $-1.002 \times \text{Cash Flow} / \text{K} + 0.283 \times \text{Tobin's Q} + 3.139 \times \text{Debt} / \text{Total Capital} + (-39.368) \times \text{Dividends} / \text{K} + (-1.315) \times \text{Cash} / \text{K}$
R&D	The ratio of research and development expense scaled by total assets.
NEMPLOYEE	The number of employees by the debtor as of the last 10-K before filing.
CEOREPLACED	The variable equals one if the CEO is replaced and zero otherwise.
FEMALEDIRECTOR	The number of female independent directors on a board.
QUAL_INDEX	Qualification index of directors. This is an index of the sum of the following indicator variables: (i) legal/consulting experience, (ii) academic experience, (iii) accounting/finance experience, (iv) management experience, (v) political experience, (vi) military experience, (vii) education—undergraduate, (viii) education—graduate and (ix) education—MBA. We obtain these variables from the BoardEx database.
DEFENDER	The variable equals one if the strategy is defender and zero otherwise. We calculate the business strategy scores following (Bentley et al., 2013).
ANALYZER	The variable equals one if the strategy is analyzer and zero otherwise. We calculate the business strategy scores following (Bentley et al., 2013).
PRisk	Firm-level political risk measure using textual analysis developed by Hassan et al. (2019). We obtain this data from: https://sites.google.com/view/firmrisk/download.
FIRM_SIZE	Firm Size is market capitalization, or market value total ( <i>mkvalt</i> ) in Compustat.
FCF	Free cash flow is a measure of cash generated from operations and investment. We obtained this data from Compustat.

#### **Table 1: Sample distributions**

Panel A of Table 1 presents the average of main variable (OC/TA) used in this study. The table shows the outcomes of (emerge and did not emerge) firms file for Bankruptcy Chapter 11 in year-wise distribution. The sample period of firms filing for bankruptcy Chapter 11 from 1981 to 2020. Panel B presents the summary of outcome bankrupt firms' emergence industry-wise distribution (SIC Classification). In these panels, the Probability of Emergence is the number of Emerged firms divided by the Total of observations.

Year of Appouncement	OC/TA	Em	Emerge I		Emerge	Total	Probability of Emergence	
Amouncement		N	%	Ν	%	Ν	<u>%</u>	
1981	1.3228	8	1.09	1	0.31	9	88.89%	
1982	0.9018	6	0.82	2	0.62	8	75.00%	
1983	0.4000	5	0.68	1	0.31	6	83.33%	
1984	3.0772	7	0.96	1	0.31	8	87.50%	
1985	10.0338	8	1.09	1	0.31	9	88.89%	
1986	0.8962	5	0.68	0	0	5	62.50%	
1987	1.2029	10	1.37	3	0.93	13	76.92%	
1988	0.9876	9	1.23	3	0.93	12	52.94%	
1989	3.4725	26	3.55	8	2.48	34	78.79%	
1990	2.9966	23	3.14	7	2.17	30	79.31%	
1991	4.2375	25	3.42	6	1.86	31	89.29%	
1992	7.8712	17	2.32	3	0.93	20	94.44%	
1993	9.6319	9	1.23	1	0.31	10	64.29%	
1994	1.7817	14	1.91	5	1.55	19	60.87%	
1995	3.7337	8	1.09	9	2.8	17	57.14%	
1996	1.5945	11	1.5	6	1.86	17	57.89%	
1997	1.8909	14	1.91	8	2.48	22	46.67%	
1998	0.1814	31	4.23	16	4.97	47	43.66%	
1999	10.9131	35	4.78	40	12.42	75	48.61%	
2000	6.0652	50	6.83	37	11.49	87	70.42%	
2001	4.9960	51	6.97	21	6.52	72	77.27%	
2002	4.7695	34	4.64	15	4.66	49	87.18%	
2003	4.2634	15	2.05	5	1.55	20	83.33%	
2004	6.7035	21	2.87	3	0.93	24	84.00%	
2005	11.6928	8	1.09	4	1.24	12	66.67%	
2006	4.0783	11	1.5	4	1.24	15	35.48%	
2007	6 5371	28	3.83	20	6.21	48	60.87%	
2008	5.0383	40	5.46	18	5.59	58	83.33%	
2009	4 0531	12	1 64	8	2.48	20	63 16%	
2010	8.1940	14	1.91	7	2.17	21	63.64%	
2011	1.3687	17	2.32	8	2.48	25	70.83%	
2012	2.1289	9	1.23	7	2.13	16	50.00%	
2013	5.0089	12	1.64	9	2.8	21	75.00%	
2014	-2.4385	15	2.05	4	1.24	19	71.43%	
2015	2.4906	30	4.1	6	1.86	36	85.71%	
2016	2.8158	18	2.46	5	1.55	23	85.71%	
2017	2.7172	9	1.23	3	0.93	12	50.00%	
2018	5,5991	14	1.23	9	2.8	23	82.35%	
2019	7.3196	47	6.42	ŝ	0.93	50	90 38%	
2020	1.6330	6	0.82	5	1.55	11	1 83%	
Total	162 162	727	1000/	277	1000/	1054	60.45%	

