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Bankruptcy Control and the Theory of the Firm

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I. Introduction

Over the last five years, the idea that bankruptcy practice has trounced the scheme of the 1978 Bankruptcy Code (from now on “The Code”) has emerged. Pioneered by professors Baird and Rasmussen, a cluster of legal literature has developed around the changes in bankruptcy practice, the reasons behind those changes and possible efficiency implications of the professed novel occurrences. There are conflicting opinions over almost every aspect of the debate, but everyone seems to agree at least that actual bankruptcy practice has evolved from the depictions commonly made two decades ago.

Technological changes and financial innovations seem to be the triggering factor for the new developments. Financial contracting design has adopted a widespread use of agreement specific increasingly detailed covenants, which allowed writing contracts that

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3 Rajan and Zingales refer to them as “a bona fide financial revolution”, where major technological, regulatory and institutional changes are the cause of the new era. See Raghuram G. Rajan & Luigi Zingales “The influence of the Financial Revolution on the Nature of Firms”, 91 American Economic Review 206, 206 (2001)
depended upon the new monitoring technology. The financial strategist is now able to employ security interests in virtually all the debtor’s property, present and future, intertwined with the credit agreement in order to reinforce the power of the lender. These innovations have helped to create new scenarios for lenders, who under the new conditions have a tighter grip to closely monitor the debtor financial health. As a result of the increased efficiency of the system, lenders willingness to advance funding seems to have grown, as evidenced by the fewer unencumbered assets that debtors have when entering bankruptcy. Debtors in a compromised financial situation seem eager to accept the new flow of capital.

A related development specific to bankruptcy, debtor-in-possession (from now on “DIP”) financing, appears to have fitted perfectly with the eagerness of both lenders and borrowers for more financing. Despite the fact that it has been allowed for over a century, the new credit market has facilitated the utilization of this tool and has made it

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5 Monitoring technology can be a cause for incomplete contracts. See, for example, Rohan Pitchford “How Liable Should a Lender Be? The Case of Judgment-Proof Firms and Environmental Risk”, 85 American Economic Review 1171, 1174 (1995).

6 Professors Baird and Rasmussen consider that distressed lending’s relative use and importance grew over the last couple of decades helped by the enactment of Article 9 of the UCC and its reform version. “Before Article 9 of the Uniform Commercial Code was enacted, acquiring a security interest in all of a company’s property was hard. Each type of collateral had its own legal regime. Moreover, courts viewed with suspicion omnibus clauses that picked up all of the debtor's property and provided no cushion for other creditors. In many instances, secured lending was premised upon the creditor’s ability to take possession of discrete assets and sell them in the event that the debtor defaulted. It was not possible to make a secured loan premised upon the corporation's value as a going concern. Article 9, and especially the revised Article 9, have made it possible for lenders to acquire all of a corporation's assets. The modern security interest effectively covers not only a corporation's discrete assets, but also the synergy that each asset has with the others. The expanded security interest not only changes the basis on which the lender extends credit, but also the control that the creditor can exercise over the business.” Douglas G. Baird & Robert K. Rasmussen “Private Debt and the Missing Lever of Corporate Governance”, 154 U. Pa. L. Rev. 1209, 1228 (2006). The point that security interests over all the assets covers any synergy those assets may have is previously made by Rizwaan Mokal referring to the British receivership system. See Rizwaan J. Mokal “The Floating Charge – An Elegy”, in Commercial Law and Commercial Practice, pp. 485-93, Sarah Worthington ed. (2003).


prevalent among corporate bankrupt debtors. DIP financing pervasive use by chapter 11 corporations, shook the foundations of The Code’s system, allowing a DIP lender to obtain effective control of the bankrupt debtor.

Originally, The Code thought about reorganization as a place where the debtor required some “breathing space” and therefore established an automatic stay on creditors’ claims -originated before the debtor entered bankruptcy protection upon filing. The intended effect of the stay was to allow some time for the debtor firm to negotiate a restructuring with her creditors. The debtor would use as financing the money not paid to creditors during the length of the reorganization proceeding. Pre-petition creditors were then thought to act as (involuntary) financiers for the turnaround on the promise that the recovery would be larger for the creditors as a whole. As a result, creditors shouldered the cost of being forced financiers and suffered from the smaller leverage they could exercise over a debtor in distress, as property could not be repossessed during the reorganization even when no payments were made.

Nonetheless, The Code limited DIP’s use and disposition of assets upon the existence of security interests. As debtors entered bankruptcy with a larger percentage of assets encumbered, the obsolescence of The Code financing system has became apparent. Post-petition financing has taken a prominent role. Creditors have been lured

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12 “The purpose of a business reorganization case ... is to restructure a business's finances so that it may continue to operate, provide its employees with jobs, pay its creditors, and produce a return for its stockholders. The premise of a business reorganization is that assets that are used for production in the industry for which they were designed are more valuable than those same assets sold for scrap. Often, the return on assets that a business can produce is inadequate to compensate those who have invested in the business. Cash flow problems may develop, and require creditors of the business, both trade creditors and long-term lenders, to wait for payment of their claims. If the business can extend or reduce its debts, it often can be returned to a viable state. It is more economically efficient to reorganize than to liquidate, because it preserves jobs and assets”. H.R. Rep. No. 595, 95th Cong., 1st Sess. 220 (1977), reprinted in 1978 U.S.C.C.A.N. 5963, 6179
to provide fresh funding to the DIP by the advantages available in section 364.\textsuperscript{16} These post-petition credit arrangements have allowed the post-petition lender to gain leverage over the debtor: because these lending agreements are made after the filing for bankruptcy, this lender isn’t constrained by the automatic stay provision. As a consequence, and due to the need to attract fresh capital to the firm, those DIP financing agreements can be readily enforced upon default.\textsuperscript{17}

This new “contractual” face of corporate bankruptcy has been received with praise,\textsuperscript{18} as well as doubt.\textsuperscript{19} TEB considers that “Today’s investors allocate control rights among themselves through elaborate and sophisticated contracts that already anticipate financial distress. In the presence of these contracts, a law of corporate reorganizations is largely unnecessary.”\textsuperscript{20} TEB assures us that a senior lender is more likely to make sound decisions than a debtor. Professor Skeel, Jr. quickly joins the normative idea mentioning

\footnotesize{“Creditors’ Ball: The “New” New Corporate Governance in Chapter 11”, 152 U. Pa. L. Rev. 917, 918-9 (2003) (“the "new" new Chapter 11 governance is contractual in nature… Before they even file for bankruptcy, corporate debtors must arrange an infusion of cash to finance their operations in Chapter 11. To an increasing extent, lenders are using these loan contracts to influence corporate governance in bankruptcy. The fate of an asset or division of the company, even the terms of a transfer of control, has been spelled out as terms in a debtor's DIP financing agreement.”). Brecht, Bolton &Roel consider that “the term “corporate governance” derives from an analogy between the government of cities, nations or states and the governance of corporations.” See Marco Brecht, Patrick Bolton & Alisa Roell “Corporate Governance and Control”, working paper available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=343461 (last visited 7/15/07).

\textsuperscript{16} Section 364 of the Bankruptcy code allows the DIP to contract credit with the possibility of providing security interests in both unencumbered and encumbered assets (the later with priority over any previous liens). See 11 U.S.C. §364 (2000).

\textsuperscript{17} This result is due to the fact that section 362(a) of the code stays only action originated before the commencement of the proceedings. See 11 U.S.C. §362(a) (2000).


\textsuperscript{20} See Douglas G. Baird & Robert K. Rasmussen “The End of Bankruptcy”, 55 Stan. L. Rev. 751, 755 (2002). In the same vein they mention “When control rights are allocated coherently, no legal intervention is needed to ensure that decisions about the firm’s future are made sensibly. Most large firms now allocate control rights among investors in a way that ensures coherent decisionmaking throughout the firm’s life cycle.” See Douglas G. Baird & Robert K. Rasmussen “The End of Bankruptcy”, 55 Stan. L. Rev. 751, 778 (2002).}
that the new “governance levers have dramatically improved the quality of chapter 11 governance.”

The recognition of the new state of bankruptcy affairs has presented several questions to the academic debate. There are important issues that require further examination to understand what the role played by creditors in the new setting is. Two essential issues to investigate are the scope and concentration of bankruptcy control and, if indeed we can assume that there is a transfer of control to the DIP lender, whether creditor control generates uninvestigated costs that we should take into account when evaluating its efficiency, which will be the focus of this paper.

Control has been used in many different ways in different disciplines. Even within the same discipline, many authors define or simply refer to control in distinct ways. An examination of the conceptual borders of control may help distinguish different perceptions of control and understand their diverse implications. In order to inform the scrutiny of control this paper will delve into the different theories of the firm as an inevitable base for the understanding of control.