#### Panel B: Industry-wise distribution

Name	Emerge	Did Not Emerge		Total	Probability of Emergence	
	Ν	%	Ν	%	Ν	%
Agricultural Prod. Crops	2	0.27%	1	0.27%	3	66.67%
Mining	94	12.84%	26	7.10%	120	78.33%
Construction	18	2.46%	2	0.55%	20	90.00%
Manufacturing	240	32.79%	71	19.40%	311	77.17%
Transportation Communications, Electric, Gas	125	17.08%	52	14.21%	177	70.62%
Wholesale Trade	23	3.14%	12	3.28%	35	65.71%
Retail Trade	83	11.34%	55	15.03%	138	60.14%
Finance, Insurance, and Real Estate	57	7.79%	111	30.33%	168	33.93%
Services	90	12.30%	36	9.84%	126	71.43%
Total	732	100.00	366	100.00	1098	66.67%

#### **Table 2: Descriptive statistics**

Panel A of Table 2 reports summary statistics of variables analyzed in this study. It summarizes the mean, standard deviation, median, 1<sup>st</sup> quartile, and 3<sup>rd</sup> quartile. Panel B compares means and medians of variables analyzed in the study. T-tests and Wilcoxon-tests are conducted to test for differences between the means and medians of the two subsamples (High OC and Low OC). \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% level, respectively. See Appendix B for variable definitions.

	Mean	Std. Dev.	Median	1 <sup>st</sup> Quartile	3 <sup>rd</sup> Quartile				
EMERGE	0.695	0.461	1.000	0.000	1.000				
OC/TA	0.151	0.723	0.031	0.000	0.138				
PREPACK	0.123	0.328	0.000	0.000	0.000				
SALEINTENDED	0.170	0.376	0.000	0.000	0.000				
MANUFACTURING	0.296	0.457	0.000	0.000	1.000				
INVOLUNTARY	0.040	0.196	0.000	0.000	0.000				
PRIME1YEARBEFFILE	6.745	2.812	6.750	4.500	8.500				
PRIME2YEARBEFFILE	7.126	2.733	8.000	4.750	8.500				
SALES_SCALED	0.997	0.910	0.807	0.317	1.377				
LEVERAGE	1.014	0.511	0.933	0.768	1.122				
COMSIZE	7.338	1.184	7.065	6.404	8.001				
COMMCREDINDICATOR	0.803	0.398	1.000	1.000	1.000				
DIPLOANINDICATOR	0.549	0.498	1.000	0.000	1.000				
EBITPOSITIVE	0.490	0.500	0.000	0.000	1.000				
Panel R· Mean and median test									

#### Panel A: Descriptive statistics (Observations 1,054)

	HIGH_OC (N=531)		LOV (N=	V_OC =523)	Mean-	Median-
	Mean	Median	Mean	Median	test	test
EMERGE	0.802	1.00	0.585	1.000	***	***
PREPACK	0.153	0.000	0.093	0.000	***	***
SALEINTENDED	0.145	0.000	0.195	0.000	**	**
MANUFACTURING	0.386	0.000	0.206	0.000	***	***
INVOLUNTARY	0.028	0.000	0.052	0.000	**	**
PRIMEIYEARBEFFILE	6.845	6.750	6.645	4.250		
PRIME2YEARBEFFILE	7.176	8.000	7.076	4.750		
SALES_SCALED	1.212	1.016	0.782	0.208	***	***
LEVERAGE	1.025	0.950	0.983	0.758	**	
COMSIZE	7.181	6.965	7.493	6.460	***	***
COMMCREDINDICATOR	0.793	1.000	0.812	1.000		
DIPLOANINDICATOR	0.628	1.000	0.470	0.000	***	***
EBITPOSITIVE	0.512	1.000	0.468	0.000		

### Table 3: Correlation matrix

This table presents Pearson's correlation coefficients between the variables employed in the main logistics regression. Superscript \*\*\*, \*\* and \* correspond to statistical significance at the 1%, 5%, and 10% levels, respectively. See Appendix for definitions of variables.

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]
EMERGE	[1]	1													
OC/TA	[2]	0.126***	1												
PREPACK	[3]	0.207***	0.032	1											
SALEINTENDED	[4]	-0.371***	-0.007	-0.124***	1										
MANUFACTURING	[5]	0.108***	0.052*	-0.044	0.005	1									
INVOLUNTARY	[6]	-0.045	-0.035	-0.076**	-0.067**	-0.049*	1								
PRIME1YEARBEFFILE	[7]	-0.024	-0.005	-0.159***	-0.154***	0.055*	0.127***	1							
PRIME2YEARBEFFILE	[8]	0.001	-0.007	-0.170***	-0.148***	0.071**	0.156***	0.818***	1						
SALES_SCALED	[9]	-0.001	0.146***	-0.047	-0.025	0.095***	-0.070**	0.133***	0.141***	1					
LEVERAGE	[10]	0.165***	0.048	0.083***	-0.103***	0.036	0.015	-0.073**	-0.046	0.074**	1				
COMSIZE	[11]	0.047	-0.077**	-0.061**	-0.084***	-0.110***	-0.006	-0.055*	-0.03	-0.254***	-0.04	1			
COMMCREDINDICATOR	[12]	-0.154***	-0.009	-0.627***	0.063**	0.060**	-0.03	0.175***	0.168***	0.106***	-0.075**	0.095***	1		
DIPLOANINDICATOR	[13]	0.078**	0.037	-0.031	0.018	0.129***	-0.139***	-0.235***	-0.273***	0.164***	0.026	0.009	0.100***	1	
EBITPOSITIVE	[14]	0.093***	-0.047	0.058*	-0.078**	0.119***	-0.029	0.074**	0.065**	0.054*	-0.019	0.121***	-0.042	0.066**	1

# Table 4: Logistics Regression: Organizational Capital and the Probability of FirmEmergence

This table presents the logistics regression results of the OC (OC/TA) on firms' emergence (*emerge*). Panel A reports baseline OC and firms' emergence. Model 1 uses the total sample, while Model 2 (Model 3) uses the subsamples in which high OC (low OC) is when the OC is higher (lower) than the corresponding OC/TA. Panel B reports baseline OC/TA with alternative measure of firms' emergence with the proxy of D/E Ratio. Model 1 uses the total sample, while Model 2 (Model 3) uses the subsamples in which high OC (low OC) is when the OC is higher (lower) than the corresponding OC/TA. Panel B reports baseline OC/TA with alternative measure of firms' emergence with the proxy of D/E Ratio. Model 1 uses the total sample, while Model 2 (Model 3) uses the subsamples in which high OC (low OC) is when the OC is higher (lower) than the corresponding OC/TA. All the models control for year and SIC industry fixed effects. The z-values are reported in parentheses and robust standard errors are clustered by firm. The \*\*\*, \*\*, and \* denote significance at the 1%, 5% and 10% levels, respectively. See Appendix B for definitions of variables.

~	<b>Dependent variable = Firms' Emergence</b> ( <i>emerge</i> )						
	Full Sample	HIGH_OC	LOW_OC				
	Model (1)	Model (2)	Model (3)				
OC/TA	0.8538***	0.9419*	0.2959				
	(3.91)	(1.91)	(1.09)				
PREPACK	1.5007***	1.0989	1.6402**				
	(3.09)	(1.17)	(2.55)				
SALEINTENDED	-1.8632***	-1.7798***	-2.3491***				
	(-8.16)	(-4.65)	(-6.38)				
MANUFACTURING	-0.1184	0.4378	0.2334				
	(-0.09)	(0.30)	(0.41)				
INVOLUNTARY	-0.6151	-0.3777	-0.8265				
	(-1.51)	(-0.42)	(-1.42)				
PRIME1YEARBEFFILE	-0.2299**	-0.3583**	-0.1896				
	(-2.51)	(-2.18)	(-1.40)				
PRIME2YEARBEFFILE	0.1184	-0.0606	0.1647				
	(1.15)	(-0.33)	(1.02)				
SALES_SCALED	-0.2046*	-0.2437	-0.5044**				
	(-1.81)	(-1.35)	(-2.15)				
LEVERAGE	1.2126***	0.9536**	1.8199***				
	(4.67)	(2.05)	(4.44)				
COMSIZE	0.1253	-0.0308	0.2075*				
	(1.60)	(-0.21)	(1.91)				
COMMCREDINDICATOR	-0.4462	-1.6027**	-0.1076				
	(-1.44)	(-2.40)	(-0.25)				
DIPLOANINDICATOR	0.6477***	1.0728***	0.4839*				
	(3.24)	(3.08)	(1.69)				
EBITPOSITIVE	0.4650***	0.6350**	0.2893				
	(2.61)	(2.08)	(1.13)				
Intercept	3.5909	9.9768**	14.9395				
	(1.31)	(2.22)	(0.01)				
Year Fixed Effects	Yes	Yes	Yes				
Industry Fixed Effects	Yes	Yes	Yes				
Ν	1054	531	523				
Pseudo R-squared	0.2815	0.3391	0.3553				
ROC Curve	0.8391	0.8739	0.8716				