This article will proceed as follows: Part II will describe chapter 11 original governance structure and the way in which it is modified by lender control. Then it will discuss TEB view of the theory of the firm and its internal congruence. I will argue that TEB’s view is inconsistent and therefore a deeper study of the theory of the firm is required in order to assess the efficiency of lender control. Part III will look into different conceptualizations of the theories of the firm and derive from it the notion of value and control under each theory. That will lead to the study of potential externalities arising out of different control definitions. Part IV will utilize the framework established in part III to evaluate specifically the effects of lender control. I will argue that lender control

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22 Professor Skeel, Jr. provides two examples of control that differ in scope, with the US Air case involving the financier dictating the course of the reorganization case and the TWA case implying a lesser degree of control. See David A. Skeel, Jr. “The Past, Present and Future of Debtor-in-Possession Financing”, 25 Cardozo L. Rev. 1905, 1920-1 (2004).
generates costs independent of those arising out of any conflict of interest between claimholders. Finally, Part V will provide some concluding remarks.

II. Reorganization governance and TEB’s idea of the firm

A. Understanding chapter 11 governance

The degree of difficulty that defining control entails does not appear to correspond with the profuse use the concept has in many completely different fields. Much of the difficulty around the concept of control starts with its diverse meanings. Control is used in a variety of contexts to express proficiency, limitation or restraint, prevent the spread of, regulation, verification, influence, etc. Indeed, Oliga mentions that “In social science literature, the concept of control is as elusive as it is pervasive.”

Despite the difficulties that defining control entails, the corporate governance literature usually discusses control by focusing on the possibility of winning battles in shareholder meetings. This conceptualization, which follows the ideas presented by Professor Manne and before him Professors Berle, jr. and Means, depend heavily on the formal structure of business associations’ which have the shareholders (or equity holders in general) as the ultimate decision making body. The fact that a large proportion of public companies have dispersed ownership in the United States has generated a gap between the formal idea behind business associations’ structure and practice. As a result of that divide, control has been portrayed since Berle, jr. and Means as potentially separate from ownership.


Professor Manne has re-tied the idea of ownership and control. Manne has argued that corporate control constitutes a valuable asset, independent of any economies of scale or scope.\(^\text{27}\) Manne’s considered that there are three main ways to obtain control of a corporation: a proxy fight, direct purchase of shares (as in the case of a takeover) and mergers.\(^\text{28}\) Despite the indeterminacy of control under Manne’s view, it is clearly tied to the voting rights of shares and has then to derive from the formal corporate law structure.\(^\text{29}\) The ability to win elections at shareholder meetings and, specifically, to appoint directors to the board are the core of control, because “the powers of the board of directors are plenary.”\(^\text{30}\)

Corporate governance scholarship has devoted a great deal of attention to investigate the factors influencing boards’ composition, action and inaction.\(^\text{31}\) There is a


\(^{28}\) See Henry G. Manne “Mergers and the Market for Corporate Control”, 73 The Journal of Political Economy 110, 114-9 (1965). Professors Berle, jr. and Means expressed “Since direction over the activities of a corporation is exercised through the board of directors, we may say for practical purposes that control lies in the hands of the individual or group who have the actual power to select the board of directors, (or its majority), either by mobilizing the legal right to choose them – “controlling” a majority of the votes directly or through some legal device- or by exerting pressure which influences their choice.” See Adolf A. Berle, jr. & Gardiner C. Means “The Modern Corporation and Private Control”, The Macmillan Company, New York, New York (1933), p. 69.

\(^{29}\) The view of the relative importance of voting as a governance mechanism is shared by Easterbrook and Fischel who consider that “The right to vote is the right to make all the decisions not otherwise provided by contract – whether the contract is express or supplied by legal rules.” See Frank H. Easterbrook & Daniel R. Fischel “Voting in Corporate Law”, 26 Journal of Law and Economics 395, 402 (1983).

\(^{30}\) See Douglas G. Baird & Robert. K. Rasmussen “The Prime Directive”, 75 U. Cin. L. Rev. 921, 924 (2007). Due to the broad scope of its powers, they refer to the board of directors as “the locus of corporate governance.” See Douglas G. Baird & Robert. K. Rasmussen “The Prime Directive”, 75 U. Cin. L. Rev. 921, 923 (2007). Talking about high shareholder concentration, Brecht, Bolton & Roell consider that “Most of the time large shareholder action is channelled through the board of directors. Large shareholders are in principle able to appoint board members representing their interests. When they have majority control of the board they can hire (or fire) management. Large shareholders can also exercise power by blocking ratification of unfavourable decisions, or possibly by initiating decisions.”

great degree of uncertainty surrounding actual allegiances, if any, of director members. This uncertainty is not dissipated in the bankruptcy context.\textsuperscript{32} Maybe because of the somewhat unobservable nature of board of directors’ decision-making process and the belief that boards are susceptible to be captured,\textsuperscript{33} attention has shifted to other actors in the quest for governance clues. In the case of bankruptcy, natural candidates are the claimholders because of the parallelism that exist between them and shareholders of non-bankrupt firms.\textsuperscript{34}

Voting rights assigned to bankruptcy claims by chapter 11 would be theoretically decisive in order to approve a reorganization plan and let the debtor exit bankruptcy.\textsuperscript{35} In other words, The Code thought about giving the creditors as a whole the possibility to negotiate and be outcome determinative. As a result, whatever control is in bankruptcy under the Manne ideal, it appears to have been at least partially extracted from shareholders voting and redirected to claimholder voting.\textsuperscript{36} This realization has been


\textsuperscript{33} See Melvin A. Eisenberg, The Structure of the Corporation, 139-148 (1976). The term capture refers to a difference between what one party expends and what the other party gets in the appropriation of a right. See Yoram Barzel, Economic Analysis of Property Rights, 2d ed. 5-6 (1997).

\textsuperscript{34} The parallel to the governance focus of Berle, jr and Means on shares voting power as determinants of control is clear. See Adolf A. Berle, jr. & Gardiner C. Means “The Modern Corporation and Private Control”, The Macmillan Company, New York, New York (1933).

\textsuperscript{35} Under this view, the corporate governance structure under the Code works as an unusual corporation where dollars of credit function as shares and priority serves as preferred stock.

\textsuperscript{36} It is important to note that a reorganizing corporation has a complex control structure, even if control is composed merely of voting power, given that shareholders’ retain the power to elect directors all through the proceedings. See \textit{In re Bush Terminal Co.,} 78 F.2d 662, 664 (2\textsuperscript{nd} Circuit, 1935) (“Obviously, the stockholders should have the right to be adequately represented in the conduct of the debtor's affairs, especially in such an important matter as the reorganization of the debtor. Such representation can be obtained only by having as directors persons of their choice… No reason is advanced why stockholders, if they feel that the present board of directors is not acting in their interest, or has caused an unsatisfactory plan to be filed on behalf of the debtor, should not cause a new board to be elected which will act in conformance with the stockholders' wishes.”); \textit{In re Johns-Manville Corporation et al. v. The Equity Security Holders Committee,} 801 F.2d 60, 64 (2\textsuperscript{nd} Circuit, 1986) (stating that “the well settled rule that the right to compel a shareholders' meeting for the purpose of electing a new board subsists during
perceived by some market players who actively have pursued the acquisition of bankruptcy claims in order to achieve control or block reorganization plans, in pursuit of extracting additional rents.\textsuperscript{37}

Professors Baird and Rasmussen, followed by Professor Skeel, Jr., have exposed the fact that the bankruptcy control picture is not complete.\textsuperscript{38} They have presented a world where Manne’s view of the “voting power” nature of control is rather unimportant in today’s bankruptcy practice. What TEB unveiled is that the commonly perceived duality of firms either reorganizing through the approval of a plan or liquidating (the formal possibilities under The Code), with the ensuing loss in value, is a false dichotomy. Auctions of the firm or a division of the firm are possible without any need for creditor voting or liquidation through the section of The Code authorizing debtor-in-possession’s sale of assets.\textsuperscript{39} According to TEB, firm or division auctions’ are possible because the market for distressed firms has continually developed and became more efficient,\textsuperscript{40} preventing the big losses associated with selling assets or firms in bankruptcy.\textsuperscript{41}

As a result of the development of a better market for distressed firms, the possibility to achieve control through other means has arisen as a lucrative one. If a party is able to obtain the reins of the bankrupt firm, she has an exit strategy to the creditor


\textsuperscript{38}This idea was not entirely new. The literature based on different theories using control to assign liability, subordinate or recharacterize claims already employed the concept of creditor control in distressed situations. See for example Jeremy W. Dickens “Equitable Subordination and Analogous Theories of Lender Liability: Toward a New Model of “Control””, 65 Tex. L. Rev. 801 (1987).