Panel B: Baseline with Alternative Measure of Firm Emergence (D/E Ratio)								
	Dependent Variable = D/E RatioFull SampleHIGH OCLOW C							
-	Full Sample	HIGH_OC	LOW_OC					
-	Model (1)	Model (2)	Model (3)					
OC/TA	-0.2397*	-0.5823**	0.1718					
	(-1.78)	(-2.03)	(0.69)					
PREPACK	0.6066	0.3548	0.7075					
	(1.40)	(0.59)	(0.93)					
SALEINTENDED	-0.4336*	-0.3823	-0.9978**					
	(-1.72)	(-1.01)	(-2.38)					
MANUFACTURING	-0.2595	-0.4822	0.5894					
	(-0.17)	(-0.31)	(0.95)					
INVOLUNTARY	-1.0847	-0.4900	-2.2775*					
	(-1.50)	(-0.48)	(-1.80)					
PRIME1YEARBEFFILE	-0.0990	0.0640	-0.2144					
	(-0.89)	(0.40)	(-1.16)					
PRIME2YEARBEFFILE	-0.0972	0.2168	-0.4827**					
	(-0.74)	(1.00)	(-2.11)					
SALES_SCALED	-0.4636***	-0.3651	-0.7819**					
	(-2.61)	(-1.50)	(-2.57)					
LEVERAGE	0.6026***	1.3226***	0.1529					
	(2.68)	(3.60)	(0.55)					
COMSIZE	0.1437	0.1829	0.1238					
	(1.59)	(1.32)	(0.87)					
COMMCREDINDICATOR	-0.3253	-0.4549	-0.2794					
	(-0.90)	(-0.90)	(-0.46)					
DIPLOANINDICATOR	-0.3222	-0.4811	-0.6471*					
	(-1.42)	(-1.39)	(-1.77)					
EBITPOSITIVE	0.5555***	0.2935	1.2998***					
	(2.69)	(0.99)	(3.37)					
Intercept	1.1945	-3.0148	5.6574**					
-	(0.56)	(-1.04)	(2.17)					
Year Fixed Effects	Yes	Yes	Yes					
Industry Fixed Effects	Yes	Yes	Yes					
N	589	319	260					
Pseudo R-squared	0.1784	0.2209	0.2614					
ROC Curve	0.7893	0.8245	0.8277					

### **Table 5: Entropy Balancing**

This table reports the entropy balancing logistic regression estimates. Panel A reports a comparison of mean, variance, and skewness of the variables between treated and control groups. Panel B reports the entropy balancing logistic regression results. Z-Scores are reported in parentheses. The regression results control for year and SIC industry fixed effects. The z-values are reported in parentheses and robust standard errors are clustered by firm \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 1% level (two-tailed), respectively. See Appendix B for definitions of variables.

Panel A: Descriptive statistics of variables for treatment and control groups (After Weighting)								
—	Maaa	Venience	C1	Maar	Venterror	<u>C1</u>		
	Mean	variance	Skewness	Mean	variance	Skewness		
PREPACK	0.1527	0.1296	1.9310	0.1527	0.1296	1.9320		
SALEIN I ENDED	0.1455	0.1244	2.0140	0.1454	0.1245	2.0120		
MANUFACIUKING	0.3855	0.2373	0.4706	0.3854	0.2373	0.4707		
	0.0279	0.0272	5.7300	0.0280	0.0273	5.7210		
PRIMEIYEARBEFFILE	6.8450	8.15/0	1.1/40	6.8450	8.5980	1.3200		
PRIME2YEARBEFFILE	/.1/60	/.8240	0.7386	/.1/60	6.9880	0.3056		
SALES_SCALED	1.2120	0.9939	2.5210	1.2110	0.7902	1.4670		
LEVERAGE	1.0250	0.2768	4.0690	1.0250	0.2634	4.9450		
COMSIZE	/.1810	1.0750	1.1180	/.1820	1.1960	1.3250		
COMMCREDINDICATOR	0.7933	0.1643	-1.4490	0.7931	0.1644	-1.44/0		
DIPLOANINDICATOR	0.6276	0.2342	-0.5277	0.6273	0.2342	-0.5266		
EBITPOSITIVE	0.5121	0.2503	-0.0484	0.5121	0.2503	-0.0484		
Panel B: Entropy Balancing	g Regress	sion Results				0.75(2)***		
OC/TA						$0.7563^{***}$		
						(3.32) 1 4642***		
PREPACK						(2.67)		
						(2.07) 1 /030***		
SALEINTENDED						(-5.29)		
MANUEACTURINC						0.0926		
MANUFACIURING						(0.25)		
INVOLUNTARY						-0.3664		
						(-0.71)		
PRIME1YEARBEFFILE						-0.2476**		
DDIME9VEΛ DREEEII E						-0.0044		
FRIMEZIEARDEFFILE						(-0.03)		
SALES_SCALED						-0.3182**		
						(-2.37) 1 3212***		
LEVERAGE						(4.15)		
COMSIZE						0.2948***		
COMSILL						(2.95)		
COMMCREDINDICATOR						$-1.1004^{***}$		
						0.6802***		
DIPLOANINDICATOR						(2.88)		
EBITPOSITIVE						0.7405***		
<b>T</b>						-1.7618		
Intercept						(-1.06)		
Year Fixed Effects						Yes		
Industry Fixed Effects						Yes		
Ν						1049		
Pseudo R-squared						0.3207		

#### Table 6: Organizational Capital and Firms Emergence: Two-stage Instrumental-variable analysis

This table reports two-stage instrumental variable estimation of the relation between organizational capital and firm emergence. Model 1 presents the first stage and second stage using state-level UI benefits and industry OC median (*PEER\_OC*). Model 2 presents Lewbel's (2012) by employing the heteroskedasticity in the error term of the first stage regression. The instruments generated from internal the existing model. Model 3 presents GMM using the equal instruments. The t- value is reported in parentheses in Model 1, and the z-values are reported in parentheses in Models 2 and 3. Robust standard errors are clustered by firm. The \*\*\*, \*\*, and \* denote significance at the 1%, 5% and 10% levels, respectively. See Appendix B for definitions of variables.