\textsuperscript{39}See 11 U.S.C. §363


\textsuperscript{41}This losses are usually referred as “asset fire sales”. See, for example, Gregor Andrade & Steven N. Kaplan “How costly is Financial (not Economic) Distress: Evidence from Highly Leveraged Transactions that Became Distressed”, 53 Journal of Finance 1443 (1998).
voting/liquidation duality. Theoretically, then, anyone who obtains full control (if such a thing is ever possible) would be in a position to determine the fate of the estate assets without the need of any negotiation with other bankruptcy constituents. This exit strategy accentuates the leeway of the DIP and naturally, the importance of the chapter 11 process’s governance.\textsuperscript{42}

Arguably, the importance of chapter 11 governance takes the system by surprise. The Code’s design has left many corporate governance issues ancillary, relying heavily on the non-bankruptcy law applicable to each specific case.\textsuperscript{43} The increased flexibility gained by the DIP as a result of a better market for bankruptcy sales and the appearance of a creditor vying to control the process trumps The Code’s assumption that the debtor, absent the appointment of a trustee,\textsuperscript{44} would be running the firm through the process that leads to the approval of the reorganization plan.\textsuperscript{45} This is the configuration which allows for a lender to obtain what Baird and Rasmussen have called the “missing lever” over a


\textsuperscript{43} Elson, Helms & Moncus consider that “Traditionally, the focus in chapter 11 restructurings has been on financial and managerial reform, largely ignoring equally important issues of corporate governance.” See Charles M. Elson, Paul M. Helms & James R. Moncus “Corporate Governance Reform and Reemergence from Bankruptcy: Putting the Structure Back in Restructuring”, 55 Vand. L. Rev. 1917, 1918 (2002). A reflection of the lack of importance given by the Code to governance structures in chapter 11 is the lack of explicit sections focalizing on it. Similarly, the Code provides for mandatory formation of unsecured creditors committee without providing any guidance into the regulation and functions it should have. See Daniel J. Bussel “Coalition-Building through Bankruptcy Creditors’ Committees”, 43 UCLA L. Rev 1547, 1549 (1996). The situation was different under the 1973 Report of the Commission on the Bankruptcy Laws of the United States, which vowed for the mandatory appointment of trustees if the debtor owed 1 million or more dollars or had 300 or more security holders, the figure of the administrator to handle non-judicial matters or the express focus on control when looking at the differences between former Chapters X, XI and XII of the Bankruptcy Act. See Report of the Commission on the Bankruptcy Laws of the United States, H.R. Doc. No. 93-137, 93rd Cong., 1st Sess., pp. 244-53 (1973).

\textsuperscript{44} See 11U.S.C. §1104 (a).

\textsuperscript{45} This feature of chapter 11 has been referred to as being biased towards status quo and lacking commitment to protect creditors’ rights. See William W. Bratton “Venture capital on the Downside: Preferred Stock and Corporate Control”, 100 Mich. L. Rev. 891, 894 (2002).
distressed debtor, through his dealings with the debtor,\textsuperscript{46} eventually trampling any control exercised through voting by either shareholders or claimholders.\textsuperscript{47}

In order for a lender to exercise control, the lender must have such exercise as a feasible possibility. To better determine which types of control are feasible for the lender we must first look at the theory of the firm. The study of the theory of the firm as an important methodological step to understand reorganizations was introduced by TEB. TEB’s objective when looking at the theory of the firm was to use it in order to assess the efficiency of firm continuation. I depart from TEB’s analytical framework in that I will employ the theory of the firm to understanding what the firm is as necessary step to comprehend its implications for what control can be applied. Only then, I propose, can efficiency consequences be assessed. With this objective in mind, the following section will review TEB’s view of the theory of the firm.

\textbf{B. Revisiting TEB’s view of the theory of the firm}

As we have seen, lending arrangements nowadays, supervised to a certain extent by the courts, are the key gizmo utilized by a creditor in order to gain influence over the DIP and, more generally, the bankruptcy process. The sophistication of those lending contracts in the case of distressed borrowers has grown to the extent that they are commonly reported to be very detailed, containing a googol of covenants that the

\textsuperscript{46} See in general Douglas G. Baird & Robert K. Rasmussen “Private Debt and the Missing Lever of Corporate Governance”, 154 U. Pa. L. Rev. 1209 (2006). It is true that no interested party can determine how the reorganization process unwraps without petitioning to the bankruptcy court for approval of a petition to sell assets - see 11 U.S.C. §363(b)(1) - or presenting a reorganization plan for court confirmation – see 11 U.S.C. §1129 -. Nonetheless, due to the governance structure of the firm which allows great leeway to directors in their decision under the business judgment rule, it is easier to exercise influence or control over the process and over the debtor assets, through influencing or controlling the debtor himself, because the chapter 11 structure respected directors’ outside of bankruptcy right to govern the bankrupt firm. On the business judgment rule see for example \textit{Aronson v. Lewis}, 473 A.2d 805, 812 (1984) (“It is a presumption that in making a business decision the directors of a corporation acted on an informed basis, in good faith and in the honest belief that the action taken was in the best interests of the company. Absent an abuse of discretion, that judgment will be respected by the courts. The burden is on the party challenging the decision to establish facts rebutting the presumption.”)

\textsuperscript{47} Indeed, leverage is so important in Professors Baird and Rasmussen’s regard that they report that “when a business enters financial distress, the major decisions… require the blessing of the banks.” See in general Douglas G. Baird & Robert K. Rasmussen “Private Debt and the Missing Lever of Corporate Governance”, 154 U. Pa. L. Rev. 1209, 1212 (2006).
borrower is needed to abide by. A study by Chatterjee, Dhillon and Ramirez has showed that detailed covenants were found in DIP financing cases with a higher frequency than previous literature found in other context (almost 100% of cases). See Sris Chatterjee, Upinder S. Dhillon & Gabriel G. Ramirez “Debtor-in-Possession Financing”, 28 Journal of Banking & Finance 3097, 3108 (2004).

Once a covenant has been violated, the borrower will allegedly accede to the lender requests in order to obtain the waiver of the default and keep the hope of a successful reorganization alive. One of the requests may involve the appointment of a restructuring officer, a board member or even a new manager, presumably either philosophically or relationally closer to the lender. The lender then can be naturally understood to be running the show, something that TEB believes it is more efficient to The Code’s scheme.

48 A study by Chatterjee, Dhillon and Ramirez has showed that detailed covenants were found in DIP financing cases with a higher frequency than previous literature found in other context (almost 100% of cases). See Sris Chatterjee, Upinder S. Dhillon & Gabriel G. Ramirez “Debtor-in-Possession Financing”, 28 Journal of Banking & Finance 3097, 3108 (2004).

49 On the capability of restructuring officers, Miller & Waisman contend that “CROs are typically vested with executive decision making power and direct access to the debtor’s board, but they can talk to the lenders without reporting back to the board.” See Harvey R. Miller & Shai Y. Waisman “Is Chapter 11 Bankrupt?”, 47 B. C. L. Rev. 129, 154 (2005).


51 See Douglas G. Baird & Robert K. Rasmussen “The End of Bankruptcy”, 55 Stan. L. Rev. 751, 757-8 (2002). Much of the following analysis on the theory of the firm and the related control concept will focus on TEB, because Creditors’ Ball, nor The Past, the Present and the Future have claims into the definition of either concept.


54 See Douglas G. Baird & Robert K. Rasmussen “The End of Bankruptcy”, 55 Stan. L. Rev. 751, 757 (2002). Whether a transaction costs approach dominates now the theory of the firm is not at all clear. Indeed, the number of works on the theory of the firm that are not based on transaction costs economics is very large.
contracts as easily as inside a firm is increasingly common today." As a result, the set of economic activities to be performed inside firms relative to those to be carried out through markets has diminished.

Had TEB stopped there and had left us with the idea that the firm is a nexus of explicit contracts, it would be possible to criticize their view of the firm in general terms, because it treats contracts as complete posing no incentive problems, uses transaction costs as the unit of analysis which is problematic when bureaucracy costs relate to many transactions, and the market is treated as a black box (in the same way that the firm was treated by neoclassical theory). But TEB has looked at firms and has pointed at other sources of value. They mention the existence of firm specific assets (both tangible and intangible), team grounded knowledge or expertise, and, more generally, going concern value.

The recognition of the existence of knowledge in teams that can be taken away to other firms and human specific assets means that some intangible assets cannot be fully protected by the law or contract, probably because both are incomplete as a result of human limitations. As a result, transaction costs are not the only thing to pay attention to, because allocation of resources and power generate important ex ante and ex post incentives. In addition, despite the fact that TEB discusses growth options, the focus on transaction costs (natural consequence of their view of the theory of the firm) generates a static understanding of the firm. If a firm can buy and sell all its inputs each period

59 See Douglas G. Baird & Robert K. Rasmussen “The End of Bankruptcy”, 55 Stan. L. Rev. 751, 758-68 (2002). Firm specific assets are those which have a larger value inside the firm than outside.
61 See section II.C, supra.
independently of previous actions, then each period has no influence over the following ones. This limits the possibility to comprehend the nature of growth opportunities, its interrelation with assets in place and how to keep them inside the firm.  

Therefore, it must be concluded that TEB’s understanding of the theory of the firm is inconsistent with a nexus of contracts view. Unfortunately, TEB’s view cannot be rationalized under the other theories of the firm either. This is the case, despite the fact that its definition of control is closely related to the property rights approach, as TEB believes that “control is the ability to make decisions regarding the deployment of assets, including human capital”. But naturally, TEB’s nexus of contracts conception of the firm could never be consistent with a property rights approach because the former is based on contractual completeness and the later on contractual incompleteness.

As it can be seen from this account, TEB doesn’t provide a consistent view of the theory of the firm which could be use to explore the consequences of assigning control to a creditor. In particular, defining the firm will determine where value comes from and will influence how to protect and foster that value (which will likely depend on how control is allocated). The following section will then explore different theories of the firm and the way they determine where value comes from and the sets of feasible control which can be exercised.

III. Theories of the firm

The preceding discussion begs the question of what lender control in the DIP financing context is, so that it is possible to analyze its implications. In order to examine control definitions, an intermediate step needs to be taken. The notion of what a firm is, the element over which control can potentially be exerted, needs to be unveiled. Understanding what constitutes the firm will determine limits in the set of possible control scopes, while also informing how amenable control is to concentration under different conceptualizations of the firm.

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64 See Douglas G. Baird & Robert K. Rasmussen “The End of Bankruptcy”, 55 Stan. L. Rev. 751, 779 (2002). This definition is very similar to the one provided by Hart and mentioned in section II.B.4, supra.
This section will delve into the theory of the firm in order to carry forward some conclusions to help understand what control signifies and what the consequences of its allocation to a secured creditor are. Control applies potentially to the elements of the economic firm. In this sense, the scope of control has an upper limit determined by what the firm’s elements are. This is not to say that the strength of control depends merely on what the elements of the firm and the legal entitlements are.\(^{65}\) It means that recognizing the limitations that a static analysis may have (shying away from questions such as how the definition of the firm and its governance may affect responses to authority), the definition of the economic firm will shape what the scope of control could potentially be. The possibility of control concentration is also informed by the theory of the firm concept that is adopted, because the lesser the commodifiability of a firm element the more difficult it will be to concentrate control (due to the non-appropriability of the other elements of the firm).\(^{66}\) Scope and concentration control levels govern an individual’s (i.e. DIP lender) ability to protect firm value.

The firm elements also provide clues to assess firm value. Different firm theories will conceive value as arising from different sources. As there is a connection between possible control definition and allocations and firm value, this section will also discuss the implications of different theories of the firm on value. The incidence of control allocation on firm value will be discussed infra in IV.

\(^{65}\) Compliance with authority, for example, has a cultural understanding and different ways to respond to authority may generate different values to firms. For a comprehensive study on the effects of authority see Stanley Milgram “Obedience to Authority: An Experimental View”, Harpcollins, New York, NY (1974).

\(^{66}\) For example, Nickerson and Zenger believe that the characteristic of the problem to be solved implicates the organizational form. If a problem is decomposable (low interaction is needed among knowledge sets, hence problems can be decomposed into sub-problems), a market solution is appropriate as it provides weak incentives for knowledge sharing. If the problem is of moderate interaction problems (sub-problems can be identified, but the value of the solution depends on the interaction of the sub-solutions), an authority-based search is better suited, because it efficiently handles the trade off between economizing on the transmission and handling of information due to the presence of a central figure that understand critical knowledge interactions with the costs arising out of the cognitive limits of managers and the overconfidence in their own judgment. Finally, if a problem requires high interaction (the complexity of the problem is so big that no knowledge set by itself is sufficient to solve the problem), a consensus-based hierarchy, which substitutes education for direction and is better at achieving a common language, is appropriate as it resolves disputes based on consensus and has low powered incentives which discourages knowledge hoarding. See, generally, Jack A. Nickerson & Todd R. Zenger “A Knowledge-Based Theory of the Firm – The Problem-Solving Perspective”, 15 Organization Science 617 (2004).
The theory of the firm has proven to be a fruitful field for research purposes in recent years. Many papers and books have looked at what the firm is, creating a host of theories. Such a proliferation of theories will make the account that follows necessarily incomplete and maybe unsubtle. Nonetheless, and given the difficulties in covering every proposed idea in depth, the subsequent discussion will try to highlight broad categories of existing theories of the firm to serve as a background when analyzing TEB understanding of the firm in the bankruptcy scenario.

A. Neoclassical theory

The neoclassical theory views the firm in terms of the technological transformations they are capable of employing. The focus is set on the maximization of the production function of the firm, because firms are assumed to “deal in markets for homogeneous commodities.” In a simple description, which assumes perfect competition in the output market, the theory maintains that the firm will attempt to produce so that its marginal cost matches the output price. Milgrom and Roberts

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suggest that the neoclassical theory looked at market failures in competitive environments to find reasons for non-market organizations, among which they mention market power, increasing returns to scale, externalities, missing markets, and search, matching and coordination problems.\footnote{71}{See Paul R. Milgrom & John Roberts, ECONOMICS, ORGANIZATION & MANAGEMENT, Prentice Hall, Englewood Cliffs, N.J. (1992), at 73-7.}

The neoclassical conceptualization raises several concerns. It rationalizes the firm as a sort of black box which transforms inputs into outputs and circumscribes the object of study to the analysis of how the firm can maximize its production. Therefore, the neoclassical theory doesn’t pay any attention to how things work inside the firm and has nothing to say about internal firm organization.\footnote{72}{See Oliver Hart “Firms, Contracts, and Financial Structure”, Oxford University Press, New York (1995), p. 17.} As a related consequence, the concentration on the technology employed fails to supply a “genuine trade-off between integration and non-integration.”\footnote{73}{See Bengt R. Holmstrom & Jean Tirole “The Theory of the Firm”, 1 Handbook of Industrial Organization 61, 66 (1989).} Finally, the neoclassical theory takes as a given the information set necessary for production, effectively treating knowledge as an exogenous factor.\footnote{74}{Winter argues that “By taking production sets or functions as given, [neoclassical theory] fails to provide for a framework for explaining why society’s capabilities should be packed at a particular time in one particular way and not some other way… Most importantly, textbook orthodoxy fails to provide a basis for understanding the incentives and processes in business firms that produce technological and organizational change.” See Sidney G. Winter “On Coase, Competence, and the Corporation”, 4 Journal of Law, Economics, & Organization 163, 171 (1988).}

The neoclassical theory considers that value arises from a given production function (due to scale or scope economics). Therefore, if the firm has value outside of bankruptcy, it will maintain it in bankruptcy, because it conserves that production function. As the neoclassical theory doesn’t say anything about which elements constitute the firms, control scope remains an undefined and open subject. In addition, the lack of precision on what constitutes the firm’s elements doesn’t rule out any concentration option. Ergo, full control concentration is possible.

\textbf{B. Nexus of explicit contracts}
The explicit nexus of contracts view of the firm is prevalent in corporate finance. The idea was originated with Alchian and Demsetz’s study of a situation where output from a joint venture can be verified but input from different individuals cannot. As free riding would emerge, they propose to allow one person to monitor the venture, pay the other individuals fixed amounts and receive all the residual claims from the firm. Jensen and Meckling contributed greatly to this approach by explicating the view of the firm as a nexus of contracts: the firm being a legal fiction that ties a set of contractual relations. The boundaries of the firm are then set by the costs the monitor incurs in controlling that the agent performs according to the contract. In their conceptualization, the firm will achieve optimal size when the marginal increment in value due to size is equal to the marginal increment in loss involved in the consumption of additional fringe benefits by the agents.