_	Model 1	Model 2	– Model 3	Model 4
Variables	Instrumental	Variable Probit	<u>Model 5</u>	Model 4
	First Stage	Second Stage	Lewbel's (2012) approach	GMM
OC/TA_FITTED/ OC/TA		1.8708***	1.8781***	0.1751***
		(2.56)	(4.20)	(3.64)
UI	0.1512***			-0.0005
	(2.64)			(-0.85)
PEER_OC	1.0884***			-0.1559
	(3.51)			(-0.61)
PREPACK	0.1075	0.6467	0.6500	0.0377
	(0.75)	(1.30)	(1.32)	(0.40)
SALEINTENDED	0.0237	-1.2282***	-1.2303***	-1.0413***
	(0.34)	(-5.87)	(-5.89)	(-4.83)
MANUFACTURING	-0.0422	-0.0944	-0.0935	0.0813
	(-0.44)	(-0.40)	(-0.39)	(1.18)
INVOLUNTARY	-0.0079	0.0132	0.0126	0.0434
	(-0.05)	(0.03)	(0.03)	(0.23)
PRIME1YEARBEFFILE	-0.0296	-0.2359**	-0.2365***	-0.0713***
	(-0.86)	(-2.48)	(-2.65)	(-3.18)
PRIME2YEARBEFFILE	0.0102	-0.1131	-0.1132	0.0144
	(0.27)	(-1.08)	(-1.09)	(0.52)
SALES_SCALED	0.0363	-0.1598	-0.1598	-0.0698
	(0.91)	(-1.50)	(-1.55)	(-1.64)
LEVERAGE	0.1931	0.7056**	0.7057***	0.2538***
	(2.28)	(2.46)	(2.76)	(3.37)
COMSIZE	0.0167	0.1453**	0.1457**	0.0445
	(0.57)	(1.97)	(2.00)	(1.45)
COMMCREDINDICATOR	-0.0284	-0.6437**	-0.6457**	-0.2512***
	(-0.25)	(-2.08)	(-2.09)	(-2.65)
DIPLOANINDICATOR	0.0175	0.1663	0.1663	0.1165
	(0.26)	(0.96)	(0.97)	(1.56)
EBITPOSITIVE	-0.0300	0.3635**	0.3642**	0.1835***
	(-0.49)	(2.29)	(2.32)	(2.59)
Intercept	-1.3827	0.9069	0.9082	-0.3805
	(-2.29)	(0.94)	(0.94)	(-1.19)
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
Ν	428	428	428	428
R-Squared	0.1333			
Wald Test of Exogeneity		0.00	0.00	
Hansen J ( <i>p</i> -value)				0.2106

#### **Table 7: Alternative Measurements of Organizational Capital**

This table uses various OC metrics to summarize logistic regression findings on the impact of organizational capital (OC/TA) on firms' emergence. Panel A explores the relationship between different OC measures and firms' emergence. It includes Model 1 with OC as defined by Eisfeldt and Papanikolaou (2013), Model 2 using OC from Ewens et al. (2020), Model 3 with OC adjusted for depreciation, and Model 4 where OC is adjusted by Property, Plant, and Equipment (PPE). Panel B examines the association between these alternative OC measures and the debt-to-equity (D/E) ratio. Each model follows the same OC definitions as in Panel A. All the models control for year and SIC industry fixed effects. The z-values are reported in parentheses and robust standard errors are clustered by firm. The \*\*\*, \*\*, and \* denote significance at the 1%, 5% and 10% levels, respectively. See Appendix B for definitions of variables.

	<b>Dependent variable = Firms Emergence</b> ( <i>EMERGE</i> )			
	Eisfeldt and Papanikolaou	Ewens et al.	OCTA/DP	OCTA/PPE
	Model (1)	Model (2)	Model (3)	Model (4)
OCTA	0.7954***	0.0014*	20.3219***	0.0012***
OC/IA	(3.86)	(1.87)	(3.86)	(3.42)
Intercept	-1.2497	4.7228*	3.4231	-8.9043
	(-0.70)	(1.69)	(1.21)	(-0.01)
Control Variables	Yes	Yes	Yes	Yes
Year Fixed	Yes	Yes	Yes	Yes
Industry Fixed	Yes	Yes	Yes	Yes
Ν	1035	1001	1001	1001
Pseudo R-squared	0.282	0.269	0.289	0.418
ROC Curve	0.8397	0.8328	0.8448	0.8347