This approach generates several implications. As all contracts are explicit, the firm cannot be worth more than the sum of contracts it unites, making any sub-partition as valuable inside as outside the firm. The explicit nexus of contracts assumes that each

82 See Luigi Zingales “In search for New Foundations”, 55 Journal of Finance 1623, 1631 (2000). In Jensen and Meckling words “The private corporation or firm is simply one form of legal fiction which serves as a nexus for contracting relationships and which is also characterized by the existence of divisible residual claims on the assets and cash flows of the organization which can generally be sold without permission of the other contracting individuals. Although this definition of the firm has little substantive content, emphasizing the essential contractual nature of firms and other organizations focuses attention on a crucial set of questions—why particular sets of contractual relations arise for various types of organizations, what
constituent, but the shareholders, is fully paid its opportunity cost. Therefore, allocating
decision rights to shareholders as residual claimants easily follows, because they are the
only constituents of the firm bearing risks. In the same vein, only shareholder interests
should be pursued by the firm. As a corollary consequence, in order to value the firm,
computing only share price is important.

The nexus of explicit contracts theory has shortcomings. Assuming the existence
of explicit contracts only seems to contrast hardly with reality. Fama and Miller have
pointed out that bondholders are not completely protected from shareholder decision
making. Becker points to worker’s specialization to observe that those employees can
be affected if the firm fires them before they recoup the investment in specialization and
therefore are residual claimants also. In addition, Shleifer and Summers studied
efficiency gains of takeovers to conclude that at least in part they arise out of wealth
redistribution from stakeholders to shareholders (the redistribution of wealth may come
from employees, government or suppliers). Therefore, even though shareholders are the
only de jure residual claimants in the nexus of contracts, it doesn’t mean that they are the

the consequences of these contractual relations are, and how they are affected by changes exogenous to the
organization. Viewed this way, it makes little or no sense to try to distinguish those things that are “inside”
the firm (or any other organization) from those things that are “outside” of it.” See Michael C. Jensen &

83 Esaterbrook and Fischel consider that “As the residual claimants, the shareholders are the group with the
appropriate incentives (collective choice problems to one side) to make discretionary decisions… Yet all of
the actors, except the shareholders, lack the appropriate incentives. Those with fixed claims on the income
stream may receive only a tiny benefit (in increased security) from the undertaking of a new project. The
shareholders receive most of the marginal gains and incur most of the marginal costs. They therefore have
the right incentives to exercise discretion.” See Frank H. Easterbrook & Daniel R. Fischel “Voting in

84 See Eugene Fama & Merton H. Miller THE THEORY OF FINANCE, Dryden Press, Hinsdale, Ill. (1972)

85 See Gary S. Becker HUMAN CAPITAL: A THEORETICAL AND EMPIRICAL ANALYSISYS, WITH
SPECIAL REFERENCE TO EDUCATION,

86 See Andrei Shleifer & Lawrence H. Summers. “Breach of Trust in Hostile Takeovers”, Corporate
Takeovers: Causes and Consequences, edited by Alan J. Auerbach, pp. 33-56. Chicago: The University of
Chicago Press (1988). They contended that firms usually rely on implicit contracts which the company
must be trusted to respect. To the extent that long term contracts reduce costs, such trustworthiness is a
valuable asset to the firm. The need for long term contracts derives from the equal need to promote firm
specific investment. The problem is that even if ex ante efficient, in certain states of the world it will be ex
post efficient to breach those contracts. Hence, ex post cost breaching needs to be measured against ex ante
increase in cost (plus it is more likely to be, at least in part, a redistribution of wealth than anything else).
only de facto residual claimants. In fact, the very notion of the existence of a class of residual claimants has been questioned.\textsuperscript{87}

To recap, the nexus of explicit contracts notion views the firm as the mere sum of its parts.\textsuperscript{88} Therefore, any going concern value that a firm may have needs to arise necessarily from the transaction costs\textsuperscript{89} that could be saved from not having to put back together the web of contracts already in place. It does not necessarily follow that the interconnection of contracts is valuable but provided that it is, the value of a firm under the nexus of explicit contracts has an upper limit determined exogenously by search and information costs, bargaining and decision costs. If technological advances reduce these costs, as TEB has suggested happened, then the value to be protected in bankruptcy diminishes also.\textsuperscript{90}

As for control, the nexus of explicit contracts theory proclaims that a firm’s elements arise out of the web of agreements that constitute the firm.\textsuperscript{91} Naturally, the scope of potential control then can be defined over the uses of the rights arising of those contracts. In other words, as the firm purchases each of the inputs necessary for production and those are readily replaceable by equal quality ones, control (and its scope) is merely a contractual concept. Consequently, and irrespective of whoever this control is specifically allocated to,\textsuperscript{92} the controlling party will be able to determine what the use of

\textsuperscript{87} Milgrom and Roberts suggest that “it may be impossible to identify any individual or group that is the unique residual claimant or, indeed, to identify the benefits and costs accruing to any decision and so compute the residuals.” See Paul R. Milgrom & John Roberts, ECONOMICS, ORGANIZATION & MANAGEMENT, Prentice Hall, Englewood Cliffs, N.J. (1992), at 315.
\textsuperscript{88} See section II.B.2 supra.
\textsuperscript{91} The usage of control is generally employed in a negative sense in this literature, referring to ways to reduce agency costs. Jensen and Meckling, for example, consider control as a way to limit an agent’s behavior. See Michael C. Jensen & William H. Meckling “Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure”, 3 Journal of Financial Economics 305, 308-10 (1976). Nonetheless, the idea of control applied to bankruptcy has a positive nature, as it implies decision-making. Therefore, due to the focus of this paper, the notion of control is constructed in a positive way.
\textsuperscript{92} Alchian and Demsetz believe that control should be allocated to equity because they have the best incentives to lead the team when global outputs are easily measurable but not individual contribution to the
the inputs for the periods acquired will be (within the restrictions each contract provides). At least theoretically, under this theory control can be fully concentrated (i.e. one person can be the owner of those rights or the delegated manager of the web of explicit contracts).

C. Nexus of explicit and implicit contracts

Baker, Gibbons and Murphy believe that “firms are riddled with relational contracts: informal agreements and unwritten codes of conduct that powerfully affect the behaviors of individuals within firms.” These informal agreements, or implicit contracts, help to circumvent problems such as non-observability (moral hazard) or non-verifiability (non-contractability) of outcomes by third parties. The informality of implicit contracts makes them highly adaptable to unforeseen situations but, as a drawback, they can only be self-enforced. As a result, implicit contracts are not available on demand and require the formation of firm reputation which can only be achieved through the passage of time.

The nexus of implicit and explicit contracts conception of the firm then presents a more complex structure, introducing the interaction between formal and informal agreements. Due to the particular arrangements constituting the firm, it can be worth more or less than the sum of its individual parts depending on the value of the particular investments. Interestingly, the economic definition of the firm may differ from the legal one, as corporations are not viewed as owning relations, specifically non-contracted upon output. See Armen Alchian & Harold Demsetz “Production, Information Costs and economic Organization”, 62 American Economic Review 777, 781-3 (1972).


ones.  For example, relational suppliers may generate value, but that value generally is not considered to be owned by the firm.

A notable corollary for bankruptcy purposes is that capital structure is important because liquidity shocks can diminish the value of the implicit contracts, even in a permanent manner. If a firm loses the reputation it has for respecting implicit contracts due to financial restrictions, then the value of the firm itself and the mere sum of the value of the individual assets may tend to converge, because the credibility of its promises would diminish.  As a result, the implicit and explicit nexus of contracts theory conceives that the firm has other residual claimants besides equityholders, due to other stakeholders’ investment in the relation.

The nexus of implicit and explicit contracts theory recognizes the existence of value outside mere transaction costs. Implicit contracts are difficult to understand and value, but their existence implies that there are hidden assets in an organization.  As a consequence, the mere aggregation of financial claims may not accurately represent the value of the firm. Focusing on financial claims to decide what to do with the assets of a distressed firm may be suboptimal because it may disrupt an appropriate asset ownership and control structure which makes a given promise self enforcing.

The nexus of explicit and implicit nexus of contracts theory shares with the nexus of explicit contracts the view of control being the outcome of the web of agreements that constitutes the firm. As seen before, implicit contracts are naturally self-enforcing due to their informality therefore the potential scope of control is comprised by legal rights and non legal ones. Explicit contracts allocation of control can be done in the same way as in

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97 Chaver and Fried address the existence of implicit contracts and, as a result, challenge the conceived financial value maximization standard (which tries to maximize the value to creditors and shareholders) in the eve of insolvency as insufficient, because performance creditors are not accounted for in that standard. See Alon Chaver & Jesse M. Fried “Manager’s Fiduciary Duty upon the Firm’s Insolvency: Accounting for Performance Creditors”, 55 Vand. L. Rev. 1813 (2002).
the nexus of explicit contracts theory, but implicit contracts control rights are split between the parties to those contracts (both parties control whether to honor them or not). In an end game situation like bankruptcy, a breach of the implicit contracts could be made without paying for the consequences. As a result of these arguments, full control concentration under this theory is impossible.