	<b>Dependent Variable = Firms Emergence</b> ( <i>D/E Ratio</i> )			
	Eisfeldt and Papanikolaou (2013)	Ewens et al. (2020)	OCTA/DP	OCTA/PPE
	Model (1)	Model (2)	Model (3)	Model (4)
00/74	-0.0496	-0.0011	-8.0784**	-0.0013***
OC/IA	(-0.87)	(-1.63)	(-2.04)	(-2.81)
Intercept	1.0206	0.8627	1.7236	-1.7588
	(0.48)	(0.40)	(0.78)	(-1.20)
Control Variables	Yes	Yes	Yes	Yes
Year Fixed	Yes	Yes	Yes	Yes
Industry Fixed	Yes	Yes	Yes	Yes
Ν	588	579	579	587
Pseudo R-squared	0.175	0.193	0.196	0.237
ROC Curve	0.7722	0.7867	0.7893	0.7756

# Table 8: Organizational Capital and the Probability of Firm Emergence: The Role of GFC<br/>and Sarbanes-Oxley Act 2002

This table displays the results of logistic regression analyses, examining the impact of organizational capital (OC/TA) on firms' emergence under different crucial periods. In Panel A, we divide the sample based on Global Financial Crisis period (GFC). Model 1 shows the period before GFC (2007), and Model 2 after GFC ( $\geq$  2007). Panel B displays the period of Sarbanes-Oxley (SOX) Act 2002. Where Model 1 is the period before SOX (<2002) and Model 2 is the period after SOX ( $\geq$  2002). All the models control for year and SIC industry fixed effects. The z-values are reported in parentheses and robust standard errors are clustered by firm. The \*\*\*, \*\*, and \* denote significance at the 1%, 5% and 10% levels, respectively. See Appendix B for definitions of variables.

Dependent variable = Firm	ns Emergence (emerge)
<b>Before GFC (&lt; 2007)</b>	After GFC (≥ 2007)
Model (1)	Model (2)
3.4116***	0.4762**
(5.02)	(2.29)
2.9354***	
(17.66)	
2.9303	8.7505
(0.84)	(0.01)
Yes	Yes
Yes	Yes
Yes	Yes
654	400
0.286	0.375
0.8394	0.8849
	Dependent variable = Firm           Before GFC (< 2007)           Model (1)           3.4116***           (5.02)           2.9354***           (17.66)           2.9303           (0.84)           Yes           Yes           Yes           654           0.286           0.8394

	<b>Dependent variable = Firms Emergence</b> ( <i>emerge</i> )	
	<b>Before SOX (&lt; 2002)</b>	After SOX (≥ 2002)
	Model (1)	Model (2)
OC/TA	3.7687***	0.4740**
	(4.74)	(2.40)
Diff in Coeff	3.2947***	
Chi-squared	(18.01)	
Intercept	-2.8188	23.0804
	(-0.63)	(0.02)
Control Variables	Yes	Yes
Year Fixed Effects	Yes	Yes
Industry Fixed Effects	Yes	Yes
Ν	469	585
Pseudo R-squared	0.313	0.327
ROC Curve	0.8512	0.8671

## Table 9: Organizational Capital and the Probability of Firm Emergence: The Role ofEconomic Environment

This table displays the results of logistic regression analyses, examining the impact of organizational capital (OC/TA) on firms' emergence under different levels of economic uncertainty. In Panel A, we divide the sample based on the Economic Policy Uncertainty (EPU) Index, as introduced by Baker, Bloom, and Davis (2016). Here, Model 1 focuses on firms experiencing high EPU, and Model 2 focuses on those with low EPU, using median values for segmentation. Panel B explores the influence of the Consumer Price Index (CPI), where Model 1 is dedicated to firms in high CPI environments and Model 2 to firms in low CPI contexts. All the models control for year and SIC industry fixed effects. The z-values are reported in parentheses and robust standard errors are clustered by firm. The \*\*\*, \*\*, and \* denote significance at the 1%, 5% and 10% levels, respectively. See Appendix B for definitions of variables.

Panel A: Economic Uncertaint	y	
	<b>Dependent variable = Firms Emergence</b> ( <i>emerge</i> )	
	High EPU Index	Low EPU Index
	Model (1)	Model (2)
OC/TA	0.7319***	0.9978***
	(2.76)	(2.86)
Diff in Coeff	-0.2659	
Chi-squared	(0.20)	
Intercept	12.7203	0.5462
	(0.01)	(0.22)
Control Variables	Yes	Yes
Year Fixed Effects	Yes	Yes
Industry Fixed Effects	Yes	Yes
Ν	478	536
Pseudo R-squared	0.318	0.265
ROC Curve	0.8617	0.8280
Panel B: CPI		

	<b>Dependent variable = Firms Emergence</b> ( <i>emerge</i> )	
	High CPI	Low CPI
	Model (1)	Model (2)
OC/TA	0.4764**	3.5007***
	(2.27)	(4.48)
Diff in Coeff	-3.0243***	
Chi-squared	(14.93)	
Intercept	13.7558	13.6469
	(0.01)	(0.01)
Control Variables	Yes	Yes
Year Fixed Effects	Yes	Yes
Industry Fixed Effects	Yes	Yes
Ν	492	491
Pseudo R-squared	0.367	0.320
ROC Curve	0.8824	0.8564

# Table 10: Organizational Capital and the Probability of Firms Emergence: The Role of<br/>Financial Constraints and R&D

This table displays the outcomes of logistic regression analyses, investigating the effect of organizational capital (OC/TA) on firms' emergence, segmented into various subsamples. Panel A focuses on the Kaplan-Zingales (KZ) Index, with Model 1 examining firms with a high KZ Index and Model 2 assessing those with a low KZ Index. Panel B explores the influence of Research and Development (R&D) spending, where Model 1 is dedicated to firms with high R&D investment and Model 2 with low R&D. All the models control for year and SIC industry fixed effects. The z-values are reported in parentheses and robust standard errors are clustered by firm. The \*\*\*, \*\*, and \* denote significance at the 1%, 5% and 10% levels, respectively. See Appendix B for definitions of variables.