D. Property rights approach

The property rights theory of the firm developed from a seminal paper by Grossman and Hart which was furthered by another important piece by Hart and Moore. They believe that firms are collections of non-human assets. Having property rights over those assets is important because complete contracts are infeasible and/or too costly. Then, due to the fact that contracts are incomplete, having ownership of the assets grants the possibility, referred to as having residual control rights, to decide on the use of those assets when the contracts didn’t specify on the uses under every contingency. In Hart’s words “The owner of an asset has residual control rights over the asset: the right to decide all usages of the asset in a way not inconsistent with prior contract, custom, or law.”

The property rights theory of the firm maintains that the allocation of residual decision rights via ownership can have an effect on investments in relationship specific capital (one which has lesser or no value outside the relation for which is created) and thereby overall efficiency. As residual control rights determine to some extent ex post

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103 Grossman and Hart explain the problem of costly contracts in these terms “We present a theory of costly contracts that emphasizes that contractual rights can be of two types: specific rights and residual rights. When it is too costly for one party to specify a long list of the particular rights it desires over another party’s assets, it may be optimal for the party to purchase all rights except those specifically mentioned in the contract. Ownership is the purchase of these residual rights of control.” See Sanford J. Grossman & Oliver D. Hart “The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration”, 94 Journal of Political Economy 691, 692 (1986).

distribution of surplus, how those rights are allocated will determine the parties’ willingness to invest ex ante. Then, efficiency will be served by allocating the assets’ ownership in proportion to the relation specific investment that parties make ex ante. For example, Hart mentions the case of GM ownership of Fisher Body, electricity generating plants owning coal mines, and aluminum refineries owning bauxite mines. Joint ownership of assets, because more than one party can make valuable firm specific investments, explains more sophisticated firm structures.

Zingales believes that a very appealing feature of this theory is to make the economic notion of the firm amenable to legal theory, because it is easier to associate a corporation with the assets it owns rather than, for example, the labor force it employs. Regardless of the validity of such claim (Zingales never discloses what the legal theory of the firm under his view, or someone else, is), the property rights approach has been undoubtedly ground breaking. Nonetheless, it has received criticism. A commonly mentioned problem of the property rights approach is the identification of ownership and control. Another difficulty arises from the narrow scope of the theory, as it does not take into account human capital as being part of the firm. Finally, as is discussed above with the nexus of explicit contracts theory, the value of the firm is represented only by the sum of the assets it owns, which provides little explanatory power for the role of equity.

The property rights approach starts from asset ownership to explain a firm’s existence in terms of ex ante incentives to parties that will make them generate efficient complementarities. Therefore, physical assets’ and its allocation, through reducing hold

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up power, will determine the value of the firm.\textsuperscript{109} Zingales points that “However, by defining the firm as a collection of assets, the property rights view excludes the insider’s human capital.”\textsuperscript{110} The former understanding leads Zingales to believe that firm value is identified with what the owner can extract as private benefits, because the specific investment (i.e. due to complementarities) by the owner is what generates the extra surplus making the firm valuable.

The property rights theory of the firm regards control rights or, to be precise, residual control rights as the basis for conceiving ownership.\textsuperscript{111} This approach does not differentiate between ownership and control, so both are commingled and inseparable. The concept of control here can be understood as a way “to foster and protect relationship specific investments.”\textsuperscript{112} As the property rights approach focuses on non-human assets, the scope of control would appear to exclude them. Nonetheless, firm value (and allocation of ownership) is dependent on relations between human and non-human assets. Ergo, the scope of control could potentially cover not only non-human assets but also specific investments, with the caveat that the later is non transferable. As a result, full control concentration may not be achieved under the property rights approach to preserve (ex post) and create (ex ante) firm value.

\textsuperscript{109} Referring to the famous GM-Fischer Body integration problem, Hart gives the following example: “Anticipating the way surplus is divided, GM will typically be much more prepared to invest in machinery that is specifically geared to Fisher bodies if it owns Fisher than if Fisher is independent, since the threat of expropriation is reduced. The incentives for Fisher, however, may be quite the opposite. Fisher management will generally be much more willing to come up with cost-saving or quality-enhancing innovations if Fisher is an independent firm than if it is part of GM, because Fisher management is more likely to see a return on its activities. If Fisher is independent, it can extract some of GM’s surplus by threatening to deny GM access to the assets embodying these innovations. In contrast, if GM owns the assets, Fisher management faces total expropriation of the value of the innovation to the extent that the innovation is asset-specific rather than management-specific, and GM can threaten to hire new management team to incorporate the innovation.” See Oliver Hart “An Economist’s Perspective on the Theory of the Firm”, 89 Colum. L. Rev. 1757, 1768-9 (1989).


\textsuperscript{111} “The market can function only in a situation where the “exclusion principle” applies, i.e. where A’s consumption is made contingent on A’s paying the price, while B, who does not pay, is excluded. Exchange cannot occur without property rights, and property rights require exclusion. Given such exclusion, the market can function as an auction system.” See Richard A. Musgrave & Peggy B. Musgrave, Public Finance in Theory and Practice 55 (3d ed. 1980).

\textsuperscript{112} See Raghuram G. Rajan & Luigi Zingales “Power in a Theory of the Firm”, 113 Quarterly Journal of Economics 387, 387 (1998). As they explain, “the smaller the space of contracts that can be written and enforced, the more important the role of residual rights of control.”
E. Nexus of Specific Investments

Rajan and Zingales have proposed recently a view of the firm as a nexus of specific investments, considering that it is not just physical assets’ ownership that generates power “nor necessarily the most efficient in promoting relation specific investments.” Zingales affirmed that “what distinguishes the firm from the market is the web of specific investments built around a critical resource… By controlling a critical resource an entrepreneur can influence the accumulation of specific investments so as to build complementarities between the person the entrepreneur seeks to have power over and her critical resource.”

The nexus of specific investments considers then that “before investment [in specialized human capital] takes place, the firm is defined by who holds the ownership rights to the physical assets that are required for production and by who is given access to the physical assets.” “After specific investment has been undertaken, the firm is defined by the ownership of the physical assets and the power that accrues to those who have made specific investments.” If the firm is successful in its development, at some point the web of specific investment becomes so important and distinct from the mere sum of the parts it is composed of that it becomes the critical resource around which more specific investments are made.

The nexus of specific investments’ view of the modern firm is influenced by the assessment that physical assets are less unique and hence command less rents than in

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118 This is a way of explaining the creation and existence of reputation or organizational capital, though I am not aware of any formalization of reputation creation in this way.
Chandler’s traditional firm\textsuperscript{119} and the difficulty in appropriability of human capital. Complementarily, increased competition at the worldwide level augmented the demand for innovation which has been translated into more rents to human capital.\textsuperscript{120} But increased competition changed the game in another important way: a firm’s grip on employees has diminished due to the increased access to financing and employment opportunities.\textsuperscript{121} Probably the hardest problem the nexus of specific investments theory presents arises out of the fuzzy definition of access, which generates some indeterminacy.

This theory, like the nexus of explicit and implicit contracts one, generates a plausible explanation to the existence of indirect costs of bankruptcy.\textsuperscript{122} Reorganizations and to a greater extent liquidations, irrespective of being due to financial or economic reasons, may destruct value if they signal to employees that their specific investment may become less valuable, in turn reducing the value of organizational capital. As a result of the magnitude and alleged irreparable condition of the bankruptcy costs, the nexus of specific investment theory believes that the role of equity may have mutated from its financing nature into a sort of insurance that protects the long term viability of the enterprise.\textsuperscript{123}


\textsuperscript{121} Rajan and Zingales provide several illustrations of the smaller grip a firm has on key employees. For example “Intel, the microprocessor manufacturer, was started, not in a garage or basement as many other Silicon Valley start-ups, but when Robert Noyce, the General Manager of Fairchild Semiconductor, and Gordon Moore, its head of Research and Development walked out of Fairchild and set up their own firm, Integrated Electronics. Shortly before their departure, a scientist in Moore's department had discovered the "silicon-gate" technique to produce semiconductor memory devices. This became an important part of Intel's proposed product line... Clearly, of all Fairchild's employees, Noyce and Moore had the greatest access to Fairchild's inventions, and at the very least, took a lot of knowledge and, equally important, employees with them to the start-up. Thus, Intel hit the ground running, and is now one of the most profitable firms while Fairchild Semiconductor is virtually a footnote in business history.” See Raghuram G. Rajan & Luigi Zingales “The Firm as a Dedicated Hierarchy: A Theory of the Origins and Growth of Firms”, 116 Quarterly Journal of Economics 805, 806 (2001).