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	<b>Dependent variable = F</b> i	<b>Dependent variable = Firms Emergence</b> ( <i>emerge</i> )	
	High KZ Index	Low KZ Index	
	Model (1)	Model (2)	
OC/TA	0.6617*	0.4847	
	(1.95)	(1.22)	
Diff in Coeff	0.1770		
Chi-squared	(0.30)		
Intercept	1.5261	-1.4020	
	(0.43)	(-0.45)	
Control Variables	Yes	Yes	
Year Fixed Effects	Yes	Yes	
Industry Fixed Effects	Yes	Yes	
N	190	198	
Pseudo R-squared	0.191	0.289	
ROC Curve	0.7849	0.8285	
Panel B: Research and Developme	ent (R&D)		

	<b>Dependent variable = Firms Emergence</b> ( <i>emerge</i> )	
	High R&D	Low R&D
	Model (1)	Model (2)
OC/TA	0.3221	3.1111***
	(0.73)	(2.76)
Diff in Coeff	-2.7890**	
Chi-squared	(3.12)	
Intercept	57.4480	14.6231
	(0.00)	(0.00)
Control Variables	Yes	Yes
Year Fixed Effects	Yes	Yes
Industry Fixed Effects	Yes	Yes
Ν	176	180
Pseudo R-squared	0.548	0.593
ROC Curve	0.9410	0.9520

# Table 11: Organizational Capital and the Probability of Firm Emergence: The Role ofGovernance

This table showcases logistic regression findings on how organizational capital (OC/TA) influences firm emergence, broken down into specific subsamples. Panel A focuses on CEO replacement, differentiating between firms that have replaced their CEO (Model 1) and those that have not (Model 2). Panel B examines the impact of employee numbers, comparing firms with a high number of employees (Model 1) to those with a low number (Model 2). Panel C considers the presence of female directors, with Model 1 representing firms with at least one female director and Model 2 those without any female directors. Finally, Panel D evaluates firms based on their quality index, comparing those with a high-quality index (Model 1) to those with a low-quality index (Model 2). \*\*\*, \*\* and \* denote significance at the 1%, 5%, and 10% levels, respectively. See Appendix B for definitions of variables.

#### Panel A: Number of Employees **Dependent variable = Firms Emergence** (*emerge*) High Number of Employee Low Number of Employee Model (1) Model (2) OC/TA 0.8211\*\*\* 1.1225\*\* (3.30)(2.42)Diff in Coeff -0.3014 Chi-squared (0.23)Intercept 7.6282\* -1.7986(1.85)(-0.74)Control Variables Yes Yes Year Fixed Effects Yes Yes Industry Fixed Effects Yes Yes N 511 484 Pseudo R-squared 0.351 0.272 ROC Curve 0.8698 0.8349 **Panel B: CEO Replaced**

	<b>Dependent variable = Firms Emergence</b> ( <i>emerge</i> )	
	CEO Replaced	No CEO Replaced
	Model (1)	Model (2)
OC/TA	1.4483***	1.0117
	(3.00)	(1.60)
Diff in Coeff	0.4366	
Chi-squared	(0.20)	
Intercept	8.5692	-2.2347
	(1.57)	(-0.50)
Control Variables	Yes	Yes
Year Fixed Effects	Yes	Yes
Industry Fixed Effects	Yes	Yes
Ν	665	389
Pseudo R-squared	0.280	0.428
ROC Curve	0.8654	0.8943
Panel C: Female Directors		

	Dependent variable = F	Dependent variable = Firms Emergence ( <i>emerge</i> )	
	Female Director	No Female Director	
	Model (1)	Model (2)	
OC/TA	1.2091**	0.7030	
	(2.08)	(0.96)	
Diff in Coeff	0.5061		
Chi-squared	(0.28)		
Intercept	17.9449	-17.3509	
	(0.01)	(-0.00)	

Control Variables	Yes	Yes
Year Fixed Effects	Yes	Yes
Industry Fixed Effects	Yes	Yes
Ν	155	137
Pseudo R-squared	0.522	0.518
ROC Curve	0.9309	0.9284

#### **Dependent variable = Firms Emergence** (*emerge*) **High Qual Index** Low Qual Index Model (1) Model (2) 1.9567\*\*\* OC/TA 0.1839 (2.85) 1.7728<sup>\*\*\*</sup> (0.30)Diff in Coeff Chi-squared (5.23) Intercept 1.4060 3.1065 (0.74)(0.25)Control Variables Yes Yes Year Fixed Effects Yes Yes Industry Fixed Effects Yes Yes 152 122 Ν Pseudo R-squared 0.478 0.526 ROC Curve 0.9202 0.9390

Panel D: Qual Index

# Table 12: Organizational Capital and the Probability of Firm Emergence: Strategy Orientation and Firm-level Political Risk

Panel A explores strategic orientation, comparing defender strategy firms (Model 1) to non-defender strategy firms (Model 2). Panel B investigates the influence of analyzer strategy, with Model 1 for firms adopting an analyzer strategy and Model 2 for those without it. All the models control for year and SIC industry fixed effects. Lastly, Panel C represents firm-level political risk, with Model 1 for high risk and Model 2 for low risk. The z-values are reported in parentheses and robust standard errors are clustered by firm. The \*\*\*, \*\*, and \* denote significance at the 1%, 5% and 10% levels, respectively. See Appendix B for definitions of variables.

Panel A: Strategy - Defender		
	<b>Dependent Variable = Firms Emergence</b> ( <i>emerge</i> )	
	Defender	Non-Defender
	Model (1)	Model (2)
OC/TA	1.9848	0.8136***
	(1.52)	(3.82)
Diff in Coeff	1.17	
Chi-squared	(0.91)	
Intercept	17.6666	-1.4778
	(0.01)	(-0.79)
Control Variables	Yes	Yes
Year Fixed Effects	Yes	Yes
Industry Fixed Effects	Yes	Yes
N	206	848
Pseudo R-Squared	0.5519	0.2913
ROC Curve	0.8807	0.8416
Panel B: Strategy - Analyzer		

	<b>Dependent Variable = Firms Emergence</b> ( <i>emerge</i> )	
	Analyzer	Non-Analyzer Model (2)
	Model (1)	
OC/TA	0.8045***	2.2466*
	(3.78)	(1.71)
Diff in Coeff	-1.4421	
Chi-squared	(1.33)	
Intercept	-1.5504	18.1374
-	(-0.83)	(0.01)
Control Variables	Yes	Yes
Year Fixed Effects	Yes	Yes
Industry Fixed Effects	Yes	Yes
N	839	215
Pseudo R-Squared	0.2884	0.3766
ROC Curve	0.8404	0.8826
Panel C: Firm-level Political Risk		

	<b>Dependent Variable = Firms Emergence</b> ( <i>emerge</i> )	
	High	Low
	Model (1)	Model (2)
OC/TA	0.0113	0.9176*
	(0.02)	(1.77)
Diff in Coeff	-0.9063	
Chi-squared	(1.40)	
Intercept	-0.3953	-7.6302
	(-0.14)	(-1.58)
Control Variables	Yes	Yes
Year Fixed Effects	Yes	Yes
Industry Fixed Effects	Yes	Yes
Ν	184	182
Pseudo R-Squared	0.4974	0.5078
ROC Curve	0.9269	0.9331

# Table 13: Organizational Capital and the Probability of Firm Emergence: The Role of Firm<br/>Characteristics

This table outlines logistic regression outcomes, assessing the impact of organizational capital (OC/TA) on firm emergence across various subsamples. Panel A delves into the effect of firm size, with Model 1 analyzing large firms and Model 2 focusing on small firms. Panel B examines leverage through Free Cash Flow (FCF), distinguishing between firms with high FCF (Model 1) and those with low FCF (Model 2). The z-values are reported in parentheses and robust standard errors are clustered by firm. The \*\*\*, \*\*, and \* denote significance at the 1%, 5% and 10% levels, respectively. See Appendix B for definitions of variables.

#### Panel A: Firm Size

	<b>Dependent variable = Firms Emergence</b> ( <i>emerge</i> )	
	High Firm Size	Low Firm Size
	Model (1)	Model (2)
OC/TA	0.2923	1.7891***
OC/IA	(1.17)	(3.54)
Diff in Coeff	-1.4968*	
Chi-squared	(2.92)	
Intercent	-0.6472	13.7834
Intercept	(-0.20)	(0.01)
Control Variables	Yes	Yes
Year Fixed Effects	Yes	Yes
Industry Fixed Effects	Yes	Yes
N	305	308
Pseudo R-squared	0.314	0.418
ROC Curve	0.8516	0.9006
Panel B: Leverage (Free Cash Flow)		

	<b>Dependent variable = Firms Emergence</b> ( <i>emerge</i> )	
	High FCF Model (1)	Low FCF Model (2)
OC/TA	2.9665*** (4.55)	0.3905** (1.97)
Diff in Coeff	2.560**	
Chi-squared	(5.05)	
Intercept	2.1238 (0.75)	28.9751 (0.01)
Control Variables	Yes	Yes
Year Fixed Effects	Yes	Yes
Industry Fixed Effects	Yes	Yes
Ν	456	464
Pseudo R-squared	0.420	0.291
ROC Curve	0.9104	0.8372