As for firm governance, it is heavily affected by the implications of the nexus of specific investments theory. The fact that power is dispersed among constituents shifts the governance focus into the prevention of conflicts between stakeholders. Besides the need to take into account conflicting objectives, the dispersion of power among different stakeholders risks, in the extreme, the destruction of firm value as no party fully internalizes the preservation of organizational capital. Therefore, Zingales considers that the principal role for firm governance is “to ensure an alignment between the ability to capture the opportunities and reward stemming from them.”

The nexus of specific investments theory does not generate all the answers in terms of how to value a firm. This theory is premised upon the fact that “what keeps the firm together is the strong complementarity between human and physical assets. Thus, an option “belongs” to the firm if it is highly complementary with the physical and human capital that constitutes the firm.” With this information, some conclusions follow which are of interest for bankruptcy purposes. First, firms consist of more than the mere value of the physical assets they have ownership over. Second, value may not reside “inside” the legal notion of the firm. Finally, value may be very volatile and can be easily lost due to human capital mobility, which probably helps to explain bankruptcy indirect costs’ positive correlation with the duration of the proceedings.

The nexus of specific investments understanding of control is likely the more complex of all. It believes that the sources of control arise from the existence of critical resources. A critical resource could arise out of ownership of physical assets, but also specialization of human capital on that other critical resource. The elements of the firm are then comprised by human (non-transferable) and non-human assets. Therefore, control scope is potentially applied to those elements. As a consequence of the non-transferability of some elements of the firm, control is necessarily dispersed and shared by those who own critical resources. As a result, the ability to exercise control by the

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owners of physical assets is heavily constrained by the power achieved through human
capital specialization. Then, if human and physical critical resources are not owned by
the same person, full control concentration is impossible.

F. Implications for this paper

As it was highlighted throughout the section, the understanding of what
constitutes a firm is of utmost importance. Ramifications emanating from those
conceptions will eventually play a colossal role in trying to answer where a distressed
firm’s value stems from. The answer to the previous question will help to evaluate
whether creditor control is optimal to realize firm value and whether it matters what
medium is used to obtain that value. Of course, the definition of the firm will not be the
only element to use while attempting to determine which is the most efficient allocation
of bankruptcy control, but each particular definition will play an important role in the
determination of the set of feasible answers to the allocation question, because each
particular theory has the potential to determine different sets of answers.

This section’s discussion helps in understanding that value depends on what we
see the firm as being. As soon as it is recognized that value arises out of non physical,
potentially non transferable assets or that value is not fully covered by financial claims to
the legal firm, then the importance of who is assigned control grows. In that case, the
decision-maker will need to take into account not only physical asset value or saving on
transaction costs (both values being exogenous to the decision-maker action choice), as
basically proposed by TEB.

The preceding discussion shows that control has different scope and concentration
possibilities under different theories. As a result of the different implications of the
definition of control under different theories of the firm, allocations of control may not be

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128 A good example of the difficulty in explicitly defining contract terms is given by Blumenstein and Stern
who, citing a 1700 pages long contract between UAW and General Motors, express that “several important
aspects of this and the other UAW agreements aren't even in the written contracts. According to individuals
close to the talks, some of the most sensitive provisions, such as how many jobs the auto makers will
actually guarantee, are settled with an "understanding": a handshake or a wink-and-a-nod at the bargaining
table.” See Blumenstein, Rebecca, and Gabriella Stern, “UAW, Auto Makers Find Some Things Better Left
innocuous towards incentives. Therefore, the investigation of the effects of allocating control to a DIP lender will be explored in the following section.

IV. Lender Control Scope and Concentration Costs

So far, an investigation of the consequences of different theories of the firm on particular firm traits has been explored. This section intends to make as explicit as possible the relationship between firm value and allocation of control. As TEB implicitly concedes the existence of value outside the web of explicit contracts, this section of the paper will try to examine what the costs of lender control could be under the other theories of the firm. The main argument to be developed here is that, once the explicit nexus of contracts theory of the firm is discarded due to its stringent assumptions, other externality costs arise when DIP lender is assigned control of the firm, regardless of which other theory of the firm is chosen.\textsuperscript{129}

The legal literature has usually relied on the nexus of explicit contracts to think about bankruptcy control concentration costs. An early example of this conceptualization comes from very insightful work by Triantis.\textsuperscript{130} Triantis focuses on conflicts of interests\textsuperscript{131} between claimholders produced by priority differences and considers that “The most enduring problem, however, is that even if successful, the shift in decisionmaking authority to the residual owners does not eliminate financial agency problems. Unsecured creditors are residual owners only at the margin. Their participation in the company's fortunes is bounded on both sides: they share gains with shareholders and losses with the more senior creditors. Therefore, conflicts of interest between the

\textsuperscript{129} Again, given that TEB concedes and it is generally agreed that value outside mere explicit contracts exists.


\textsuperscript{131} Mehran and Stulz define conflict of interests as “a situation in which a party to a transaction can potentially gain by taking actions that adversely affect its counterparty.” See Hamid Mehran & Rene M. Stulz “The Economics of Conflict of Interests in Financial Institutions”, 85 Journal of Financial Economics 267, 268 (2007).
residual owner who holds decisionmaking authority in bankruptcy and these other groups will persist.”

Indeed, exactly this idea is followed by Lopucki’s critique of TEB and recent empirical work by Ayotte and Morrison.

As soon as we move away from the nexus of explicit contracts paradigm, other potential costs unfortunately come to share a bankruptcy scene already filled with those. These costs may vary under each theory and arise out of not only conflicts of interests between claimholders produced by priority differences but also due to the lack of internalization of implicit contracts value or specific investments by the entrepreneur or key employees. Therefore, my claim is that these costs need to be considered in order to reassess the proclaimed benefits of DIP lender control for economic efficiency.

Let us revisit the scope and concentration of control under the different theories and their relation to firm value. As discussed above, the property rights theory of the firm regards control rights in a residual manner. It conceptualizes ownership and control as indifferent, making them inseparable and susceptible to full concentration. The property

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135 For example, Bergström, Eisenberg and Sundgren mention that “Priority differences cause conflicts between high and low priority claimholders... Secured creditors who believe they will receive close to full payment in liquidating bankruptcy may prefer bankruptcy over reorganization, even when total payments to creditors would be higher in a reorganization. Secured creditors receive only part of the gain if the value of the reorganized firm increases, but bear all of the costs if the value decreases. Theorists acknowledge the likelihood that secured creditor incentives are skewed towards liquidation over reorganization.” See Claes Bergström, Theodore Eisenberg & Stefan Sundgren “Secured Debt and the Likelihood of Reorganization”, 21 Int’l Rev. L. & Econ. 359, 360 (2002). For a recent empirical study along these lines see Kenneth M. Ayotte & Edward R. Morrison “Creditor Control and Conflict in Chapter 11”, working paper available at http://www.law.duke.edu/conference/triangle/morrison_chapter11.pdf (last visited 5/02/07).
137 On the proclaimed benefits of DIP lender control, see section I supra.
rights approach ties asset ownership to ex ante incentives that parties have in order to efficiently invest in complementarities. Therefore, value is dependent on physical assets’ allocation and “ceteris paribus, a party is more likely to own an asset if he or she has an important investment decision”.

If control is assigned to a DIP lender, the logic of this theory tells us that ex ante incentives will be diminished as the lender would add no complementarities or synergetic value, while he would still share in the proceeds. As a result, assigning control to the DIP lender will hamper specific investments in complementarities by key members of the firm. Having said that, a caveat must be noted: proponents of the efficiency of DIP lender control rely heavily on lenders selling the firm, as they just want to recover what it is owed to them and don’t have any special knowledge about the business of running firms. Then, the previous problem would be shoved into the future (though unlikely

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139 Aghion and Bolton, in a very famous result in the incomplete contract theory, show that contingent allocation of control to a lender is more efficient than assigning control under any circumstances to either debt or equity. The model in that paper is based on agency costs, which grow when equity value approaches zero because control permits to reap private benefits. The point here is different from Aghion and Bolton, because the analysis doesn’t center on agency costs, but follows Grossman and Hart in looking at what other costs may arise when the firm is controlled by someone without the ability of generating complementarities with a specific asset that constitutes the firm. See Phillippe Aghion & Patrick Bolton “An Incomplete Contracts Approach to Financial Contracting”, 59 Review of Economic Studies 473 (1992). On the same vein, see Jukka Vauhkonen “Financial Contracts and Contingent Control Rights”, working paper available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=438501 (last visited 6/07/07).

140 See Douglas G. Baird & Robert K. Rasmussen “The End of Bankruptcy”, 55 Stan. L. Rev. 751, 786 (2002) (“Given the developments in capital markets, such [going-concern] sales are increasingly possible...The market for selling firms as going concerns is well-developed.”); Sandeep Dahiya, Kose John, Manju Puri & Gabriel Ramirez “Debtor-in-Possession Financing and Bankruptcy Resolution: Empirical Evidence”, 69 Journal of Financial Economics 259 (2003) (noting that DIP financed firms either reorganize or liquidate (monitoring function) faster than the non DIP financed); Keneth M. Ayotte & Edward R. Morrison “Creditor Control and Conflict in Chapter 11”, working paper available at http://www.law.duke.edu/conference/triangle/morrison_chapter11.pdf (last visited 5/02/07) (when secured creditors are oversecured, they find that cases are significantly shorter and more likely to result in a sale. Also, case speed increases -and the probability of a sale rises- as the claims of oversecured creditors encumber a greater fraction of the firm’s assets).

In addition, the use of control by the lender to sell the firm shies away from difference in knowledge that the lender and employees may have into the possible action set. As a result, it doesn’t have to deal with any inefficiencies arising out of allocating authority to a lesser informed party. On this issue, see generally Nicolai J. Foss, STRATEGY, ECONOMIC ORGANIZATION, AND THE KNOWLEDGE ECONOMY, Oxford University Press, Great Britain (2005), at 126-30; Philippe Aghion & Jean Tirole “Formal and Real Authority”, 105 The Journal of Political Economy 1 (1997); Philippe Aghion, Mathias Dewatripont & Patrick Rey “Transferable Control”, 2 Journal of the European Economic Association 115 (2004).
diminished). The conflict of interests’ problem arising from the different priorities enjoyed by different claimants is not affected by the sale of the business line of argument and remains at full strength.\footnote{This is the main result obtained by Ayotte and Morrison in their recent working paper. See Keneth M. Ayotte & Edward R. Morrison “Creditor Control and Conflict in Chapter 11”, working paper available at \url{http://www.law.duke.edu/conference/triangle/morrison_chapter11.pdf} (last visited 5/02/07)}

Let us mull over the nexus of implicit and explicit contracts theory now. This theory considers that firm value arises out the web of agreements that constitute the firm. Accordingly, the scope of potential control covers explicit and implicit contractual arrangements but, as we have seen above, control can not be fully concentrated due to self enforcing nature of the implicit contracts (i.e. an informal agreement doesn’t provide the parties a transferable right). As there are many informal agreements, assigning control to constituents who, in the case of a sale, do not internalize (impossibility of full concentration) the effect of their decisions on those gaining from the implicit contracts generates externality costs and likely affects the value of the firms’ hidden assets.

Shleifer and Summers have studied this problem in the context of takeovers, where they affirm that gains in stock price do not entirely reflect efficiency gains, due to the redistribution of wealth from employees (i.e. in terms of lower wages), government (i.e. tax credits) or suppliers to shareholders.\footnote{See Andrei Shleifer & Lawrence H. Summers. “Breach of Trust in Hostile Takeovers”, Corporate Takeovers: Causes and Consequences, edited by Alan J. Auerbach, pp. 33-56. Chicago: The University of Chicago Press (1988).} Therefore, assigning full control to equity or debt may be inefficient as long as those implicit terms reduce contracting costs and generate efficient incentives. Although, Shleifer and Summers were inspired by the takeover wave of the 1980’s, their view is readily transplantable to bankruptcy, as long as reorganizations are dominated by section 364 sales (as believed by professor Skeel, Jr.) and either the DIP or the DIP lender make by himself or together the sale decision.\footnote{See section I and II.A, supra.}

Finally, let’s examine the nexus of specific investment implications of allocating control to the DIP lender. This theory is the first to explicitly address firm control as
intrinsically dispersed as an important way to generate and tie growth options to the firm. Zingales refers to the dispersed characteristic of control by saying

“The secret [to the creation of firm value] is to create a situation where employees know that their rewards will be greater if they make firm-specific investments. The enterprise does this by giving key employees or units privileged access to the enterprise or its critical resources, so that they have power if they specialize.”

The realization that control over critical physical assets is combined with the power on inalienable human assets is an important paradigm shift. What ties the firm together and generates value is the interconnection and complementarities of human and physical resources. The more complementary the growth options are with the resources in place, the more likely it is that they will “belong” to the firm. If a biological analogy is permitted, the nexus of specific investments view of control is morphogenic, because the firm is directed to adaptive structural transformation as a way to maintain and increase its own value.

As mentioned above in section III.A, the nexus of specific investment conceives control’s scope as potentially covering human and non-human assets. Accordingly, the nexus of specific investment implies that complete control concentration is impossible (due to the non-transferability of decision making over human assets). Therefore, DIP lender control is naturally limited by the impossibility of full control concentration. In theory, each person who has made a specific investment would have power to extract part of the benefits (as he is essential to obtaining full firm value). As the access to the assets in relation to which specific investments were made is self enforcing (otherwise value is lost to the firm), lack of control concentration would seem to be innocuous. Nonetheless, such a conclusion would be misleading: due to the conflict of interests

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146 For a view that integrates organization theory, control and biology, see John C. Oliga, POWER, IDEOLOGY AND CONTROL, Plenun Press, New York, NY (1996), at 121-38
arising out of priority differences, access is not self-enforceable anymore. As different claim types (except for equity) have a cap on the amount obtainable in bankruptcy equal to what the claimholder is owed, a decision maker with those incentives would not express interest for obtaining full firm value. Naturally, this scheme would result in fewer amounts spent on specific investments ex ante. As a result, the nexus of specific investment theory tells us that DIP lender control deepens the problem arising out of conflict of interests arising out of priority differences because value is not only lost ex post (as under the nexus of explicit contracts view) but also ex ante. Then, the allocation of full control/ decision-making power with the DIP lender will likely hamper those valuable investments.

To summarize, TEB recognizes the existence of value besides the web of explicit contracts, therefore conceding that the firm cannot be explained relying merely on that theory. When we look at control concentration possibilities under the other theories it was showed that allocating control to a DIP lender will generate externality costs which the previous literature had not focused on before: diminishing ex ante incentives due to conflict of interests arising out of priority differences, lack of internalization of implicit contracts value or specific investments by the entrepreneur or key employees. Therefore, any claims on the supposed efficiency of DIP lender control need to be reconsidered under the new light generated by these costs. As a corollary, full control concentration has been shown to be infeasible under the rest of the theories explored. Therefore, the mere concept of assigning control to the DIP lender needs to be reconsidered. What amounts to the transferred control? Is it control over physical assets? Is it control over employees with specific investments? Further analysis and research efforts are required in order to provide a plausible answer to these questions.

V. Conclusion

Naturally, creditors possess great incentives to obtain safeguards ex ante in their contracts and to pursue the results of those contracts by self-help, court action or negotiation. No one else is going to do it for them and courts have not shown any
sympathy either lately.\textsuperscript{149} What is important, though, is how well they can function as decision-makers in order to obtain maximum return in exchange for the firm.

This paper intended to further the understanding of control and value as a result of conceptualizations about the theory of the firm, and in that sense follow in TEB’s methodological foot steps. The paper has shown that DIP lenders do not internalize the value of the whole firm and as a result their decisions will likely generate costs arising out of: conflicts of interests between claimholders produced by priority differences, lack of internalization of implicit contracts value and specific investments by key employees. As a result, the proclaimed efficiency of DIP lender control must be reassessed taking into account those costs. In addition, the very concept of DIP lender control needs to be revised under the light that it cannot be as far reaching as TEB and others have thought.

This paper also posses several questions for further research. If control is this fuzzy concept which may not be completely concentrated, what does it mean for lender liability theories to require creditor control in order to impose responsability. The same question can be asked about theories usually related to debtor control, as equitable subordination. In addition, what constitutes a claim for bankruptcy purposes may need to be reconsidered. If implicit contracts generate value it may make sense to consider them as claims in order to prevent the destruction of value.

\textsuperscript{149} In NACEPF, the court decided that the recognition of fiduciary duties to creditors in the “zone of insolvency” context may involve: “using the law of fiduciary duty to fill gaps that do not exist.” Hence, “the need for providing directors with definitive guidance compels us to hold that no direct claim for breach of fiduciary duties may be asserted by the creditors of a solvent corporation that is operating in the zone of insolvency. When a solvent corporation is navigating in the zone of insolvency, the focus for Delaware directors does not change: directors must continue to discharge their fiduciary duties to the corporation and its shareholders by exercising their business judgment in the best interests of the corporation for the benefit of its shareholder owners.” See \textit{North American Catholic Educational Programming Foundation, Inc. v. Gheewalla}, 2007 Del. LEXIS 227 (Del. May 18, 2007), at 19.